BUSHVELD MINERALS

Annual Report and Financial Results
December 2020

Building on our solid foundation to meet the growing vanadium demand

This report is also available at
www.bushveldminerals.com/financial-reports

In this Annual Report, the terms 'Bushveld Minerals Group', 'Bushveld', 'Company', 'Business','Group', 'we', 'us', 'our' and 'ourselves' are used to refer to Bushveld Minerals Limited. The terms 'Vametco Mine and Processing Plant', 'Vametco Vanadium Mine' and 'Vametco' are used to refer to 'Bushveld Vametco Alloys (Proprietary) Limited'. The terms 'Vanchem Plant' and 'Vanchem' are used to refer to 'Bushveld Vanchem Proprietary Limited'. The term 'Cellcube' refers to 'Enerox GmbH'.

Cross-references refer to sections of the Annual Report, unless stated otherwise.

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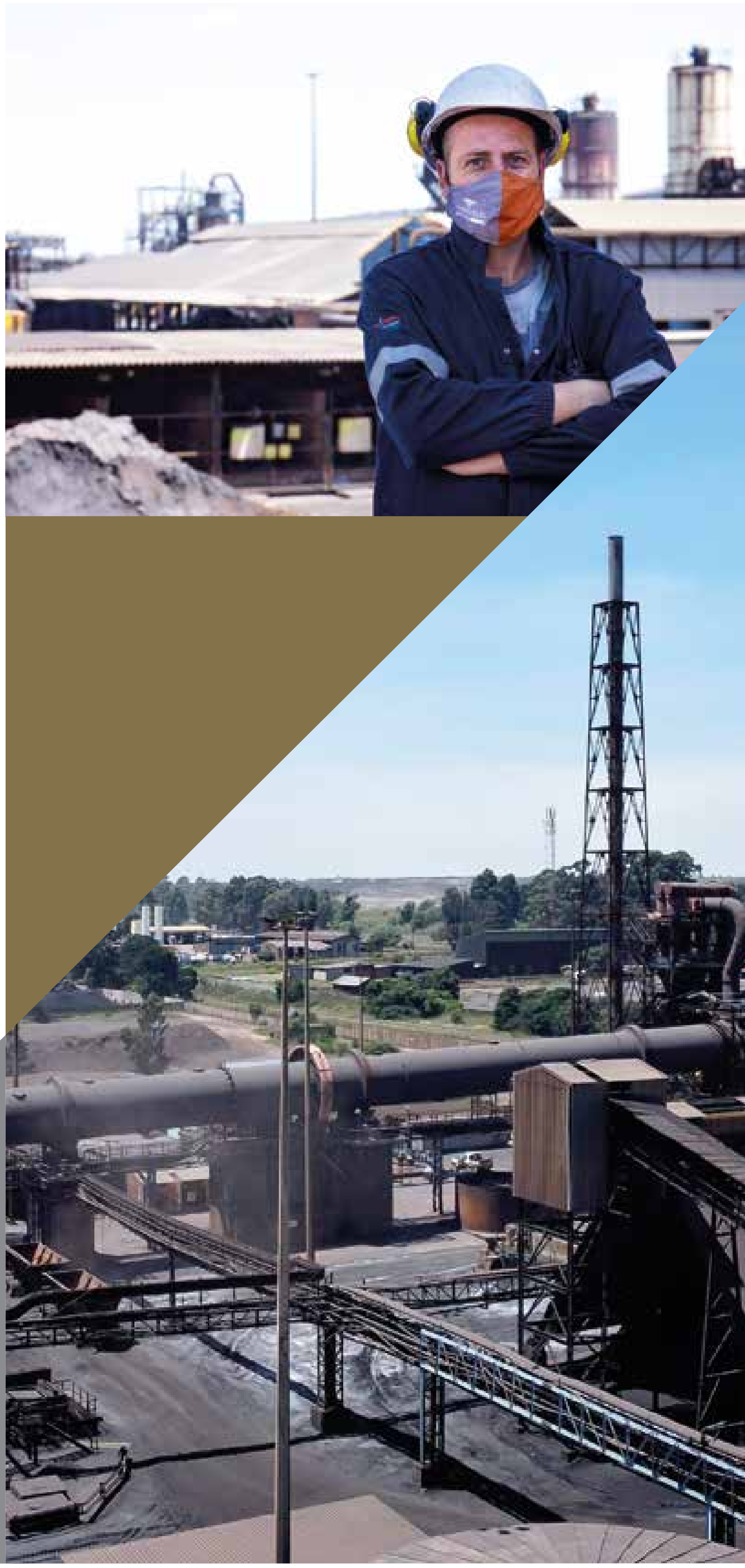


Bushveld Minerals is a low-cost, vertically-integrated primary vanadium producer

Bushveld owns two of the world's four operating vanadium processing facilities and is one of only three operating primary producers globally. In 2020, the Company produced more than 3,600 mtV, representing approximately three per cent of the global vanadium market. With a diversified vanadium product portfolio serving the needs of the steel, energy and chemical sectors, the Company participates in the entire vanadium value chain through its two main pillars: Bushveld Vanadium, which mines and processes vanadium ore; and Bushveld Energy, an energy storage solutions provider.

Bushveld Vanadium is targeting to materially grow its vanadium production and achieve an annualised steady state production run rate of between 5,000 mtVp.a. and 5,400 mtVp.a. by the end of 2022, from projects currently being implemented. Beyond that, pre-feasibility studies are in progress to determine the optimal path to increase production even further to a steady state production run rate of between 6,400 mtVp.a. and 6,800 mtVp.a. in the medium-term and to a steady state production run rate of 8,400 mtVp.a. in the long term. Bushveld Energy is focused on developing and promoting the role of vanadium in the growing global energy storage market through the advancement of vanadium-based energy storage systems, specifically Vanadium Redox Flow Batteries ("VRFBs").

Bushveld Minerals' Key Achievements

2012

Bushveld Minerals
Bushveld Minerals admitted to trading on AIM on 26 March 2012.

2013

Bushveld Minerals
Bushveld Vanadium Project platform established on an initial resource of 52Mt.

2014

Mokopane
Licence extension for Mokopane Prospecting Right approved.

2016

Bushveld Energy
Official launch of Bushveld Energy.

Bushveld Energy
Co-cooperation Agreement signed with Industrial Development Corporation to determine the economic viability of VRFBs for use and manufacture in South Africa.

2017

Vametco
Acquired a 26.6 per cent effective shareholding in Vametco, a vanadium mine and primary processing facility.

Vametco
Increased its effective shareholding in Vametco to 59.1 per cent.

2018

Vametco
Increased its effective shareholding in Vametco to 74 per cent through a series of transactions.

Bushveld Energy
Started development of first commercial photovoltaic and vanadium redox flow battery mini-grid.

2019

Bushveld Energy
Implemented its first rental contract with Avalon Battery Corporation.

Bushveld Energy
Received Environmental Authorisation for a 200 MWh (~1,100 mtVp.a) capacity vanadium electrolyte facility.

Bushveld Energy
8.71 per cent investment into AIM-listed Invinity Energy Systems ("Invinity").

Vanchem
Acquired 100 per cent of Vanchem, a primary vanadium processing facility.

2020

Mokopane
Executed a 30-year mining right.

Bushveld Energy
Vanadium rental partnership with Invinity and Pivot Power (part of EDF Renewables).

Bushveld Energy
Acquired Cellcube as part of an investment consortium.

Bushveld Energy
Established the Bushveld Electrolyte Company ("BELCO").

2021

Bushveld Energy
Monetised Invinity Investment and realised US$13 million.

Bushveld Energy
Secured indirect interest of 25.25 per cent in Cellcube.

Bushveld Energy
Commenced construction of BELCO.

Our Core Business

Our Vision

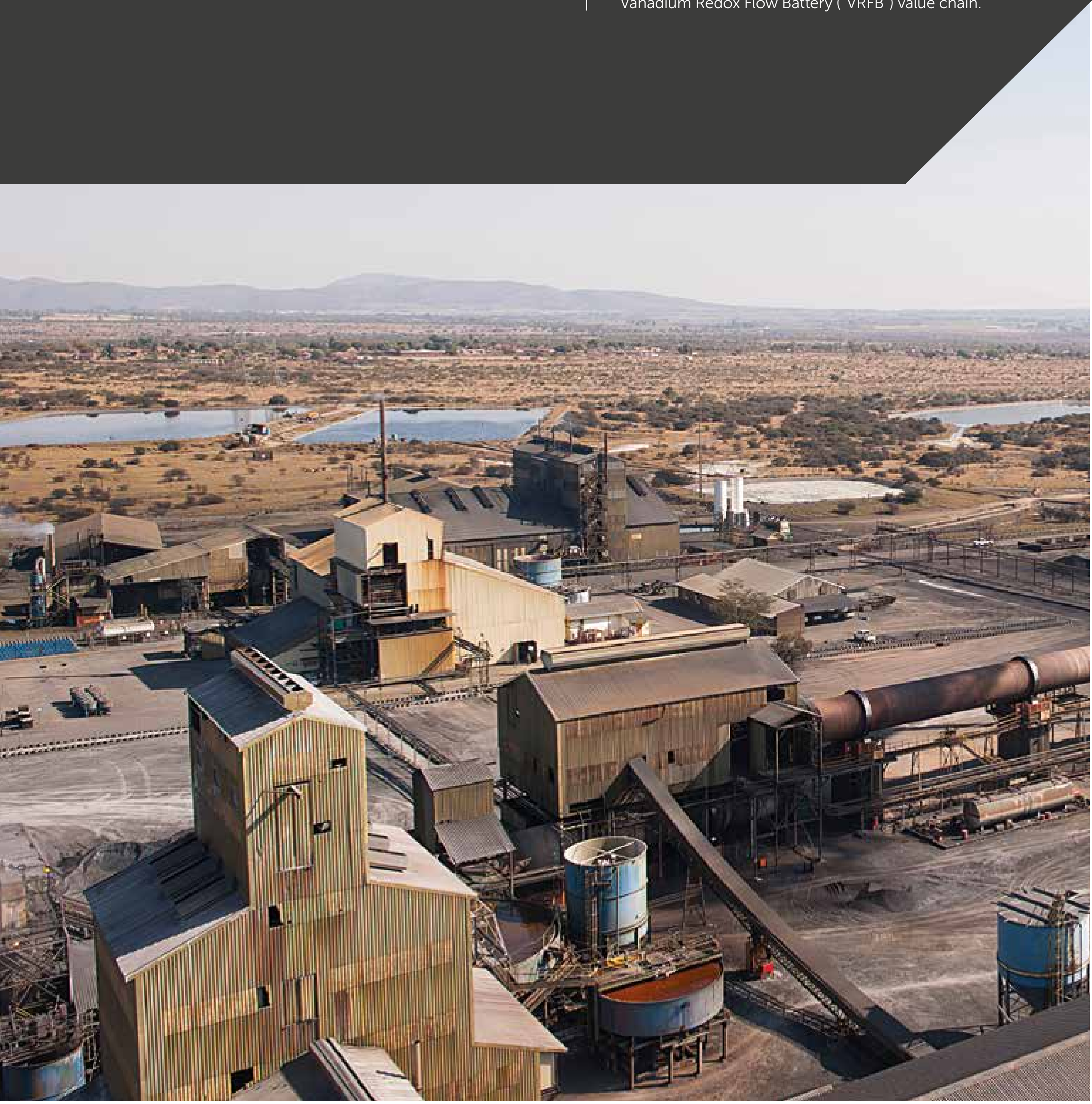
Become one of the world's most significant, lowest-cost, vertically-integrated primary vanadium platforms, with a diversified vanadium product portfolio.

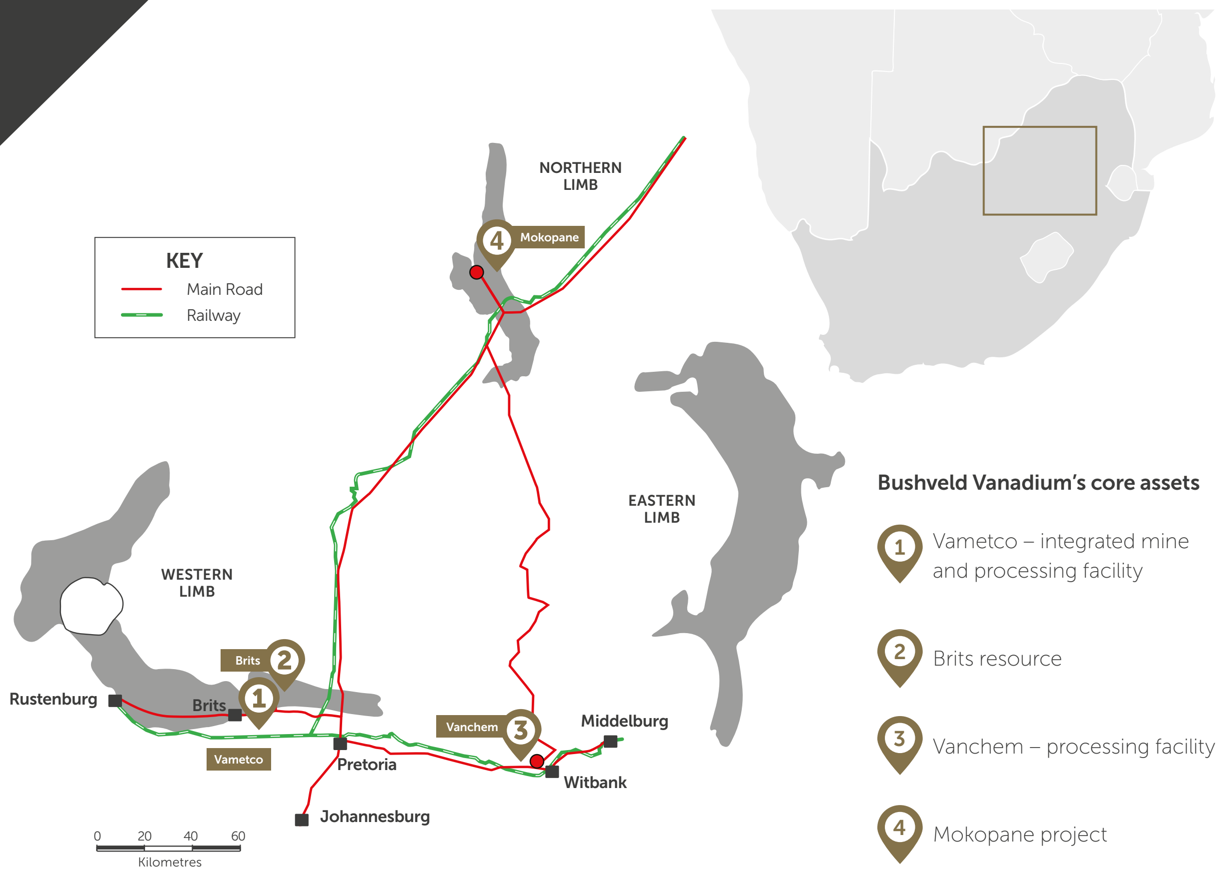
Our Mission

Generate value in a safe and sustainable way for all of our stakeholders throughout the commodity cycle.

Our Strategy

- Build a sustainable, cash-generating, low-cost production platform, comprising:
  - high-grade, opencast and low-cost primary vanadium mines; and
  - refurbished scalable brownfield processing facilities.
- Use our large, low-cost production platform to build a leading downstream vanadium-based energy storage platform, creating value as a manufacturer of electrolyte, investor and project developer across the Vanadium Redox Flow Battery ("VRFB") value chain.





Bushveld Vanadium's core assets

1. Vametco – integrated mine and processing facility
2. Brits resource
3. Vanchem – processing facility
4. Mokopane project

BUSHVELD VANADIUM

The Company's assets are located in South Africa, which hosts the largest high-grade primary vanadium deposits in the world.

The Vametco mine, Brits resource and Mokopane project comprise a total JORC-compliant resource base of at least 549 Mt (100 per cent basis), including 75 Mt (100 per cent basis) of JORC-compliant reserves, with some of the highest primary grades in the world.

Through Vametco and Vanchem, Bushveld Minerals produces Nitrovan, ferrovanadium, vanadium oxides and vanadium chemicals, which deliver a diversified revenue stream from the steel, chemicals and energy storage markets.

Collectively, the Vametco and Vanchem plants provide Bushveld with the potential for a flexible and scalable low-cost production platform, which will enable it to maintain a competitive position in the vanadium market.

BUSHVELD ENERGY

Bushveld Energy, launched in 2016, is focused on developing and promoting the role of vanadium in the growing energy storage market through the application of VRFBs. Bushveld Energy is building an energy storage supply chain in South Africa by leveraging the Company's South African-mined and beneficiated vanadium.

Bushveld Energy's business model embraces several activities along the VRFB value chain, including electrolyte production, investment in VRFB manufacturing, and energy storage project development across Africa.

Our Key Strengths

A green commodity for the future with attractive fundamentals

- Vanadium demand is underpinned by its use in steel, which is expected to grow at a Compound Annual Growth Rate ("CAGR") of 2.7 per cent through to 2030[1].
- Vanadium increases the efficiency of the steel supply chain while reducing greenhouse gas emissions.
- VRFBs are expected to increase vanadium demand, from energy storage, by a CAGR of 56.7 per cent by 2030[1].
- Supply is concentrated, constrained and limited new supply is expected from greenfield projects, given their higher barriers to entry.
- VRFB technology supports the global transition to clean energy and produces lower life cycle CO_2 emissions than competing storage technologies[2].
- Medium- to long-term market fundamentals remain attractive.

Solid foundation

- The Company's 549 Mt (100 per cent basis) resource is one of the largest primary vanadium resource bases and offers significant growth potential. Bushveld Minerals' orebodies comprise large, long-life, opencast deposits, with grades of 1.6 – 2.0 per cent V_2O_5 in-magnetite, which are among the highest in the world.
- The Group owns two of the world's four operating primary production processing facilities, which are low-cost and scalable operations.
- The Group has a diverse revenue stream from the steel, chemicals and energy markets.

Significant production growth

- Bushveld has the capacity to scale up production, increasing its share of the vanadium market.
- The Company aims to achieve a steady state production run rate of between 5,000 mtVp.a. and 5,400 mtVp.a. by the end of 2022. Studies are under way to increase production to a steady state production run rate of between 6,400 mtVp.a. and 6,800 mtVp.a. in the medium term and to a steady state production run rate 8,400 mtVp.a. in the longer term.

Vertical integration

- Bushveld Minerals' vertical integration strategy allows it to mine, process and manufacture vanadium-based products in a single value chain and provides flexibility to maximise sales, depending on product demand.
- The Company uses its low-cost scalable production base to build a significant downstream vanadium-based energy storage platform, thus participating in a massive, rapidly-growing industry.
- Vertical integration is key, both to ensure future vanadium demand from energy storage and to unlock significant economic opportunities for the Company across its value chain.
- The growth of the VRFB industry can support vanadium demand and contribute to minimising volatility in the vanadium price. The Group will continue to supply the steel, chemicals and energy markets to maintain its solid position throughout the commodity cycle.

Sustainability – Value beyond compliance

- Bushveld Minerals is dedicated to maintaining sustainable mining and processing practices across all of its operations and projects. This includes ensuring employees enjoy a healthy and safe working environment, that it operates in an environmentally- and socially-responsible manner, and that it adds value to all stakeholders.
- The Company actively promotes the principles of the circular economy. It is scaling up the necessary technical and commercial parameters to ensure that vanadium in energy storage is re-used.
- The Group is helping to reduce the environmental footprint of mining, including reducing the carbon intensity of its own operations.

Shareholder returns

- Bushveld Minerals is committed to delivering attractive returns to its shareholders. It applies a consistent and disciplined approach towards capital allocation to manage the Group's growth initiatives.

Sources:
1 Roskill, Vanadium Outlook to 2030.
2. Vanitec and Texas A&M study.

Positioning Bushveld Minerals for the Future

> Our objective is to grow production in an efficient, sustainable manner, while avoiding any strain on our balance sheet. This is not a race, but a journey, and we want to make certain that once we reach our goal, we can maintain our production rates for decades into the future.

Dear Stakeholders,

There is no doubt that 2020 will be remembered for decades to come as a difficult period for everyone, and for some more than others.

It was also a year when responsibility came to the forefront; the responsibility of governments to look after their citizens, corporates to ensure the health and safety of their employees, and companies like Bushveld Minerals to ensure that the value of its tier-one assets were retained throughout the difficult period of the COVID-19 pandemic.

As a corporate citizen in South Africa, Bushveld Minerals' responsibilities run deep, starting with our local communities. The sustainability of our communities is intrinsically linked to the success and longevity of our operations.

I would like to applaud management for acting swiftly to protect our employees early and throughout the pandemic. Management halted operations, in line with the government's equally commendable measures, and applied strict health and safety protocols, including social distancing, sanitising, education and a revised shift system, once operations were restarted.

Vanadium prices were not excluded from the pandemic's effect on global growth, as prices of basic materials, including those needed for steel production, dipped initially, due to weakness in key markets.

Again, management must be commended for finding new sources of demand in China. The country emerged from the pandemic with a strong appetite for metals, and its demand was higher than in other parts of the world.

Late in 2020 and in the first half of 2021, we have seen vanadium prices continue to rise globally as growth returns after a year of lockdowns.

Prudently, the Board and management conducted an internal review of capital expenditure plans, ensuring the roll-out of these planned investments matched our ability to finance them and that they were not slowed down by short-term market dynamics.

We entered into a transaction with Orion Mine Finance, under which we successfully secured US$65 million in funding. The financing provides a structure that will support the Group to achieve a steady state production run rate of between 5,000 mtVp.a. and 5,400 mtVp.a. by the end of 2022. Studies are currently being conducted to determine the optimal way to deploy this capital for further growth to a steady state production run rate of between 6,400 mtVp.a. and 6,800 mtVp.a., which may include resequencing some of our capital projects. Our objective is to grow production in an efficient, sustainable manner, while avoiding any strain on our balance sheet.

This is not a race, but a journey, and we want to make certain that once we reach our goal, we can maintain our production rates for decades into the future.

In the year under review, we controlled our newest asset, Vanchem, for the full financial year. Vanchem diversifies our product mix and delivers key brownfield growth that we previously indicated was an important part of our strategy, given our vast resource in the ground.

Despite the unforeseen challenges of the past year, governments have recognised and embraced the opportunity to steer the world towards the clean energy transition faster than was previously evident. Many governments have put renewable energy and a focus on reduced emissions at the centre of their stimulus programmes.

In South Africa, the government has prioritised the need to resolve its energy supply crisis and it has taken some bold steps since the start of 2021. Several recent announcements are promising for the future of renewable energy and energy storage.

The first key announcement was confirmation by National Treasury that it had agreed with Eskom on an implementation plan and timelines for the restructuring of the utility. This will allow competition and cost transparency in electricity generation. The second key announcement was the increase in the threshold for self-generation without a licence from 10 MW to 100 MW, which will help to increase electricity supply, particularly from renewable resources. The third was the revival of the renewable procurement programme. This was halted in 2015 but reprioritised under the 2019 Integrated Resource Plan. All three are important steps to increase competition in the power sector.

These developments support Bushveld Minerals' plans to develop its downstream operations beyond the production of end-use vanadium products, to become a key player across the renewable energy storage value chain. As we have repeatedly stated, the energy storage market presents a sizeable commercial opportunity for our Company. Our integrated strategy means we will not only benefit from the uptick in demand arising from this opportunity, but will also be able to participate meaningfully in the downstream sector.

As you know, we recognised this opportunity much earlier than most others and had already established a solid energy base. We were able to benefit from our investment in Invinity Energy Systems ("Invinity"), the London-listed entity that resulted from the merger between Avalon Battery Corporation and redT energy plc, as Invinity's shares gained appreciably in value after its relisting in April 2020. It has subsequently secured several exciting sales contracts. Additionally, we invested into Cellcube as part of an investment consortium.

We have also made significant progress in our efforts towards self-generation at Vametco. We have developed a strong platform for externally-funded solar generation and Vanadium Redox Flow Battery ("VRFB") storage that will satisfy just under 10 per cent of Vametco's energy requirements and reduce its carbon footprint. This project is part of Bushveld's strategy to demonstrate the superior technical and economical merits of long-duration VRFB systems when paired with renewable energy, as the South African government relaxes regulatory hurdles around energy self-generation.

Another key responsibility for us is to our shareholders. While much of the regular in-person engagement with our investor base was impossible in 2020, our responsibility to ensure sustainable returns for the long term informed every decision we made. Despite a global event that no-one had prepared for, the business was managed appropriately through this challenging period.

To progress the Company so much under such constraints would have been impossible without the combined efforts of our people, who are essential to our success.

Although COVID-19 infections continue to rise by varying degrees in different countries, we are seeing signs of progress in the world's efforts to combat the pandemic through vaccination programmes, including South Africa.

We will continue to prioritise the safety of our employees as we prepare the business for a global economic recovery and an acceleration of the new energy future, fuelled by governments' policies to encourage the transition.

I would like to thank Fortune and the entire Bushveld team for their efforts during a very challenging year.

Finally, I pay tribute to Dolly Mokgatle, our former non-Executive Director, who tragically passed away in early 2021. Dolly, was an established and highly-experienced business leader in South Africa, who will be sorely missed by all.

Ian Watson
Independent Non-Executive Chairman
29 June 2021

Ensuring a Solid Base to Achieve Sustainable Growth

> While COVID-19 was an unprecedented and unexpected challenge, I am pleased to say we have emerged from 2020 in a robust position. This reflects our pragmatic approach to the outbreak. We sought to keep our employees and communities safe, while building resilience and agility so that the Business could continue to operate while maintaining an appropriate growth outlook.

2020 overview

I would like to begin by expressing my deep gratitude to every individual within the Bushveld Group for their efforts to ensure that the Company survived 2020 relatively unscathed. Our comprehensive response to the COVID-19 pandemic, ably led by the COVID-19 Task Team we established, was only effective because our employees respected and followed the protocols that were prescribed.

Our response plan operated in a context of a laudable and decisive set of risk-adjusted actions by the government of South Africa, which included a series of lockdowns and several other measures that have helped the country weather the COVID storm. This enabled its people to return to some sense of normality and ordinary operating conditions far sooner than many other countries.

While COVID-19 was and is an unprecedented challenge, I am pleased to say we have emerged from 2020 in a robust position. This reflects our pragmatic approach to the outbreak. We sought to keep our employees and communities safe, while building resilience and agility so that the Business could continue to operate while maintaining an appropriate growth outlook.

This meant, in the short term, prioritising:

- The health and safety of our employees, to prevent and minimise transmission of the virus in the workplace and at home. We implemented safety protocols in the workplace, including social distancing, supplying sanitisers, education about the virus, and restructuring the shift system. We supported our local communities by supplying water and sanitisers to local hospitals, police stations and care homes.
- Cash preservation, which entailed a review of all capital expenditure and the deferment of several growth initiatives until we had clarity on the expected impact of the pandemic on our operations and markets.
- Adapting our business to align with new operational realities, such as disrupted supply chains and logistics, to ensure we could still service our customers.

During the initial lockdown imposed by the South African government in late March 2020, we were able to maintain some scaled-down operations at Vametco. Vanchem was placed on care and maintenance. The re-start and ramp-up to normal production levels necessitated operational adjustments to accommodate social distancing, COVID-19 protocols and altered shifts for the implementation of certain projects. We continue to use an agile remote working set-up to ensure that all employees remain productive while we minimise any potential outbreaks in the workplace.

At the start of 2020, execution of our previously-announced growth strategy was well advanced. This strategy included: the refurbishment programme at Vanchem and the planned expansion at Vametco, targeting an increase of production to 4,200 mtVp.a. at both operations; construction of the electrolyte manufacturing plant in East London; and making investments in the Vanadium Redox Flow Battery ("VRFB") value chain. Due to the pandemic, we had to review some of our targets.

In the short term, our decision to defer some planned growth capital expenditure was reinforced by a declining vanadium price. The vanadium price fell from approximately US$30/kgV to lows of circa US$20/kgV (London Metal Bulletin prices) in part due to the pandemic's disruptive impact on global commodities markets.

However, a review of the outlook for vanadium in a post-COVID world highlighted a stronger case for growth in the longer term driven by economic recovery in key global economies, several of whom embarked on fiscal programmes targeting infrastructure development and an accelerated energy transition investments, both of which are favourable for vanadium demand.

Our financial stress-testing indicated that the business was in a healthy position. However, prevailing market conditions meant we would need external funds to support our growth plans.

Towards the end of the year, we successfully closed a US$65 million financing arrangement with Orion Mine Finance ("Orion"), through a Production Financing Agreement and convertible loan note issue. The funding placed us in a strong position to maintain our growth strategy. Some of the funding was used to strengthen the balance sheet by partially retiring existing debt facilities. We ended the year with cash and cash equivalents of US$50.5 million.

During Q4 2020, as economies reopened, there was strong vanadium demand, not only from China, but also from some of our more traditional markets, such as the USA and Europe. This demand has continued into 2021.

Bushveld generated revenue of US$90 million on the back of sales of 3,842 mtV. However, we recorded an EBITDA loss of US$14.9 million due to a 52 per cent decline in the realised vanadium price.

Safety

We recorded 54 COVID-19 cases among our employees in 2020, all of whom have fully recovered. We are grateful, not only to our colleagues working hard to ensure compliance with our safety protocols, but also to the employees abiding by these protocols. Post year end, however, we were sad to record two fatalities due to COVID, underscoring the need to remain vigilant, even as the country's mass vaccination programme is set to pick up momentum in H2 2021.

Governments around the world are now well into the next phase of recovery, reinvigorating parts of the economy that have been severely affected, upping infrastructure spend, and focusing on those sub-sectors that have a prosperous future, such as the new energy transition. We are proud that the South African government is on the same path.

Despite the ongoing pandemic, we were pleased to achieve a Total Injury Frequency Rate ("TIFR") at Vametco of 18.21, an improvement of 22 per cent from 23.49 in 2019, and a TIFR of 5.26 at Vanchem. The safety of our workforce and all employees remains front of mind for us.

Bushveld Vanadium: operational performance

Production for the year was 24 per cent higher than in 2019, despite the challenging environment and 380 mtV of lost production due to the COVID-19 pandemic. The consolidation of Vanchem for a full-year period made up a large part of the production and sales volume increase. Sales volumes rose 61 per cent relative to 2019, owing to the addition of sales from Vanchem, as well as increased demand from customers during the second half of the year. In the early part of the year, we began diverting a larger portion of our sales to China, as the country's economy was one of the first to ease lockdown measures and restart industrial production. During 2020, 23 per cent of our sales were to China, up from nine per cent in 2019. This is in line with the Company's strategy of increasing sales to higher-priced markets.

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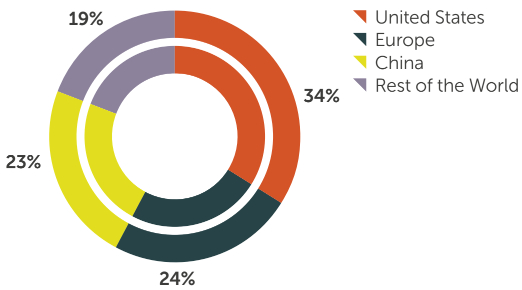
	Unit	2020	2020 versus 2019	Lost production due to COVID-19[2]
Group production	mtV	3,631	24%	380
Vametco production	mtV	2,654	-6%	300
Vanchem production	mtV	990[1]	–	80

1. Includes 14 mtV of ammonium metavanadate that Vametco sold to Vanchem for further processing into 12.8 mtV of ferrovanadium.
2. Lost production associated with the 21 day COVID-19 nationwide shutdown in South Africa.

Group sales by region %



Strategic focus

Brownfield assets acquisition

We believe that vanadium market fundamentals significantly favour primary producers. We are thus pleased to have been able to acquire Vanchem in November 2019, following the acquisition of Vametco in 2017 and 2018. This puts Bushveld in a competitive position, as it owns two of the world's four operating primary processing plants. The acquisitions are part of the brownfield strategy we announced in 2016, which has seen the Company transform from an exploration to a Vanadium mining and processing company.

The combined acquisition cost for these two plants was approximately US$120 million. The capital expenditure of approximately US$30 million (including US$15 million in Environmental compliance related capital expenditure), will take the Group's steady state production run rate to between 5,000 mtVp.a. and 5,400 mtVp.a, from the projects currently being executed, such as the Vanchem kiln 3 refurbishment (Phase1). We achieved this growth by leveraging cashflows generated by the operations, debt funding and approximately US$60 million in equity financing (through equity placing, convertible and warrant instruments) since 2016.

Following these acquisitions, our main focus has been to refurbish and expand production at these assets, to integrate and operate them efficiently, and to maximise synergies between them. Maximising efficiencies also entails addressing the historic under-investment in maintenance at Vanchem and Vametco, which will deliver greater performance reliability. Where necessary, plant reliability will be prioritised ahead of growth.

Another key focus has been aligning the operations with the Group's operating model, culture and standards, as well as building the leadership team. Our operating model is based on having strategic control of our assets to ensure we can exercise sufficient oversight and strategic direction. This requires building the necessary capacity at head office, with a fit-for-purpose organisational design, appropriate technical skills, integrated business processes and establishing robust shared service functions to maximise efficiencies.

This is no small task for an operation with this depth of vertical integration in mining, crushing and milling, concentration, pyrometallurgy and hydrometallurgy.

Meanwhile, the continuing operation and growth of Vanchem necessitates securing its ore supply while the Mokopane project is being developed. With the ore stockpile acquired with the plant depleting, we anticipate replacing this supply with ore from Vametco, which has an abundant resource base.

Specifically, we have earmarked the Upper Seam portion of the Vametco resource through a targeted operation ("The Upper Seam Project"). With a reserve of 0.9 Mt of in-situ ore, The Upper Seam Project will supply Vanchem with 34 kt per month commencing in Q3 2021, removing the necessity of relying exclusively on third-party sources of ore over this period. The Upper Seam Project resource has similar mineralogy to the current ore used at Vanchem, and tests conducted to date have proven its suitability for processing at Vanchem.

The cost of supply to Vanchem will be in line with or better than third-party suppliers. This initiative will ensure that Vanchem has sufficient competitively-priced ore feedstock in the short to medium term, with no significant capital expenditure requirements. Since the total Upper Seam resource base is 16 Mt, we are investigating the potential to extend this source of supply beyond the initial 18 months. Further information can be found in the Details of Operating Assets and Operational Review.

Operational stability

We are mindful that over the years Vametco's performance has not met expectations. In 2020, its output would have been 2,954 mtV, if it were not for production lost through the effects of COVID-19. The plant did not undertake the standard annual shutdown in an effort to make up time. This resulted in significant operational instability, which caused several unscheduled stoppages during Q1 2021, prior to the 35-day maintenance shutdown.

Since the successful completion of the shutdown, operational stability and performance have improved. Sustaining this stability, however, requires a recalibration of Vametco's monthly production levels and a disciplined, proactive maintenance strategy over a period of time. As a consequence, the management team has revised the monthly production targets for Vametco to approximately 240 mtV per month, previously 270 mtV. This changes Vametco's 2021 production guidance to between 2,300 mtV and 2,400 mtV, from previous guidance of between

2,700 mtV and 2,850 mtV. The run rate for the remaining months of 2021 is an annualised production of approximatively between 2,600 mtVp.a. and 2,700 mtVp.a.

We want to ensure that Vametco achieves sustainable and consistent output of 2,800 mtVp.a. before embarking on aggressive production growth.

Disappointingly, the commissioning of Vanchem's kiln 3, which is currently under refurbishment and the consequent production run rate increase of 2,600 mtVp.a. is likely to be delayed to the end of Q4 2021 owing to among other factors, delays in securing steel supplies. This requires revising 2021 production guidance to between 1,100 mtV and 1,200 mtV, previously between 1,400 mtV and 1,500 mtV. Overall, 2021 Group full-year production guidance has been revised to between 3,400 mtV and 3,600 mtV, previously between 4,100 mtV and 4,350 mtV.

We are also mindful of the increases in costs at Vametco over the past three years and have initiated a review of those costs to see where improvements are possible. Further detail is provided in the Finance Director's Statement.

We have not taken these decisions lightly. While we retain confidence in the plant's ability to produce above this level, our philosophy is that growth must be built on a foundation of robust, stable and efficient operations and must be pursued in a capital-efficient manner.

Capital projects sequencing

Notwithstanding the production revisions, our plans to grow output to 8,400 mtVp.a. in the long-term remain unchanged. During the current year, the studies on the Vametco Phase III expansion project and the Vanchem Phase II refurbishment will determine which project will be prioritised to achieve our production targets beyond our first production target. The decision will be guided by the principle of capital efficiency of 'securing the next-cheapest unit of vanadium'. As we are reviewing our production profile to achieve optimal sequencing between Vametco and Vanchem, the scope of the pre-feasibility study ("PFS") for Vametco has been extended. It is now expected to be completed in Q4 2021 together with the technical studies currently under way at Vanchem.

The stability of operations at Vanchem relative to Vametco, and the emerging view, supported by studies, that expanding production at Vanchem is likely to be significantly cheaper than at Vametco, has helped shape a growth-outlook that comprises:

- The current growth phase, which is being implemented, will see production increase to a steady state production run rate of between 5,000 mtVp.a. and 5,400 mtVp.a. by the end of 2022. This reflects Vametco and Vanchem operating at a steady-state production run rate of 2,800 mtVp.a. and 2,600 mtVp.a., respectively. Vanchem's production is expected to increase from 1,100 mtV to a run rate of 2,600 mtV by the end of 2022, supported by the commissioning of Kiln 3 and associated downstream expansions. Further information can be found in the Details of Operating Assets section of this report.
- A second growth phase to increase production to a steady state production run rate of between 6,400 and 6,800 mtVp.a.
- A third growth phase to a steady state production run rate of 8,400 mtVp.a., when the rest of the expansion initiatives are implemented.

We will provide details on the production path and expected capital expenditure once the studies are completed.

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Bushveld Energy

We are delighted to see the growing global momentum behind the energy transition away from fossil fuels to clean energy, especially renewable energy and energy storage in particular. An increasing number of countries are committing to reducing their carbon footprints and increasing the share of renewable energy in the power sector. The role of electricity continues to grow.

We are fortunate to be based in a country that has made bold decisions on this energy transition and has grown to be the sixth-largest residential energy storage market in the world. We expect it to grow into the global top-five utility energy storage markets, with policies that catalyse deployment of more stationary energy storage systems. Moreover, growing interest in increasing the country's share of the value chain unlocks greater opportunities for local suppliers.

These developments validate our forward-thinking strategy, set in motion in 2014, to vertically integrate downstream into the energy storage sector, through the launch of Bushveld Energy in 2016. They come as we make significant progress across the three areas of focus for Bushveld Energy: electrolyte manufacturing; sales and rentals; deployment of VRFBs in Africa; and investments into VRFB manufacturing.

During the year we made progress on our plans to build an electrolyte manufacturing plant in East London, South Africa. With an initial capacity of 200 MWh of vanadium electrolyte and capacity to scale up to 800 MWh, the electrolyte plant will be the largest publicly-announced plant outside China.

Our strategy to invest in VRFB manufacturing, which is designed to be a catalyst for mobilising financing to build scale among VRFB Original Equipment Manufacturers, has also been fruitful. Our investment in AIM-quoted Invinity

"Our emphasis in 2021 is on achieving consistent operational stability, enhancing operational performance and ensuring that both Vametco and Vanchem achieve their near- and medium-term production and cost targets, with optimal efficiency."

"Towards the end of the year, we successfully closed a US$65 million financing arrangement with Orion Mine Finance ("Orion"), through a Production Financing Agreement and convertible loan note issue. The funding placed us in a strong position to maintain our growth strategy. Some of the funding was used to strengthen the balance sheet by partially retiring existing debt facilities. We ended the year with cash and cash equivalents of US$50.5 million.

Energy Systems Plc ("Invinity"), whose creation we facilitated in 2020, delivered immediate benefits. Invinity has won several important contracts and its share price rose by more than 300 per cent in 2020. We have since crystallised our position and realised a total of approximately US$13 million, providing a significant return on capital of more than double our initial investment of US$5 million, in just over a year. With a right of first refusal for supply of vanadium and electrolyte, we have an attractive opportunity to develop a vanadium supply-relationship with Invinity. Through a joint venture agreement with Invinity, we are now developing and deploying vanadium electrolyte rentals to Invinity's customers.

We also played a key role in partnering with other investors to acquire Cellcube, of which we now own 25.25 per cent indirect interest. Cellcube, the holding company for Enerox GmbH, an Austrian-based leading VRFB manufacturer, has a solid track-record in manufacturing grid-scale energy storage systems.

As with Invinity, we have a right of first refusal to supply vanadium to Cellcube, creating more offtake potential for our vanadium and electrolyte products and hedging against future volatility in vanadium prices, as the VRFB market develops.

Despite the challenges of the COVID-19 pandemic, progress continued on our mini-grid project at Vametco, where Cellcube has been selected to supply a 4 MWh VRFB for the project. The solar PV and storage project will save nearly 114,000 tonnes of CO_2 over its 20 year life. The mini-grid provides an important proof-of-concept for self-generation solutions in a country that has made firm commitments to establish a supportive framework for self-generation. In the latest development, the threshold for self-generation without a licence will be lifted from 10 MW to 100 MW, unlocking faster growth in behind-the-meter generation and storage.

Continues >

Sustainability: Value beyond compliance

In 2020, we started a process of developing our sustainability strategy, which will focus on Environment, Social and Governance ("ESG") principles. We will integrate material ESG considerations across the value-chain into the business decision-making process; report on material ESG key performance indicators; and communicate a consistent message to stakeholders on key ESG commitments.

We also initiated the process of developing an ESG Management System ("EMS"). The purpose of the EMS is to provide a framework to enable Safety, Health and Environmental ("SHE") and social risks to be understood, and to develop, implement and appropriately manage mitigation measures.

Collectively, the ESG strategy and management system will assist us to comply with relevant authorisations, legal requirements, the International Finance Corporation Standards and other obligations, in a systematic and structured framework.

We are especially proud that, through vanadium, we play an important role in global decarbonisation efforts.

- In steel – the use of vanadium as an alloying element will reduce the intensity of steel in construction, resulting in a reduced carbon footprint for steelmaking.
- Through VRFBs, vanadium plays a key role in supporting the global energy transition to a greener supply-mix, which is fast gaining momentum.

Through a commitment to developing renewable energy-based energy-generation solutions we will also ensure that our production platform has a favourable carbon footprint.

Finally, through the innovative electrolyte rental solutions that we are developing and implementing, not only will we help to accelerate the adoption of VRFBs, but we will also help advance the circular economy by ensuring vanadium is reused through multiple life-cycles.

Johannesburg Stock Exchange listing

We continue to monitor market conditions and engage with South African institutional investors. However, because of the unforeseen events of 2020, we had to redirect much of our focus towards dealing with the pandemic, prioritising the safety of employees, and focusing on managing our operations. This included securing US$65 million from Orion. The Company remains interested in the potential listing and will continue to explore the opportunity to do so when conditions are suitable.

Appointments and integration

In 2019, we adopted our new operating model. Overall, we remain on course to roll it out across the Group, in spite of the setbacks of 2020. This is a key step in ensuring that we have sufficient organisational capacity to support our growth plans.

Our priority in 2020 was to manage the impact of COVID-19, while keeping a firm handle on initiatives to build critical organisational capacity. We are pleased to report that some of the work that was already under way to implement the operating model has contributed to our ability to manage the COVID-19 challenges more effectively. The model was primarily designed to help us achieve operational excellence, by ensuring that our business operations have sufficient support and that we can achieve greater integration across the various parts of the Group.

We have made significant strides in building our organisational capacity. We will continue to do so, focusing on human capital, financial resources, the operating model, and business processes and systems.

As one of our initiatives to enhance our operational performance, we announced the appointment of Francois Naude as Director of Operations; he brings more than 27 years of mining and processing experience and he will oversee the Vametco, Vanchem and Bushveld Electrolyte Company ("BELCO") operations, with the latter, migrating to the Bushveld Vanadium platform. The appointment is key to our operational strategy.

The Operations Director's mandate covers the following key parameters: meeting the Company's production volume aspirations; achieving cost targets; meeting SHE objectives; maintaining our social licence to operate; and effectively implementing capital projects on budget and in time.

Looking forward

Our emphasis in 2021 is on achieving consistent operational stability, enhancing operational performance and ensuring that both Vametco and Vanchem achieve their near- and medium-term production and cost targets, with optimal efficiency. Francois and his team have already made significant headway, prioritising operational stability and reliability, especially at Vametco.

While we are always mindful of achieving our growth targets, we believe it is more prudent to invest efficiently. This could necessitate resequencing our capital projects and potentially revising development timelines. I am confident that we now have in place a sound technical leadership team to ensure we succeed.

Through Bushveld Energy we have championed the place of VRFBs in the growing energy storage space. Not only did we have the foresight to see the opportunity, we also developed an appropriate and agile strategy for vertical integration along the value chain that we are pleased to see other vanadium producers adopting. Our key focus items are construction of the 200 MWh electrolyte plant, which commenced in June 2021, and obtaining a generation licence. Furthermore, we intend to achieve financial close on, and begin construction of, the Vametco hybrid mini-grid.

Overall, fundamentals for the vanadium market remain strong, characterised by a growing intensity of use of vanadium in steel. We expect governments across the world to adopt similar policies to those of China, by increasing infrastructure spending to revive and support their economies post-COVID. The energy transition will continue, resulting in greater renewable and energy storage deployment, in which VRFBs are expected to capture a significant market share, increasing vanadium demand. We retain the view that vanadium supply remains constrained and concentrated. All these factors benefit primary vanadium producers such as Bushveld Minerals.

We remain fully committed to our vertically-integrated growth strategy of achieving our long-term production of 8,400 mtVp.a. while becoming a leader in the downstream VRFB industry.

Once again, I would like to thank all of our employees and investors for continuing to believe in Bushveld, despite an uncertain and difficult year. We have begun 2021 in a solid position, benefiting from increased vanadium demand and higher prices, as the world economy recovers and accelerates its adoption of new energy sources. We have reason to look forward to the future with great optimism.

Fortune Mojapelo
Chief Executive Officer
29 June 2021

Bushveld Minerals' Vertical Integration Business Model

Capturing demand opportunities across the vanadium value chain.

Strategy

Bushveld Minerals' vanadium grades, at 1.6 per cent – 2.0 per cent V_2O_5 in-magnetite, are among the highest in the world. We were the first to establish a vertically-integrated business model, which we have nurtured from the start, as we partner in, develop and supply this nascent but high-growth sector. We diversify our vanadium products beyond steel and alloys to grow demand by developing the opportunity for vanadium in the energy storage industry.

Here the Company sees a confluence of:

- A burgeoning energy storage industry that is set to create a steep-change in vanadium demand.
- The Company's unique position in the industry, enabling it to capture a significant share of the vanadium value chain in the energy storage industry.
- A large, attractive commercial opportunity that can create a natural hedge for the Company, as vanadium is one of the most volatile commodities.

While vertical integration captures commercial value for the business, it is also essential to unlock the energy storage opportunity for vanadium. Vertical integration addresses two significant hurdles for the global adoption of Vanadium Redox Flow Batteries ("VRFBs"), namely:

Geology and mining

Bushveld has one of the largest, high-grade primary vanadium resource bases in the world. The Company's vanadium resource base currently consists of three mineral assets: Vametco, Brits and the Mokopane project. Together, the three deposits constitute a 549 Mt (100 per cent basis) JORC-compliant resource, including 75 Mt (100 per cent basis) of JORC-compliant reserves. The resource vanadium grades are some of the highest primary grades in the world. These high-grade deposits are located on the Bushveld Complex, which hosts the world's largest primary vanadium resources.

Bushveld Minerals seeks to establish a portfolio of vanadium resources for future development in potential partnerships as the supply deficit deepens and it becomes clearer that primary production is key to addressing this shortfall.

Processing

Bushveld's asset strategy focuses on identifying constrained brownfield processing infrastructure that can be made more efficient and expanded, following refurbishment and maintenance. The attraction of brownfield processing facilities lies in the potential for significant reductions in capital expenditure and lead-time to achieve production, compared with new build options. This strategy underpinned Bushveld's purchase of Vametco in 2017 and Vanchem in 2019, both of which provide the Company with a solid platform from which to expand its production base. These two plants give Bushveld the potential to significantly increase its share of the vanadium market while remaining a low-cost producer.

The Company's vanadium product portfolio is diverse and includes Nitrovan, ferrovanadium, vanadium oxides, electrolyte and vanadium chemicals. These vanadium products are marketed to steel manufacturers, chemical producers and battery companies.

- **Security of supply.** The massive, but uncertain, growth in the energy sector's demand for vanadium could create more market volatility, if not matched with timely supply expansion. A recent World Bank Group Minerals for Climate Action report estimated that, by 2050, vanadium demand in energy alone could be nearly twice the current market size. However, the uncertain timing of that demand makes industry-wide production expansion challenging; and
- **Security of cost.** Vanadium's high price volatility and its role as the sole mineral in the VRFB makes input costs more important than in other industries, such as steel. While price spikes, such as the one seen in 2018, are profitable for vanadium producers, they may undermine the energy storage industry before it attains maturity.

Implementation

Our vertical integration strategy has the following two primary components:

- Establishing a low-cost primary production platform based on our large high-grade deposits and low-cost, scalable processing facilities; and
- Leveraging our production capabilities to build a downstream vanadium-based energy storage platform comprising electrolyte production, investment into VRFB manufacturing and development of megawatt-scale energy storage projects.

Energy storage

Bushveld Minerals identified the fast-growing energy storage market as a key and attractive downstream industry where vanadium-based battery systems have the potential to take a significant market share. Through our subsidiary Bushveld Energy, we are actively driving the adoption of VRFBs in the global energy storage industry. Bushveld Energy's business model extends across three pillars: electrolyte supply; investment into VRFB manufacturing; and battery deployment and project development across Africa.

According to Guidehouse Insights, previously known as Navigant Research, global stationary energy storage demand is forecast to grow to 100 GWh in annual deployments by 2027. A mere 10 per cent share of this market for VRFBs would see VRFB deployments of 10 GWh per annum by 2027. Since a 1 GWh VRFB system requires approximately 5,500 mtV, or approximately five per cent of 2020's global vanadium production (circa 116,128 mtV[1]), this could add up to 55,000 mtV to annual vanadium demand by 2027. Guidehouse Insights forecast that flow batteries could account for up to 18 per cent of the US$50 billion energy storage market by 2027, representing nearly US$10 billion in revenue. The long-term opportunity is even larger. The 2020 World Bank Group report "Climate Smart Mining" noted that vanadium would be the fifth-most impacted mineral by increased energy storage demand. Almost twice as much vanadium would be needed for energy storage by 2050 than was produced globally in 2018. The 2021 International Energy Association ("IEA") report "The Role of Critical Minerals in Clean Energy Transitions" found that, under certain scenarios, between 120,000 mtV and 210,000 mtV would be needed for energy storage alone by 2040.

For these reasons, Bushveld pursued a downstream integrated business model through Bushveld Energy to:

- Exploit the rapidly growing multi-billion-dollar commercial opportunity that the energy storage industry presents, through the adoption of VRFBs.
- Become a key player across the VRFB supply chain through electrolyte supply, investment in VRFB production and original equipment manufacturers, and deploying energy storage projects using VRFBs in Africa.
- Strengthen and diversify vanadium demand beyond steel and alloys to create exposure to a much higher growth market, which the Company's upstream assets are well positioned to supply.
- Contribute to reducing the volatility of Bushveld's revenues and profitability, as energy storage exhibits lower market volatility than commodity markets and provides an industrial hedge to the vanadium price.
- Achieve higher valuation multiples for our business, as energy and diversified listed companies carry higher earnings multiples than pure miners.

Unique positioning

All these factors allow Bushveld Minerals to maximise the Company's share of the vanadium value chain and underscore its unique positioning to unlock this value, which includes:

- A large, high-grade, long-life primary resource base.
- Low-cost, scalable primary processing infrastructure with capacity to grow production.
- A diverse vanadium product offering, including low capital intensity of further downstream products, such as vanadium electrolyte.
- Deep local knowledge of energy markets, enabling it to secure large-scale energy storage mandates.
- Alignment with South Africa's policy environment, which supports mineral beneficiation and large-scale deployment of stationary energy storage systems.

Sources:
1. Roskill, Vanadium Outlook to 2030.

Impact of South Africa's policy framework on Bushveld Minerals' business model

In a year when governments around the world had to step up to the challenge of the impact of COVID-19 on their economies, South Africa continued to battle with securing its energy supply.

The government has acknowledged the need to accelerate its plans to resolve South Africa's energy crisis as this is the catalyst for implementing the various sector master plans that are meant to kickstart South Africa's post COVID-19 recovery.

To this end, the South African government has not only reiterated its commitment to ramp up the implementation of its energy programmes, but has also taken encouraging steps towards supporting local beneficiation of critical minerals such as vanadium. Such positive signals to the mining sector and supports the case for Bushveld Minerals' vertical integration model and its drive to ensure that it participates fully in the global vanadium value chain.

In 2020, we were pleased by some of the key developments announced by South Africa's Department of Minerals and Energy, such as:

1. **Restructuring of Eskom:** The confirmation by National Treasury at the beginning of 2021 that it had agreed with Eskom on an implementation plan and timelines for the restructuring of Eskom. In this restructuring, the transmission division will be legally separated from the larger entity by December 2021, and the generation and distribution divisions will be separated by December 2022. These are important steps to increase competition in the power sector and improve cost transparency and accountability at Eskom. The restructuring has not affected Eskom's battery procurement programme, funded by the World Bank, under which three battery tenders were issued for 827 MWh in April 2021.

2. **Additional energy renewable generation:** the South African government restarted implementing the renewable procurement programme that was halted in 2015 but re-prioritised under the 2019 Integrated Resource Plan ("IRP 2019").

   In December 2020, the government concluded the bidding process for an additional 2,000 MW from a mix of renewable energy sources. This was followed by the announcement in March 2021 that the fifth bid window for renewable energy procurement will soon be opened, which will add another 2,600 MW to the grid. It will also procure over 11,000 MW of power, including at least 513 MW of energy storage, under the IRP 2019.

   In June 2021, we welcomed the government's announcement that the threshold for self generation will be increased from 10 MW to 100 MW. We expect a

significant increase in private power generation projects. This is great news for the Bushveld Energy strategy, as industries seek to become less reliant on Eskom and move towards renewable energy and energy storage solutions.

3. **Masterplans for local beneficiation:** South Africa has some of the largest deposits of high-grade minerals that are in demand as the world undergoes an energy transition. The increasing demand for battery storage and fuel cells provides an opportunity for South Africa to leverage its comparative advantage from these national resources to build a dynamic industrial economy. In responding to this challenge, the South African government has in the past year reiterated its commitment to invest in building more local capacity for minerals beneficiation.

   This will benefit vanadium, as well as other industrial minerals such as Platinum Group Metals. The key outcomes of this master plan are that we will see an increase in government's investment in significant research and development, technology and capability applications. More encouraging for Bushveld is that the government is specifically supporting the development of a local battery manufacturing industry for energy storage.

The increased pace of implementation from government's side is a clear sign that Bushveld's plans to build capacity for VRFB manufacturing in South Africa are aligned with the needs of South Africa's energy sector.

About Vanadium

Vanadium is derived from three sources: co-production, primary production and secondary production. In 2020, approximately 90 per cent of global vanadium was recovered from magnetite and titano-magnetite ores, either from co-production or primary production.

- Co-production derived from iron ore processed for steel production remains the main source of vanadium, accounting for 72 per cent of 2020 global supply[1].
- Primary production involves salt-roasting, water leaching, filtration, desilication and precipitation. This accounted for 18 per cent of global supply in 2020, and rose year-on-year in tonnage terms, even though its market share percentage decreased relative to 2019[1].
- Secondary production is the recovery of vanadium from fly ash, petroleum residues, alumina slag, and from the recycling of spent catalysts used in crude oil refining. It accounted for approximately 10 per cent of global supply in 2020[1].

In 2020, global vanadium production increased to 116,128 mtV from 109,643 mtV in 2019[1]. This increase was due to higher slag production in China, driven by:

- Increased crude steel production, supported by the Chinese Government's stimulus measures, primarily driven by infrastructure spending, which translated into record steel production of 1,065 Mt[2], a seven per cent year-on-year increase.
- High seaborne iron ore prices (iron ore prices rose to their highest levels in the last five years, at over US$150/t[3]) by December 2020. This was driven by China's strong demand, as well as constrained global supply. As a result, Chinese steel mills used more domestic vanadium titaniferous magnetite ore.

China is the world's top vanadium producer, accounting for 60 per cent of global vanadium supply in 2020. Most of its vanadium was derived from co-production. Russia is the second-largest producer and South Africa the third-largest, accounting for 17 per cent and seven per cent of 2020[1] supply, respectively. South Africa's vanadium was derived from primary production from Bushveld Minerals and Glencore.

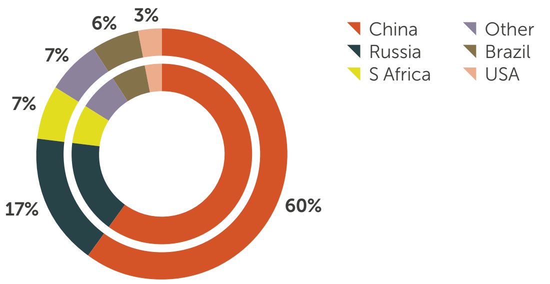
Vanadium market fundamentals

Supply

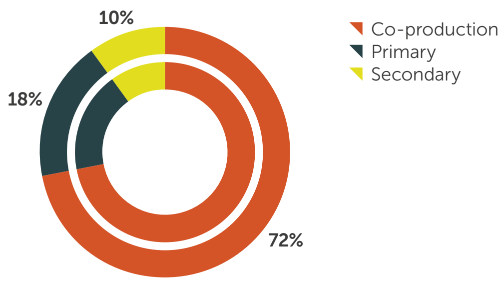
Most of the volume, on a unit basis, came from Chinese slag producers, whose production of slag increased. This resulted from higher steel output on the back of fiscal stimulus that the government introduced in late March 2020 to fast-track an economic recovery. These measures included increased infrastructure spending, which translated into record steel production.

China became a net vanadium importer for five months in 2020: June, July, August, October and November. This absolute increase in steel production has resulted in Chinese co-producers operating at near capacity, limiting

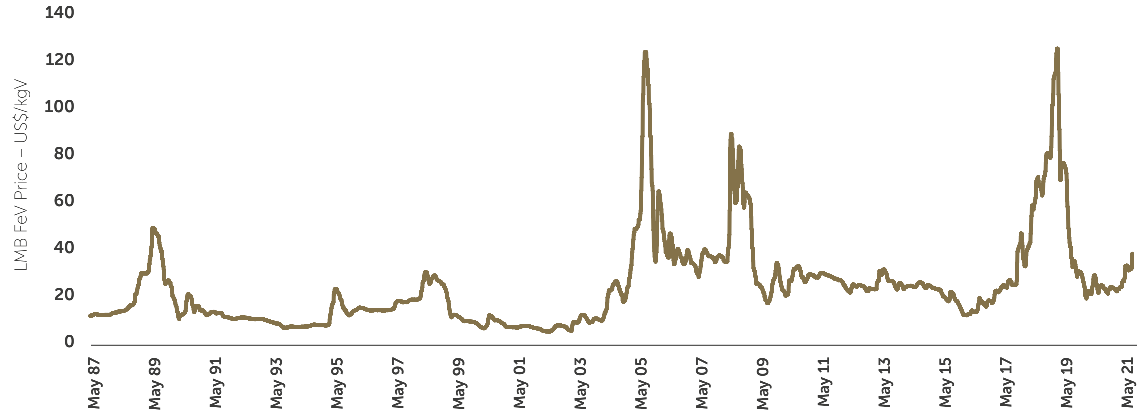
2020 Global Vanadium Production by Country



2020 Global Vanadium Production by Source



Ferrovanadium Price: May 1980 – May 2021
FeV historical average mid-price (US$/kgV)



Source: London Metal Bulletin, price as at 28 May 2021

the scope for further vanadium production growth from this source.

Outside China, production increases were recorded by primary producers in South Africa and Brazil. Stone coal production declined slightly year-on-year, as low prices disincentivised production. Although stone coal producers could be re-incentivised by higher prices, environmental, financial, and technical constraints remain.

Historically, vanadium supply and demand has relied upon steel supply and demand, respectively. The limited capacity of vanadium-producing steel plants has driven vanadium's price volatility. With growth in primary production of vanadium, the dependency of vanadium supply on co-production from steel is decreasing. The same trend would be likely to follow in vanadium demand, if new uses of vanadium continue to grow faster than steel demand, such as from energy storage.

Despite the significant increase in vanadium slag production, several efforts by the Chinese government to rationalise its steel industry and cut pollution may impose further constraints on vanadium co-production steel plants. Stone coal production, meanwhile, will continue to be limited by environmental restrictions. The result is a constrained growth outlook for Chinese vanadium production from co-producers, which are already operating at near capacity, and stone coal vanadium producers. The constraint is exacerbated by the ban on vanadium slag imports into China.

Secondary production is poised to increase supply in the medium term, as a result of the International Maritime Organisation ("IMO") 2020 regulations that require the use of more refining catalyst. However, it remains a higher-cost form of production than primary and co-production. The new supply could either displace the projects with weaker economics or create a larger and more durable surplus. Secondary production is limited, not by processing capacity, but by both the availability of the necessary feedstock and the high costs of production. Supply of secondary materials is derived mainly from spent catalysts associated with the processing of crude oils and oil sands, the manufacture of various acids, ash and residues from the combustion of oils and coals, and some residues from alumina production, particularly in India.

Supply growth can be considered across three categories: capacity expansions of current producers, re-starts of production plants that had been mothballed, and greenfield project development. Capacity expansions have the highest probability of realisation, with the lowest capital and quickest path to production. New greenfield projects face the most significant hurdles. Most of the recent greenfield projects announced for development are of a co-production or multi-commodities nature, suffer from relatively low grades and require significant capital and a relatively stable and higher price outlook than recent prices indicate.

Section 232 of the Trade Expansion Act of 1962, as amended (19 U.S.C. 1862)

Section 232 of the Act provides the President of the USA with the ability to impose restrictions on certain imports, "based on an affirmative determination by the Department of Commerce that the product(s) under investigation is imported into the United States in such quantities or under such circumstances as to threaten to impair the national security".

In November 2019, a petition was filed by two domestic vanadium producers (AMG Vanadium and U.S. Vanadium_LLC) alleging that vanadium is imported into the USA in quantities or under circumstances that threaten to impair national security. In May 2020, in response to the petition, Bushveld and a clear majority of other vanadium industry stakeholders responded in opposition to arguments that the national security of the USA is threatened by vanadium imports. They noted in particular that Nitrovan has been imported into the US in stable volumes over several decades, and in part highlighted that even the domestic USA producers of vanadium are non-integrated processors that actually import a significant portion of their feedstock. Bushveld Minerals' sales volume to the USA accounted for 34 per cent in 2020.

1 Source: Roskill Vanadium Outlook to 2030.

The US Commerce Department submitted the results of their investigation to the President in February 2021. Neither the headline findings nor the report itself have so far been made public.

By 22 June 2021, no official statement has been made by the President of the USA about the Section 232 investigation into vanadium imports. It is now being assumed that there will be no changes to the current situation regarding importation of vanadium into the USA.

Demand

Total vanadium demand is dominated by the steel industry, which accounted for 91 per cent of total demand in 2020[1] and will remain the largest source of vanadium demand in future.

Global vanadium consumption increased from 109,835 mtV in 2019 to 112,157 mtV in 2020[1], supported by increased infrastructure spending in China, which resulted in higher steel production, in turn supporting vanadium demand.

During the period, Bushveld took advantage of the robust vanadium demand and higher prices in China than in other jurisdictions by diverting a larger portion of its sales to China in H1 2020. The vanadium demand from the North American and European steel and aerospace industries declined during the period, due to the pandemic and associated plant shutdowns.

The increase in consumption was primarily driven by the Chinese Government's stimulus for infrastructure spending, as well as increased intensity of use of vanadium in steel, as enforcement of rebar standards improved during 2020. According to Roskill, vanadium demand in the steel market will grow at a CAGR of about 2.7 per cent through to 2030, with global vanadium demand from steel reaching approximately 136,000 tonnes by 2030.

Developed economies, such as Europe, Japan and North America, have a higher vanadium intensity than developing countries. China surpasses the world average in its intensity of use, supported by enhanced compliance on rebar standards.

While vanadium demand will be underwritten by the growing intensity of use of vanadium in the steel market, the energy storage industry offers significant demand upside.

An example is Nusaned Investment, a Saudi Arabian-based company that entered into a joint venture with Germany-based technology company, Schmid Group, to focus on manufacturing and technology development.

According to Roskill, vanadium demand from VRFBs will grow at a CAGR of approximately 56.7 per cent through to 2030[1]. Longer-term demand will be even greater. For example, the World Bank Group forecasts that by 2050 vanadium demand from energy storage alone could be twice as large as global vanadium production in 2018.

Market balance

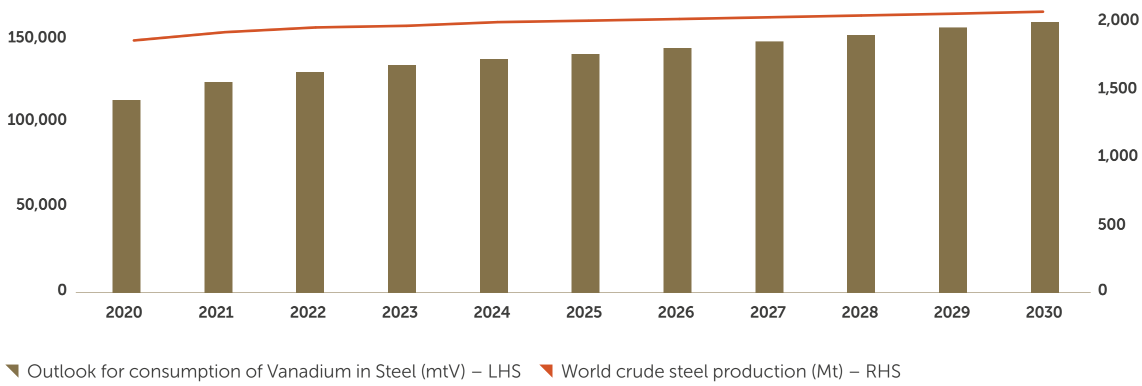
Supply and demand dynamics point to a structural net deficit. Supply is concentrated and constrained as:

- In China, capacity utilisation from slag producers was estimated at 80 to 90 per cent in 2020, with the top five producers operating close to full capacity. Russia was also operating close to full capacity, at approximately 90 per cent[1].
- The steel industry in China has been increasingly relying on imported iron ore, which is non-vanadium bearing.
- Over the longer term, Chinese vanadium production will be constrained by the decline in domestic iron ore supply and iron ore quality, coupled with environmental restrictions on steelmakers, co-product and stone coal vanadium producers, as well as the ban on vanadium slag imports.

Growing demand is underpinned by higher intensity of use of vanadium in steel. China will drive most of the increase. The growth in demand for vanadium will be impacted by demand for VRFB's and by how quickly non-Chinese global steel and alloy demand recovers.

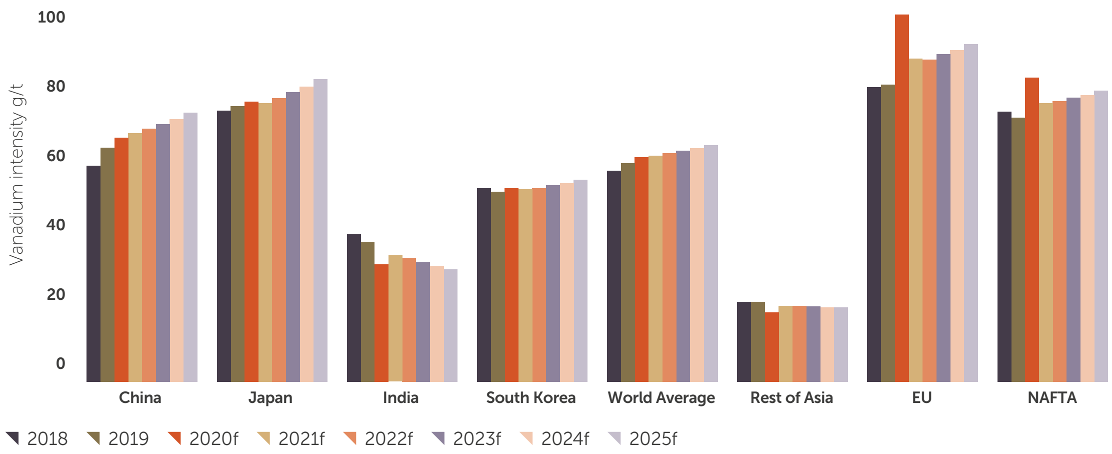
The vanadium market moved into a short-term surplus in 2020, as ex-China steel mill shutdowns continued due to the COVID-19 pandemic. Roskill expects the market will move into a deficit from 2021 to 2023, followed by a surplus from 2024. The market will revert to a deficit from

Word Crude Steel Production and Consumption of Vanadium in Steel



Source: Roskill, Vanadium: Outlook 2030, World Steel Association

Vanadium Intensity of Use (2018-2025)



Source: Fastmarkets 2020.
Source: Roskill, Vanadium: Outlook 2029.

2029. Roskill takes the assumption that all new projects announced will come into production

Roskill has revised upwards its forecast for vanadium consumption in energy storage through VRFBs upwards. It forecasts growth in demand between 2020 and 2030 from 163 mtV to 14,585 mtV.

Vanadium price

2020 was characterised by the divergence in economic performance and steel production between China and the rest of the world, respectively depicting strong growth and strong decline. This was reflected in the vanadium market, with increased imports in China that built a Chinese price premium.

The robust vanadium demand and rising prices seen at the end of 2020 continued in 2021, across all key markets. The recovery was driven by higher steel mill capacity utilisation rates and low warehouse stocks. The vanadium price has continued to rise, with increased demand in Europe and the US. We expect prices to be stable for the remainder of 2021.

Outlook

H1 2021 benefited from global demand recovery, which is expected to gain momentum in H2 2021. This is because Chinese economy remained robust and economic recovery took hold in other countries around the world.

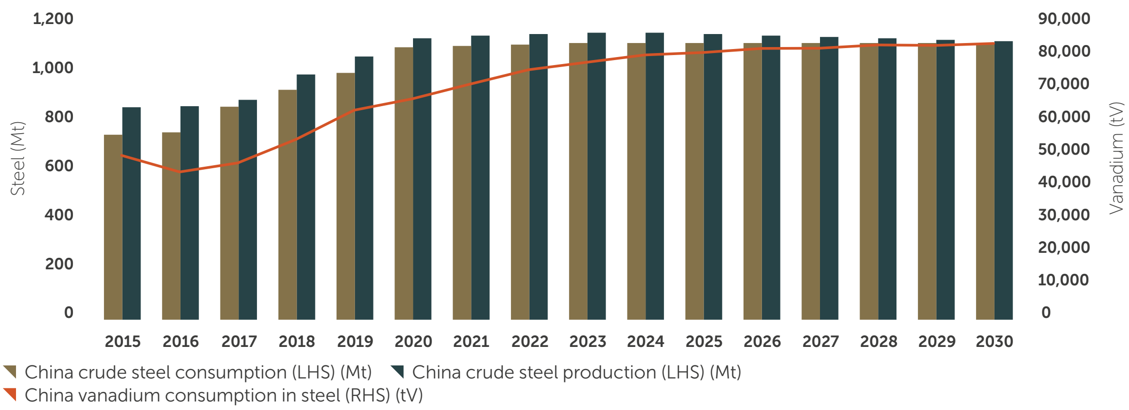
Vanadium prices have recovered and should remain firm as long as the economic recovery persists. Governments around the world have announced different measures to revive their economies after the impact of COVID-19, and, with vaccine availability and widespread distribution, the global economy is expected to recover.

The potential headwinds are:

- Easing of stimulus in China, which may reduce Chinese vanadium consumption.
- Setbacks in the global recovery from COVID-19, as new variants are seen across the globe.

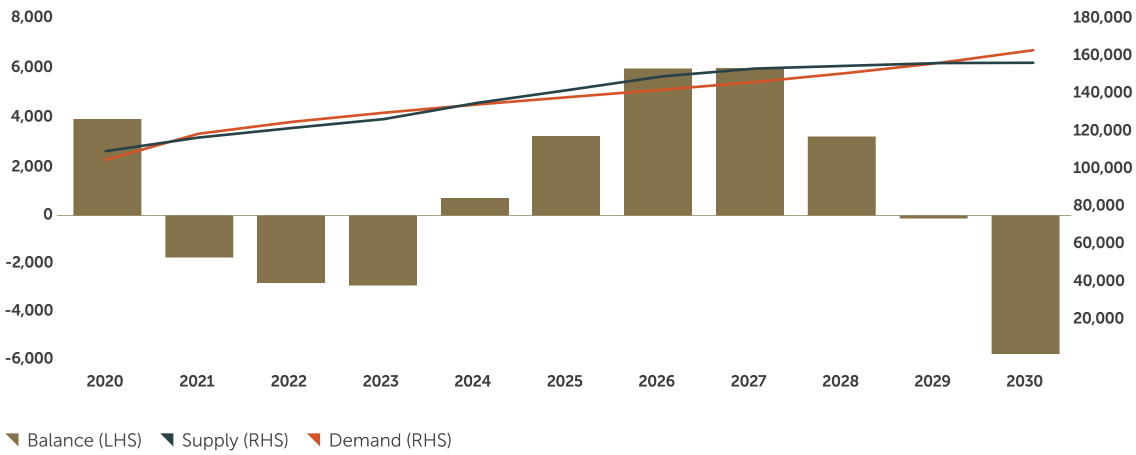
Demand for VRFBs is expected to increase, based on a higher number of installations in 2020, as well as in 2021, and announced projects for the rest of the decade. This translates into a higher gigawatt/h (GWh) forecast and higher vanadium demand.

China Crude Steel and Vanadium Consumption



Source: Roskill, Vanadium: Outlook 2030

Vanadium Market Balance (mtV)



Source: Roskill Vanadium Outlook to 2030

We retain the view that supply remains concentrated and constrained. Limited new supply is expected from greenfield projects and co-production is still primarily driven by steel and iron ore fundamentals.

With record steel production and iron ore prices close to their all-time high, China's slag producers are forecast to have increased their output by about nine per cent in 2020. Although the high iron ore price provides an incentive for steel mills to use more domestic vanadium titaniferous magnetite ore, Chinese co-producers are operating close to capacity, so their ability to produce more vanadium is restricted.

In addition, several efforts by the Chinese government to cut pollution may impose further constraints on vanadium co-production steel plants. These initiatives include the reduction of excess steelmaking capacity targeting highly-polluting, high-cost plants, and the conversion of blast furnace operations to electric arc furnace technologies, which will increase the role of scrap iron in steel making and reduce the overall demand for iron ore.

Declining domestic iron ore supply, due to quality, along with environmental restrictions on both steelmakers and co-production vanadium producers, can be expected to see a greater reliance on haematite (non-vanadium bearing) iron ore for steel making among co-producers, which will limit vanadium slag production growth.

A green commodity for the future

Vanadium's benefits to a greener society include its contributions as an alloy in high-strength, low-alloy steels, primarily used in construction. A recent study quantified this benefit as equivalent to the annual CO_2 production of the Philippines or annually "planting approximately 260 million trees."[4]. Its use as the critical mineral in VRFBs further positions vanadium as a green commodity for the future.

In the aerospace sector, vanadium has long been the material used to ensure low density, high strength, and the ability to maintain strength at high operating temperatures which is essential in aero-engine gas turbines and airframes.

Development of new titanium alloys continues and grades containing 8, 10 and 15 per cent vanadium have even higher strengths. They have the potential to make important contributions to weight reduction and fuel efficiency in the aircraft of the future.

One of the key green applications of vanadium, with even more potential future upside, given the energy transition, is in VRFBs used for grid energy storage. VRFBs are safe and have a long lifespans, enabling them to repeatedly charge/discharge over 35,000 times for a lifespan of over 20 years.

Bushveld Minerals is building its own VRFB solar mini-grid at the Vametco mine. This will decrease the Company's carbon footprint, as it will reduce CO_2 emissions by more than 5,700 metric tonnes per year (and nearly 114,000 tonnes of CO_2 over the life of the project).

Sources:

1. Roskill, Vanadium Outlook to 2030.
2. World Steel Association
3. Bloomberg, December 2020, May 2021.
4. Texas A&M study
5. Section 232 Investigations: Overview and Issues for Congress, Congressional Research Service,

Energy Storage Overview

The energy sector is undergoing a fundamental transition, both in the extent of electrification and the advent of renewable energy. Electricity's share of global energy consumption has doubled from 10 per cent in 1980 to 20 per cent today. It is expected to exceed 40 per cent by 2050[1]. At the same time, renewable energy is displacing fossil fuels in energy generation. These two changes have enormous implications, not only for global energy production, but for all minerals involved in the electricity value chain.

Electricity is much more difficult to "store" than other sources of energy. On top of that, the variability of renewable energy sources further exacerbates the daily misalignment between when electricity produced and consumed. Both trends increase the need for stationary storage, including large batteries. Energy storage, especially long-duration storage (four or more hours per day), is essential to support the growth in electricity demand while enabling the energy transition to a carbon neutral world.

According to Bloomberg New Energy Finance, global stationary energy storage installations will grow 122-fold from 2018 to 2040, rising from 17 GWh to 2,850 GWh by 2040. In the shorter term, according to Guidehouse Insights, formerly Navigant Research, the market will reach US$50 billion in annual value by 2027.

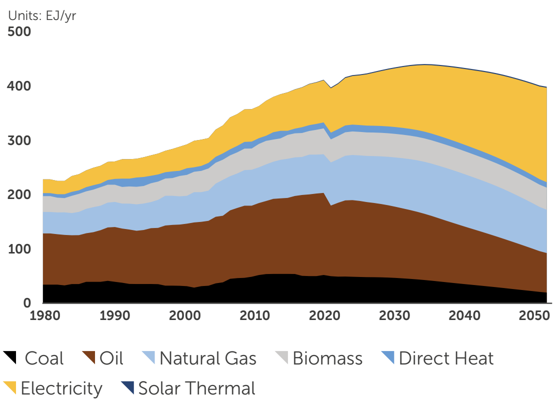
Unsurprisingly, investment into battery technologies is also accelerating, with Mercom reporting that in 2020 corporate funding of battery storage companies reached US$6.6 billion compared with US$2.8 billion in 2019, almost a 250 per cent increase. The trend accelerated in Q1 2021, with corporate funding of battery storage companies reaching US$4.7 billion in the quarter compared with just US$244 million in Q1 2020.

Bushveld Energy participates in the global value chain for energy storage through the supply of vanadium mined by the Group, electrolyte that will be produced by the Group and investment in battery companies and manufacturing. In addition, Bushveld has a deployment business that focuses on the African market, which is traditionally under-served but offers immense growth potential.

South Africa is an excellent example of that growth:
- In 2020, South Africa was the sixth-largest market for residential energy storage, with 185 MWh of deployments, according to IHS Markit. It ranked behind Italy and ahead of the United Kingdom.
- According to Bushveld's own analysis, South Africa may be one of the top-five utility energy storage markets in 2022.

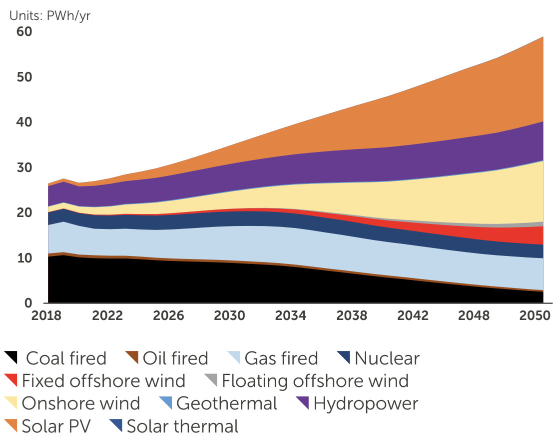
Over 1,440 MW of utility procurement has already been announced, including;
- 350 MW from the first phase of the World Bank-funded Eskom battery procurement programme (already tendered).
- 578 MW from storage co-located with renewable energy in seven awarded projects in H1 2021, under South Africa's Risk Mitigation Independent Power Procurement ("RMIPP") round.
- 513 MW in new tenders announced by the Department of Mineral Resources and Energy for H2 2021 that are included in the South African Government's Integrated Resource Plan.
- Within the roughly 8,000 MW global forecast from Guidehouse Insights for 2022 for utility scale storage, South Africa is poised to account for approximately 15 per cent.

World Energy Demand by Carrier



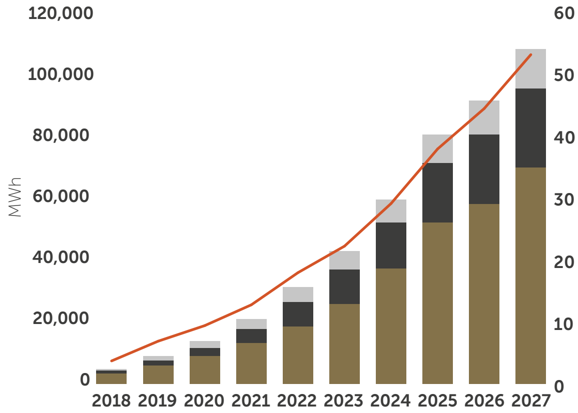
Source: DNV GL Energy Transition Outlook 2020, IEA 2019

World Electricity Generation by Power Station Type



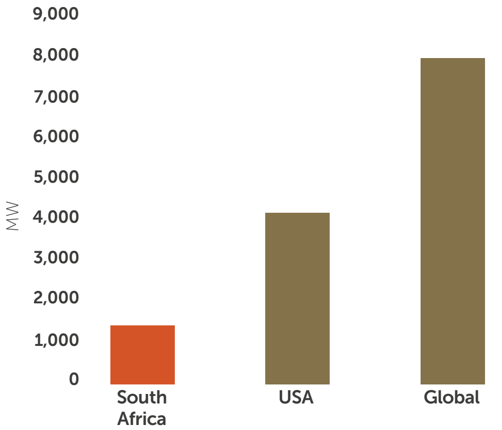
Source: DNV GL Energy Transition Outlook 2020, IEA 2019

Annual Installed Stationary Energy Storage Capacity and Deployment Revenue by Market Segment



Source: Guidehouse Insights

Forecast 2022 Utility-Scale Installations



Source: USA forecast from Wood Mackenzie P&R/ESA US energy storage monitor 2020 year in review; Global forecast from Guidehouse Insights; South Africa forecast based on Bushveld Energy analysis

Vanadium Redox Flow Batteries ("VRFBs")

VRFBs are well-positioned to take a significant share of the stationary energy storage market, owing to unique advantages for long-duration stationary energy storage applications.

Advantageous features of VRFBs include:

- **Long lifespan cycles:** the ability to repeatedly charge/discharge more than 35,000 times for a lifespan of over 20 years.
- **100 per cent depth of discharge** without material performance degradation is unique to VRFBs.
- **Low cost per kWh** when fully used at least once daily.
- **Safety:** no fire or smoke risk from thermal runaway.
- **Sustainability:** a 30 per cent lower carbon footprint than li-ion batteries. Vanadium is re-usable on decommissioning of a system.
- **Flexibility** that allows for capturing the multi-stacked values of energy storage in grid applications.
- **No cross-contamination**, since there is only one battery element, unique among flow batteries.

The lack of degradation of the electrolyte, as well as the simple architecture of the VRFB that allows electrolyte to be removed and re-used, creates an opportunity to devise innovative financial solutions such as electrolyte rental.

These solutions will accelerate VRFB adoption by reducing the upfront capital costs, while creating new economic opportunities for vanadium producers.

Advancement of VRFB market and outlook

In 2020, VRFBs deployments increased and the supply chain continued to mature. Specific examples included:

- 51 MWh VRFB awarded to Sumitomo in Japan, 400 MWh VRFB project announced by Shanghai Electric in China, and, in early 2021, a 500 MWh project announced by VRB Energy, also in China.
- Announcement of giga factories for VRFB production in China by Shanghai Electric and in Saudi Arabia by Schmid and Nusaned, part of the Saudi Aramco group.
- Large, multinational power companies, such as EDF and Enel, started deploying VRFB technology in Europe in 2020. More recently, Siemens Gamesa announced a joint development agreement for VRFBs with Invinity Energy Systems in Q2 2021.

Demand from VRFBs is set to grow further as governments focus on accelerating the energy transition to zero-carbon resources.

Sources:
1. DNV GL Energy Transition Outlook 2020

Overview of Vanadium Redox Flow Battery Technology

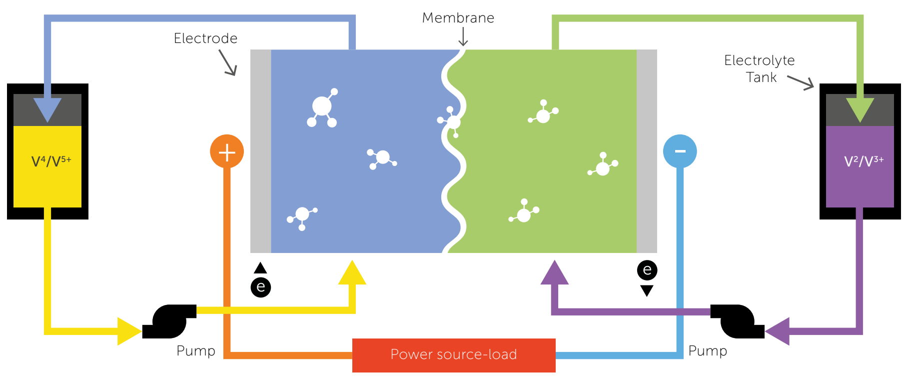


Illustration: Bushveld Energy

Bushveld Minerals' strategy

Build a sustainable, cash-generating, low-cost production platform, comprising:

- high-grade, open-cast and low-cost primary vanadium mines; and
- refurbished scalable brownfield processing facilities

Health & Safety and Stakeholder Engagement

Financial

Use our large, low-cost production platform to build a leading downstream vanadium-based energy storage platform, creating value as a manufacturer of electrolyte, investor and a project developer across the Vanadium Redox Flow Battery ("VRFB") value chain.

Operational

Performance versus 2020 objectives	2021 objectives
• Reported zero fatalities, no lost-time injuries and no new cases of occupational health diseases.	• Zero harm: the health, safety and well-being of our employees, as always, is a key priority. • Maintain the necessary safety measures required in a COVID-19 constrained environment, while ensuring minimal disruption to the operations. • Strengthen relations with labour and communities. • Continue to build operational capacity, financial resources, the operating model, and business processes and systems.
• US$50.5 million cash and cash equivalents held at 31 December 2020 (2019: US$34.0 million). • Revenue of US$90.0 million, a 23 per cent reduction relative to 2019 (2019: US$116.5 million) as a result of a 52 per cent decline in the average realised price, partly offset by an increase in sales. • EBITDA loss of US$14.9 million, the decrease relative to 2019 (2019: US$32.6 million) is due to a decline in the vanadium prices. • Completed and drew down the US$65 million financing package with Orion Mine Finance to fund mining projects as well as to partially retire existing debt facilities. • Early settlement of Duferco Participations Holding S.A.'s convertible loan notes, with partial repayment of US$11.5 million of the US$23 million of notes held.	• Strengthen the Company's balance sheet and increase cash flow through margin expansion and debt reduction. • Implement the Group's Cost Savings Programme to cut costs by between US$2.5 million to US$4 million starting from 2022.
• Annual production of 3,631 mtV, 24 per cent higher than 2019 (2019: 2,931 mtV), primarily as a result of the inclusion of Vanchem's production, despite 380 mtV of production lost due to the nationwide lockdown. • Annual sales of 3,842 mtV, 61 per cent higher than 2019 (2019: 2,392 mtV), as a result of the contribution of sales volumes from Vanchem as well as increased demand from existing customers. • Sales to China contributed 23 per cent of total volumes sold, compared with nine per cent in 2019.	• Improve operational stability in H2 2021 and continue to implement synergies across Vametco and Vanchem. • Complete technical studies at Vametco and Vanchem, in order to identify an optimal growth path. • Optimise production flexibility between Vametco and Vanchem. • Identify and implement cost reduction initiatives. • Achieve benefits of centralised procurement activities.
• Established Bushveld Electrolyte Company as the operating entity for the electrolyte business and completed the engineering phase. • Signed an electrolyte rental contract between Pivot Power, part of EDF Renewables, and Vanadium Electrolyte Rental Limited, a joint venture established in 2020. • Successfully completed investments in VRFB Original Equipment Manufacturers Invinity Energy Systems plc and Cellcube.	• Progress construction of the electrolyte plant, with an initial 200 MWh capacity. • Scale up the vanadium electrolyte rental product with new contracts. • Support and fund the growth of Cellcube, together with the other shareholders. • Attain financial close and commence construction of the Vametco hybrid mini-grid. • Participate in large, upcoming battery energy storage tenders in South Africa. • Develop self-generation options for all Bushveld's existing and future electricity needs.

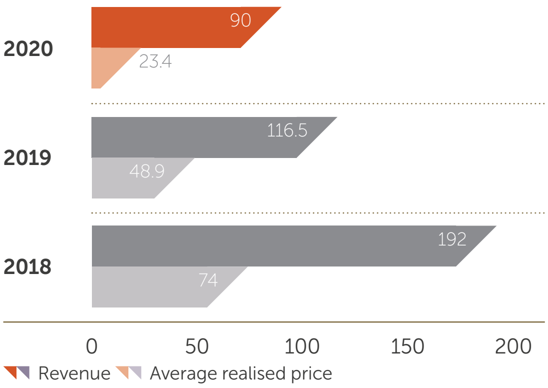
Group 3-year Performance Indicators

Despite the 24 per cent increase in production and the 78 per cent increase in sales, Group performance was impacted by the lower vanadium price.

Revenue versus average realised price

Revenue decline of 23 per cent in 2020 relative to 2019 as a result of the 52 per cent reduction in the average realised price, partially offset by a 24 per cent increase in Group production.

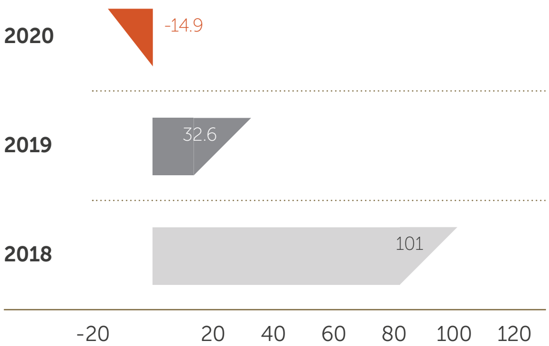
Revenue (US$ millions)/average realised price US$/kgV



EBITDA KPI

EBITDA loss of US$14.9 million in 2020, the decrease relative to 2019 is primarily due to the decline in the vanadium price.

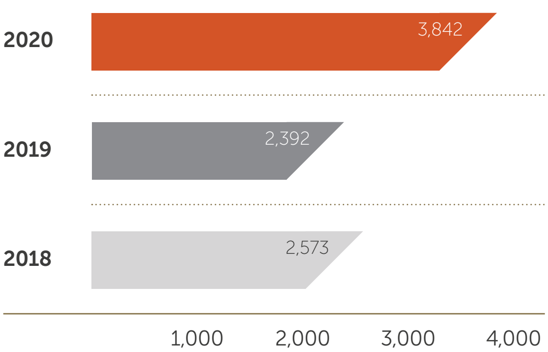
EBITDA (US$ millions)



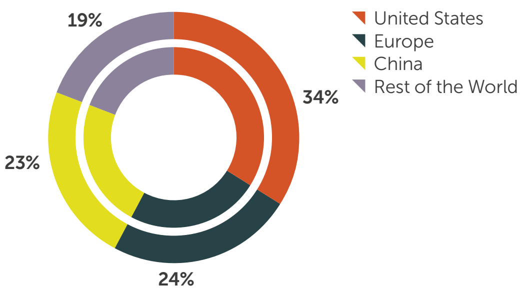
Sales

61 per cent increase in 2020 sales volume relative to 2019, as a result of sales from Vanchem, as well as increased demand from China during H2 2020.

Sales (mtV)



Group sales by region %

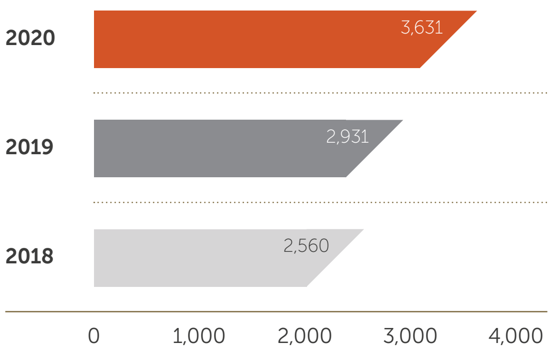


KPI Group's key performance indicators

Production KPI

24 per cent increase in 2020 Group production compared with 2019, primarily as a result of the inclusion of Vanchem, despite 380 mtV of production lost due to the COVID-19 nationwide lockdown.

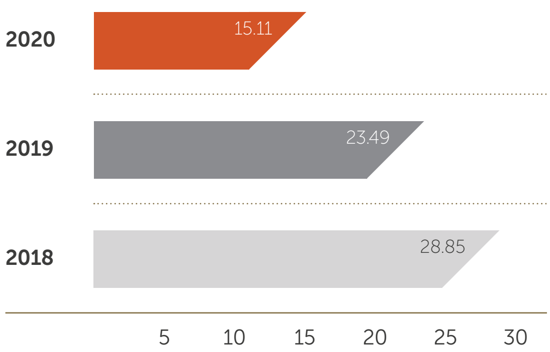
Production (mtV)



Total Injury Frequency rate ("TIFR")

TIFR was 15.11. Vametco achieved a TIFR of 18.21 representing an improvement of 22 per cent relative to 2019. Vanchem's 2020 TIFR was 5.26.

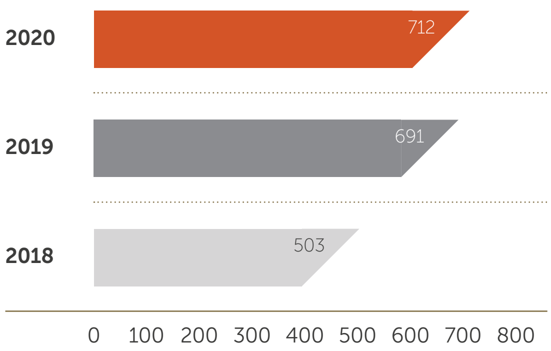
Group Total Injury Frequency Rate



Employees

Bushveld employed 712 people.

Number of employees



KPI Group's key performance indicators

Ensuring Financial Reliance in Market Downturn

Overview

The 2020 financial year was a difficult year operationally due to the impact of the COVID-19 pandemic, which resulted in 380 mtV in lost production, as well as additional costs associated with adapting our work practices to ensure our workplaces were safe for us to continue to operate, following the nationwide lockdown.

Group production nevertheless increased by 24 per cent to 3,631 mtV, as Vanchem operated for a full 12 months under the Bushveld Group umbrella, underscoring the importance of our acquisition. Group sales increased by 61 per cent to 3,842 mtV, despite the logistical challenges resulting from COVID-19. This was a significant achievement, which also reflects the inclusion of Vanchem's sales for the full financial year, and increased customer demand in H2 2020.

Group	Unit	2020	2020 vs 2019
Sales	mtV	3,842	61%
Average realised price	US$/kgV	23.4	-52%

The financial benefits of this performance were significantly diluted by market factors, as the decline in vanadium prices experienced in the second half of 2019 persisted throughout 2020. Year-on-year, realised prices declined by approximately 52 per cent, consequently eroding Group profitability and cashflow.

The Group reported revenue of US$90 million (2019: US$116.5 million), and an Earnings Before Interest, Tax, Depreciation and Amortisation ("EBITDA") loss of US$14.9 million (2019: EBITDA of US$32.6 million).

The Group put in place several measures to conserve cash and protect the balance sheet in light of the uncertain operating environment. We scaled back on our planned capital expenditure, optimising our capital allocation process to preserve cash. From a cost perspective, we continued to focus on cost containment even as we integrated the two operations. We expect to realise synergies in areas such as the shared procurement platform we established, as we progress. The Group's focus on cost containment and the early wins achieved are illustrated later in this report under the Cost of sales section.

Administrative expenses were reduced by US$4.9 million to US$19.8 million (2019: US$24.7 million) as a result of cash-preservation measures implemented by the Group. These costs are further analysed in the administration cost section. Net cash from operating activities was an outflow of US$17.1 million (2019: US$28.5 million), mainly driven by the decline in price.

Despite uncertain market conditions, we successfully secured US$65 million of funding from the mining-focused investment business, Orion Mine Finance ("Orion"). The Group ended the year with a strong cash balance of US$50.5 million (2019: US$34.0 million).

Orion: US$65 million financing package

In November 2020, the Company announced that it had successfully completed and drawn down on a US$65 million financing package from Orion. The funding comprised a US$30 million Production Financing Agreement and a US$35 million convertible loan note. Part of the proceeds were used to retire the Nedbank ZAR250 million term loan, repay US$5 million of the Duferco loan notes, plus interest of US$1.28 million, as well as to fund capital projects in Bushveld Vanadium.

Analysis of results

Income statement summary as adjusted from "statutory" primary statement presentation.

	US$ 2020	US$ 2019
Revenue	89,988,078	116,514,112
Cost of sales	(73,394,608)	(45,819,774)
Other operating and administration costs	(31,534,410)	(38,061,382)
EBITDA	**(14,940,940)**	**32,641,956**
Depreciation	(17,866,153)	(10,388,145)
Operating (loss)/profit	(32,807,093)	22,253,811
Gain on bargain purchase – Vanchem	–	60,586,633
Net financing expense	(4,654,258)	1,923,687
Other non-operating costs	(206,066)	(1,510,572)
Profit before tax	(37,667,417)	83,253,558
Income tax charge	484,654	(14,005,965)
Profit after tax	(37,182,763)	69,247,593

Revenue

Revenue for the Group was US$90.0 million (2019: US$116.5 million). Group sales in 2020 amounted to 3,842 mtV at an average price of US$23.4/kgV and an average exchange rate of ZAR16.46 to the US dollar (2019: 2,392 mtV, average price US$48.7/kgV, average exchange rate of ZAR14.5 US dollar). The geographic split of Group sales in 2020 was 34 per cent to the United States, 24 per cent to Europe, 23 per cent to China and 19 per cent to the rest of the world. Sales to China in 2020 were significantly higher than the nine per cent share of total sales achieved in 2019, in line with our strategy of creating sufficient flexibility in the business to enable the Group to increase sales to higher-priced regions.

Cost of sales

The cost of sales excluding depreciation for the period was US$73.4 million (2019: US$45.8 million). The increase is partially attributable to the inclusion of Vanchem for the full financial year as well as increase in areas such as energy and maintenance costs at Vametco.

The material cost benefits of increasing production are illustrated in the table below, which shows that our strategy of growing production through the acquisition of Vanchem and increasing its production has resulted in a lower Group cost of US$29/kgV (including sustaining capital) relative to 2019 (2019: US$37/kgV) as a result of the dilution of fixed costs. The effects of the bargain purchase of US$60.6 million have been excluded from the calculation below as it is a once off in nature and did not contribute cash to the bottom line performance of the business in 2019. We expect to see continued cost-reductions as the Group continues to embed synergies across Vametco and Vanchem and grow production organically.

	2020	2019
Total Cost		
Cost of sales (direct)	(73,394,608)	(45,810,774)
Operating costs and admin	(31,534,410)	(38,061,382)
Other non-operating costs	(206,066)	(1,510,572)
Total income statement cost excl. depreciation	(105,135,084)	(85,382,727)
Total units sold	3,842	2,392
Cost income statement per unit produced (excl. depreciation) US$/kgV	27	36
Sustaining capital	(5,375,610)	(3,652,977)
Total cost including sustaining capital	(110,510,694)	(89,035,704)
Cost per unit sold including sustaining capital US$/kgV	29	37
Total revenue		
Revenue	89,988,078	116,514,112
Average price realised US$/kgV	23	49

Cost-saving initiative

To ensure that Bushveld Minerals remains competitive at a lower vanadium price and reaps the benefits of a higher commodity price, the Group has introduced a cost-savings programme ("CSP"). The CSP is aimed at ensuring continued competitiveness throughout the commodity-cycle, while enhancing the offering to markets across all the industries in which we compete. We are targeting cost-saving initiatives across the Group, with procurement as the first priority. Our objective is to cut costs by approximately US$2.5 million to US$4 million per year, starting from 2022.

Other operating and administration costs

Other mine operating costs included community, social and labour plan costs at Vametco and Vanchem. Even though the Group as a whole was not profitable, mainly driven by the poor vanadium price, the Group still maintain its social commitments and obligations.

The idle plant costs of US$4.2 million (2019:US$2.9 million) mainly reflects the 21-day shutdown, as a result of the South African COVID-19 nationwide lockdown during the first half of 2020.

Group administrative expenses reduced by US$4.9 million to US$19.8 million (2019: US$24.7 million), due to our effective cost-control measures. The overall effectiveness of the containment can also be noted with the full year of administrative costs associated with the Vanchem site fully absorbed whilst still delivering a reduction in the administrative costs when compared to 2019.

Administrative expenses included staff salaries of US$8.1 million (2019: US$9.6 million) for both the operations and head office administration and management staff. Since the costs are not directly attributable to the cost of production, they are recoded under administrative expenditure based on industry practice. The operation salaries amounted to US$4.7 million (2019: US$5.7 million), whilst the shared service and change to head office division (including directors fees), amounted to US$3.5 million (2019: US$3.8 million). The reduction in overall salary costs was as a result of one-off costs incurred in 2019 associated with Vametco legacy staff offset by a slight ramp up in staff costs for Vanchem and capacity building of the Shared Service departments professional fees of US$6 million (2019: US$7.6 million), are mainly attributable to the costs associated with the Orion transaction as well as other Bushveld Energy corporate development initiative such as Invinity and Cellcube that were implemented in the year.

Continues >

Other costs incurred related to additional overheads on establishing the Vanchem administrative departments as well as the general security and maintenance of the sites.

The EBITDA reconciliation shown below illustrates the impact of the decline in the vanadium price from the prior year. Operating costs increased due to the Vanchem operations running for the full year, this was offset by a declined in the mineral royalty payable relative to sales prices. The royalties are paid by Vametco at the Unrefined Rate of 0.5 + { EBIT / (Gross Sales x 9) } x 100 with a seven per cent maximum royalty percentage payable on unrefined minerals.

	US$
2019 EBITDA	32,641,956
Revenue changes	(26,526,033)
Operating cost changes	(30,029,571)
Inventory movement	8,972,708
2020 EBITDA	(14,940,940)

Balance sheet

Assets

Total current assets increased during the year as a result of the increase in value of financial assets US$22.4 million (2019 US$1.9 million) which related to the investments made in Invinity Energy Systems ("Invinity") and Cellcube. Refer to note 21 of the financial statements for further detail. The other material increase was as a result of the Group cash and cash equivalents of US$50.5 million (2019: US$34.0 million) due to the Orion financing package offset by the settlement of the Nedbank term debts as well as other borrowing obligations.

Non-current assets related to intangibles and property, plant and equipment remained consistent to the prior year and changes were mainly as a result of depreciation in the year. A deferred tax asset was raised for the assessed loss incurred during the year, (refer to note 16 for further details).

Equity and liabilities

Total current and non-current liabilities increased by US$48.2 million due to the Orion production financing agreement and convertible loan notes, offset by the repayment of the Nedbank term loan. The trade and other payable also contributed to the increase as a result of Vanchem coming online for the full year and the additional trade balance required as a result.

The share capital balance also increased as a result of the Duferco convertible loan note which was exercised at the end of the financial year.

Net debt

The net debt reconciliation below outlines the Group's total debt and cash position.

	2020 US$	2019 US$
Gross Cash and Cash Equivalent	50,540,672	34,011,557
Nedbank Term Loan and Revolving Credit Facility	(8,636,535)	(18,071,342)
Convertible Loan Notes – Duferco	(11,585,068)	(23,173,288)
Production Financing Agreement – Orion Mine Finance	(30,105,886)	–
Convertible Loan Notes Instrument – Orion Mine Finance	(33,706,104)	–
Other	(845,588)	(511,522)
Net Debt	(33,706,104)	(7,744,595)

Cash flows

Net cash outflow from operating activities for the year were (US$17.1 million), a decrease of US$45.6 million compared with 2019, driven by reduced profitability on the back of sustained low vanadium prices. Capital expenditure and investing activities for the year were US$13.3 million, a decrease of US$36.4 million from 2019 mainly due to the cash preservation measures implemented during the year.

Cash generation

The table below summarises the main components of cash flow during the year.

	US$ 2020	US$ 2019
Operating (loss)/profit	(32,807,093)	22,253,811
Depreciation and amortisation	17,866,153	10,388,145
Changes in working capital and provisions	1,253,029	4,586,737
Taxes paid	(3,452,492)	(8,767,312)
Cash flow from operations	(17,140,404)	28,461,381
Sustaining capital	(5,375,610)	(3,652,977)
Free cashflow	(22,516,014)	24,808,404
Cash from other investing activities	(7,943,222)	(46,077,866)
Financing activities	47,433,269	13,287,374
Cash (outflow)/inflow	16,974,034	(7,982,088)
Opening net cashflow	34,011,557	42,019,123
Foreign exchange movement	(444,919)	(25,478)
Closing net cash	**50,540,672**	**34,011,557**

"We will continue to prioritise financial stability through cost containment, conserving cash and adhering to a clear capital allocation framework, to ensure the Group's resilience through the operating cycle.

Investing activities

Investing activities were driven by capital expenditure growth with property plant and equipment expenditure of US$3.9 million, as well as a payment made for the deferred consideration owed to Evraz of US$1.7 million. Investment in Cellcube of US$1.9 million, and US$1.5 million spent on intangibles. The costs were offset by finance income to the tune of US$1 million for the year.

Financing activities

Financing activities of US$47.4 million include the US$65 million Orion financing package and approximately US$8 million from the Nedbank revolving credit facility. This was partially offset by the US$5 million repayment of the US$23 million unsecured convertible note held by Duferco plus interest of US$1.28 million in cash. The balance of US$6.5 million which was also due for repayment was settled by the issue of 37,115,210 new Bushveld shares. The Nedbank term loan of ZAR250 million (approximately US$17 million) was also fully retired.

Financial risk management

The main financial risks faced by the Group relate to the availability of funds to meet business needs (liquidity risk), the risk of default by counterparties to financial transactions (credit risk), fluctuations in interest and foreign exchange rates and commodity prices. These factors are more fully outlined in the notes to the accounts. There are important aspects to consider when addressing the Group's going concern status, particularly in the context of the COVID-19 pandemic. We are proactively managing the risks within our control. There are, however, factors which are outside the control of management, specifically volatility in the ZAR:USD exchange rate as well as the vanadium price, which we do not currently hedge and which can have a significant impact on the Business.

Going concern and outlook

We manage liquidity risk by ensuring that the Group has sufficient funds for all ongoing operations. Our philosophy is to maintain a low level of financial gearing, given exposure to the vanadium price and exchange rate fluctuations.

As part of the annual budgeting and long-term planning process, the Group's budget and cashflow forecasting is reviewed and approved by the Board. The forecast is amended in line with any material changes identified during the year. Equally, where funding requirements are identified from the cashflow forecast, appropriate measures are taken to ensure these requirements can be satisfied. In particular, a capital allocation framework is applied which prioritises maintenance, critical and regulatory capital funding requirements.

We also closely monitor liquidity risk. We regularly produce cash forecasts and analyse sensitivities to different scenarios, including, but not limited to, changes in commodity prices and different production profiles from the Group's producing assets.

The Nedbank debt facility available to Vametco is subject to financial covenants which are EBITDA-driven. After year-end, in light of the weak vanadium price during H2 2020 and the low production volumes now expected for H1 2021, as a result of the 35-day maintenance shutdown and the unprotected industrial action at Vametco, we proactively engaged Nedbank. This enabled us to successfully renegotiate the covenant testing terms required under the ZAR125 million Revolving Credit Facility ("RCF"). Nedbank has agreed to waive the covenants for the June 2021 period and relax the December 2021 Group net debt to EBITDA ratio from 2.50 times to 4.0 times. A condition of the waiver is that the RCF is amortised by ZAR5 million (approximately US$0.3 million) per month from 6 August 2021, with a bullet payment of ZAR50 million US$3.4 million) due on the maturity date of 6 November 2022.

Since year-end, renegotiations of the Duferco convertible balance of US$11.5 million have been positive and near conclusion. This would result in US$5 million being payable in November 2021 and the remaining US$6.5 million being converted into Bushveld shares.

Post year end, the investment in Invinity was realised, resulting in capital appreciation of some 160 per cent. The proceeds of the sale were used towards Bushveld Energy's 2021 projects, including its investment in Cellcube, as explained in the CEO's Review.

As mentioned in the CEO Review, we are evaluating the Group's growth-production sequencing and funding requirements for all operations in order to determine the ideal production sequencing to achieve our targets. Details on the Group's production path and funding will be provided on completion of the technical studies currently underway at Vametco and Vanchem.

Although the start of the 2021 financial year has been challenging, we are encouraged by the positive production run rate at Vametco post-maintenance and by the upward vanadium pricing trajectory that we have seen to date.

Vanchem is expected to make EBITDA losses for the rest of the year, but this situation is expected to reverse after the growth in capital spending, as it will enable Vanchem to ramp up production to a sustainable steady state production run rate of approximatively 2,600 mtVp.a. by the end of 2022. Beyond 2021, the Group is expected to benefit from the synergies of running both operations, as the combined production from Vametco and Vanchem will contribute to the Group's fixed costs.

Looking forward, we will continue to prudently manage costs and conserve cash, as long as uncertainty lingers over the global health and possible economic consequences of COVID-19, even though COVID-19 vaccine programmes are being implemented globally.

The vanadium price was impacted in 2020 by lower global demand due to the COVID-19 pandemic. Prices have significantly improved from their lows of 2020 and are currently trading above US$40/kgV, supported by various fiscal stimulus measures, which are expected to drive demand for raw materials.

We will continue to prioritise financial stability through cost containment, conserving cash and adhering to a clear capital allocation framework, to ensure the Group's resilience through the operating cycle.

Tanya Chikanza
Finance Director
29 June 2021

Details of Operating Assets and Operational Review

Bushveld owns one of the largest, high-grade primary vanadium resource bases in the world, with all of its assets situated in South Africa. The Company's vanadium resource comprises three mineral assets: the Vametco mine, Brits resource and the Mokopane project. The Group's principal vanadium processing facilities are the Vametco processing plant ("Vametco"), in which the Company first acquired an interest in April 2017, and the Vanchem plant ("Vanchem"), a primary vanadium-producing facility with a beneficiation plant capable of producing various vanadium oxides, ferrovanadium and vanadium chemicals, acquired in November 2019.

The Company plans to achieve a steady state production run rate of between 5,000 mtVp.a. and 5,400 mtVp.a. by the end of 2022, from the projects currently being executed such as the Vanchem kiln 3 refurbishment (Phase1). Futhermore, studies are under way to determine the optimal path to increase production to a steady state production run rate of between 6,400 mtVp.a. and 6,800 mtVp.a. in the medium-term and to a steady state production run rate of 8,400 mtVp.a. in the long-term.

Vametco

Vametco is an integrated mining and processing plant located eight kilometres north-east of Brits in the North West Province of South Africa. The operation owns the new order mining right for vanadium and other associated minerals over a portion of the remaining extent of Portion 1 of the farm Uitvalgrond 431 JQ and Portion 1 of the farm Krokodilkraal 426 JQ in Brits. Vametco operates an open-pit mine supplying ore to a vanadium processing plant located on the same properties.

Mine

Vametco's open pit mine is approximately 3.5 kilometres long, extending in a west-east direction. The ore body is well-defined, continuous and dips in a north-east direction at approximately 19 to 20 degrees. The mine is based on a JORC-compliant resource of 184.2 Mt, including 46.4 Mt reserves, with in-magnetite vanadium grades averaging approximately 2.0 per cent V_2O_5, with a life of mine of more than 30 years.

Processing

Vametco's processing plant receives ore from the co-located Vametco mine. Vametco employs the standard salt-roast and leach process to produce a steel-alloying vanadium carbon nitride product called Nitrovan. The process involves the following stages:

- **Step 1:** Crushing, milling and magnetic separation to produce a magnetite concentrate with average grades of approximately 2.0 per cent V_2O_5 in-magnetite;
- **Step 2:** Salt-roasting the concentrate, where the concentrate is roasted with sodium salts in a kiln at approximately 1,150°C to form a water-soluble sodium vanadates material;
- **Step 3:** Leaching and purification, with dissolution of roasted vanadium concentrate in water, purification, and precipitation of vanadium through the addition of ammonium sulphate followed by drying and then processing in a reducing environment to produce a Modified Vanadium Oxide ("MVO") product; and
- **Step 4:** Nitrovan production: the MVO is briquetted and fed into a shaft induction furnace in a nitrogen atmosphere to produce Nitrovan, which is used as a micro-alloy in steel production.

Table 1: Operational highlights for Vametco (on a 100 per cent basis)

Description	Unit	2020	2019	2020 vs 2019
Vanadium (Nitrovan plus FeV) produced	mtV[1]	2,654	2,833	-6.3%
Production cash cost[2] (C1)	US$/kgV	18.33	18.05	1.5%
Total cash cost[3]	US$/kgV	23.31	29.38	-20.7

1. mtV = metric tonnes of vanadium.
2. Includes direct costs of production. Excludes depreciation, royalties, movements in finished goods inventories and selling, general & administrative expenses.
3. Includes direct costs of production, selling, general & administrative expenses and cash outflows on sustaining capital and growth capital. Excludes depreciation, royalties, movements in finished goods inventories and sales commissions.

2020 operational performance

Vametco achieved an annual production of 2,654 mtV. Approximately 300 mtV was lost when production was disrupted by the South African 35-day nationwide lockdown due to the COVID-19 pandemic. In spite of the impact of the nationwide lockdown and resultant changes in work arrangements, Vametco's production was just six per cent lower than in 2019 (2019: 2,833 mtV). Vametco achieved a production cash cost of US$18.30/kgV and a total cash cost of US$23.31/kgV.

Phase III of the multiphase expansion project

In 2020 the Company commenced the technical studies associated with the Pre-Feasibility Study ("PFS") for the expansion of Vametco to achieve a steady-state production run-rate of 4,200 mtVp.a. As the Group is reviewing its production profile and associated capital spend to achieve the most capital efficient production sequencing between Vametco and Vanchem, the scope of work of the PFS has been extended to include upgrading the concentrate section to a Semi-Autogenous Grinding mill and life of mine of Open Pit with higher production to supply both Vametco and Vanchem making Vametco the single ore supply for both operations for the medium term. Details on the ramp-up profile and capital expenditure plans will be provided once the PFS has been completed, which is expected in Q4 2021.

2020 capital expenditure

Sustaining capital expenditure required for maintaining and sustaining Vametco was US$1.6 million. A kiln off-gas project was initiated in 2018 to comply with environmental regulations relating to air emissions and to further-increase kiln feed throughput. During 2020, Vametco successfully completed and commissioned the kiln off-gas. A total of US$2.3 million was invested in the project in 2020.

2021 outlook and capital expenditure

A Group operational leadership and technical team has been formed and has devised a programme to address issues causing instability and variations in our process. The team's focus is on understanding the causes of variation and improving people, processes and systems to achieve sustainable steady-state production.

As reported in the Q1 2021 operational update, performance was impacted by mechanical breakdowns and the 35-day planned maintenance shutdown. There were more unforeseen mechanical breakdowns after start-up, followed by a six-days of unprotected industrial action in April 2021.

The strategy for Vametco is to create an operational environment that focuses on stability and consistency through the implementation of various workstreams. These include: maximising safety and housekeeping; identifying and solving process and system constraints; and optimising preventative maintenance programmes to minimise unplanned breakdowns. After the successful completion of the 35-day annual shut down, the plant has experienced improved levels of stability and reliability, setting the operation up for consistent performance for the remainder of the year at monthly production levels of approximately 240 mtV.

Due to the above, Vametco's 2021 guidance has been revised to between 2,300 mtV and 2,400 mtV, previously between 2,700 mtV and 2,850 mtV. The annualised production run rate for the remaining months of 2021 is between 2,600 mtV and 2,700 mtV. Production cash cost (C1) has been revised to between US$23.7/kgV and US$24.20/kgV (ZAR339/kgV and ZAR345/kgV), previously US$20.0/kgV and US$21.30/kgV (ZAR320/kgV and ZAR340/kg).

Total capital expenditure is estimated at ZAR85.2 million (circa US$6.0 million), with most of the cost being ZAR-denominated. It includes:

- ZAR62 million (circa US$4.4 million) of sustaining capital;
- ZAR19.7 million (circa US$1.4 million) of environmental capital; and
- ZAR3.5 million (circa US$245,000) required for the Vametco Phase III PFS.

Vanchem

Vanchem is a primary vanadium-processing facility with a beneficiation plant. It is located at Ferrobank Industrial Park in Emalahleni Local Municipality, Mpumalanga Province, in South Africa. It produces vanadium pentoxide, ferrovanadium and vanadium chemicals and is capable of producing vanadium trioxide. Vanchem uses the salt-roast beneficiation process, similar to that used at Vametco.

Vanchem continues to use vanadiferous magnetite ore acquired together with the operation in November 2019.

This ore feedstock has been supplemented with limited quantities of magnetite concentrate from Vametco.

The Upper Seam portion of the Vametco resource ("The Upper Seam Project") has been earmarked as the near-term source of feedstock for Vanchem, to replace the ore stockpile acquired with the plant while the Mokopane project is being developed. The source of the ore will be the Upper Seam reserve and stockpile, which has a V_2O_5 grade in magnetite of 1.76 per cent and magnetite content of 65 per cent in ore, superior to previous third-party suppliers. This will be upgraded to 80-85 per cent magnetite in ore with a mass yield of 80 per cent, using the temporary ore processing unit.

With a reserve base of approximately 0.9 Mt of ore, the Upper Seam Project, will supply Vanchem with a significant proportion of its ore requirement for 18 months and has the ability to supply 34 kt of ore per month commencing in Q3 2021, removing the necessity of relying exclusively on third-party sources of ore over this period. The Upper Seam Project resource has similar mineralogy to the current ore used at Vanchem, and tests conducted to date have proven its suitability for processing at Vanchem. This will be achieved by installing a temporary ore processing unit, which will avail additional crushing capacity to Vametco on a demand basis and have dry magnetic separation capabilities.

The initiative will ensure that Vanchem has sufficient competitively-priced ore feedstock (in line with, or better than, third-party suppliers) in the short to medium term, with no significant capital expenditure requirements. In addition, with an overall Upper Seam resource base of 16 Mt the potential to extend this particular supply beyond the initial 18 months exists and is being investigated accordingly. Vanchem has a short to medium term strategy of sourcing feedstock, ahead of the Mokopane mine becoming its primary supplier, as follows:

- Source ore from the Upper Seam at Vametco; and/or
- Procuring ore from third parties when prices are more competitive when compared to the Upper Seam costs and have operational and/or blending advantages. Quantities of third-party ore have been procured and additional opportunities are being considered.

Processing:

- **Step 1:** Crushing, milling and magnetic separation to produce a magnetite concentrate with average grades of approximately 1.65 per cent V_2O_5 in-magnetite;
- **Step 2:** Salt-roasting of concentrate. The concentrate is roasted with sodium salts in a kiln at approximately 1,150°C to form a water-soluble sodium vanadate material;
- **Step 3:** Leaching and purification, involving dissolution of roasted vanadium concentrate in water, purification and precipitation of vanadium through the addition of ammonium sulphate, followed by drying and then processing in a reducing environment to produce an ammonium metavanadate ("AMV") product;
- **Step 4:** The AMV is de-ammoniated and melted to produce vanadium pentoxide flakes – a primary product. The AMV is also used in other processes to produce a spectrum of vanadium chemicals; and
- **Step 5:** vanadium pentoxide is reduced by aluminium in the aluminothermic process in the presence of iron to produce ferrovanadium – a primary product.

2020 operational performance

Vanchem produced 990 mtV in the financial year. It lost approximately 80 mtV when production was disrupted by the South African 35-day nationwide lockdown due to the COVID-19 pandemic. In spite of this, Vanchem met its 2020 production guidance of between 960 mtV and 1,100 mtV. Vanchem achieved a production cash cost of US$22.40/kgV and a total cash cost of US$29.9/kgV.

Table 2: Operational highlights for Vanchem (100 per cent basis)[1]

Description	Unit	2020
Chemicals	mtV[1]	137
Flake	mtV[1]	418
FeV	mtV[1]	434
Total production	mtV[1]	990
Weighted average production cash cost(C1)[2]	US$/kgV	22.4
Weighted average total cash cost(C1)[3]	US$/kgV	29.9

1. mtV = metric tonnes of vanadium.
2. Includes direct costs of production. Excludes depreciation, royalties, movements in finished goods inventories and selling, general & administrative expenses.
3. Includes direct costs of production, selling, general & administrative expenses and cash outflows on sustaining capital and growth capital. Excludes depreciation, movements in finished goods inventories and sales commissions.

2020 capital expenditure

Sustaining and critical capital expenditure required for maintaining and sustaining Vanchem was US$0.2 million and US$3 million of environmental capital.

Refurbishment programme

In 2020 the Company completed a preliminary desktop scoping study on a three-phase refurbishment programme for the entire plant to achieve a steady-state production run-rate of 4,200 mtVp.a., fully utilising a three-kiln configuration. In Phase I of the refurbishment programme, Vanchem's production is expected to increase from 1,100 mtV to a run rate of 2,600 mtV by the end of 2022, supported by the commissioning of Kiln 3 and associated downstream expansions.

Vanchem has three roasting kilns of which Kiln 3's holds similar properties to that of Vametco Kiln. It has a length of

90 metres and 4.0m in diameter. In addition, Kiln 3 covers 50 per cent of Vanchem's installed capacity, with Kiln 2 and Kiln 1 at 25 per cent respectively. More details of the ramp-up profile and capital expenditure plans will be provided once the technical studies are completed in Q4 2021.

2021 outlook and capital expenditure

Due to delays in securing steel supplies for the refurbishment of Kiln 3 feed-end building, production has been revised to between 1,100 mtV and 1,200 mtV, previously, between 1,400 mtV and 1,500 mtV. Production cash cost (C1) has been revised to between US$30.3/kgV and US$31.1/kgV (ZAR434/kgV and ZAR444/kgV) previously, between US$26.20/kgV and US$26.70/kgV (ZAR419/kgV and ZAR427/kg). Accordingly, due to the delay, the capital expenditure for the year associated with the kiln 3 refurbishment has been revised to US$11.3 million, previously US$15.7 million with most of the cost being ZAR-denominated.

Brits

The Brits project hosts high-grade vanadium mineralisation in several magnetite layers. The mineralisation, which is outcropping, is a continuation of the Vametco strike. The project offers a potential extension of Vametco's life of mine and a cheap source of near-surface ore for the Vametco plant. Drilling has shown lower seam weighted average grades of 0.6 per cent V_2O_5 in-whole rock and 1.6 per cent V_2O_5 in-magnetite, which are among the highest in the world. A Competent Person's Report ("CPR") was published in January 2020. Brits has the potential to provide additional feed tonnage for Vametco and, if required, concentrate feed for the Vanchem plant.

The Company's interest in the asset ranges between 51 per cent and 74 per cent through three different companies, one of which is Caber Trade Mining and Invest 1 (Pty) Ltd ("Caber Trade"), the mining right applicant, in which the Company holds an interest of 51 per cent.

The Caber Trade mining right application was refused by the Department of Mineral Resources and Energy ("DMRE") in 2020, since it did not fulfil certain conditions set out in the 2012 letter of acceptance. Caber Trade has subsequently lodged an appeal against the decision, on the grounds that the process followed in the refusal decision was administratively flawed. The appeal process is ongoing and we await the final decision of the DMRE.

The Caber Trade properties were not included in the CPR, therefore the refusal of the mining right therefore has no impact on the mineral resource statement.

Mokopane

Mokopane is located on the central portion of the northern limb of the Bushveld Complex. The project is in the Mokopane District of Limpopo Province, approximately 65 kilometres west of the provincial capital, Polokwane. The project includes one of the world's largest primary vanadium resources, with a weighted average grade of 1.4 per cent V_2O_5 in-whole rock and 1.75 per cent V_2O_5 in-magnetite.

Licensing

On 29 January 2020, the DMRE executed a 30-year mining right in favour of the Company's subsidiary, Pamish Investments No. 39 (Pty) Ltd ("Pamish"), over five farms: Vogelstruisfontein 765 LR; Vriesland 781 LR; Vliegekraal 783 LR; Schoonoord 786 LR; and Bellevue 808 LR. The Mining Right required Pamish to commence mining activities, including in-situ activities associated with the Definitive Feasibility Study ("DFS") by end of January 2021. The COVID-19 pandemic resulted in a significant delay in the commencement of the DFS and the necessary engagement with local communities required to finalise Land Use arrangements and, consequently, this deadline was not met. Application to the DMRE for an extension of 18 months to commence mining activities has been submitted. Engagement has begun with communities to reach agreement for access to the project areas and secure a Land Use Arrangement.

Ownership

While the Mokopane mining right is subject to Mining Charter II regulations, the Company is committed to adopting Mining Charter III regulations in respect of host community and employee shareholding requirements. In accordance with Mining Charter III, a free-carried interest of five per cent of the equity in Pamish will, in due course, be transferred by the existing shareholders (Bushveld Minerals and Izingwe Capital (Pty) Ltd) to the Bakenberg Community Trust, a trust established for the benefit of the local communities. Bushveld Minerals' interest in the Mokopane Project will accordingly reduce from 64 per cent to 60.8 per cent, while Izingwe's shareholding will reduce from 36 per cent to 34.2 per cent. Pamish has further committed to allocate an additional five per cent to an Employee Share Ownership Participation Scheme once the mine is operational, which will result in Bushveld Minerals ultimately holding 57.6 per cent and Izingwe 32.4 per cent.

Geology & resources

The Mokopane deposit is a layered orebody along a 5.5 kilometre north-south strike, dipping at between 18 and 22 degrees west. The project comprises three adjacent and parallel magnetite layers, namely the Main Magnetite Layer ("MML"), the MML-Hanging Wall ("MML-HW") layer and the AB Zone. Its 298 Mt (JORC) resources and reserves have grades ranging from 1.6 per cent to over 2.0 per cent V_2O_5 as follows:

- MML: 52 Mt @ 1.48 per cent V_2O_5 (1.6-1.8 per cent V_2O_5 in-magnetite).
- MML-HW & Parting: 233 Mt @ 0.8 per cent V_2O_5 (1.5-1.6 per cent V_2O_5 in-magnetite).
- AB Zone: 12 Mt @ 0.7 per cent V_2O_5 (greater than 2.0 per cent V_2O_5 in-magnetite).

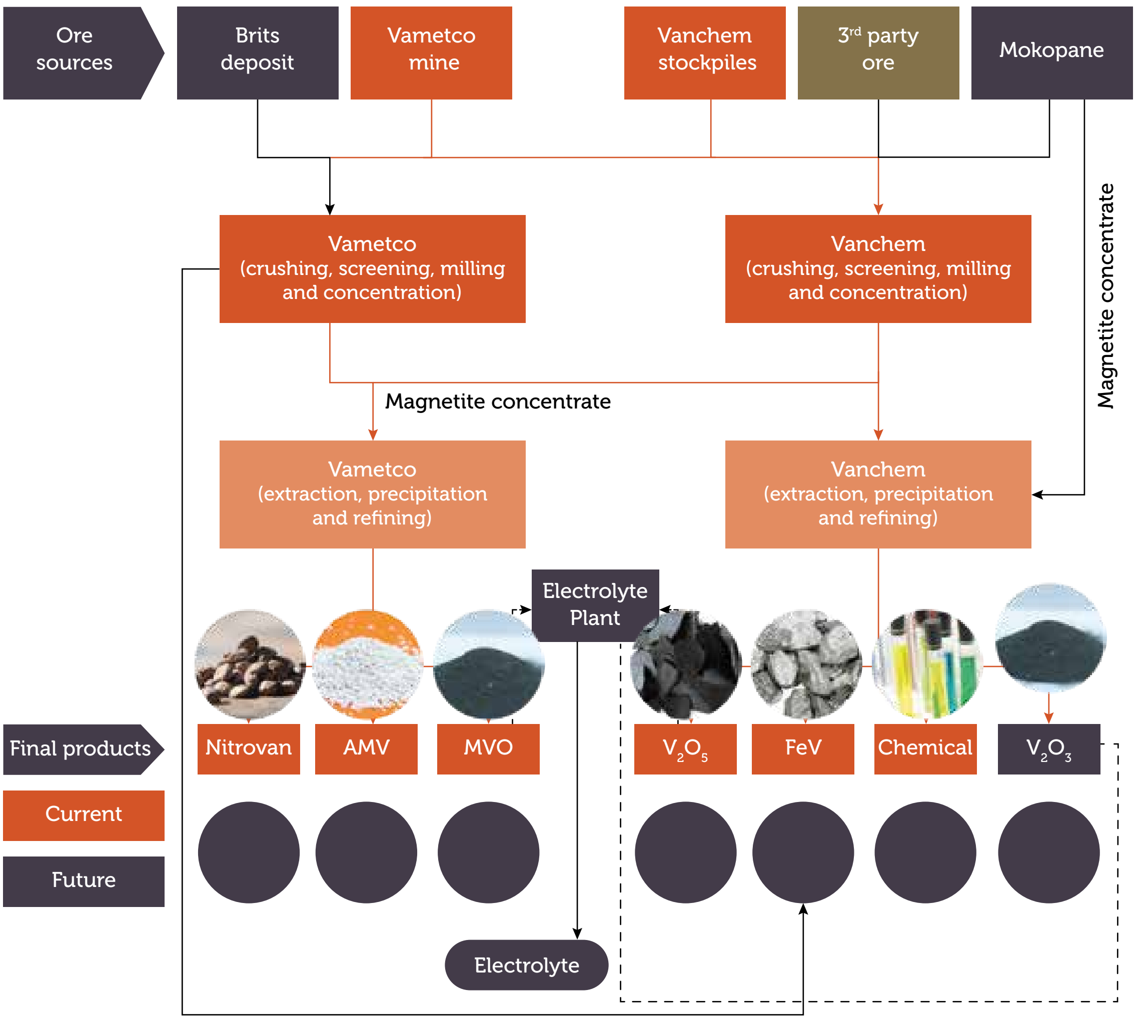
Outlook and capital expenditure

Mokopane is intended to be a primary source of feedstock for Vanchem from its large mineral resource base in the longer term. With the success of the short-to medium-term initiatives associated with the Upper Seam project at Vametco, which could supply Vanchem with ore for an extended period and in line with the Group's capital projects sequencing, Bushveld is reviewing the business case at Mokopane. This review will consider commencing mining operations at a much-reduced level (producing a dry magnetic separation ore product for transport to Vanchem, which has milling and wet magnetic separation production capacity). It would allow for scaling up as necessary, as Vanchem's production capacity grows and other sources are phased out. This analysis could, of necessity, affect the scope and nature of the DFS which has been planned at Mokopane for the commencement of mining activities.

Activities for 2021 include a ground water survey and aerial surveys and compiling and submitting a water use licence application. The MML at Mokopane would remain the targeted deposit for short- to medium-term mining operations at Mokopane. The revised business case will not preclude expansion of ore production, including the development of milling and concentrate facilities or the option of developing Mokopane into a stand-alone integrated mine and processing plant, producing 5,300 mtVp.a. of V_2O_5 product, as set out in the pre-feasibility study completed in 2016.

Flexible and integrated asset-base with a diversified portfolio of products

Bushveld Minerals' vertical integration strategy and production flexibility allows it to mine, process and manufacture vanadium-based products in a single value chain, providing flexibility to source feedstock and maximise sales, depending on product demand dynamics. This will provide a solid foundation for our business throughout the commodity cycle.



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Bushveld Energy

In 2020, Bushveld Energy started to reap the initial results of its activities across three strategic pillars: vanadium electrolyte supply, investment into Vanadium Redox Flow Batteries ("VRFBs"), and Manufacturing and Deployment of VRFBs in Africa.

Vanadium electrolyte manufacturing and leasing

The development of a 200 MWh vanadium electrolyte production facility of approximately 1,100 mtV or 8M litres of electrolyte to supply VRFBs, in partnership with the Industrial Development Corporation ("IDC"), was completed and implementation began. During the year, the Bushveld Electrolyte Company ("BELCO") was established as the operational company for the electrolyte business, with 55 per cent ownership by Bushveld Energy and 45 per cent by the IDC. To ensure closer alignment of all vanadium operating facilities, BELCO will migrate to the Bushveld Vanadium platform in 2021, both operationally and in ownership, overseen by Francois Naude, Bushveld's Director of Operations. Sales and marketing of electrolyte will also be carried out by Bushveld Minerals.

BELCO'S Engineering, Procurement and Construction ("EPC") process started in Q2 2020. The engineering phase was completed in Q4 2020. Procurement commenced in Q1 2021, construction started in Q2 2021 and plant commissioning is expected to occur during H2 2022.

Design modifications to improve safety, operations and maintenance were identified during the engineering phase that increased capital expenditure for construction to ZAR217 million (approximately US$13.6 million) from US$10 million originally at the concept stage. Bushveld's capital expenditure investment commitment for plant construction has been amended to ZAR81 million (approximately US$5.1 million) through to 2024. The balance of ZAR136 million (approximately US$8.5 million) will be funded through equity and debt, under the agreement signed between Bushveld Energy and the IDC. Bushveld is also committing ZAR24 million (US$1.5 million) for working capital during the first three years of plant operations to support ramp-up.

Bushveld Energy continued to innovate beyond pure electrolyte sales, by establishing the Vanadium Electrolyte Rental Limited ("VERL") company with AIM-listed Invinity Energy Systems ("Invinity"). In 2020, VERL signed a rental contract in the United Kingdom with Pivot Power, part of EDF Renewables. Under this contract, VERL will own the electrolyte in Pivot Power's 5 MWh flow battery and rent it to Pivot Power for 10 years.

Partnering with VRFB Original Equipment Manufacturers

During the year, Bushveld Energy's strategy of supporting and collaborating with global VRFB manufacturers delivered results.

The VRFB Original Equipment Manufacturers ("OEM") partnership strategy is designed to play a catalytic role in mobilising third-party capital to assist VRFB manufacturers to scale up their sales and capacity to meet the fast-growing demand for long-duration energy storage solutions. The strategy embraces the rental of vanadium feedstock, vanadium electrolyte and electrolyte; VRFB deployment; and investment in the OEMs.

In line with this strategy, Bushveld Energy has made strategic equity investments and entered into joint venture agreements across the vanadium and energy storage value chain. Two significant investments were in Invinity and Cellcube (Enerox GmbH).

Invinity was relisted on AIM on 1 April 2020 after the merger of Canada/US-based Avalon Battery Corporation with AIM-listed redT energy plc ("redT"). Bushveld's initial interest in Invinity was 8.71 per cent. Between its listing and the end of 2020, Invinity's share price increased by over 300 per cent, reflecting the build-up of its order pipeline to 18.6 MWh. It was able to raise over GBP33 million in follow-on funding in 2020, in addition to the initial US$5 million investment from Bushveld.

Bushveld Energy has since sold its stake in Invinity, for which it received about US$13 million, a return of approximately 160 per cent in just over one year. The proceeds of the sale were used towards Bushveld Energy's 2021 projects, including its investment in Cellcube. Bushveld Energy continues to support Invinity and its management team and the two companies collaborate on multiple areas of interest. Bushveld has the right of first refusal to supply vanadium and vanadium electrolyte to supply to systems sold by Invinity, up to the second-year anniversary of the agreement.

Similarly, Bushveld Energy holds an indirect interest in Cellcube of 25.25 per cent. In March and April 2021, Bushveld contributed US$7.7 million of the US$30 million of funding that Cellcube requires to scale up to 30 MW (120 - 240 MWh) per annum of manufacturing capacity and sales by 2022. This will enable it to capitalise on a strong pipeline of available projects and future manufacturing expansion.

As with Invinity, Bushveld Energy is playing a catalytic role in supporting the growth of Cellcube, with most of the capital coming from other investors.

The timing of the investments has been opportune, given the acceleration of the energy transition, increased need for clean energy technologies and massive capital migration into companies developing and deploying such technology in 2020 and 2021.

Deployment of VRFBs

The hybrid mini-grid project at the Vametco vanadium mine progressed in 2020, despite significant disruptions due to the COVID-19 pandemic in South Africa. The project was increased to 3.5 MW of solar PV generation and 4 MWh of VRFB energy storage to incorporate new regulatory permissions. It is part of Bushveld's strategy to demonstrate both the superior technical merits of long-duration VRFB systems when paired with renewable energy and provide a commercial return to the Company's shareholders. It will also use locally-mined and beneficiated vanadium, showing how VRFB energy solutions can create greater local value for South Africa than any other storage technology.

The hybrid mini-grid project will supply just under 10 per cent of Vametco's electrical energy consumption at any one time, and will demonstrate the technical and commercial capability of hybrid mini-grids using solar PV and VRFB technology. Technically, the system will be able to operate independently or jointly, either as a standalone system, or as a fully-functional mini-grid installation.

In addition, the hybrid mini-grid project will contribute towards reducing the carbon footprint of Bushveld's mining and processing operations. It will cut CO_2 emissions by more than 5,700 metric tonnes per year (and nearly 114,000 tonnes of CO_2 over the 20-year life of the project). This will be a positive contribution towards South Africa's low-emission strategy and Bushveld Minerals' Environmental Social and Governance objectives.

Bushveld Energy has received environmental authorisation and awarded the EPC contract for the construction of the mini-grid. Cellcube will supply the 1 MW/4 MWh VRFB using single-acid, sulphate-based electrolyte for the project. An EPC will manage and integrate the project, including 3.5 MW of solar PV.

The Company signed a memorandum of understanding with Thebe Investment Corporation ("Thebe"), a South African investment management company, as a strategic equity partner in the development and funding of the hybrid mini-grid project. Thebe will be active in the development of the project going forward, including assisting the Company in finalising the terms of the external debt funding. The Vametco installation will be one of the first solar mini-grid projects with long-duration storage financed off-balance sheet as an independent power producer ("IPP") in Africa.

As previously announced, at Eskom's mini-grid facility in Rosherville, South Africa, Bushveld Energy and the IDC installed the country's first VRFB in 2018, a peak 120 kW/ peak 450 kWh system using mixed acid electrolyte. In June 2020, UniEnergy Technology ("UET") which was the VRFB provider, shifted to a new VRFB product, and was no longer able to continue monitoring, maintaining and servicing the system. A replacement system has been supplied but not yet commissioned, because of COVID-19 restrictions in China and South Africa.

2021 outlook and capital expenditure

Bushveld Energy's 2021 capital expenditure was budgeted at ZAR152 million (circa US$9.5 million). Most of this budget will be covered by sales of existing Bushveld Energy assets, such as the recent sale of the Company's holding in Invinity. Capital will be spent on the following projects and initiatives:

- Supporting and funding the growth of Cellcube, together with the other shareholders of EHL, to enable it to capitalise on the rapidly-growing global energy storage market.
- Bushveld's share of BELCO's procurement and construction costs.
- Scaling up the electrolyte rental product (including the rental contract with Pivot Power) in the UK through the VERL, and the rental contract for the Vametco mini-grid.
- Developing self-generation and storage solutions for Bushveld Minerals' operating facilities through Bushveld Energy's Deployment business, including Bushveld's share of the equity portion of financing for the Vametco mini-grid project, which is structured as an Independent Power Producer ("IPP").
- Participating in large upcoming battery energy storage tenders in South Africa. These include the World Bank-funded BESS programme at Eskom, which has already issued 827 MWh in tender opportunities. Another is the 513 MW battery procurement programme announced by the Independent Power Programme Procurement Office. This tender is expected to be issued in H2 2021 by the DMRE.

Other non-core interests
Additional investments in coal, coal-to-power and tin

Coal – Lemur Holdings

Lemur Holdings ("Lemur"), a wholly-owned subsidiary of Bushveld Minerals, is focused on coal energy projects. Its flagship project is the Imaloto coal-to-power project in southwest Madagascar, which consists of four exploration permits and one mining and exploitation permit, covering a total area of about 81.25 square kilometres.

Continues >

Imaloto is an integrated coal-fired power project. It includes a 136 Mt coal mine, a 60 MW power plant and a new transmission line stretching over 250 kilometres. It is the only coal-to-power solution being developed in Madagascar. The power plant is scalable from the current planned 30 MW to 60 MW and the transmission line is expandable up to 500 kilometres.

The project has a total of 136 Mt JORC-compliant mineral resources, of which 92 Mt is in the measured and indicated category. In addition to a fully-executed mining exploitation licence, Lemur has two exploration permits covering a combined 87.5 square kilometres in close proximity to the Imaloto Power Project.

Imaloto is perfectly-positioned to address Madagascar's persistent power supply challenges, particularly in its least-developed but mineral-rich southern region. The southern region currently does not have a power grid and is almost entirely powered by isolated generators. In addition to substantially increasing the generation capacity in Madagascar, the initial 60 MW capacity of the Imaloto Power Project will form the basis for a power grid for the southern region.

The Imaloto power station will be located next to the coal mine, providing a captive market for the mine's production and unlocking the intrinsic value in the underlying project.

This project is at an advanced stage. The feasibility studies for both the power plant and the transmission line were completed by Sinohydro, following a technical co-operation agreement signed in 2017.

The Imaloto project has a full mining right for the coal mine as well as a 30-year Independent Power Producer concession from the government of Madagascar. Lemur has also concluded a 30-year Power Purchase Agreement for an initial 25 MW from JIRAMA, the state-owned utility.

Lemur appointed Bara Consulting to undertake the Definitive Feasibility Study ("DFS") for its Imaloto coal mine in the first quarter of 2020. The DFS is currently in final draft form and ready for sign-off, subject to a site visit by the Competent Person.

Most Social and Environmental Impact Assessment ("SEIA") studies have been completed and submission to the Ministry of the Environment is expected to occur in the second half of 2021.

During the fourth quarter of 2020, Lemur appointed the Development Bank of Southern Africa as its Mandated Lead Arranger ("MLA") for the construction capital funding of up to US$155 million for the Imaloto Power Project.

Negotiations with the contractors for the EPC of the power station and transmission line are ongoing. However, final sign-off of EPC agreements has been delayed until site visits by contractors take place.

Lemur remains in discussions with potential strategic partners and the government of Madagascar on the implementation of the project.

The PQ Iron & Titanium and PQ Phosphate Projects

The PQ Iron & Titanium Project is a multi-commodity project, located 45 kilometres north-northwest of the town of Mokopane in Limpopo Province, South Africa. The Project has a JORC-compliant Inferred and Indicated Mineral Resource of 955 Mt, with an average grade of 33.7 per cent Fe and significant TiO_2 (over 18 per cent TiO_2 in-magnetite concentrates). The project boasts some of the highest in-magnetite grades of titanium in the world and could be developed as a titanium and pig iron project in the future. No further work is planned on the project at this stage.

The PQ Phosphate Project resource lies immediately above the iron ore and titanium resource of the PQ Project. The Company reported in June 2014 a maiden phosphate resource statement for the PQ deposit of 442 Mt, with average phosphate grades of 3.6 per cent P_2O_5. Although the grades are low, the PQ Phosphate deposit is in the immediate hanging wall of the PQ Project and would be mined concurrently with the stripping of the latter. Of particular interest is that laboratory-scale test work has shown that 37 per cent P_2O_5 concentrate grades are achievable from this deposit.

Both projects are based on the same licence area as the Mokopane Vanadium Project, where there is a mining right held by Pamish Investments No. 39 (Pty) Ltd ("Pamish"). Therefore, all shareholding arrangements for Mokopane Vanadium Project apply to the PQ Iron Ore, Titanium & Phosphate Projects.

Progress to date has been limited to understanding the economic parameters necessary for success and how these projects can be configured in line with the Company's approach towards developing projects. No further work is planned on these projects while the Company advances its vanadium platform.

AfriTin Mining Limited

The Company holds a 4.76 per cent shareholding in AIM-listed AfriTin Mining Limited, an African mining company with a portfolio of near-production tin assets in Namibia and South Africa. It was demerged from Bushveld Minerals in November 2017.

Principal Risks

1. Global Pandemic

Nature of Risk	Mitigating Action
Risk of COVID–19 infections and emerging variants	• Strict enforcement and monitoring of COVID-19 government regulations by COVID-19 Task Team. • Counter measures in place with local medical staff and clinics for support and further testing. Quarantine facilities in place at local establishments. • Procurement of COVID-19 vaccinations under consideration in conjunction with Minerals Council South Africa.

2. Meeting Production Targets

Nature of Risk	Mitigating Action
Unplanned plant and equipment breakdowns, causing production delays	• Prioritised and revised plant and equipment maintenance strategy in progress. • Daily monitoring and proactive response to breakdowns. • Emergency repairs and maintenance teams mobilised and prioritised. • Capital allocated for refurbishment and maintenance.
Unprotected strikes and community protest action	• Pro-active stakeholder strategy in place resulting in frequent consultations and engagement with union and communities. • Addressing legacy and historical practices with organised labour to avert strike action.

3. Funding of Working Capital and Debt

Nature of Risk	Mitigating Action
Global market volatility affecting demand and commodity prices	• Managing our operations to the lowest cost levels possible. • Commodity prices monitored on a regular basis. • Global vanadium market movements monitored on a daily basis. • Hedging considered as a mitigating strategy, should prices dip below specific thresholds.
Volatile exchange rate	• Current and forecast exchange rates monitored daily. • Hedging considered as a mitigating strategy, should exchange rates dip below specific thresholds.
Rising costs of raw materials and labour	• Cost containment measures in place and prioritisation of expenditure. • Robust procurement processes ensure price competitiveness. • Avoidance of wasteful and unnecessary expenditure. • Implementation of new operating model supplemented by S189 process, to remove redundancies and duplication.
Breach of debt covenants levels	• Regular monitoring of working capital requirements and expenditure in relation to breaching debt covenants. • Regular communication with lenders. • Taking proactive corrective measures ahead of potential covenant breaches, including proactively considering alternate funding options and/or covenant waivers.

4. Increased Safety and Health Incidents

Nature of Risk	Mitigating Action
Compliance with safety and health processes and protocols	• Rigorous safety and health protocols implemented and observed, leading to zero fatalities. • Regular health checks performed.
Insufficient plant maintenance contributes to an unsafe workplace and increased safety incidents.	• Increased safety awareness and campaigns. • Regular safety briefings held. • Safety protocols strictly maintained and adhered to.

5. Plant and Infrastructure

Nature of Risk	Mitigating Action
Plant and infrastructure maintenance backlog	• Capital allocated for refurbishment and maintenance of plant and equipment. • Planned annual plant shutdown executed to conduct routine maintenance and repairs.
Reactive asset maintenance and scheduling	• Asset management strategy being developed. • Asset register in place. • Senior appointment of asset management resource concluded.

6. Licence to Operate

Nature of Risk	Mitigating Action
Compliance with Mining Charter III transitional plan	• Stakeholder engagement strategy in place. • Recruitment of transformational specialist under consideration. • Transformation Committee formed (represented by Group Heads) to monitor compliance with Mining Charter III and Black Economic Empowerment ("BEE") legislation. • Regular engagement with DMRE relating to approval of Social and Labour Plan.
Compliance with Broad-Based Black Economic Empowerment ("BBBEE") Act	• Preferential procurement policy developed. • Supplier and enterprise development and preferential procurement initiatives prioritised. • External supplier contracted to perform 'fronting' validation service.
Security of tenure as lessee affected due to community factionalism	• Regular and continuous engagement with surrounding communities and stakeholder groups.

7. Environment

Nature of Risk	Mitigating Action
Compliance with Environmental legislation	• Comprehensive gap analysis performed by external consultants on state of Environmental Social and Governance ("ESG") standards, resulting in remediation action plan, which is progressing. • Kiln off-gas system has been installed and commissioned. • Capital budgeted for 2021 to address dam water capacity and mitigate risks. • Regular monitoring and management intervention in key risk areas. • Rehabilitation guarantees in place to minimise and mitigate environmental effects of mining.
Ground Water Pollution	• Ground water pollution modelling conducted at all operations and managed accordingly.

8. Electricity Supply

Nature of Risk	Mitigating Action
Unstable electricity supply from local Municipality, particularly at Vanchem	• Engagement with Eskom for direct supply. • Stand-by generators and countermeasures in place in the event of load-shedding. • Developing self-generation solutions for our operations.

9. Sales and Marketing

Nature of Risk	Mitigating Action
Growing trade protectionist policies in key markets	• Developing a broad global market strategy that provides flexibility • Close and regular monitoring of legislation.
Disrupted logistics supply chain due to global COVID-19 restrictions.	• Operational flexibility producing a wide variety of Vanadium products. • Adjusting our inventory management levels at various global warehouses.

10. Environmental, Social and Governance

Nature of Risk	Mitigating Action
Compliance with ESG	• ESG gap analysis performed. • ESG framework being developed. • Key compliance obligations prioritised. • Regular monitoring of compliance.
Lack of governance frameworks and policies	• Formalisation and implementation of Enterprise Risk Management. • Policies in place to combat bribery and corruption. • Governance framework being developed. • Internal audit function established

Bushveld Minerals' COVID-19 Response

In the year under review, the impact of COVID-19 on the business required the Group to put in place effective health and safety protocols. It had to adapt the way that support is provided to employees and ensure business continuity. From the start of the pandemic, the Group has been operating in a precarious environment. The Group continuously adapted its response to ensure that rising issues were adequately addressed across all units of its business. Over and above the measures outlined in this document, management worked to ensure the recovery and resilience of the business post the lockdown period.

In 2020, the Group did not report any COVID-19-related deaths at its operations. However during the second wave, which intensified in January 2021, Vametco reported two COVID-19 related deaths, despite the strict safety measures that were in place. During the lockdown in 2020,the Group was able to maintain some scaled-down operations at Vametco, while Vanchem was on care and maintenance. While financial-stress testing showed the need to strengthen the balance sheet, it did not suggest the business was in distress. The Group is making continuous efforts to adapt to an agile remote working set-up.

In order to manage any potential outbreak in the workplace, a COVID-19 task team was established. The main purpose of the task team are to assist the Group to navigate through this precarious period, ensure business continuity and focus, and instil confidence and steadiness across our ecosystem.

This committee addresses some of the following issues:
- Formulating and implementing health and safety protocols; and
- Formulating and driving the implementation of business continuity plans.

Key Interventions

Employees

The Group's immediate focus was to ensure the safety of employees and maintain safety in the work environment. At the same time, it had to protect the livelihoods of employees by considering the financial impact of the pandemic.

The Human Resource stream focused on proactively managing the workforce, with its first priority being the most vulnerable staff. Measures were put in place to protect business continuity, with protocols to enable the organisation to adapt to the pandemic.

The team considered not only the changing nature of how and where work gets done, but also how to maintain optimal collaboration between physically-dispersed teams.

IT intervention

Another key intervention was to ensure that the Group's Information Technology ("IT") teams assessed and addressed systems and cyber vulnerabilities, while enabling employees in all areas of the business to work smoothly.

The key IT interventions were in these areas:
- Security awareness;
- Identity and access management, allowing for unusual and privileged access;
- Data loss prevention; and
- Remote access support.

Communication

The task of the communication stream was to pro-actively engage the Group's employees and stakeholders.

The team implemented an enhanced workforce engagement plan to maintain morale while normal contact was disrupted. The Group sought to communicate early and often and ensure that messages were transparent, simple and clear. Employees were provided with credible and factual information on COVID-19 prevention.

Externally, the Group collaborated with local government and other companies in the host communities to reduce the impact on society. The Vametco team continues to offer water to communities with access points outside its operations and has donated sanitisers to community clinics.

Suppliers

COVID-19 is prompting companies to revisit their global supply chain strategies and accelerate the adoption of Digital Supply Network models and capabilities. However, immediate actions are needed to respond to the short-term challenge.

The business has reviewed these key areas:
- Risk of supplier disruptions.
- Location of suppliers and origin of supply.
- Ensuring transporters are available and classified as essential.
- Whether suppliers are classified as essential.
- Stock holdings and storage restrictions.
- Ranking of critical materials and putting contingency plans in place for the most critical items.
- Identifying alternative suppliers.
- Ongoing revision of contingency measures.
- Continuous collaboration with essential suppliers.

We continue to assess the environment as it changes and take guidance from the industry on the identified focus areas.

Financial analysis

We undertook financial modelling to estimate the impact of the shutdown under various lockdown length scenarios. The financial modelling also considered emerging consensus views on key parameters, such as exchange rates and the vanadium price. In addition, the financial modelling considered the impact on the Group's compliance with its covenants under the Nedbank term debt financing to assess the risks of breaching those covenants. Finally, the analysis considered the impact of COVID-19 on the Group's capital requirements. An assessment of the Group's capital expenditure was done, and recommendations made on the previously-approved capital expenditure programme.

Looking ahead

Since the lockdown, lessons learnt have been captured, ensuring that Bushveld emerged stronger and more prepared for the new normal. The business will remain focused on ensuring several key indicators, including:

- **Vanadium market and production scenarios:** An understanding of the vanadium demand and supply dynamics post the pandemic.
- **Agile way of working:** Revising employment arrangements to reflect the new normal.
- **Risk Management:** Crisis and resilience planning to ensure business continuity.
- **Financial resilience:** Maintaining robust financial forecasts and scenario planning. Stress-testing the corporate model and capital structure.
- **Digitisation:** Considering a digitally-enabled workplace in future, including for business processes and back-office functions.

Sustainability – Value Beyond Compliance

Bushveld Minerals' strategic intent of value beyond compliance is anchored on the principle of creating shared, long-lasting value for all its stakeholders.

The Group began to develop a sustainability strategy in 2020. The sustainability strategy focuses on Environment, Social and Governance ("ESG") principles. The Group will integrate material ESG considerations into the decision-making process, across the value chain. It will report on material ESG Key Performance Indicators and communicate a consistent message to stakeholders on key ESG commitments.

The Group also started a process of developing the ESG management system, which is developed in line with the International Finance Corporation ("IFC") Performance Standards. It also incorporates the requirements of the ISO 14001:2015 Environmental Management Systems and ISO 45001:2018 Occupational Health and Safety Management Systems to facilitate future alignment with these standards and certification at an operational level.

Collectively, the ESG strategy and management system will assist Bushveld and its operations to comply with relevant authorisations, legal requirements, the IFC's Environmental and Social Performance Standards and other obligations in a systematic and structured framework. The Group's sustainability strategy and ESG management system will be concluded in Q4 2021.

1. Health and safety

Bushveld Minerals recognises that the well-being of employees and communities is key for its long-term success, and we intend to build on the foundations already in place at Vametco and Vanchem.

The approach is risk-based, starting with a Baseline Risk Assessment, moving to an Issue-based Risk Assessment, and then to a Continuous Risk Assessment, which includes lagging and leading indicators.

Our guiding principle is zero tolerance for deviations from safety regulations, whether by our own employees or contractors. We have instilled a work culture based on behavioural management that views health and safety as of paramount importance. This was achieved through various safety campaigns implemented in 2020.

Training is directed at making sure our employees not only work responsibly for their own well-being, but also look out for their colleagues' health and safety. Our safety drive entails visible leadership and behavioural change coaching, inspections and training programmes that are conducted on site by both management and employees. We believe that measuring ourselves against industry-leading practices and implementing good health and safety systems and conditions will keep us in the forefront of the industry.

Bushveld Vametco's safety performance for 2020 was zero fatalities and zero lost-time injuries. The Department of Mineral Resources' Mine Health and Safety inspectors paid 15 visits to the mine and issued one stoppage in terms of the Mine Health and Safety Act's Section 54. All findings were corrected.

2. Environmental management

Bushveld Minerals' environmental strategy is centred on compliance with various environmental laws and regulations (national, provincial and local) and alignment with international standards, including the IFC's environmental and social performance standards and the ISO 14001:2015 Environmental Management system.

Annual environmental performance assessment audits are conducted by an external environmental specialist and by regulatory authorities. They consider the Group's compliance with the conditions of the Environmental Management Plan ("EMP") and the mine's environmental authorisations. Environmental legal compliance audits were also performed by an independent specialist. No major findings were reported from any of these audits and no environmental penalties were imposed by the regulatory authorities.

Vametco

Vametco is embarking on an Environmental Impact Assessment ("EIA") for its expansion project. The updated EIA will enable it to develop a comprehensive EMP. Vametco plans to start the process of developing and implementing the ISO 14001:2015 Environmental Management System.

Water management

Water management is integral to the Group's licence to operate, so compliance with all the requirements of the Group's Water Use Licence ("WUL") is a priority. Vametco is in the process of amending its Water Use Licence to include activities under the third phase expansion. In 2020, there were two compliance audits by the competent authority, the Department of Water and Sanitation. Action plans were developed and communicated to the department to address the findings. The outstanding issues will be addressed through the amendment to the WUL, which is in progress.

Vametco also conducted all required internal and external Integrated Water Use Licence ("IWUL") audits in 2020. Based on those audits, action plans were developed to improve water management.

Vametco follows an ongoing surface and groundwater monitoring programme. Sampling and analysis of various chemical constituents and groundwater level measurements are conducted on a monthly and quarterly basis, as required by the IWUL and South African National Standards drinking water quality standards, to ensure effective management of the water resources on site and in surrounding areas. The implementation of best practice measures for effective clean and dirty water separation, optimised recycling of used water and water balance.

The annual water allocation under Vametco Alloys' WUL is 1,624,811 m^3 from various sources (boreholes, open pit seepage and third-party water supplied by the Hartbeespoort Irrigation Water Board (Canal). In 2019, Vametco's water withdrawals were 77 per cent of its total allocation (1,251,114 m^3), resulting in a 23 per cent saving (373,697 m^3). In 2020, Vametco increased its water withdrawals by 6 per cent compared with the 2019 utilisation. That brought its total extraction to 82 per cent (1,324,302 m^3) of its allocation.

Waste Management

Vametco is in the process of amending its Waste Management Licence, which will be authorised by the DMRE as part of the environmental authorisation for the entire operation. With the advent of COVID-19, some non-essential activities were halted, which affected waste management services. Total waste removed from site declined by 31 per cent compared with 2019. A total of 599 tons of waste was removed at Vametco in 2020, compared with 871 tons removed in 2019. Recyclable waste removed in 2020 (463 tons) declined by 33 per cent (233 tons) against 2019 (696 tons). Waste disposed off-site into landfills (136 tons) declined by 22 per cent (39 tons) compared with 2019 (175 tons).

An independent external specialist conducted audits on the Factor of Safety ("FoS") of the Group's mineral waste disposal, particularly the tailings dam and magnetite tailings storage facilities. The report is expected in 2021.

Air quality and environmental dust fall-out

The Bojanala District Municipality granted Vametco an Atmospheric Emission Licence in September 2020, in line with Minimum Emission Standards valid for 5 years. The Group is dedicated to ensuring that there is compliance with the conditions of the licence This includes monitoring our stacks emissions and implementing management plans if they exceed the designated limits. Capital projects, including the installation of off-gas scrubber systems and bag house systems, demonstrate our commitment to keep our emissions within standards. The effectiveness of these measures is evident in the results of stack emissions monitoring conducted by independent third-party specialists.

Vametco developed and is implementing a dust management plan to ensure that the operation remains within its compliance limits of below 1,200 mg/m^2 per day, in line with South African National Dust Control Regulations, 2013.

Biodiversity Management

Vametco conducts annual plant assessments as part of the biodiversity impact assessment. This includes an Invader Species Eradication Programme, in which people from the local community are employed. Vegetation and grass are planted in areas meeting final rehabilitation criteria during summer. Updated plant and animal specialist studies were conducted as part of the EIA.

Mine rehabilitation and environmental liabilities

A closure cost review analysis for 2020 was conducted by a third-party consulting firm. No material change was reported compared with 2019. Concurrent rehabilitation is practised wherever possible to minimize environmental impacts during operation and reduce the final environmental liability. Vametco is finalising the Financial Rehabilitation for Closure in terms of the NEMA Financial Provisioning Regulations of 2015.

Quality Management System ("QMS"): ISO 9001:2015

Vametco has maintained its ISO 9001 certification. During the annual assessment audit conducted in 2020 by the certification body, Bureau Veritas ("BV"), the organisation demonstrated that its quality management system fulfilled the requirements of the standard. No major findings were raised and all minor findings were addressed.

Vanchem

Occupational Health and Safety

One of Vanchem's priorities is to provide a safe and healthy workplace for all its employees, contractors, suppliers, and visitors.

One of the first priorities following the acquisition of Vanchem was to update the Occupational Health and Safety Policy and Procedures. The updated policy and procedures are meant to provide the leadership with the resources to ensure all workers go home safe and well every day. The procedures are also designed to ensure a systematic approach is taken to anticipating, identifying, evaluating, controlling, monitoring, and managing occupational health and safety risks to make them "as low as reasonably practicable".

The Group is developing the system in line with the ISO 45001: 2018 Occupational Health and Safety Management System.

Environment

Since acquiring Vanchem, independent consultants were commissioned to conduct various EIAs to evaluate the current status quo on the environmental impacts and risks of our operation. For projects which need to progress to construction and operation, the EIA forms the basis of the site-specific environmental management system ("EMS").

The system is developed in line with ISO 14 001: 2015 Environmental Management System.

In 2020, Vanchem started to implement the ISO 9001: 2015 Quality Management System. The first-stage audit is expected in October 2021 and the certification audit is expected to take place in March 2022.

Bushveld Energy

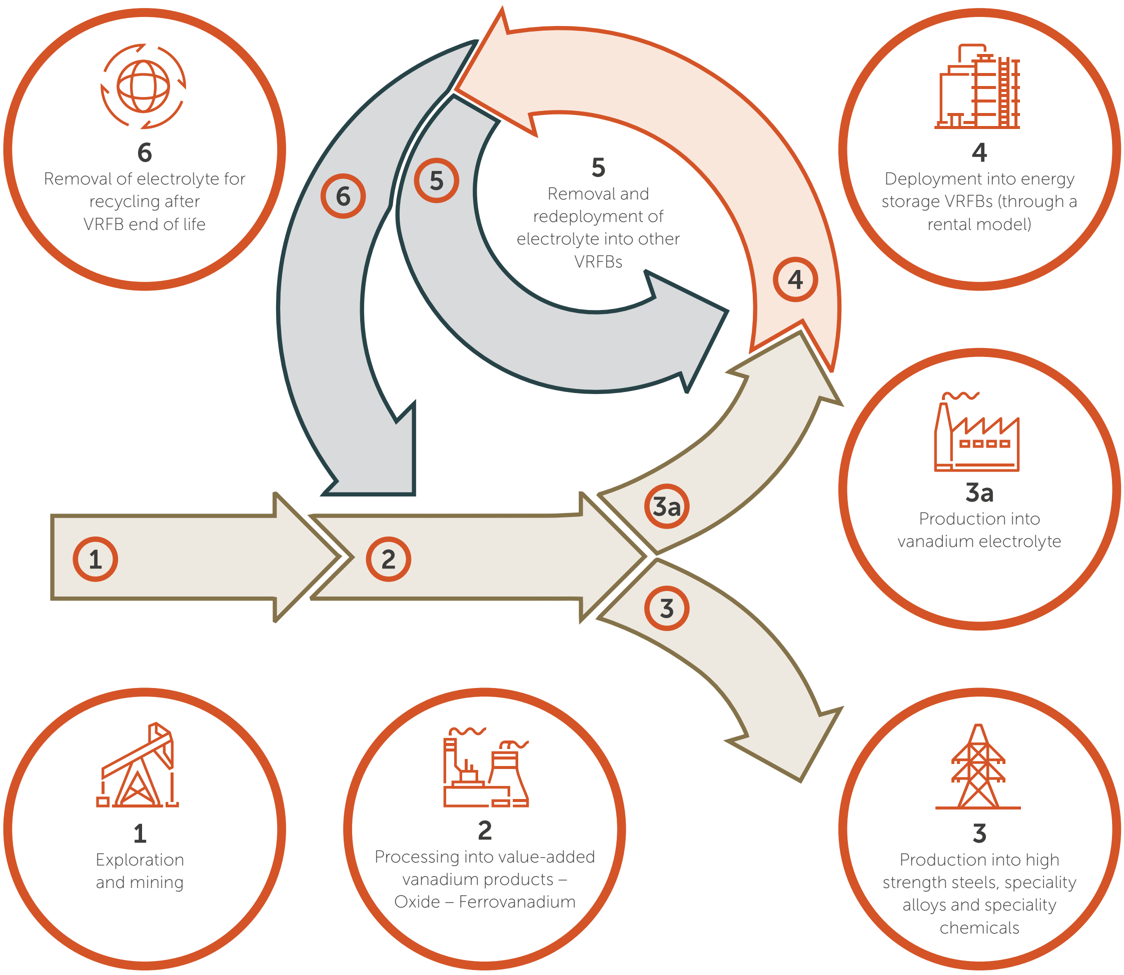
Bushveld Energy is actively driving the adoption of Vanadium Redox Flow Batteries ("VRFBs") in the global energy storage industry. Bushveld Energy's activities stretch over three key areas: electrolyte production; battery investment and manufacturing; and project development.

Bushveld Energy is developing a 1 MW mini-grid at Vametco, consisting of 3.5 MW of solar photovoltaics and 1 MW/4 MWh of VRFBs. The additional benefit of this project for Bushveld Minerals is that it is expected to contribute towards the reduction of the Company's carbon gas emissions through using renewable solar energy and storage. Bushveld Energy, together with the Group's Operations team, is investigating options to further increase sourcing of renewable energy at all of Bushveld's facilities to further minimise the carbon footprint.

VRFBs are designed to last for 20 years or more, so fewer batteries need to be deployed than would be the case for lithium batteries. The unique technical design allows full re-usability of the chemical electrolyte in the battery, once the electrical and mechanical components wear out. That means that even when the battery reaches the end of its 20-year lifespan, the electrolyte can be redeployed into another battery. The electrolyte can be easily reprocessed by existing vanadium processing facilities, at minimal cost, into products such as ferrovanadium and vanadium-pentoxide for use in high-strength steels and specialty alloys and chemicals. Vanadium electrolyte is primarily made of water, allowing for easier processing than from other compound states. Only one mineral is extracted from vanadium electrolyte, whereas lithium, nickel, manganate, cobalt, etc. need to be separated out in a lithium battery. These opportunities may make vanadium the most circular economy-friendly mineral.

3. Socio-Economic Development

In 2020, Bushveld Minerals was not immune to the global economic challenges brought on by the impact of COVID-19. The pandemic has not only negatively impacted many livelihoods globally, but in the case of South Africa, the impact of COVID-19 has worsened socio-economic challenges that pre-dated the pandemic. As a result, the host communities where the operations of Bushveld Minerals are located are currently experiencing even higher levels of unemployment, poverty and inequality. Communities have increased expectations of the mining sector and of other large employers in their areas. This will undoubtedly continue to put pressure on their relationship with the Bushveld operations at Vametco and Vanchem.



In 2020, the implementation of Corporate Social Investment ("CSI") projects for Bushveld Minerals was impacted by the COVID-19 lockdown. However, a total of over ZAR1.5 million was spent to support various social initiatives around our operations that benefited our host communities. The key areas that were impacted by this spending were:

- Improving infrastructure, using the services of local SMMEs;
- Creating short-term job opportunities for unemployed community members; and
- Raising COVID-19 awareness in the community.

Socio-economic Base Study

In October 2020, Bushveld Minerals commissioned a socio-economic baseline studies among local communities around its Vametco Alloys and Vanchem operations.

The results of the study will be used to identify and develop sustainable programmes that will help to address the socio-economic challenges within Bushveld's host communities. The households surveyed were located in the identified host communities of Madibeng and Emalahleni. The results of the study, have provided key indicators of where efforts should be focused in future. Bushveld aims to build sustainable relationships with its host communities by partnering with them to implement sustainable development programmes.

Key Indicators

The baseline study focused on key socio-economic indicators related to population and demographics, community well-being, employment and income, employability, access to infrastructure and related public services, economic development and the impact of COVID-19.

Although there were some differences in population and demographics within the Madibeng and Emalahleni communities, there were also some clear similarities that are worth highlighting.

Below is a summary of key findings that were common to both Vametco and Vanchem.

Income and employment

Key Findings

- High unemployment rate – youth unemployment is over 30 per cent in both communities
- Community believes that Bushveld needs to employ more people from the local community
- Community believes Bushveld needs to commit to train more local people to be employable in its operations

Community Recommendations

- Focus on employability and income generation, not only on the procurement opportunities
- Skills development to be prioritised so that beneficiaries develop relevant and mobile skills and are not dependent strictly on Bushveld

Community well-being

Key Findings

- There is a perception that the mining sector is not having a positive impact on the community
- There is insufficient reporting on progress on the commitments already made to uplifting the community

Community Recommendations

- Building capacity for an impactful SED Programme
- Focus on programmes that have sustainable benefits for communities
- Contribute to improving housing challenges
- Focus on environmental issues, such as air quality

Economic development

Key Findings

- Community believes Bushveld needs to develop and contract with more local businesses

Community Recommendations

- Implement a procurement policy that benefits local businesses
- Support SMME development

Access to infrastructure & related public services

Key Findings

- There is increasing pressure on infrastructure and public services
- Local municipalities are not able to keep up with demand
- There is an expectation from community members that the mining companies in their area must contribute towards improving infrastructure

Community Recommendations

- Bushveld needs to support local social amenities
- Bushveld needs to support projects initiated by the municipalities

Impact of COVID-19

Key Findings

- Worsening unemployment, as livelihoods were impacted in 2020 lockdowns
- Lack of opportunities for SMMEs due to decrease in business activity across sectors

Community Recommendations

- Continue to respond to COVID-19 needs as they arise

Socio-economic development contributions: human resources development

Human resources development ("HRD") is one of the Company's important socio-economic goals. Bushveld Minerals invests in developing the skills of its employees and members of the host communities. The aim is to improve the quality of life of workers and members of the community, while increasing their labour mobility and prospects of employment beyond Bushveld Minerals. The HRD programmes include learnerships, internships, bursaries, portable skills and Adult Education and Training ("AET"). The HRD programmes and achievements in 2020 are described below.

1. Learnerships: Learnership programmes are offered to both employees and non-employees. In 2020, there were 47 non-employee learners and five employee learners. Trades taught included: Fitting, Fitting and Turning, Electrical, Instrument Mechanician, Rigging, Boiler-making and Diesel Mechanics.

2. Internships: Four community members were part of the one-year internship programme studying in Analytical Chemistry. Another seven community learners were on a two-year internship programme, with two in Finance, one in Geology; one in Electrical Engineering; one in Analytical Chemistry and one in Chemical Engineering.

3. Bursaries: 35 bursaries were awarded. 69 per cent of the bursary holders were females. Qualifications pursued included Medicine, Accounting, Engineering, Information Technology, Geology, Law, Education and Pharmacology.

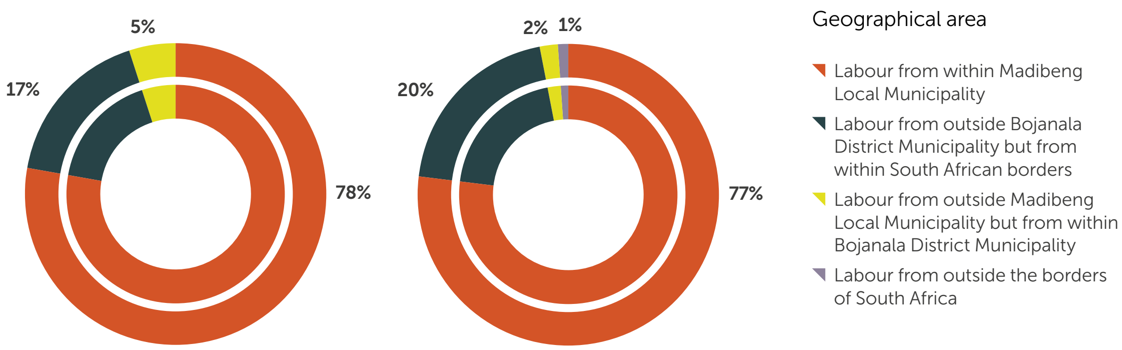
4. Portable skills: Due to COVID-19 restrictions, the business was unable to make an impact in this area. Training sessions will resume once health and safety protocols allow.

5. AET: This is an accredited curriculum offered to community members and employees to promote literacy. It focuses on upgrading English communication skills and numeracy. The curriculum ranges from pre-AET to level 4 (NQF1). In 2020, there were 29 learners from the community and 16 employees on this course.

Socio-economic development contributions: Labour Profile

Bushveld Minerals' subsidiaries pay special attention to sourcing labour from host municipalities, and this contributes directly towards local socio-economic development. The graphs below show Vametco's and Vanchem's Labour Profiles.

Vametco's Labour Profile (31 December 2020)



Vanchem's Labour Profile

Stakeholder Engagement

Bushveld Minerals has developed a Stakeholder Engagement Strategy which forms the blueprint for building relationships with stakeholders, including host communities and local landowners. The stakeholder engagement strategy was developed to enable Bushveld Minerals to develop a collaborative relationship with key stakeholders in support of its strategic objective – to become a fully integrated vanadium company.

The stakeholder engagement strategy builds on Bushveld's strategic intention to identify key stakeholders and their interests and requirements, to develop appropriate engagement models. There were meaningful, transparent, and honest engagements with stakeholders in 2020.

Four key stakeholder engagement outcomes were set to support Bushveld Minerals' strategy:

- Socio-economic development, regulatory compliance, and creation of value beyond compliance in communities where we operate.
- Development of a strong South African vanadium industry, including a broad base of stakeholders.
- Development of a policy and regulatory framework for the battery energy storage systems industry, including VRFBs, in the South African electricity market; and
- Expansion of VRFB deployments into the African continent and exports of vanadium, electrolyte, and the electrolyte rental product to key global markets (US, UK/EU and China).

The country experienced the worst pandemic in over 100 years, accompanied by government measures to curb infections. Without doubt, the national lockdown and new compliance and safety regulations had a negative impact on the original 2020 stakeholder relations plan for face-to-face engagements. Engagement has become virtual, which brings its own challenges. Key highlights from our stakeholder relations activities in 2020 include:

1. The commitment by the Office of the Premier of the Eastern Cape to provide necessary support to Bushveld Electrolyte Company's investment in the Eastern Cape.
2. The commitment by the Office of the Deputy Minister of Finance in South Africa to provide necessary support to Bushveld Minerals in championing local beneficiation programs in the vanadium sector.
3. Bakenberg Traditional Council, Bakenberg Mining Forum and Pamish resolved to engage further to finalise all outstanding matters affecting the mine, such as surface lease agreements, community shareholding, and implementing the social and labour plan.
4. The Investment and Infrastructure Office in the Presidency committed to provide the necessary support to Bushveld Energy.

Our People

> Bushveld Minerals sees all its employees as long-term strategic partners, sharing the common objective of building a sustainable business for the mutual benefit of all stakeholders.

Strategic Overview

In 2019, the Group introduced an integrated Human Capital strategy that sought to advance our strategic intent of having skilled and engaged employees who are able to innovate and drive operational excellence. This was centred on two strategic pillars; shared human capital identity and an integrated employee experience. In 2020, there was progress in the implementation of our priorities, with key strategic milestones detailed below.

1. Developing a shared Human Capital Identity

- The Group has made great strides towards building an integrated group approach to employee relations. The Association of Mineworkers and Construction Union (AMCU) was on-boarded at Bushveld Vanchem, and a 12-month wage agreement signed.
- The Group has implemented a strategic control operating model. This ensures that the executive team participates in development and the implementation of business unit strategies to consolidate the "Bushveld Minerals Way" of operating and to maximise synergies across the Group. As a result of applying this model, Vanchem and Vametco's operating structures were fully aligned, and the service delivery models for all support functions were reconfigured, namely:
  - Finance, Audit and Risk;
  - Human Capital;
  - Community and Stakeholder engagement; and
  - Safety, Health and Environment.

  The restructure was followed by the ongoing process of constructing the Bushveld Minerals Way which incorporates the alignment of ways of work, systems and processes across the Group to drive operational excellence.

2. Cultivating a shared employee experience

Employee well-being

- COVID-19 was the true test of our ability to cultivate a shared employee experience of well-being and resilience.
- In response, Bushveld introduced the Kaelo programme, managed by a private employee wellness provider, to support employees and their families. The programme was selected for the versatile interventions that it offered our employees during these difficult times. Employees had access to psychological and mental health assistance, financial and legal advice, trauma counselling and more.
- A dynamic COVID-19 policy and protocols was put in place with a focus on 'Safety First' and to allow a variety of flexible work practices for different categories of employees.
- This led to an effective response that included identifying and protecting vulnerable employees, introducing and administering special COVID-19 sick leave, and reinforcing employee wellness programmes, with a focus on the physical and mental wellness of our employees and their families.
- We introduced remote working, where possible, and leveraged technology to facilitate and adapt to new ways of working. Where remote working was not practical, for example on mining and processing sites, operating procedures were modified to ensure social distancing, mask wearing, and frequent hand washing or sanitising.

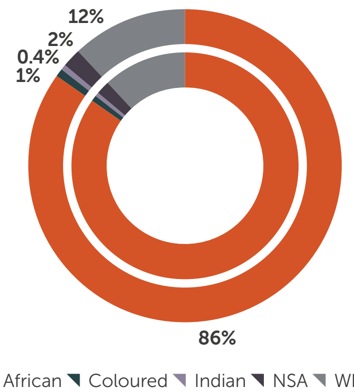
People Management Practices

In 2020, a group-wide Competency Framework was developed. It will form the foundation for the Group Talent Framework. The first Group Talent Forum presided over by the Group Chief Executive was convened in the second half of the year. This is a management governance forum that discusses and makes recommendations on issues such as senior leadership development, succession, senior talent pipeline oversight and retention across the Group.

The Group performance and reward framework was implemented at Vanchem. It has not been implemented yet at Vametco due to legacy issues.

2020 People Profile

Bushveld Minerals employees (race profile)



1. Diversity and Inclusion

The primary focus remains to acquire diverse and deep leadership skills to help move the business to the next level of growth. The Group's aspirations for employment equity include achieving value beyond compliance and improving labour and community relations, with transformation and diversity as a value driver across the business.

The ability to attract, integrate and retain high-calibre skills and human capabilities remains at the top of the Group's human capital agenda. For this reason, there has been an investment in time and resources to achieve best-practice talent acquisition, while building a solid remuneration and reward framework aimed at rewarding exceptional performance and retaining critical skills.

2. Overall Group Staff Complement

The Group employed a total of 712 people at the end of December 2020. The table below provides a breakdown by business unit:

Employment Type	Bushveld Minerals Corporate Office (including Bushveld Energy and Lemur)	Vametco	Vanchem
Permanent	28	430	164
Fixed-term Contractors	6	20	11
Learners/Apprentices/Interns/Graduates	–	53	–
Total Headcount	**34**	**503**	**175**

2020 Human Resources Priorities

Our priorities for 2020 are informed by the Group Human Resources strategy, underpinned by the Group Strategic Priorities.

Human Resources STRATEGIC PILLAR	FOCUS AREA
Shared Human Capital Identity	• **Leadership** – Shared leadership ethos and talent management, including succession management. • **Culture** – Post-acquisition culture integration for the Group and its operations. • **Employee Wellness and Relations** – Focus on building an integrated group approach to employee relations, with fully-engaged employees who will thrive and give their best to achieve their own and the Company's objectives.
Integrated Employee Experience	• **Integrated talent management practices** - Talent acquisition: enhance our ability to attract great talent across all operations. - Performance: ensure that business leaders have the requisite set of competencies and tools to shape and drive a performance culture. - Talent development: investment in the improvement of both leadership and technical competencies across the group. - Remuneration and reward: Group-wide implementation of the remuneration and reward philosophy and policy. • **Bushveld employer branding** - Develop an integrated internal and external Bushveld Minerals employer brand. - Leverage the Group's employee value proposition to strengthen its reputation as a preferred employer, for both existing and prospective employees.

Bushveld Minerals sees all its employees as long-term strategic partners, sharing the common objective of building a sustainable business for the mutual benefit of all stakeholders. We believe in a shared human capital identity and integrated employee experience across our operations, underpinned by people management practices that foster the performance, growth and prosperity of all our employees.

Skilled and engaged employees, working in a safe and productive environment, are able to innovate and drive operational excellence, enabling us to create value for our stakeholders.

Meet the Board of Directors

Ian Watson (78)

Independent Non-Executive Chairman

Appointed to Board
March 2012

Experience
A mining engineer with considerable experience in the South African mining sector. A professional engineer and a member of the Engineering Council of South Africa. Previous roles include Managing Director of Northam Platinum. A former CEO of Platmin Limited and International Ferro Metals (SA). Consulting Engineer at Gold Fields of South Africa Limited.

Qualifications
National Diploma in Mining from Witwatersrand Technical College School of Mines.

Mine Manager's Certificate of Competency, Republic of South Africa.

Board Committee membership
Chairman of the Disclosure and Nomination Committees and a member of the Remuneration Committee.

Fortune Mojapelo (45)

Co-founder and Chief Executive Officer

Appointed to Board
March 2012

Experience
Co-founder and Chief Executive of Bushveld Minerals, a role he has held from the inception of the Company. Co-founder and Director of Bushveld Energy. A founding shareholder of VM Investment Company, a principal investment and advisory company focusing on mining projects in Africa. Played a leading role in the origination, establishment and project development of several junior mining companies in Africa. Began his career at McKinsey & Company as a consultant on corporate strategy and organisational development in several sectors in South Africa and Nigeria.

Qualifications
BSc (Actuarial Science) from the University of Cape Town.

Board Committee membership
Disclosure and Nomination Committees.

Tanya Chikanza (55)

Finance Director

Appointed to Board
October 2019

Experience
Has extensive experience in managing publicly-listed companies' relationships with financial markets. Has a global and market-facing perspective, with 30 years in international equity and debt capital markets, strategy, corporate finance and audit. Previously spent nine years at dual-listed Lonmin Plc where, as Executive Vice President of Corporate Strategy, Investor Relations and Corporate Communication, she helped to steer Lonmin's return to profitability in 2018 and led the recent all-share transaction with Sibanye-Stillwater. Executive Director at Smith's Corporate Advisory in London.

Vice-President Corporate Finance at JP Morgan Cazenove.

Qualifications
Qualified Chartered Accountant.

Member of the Institute of Chartered Accountants of Zimbabwe.

Anthony Viljoen (44)
Non-Executive Director

Appointed to Board
March 2012, Executive Director. Appointed Non-Executive Director in November 2017

Experience
Founding Chief Executive Officer of AIM-listed AfriTin Mining Limited since 2017. Executive Director of Bushveld Minerals from March 2012 to November 2017. A mining entrepreneur and founding shareholder and director of VM Investment Company, a principal investment and advisory company focusing on mining.

Involved in the establishment and project development of a number of junior mining companies across Africa. Previously worked at Deutsche Bank, Barclays Capital in London and Loita Capital Partners.

Qualifications
BSc (Business and Agricultural Economics) from the University of KwaZulu-Natal.

Postgraduate Diploma in Finance Banking and Investment Management from the University of KwaZulu-Natal.

Board Committee membership
Audit Committee.

Jeremy Friedlander (66)
Independent Non-Executive Director

Appointed to Board
March 2012

Experience
Established McCreedy Friedlander in 1993, which became one of the premier property agencies in South Africa and listed it in 1998 on the JSE. A director of Onslow Resources (oil and gas in Namibia and Yemen). Business development director of a number of Avana companies involved in uranium, coal, gold, oil and gas and industrial minerals. Recently involved in the establishment of a number of natural resource projects, predominantly in Africa and South America.

Qualifications
BA LLB from the University of Cape Town.

Board Committee membership
Audit, Disclosure and Remuneration Committees.

Michael J. Kirkwood (74)
Senior Independent Non-Executive Director

Appointed to Board
April 2018

Experience
Spent over 30 years with Citigroup, latterly as UK Head for 10 years. Retired in 2008. Subsequent multiple listed company Non-Executive board roles include Kidde plc, Circle Holdings plc (Chair), AngloGold Ashanti Ltd and Eros International plc. NED of UK Financial Investments Ltd (UK Government entity) and Deputy Chair of Price Waterhouse Coopers Advisory board. Current roles include Chairman of Ondra LLP, NED of AngloGold Ashanti Holdings plc and Verita Healthcare Group. Prominent positions as President of the Chartered Institute of Bankers, Chairman of British-American Business and Deputy Chair of British Bankers Association.

Qualifications
Graduate of Stanford University in Engineering, Economics and Management, California. Fellow of Chartered Institute of Bankers Honorary Fellow of the Association of Corporate Treasurers.

Board Committee membership
Chairman of the Audit and Remuneration Committees, and a member of the Nominations Committee.

Executive Management Team

Fortune Mojapelo (45)
Co-founder and Chief Executive Officer since March 2012

Experience
Co-founder and Chief Executive of Bushveld Minerals, a role he has held from the inception of the Company. Co-founder and Director of Bushveld Energy. A founding shareholder of VM Investment Company, a principal investment and advisory company focusing on mining projects in Africa. Played a leading role in the origination, establishment and project development of several junior mining companies in Africa. Began his career at McKinsey & Company as a consultant on corporate strategy and organisational development in several sectors in South Africa and Nigeria.

Qualifications
BSc (Actuarial Science) from the University of Cape Town.

Tanya Chikanza (55)
Finance Director since October 2019

Experience
Has extensive experience in managing publicly-listed companies' relationships with financial markets. Has a global and market-facing perspective, with 30 years in international equity and debt capital markets, strategy, corporate finance and audit. Previously spent nine years at dual-listed Lonmin Plc where, as Executive Vice President of Corporate Strategy, Investor Relations and Corporate Communication, she helped to steer Lonmin's return to profitability in 2018 and led the recent all-share transaction with Sibanye-Stillwater. Executive Director at Smith's Corporate Advisory in London.

Vice-President Corporate Finance at JP Morgan Cazenove.

Qualifications
Qualified Chartered Accountant.

Member of the Institute of Chartered Accountants of Zimbabwe.

Francois Naude (47)
Director of Operations since January 2021

Experience
Has over 27 years' experience in mining and processing. Previously Director of Operations at Vedanta Resources' Konkola Copper Mines in Zambia. A former General Manager at AngloGold Ashanti. Founder and Director of Southern Cross Mining Services, a Company that was later sold to JIC Mining Services.

Qualifications
Mine Managers' Certificate of Competency (No.5402).

National Higher Diploma – Mining Engineer.

Mikhail Nikomarov (40)
Chief Executive Officer of Bushveld Energy since April 2015

Experience
Over 15 years of international business experience in energy and finance, including as CEO and co-founder of Bushveld Energy since 2015. Seven years with McKinsey & Company in Moscow and Johannesburg, advising national governments, utilities and manufacturers on growth strategy and policy and leading operational turnarounds in the energy sector. Three years as Portfolio Manager at Sovereign Bank, USA (now Santander Bank). Chairman of the Board of South African Energy Storage Association.

Chair, Energy Storage Committee, Vanitec (the global association of vanadium producers).

Qualifications
MBA from INSEAD.

Diploma in Economics from London School of Economics.

BA (History) and BA (Economics) from University of Massachusetts.

Prince Nyati (43)
Chief Executive Officer of Lemur Holdings since November 2017

Experience
Over 16 years' experience developing energy and mining projects in sub-Saharan Africa. Started his career in oil, gas and petrochemicals in the USA and has worked in Zambia, South Africa, India and Singapore for companies including Shell Oil, Total Petrochemicals, Eskom and Tata Power. As Africa Group Head at Tata Power, Prince evaluated over 100 mine assets and 50 power opportunities in 30 countries. Worked on transactions representing over US$1 billion in value. Other experience includes commodity trading, specialising in domestic and seaborne coal. Involved in the development and financial close of a 120 MW hydro-electric project in Zambia as well as two wind farm projects (235 MW) in South Africa. Served on the boards of Cennergi and the Tsitsikamma and Amakhala Wind Projects.

Qualifications
MBA from the University of Houston.

BA from the University of Zambia.

Sihle Mdluli (40)
Director: Strategy and Corporate Services since June 2019

Experience
Former Director and Operations Transformation Leader at Deloitte Africa's Strategy and Operations practice.
Spent over nine years assisting clients in defining and executing their strategies and improving their cost per output unit in a sustainable manner. Has extensive experience in building stakeholder value in the mining and public sectors, focusing on Strategy Formulation and Execution, Business Model Transformation, Recovery and Turnaround Strategy, Capital Projects Efficiency, Collaborative Facilitation and Stakeholder Engagement. Prior to Deloitte, she spent over six years at De Beers, where she acquired experience in mining, plant operations, general management and diamond sales.

Qualifications
Program for Management Development from Gordon Institute of Business Science.

MBA from Wits Business School.

BSc Engineering (Metallurgy) from the University of the Witwatersrand.

Executive Management Team continued

Ken Greve (60)

Director: Corporate Development since 1 January 2019

Experience

Mining Engineer with extensive experience in project management, project development, business and company valuations, mergers and acquisitions, logistics contracts and specialised financing, particularly in the resources industry. Held senior corporate finance and investment banking roles at Gold Fields of South Africa, JP Morgan, Kumba Resources and BHP Billiton, where he was Vice-President of Strategy & Business Development in South Africa. Previously held various directorships, including at Richards Bay Minerals, where he oversaw the Black Empowerment transaction. Member of the South African Institute of Mining and Metallurgy.

Qualifications

BCom Honours (Economics) from the University of South Africa.

Mining Engineering degree from the University of the Witwatersrand.

Viki Rapelas (42)

Director: Legal, Governance and Compliance since January 2019

Experience

Admitted Attorney of the High Court of South Africa since 2004. Admitted Notary and Conveyancer since 2012. Legal Advisor to the Bushveld Minerals Group since 2007. 19 years of transactional advisory, mergers and acquisitions and general corporate and commercial law experience.

Qualifications

International Law qualification from University of Antwerp (Belgium).

BProc and LLB from Rand Afrikaans University (now University of Johannesburg).

Technical Advisors

Professor Morris Viljoen (80)

Technical Advisor since March 2012

Experience

Over 30 years' experience in the mining industry, following a role with JCI in base metals (including nickel, copper antimony, gold and platinum) exploration and mining in southern Africa and as consulting geologist for Rustenburg Platinum Mines (part of Anglo American Platinum).

Held the position of Professor of Mining Geology at the University of Witwatersrand for 13 years and established the Centre for Applied Mining and Exploration Geology, which has identified and developed mineral projects including the Amalia and Blaaubank lode gold deposits, the Akanani/AfriOre Platinum Project and the Uramin Uranium Project.

Professor Richard Viljoen (80)

Technical Advisor since March 2012

Experience

Over 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 Leeudoorn 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.

Has also completed numerous Competent Person's Reports for projects including the Witwatersrand South Reef project, Doornkop mine project and the Uramin uranium project.

A great loss for Bushveld Minerals

It is with great sadness that Bushveld Minerals learned of the untimely passing of Ms Dolly Mokgatle in early 2021. In her relatively short time with us, we appreciated what made her such a driving force in building the new South Africa.

From March 2020, Ms Mokgatle served on the board of Bushveld Minerals as an independent non-executive director. She was also a member of our Audit Committee. Before joining Bushveld Minerals, Ms Mokgatle had a distinguished career as a captain of industry, a trailblazer for black women in business and a champion for women's empowerment. Ms Mokgatle's impressive career in the private sector included being CEO of Spoornet (now Transnet Freight Rail) and a founder of the Peotona group of companies. In the energy sector, she was MD of the Transmission Group at Eskom and a deputy chair on the board of the National Energy Regulator of South Africa. Throughout her career, she was a staunch believer in educating and mentoring girls and younger women, pioneering a women's development programme.

During her time at Bushveld Minerals, Ms Mokgatle readily immersed herself in the role and added immense value with her wisdom and knowledge of the South African energy sector. She will be sorely missed by all those who worked with her at Bushveld Minerals.

Dolly will be greatly missed by her family, friends and colleagues as well as the South African business community as a whole, which has lost a great talent and business partner.

May her soul rest in peace.

Corporate Governance Report

The Board collectively recognises that implementing an effective corporate governance structure is of paramount importance to continue to deliver the Company's strategy, create long-term value and maintain our licence to operate. In 2018, the Company elected to adopt and comply with the Quoted Companies Alliance Corporate Governance Code ("QCA Code"), to support a flexible and pragmatic approach to corporate governance regulations as being more appropriate for Bushveld.

The principles of the QCA Code are set out below, supplemented with details of how the Company is applying them and how the principles support the Company's medium- to long-term success.

Additionally, the Company's website includes a Corporate Governance Statement that explains the application of the QCA Code further and can be found at **http://www.bushveldminerals.com/corporate-governance/.**

Deliver Growth

Principle 1:
Establish a strategy and business model that promotes long-term value for shareholders

Bushveld Minerals' business strategy revolves around unlocking the value of assets in its diversified vanadium product portfolio and delivering returns to shareholders through effective management and efficient operations.

The strategy is clear and supported by a compelling investment case, both of which are fully described in various sections within the Business Overview of this report.

The overriding objective of the Board is to direct the business to ongoing success in delivering long-term shareholder value. To achieve this, an operating model has been adopted that defines how to deliver and execute the strategy by defining the structures in which to operate and the capabilities required.

Principle 2:
Seek to understand and meet shareholder needs and expectations

The Board is committed to providing effective communication with shareholders and attaches great importance to delivering clear and transparent information on the Company's activities and strategy.

The Bushveld Minerals Investor Relations team is dedicated to communicating the Bushveld Minerals value proposition to both institutional and private investors, as well as the broader market. This is successfully achieved through active engagement with investors, research analysts and journalists via a combination of investor roadshows, proprietary webinars, attendance at conferences focused on the mining and energy storage sectors and engagement with selective media. These engagements are key as they provide valuable feedback in the Board's decision-making process and determine how the Company can best meet shareholder expectations.

The Board views the Annual General Meeting ("AGM") as the main forum for communicating directly with investors and it is attended by the Directors, in person (where circumstances allow) or via teleconference, who are available to answer any questions raised by shareholders. At the AGM, various resolutions are proposed and voted on by the shareholders, either by attending the meeting or appointing a proxy to vote on their behalf. The results of the voting are released to the market as soon as practicable after the AGM has closed.

Significant developments and regular operational updates are disseminated through stock exchange announcements via the Regulatory News Service ("RNS") and can be found on the Company's website at **http://www.bushveldminerals.com/regulatory-news-rns/**. The website also has a wealth of information for existing and potential shareholders, including a corporate video, project descriptions, investor presentations, financial and technical reports, analyst research, webcasts and certain shareholder information.

Any shareholder enquiries can be directed to **info@bushveldminerals.com**

	2020
Virtual roadshows	
Full Year 2019 Results	June
H1 2019 Results	October
Reporting	
Q1 2020 Operational Update	May
Q2 and H1 2020 Operational Update	September
Final Results for the year ended 31 December 2019	June
Interim Results for six months to end of June 2020	September
Q3 and 9 months 2020 Operational Update	November
Q4 and FY 2020 Operational Update	January 2021
Annual General Meeting	July
General Meeting	November
Conferences	
In-person	
Africa Mining Indaba, Cape Town	February
Roskill/Investec Conference – Spotlight on Africa, Cape Town	February
BMO Metals and Mining Conference, Florida	February
Virtual	
7th Vanitec Energy Storage Meeting	June
International Flow Battery Forum	June
Proactive One2One Investor Forum	July
South African National Energy Association's workshop on Energy Storage	September
World Energy Storage Day, conference and expo	September
Exane BNP Paribas – Energy Storage Conference	October
Africa Utility Week	November
The Junior Indaba	November
Solar Power Africa	November
Africa Utility Week	November
Stakeholder Consultation of the Energy Storage Partnership – World Bank	November
South Africa Investment Conference	November
Bernstein Revolution Conference	November
International Mining and Resources & Expo ("IMARC")	November

Principle 3:
Take into account wider stakeholder and social responsibilities and their implications for long-term success

Bushveld Minerals recognises that successful execution of its business strategy requires it to build and maintain meaningful, well-functioning relationships with its multiple stakeholders. These include government, regulatory authorities, funders, partners, employees, contractors, customers and, very importantly, the communities in which our projects and operations are based. We see our socio-economic role going beyond the creation of jobs and revenue for South Africa, to acting as an agent for transforming these communities.

More information and detail on this can be found within our Sustainability Report on page 52.

Principle 4:
Embed effective risk-management, considering both opportunities and threats, throughout the organisation

The Board has primary responsibility for establishing and maintaining the Company's governance structures, internal controls and risk-management systems, which are designed to meet the particular needs of the Company and the risks to which it is exposed. The oversight responsibility for reviewing the adequacy and effectiveness of these governance structures, internal controls and risk-management systems has been delegated to the Audit Committee.

A key priority for the Audit Committee during 2019 was to initiate the recruitment process, in conjunction with Human Resources, and conclude the appointment of the Group Head: Internal Audit and Risk, which was successfully completed in 2020. Pursuant to this appointment, and on recommendation from the Audit Committee, the Board has also formally mandated and given effect to the establishment of the Internal Audit & Risk function by approving the Internal Audit Charter, Internal Audit Manual, Internal Audit Code of Ethics and an Internal Audit Policy. These policies are fully aligned to the Institute of Internal Auditors, International Standards for the Professional Practice of Internal Auditing, consequently the main objectives of the Internal Audit and Risk function is to support Bushveld in accomplishing its objectives by bringing a systematic and disciplined approach to evaluating and improving the Company's governance, risk management and systems of internal controls. To maintain its independence and objectivity, this role reports functionally to the Chairperson of the Audit Committee and administratively to the Finance Director. While the Board is aware that no system or any one individual can provide absolute assurance against material misstatement or loss, this appointment gives the Directors the required level of assurance that the risks of the Company are being proactively managed.

Consequent to the appointment of the Internal Audit and Risk role, the development of an Enterprise Risk Management Framework ("ERMF"), incorporating Risk Appetite and Tolerance levels, has been expedited. The aim is to approve and implement the ERMF during 2021: Q2/Q3. Notwithstanding, the ongoing development of a formal risk-management framework, the company identifies, evaluates and manages risk throughout its operations and has completed detailed risk assessments, together with risk mitigation strategies. These detailed risk assessments are consolidated and have resulted in the identification of principal risks that could impact the Company's ability to deliver on its long-term strategic objectives. The principal risks are detailed on page 47.

Over and above the work being performed by the Internal Audit and Risk function, the Board considers that the frequency of Board meetings, and the level of detail presented to the Board for its consideration in relation to the operations of the Company, provides an additional process to identify, evaluate and manage significant risks relevant to its operations. Additionally, the reports received from the Company's external, independent auditor, via the Audit Committee, on the state of Bushveld's internal controls is of course another valuable tool.

Maintain a dynamic management framework
Principle 5:
Maintaining the Board as a well-functioning, balanced team led by the Chair

The 2020 Board consisted of a Non-Executive Chairman (Ian Watson), a Senior Non-Executive Director (Michael Kirkwood), three additional Non-Executive Directors (Jeremy Friedlander, Dolly Mokgatle and Anthony Viljoen) and two Executive Directors (the Chief Executive Officer and the Finance Director, Fortune Mojapelo and Tanya Chikanza, respectively). The Board was of the view that the Chairman and three of the four non-Executive Directors, being Michael Kirkwood, Jeremy Friedlander and Dolly Mokgatle, were deemed to be independent for the purposes of Corporate Governance and are of independent character and judgement. The Board was satisfied that it had achieved a suitable balance between independence, on the one hand, and knowledge of the Company on the other, enabling it to discharge its duties effectively. It was with great sadness that the Board learnt of the untimely passing of Dolly Mokgatle in January 2021 and, as a result, is, through the Nomination Committee, actively searching for a suitably qualified replacement.

The Board holds formal quarterly meetings and meets outside those events as and when necessary. The Executive Directors work full-time for the Company and the expectation is that the Non-Executive Directors will spend approximately 30 days per annum on work for the Company.

The Board met formally four times during the year ended 31 December 2020, with an additional three meetings held to consider matters falling outside of the quarterly cycles. Attendance was as follows:

Ian Watson	7
Michael J. Kirkwood	7
Jeremy Friedlander	7
Anthony Viljoen	7
Dolly Mokgatle (appointed 19 March 2020)	5
Fortune Mojapelo	7
Tanya Chikanza	7

The Board is supported by Audit, Remuneration, Nomination and Disclosure Committees which operate within specific terms of reference and are described further in Principle 9 below.

Principle 6:
Ensure that the Directors pool the necessary up-to-date experience, skills, and capabilities

The Directors of Bushveld Minerals have been appointed to the Company because of the varied skills and experience that they offer, as well as their personal qualities and capabilities. Full biographical details of the Directors are included on pages 62 and 63. which provides an indication of their breadth of skills and experience. The Board is also able to engage independent advisors should the need arise.

The Board is determined to ensure that it continues to have the right balance of Directors. This is a continuous process, with the Nomination Committee regularly reviewing the composition of the Board to ensure that it has the necessary breadth and depth of skills to support the ongoing strategy of Bushveld Minerals. In addition to this, at least one-third of directors retire by rotation and offer themselves for re-election every year, which is voted on by shareholders at the AGM.

As noted above, in March 2020 the Board appointed Dolly Mokgatle, whose extensive expertise in South Africa's power network, coupled with her in-depth knowledge of energy policy, was considered very valuable for the Company's energy strategy. In addition, with her corporate experience on numerous company boards over the years, the Company's governance was strengthened. Since Dolly's passing, efforts are under way to find a suitable replacement.

Principle 7:
Evaluate Board performance based on clear and relevant objectives, seeking continuous improvement

The Board recognises the importance of regularly reviewing the effectiveness of its performance and the ability of the members to work together to achieve the Company's objectives, as well as that of its committees and the individual directors.

Responsibility for assessing and monitoring the performance of the Executive Directors lies with the independent Non-Executive Directors, using agreed key performance indicators. Further detail can be found in the Remuneration Report on page 77.

The Board as a whole evaluates its own performance internally, and that of the committees, and uses the process to identify opportunities for improvement. The Nomination Committee is responsible for reviewing the structure, size, and composition (including skills, knowledge, experience and diversity) of the Board and making recommendations to the Board on any changes. Succession planning for Directors and other senior executives is also the responsibility of the Nomination Committee and is front of mind.

Principle 8:
Promote a corporate culture that is based on ethical values and behaviours

Bushveld is committed to the highest standards of transparency, accountability and conducting business in an honest and ethical manner, in accordance with sound governance principles. In building a strong and sustainable governance framework, the Company's aspiration is to ensure that ethical values and behaviours are fully embedded throughout the Company, supporting the ethical culture of Bushveld. The Board and senior management is fully committed in establishing an honest and ethical culture and is conscious that the tone it sets will impact all aspects of the Group and the way that employees behave and operate.

The Company seeks to ensure that responsible business practices are fully integrated into the management of its operations, which is essential for operational excellence and to deliver Bushveld's strategy.

Bushveld has the following policies in place:

Conflicts of Interest, Anti-Corruption and Bribery Policy

It is the Company's policy to conduct all of its business in an honest and ethical manner. We take a zero-tolerance approach to bribery and corruption and are committed to acting professionally, fairly and with integrity in all our business dealings and relationships, wherever we operate. The purpose of this policy is to provide clear guidelines and acceptable practices to all employees to avoid potential and perceived conflicts and interest. The policy further sets out firm rules and regulations regarding the receipt of gifts, entertainment and business courtesies. Bribery and corruption in any form or shape is strongly discouraged and employees found in contravention of these polices may be subject to disciplinary proceedings.

Fraud Prevention and Fraud Investigation Policies

The purpose of these policies is to detail the Company's expectations with respect to managing fraud-risk, to develop awareness of that risk in the organisation, to provide guidance to those who find themselves having to deal with fraud, and for establishing procedures and assigning responsibility for the investigation of fraud and related offences. These policies are in the process of finalisation.

Whistle-blowing Policy

This policy will help break the cycle of silence and inaction and assist in preventing corruption within Bushveld and the broader public sector in which it operates. The policy is to encourage employees and stakeholders to feel confident in raising breaches and concerns and to ensure that whistle-blowers will be protected from possible reprisals or victimisation, if disclosures are made in good faith.

Share Dealing Policy

The Company has adopted a policy for dealing in its shares, which incorporates all obligations under both Rule 21 of the AIM Rules for Companies and Article 19 of the Market Abuse Regulations.

The policy explains the circumstances under which shares in the Company can be bought or sold by Directors and relevant employees, along with the requirements and procedures that have to be followed when dealing in the Company's shares. In addition to this, the Company has a Memorandum on Inside Information providing additional information on applicable laws and possible sanctions, market-abuse provisions and communication requirements.

Social Media Policy

While the Company recognises the benefits that social media engagement can have in helping it reach out to stakeholders, this policy is in place to facilitate the responsible use of social media and minimise the risks to the Company through its misuse, which can bring a company into disrepute.

Principle 9:
Maintain governance structures and processes that are fit for purpose and support good decision-making by the Board

The Board's role is to provide strategic leadership to the Company within a framework of prudent and effective controls, enabling risk to be assessed and managed.

Matters reserved for the attention of the Board include, *inter alia*:

- Board membership and powers, including the appointment and removal of Board members and determining the terms of reference of the Board;
- Establishing the overall control framework, including the operating model that defines how to deliver and execute strategy by defining the structures in which to operate;
- Key commercial matters, including the approval of the budget and financial plans, changes to the Company's capital structure, the Company's business strategy, acquisitions and disposals of businesses and capital expenditure;
- The approval of financial statements, dividends and significant changes in accounting practices; and
- Stock exchange-related issues, including the approval of the Company's announcements and communications with both shareholders and the stock exchange.

To that end, the Board is supported by committees that have the necessary skills and knowledge to discharge their duties and responsibilities effectively. These committees are primarily made up of Non-Executive Directors. Descriptions of the various committees are provided below.

Audit Committee

The Audit Committee, comprising Michael Kirkwood as chair, Jeremy Friedlander, Dolly Mokgatle (up until 9 January 2021) and Anthony Viljoen, has responsibility for monitoring the integrity of the financial statements of the Company, including its annual and half-yearly reports, interim management statements, preliminary results announcements and any other announcements relating to financial performance before they are presented to the Board for approval. In addition to this, its duties include reviewing and reporting on the Company's internal financial controls, risk-management initiatives and governance structures.

The Audit Committee is responsible for recommending the appointment of the auditors and reviewing and monitoring their independence and objectivity. The Committee has unrestricted access to the auditors.

To assist the Audit Committee in executing its responsibilities, an Internal Audit and Risk function was established, as described more fully under Principle 4 above.

Meetings are held at least three times a year at appropriate intervals in the financial reporting and audit cycle, and as otherwise required.

The role of the Audit Committee and the duties it fulfilled during 2020 are more fully described in the Report of the Audit Committee on page 75.

Upon the appointment of a replacement Independent Non-Executive Director for Dolly Mokgatle, the Audit Committee will again have three members considered independent.

Remuneration Committee

The Remuneration Committee, comprising Michael Kirkwood, as chair, Ian Watson and Jeremy Friedlander, determines the framework for the remuneration of the Company's Chairman and Executive Directors and, as appropriate, other senior management, including pension entitlements, share-option schemes and other benefits. Remuneration of Non-Executive Directors is a matter for the Board. No Directors or senior managers are involved in any decisions on their own remuneration.

A comprehensive Remuneration Report can be found on page 77.

Disclosure Committee

The purpose of the Disclosure Committee is oversight of the implementation of the governance and procedures associated with the assessment, control, and disclosure of inside information in relation to the Company. Ian Watson is Chairman of the Disclosure Committee, with Jeremy Friedlander and Fortune Mojapelo as members.

Nomination Committee

The Nomination Committee is responsible for reviewing the structure, size and composition of the Board, making recommendations to the Board with regard to any changes, succession planning for Directors and senior management, preparing a description of the role and capabilities required for a particular appointment and nominating candidates to fill Board positions as and when they arise. The Committee also makes recommendations to the Board concerning membership of the Audit, Remuneration and Disclosure Committees, in consultation with the Chairman of each of those committees. The Nomination Committee comprises Ian Watson, Michael Kirkwood and Fortune Mojapelo, with Ian Watson as chair.

Builds Trust
Principle 10:
Communicate how the Company is governed and is performing by maintaining a dialogue with shareholders and other relevant stakeholders

The Board is committed to providing effective communication with shareholders and attaches great importance to delivering clear and transparent information on the Company's strategy, activities and financial position.

Results of the Annual General Meeting, significant developments and regular operational updates are disseminated through stock exchange announcements via RNS and can be found on the Company's website at **http://www.bushveldminerals.com/regulatory-news-rns/.**

The Company's website has a wealth of corporate information, including a corporate video, project descriptions, investor presentations, financial and technical reports, analyst research, webcasts and certain shareholder information.

As more fully described under Principle 2, the Bushveld Minerals Investor Relations team is dedicated to communicating the Bushveld Minerals' value proposition to shareholders, as well as the broader market. This is successfully achieved through active engagement with investors, research analysts and journalists via a combination of investor roadshows, proprietary webinars, attendance at conferences and engagement with selected media.

The Head of Investor Relations is the primary point of contact for shareholders and plays a key part in encouraging shareholder interaction and listening to feedback.

Any shareholder enquiries can be directed to info@bushveldminerals.com

Report of the Audit Committee

This report provides details of the role of the Audit Committee and the duties it has undertaken during the year under review.

The Audit Committee meets at least three times a year at appropriate intervals in the financial reporting and audit cycle and as otherwise required. Other Directors including the Finance Director and other individuals, as well as the external auditor, may be invited to attend all or part of any meeting, as and when required.

The Audit Committee compromised of Independent Non-Executive Directors Michael Kirkwood, Jeremy Friedlander, Dolly Mokgatle (up until 9 January 2021) and Non-Executive Director Anthony Viljoen.

The members of the Audit Committee have relevant financial experience through the various leadership roles they have held, as set out in their biographical details on pages 62 and 63.

The Audit Committee has access to sufficient resources in order to carry out its duties, including access to the Company Secretary for assistance as required. The committee gives due consideration to applicable laws and regulations, the Quoted Companies Alliance Corporate Governance Guidelines for Small and Mid-Sized Quoted Companies and the requirements of the London Stock Exchange's rules for AIM companies, as appropriate.

The Audit Committee reviews its effectiveness periodically and will conduct an annual review of its constitution and terms of reference to ensure it is operating at maximum effectiveness. Changes arising from these reviews are recommended to the Board for approval.

The Chairman of the committee reports formally to the Board on its proceedings after each meeting on all matters within its duties and responsibilities, and how it has discharged its responsibilities.

Responsibilities of the Audit Committee

Key duties of the Audit Committee include:

- Monitoring the integrity of the Company's financial statements.
- Reviewing the consistency of, and any changes to, accounting policies both on a year-on-year basis and across the Company and its group and reviewing whether management has followed appropriate accounting standards and made appropriate estimates and judgements, taking into account the views of the external auditor.
- Reviewing and reporting to the Board of Directors on significant financial reporting issues and judgements which they contain, having regard to the matters communicated to it by the auditor.
- Reviewing the Company's internal financial controls, systems of internal control and risk.
- Reviewing the adequacy and security of the Company's whistleblowing facilities and ensuring that appropriate investigations and follow up action is conducted in respect of concerns raised.
- Reviewing the adequacy of the Company's systems, procedures and controls for detecting fraud, bribery and corruption.
- Making recommendations to the Board on the appointment of the external auditor.
- Managing and overseeing the relationship with the external auditors, including their terms of engagement and remuneration.
- Meeting regularly with the external auditors and reviewing their findings.

Financial reporting

The Audit Committee reviewed and assessed the Company's financial reporting in the period, including its half-year report, results announcements and this Annual Report. This review included an assessment of the consistency of, and changes to, accounting policies, estimates and judgements; the methods used to account for significant or unusual transactions; the appropriateness of the accounting standards used; the clarity and completeness of disclosures and the context in which statements are made; and a review of material disclosures regarding audit and risk management in the financial statements, including in the strategic report and this corporate governance statement.

In reviewing the Company's financial statements, the Audit Committee has considered the Company's accounting policies, particularly in relation to the treatment of the accounting estimates and judgements as described on pages 114 and 115. A further significant focus for the Audit Committee has been the impact of COVID-19 on the going concern assumptions and viability of the Group. The potential risks to the Group include a decline in vanadium prices as well as operational stoppages, resulting in reduced ability to sell its products as well as volatile market conditions, all of which could impact the Group's cashflows and ability to comply with its financial covenants. In mitigation, the Group has modelled a variety of scenarios around cash preservation and cost containment that show the Group's ability to continue to operate sustainably.

In addition to the publicly-released reports, the Committee's review covered management reports as well as reports from and discussions with the external auditor. The Audit Committee provided comment and feedback on this Annual Report before finalisation and approval.

The review concluded that, taken as a whole, this Annual Report is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position, performance, business model and strategy.

Internal audit

The appointment of the Group Head: Internal Audit and Risk was concluded in 2020. The Board, on recommendation by the Audit Committee has mandated and given effect to the Internal Audit and Risk functions. The scope of the internal audit function has been summarised as below;

- Provide independent and objective assurance through evaluating the Company's governance, risk and internal control systems.
- Evaluating the adequacy and effectiveness of internal financial controls over financial reporting and internal controls in general.
- Reviewing the extent of compliance with laws, regulations, standards and codes.

The Committee is satisfied, having considered the assurance provided by Group Internal Audit, that no significant or material issues have been identified that would render the Group's system of internal financial controls ineffective. Subsequently the Committee is of the view that reasonable assurance was provided and the financial records may be relied upon for the preparation of the annual financial statements.

External auditor

RSM UK Audit LLP is the Company's auditor and the Audit Committee has recommended to the Board that shareholders be asked to approve the re-appointment of RSM UK Audit LLP as auditor at the Annual General Meeting.

The Audit Committee discharged its duties, in accordance with its terms of reference, during the period to 31 December 2020, including:

- Approving the engagement of the external auditor, reviewing and approving the annual audit plan;
- Meeting regularly with the external auditor;
- Reviewing the findings of the audit of the financial statements for the period ended 31 December 2020 with the external auditor;
- Reviewing the management representation letter requested by the external auditor before it was signed by management and management's response to the auditor's findings and recommendations; and
- Reviewing the effectiveness of the audit process.

Non-audit services

A policy is in place to govern the supply of non-audit services by the external auditor, in order to safeguard independence and objectivity. The policy sets out the recommended maximum fees that should be payable for non-audit services as a percentage of the audit fee and contains guidelines as to the circumstances where a proposed engagement should be subject to a tender process.

In the current period, following the appointment of RSM UK Audit LLP as statutory auditor, non-audit fees of GBP15,000 were paid in respect of agreed upon procedures on the interim financial statements for the period ended 30 June 2020.

Whistleblowing

The Company has a whistleblowing policy to encourage stakeholders and employees to raise suspected breaches, malpractice or impropriety without fear of reprisals. The policy aims to provide a secure platform for stakeholders and employees to raise concerns and prompt management to investigate each case reported. The policy commits the Company to treat all such disclosures made in good faith, in a confidential and sensitive manner. The group receives reports regarding any significant allegations made, details of investigations and the outcomes. No significant issues were reported during the year.

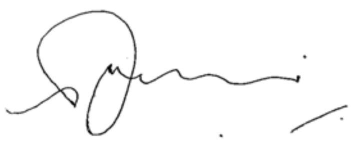
Risk management and internal control

The Audit Committee is mandated to provide oversight on the Company's governance, internal control and risk management systems. Internal controls and risk management systems are in place to support the integrity of the financial reporting process and the preparation of accounts. These systems include policies and procedures to ensure that adequate accounting records are maintained and transactions are recorded accurately and fairly to permit the preparation of financial statements in accordance with IFRS.

The key elements of the Company's system of internal controls are discussed on page 97 of this report.

The Audit Committee's review of the system of internal controls is supplemented by reports from the external auditors regarding issues identified during their engagement, particularly those relating to control weaknesses, and the responses from management.

I would like to thank the Finance team and my Audit Committee colleagues for their work during the year.



Michael J. Kirkwood
Audit Committee Chair
29 June 2021
Bushveld Minerals

Governance

2020 Remuneration Report

Part 1: Background Statement From The Remuneration Committee Chairman

Dear Shareholders,

The 2020 financial year was a challenging year for all of our stakeholders: for you as our shareholders, for our executives who worked relentlessly as a result of the impact of the COVID-19 pandemic, for the board who had to and continue to navigate the Company despite the economic challenges faced, and for all of our employees and the communities in which we operate. Despite these challenges, on behalf of the Bushveld Minerals Limited Remuneration Committee (the "Committee"), I am pleased to provide you with the Remuneration Report for the year ended 31 December 2020.

Our aim in preparing this report is to ensure that our shareholders and stakeholders better understand our approach to remunerating executives and the wider employee base. This includes the key principles we use to determine our reward framework to ensure that our executives are focused on delivering long-term shareholder value consistent with our vision and strategy.

In line with the practice adopted in 2019, this report is again presented in the King IV™ recommended format, while taking cognisance of the requirements of being an AIM-listed company during the review period. As Bushveld is not subject to Johannesburg Stock Exchange listing requirements, the policy and implementation reports are not put to non-binding shareholder votes.

The Committee is pleased to report the roll-out of the Group's remuneration policy to all our subsidiaries in early 2021.

Business Performance Overview and Impact on Remuneration Outcomes

The table below outlines key performance indicators for the Bushveld Minerals Group over a two-year period. The Group reported resilient underlying performance in its subsidiaries in the form of production volumes and operational improvements during the 2019 performance year. These improvements did not however translate into commensurate improvements in the financial indicators owing to a marked decline in vanadium prices during 2019 relative to 2018. Further detail on the Group's performance is detailed in the Finance Director's statement. Please refer to page 34 of this report for further analysis and an account of the Group's financial performance.

Indicator (US$)	**FY20**	FY19
Underlying EBIT	**(37 667 417)**	22,253,811
Underlying Earnings (EBITDA)	**(14 940 940)**	32,641,956
Closing Cash & Cash Equivalents	**50 540 672**	34,011,557
Adjusted ROIC*	**N/A**	33%
Closing Share Price	**19.5p**	20p

* Adjusted ROIC includes the bargain gain benefit from the strategic acquisition, which was acquired at a consideration below the fair value of the business.

For FY20, the overall short-term incentive ("STI") performance achievement of business targets was 75 per cent, resulting in the achievement of a "between threshold and target" business performance outcome and the payment of STIs to employees and executives. Full details of the STI measures used together with the outcomes are disclosed in part 3.

Role of the Committee and key decisions taken

The Committee was established by the Bushveld Minerals Board ("Board") to act as the Remuneration Committee of the Group and its subsidiaries (the "Group"). The Committee is responsible for and oversees the governance of all Group remuneration matters. It is specifically responsible for determining the individual remuneration of Directors (Executive and Non-Executive) and senior executives. In order to discharge its responsibility in this regard, the Committee is required to:

a. Oversee the establishment of a remuneration policy that will promote the achievement of strategic objectives, encourage individual performance and support Bushveld's long-term interests. The final approval of the policy rests with the Board;
b. Determine the remuneration framework applicable to executives of Bushveld Minerals; and
c. Review the Group's remuneration strategy and its implementation on an annual basis.

Part 1: Background Statement From The Remuneration Committee Chairman continued

In the 2020 financial period the Committee delivered the following:

Executive remuneration

a. Reviewed the total remuneration against external benchmarks.
b. Recommended individual remuneration for executives.
c. Reviewed and considered director remuneration best-practices to ensure that Bushveld's current practices remain progressive and relevant.
d. Appointed an operations director.

Non-Executive Director remuneration

a. In light of prevailing market conditions, the Committee did not recommend any adjustments to the NED fees for 2021.

Group-wide remuneration matters

a. Reviewed the impact of COVID-19 on remuneration decisions.
b. Considered remuneration trends updates.
c. Reviewed the Group-wide remuneration policy and the roll-out of the Group remuneration policies.
d. Considered fair and responsible pay (see details below).
e. Reviewed retirement and risk benefits across the Group.
f. Approved STI targets for all Group companies.
h. Performed progress testing pertaining to the 2019 performance share award.

Performance – relating to forthcoming performance cycle

a. Set short-term performance targets.

Compliance

a. Reviewed and approved the Committee's annual work plan.
b. Reviewed and approved the Remuneration Report for publication aligned to best practice.

Fair and Responsible Remuneration

During the past year the Committee actively engaged on the subject of fair and responsible remuneration. The Committee's stance is that 'fair' remuneration is impartial and free from discrimination. It is also free from self-interest, prejudice or favouritism.

It is rational, and not based on an irrational or emotional basis. 'Fair' does not mean 'the same' and remuneration levels will differ according to a number of factors, such as productivity, performance, skill, experience, risk and complexity, degree of challenge, level of responsibility of decision making, consequence and impact on the organisation. Equal contributions to performance should, however, be rewarded equally. The Company's policy on fair and responsible remuneration can be summarised as follows:

Responsible pay

a. All variable pay is subject to the achievement of performance metrics, carefully calibrated and selected by the Committee, ensuring a close alignment with shareholder value creation over the long term.
b. A portion of the STI is deferred and delivered in shares (bonus awards) which will be determined following the publication of the accounts, ensuring greater alignment with shareholders. The LTI, taking the form of prospective Conditional Shares, may also be subject to a post vesting holding period which further enforces shareholder alignment.
c. The link between pay and performance is publicly disclosed by the Company in its remuneration report.
d. The Committee and ultimately the Board reviews and approves the remuneration of Directors and senior management, ensuring independence and transparency.
e. Although remuneration is benchmarked, affordability is a key consideration when making pay adjustments. Variable pay is subject to reduction (malus) and recoup (claw-back). Executives are also expected to build and maintain a minimum shareholding in the Company.

Fair pay

a. Proper job profiles are in place for all roles within the organisation. Jobs are evaluated in accordance with a robust methodology and employees are remunerated in accordance with the determined pay scales.
b. The Group is committed to eliminating any existing unfair or unjustified differentiation within its remuneration dispensation and preventing future practices of discrimination/differentiation.
c. Horizontal fairness is applied and employees performing the same or similar job requirements at the same or similar level of performance receive similar remuneration, aligned to the Group pay scale.
d. Vertical fairness is applied by assessing the pay ratio between the CEO and the pay levels of employees below the executive level.
e. Pay is well administered, with employees paid accurately, on time and in a way that is convenient.

The Company conducted the following benchmarks and pay analysis during the period to test the principles of responsible and fair pay:

Gini coefficient

a. An internal Gini coefficient was determined on a total reward basis and compared to both the South African mining specific and national Gini (based on the REMchannel. database). The outcome was considered by the Committee.
b. The Committee will continue to monitor this on an annual basis.

Executive pay benchmarks

a. Executives and Executive Directors are paid in line with the Group's pay policy. Their guaranteed packages are pegged between the lower quartile and median of the market.
b. Executive pay is benchmarked against a bespoke comparator group with similar company features to the Group or subsidiary to ensure the reliability and validity of the data against which we benchmark ourselves.

Pay policy for shareholder alignment

a. All STI and LTI participants are subjected to malus and claw-back provisions.
b. Furthermore, incentives (STI and LTI) are directly linked to business performance by way of Group and subsidiary performance targets.

Shareholder engagement

As our shareholder register reflects more institutional shareholders, we will engage to obtain views and comments on our remuneration policy and its implementation. For the time being, the Remuneration Committee will respond to any inward enquiries relating to this report.

Future focus areas

In 2021 the focus is to continue embedding and strengthening the Group's Remuneration and Performance philosophy into the wider people management framework.

Furthermore, the Committee will prioritise the consolidation of Provident fund and Risk Benefits in order to achieve economics of scale on cost incurred and standard offerings across the group.

Remuneration advisors

The Committee re-employed the services of PricewaterhouseCoopers ("PwC"), an independent professional services firm with a global remuneration practice, to act as independent advisors to the Committee. The Committee is satisfied that they act independently.

We encourage and pursue open and regular dialogues with all our stakeholders. Your constructive input is valued and appreciated as we continue to improve the remuneration system. On behalf of the Remuneration Committee, I thank you for your continued support and feedback regarding our remuneration framework.

Michael J. Kirkwood
Chairman of the Remuneration Committee
29 June 2021

Part Two: Remuneration Policy

General Remuneration Policy

The Group Remuneration Policy seeks to enable Bushveld Minerals, to attract, motivate and retain high-performing individuals. It guides decision-making in relation to all aspects of remuneration and supports the execution of strategic deliverables, as expressed in the Group's performance framework.

The policy applies to Bushveld Minerals' head-office employees, Bushveld Energy, Bushveld Vanchem and Lemur. Employees of Bushveld Vametco Alloys are excluded at this stage, but the Committee aims for the policy to be rolled out to all subsidiaries where it makes sense, taking into account existing contractual obligations and terms and conditions of employment. The remuneration policy conforms to the Quoted Companies Alliance governance code and is anchored on the following remuneration **philosophy statements and principles:**

Bushveld's **remuneration philosophy** through the application of this policy, aims to:

- Encourage a culture that supports sustainable and entrepreneurial business growth through the provision of appropriate individual and Group short-term and long-term performance-related rewards that are fair and responsible;
- Promote the achievement of strategic objectives within the organisation's risk appetite;
- Promote positive outcomes across the economic, social and environmental context in which the Group operates; and
- Promote a culture and responsible corporate citizenship.

Elements of remuneration

The Bushveld Minerals remuneration structure is made up of a combination of fixed and variable pay. The fixed pay component is referred to as the TGP and the variable component includes the Group's STIs and LTIs. The main objective of the TGP is to provide individuals with a fixed income, priced in line with the market and aligned with the job that they do.

The variable pay component is performance-related, designed to reward superior performance and to align the interests of executives and management with those of the shareholders over the medium-and long-term. Below is a summary of the policy as it applies to designated employees in the organisation (exclusions as explained above), together with the link to strategy.

Overview and eligibility:

Fixed Pay	Element	Definition	Applicable Grades
Total Guaranteed Pay (TGP)	Base Salary	It is the rate of remuneration an employee receives in exchange for services. An employee's base salary can be expressed as an hourly rate or as a weekly, monthly, or annual salary.	All employees
	Standard Benefits	Benefits are over and above the base salary and include the Company contribution towards retirement fund and any other employer-funded group benefits.	All employees
	Conditional Benefits or allowances	Benefits received based on job specific requirements, and legislative requirements e.g. shift allowance.	Employees represented in the bargaining council
Short-Term Incentives (STI)	Production Bonus	Cash bonus paid monthly, as per the scheme rules, aimed to achieve alignment between the Company and employees in the achievement of production, safety, and productivity targets at an operational level.	Employees represented in the bargaining council
	Annual Bonus	Annual bonus is paid in cash and gives employees an incentive for the achievement of the Group's short and medium-term goals, with payment levels based on both business unit and individual performance, depending on the level of the job. Certain job categories, (D-F) STI is paid partly in cash (annual bonus) and partly as equity (deferred bonus). The deferred bonus is settled as bonus shares under the CSP (as described below) scheme.	D, E and F Bands
Long-Term Incentives (LTI)	CSP	The vesting of conditional share awards is subject to forward-looking Group performance conditions and continued employment.	D, E and F Bands
	Bonus Shares	Bonus shares are based on the STI deferral and therefore not subject to forward-looking performance vesting conditions, but continued employment is used as a vesting condition.	D, E and F Bands

Policy Applicable to the Various Elements

Remuneration element	Policy
TGP, comprising fixed cash salary plus benefits	
Policy	Our policy is to set TGP for all levels of staff between the lower quartile and median while the total package opportunity (inclusive of incentives) is set at the median or above in the case of the achievement of stretch targets, subject to discretion in the case of business needs to attract scarce skills to the company.
Policy's link to Company strategy	In light of the fact that the Group is still in a growth phase, the Committee has determined to set fixed pay for all employees between the lower quartile and the median.

Part Two: Remuneration Policy continued

Remuneration element	Policy
Approach to benchmarking and salary adjustments	For executives, the benchmark is derived from listed companies with a similar profile to that of Bushveld Minerals. Other employees are benchmarked against the mining circle of the REMchannel® Remuneration Survey. The total cost of annual increases for all employees who fall outside collective bargaining agreements is approved by the Committee and set in accordance with expected market movement and affordability. Distribution of increases to employees outside the bargaining forums is done with reference to individual performance, inflation, internal equity, competence and potential. Increases occur annually with effect from 1 January.
Benefits	Benefits include a Medical Aid, Retirement Fund, Group Life Cover, Disability Benefit and Death Benefit.
STIs	
Purpose	The purpose of the STI is to align the interest of employees with those of shareholders on an annual basis. For managerial level employees, the STI has a deferred component, aligning employees with shareholders beyond the short-term. The STI is partly paid in cash and partly deferred into shares for employees at managerial levels, while non-managerial employees receive their STI in cash. The STI gives employees an incentive to achieve the Group's annual goals, with payment levels based on both business (Group and/or subsidiary) and personal performance, depending on the level of the employee.
Policy's link to Company strategy and performance measures	The STI is designed to encourage and reward superior performance and to align the interests of employees as closely as possible with the interests of shareholders. Annual Group performance targets as well as subsidiary targets and measures are set and approved by the Board. Following the annual Board strategy review process, it approves the strategic focus areas for the year, and these are translated into a Group performance balanced scorecard which reflects on-target and stretch deliverables for the year. These would include measures such as: • Consolidated Economic Profit; • Group Strategic Priorities (as mandated by the Board); • Production Costs (Mining and Processing); • Production Volumes (Mining and Processing); • Normalised Revenue (Mining and Processing); • LTIFR ("Lost time injury frequency rate "), Community Development and Environmental Targets. Participants with line of sight on Group financial targets as well as strategic priorities will be allocated a split weighting between the Group performance targets and functional targets. As a consequence of COVID-19, only targets that could be approved for 2021 are disclosed below. The targets for FY21 are disclosed on page 85.
Bonus formula	The STI operates as follows: • Qualifying Annual TGP x On-Target Incentive Percentage x ((Personal Score x Personal Weighting) + (Business Score x Business Weighting)); • For qualifying participants (middle management and above), the STI is partly paid in cash (annual bonus) and partly deferred (deferred bonus) settled as bonus awards under the LTI (as described below); • The remainder of the participants (non-managerial) receive the full STI in cash.
On-target incentive percentages	The on-target incentive percentages are determined per grade and expressed as a percentage of an employee's qualifying TGP. The on-target incentive percentages will be determined by the Remuneration Committee from time to time, informed by prevailing market trends. The on-target ranges are indicated below.

Remuneration element	Policy
Performance measure weightings	A combination of financial and personal measures are used, each with an assigned weighting depending on seniority. Executive performance is heavily weighted toward business performance, to ensure executive and shareholder alignment. The following weightings apply at Group and subsidiary level respectively:

Group:

Level	Business weighting	Personal weighting
CEO and CFO	80%	20%
Executives	70%	30%
Senior management	60%	40%
Middle management or professional specialists	50%	50%
Non-managerial	0%	100%

Subsidiary:

Level	Business weighting	Personal weighting
Executives	60%	40%
Senior management	50%	50%
Middle management or professional specialists	40%	60%
Non-managerial	0%	100%

Subsidiary weightings for Vametco executives are implemented as follows:

Personal weighting	40%
Business – Vametco	40%
Business – Group	20%

Business performance measures and targets

As mentioned above, the business score will include a combination of financial and non-financial performance measures. The applicable targets are disclosed below. Performance outcomes are measured on the following business sliding scale:

Performance achievement	Business score
Threshold performance	50%
Target performance	100%
Stretch performance	150%

As a result of the volatility in the market regarding the Vanadium price and exchange rate, RemCo implemented a collar and cap approach for the "consolidated economic profit" target. The intention of the collar and cap on the vanadium price and foreign exchange rate is to ensure that management are protected from factors that are beyond their control but also to limit the upside, should the vanadium price and exchange rate work in their favour.

For FY20, the collar and cap for the Vanadium price was set at US$40 with a tolerance band of +-25 per cent while the exchange rate was set at ZAR14.45 with a tolerance level of 10 per cent up and down.

Personal performance measures and targets and related personal score

The personal score will be dependent on the personal performance rating of the employee for the relevant financial year. Personal performance achievement will translate into the following personal scores. A personal score below threshold acts as a gatekeeper, which means even if the business score was achieved, a participant with a personal score below threshold will not qualify for any bonus.

Rating	Description	Performance score
1	Non performance	0%
2.5	Threshold	50%
3	On target	100%
4	Exceeds expectation	125%
5	Stretch performance	150%

Part Two: Remuneration Policy continued

Remuneration element	Policy
STI opportunity	Threshold, target and stretch performance levels are set for each performance target. No bonus is payable if threshold performance is not achieved. The on-target and stretch bonus levels for executives are explained below under the heading "Package Design".
Deferral operation	For employees who hold jobs graded between Paterson Grades D and F, the STI is partly paid in cash (annual bonus) and partly deferred (deferred bonus) which is then settled as bonus awards under the LTI (as described below). The deferral is designed to further align management's short-term interests with those of the shareholders. The cash versus deferred on-target percentages are as follows:

Occupational level	On-target bonus as a % of qualifying TGP: Annual bonus	Deferred bonus
CEO and CFO	45%	28%
Executives	35%	23%
Senior management	30%	18%
Middle management or professional specialists	20%	8%

LTIs

Purpose	The Company adopted a new LTI, namely the CSP during 2018. The purpose of the CSP is to align the interests of executives with those of shareholders over the medium to long-term. Awards vest after a three-year period and are then subject to a further two-year holding period.
Policy's link to Company strategy	LTIs are inherently retentive but there are no schemes specifically in place for the sole purpose of retaining key employees. Through the delivery of real equity, employees will become shareholders in the Company.
Nature of LTI	In terms of the CSP, eligible employees will receive conditional rights to shares and the following instruments are available: • Performance awards are subject to forward-looking Company performance conditions, measured over a three-year performance period. Awards will vest subject to the achievement of the performance measures and continued employment for the duration of the vesting period. • Bonus awards are linked to STI performance which is deferred, and subject to continued employment but is not subject to forward-looking performance vesting conditions.
Eligibility	Middle management and above
Instruments and their application	A mix between performance and bonus awards will be awarded. The policy as it applies to executives is explained in the "Package Design" section below.
Performance measures and period	Performance awards are subject to performance measures over a three-year period. To ensure Group alignment, all performance awards will be subject to Group performance measures. Applicable performance measures will be determined by the Committee each time an award is made and will be communicated to participants in the award letter. Once the CSP has been implemented, retrospective achievement against targets will be disclosed. The LTI targets include: • Free cash flow margin | **40 per cent** • TSR (Absolute TSR) | **60 per cent** As a consequence of COVID-19, the RemCo has not yet decided if awards will be made in 2021 and the threshold, target and stretch performance targets can, as a consequence, not be disclosed at this stage.
Award levels	Intended on-target award levels are expressed as a percentage of TGP and are disclosed in the package design section below.

Remuneration element	Policy
Vesting levels	In recognition of the fact that TGP is set between the lower quartile and median, the CSP will comprise of an out-performance element in the case of superior performance as follows: • Threshold performance – 50% linear vesting • Target performance – 100% linear vesting • Stretch performance – 250% linear vesting
Vesting period	Bonus awards vest in equal tranches after 12 and 18 months, after the end of the performance period to which the deferral relates. Bonus awards are not subject to a holding period. Performance awards are subject to a three-year vesting period, whereafter the shares will be settled. In addition, at the discretion of the Committee, 50 per cent of vested performance shares are subjected to additional holding periods of one year (25 per cent of the shares) and two-years (the remaining 25 per cent) during which they cannot be disposed of, post-vesting retrospectively. During the holding period the vested shares may also be subject to claw-back, as explained in further detail below.
Dilution limit	The Company voluntarily imposed a dilution limit for the CSP. Up to five per cent of the issued share capital can be issued in settlement of awards granted under the CSP. When required under listing rules, the Company would seek to formalise the limit in a general meeting.

2021 STI performance targets

The Committee has agreed the following financial and non-financial targets for the year:

Company targets for FY21:

Performance measure	Weighting	Threshold (50%)	Target (100%)	Stretch (150%)
Consolidated economic profit	70%	WACC	WACC + 1.5%	WACC + 3%
Environment, Social and Governance ("ESG"), as outlined in further detail below	30%			

The approved ESG targets are outlined below:

Key performance area	Weighting	Key performance indicator	Threshold	On target	Stretch
Occupational health & safety	30%				
	40%	Total Recordable Injury Frequency Rate ("TRIFR")	≥5% performance improvement	≥18% performance improvement	≥20% performance improvement
	40%	LTIFR	≥5% performance improvement	≥18% performance improvement	≥20% performance improvement
	20%	New occupational disease cases	N/A	0	N/A

Part Two: Remuneration Policy continued

Key performance area	Weighting	Key performance indicator	Threshold	On target	Stretch
Environment	25%				
	70%	Responsible environmental stewardship	No major environmental incidents	Additional: Compliance rating on environment assessment audits	Additional: Environmental management system that incorporates international standards such as International Finance Corporation
	30%	Global vanadium advocacy	Active participation in Vanitec processes that address Vanadium environmental matters	Additional: Active advocacy on benefit of vanadium to sustainability, in areas such as the circular economy	
Social licence to operate	25%				
	100%	Acquire and maintain social license to operate	Compliance to applicable regulatory frameworks (MCII, B-BBEE & DTI Codes, etc)	Additional: Adherence to MCIII plan milestones and the development of Value Beyond Compliance strategies	Additional: Effective cross-functional internal forums such as transformational forums inclusive of General Management, Finance, Procurement, HR and Stakeholder
Governance	20%				
	100%	Adherence to the QCA Corporate Governance Code	Full adherence to the QCA Code	Threshold + 100% year-on-year improvement as per Board approved Governance annual workplan	

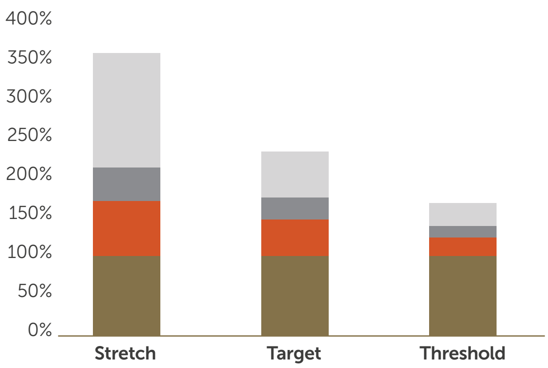
The Committee will continue to keep a close eye on the impact of COVID-19 on the business and will monitor its financial performance accordingly. As the year progresses, and in the event that the full impact of COVID-19 on the business becomes more apparent, the Committee will be better placed to make appropriate amendments to the STI metrics that would be fair to all stakeholders, both employees and shareholders.

Package design

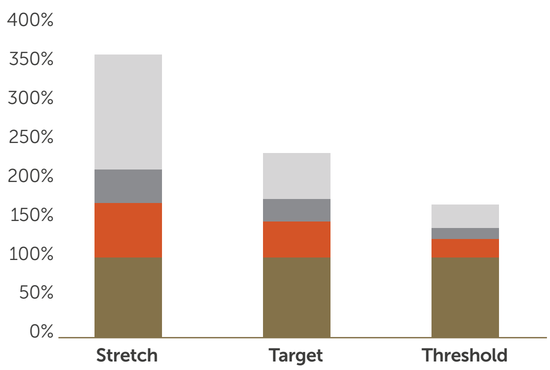
The remuneration policy is linked to our strategy and is an enabler for the achievement of the Group's key performance indicators. The structure of the remuneration package supports the Group's strategic objectives and is made up of fixed and variable remuneration.

The mix between fixed and variable pay for executive directors linked to various performance outcomes (*Threshold, On-target and Stretch*) under the terms of the policy are indicated in the following graphs:

CEO (%)



CFO (%)



TPG STI Deferred STI LTI

Further detail relating to executives and directors

Minimum Shareholding Requirements

To ensure further shareholder alignment, executives are required to build up and maintain a percentage of their TGP in unencumbered Company shares over a three-year period from date of implementation of the policy, or appointment.

This shareholding can be built up as desired by executives. Any existing shareholding, as well as vested CSP shares (including those that are subject to the holding period), will be taken into consideration when calculating the shareholding percentage.

The required shareholding levels, as a percentage of TGP (before tax) are as follows:

Chief Executive Officer	200%
Finance Director	175%
Other Executives	150%

Malus and Claw-Back Policy

As a result of increased corporate governance requirements pertaining to executive remuneration, variable remuneration is subject to malus and claw-back. The purpose of such a policy is to give the board the discretion to recoup vested, settled and/or paid incentives (also referred to a "claw-back") and to reduce and cancel any unvested and/or unpaid incentive remuneration (also referred to as "malus") when trigger event(s) occur.

The policy may be implemented by the Board where there were material misstatements of financial results or other calculation errors that resulted in the overpayment of incentives and gross misconduct on the part of the employee leading to dismissal. The policy applies to all variable pay as follows:

- Unpaid STIs and unvested LTIs are subject to malus as a pre-vesting forfeiture provision.
- Paid STI and 50 per cent of vested LTIs may be subject to claw-back as a post vesting recoupment of paid and vested incentives.
- LTIs that are subject to a holding period will be subject to claw-back as follows: 25 per cent can be clawed back for a one-year period post vesting and the final 25 per cent for a two-year period post vesting.

Executive employment contracts and termination of employment

During this period the Committee appointed ENS Africa, one of the largest independent law firms in South Africa, to review existing and draft new executive employment contracts that include restraint of trade provisions. All newly-appointed executives are engaged on the basis of the new contract and tied to a six-month restraint period.

The STI and LTI make a distinction between fault and no-fault terminations as follows:

STI & LTI

Fault termination (resignation and dismissal)	The incentive is forfeited
No-fault termination (termination due to death, ill health, disability, retrenchment, sale of an employer, retirement)	A pro-rata portion of the incentive is received, based on the number of complete months in service, and in the case of performance shares awards are adjusted for performance. The unvested or unpaid portion will lapse

Shareholder engagement

Bushveld Minerals is committed to fair, responsible and transparent remuneration. As such the Company invites shareholders to engage with the Group on remuneration-related matters. In response to shareholder queries, where appropriate, the Board may resolve to amend relevant elements of the remuneration policy.

Non-executive director fees

Non-executive directors are appointed to the Bushveld Minerals Group based on their ability to contribute competence, insights and experience appropriate to assisting the Group to set and achieve its objectives. Consequently, fees are set at levels to attract and retain the calibre of directors necessary to contribute to a highly effective board.

They do not participate in either the STI or LTI. No arrangements exist for compensation in respect of loss of office. The aggregate fees of all directors shall not exceed GBP500,000 per annum, or such higher amount as may be determined by ordinary resolution *(excluding amounts payable under any other provisions of the Articles)*.

The current approved fee structure is as follows:

Board Position	Annual Fee – US$
Chairman	96,278
Non-executive director	51,348
Senior non-executive director	64,185

Board Committee Chairperson	Annual Fee – US$
Remuneration committee	6,419
Audit committee	6,419
Nominations committee	3,209
Disclosure committee	3,209

Part Three: Remuneration Implementation Report

TGP increases awarded to executives versus other employees

In line with the company’s philosophy to address the wage gap, higher increases were awarded to lower levels of staff. The following TGP increases were awarded with effect from January 2021:

Occupational Level	% Increase
Top Management	0%
Executives	3%
Middle management/professional specialists	3%
Non-management	5%

There would be no annual adjustment for Vametco management, instead their percentage allocation would offset the reduction of the employer contribution towards their retirement fund from 11.75 per cent to 7.5 per cent.

2020 STI outcomes

Metrics and weightings

The relative weighting and composition of Group and Individual objectives for 2020 were:

Performance category	CEO and CFO	Other Executives	Subsidiary Executives
Personal performance	20%	30%	40%
Business performance	80%	70%	60%

Business targets and outcomes

Measure	Weighting	2020 Target Threshold	Target	Stretch	2020 outcomes
Consolidated Economic Profit (EVA = RONA vs WACC)	70%	RONA = WACC	RONA = WACC + 1.5%	RONA = WACC + 3%	60%
ESG (all measures are equally weighted as illustrated below)	30%	80% of target	100% of target	150% of target	113%
Safety performance	33%	5%	10%	15%	100%
Health (compliance)	33%	90%	95%	100%	100%
Community (number of business disruptions)	33%	2	0	0	100%

For FY20, for the business performance measure, the collar was applied to the Vanadium price at US$30/kgV while the rand dollar exposure was capped using the higher end of the exchange rate at ZAR15.90.

The overall STI performance achievement for business targets is 75 per cent, resulting in the achievement of a "between threshold and target" business performance outcome.

Personal targets and outcomes

Depending on the participant's role, personal metrics and targets were set and evaluated with reference to the following performance categories:

a. Strategy Implementation
b. Production Volumes
c. Production Costs
d. Capital Projects
e. Sustainability
f. Organisational Health

STI calculation and payments

The STI is calculated based on the following formula, which incorporates six variables derived from the end of year performance evaluation scores:

Qualifying Annual TGP x On-Target Incentive Percentage x ((Personal Score x Personal Weighting) + (Business Score x Business Weighting)).

To ensure alignment with shareholders are maintained and considering the lack of a CSP performance share allocation in FY20, it was concluded that a significant part of the STI will rather be settled in equity (shares in lieu of cash), which will be subject to a vesting period and forfeiture conditions until 31 December 2021, together with the normal deferral component in terms of the remuneration policy.

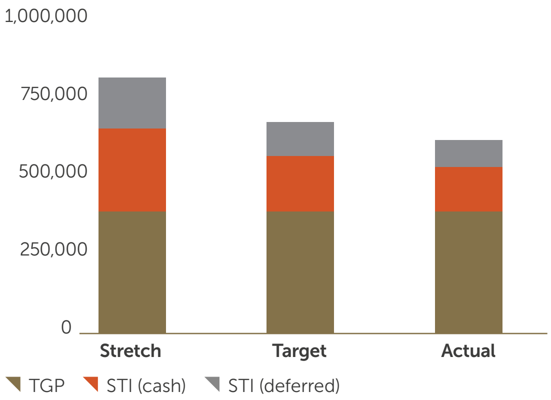
In this context, the STIs (cash and deferred shares) were as follows for the Company's two executive directors, the CEO and CFO during 2021.

Name	TGP USD	On-target incentive percentage	Personal Score	Personal weighting	Business score	Business weighting	Total calculated STI (USD)	STI settled in cash USD	STI settled in shares (USD)
F. Mojapelo	381,107	73%	100%	20%	75%	80%	137,198	45,687	91,511
T. Chikanza	285,760	73%	102%	20%	75%	80%	64,330	21,422	42,908

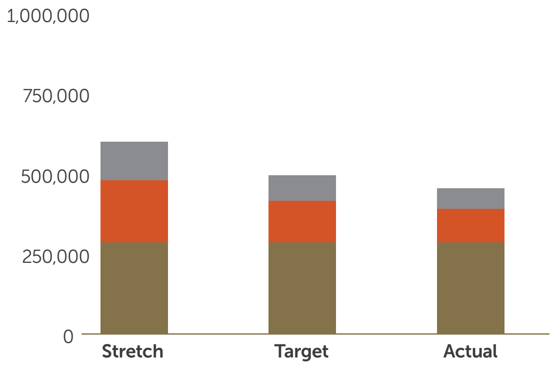
Part Three: Remuneration Implementation Report continued

Actual CEO STI against on-target and stretch

STI outcome (US$ (millions))



Actual CFO STI against on-target and stretch



2020 conditional shares awarded

The CSP comprises two elements: performance shares and bonus shares. During 2020, no conditional performance shares were granted while bonus shares will be awarded during 2021 for performance relating to the 2020 financial year.

Minimum shareholding requirements

Minimum shareholding requirements for the executives were adopted at the beginning of this financial year. Executives are given three years from this date, or the date of their employment, to build up the required shareholding. The current levels of ownership are depicted below:

Executive	% of TGP held in shares (as at 31 Dec 2020)	MSR target and target date
F. Mojapelo	589%	200% (31 Dec 2021)
T. Chikanza	0%	150% (1 Oct 2022)

Remuneration disclosure

Remuneration paid to executive directors during the year

Single figure of remuneration table:

Name	Year	Guaranteed pay USD	Benefits USD	STI[1] USD	LTI Reflected USD	Other	**Total single figure of Remuneration USD**
Executive directors							
F Mojapelo[2,3]	2020	381,107	–	137,198	85,368	–	**603,673**
	2019	416,230	–	246,772	153,547	–	**816,550**
T Chikanza[3,4]	2020	285,760	–	103,388	64,330	–	**453,478**
	2019	78,043	–	–	–	–	**78,043**

Footnotes:

1. The STI included in the 2019 and 2020 financial years relates to the cash component accrued to incumbents relating to performance in the 2019 and 2020 financial year respectively, however the STI is only paid after year end. For FY20, 1/3 of the STI will be settled in cash and 2/3 in shares which will vest in December 2021.
2. The LTI reflected in the 2019 financial year includes the bonus share awards which relate to performance in the 2019 financial year.
3. The LTI reflected in the 2020 financial year includes the bonus share awards which relate to performance in the 2020 financial year and will be awarded after year end.
4. T Chikanza was employed as CFO on 1 October 2019 and therefore only 3 months remuneration is included. She did not quality for an STI or LTI award during the 2019 financial year.

* All amounts for the 2020 single figure disclosure were converted to USD using the average exchange rate of 16.4622 for the 2020 financial year (2019: 14.4513).

Schedule of unvested awards and cash flow on settlement

Names	Award date	Vesting date	Opening balance on 1 Jan 2019	Granted during 2019	Forfeited during 2019	Settled during 2019	Closing balance on 31 Dec 2019	Cash value of receipts 2019 (USD)[1]	Estimated closing fair value on 31 Dec 2019 (USD)[2]
Executive directors									
F Mojapelo									
– Retrospective share award	Aug-18	Aug-19	7,000,000	–	–	(7,000,000)	–	2,532,206	–
CSP awards:									
– Performance share award	Jan-19	Jan-22	–	678,572	–	–	678,572	–	136,863
– Bonus share award	Jul-20	50% in Dec 2020 and 50% in June 2021	–	–	–	–	–	–	–

Names	Granted during 2020	Forfeited during 2020	Settled during 2020	Closing balance on 31 Dec 2020	Cash value of receipts 2020 (USD)[1]	Estimated closing fair value on 31 Dec 2020 (USD)[2,3]
Executive directors						
F Mojapelo						
– Retrospective share award	–	–	–	–	–	–
CSP awards:						
– Performance share award	–	–	–	678,572	–	–
– Bonus share award	880,745	–	(440,373)	440,373	117,319	117,319

1. Includes the proceeds from the awards settled during the year, based on the market value on vesting date.
2. The performance share awards are included at the year end share price of US$0.27 (2019: US$0.26) with an estimated vesting percentage of 0% (2019: 76.8%).
3. The bonus share awards made in the 2020 financial year are included at the year end share price of US$0.27.

Bonus share award 2021: A bonus share award will be made under the CSP to the CEO and CFO in the 2021 financial year relating to performance in the 2020 financial year.

Non-executive director fees paid during the year

No increases to the fees of non-executive directors were approved for the 2020 year. The fees paid during 2020 compared to 2019 are disclosed below.

	2020 Fees received by non-executive directors (USD)							
Non-executive directors	Board	Remuneration Committee Chair	Audit Committee Chair	Nominations Committee Chair	Attendance of ad-hoc meetings	Disclosure Committee Chair	Total fees received 2020	Total fees received 2019
Ian Watson	96,278	–	–	3,209	6,419	3,209	109,115	116,655
Michael Kirkwood	64,185	6,419	6,419	–	5,135	–	82,157	90,440
Jeremy Friedlander	51,348	–	–	–	6,419	–	57,767	64,226
Anthony Viljoen	51,348	–	–	–	3,851	–	55,199	61,604
Dolly Mokgatle	39,945	–	–	–	2,562	–	42,507	–

Directors' Report

The Directors of Bushveld Minerals Limited ("Bushveld" or the Group") hereby present their report together with the consolidated financial statements for the year ended 31 December 2020.

Principal activities, business review and future developments

Bushveld Minerals is a low-cost, vertically-integrated primary vanadium producer. As the owner of two of the world's four operating vanadium processing facilities, the Company is one of only three primary producers globally. In 2020, Bushveld Minerals produced more than 3,600 mtV, representing approximately three per cent of the global vanadium market. With a diversified vanadium product portfolio serving the needs of the steel, energy and chemical sectors, the Company participates in the entire vanadium value chain through its two main pillars: Bushveld Vanadium, which mines and processes vanadium ore; and Bushveld Energy, an energy storage solutions provider.

Bushveld Vanadium is targeting to materially grow its vanadium production and achieve an annualised steady state production run rate of between 5,000 mtVp.a. and 5,400 mtVp.a. by the end of 2022, from projects currently being implemented. Beyond that, pre-feasibility studies are in progress to determine the optimal path to increase production even further to a steady state production run rate of between 6,400 mtVp.a. and 6,800 mtVp.a. in the medium-term and to a steady state production run rate of 8,400 mtVp.a. in the long term. Bushveld Energy is focused on developing and promoting the role of vanadium in the growing global energy storage market through the advancement of vanadium-based energy storage systems, specifically Vanadium Redox Flow Batteries ("VRFBs").

The Company held an initial interest in Invinity of 8.71 per cent. Bushveld Energy has since sold its stake in Invinity, for which it received about US$13 million. Similarly, Bushveld Energy holds an indirect interest in Cellcube of 25.25 per cent. In addition, the Company holds a 4.76 per cent shareholding in AIM-listed AfriTin Mining Limited, an African mining company with a portfolio of near-production tin assets in Namibia and South Africa. It was demerged from Bushveld Minerals in November 2017. Furthermore, the Group also has interests in Lemur, an integrated thermal coal mining and independent power producer project in Madagascar.

Bushveld Minerals is the holding company of several companies. The Group structure is described in Note 1 of the financial statements.

Reviews of the Group's financial and operational performance and future developments are provided in the Chairman's Statement, Chief Executive Officer's review and the Finance Director's review on pages 8, 10 and 34 respectively.

Results and dividend

The Group's results show a loss before tax for the year of US$37.7 million (2019: profit of US$83.3 million). While its value proposition to shareholders is primarily of a capital growth nature, the intention is to create shareholder value through delivering on strategy. Further analysis of the results is disclosed in the Finance Director's statement.

Share capital and funding

Full details of the authorised and issued share capital, together with details of the movements in the Company's issued share capital during the year, are shown in note 23. The Company has one class of ordinary shares which carry no right to fixed income. Each share carries the right to one vote at general meetings of the Company.

Directors

The Directors who served the Company since 1 January 2020 are as follows:

Fortune Mojapelo	Chief Executive Officer
Tanya Chikanza	Finance Director
Ian Watson	Chairman and Independent Non-Executive Director
Michael J. Kirkwood	Senior Independent Non-Executive Director
Anthony Viljoen	Non-Executive Director
Jeremy Friedlander	Independent Non-Executive Director
Dolly Mokgatle	Independent Non-Executive Director (Appointed March 2020, deceased January 2021)

Directors' interests

The Directors' beneficial interests in the shares of the Company at 31 December 2020 were:

	Ordinary shares of 1p each 31 December 2020	Ordinary shares of 1p each 31 December 2019
Fortune Mojapelo	**12,580,000**	12,580,000
Tanya Chikanza	**–**	–
Ian Watson	**3,555,000**	3,555,000
Michael J. Kirkwood	**300,000**	300,000
Anthony Viljoen	**12,746,667**	12,746,667
Jeremy Friedlander	**1,050,000**	1,050,000
Dolly Mokgatle	**–**	–

Fortune Mojapelo held 8,500,000 Ordinary Shares in Bushveld Minerals directly and has a beneficial interest in a further 8,160,000 shares held through VM Investment Company (Pty) Ltd, a company in which he has a 50 per cent interest, resulting in a total of 12,580,000 shares.

Anthony Viljoen held 8,666,667 Ordinary Shares in Bushveld Minerals directly and has a beneficial interest in a further 8,160,000 Ordinary Shares held through VM Investment Company (Pty) Ltd, a company in which he has a 50 per cent interest, resulting in a total of 12,746,667 shares.

The Bushveld Minerals remuneration structure includes an incentive component which includes the Short-term Incentives ("STI") and Long-term Incentives ("LTI") schemes. Refer to the remuneration report for details of options awarded and the vesting thereof.

Directors' indemnity insurance

The Group has maintained insurance throughout the year for its Directors and officers against the consequences of actions brought against them in relation to their duties for the group.

Employee involvement policies

The Group places considerable value on the awareness and involvement of its employees in the Group's activities. Within the bounds of commercial confidentiality, information is disseminated to all levels of staff about matters that affect the progress of the Group, and that are of interest and concern to them as employees.

Creditor payment policy and practice

The group's policy is to ensure that, in the absence of disputes, all suppliers are dealt with in accordance with its standard payment policy and it abides by the terms of payment agreed with suppliers when agreeing the terms of each transaction. Suppliers are made aware of the terms of payment.

Related party transactions

Details of related party transactions are detailed in note 35 of the financial statements.

Events after the reporting date

Events after the reporting date are detailed in note 36 of the financial statements, including the COVID-19 pandemic, the impact of which is also described in the Chairman's Statement, Chief Executive's Review and Finance Director's Report.

Statement as to disclosure of information to auditor

The Directors who were in office on the date of approval of these financial statements have confirmed that, as far as they are aware, there is no relevant audit information of which the auditor is unaware. Each of the Directors have confirmed that they have taken all the steps that they ought to have taken as Directors in order to make themselves aware of any relevant audit information and to establish that it has been communicated to the auditor.

Auditor

The Company's auditor is RSM UK Audit LLP.

Electronic communications

The maintenance and integrity of the Group's website is the responsibility of the Directors. The work carried out by the auditor does not involve consideration of these matters and, accordingly, the auditor accepts no responsibility for any changes that may have occurred to the financial statements since they were initially presented on the website.

The Group's website is maintained in compliance with AIM Rule 26.

By order of the Board

K Bredin
Company Secretary
29 June 2021

Statement of Directors' Responsibilities

The Directors are responsible for preparing the Annual Report and the financial statements in accordance with applicable law and regulations.

Guernsey company law requires the Directors to prepare group financial statements for each financial year in accordance with generally-accepted accounting principles. The Directors are required by the AIM Rules of the London Stock Exchange to prepare group financial statements in accordance with International Financial Reporting Standards ("IFRS") in conformity with the requirements of the Companies Act of 2006.

The financial statements of the Group are required by law to give a true and fair view of the state of the group's affairs at the end of the financial year and of the profit or loss of the Group and are required by IFRS, in conformity with the requirements of the Companies Act of 2006 to fairly present the financial position and performance of the Group.

The Directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and of the profit or loss of the Group for that year.

In preparing the Group financial statements, the Directors are required to:
(i) select suitable accounting policies and apply them consistently;
(ii) make judgements and accounting estimates that are reasonable and prudent;
(iii) state whether they have been prepared in accordance with IFRS in conformity with the requirements of the Companies Act of 2006; and
(iv) prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Group will continue in business.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Group's transactions, and disclose with reasonable accuracy, at any time, the financial position of the Group and enable them to ensure that the financial statements comply with applicable law. They are also responsible for safeguarding the assets of the Group and taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Group's website. Legislation in Guernsey governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

The Directors confirm they have discharged their responsibilities as noted above.

Independent Auditor's Report

Opinion

We have audited the financial statements of Bushveld Minerals Limited and its subsidiaries (the 'group') for the year ended 31 December 2020 which comprise of the Consolidated Statement of Profit or Loss and Other Comprehensive Income, Consolidated Statement of Financial Position, Consolidated Statement of Changes in Equity, Consolidated Statement of Cash Flows and notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and International Accounting Standards in conformity with the requirements of the Companies Act 2006.

In our opinion, the financial statements:

- give a true and fair view of the state of the group's affairs as at 31 December 2020 and of the group's loss for the year then ended;
- are in accordance with International Accounting Standards in conformity with the requirements of the Companies Act 2006; and
- comply with the requirements of The Companies (Guernsey) Law, 2008.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard as applied to listed entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

In auditing the financial statements, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate. Our evaluation of the directors' assessment of the group's ability to continue to adopt the going concern basis of accounting included audit of the group's cashflow forecasts, challenge of the key inputs and assumptions and discussion with management regarding the group's current and future funding options. Our key observation is that the forecasts are sensitive to vanadium price assumptions.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the group's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

Our responsibilities and the responsibilities of the directors with respect to going concern are described in the relevant sections of this report.

Summary of our audit approach

Key audit matters	**Group** • Impairment of property, plant and equipment and intangible exploration and evaluation assets
Materiality	**Group** • Overall materiality: US$3,000,000 (2019: US$2,240,000) • Performance materiality: US$2,250,000 (2019: US$1,680,000)
Scope	Our full-scope audit procedures covered 99% of revenue, 97% of total assets and 83% of profit before tax.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the group financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) we identified, including those which had the greatest effect on the overall audit strategy, the allocation of resources in the audit and directing the efforts of the engagement team. These matters were addressed in the context of our audit of the group financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Impairment of property, plant and equipment and intangible assets

Key audit matter description	The group has made of loss of US$36.0 million in the year for the reasons described in the Strategic Report. As a result, there is a risk that the carrying value of the group's property, plant and equipment and intangible exploration and evaluation may be impaired. The use of estimates and judgements in respect of impairment is disclosed in the "use of estimates and judgements" section of note 3 and details of intangible exploration and evaluation assets and property, plant and equipment are disclosed in notes 13 and 14 respectively. This is considered to be a Key Audit Matter due to the use of management estimates and judgements in estimating the recoverable amount of the assets based on long-term forecasts which require the use of assumptions, including future vanadium price and production volumes and costs.
How the matter was addressed in the audit	Our work included: • Checking the integrity and arithmetic accuracy of the cashflow forecasts as provided to the Board of directors by management • Challenging management on the reasonableness of the assumptions made in the forecasts, particularly in respect of production levels, vanadium prices, operating costs and capital expenditure • Corroborating the reasonableness of assumptions and explanations provided by management to supporting information where available • Stress-testing management's cashflow forecasts to assess the impact of assumptions worse than those included in management's forecasts • Considering mitigating actions available to management and the level of headroom in the forecasts under various scenarios • Review of the work of component auditors on impairment • Discussing our findings with management and the Audit Committee • Auditing the accuracy and completeness of disclosures made in the financial statements in respect of going concern and the impact of COVID-19
Key observations	Management use a consolidated financial model to assess impairment and the model is sensitive to vanadium price assumptions.

Our application of materiality

When establishing our overall audit strategy, we set certain thresholds which help us to determine the nature, timing and extent of our audit procedures. When evaluating whether the effects of misstatements, both individually and on the financial statements as a whole, could reasonably influence the economic decisions of the users we take into account the qualitative nature and the size of the misstatements. Based on our professional judgement, we determined materiality as follows:

	Group
Overall materiality	$3,000,000 (2019: US$2,240,000)
Basis for determining overall materiality	Formula based on 10% of result before tax
Rationale for benchmark applied	As a listed entity, result before tax is considered to be the most appropriate benchmark for users of the financial statements.
Performance materiality	US$2,250,000 (2019: US$1,680,000)
Basis for determining performance materiality	75% of overall materiality
Reporting of misstatements to the Audit Committee	Misstatements in excess of US$150,000 and misstatements below that threshold that, in our view, warranted reporting on qualitative grounds.

An overview of the scope of our audit

The group consists of 30 components, located in the following countries:

- Guernsey
- South Africa
- Mauritius
- Madagascar
- United States of America
- United Kingdom

The coverage achieved by our audit procedures was:

	Number of components	Revenue	Total assets	Loss before tax
Full scope audit	5	99%	97%	83%
Specific audit procedures	6	1%	2%	16%
Total	**11**	**100%**	**99%**	**99%**

Analytical procedures at group level were performed for the remaining components.

Of the above, full scope audits for 4 components and specific audit procedures for 3 components were undertaken by component auditors.

Other information

The other information comprises the information included in the annual report, other than the financial statements and our auditor's report thereon. The directors are responsible for the other information contained within the annual report. Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Matters on which we are required to report by exception

We have nothing to report in respect of the following matters where The Companies (Guernsey) Law 2008 requires us to report to you if, in our opinion:

- proper accounting records have not been kept by the parent company; or
- the financial statements are not in agreement with the accounting records; or
- we have failed to obtain all the information and explanations which, to the best of our knowledge and belief, are necessary for the purposes of our audit.

Responsibilities of Directors

As explained more fully in the Directors' responsibilities statement set out on page 94, the Directors are responsible for the preparation of the group's financial statements and for being satisfied that they give a true and fair view, and for such internal control as the Directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Directors are responsible for assessing the group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the group or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

The extent to which the audit was considered capable of detecting irregularities, including fraud

Irregularities are instances of non-compliance with laws and regulations. The objectives of our audit are to obtain sufficient appropriate audit evidence regarding compliance with laws and regulations that have a direct effect on the determination of material amounts and disclosures in the financial statements, to perform audit procedures to help identify instances of non-compliance with other laws and regulations that may have a material effect on the financial statements, and to respond appropriately to identified or suspected non-compliance with laws and regulations identified during the audit.

In relation to fraud, the objectives of our audit are to identify and assess the risk of material misstatement of the financial statements due to fraud, to obtain sufficient appropriate audit evidence regarding the assessed risks of material misstatement due to fraud through designing and implementing appropriate responses and to respond appropriately to fraud or suspected fraud identified during the audit.

However, it is the primary responsibility of management, with the oversight of those charged with governance, to ensure that the entity's operations are conducted in accordance with the provisions of laws and regulations and for the prevention and detection of fraud.

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud, the group audit engagement team and component auditors:

- obtained an understanding of the nature of the industry and sector, including the legal and regulatory frameworks, that the group operate in and how the group is complying with the legal and regulatory frameworks;
- inquired of management, and those charged with governance, about their own identification and assessment of the risks of irregularities, including any known actual, suspected or alleged instances of fraud;
- discussed matters about non-compliance with laws and regulations and how fraud might occur including assessment of how and where the financial statements may be susceptible to fraud.

All relevant laws and regulations identified at a Group level and areas susceptible to fraud that could have a material effect on the consolidated financial statements were communicated to component auditors. Any instances of non-compliance with laws and regulations identified and communicated by a component auditor were considered in our group audit approach.

The most significant laws and regulations were determined as follows:

Legislation/Regulation	Additional audit procedures performed by the Group audit engagement team and component auditors included:
IFRS and The Companies (Guernsey) Law 2008	• Review of the financial statement disclosures and testing to supporting documentation; • Completion of disclosure checklists to identify areas of non-compliance.
Tax compliance regulations in the jurisdictions in which the group operates	• Inspection of advice received from internal/external tax advisors; • Consideration of whether any matter identified during the audit required reporting to an appropriate authority outside the entity.
Mining Charter of South Africa and associated laws	• Enquiry of management as to whether any breaches had been identified; • Review of relevant supporting documentation.

The areas that we identified as being susceptible to material misstatement due to fraud were:

Risk	Audit procedures performed by the Group audit engagement team and component auditors
Revenue recognition	Tests of controls, tests of details, analytical procedures and cut-off testing.
Management override of controls	• Testing the appropriateness of journal entries and other adjustments; • Assessing whether the judgements made in making accounting estimates are indicative of a potential bias; and • Evaluating the business rationale of any significant transactions that are unusual or outside the normal course of business.

A further description of our responsibilities for the audit of the financial statements is included in appendix 1 of this auditor's report. This description, which is located on page 99, forms part of our auditor's report.

Use of this report

This report is made solely to the company's members, as a body, in accordance with section 262 of The Companies (Guernsey) Law 2008. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

RSM UK Audit LLP, Auditor
Chartered Accountants
25 Farringdon Street
London, EC4A 4AB

Date: 29 June 2021

Appendix 1: Auditor's responsibilities for the audit of the financial Statements

As part of an audit in accordance with ISAs (UK), we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Directors.
- Conclude on the appropriateness of the Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, including the FRC's Ethical Standard, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current year and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Consolidated Statement of Profit or Loss and Other Comprehensive Income

For the year ended 31 December 2020

	Note	2020 US$	2019 US$
Continuing operations			
Revenue	5	**89,988,078**	116,514,112
Cost of sales		**(91,260,760)**	(56,198,919)
Gross (loss) profit		**(1,272,682)**	60,315,193
Other operating income		**2,304,528**	922,385
Selling and distribution costs		**(4,828,710)**	(7,556,687)
Other mine operating costs		**(4,699,892)**	(3,865,303)
Idle plant costs		**(4,152,153)**	(2,893,286)
Share-based payment		**(375,008)**	–
Administration expenses	6	**(19,783,176)**	(24,668,491)
Operating (loss)/profit		**(32,807,093)**	22,253,811
Finance income	9	**1,077,991**	3,593,142
Finance costs	10	**(5,732,247)**	(1,669,456)
Gain on bargain purchase	8	**–**	60,586,633
Movement in earnout estimate	26	**(206,066)**	(1,510,572)
(Loss) profit before taxation		**(37,667,417)**	83,253,558
Taxation	11	**484,654**	(14,005,965)
(Loss) profit for the year		**(37,182,763)**	69,247,593
Consolidated other comprehensive income:			
Items that may not be reclassified to profit or loss:			
Changes in the fair value of financial assets at fair value through other comprehensive income	21	**13,483,194**	(359,045)
Other fair value movements		**103,448**	110,175
Total items that may not be reclassified to profit or loss		**13,586,642**	(248,870)
Items that may be reclassified to profit or loss:			
Currency translation differences		**(10,425,238)**	6,413,737
Total comprehensive (loss) income for the year		**(34,021,359)**	75,412,460
(Loss) profit attributable to:			
Owners of the parent		**(36,680,615)**	61,968,301
Non-controlling interest		**(502,148)**	7,279,292
		(37,182,763)	69,247,593
Total comprehensive (loss) income attributable to:			
Owners of the parent		**(32,640,348)**	67,136,957
Non-controlling interest		**(1,381,011)**	8,275,503
		(34,021,359)	75,412,460
Earnings per share			
Profit per ordinary share			
Basic (loss)/earnings per share (cents)	12	**(3.00)**	5.51
Diluted (loss)/earnings per share (cents)	12	**(3.00)**	5.45
		–	–

All results relate to continuing activities.

The accounting policies on pages 105 to 115 and the notes on pages 104 to 141 form an integral part of the consolidated financial statements.

Consolidated Statement of Financial Position

As at 31 December 2020

	Note	2020 US$	2019 US$
Assets			
Non-Current Assets			
Intangible assets	13	**59,003,825**	59,408,821
Property, plant and equipment	14	**167,579,993**	185,269,063
Investment property	15	**2,811,017**	2,905,449
Deferred tax	16	**5,085,154**	173,892
Financial assets – investments	17	**–**	4,420,891
Total Non-Current Assets		**234,479,989**	252,178,116
Current Assets			
Inventories	18	**34,081,625**	35,082,342
Trade and other receivables	19	**10,425,363**	4,516,287
Restricted investment	20	**3,111,465**	6,605,465
Current tax receivable		**814,067**	493,178
Financial assets at fair value	21	**22,452,877**	1,952,227
Cash and cash equivalents	22	**50,540,672**	34,011,557
Total Current Assets		**121,426,069**	82,661,056
Total Assets		**355,906,058**	334,839,172
Equity and Liabilities			
Share capital	23	**15,858,428**	15,357,271
Share premium	23	**117,065,907**	111,067,064
Retained income	23	**46,734,823**	83,415,438
Share-based payment reserve		**375,008**	–
Convertible loan note reserve		**54,814**	–
Foreign currency translation reserve	23	**(11,202,236)**	(1,655,861)
Fair value reserve	23	**12,966,294**	(620,349)
Equity attributable to owners of the parent		**181,853,038**	207,563,563
Non-controlling interest		**32,146,712**	33,527,723
Total Equity		**213,999,750**	241,091,286
Liabilities			
Non-Current Liabilities			
Post-retirement medical liability	24	**2,076,023**	2,331,325
Environmental rehabilitation liability	25	**17,998,366**	17,844,066
Deferred consideration	26	**1,802,884**	7,108,819
Loans	27	**1,597,972**	–
Borrowings	28	**70,909,370**	41,756,152
Lease liabilities	29	**4,376,483**	4,677,338
Total Non-Current Liabilities		**98,761,098**	73,717,700
Current Liabilities			
Trade and other payables	30	**22,065,601**	15,809,996
Provisions	31	**3,296,894**	3,432,619
Borrowings	28	**13,337,406**	–
Lease liabilities	29	**625,661**	787,571
Deferred consideration	26	**3,819,648**	–
Total Current Liabilities		**43,145,210**	20,030,186
Total Liabilities		**141,906,308**	93,747,886
Total Equity and Liabilities		**355,906,058**	334,839,172

The consolidated financial statements and the notes on pages 100 to 141, were approved by the board of directors on the 29 June 2021 and were signed on its behalf by:

Tanya Chikanza
Finance Director

The accounting policies on pages 105 to 115 and the notes on pages 104 to 141 form an integral part of the consolidated financial statements.

Consolidated Statement of Changes in Equity

for the year ended 31 December 2020

	Share capital US$	Share premium US$	Foreign exchange translation reserve US$	Share-based payment reserve US$	Convertible loan note reserve US$	Fair value reserve US$	Retained income US$	Total attributable to equity holders of the group/ company US$	Non-controlling interest US$	Total equity US$
Balance at 01 January 2019	**14,921,079**	**101,003,256**	**(7,073,387)**	**–**	**–**	**(371,479)**	**21,447,137**	**129,926,606**	**29,712,446**	**159,639,052**
Profit for the year	–	–	–	–	–	–	61,968,301	61,968,301	7,279,292	69,247,593
Other comprehensive income, net of tax:										
Currency translation differences	–	–	5,417,526	–	–	–	–	5,417,526	996,211	6,413,737
Fair value movement on investments	–	–	–	–	–	(359,045)	–	(359,045)	–	(359,045)
Other fair value movements	–	–	–	–	–	110,175	–	110,175	–	110,175
Total comprehensive income for the year	**–**	**–**	**5,417,526**	**–**	**–**	**(248,870)**	**61,968,301**	**67,136,957**	**8,275,503**	**75,412,460**
Transaction with owners:										
Issue of shares	436,192	10,063,808	–	–	–	–	–	10,500,000	–	10,500,000
Dividends paid to non-controlling interest	–	–	–	–	–	–	–	–	(4,460,226)	(4,460,226)
Balance at 01 January 2020	**15,357,271**	**111,067,064**	**(1,655,861)**	**–**	**–**	**(620,349)**	**83,415,438**	**207,563,563**	**33,527,723**	**241,091,286**
Loss for the year	–	–	–	–	–	–	(36,680,615)	(36,680,615)	(502,148)	(37,182,763)
Other comprehensive income, net of tax:										
Currency translation differences	–	–	(9,546,375)	–	–	–	–	(9,546,375)	(878,863)	(10,425,238)
Fair value movement on investments	–	–	–	–	–	13,483,194	–	13,483,194	–	13,483,194
Other fair value movements	–	–	–	–	–	103,449	–	103,449	–	103,449
Total comprehensive Loss for the year	**–**	**–**	**(9,546,375)**	**–**	**–**	**13,586,643**	**(36,680,615)**	**(32,640,347)**	**(1,381,011)**	**(34,021,358)**
Transaction with owners:										
Issue of shares	501,157	5,998,843	–	–	–	–	–	6,500,000	–	6,500,000
Share-based payment	–	–	–	375,008	–	–	–	375,008	–	375,008
Equity component of convertible loan note	–	–	–	–	54,814	–	–	54,814	–	54,814
Balance at 31 December 2020	**15,858,428**	**117,065,907**	**(11,202,236)**	**375,008**	**54,814**	**12,966,294**	**46,734,823**	**181,853,038**	**32,146,712**	**213,999,750**
Note	23	23								

The accounting policies on pages 105 to 115 and the notes on pages 104 to 141 form an integral part of the consolidated financial statements.

Consolidated Statement of Cash Flows

for the year ended 31 December 2020

	Notes	2020 US$	2019 US$
Cash flows from operating activities			
(Loss)/profit before taxation		**(37,667,417)**	83,253,558
Adjustments for:			
Depreciation property, plant and equipment	14	**17,866,153**	10,388,145
Gain on bargain purchase	8	**–**	(60,586,633)
Movement in earnout estimate	26	**206,066**	1,510,572
Finance income	9	**(1,077,991)**	(3,593,142)
Finance costs	10	**5,732,249**	1,669,456
Changes in working capital		**1,253,029**	4,586,737
Income taxes paid		**(3,452,492)**	(8,767,312)
Net cash from operating activities		**(17,140,403)**	28,461,381
Cash flows from investing activities			
Finance income	9	**985,901**	3,593,142
Acquisition of business	8	**–**	(30,713,500)
Purchase of property, plant and equipment	14	**(9,269,924)**	(13,320,897)
Payment of deferred consideration	26	**(1,680,459)**	(3,600,000)
Purchase of investments	17&21	**(1,883,208)**	(4,420,891)
Purchase of exploration and evaluation assets	13	**(1,471,142)**	(1,268,697)
Net cash from investing activities		**(13,318,832)**	(49,730,843)
Cash flows from financing activities			
Net proceeds from loans	27	**1,597,972**	–
Finance costs		**(3,115,205)**	(108,596)
Net proceeds/(repayment) of borrowings	28	**49,417,161**	18,582,864
Lease payments		**(753,302)**	(726,668)
Dividends paid		**–**	(4,460,226)
Disposal of financial assets held at fair value		**286,643**	–
Net cash from financing activities		**47,433,269**	13,287,374
Total cash movement for the year		**16,974,034**	(7,982,088)
Cash at the beginning of the year		**34,011,557**	42,019,123
Effect of translation of foreign rate		**(444,919)**	(25,478)
Total cash at end of the year	22	**50,540,672**	34,011,557

The accounting policies on pages 105 to 115 and the notes on pages 104 to 141 form an integral part of the consolidated financial statements.

Notes to the Consolidated Financial Statements

For the year ended 31 December 2020

1. Corporate information and principal activities

Bushveld Minerals Limited ("Bushveld") was incorporated and domiciled in Guernsey on 5 January 2012 and admitted to the AIM market in London on 26 March 2012.

The address of the Company's registered office is Oak House, Hirzel Street, St Peter Port, Guernsey, GY1 3RH. The consolidated financial statements of the Company as at and for the year ended 31 December comprise of the Company and its subsidiaries (The "Group") and the Group's interest in equity accounted investments.

As at 31 December 2020, the Bushveld Group comprised of:

Company	Note	Equity holding and voting rights	Country of incorporation	Nature of activities
Bushveld Minerals Limited		N/A	Guernsey	Ultimate holding company
Bushveld Resources Limited	1	100%	Guernsey	Holding company
Ivanti Resources (Pty) Limited	2	100%	South Africa	Mining and manufacturing company
Pamish Investments No 39 (Pty) Limited	2	64.00%	South Africa	Mining right holder
Amaraka Investments No 85 (Pty) Limited	2	68.50%	South Africa	Vanadium and iron ore exploration
Bushveld Minerals SA (Pty) Limited	2	100%	South Africa	Group support services
Bushveld Vanchem (Pty) Limited	13	100%	South Africa	Processing company
Great 1 Line Invest (Pty) Limited	2	62.5%	South Africa	Vanadium and iron ore exploration
Gemsbok Magnetite (Pty) Limited	2	74%	South Africa	Vanadium and iron ore exploration
Caber Trade and Invest 1 (Pty) Limited	2	51%	South Africa	Vanadium and iron ore exploration
Bushveld Vanadium 2 (Pty) Limited	2	100%	South Africa	Holding company
Bushveld Energy Limited	1	84.00%	Mauritius	Holding company
Bushveld Energy Company (Pty) Limited	4	100%	South Africa	Energy development
Bushveld Vametco Hybrid Mini Grid Company (RF) (Pty) Limited	12	100%	South Africa	Energy development
Bushveld Electrolyte Company (Pty) Ltd	12	55%	South Africa	Energy development
VRFB Holdings Limited	4	35%	Guernsey	Holding company
Vanadium Electrolyte Rental Limited	1&4	40% & 30%	UK	Energy development
Enerox Holdings Limited	4	50%	Guernsey	Holding company
Bushveld Vametco Limited	2	100%	Guernsey	Holding company
Strategic Minerals Connecticut LLC	7	100%	United States	Holding company
Bushveld Vanadium 1 (Pty) Limited	8	100%	South Africa	Holding company
Bushveld Vametco Holdings (Pty) Limited	11	74%	South Africa	Mining right holder
Bushveld Vametco Alloys (Pty) Limited	9	100%	South Africa	Mining and manufacturing company
Bushveld Vametco Properties (Pty) Limited	10	100%	South Africa	Property owning company
Lemur Holdings Limited	1	100%	Mauritius	Holding company
Coal Mining Madagascar SARL	5	99%	Madagascar	Coal exploration
Imaloto Power Project Limited	3	100%	Mauritius	Holding company
Imaloto Power Project Company SARL	6	99.00%	Madagascar	Power generation company
Lemur Investments Limited	3	100%	Mauritius	Holding company
Lemur SA (Pty) Ltd	3	100%	South Africa	Coal trading

1 Held directly by Bushveld Minerals Limited
2 Held by Bushveld Resources Limited
3 Held by Lemur Holdings Limited
4 Held by Bushveld Energy Limited
5 Held by Lemur Investments Limited
6 Held by Imaloto Power Project Limited
7 Held by Bushveld Vametco Limited
8 Held by Strategic Minerals Connecticut LLC
9 Held by Bushveld Vametco Holdings (Pty) Limited
10 Held by Bushveld Vametco Alloys (Pty) Limited
11 Held by Bushveld Vanadium 1 (Pty) Limited
12 Held by Bushveld Energy Company (Pty) Limited
13 Held By Bushveld Vanadium 2 (Pty) Limited

2. Adoption of new and revised standards

Accounting standards and interpretations applied

Definition of a Business (Amendments to IFRS 3)	The new standard is aimed at resolving the difficulties that arise when an entity determines whether it has acquired a business or a group of assets.
Definition of a Business (Amendments to IFRS 3) Amendments to References to the Conceptual Framework in IFRS Standards and Definition of Material (Amendments to IAS 1 and IAS 8)	The amendments clarify the definition of 'material' and to align the definition used in the Conceptual Framework and the standards themselves.
Interest Rate Benchmark Reform (Amendments to IFRS 9, IAS 39 and IFRS 7)	The new standard is aimed at resolving the potential effects the IBOR reform could have on financial reporting.

Accounting standards and interpretations not applied

Standards, amendments and interpretations to existing standards that are not yet effective and have not been early adopted by the Group:

COVID-19-Related Rent Concessions (Amendment to IFRS 16)	The new standard provides lessees with an exemption from assessing whether a COVID-19-related rent concession is a lease modification.
Interest Rate Benchmark Reform — Phase 2 (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16)	The new standard addresses issues that might affect financial reporting after the reform of an interest rate benchmark, including its replacement with alternative benchmark rates.
Reference to the Conceptual Framework (Amendments to IFRS 3)	The amendments update an outdated reference in IFRS 3 without significantly changing its requirements.
Onerous Contracts — Cost of Fulfilling a Contract (Amendments to IAS 37)	The amendments address costs a company should include as the cost of fulfilling a contract when assessing whether a contract is onerous.
Property, Plant and Equipment — Proceeds before Intended Use (Amendments to IAS 16)	The amendments prohibit deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management.
IFRS 17 'Insurance Contracts'	The new standard provides a more uniform measurement and presentation approach for all insurance contracts.
Classification of Liabilities as Current or Non-current (Amendments to IAS 1)	The amendments provide a more general approach to the classification of liabilities under IAS 1 based on the contractual arrangements in place at the reporting date.

The Directors anticipate that the adoption of these Standards and Interpretations, which become effective for annual periods beginning on or after 1 January 2020, in future periods will have no material impact on the financial statements of the Group.

Notes to the Consolidated Financial Statements continued

For the year ended 31 December 2020

3. Significant accounting policies

Basis of preparation

In accordance with Section 244 of The Companies (Guernsey) Law 2008, the Group confirms that the financial information for the year ended 31 December 2020 is derived from the Group's audited financial statements and that this preliminary announcement does not include the statutory accounts and, as such, does not contain all information required to be disclosed in the financial statements prepared in accordance with International Financial Reporting Standards ("IFRS").

The statutory accounts for the year ended 31 December 2020 have been audited and approved, but have not yet been filed. The Group's audited financial statements for the year ended 31 December 2020 received an unqualified audit opinion and the auditor's report contained no statement under section 263(2) or 263(3) of The Companies (Guernsey) Law 2008. The financial information contained within this preliminary statement was approved and authorised for issue by the Board on 29 June 2021.

The consolidated financial statements have been prepared under the historical cost basis, except for the revaluation of certain financial instruments and investment properties to fair value. Historical cost is generally based on the fair value of the consideration given in exchange for the assets. The principal accounting policies are set out below.

Going concern

During the 2020 financial year COVID-19 introduced a significant level of uncertainty in the market as well as multiple challenges from an operating and logistic perspective. Our operations resumed in early May following a 35-day national COVID-19 lockdown in South Africa during which Vanchem was non-operational and Vametco was classified as essential services and had limited production. This disruption coupled with the depressed prices realised during 2020 financial year, resulted in an operating loss for the financial period 2020. This loss has increased the financial pressure on the business.

The Group however, closely monitors and manages its liquidity risk, cash forecasts are regularly produced, and sensitivities run for different scenarios including, but not limited to, changes in commodity prices and different production profiles from the Group's producing assets. The Group will continue to prioritise operational performance, cost efficiencies and synergies across Vametco and Vanchem, and will maintain a disciplined approach towards managing capital expenditure and optimising operating margins. Based on the current status of the Group's finances, having considered going concern forecasts and reasonably possible investments, downside and COVID-19 scenarios, the Group's forecasts demonstrate it will have sufficient liquidity headroom to meet its obligations in the ordinary course of business for the next 12 months from the date of approval of the financial statements. This has been further supported by the improvement in the market price of vanadium. Further details of the group's current funding situation and strategy are included in the Going Concern and Outlook section of the Finance Director's Report.

Accordingly, the directors are satisfied that the Group continues to adopt the going concern basis of accounting in preparation of the 31 December 2020 financial statements.

Basis of consolidation

Subsidiaries

Subsidiaries are all entities (including structured entities) over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

The Group applies the acquisition method to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair values of the assets transferred, the liabilities incurred to the former owners of the acquiree and the equity interests issued by the Group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The Group recognises any non-controlling interest in the acquiree on an acquisition-by-acquisition basis, either at fair value or at the non-controlling interest's proportionate share of the recognised amounts of acquiree's identifiable net assets.

Acquisition-related costs are expensed as incurred.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date; any gains or losses arising from such re-measurement are recognised in profit or loss.

Subsequent transactions that do not result in the obtaining of control are accounted for as equity transactions as follows:

- The carrying amounts of the controlling and non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiary
- Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid is recognised directly in equity and attributed to the owners of the parent

Any contingent consideration to be transferred by the Group is recognised at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration that is deemed to be an asset or liability is recognised in accordance with IFRS 9 either in profit or loss or as a change to other comprehensive income. Contingent consideration that is classified as equity is not re-measured, and its subsequent settlement is accounted for within equity.

Inter-company transactions, balances and unrealised gains on transactions between Group companies are eliminated. Unrealised losses are also eliminated. When necessary amounts reported by subsidiaries have been adjusted to conform to the Group's accounting policies.

Disposal of subsidiaries

When the Group ceases to have control, any retained interest in the entity is re-measured to its fair value at the date when control is lost, with the change in carrying amount recognised in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognised in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognised in other comprehensive income are reclassified to profit or loss.

Non-controlling interests

Non-controlling interests in subsidiaries are identified separately from the Group's equity therein. Those interests of non-controlling shareholders that present ownership interests entitling their holders to a proportionate share of the net assets upon liquidation are initially measured at fair value. Subsequent to acquisition, the carrying amount of non-controlling interests is the amount of those interests at initial recognition plus the non-controlling interests' share of subsequent changes in equity. Total comprehensive income is attributed to non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Black Economic Empowerment ("BEE") interests are accounted for as non-controlling interests on the basis that the Group does not control these entities.

Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the board of directors, which makes strategic decisions.

Foreign currencies

Functional and presentation currency

The individual financial statements of each Group company are prepared in the currency of the primary economic environment in which they operate (its functional currency). For the purpose of the consolidated financial statements, the results and financial position of each Group company are expressed in US Dollars, which is the presentation currency for the consolidated financial statements.

Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the income statement.

Notes to the Consolidated Financial Statements continued

For the year ended 31 December 2020

3. Significant accounting policies continued

Foreign currencies continued

Group companies

The results and financial position of all the Group entities (none of which has the currency of a hyper-inflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

a) assets and liabilities for each statement of financial position presented are translated at the closing rate;
b) income and expenses for each income statement are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the rate on the dates of the transactions); and
c) all resulting exchange differences are recognised in other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate. Exchange differences arising are recognised in other comprehensive income.

Revenue recognition

Sale of goods/products

IFRS 15 requires revenue from contracts with customers to be recognised when the separate performance obligations are satisfied, which is when control of promised goods or services are transferred to the customer.

The entity satisfies a performance obligation by transferring control of the promised goods/products to the customer. In the standard "control of an asset" refers to the ability to direct the use of, and obtain substantially all of the remaining benefits from, the asset. Control includes the ability to prevent other entities from directing the use of, and obtaining the benefits from, an asset.

The Group recognises revenue at the amount that reflects the consideration to which the entity expects to be entitled in exchange for transferring goods or services to a customer. Revenue with contract customers is generated from sale of goods and is recognised upon delivery of the goods to the customer, at a point in time and comprises the invoiced amount of goods to customers, net of value added tax.

Cost of sales

When inventories are sold, the carrying amount of those inventories is recognised as an expense in the period in which the related revenue is recognised. The amount of any write-down of inventories to net realisable value and all losses of inventories are recognised as an expense in the period in which the write-down or loss occurs.

Share based payments

The Group may issue equity-settled share based payment instruments to BBE shareholders to either obtain or retain BEE credentials. Equity-settled share-based payments are measured at the fair value of the instruments at the date of the grant.

In addition, equity-settled share-based compensation benefits are provided to directors and employees under the Group's incentive schemes.

Equity-settled transactions are awards of shares, or options over shares, that are provided to employees in exchange for the rendering of services.

The cost of equity-settled transactions are measured at fair value on grant date. Fair value is independently determined using either the Binomial or Black-Scholes option pricing model that takes into account the exercise price, the term of the option, the impact of dilution, the share price at grant date and expected price volatility of the underlying share, the expected dividend yield and the risk free interest rate for the term of the option, together with non-vesting conditions that do not determine whether the consolidated entity receives the services that entitle the employees to receive payment. No account is taken of any other vesting conditions.

The cost of equity-settled transactions is recognised as an expense with a corresponding increase in equity over the vesting period. The cumulative charge to profit or loss is calculated based on the grant date fair value of the award, the best estimate of the number of awards that are likely to vest and the expired portion of the vesting period. The amount recognised in profit or loss for the period is the cumulative amount calculated at each reporting date less amounts already recognised in previous periods.

Market conditions are taken into consideration in determining fair value. Therefore any awards subject to market conditions are considered to vest irrespective of whether or not that market condition has been met, provided all other conditions are satisfied.

If equity-settled awards are modified, as a minimum an expense is recognised as if the modification has not been made. An additional expense is recognised, over the remaining vesting period, for any modification that increases the total fair value of the share-based compensation benefit as at the date of modification.

If the non-vesting condition is within the control of the consolidated entity or employee, the failure to satisfy the condition is treated as a cancellation. If the condition is not within the control of the consolidated entity or employee and is not satisfied during the vesting period, any remaining expense for the award is recognised over the remaining vesting period, unless the award is forfeited.

If equity-settled awards are cancelled, it is treated as if it has vested on the date of cancellation, and any remaining expense is recognised immediately. If a new replacement award is substituted for the cancelled award, the cancelled and new award is treated as if they were a modification.

Finance income

Interest revenue is recognised when it is probable that economic benefits will flow to the Group and the amount of revenue can be measured reliably. Interest revenue is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount on initial recognition.

Taxation

The tax expense represents the sum of the tax currently payable and deferred tax.

The tax charge is based on taxable profit for the year. The Group's liability for current tax is calculated by using tax rates that have been enacted or substantively enacted by the reporting date.

Deferred tax is the tax expected to be payable or recoverable on differences between the carrying amount of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit, and is accounted for using the "balance sheet liability" method.

Deferred tax liabilities are recognised for all taxable temporary differences and deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. Deferred tax is calculated at the tax rates that are expected to apply to the year when the asset is realised or the liability is settled based upon rates enacted and substantively enacted at the reporting date. Deferred tax is charged or credited to profit or loss, except when it relates to items credited or charged to other comprehensive income, in which case the deferred tax is also dealt with in other comprehensive income.

Intangible exploration and evaluation assets

All costs associated with mineral exploration and evaluation including the costs of acquiring prospecting licences; mineral production licences and annual licences fees; rights to explore; topographical, geological, geochemical and geophysical studies; exploratory drilling; trenching, sampling and activities to evaluate the technical feasibility and commercial viability of extracting a mineral resource; are capitalised as intangible exploration and evaluation assets and subsequently measured at cost.

If an exploration project is successful, the related expenditures will be transferred at cost to property, plant and equipment and amortised over the estimated life of the commercial ore reserves on a unit of production basis (with this charge being taken through profit or loss). Where a project does not lead to the discovery of commercially viable quantities of mineral resources and is relinquished, abandoned, or is considered to be of no further commercial value to the Group, the related costs are recognised in profit or loss.

The recoverability of capitalised exploration costs is dependent upon the discovery of economically viable ore reserves, the ability of the Group to obtain necessary financing to complete the development of ore reserves and future profitable production or proceeds from the extraction or disposal thereof.

Notes to the Consolidated Financial Statements continued

For the year ended 31 December 2020

3. Significant accounting policies continued

Impairment of exploration and evaluation assets

Whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable, the asset is reviewed for impairment. Assets are also reviewed for impairment at each reporting date in accordance with IFRS 6. An asset's carrying value is written down to its estimated recoverable amount (being the higher of the fair value less costs to sell and value in use) if that is less than the asset's carrying value. Impairment losses are recognised in profit or loss.

An impairment review is undertaken when indicators of impairment arise but typically when one of the following circumstances applies:

- unexpected geological occurrences that render the resources uneconomic; or
- title to the asset is compromised; or
- variations in mineral prices that render the project uneconomic; or
- variations in the foreign currency rates; or
- the Group determines that it no longer wishes to continue to evaluate or develop the field.

Property, plant and equipment

Property, plant and equipment are stated at historical cost less accumulated depreciation, except for investment properties which are carried at fair value. Depreciation is calculated on the straight line method to write off the cost of each asset (less residual value) over its estimated useful life as follows:

Buildings and other improvements	20-25 years
Plant and machinery	15-20 years
Motor vehicles, furniture and equipment	4-10 years
Decommissioning asset	Life of mine
Waste stripping asset	21 months

Repairs and maintenance is generally charged in profit and loss during the financial period in which it is incurred. However renovations are capitalised and included in the carrying amount of the asset when it is probable that future economic benefits will flow to the Group. Major renovations are depreciated over the remaining useful life of the related asset.

An item of property, plant and equipment is derecognised upon disposal or when no future benefits are expected from its use or disposal. Any gain or loss arising from de-recognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the income statement in the year the asset is derecognised.

Investment property

Investment property is initially measured at cost and subsequently at fair value with any change therein recognised in profit or loss. Any gain or loss on disposal of investment property (calculated as the difference between the net proceeds from disposal and the carrying amount of the item) is recognised in profit or loss.

Impairment of property, plant and equipment

At each reporting date, the Group reviews the carrying amounts of its tangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where the asset does not generate cash flows that are independent from other assets, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs.

Where there has been a change in economic conditions that indicate a possible impairment in a cash-generating unit, the recoverability of the net book value relating to that field is assessed by comparison with the estimated discounted future cash flows based on management's expectations of future commodity prices and future costs.

The recoverable amount is the higher of fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted. If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised as an expense immediately, unless the relevant asset is carried at a revalued amount, in which case the impairment loss is treated as a revaluation decrease. Where conditions giving rise to impairment subsequently reverse, the effect of the impairment charge is also reversed as a credit to the income statement, net of any depreciation that would have been charged since the impairment.

Inventories

Inventories are valued at the lower of cost or estimated net realisable value. Cost is determined on the following basis:

Raw materials	weighted average cost
Consumable stores	weighted average cost
Work in progress	weighted average cost
Finished product	weighted average cost

The cost of finished product and work in progress comprises of raw materials, direct labour, other direct costs, and related production overheads (based on normal operating capacity) but excludes borrowing costs.

Net realisable value is the estimated selling price in the ordinary course of business, less costs of completion and selling expenses.

Financial assets and liabilities

Financial assets and financial liabilities are recognised in the Group's statement of financial position when the Group becomes a party to the contractual provisions of the instrument. Financial instruments are classified into specified categories dependent upon the nature and purpose of the instruments at the time of initial recognition. All financial assets are recognised as loans and receivables or available for sale investments and all financial liabilities are recognised as other financial liabilities.

Financial assets

Measurement

At initial recognition, the Group measures all financial assets at fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs. Transaction costs of financial assets carried at fair value through profit or loss are expensed in profit or loss.

Financial assets are classified at initial recognition and subsequently measured at amortised cost, fair value though other comprehensive income (FVOCI) or fair value through profit or loss (FVPL).

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them.

Debt instruments

In order for a financial asset to be classified and measured at amortised cost or FVOCI, it needs to give rise to cash flows that are 'solely payments of principal and interest' (SPPI) on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level.

The Group's business model for managing financial assets refers to how it manages its financial assets in order to generate cash flows.

The business model determines whether cash flows will result from collecting contractual cash flows, selling the financial assets, or both.

Financial assets that do not meet the criteria for amortised cost or FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FVPL is recognised in profit or loss and presented net within other gains/(losses) in the period in which it arises.

Equity instruments

The Group subsequently measures all equity investments at fair value. Where the Group's management has elected to present fair value gains and losses on equity investments in OCI, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividends from such investments continue to be recognised in profit or loss as other income when the Group's right to receive payments is established.

Changes in the fair value of financial assets at FVPL are recognised in other gains/(losses) in the statement of profit or loss as applicable. Impairment losses (and reversal of impairment losses) on equity investments measured at FVOCI are not reported separately from other changes in fair value.

Derecognition

Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership.

Notes to the Consolidated Financial Statements continued

For the year ended 31 December 2020

3. Significant accounting policies continued

Financial assets continued

Impairment

The Group assesses on a forward-looking basis, the expected credit losses associated with its debt instruments carried at amortised cost and FVOCI. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

Trade and other receivables

Trade receivables are recognised initially at the amount of consideration that is unconditional unless they contain significant financing components, when they are recognised at fair value. The Group holds the trade receivables with the objective to collect the contractual cash flows and therefore measures them subsequently at amortised cost using the effective interest method, less any allowance for expected credit losses.

To determine the expected credit loss allowance for trade and other receivables, the Group applies the simplified approach permitted by IFRS 9, which requires expected lifetime losses to be recognised from initial recognition of the receivables, see note 32 for further details.

Other receivables consist of prepayments and deposits, which are initially recognised as non-financial assets and realised over time.

Restricted investment

Restricted investment comprises of short-term deposits with an original maturity of three months or less and an investment in an investment fund. These funds are dedicated towards future rehabilitation expenditure on the mine property.

Cash and cash equivalents

Cash and cash equivalents comprise cash on hand, deposits held at call with financial institutions, other short-term, highly liquid investments with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

Investments and other financial assets

Investments are equity instruments which the Group intends to hold for the foreseeable future and has irrevocably elected to classify them at FVOCI.

The fair value of such investments is determined by reference to quoted market prices.

Use of estimates and judgement

Impairment of financial assets

The loss allowances for financial assets are based on assumptions about risk of default and expected loss rates. The Group uses judgement in making these assumptions and selecting the inputs to the impairment calculation, based on the Group's past history, existing market conditions as well as forward looking estimates at the end of each reporting period. Details of the key assumptions and inputs used are disclosed in note 32.

Convertible loan

Interest-bearing loans are recorded initially at their fair value, net of direct transaction costs. Such instruments are subsequently carried at their amortised cost and finance charges, including premiums payable on settlement, redemption or conversion, are recognised in profit or loss over the term of the instrument using the effective rate of interest.

Instruments where the holder has the option to redeem for cash or convert into a pre-determined quantity of equity shares are classified as compound instruments and presented partly as a liability and partly as equity.

Instruments where the holder has the option to redeem for cash or convert into a variable quantity of equity shares are classified separately as a loan and a derivative liability.

Where conversion results in a fixed number of equity shares, the fair value of the liability component at the date of issue is estimated using the prevailing market interest rate for a similar non-convertible instrument. The difference between the proceeds of issue and the fair value assigned to the liability component, representing the embedded option to convert the liability into equity of the Group, is included in equity. Where conversion is likely to result in a variable quantity of equity shares the related derivative liability is valued and included in liabilities.

The interest expense on the liability component is calculated by applying the prevailing market interest rate for similar non-convertible debt to the instrument. The difference between this amount and the interest paid is added to the carrying value of the convertible loan note.

Derivative liabilities are revalued at fair value at the reporting date, and changes in the valuation amounts are credited or charged to the profit or loss.

Warrants

Warrants issued by the company are recorded at fair value on initial recognition net of transaction costs. The fair value of warrants granted is recognised as an expense or as share issue costs, with a corresponding increase in equity. The fair value of the warrants granted is measured using the Black-Scholes valuation model for options without market conditions and using the binomial method for those with market conditions, taking into account the terms and conditions under which the options were granted. The amount recognised as an expense is adjusted to reflect the actual number of warrants that vest.

Leases

The Group assesses whether a contract is or contains a lease, at inception of a contract. The Group recognises a right-of-use asset and a corresponding lease liability with respect to all lease agreements in which it is the lessee, except for short-term leases (defined as leases with a lease term of 12 months or less) and leases of low value assets. For these leases, the Group recognises the lease payments as an operating expense on a straight-line basis over the term of the lease unless another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted by using the rate implicit in the lease. If this rate cannot be readily determined, the Group uses its incremental borrowing rate. The discount rate used ranges between 10% – 11% depending on the nature of the underlying asset.

Lease payments included in the measurement of the lease liability comprise:

- fixed lease payments (including in-substance fixed payments), less any lease incentives;
- variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date;
- the amount expected to be payable by the lessee under residual value guarantees;
- the exercise price of purchase options, if the lessee is reasonably certain to exercise the options; and
- payments of penalties for terminating the lease, if the lease term reflects the exercise of an option to terminate the lease.

The lease liability is presented as a separate line in the Statement of Financial Position. The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method) and by reducing the carrying amount to reflect the lease payments made. The Group remeasures the lease liability (and makes a corresponding adjustment to the related right-of-use asset) whenever:

- the lease term has changed or there is a change in the assessment of exercise of a purchase option, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate.
- the lease payments change due to changes in an index or rate or a change in expected payment under a guaranteed residual value, in which cases the lease liability is remeasured by discounting the revised lease payments using the initial discount rate (unless the lease payments change is due to a change in a floating interest rate, in which case a revised discount rate is used).
- a lease contract is modified and the lease modification is not accounted for as a separate lease, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate.

The Group did not make any such adjustments during the periods presented.

The right-of-use assets comprise the initial measurement of the corresponding lease liability, lease payments made at or before the commencement day and any initial direct costs.

They are subsequently measured at cost less accumulated depreciation and impairment losses.

Whenever the Group incurs an obligation for costs to dismantle and remove a leased asset, restore the site on which it is located or restore the underlying asset to the condition required by the terms and conditions of the lease, a provision is recognised and measured under IAS 37. The costs are included in the related right-of-use asset, unless those costs are incurred to produce inventories.

Right-of-use assets are depreciated over the shorter period of lease term and useful life of the underlying asset. If a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that the Group expects to exercise a purchase option, the related right-of-use asset is depreciated over the useful life of the underlying asset. The depreciation starts at the commencement date of the lease. The right-of-use assets are presented as a separate line in the Statement of Financial Position. The Group applies IAS 36 Impairment of Assets to determine whether a right-of-use asset is impaired and accounts for any identified impairment loss.

Notes to the Consolidated Financial Statements continued

For the year ended 31 December 2020

3. Significant accounting policies continued

Provisions

General

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. Where the Group expects some or all of a provision to be reimbursed, for example under an insurance contract, the reimbursement is recognised as a separate asset but only when the reimbursement is virtually certain. The expense relating to any provision is presented in the statement or comprehensive income, provisions are discounted using a current pre-tax rate that reflects, where appropriate, the risks specific to the liability. Where discounting is used the increase in the provision due to the passage of time is recognised as a finance cost.

i. Environmental rehabilitation liability

The Group is exposed to environmental liabilities relating to its operations. Full provision for the cost of environmental and other remedial work such as reclamation costs, close down and restoration costs and pollution control is made based on the estimated cost as per the Environmental Management Program Report. Annual increases in the provisions relating to change in the net present value of the provision and inflationary increases are shown in the statement of comprehensive income as a finance cost. Changes in estimates of the provision are accounted for in the year the change in estimate occurs, and is charged to either the statement of comprehensive income or the decommissioning asset in property, plant and equipment, depending on the nature of the liability.

ii. Post-retirement medical liability

The liability in respect of the defined benefit medical plan is the present value of the defined benefit obligation at the reporting date together with adjustments for actuarial gains/losses. Any actuarial gains or losses are accounted for in other comprehensive income. The defined benefit obligation is calculated annually by independent actuaries using the projected unit of credit method.

iii. Provident fund contributions

The Group's contributions to the defined contribution plan are charged to profit and loss in the year to which they relate.

Use of estimates and judgements

In the application of the Group's accounting policies, the directors are required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates In particular, information about significant areas of estimation uncertainty considered by management in preparing the financial statements is described below:

i. Decommissioning and rehabilitation obligations

Estimating the future costs of environmental and rehabilitation obligations is complex and requires management to make estimates and judgements as most of the obligations will be fulfilled in the future and contracts and laws are often not clear regarding what is required. The resulting provisions are further influenced by changing technologies, political, environmental, safety, business and statutory considerations.

ii. Asset lives and residual values

Property, plant and equipment are depreciated over its useful life taking into account residual values, where appropriate. The actual lives of the assets and residual values are assessed annually and may vary depending on a number of factors. In reassessing asset lives, factors such as technological innovation, product life cycles and maintenance programmes are taken into account. Residual value assessments consider issues such as future market conditions, the remaining life of the asset and projected disposal values.

iii. Post-retirement employee benefits

Post-retirement medical aid liabilities are provided for certain existing employees. Actuarial valuations are based on assumptions which include employee turnover, mortality rates, the discount rate, health care inflation costs and rates of increase in costs.

iv. Revaluation of investment properties

The Group carries its residential investment properties at fair value. The Group engaged an independent valuation specialist to assess the fair value as at 31 December 2020 for residential properties. For residential properties, it measures land and buildings at revalued amounts with changes in fair value being recognised in other comprehensive income. Land and buildings were valued by reference to market-based evidence, using comparable prices adjusted for specific market factors such as nature, location and condition of the property. The key assumptions used to determine the fair value of the residential properties are provided in note 15.

v. Impairment of non-current assets

Determining whether an exploration and evaluation asset is impaired requires an assessment of whether there are any indicators of impairment, including by reference to specific impairment indicators prescribed in IFRS 6 – Exploration for and Evaluation of Mineral Resources. If there is any indication of potential impairment, an impairment test is required based on value in use of the asset. The valuation of intangible exploration assets is dependent upon the discovery of economically recoverable deposits which, in turn, is dependent on future vanadium and iron ore prices, future capital expenditures and environmental and regulatory restriction.

The group also reviews and tests the carrying value of tangible assets when events or changes in circumstances indicate that the carrying amount may not be recoverable. Assets are grouped at the lowest level for which identifiable cash flows are largely independent of cash flows of other assets, which is generally at the individual operating asset level. If there are indications that impairment may have occurred, estimates are prepared of expected future cash flows for each group of assets. Expected future cash flows used to determine the value in use of tangible assets are inherently uncertain and could materially change over time and impact the recoverable amounts. The cash flows and value in use are significantly affected by a number of factors including published reserves, resources, exploration potential and production estimates, together with economic factors such as spot and future metal prices, discount rates, foreign currency exchange rates, estimates of costs to produce products and future capital expenditure. At the reporting date the group assesses whether any of the indicators which gave rise to previously recognised impairments have changed such that the impairment loss no longer exists or may have decreased. The impairment loss is then assessed on the original factors for reversal and if indicated, such reversal is recognised.

An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. The recoverable amount is estimated based on the positive indicators. If an impairment loss has decreased, the carrying amount is recorded at the recoverable amount as limited in terms of IAS 36 Impairment of Assets.

The directors have concluded that there are no indications of impairment in respect of the carrying value of intangible assets but have done an impairment review on tangible assets at 31 December 2020 based on planned future development of the projects and current and forecast commodity prices. See note 13 and note 14 for details.

vi. IFRS 3 business combination

In accounting for the acquisition of Vanchem in the prior year as a business combination, the company assessed whether Vanchem met the IFRS 3 definition of "a business". IFRS 3 states that "a business consists of inputs and processes applied to those inputs that have the ability to create outputs" and we have concluded that, at the date of acquisition, Vanchem had inputs (inventories and plant and equipment with installed capacity), processes (methodology, manufacturing ability, intellectual property and a skilled workforce) and the ability to produce outputs in the form of vanadium products.

IFRS 3 requires an acquirer to measure the cost of the acquisition at the fair value of the consideration paid, and measure acquired identifiable assets and liabilities at their fair values, with any excess of acquired assets and liabilities over the consideration paid (a 'bargain purchase') recognised in profit or loss immediately. As detailed in note 8, the company engaged an independent valuation expert to value the assets acquired using the cost approach, which we consider to be the most appropriate fair value measurement technique given the nature of the assets acquired and the circumstances of the acquisition.

Where a business combination results in a bargain purchase, IFRS 3 requires that the acquirer to reassess whether it has correctly identified all of the assets and liabilities acquired and to review the procedures used to measure the fair values recognised at the acquisition date.

4. Segmental reporting

Bushveld Minerals Limited's operating segments are identified by the Chief Executive Officer and the Executive Committee, collectively named as the Chief Operating Decision Makers (CODM). The operating segments are identified by the way the Group's operations are organised. As at 31 December 2020 the Group operated within four operating segments, vanadium mining and production, energy, mineral exploration activities for vanadium and coal exploration. Activities take place in South Africa (iron ore, vanadium and energy), Madagascar (coal), other African countries (energy project development) and global (battery investment, vanadium sales).

Notes to the Consolidated Financial Statements continued

For the year ended 31 December 2020

4. Segmental reporting continued

Segment revenue and results

The following is an analysis of the Group's revenue and results by reportable segment.

Year ended 31 December 2020 Results	**Vanadium, iron ore and coal exploration US$**	**Vanadium mining and production US$**	**Energy US$**	**Total US$**
Segment revenue	**–**	**89,920,958**	**67,120**	**89,988,078**
Segment costs	**–**	**(110,750,141)**	**(1,050,735)**	**(111,800,876)**
Segmental (loss)/profit	**–**	**(20,829,183)**	**(983,615)**	**(21,812,798)**

Year ended 31 December 2019 Results	Vanadium, iron ore and coal exploration US$	Vanadium mining and production US$	Energy US$	Total US$
Segment revenue	–	116,442,585	71,527	116,514,112
Segment costs	–	(83,752,365)	(530,041)	(84,282,406)
Segmental (loss)/profit	–	32,690,220	(458,514)	32,231,706

During the year there were no costs incurred for the exploration of vanadium and iron ore as well as the coal segment. Costs attributable to both segments were of a capital nature.

The reconciliation of segmental profit to the Group's profit before tax is as follows:

	Year ended 31 December 2020 US$	Year ended 31 December 2019 US$
Segmental (loss)/profit	**(21,812,798)**	32,231,706
Unallocated costs	**(10,994,295)**	(9,977,896)
Gain on bargain purchase	**–**	60,586,633
Movement in earnout estimate	**(206,066)**	(1,510,572)
Finance income	**1,077,991**	3,593,142
Finance costs	**(5,732,249)**	(1,669,455)
(Loss)/profit before tax	**(37,667,417)**	83,253,558

Unallocated costs relate primarily to corporate costs and parent company overheads not attributable to a specific segment.

Other segmental information

31 December 2020	**Vanadium and iron ore exploration US$**	**Vanadium mining and production US$**	**Coal exploration US$**	**Bushveld Energy US$**	**Total US$**
Intangible assets – exploration and evaluation	**54,950,331**	**–**	**4,053,494**	**–**	**59,003,825**
Total reportable segmental net assets	**54,950,331**	**168,285,858**	**4,053,494**	**21,388,618**	**248,678,301**
Unallocated net liabilities	**–**	**–**	**–**	**–**	**(34,678,551)**
Total consolidated net assets	**–**	**–**	**–**	**–**	**213,999,750**

31 December 2019	Vanadium and iron ore exploration US$	Vanadium mining and production US$	Coal exploration US$	Bushveld Energy US$	Total US$
Intangible assets – exploration and evaluation	56,827,085	–	2,581,736	–	59,408,821
Total reportable segmental net assets	56,827,085	201,456,855	2,581,736	6,760,468	267,626,144
Unallocated net liabilities	–	–	–	–	(26,534,858)
Total consolidated net assets	–	–	–	–	241,091,286

Unallocated assets and liabilities relate to corporate and parent company assets and liabilities not attributable to a specific segment.

5. Revenue

	2020 US$	2019 US$
Revenue from contracts with customers		
Sale of goods	**89,920,958**	116,442,585
Bushveld Energy services rendered	**67,120**	71,527
	89,988,078	116,514,112

Disaggregation of revenue from contracts with customers		
The company disaggregates revenue from customers as follows:		
Sale of goods		
Local sales of vanadium – NV12	**2,161,420**	4,118,063
Local sales of vanadium – NV16	**1,055,785**	87,076
Local sales of vanadium – MVO	**370,686**	2,406
Export sales of vanadium – NV12	**16,452,321**	17,083,662
Export sales of vanadium – NV16	**61,537,773**	95,011,546
Export sales of vanadium – VCM	**230,248**	–
Export sales of vanadium – AMV	**8,112,725**	139,832
	89,920,958	116,442,585

Rendering of services		
Bushveld Energy services rendered	**67,120**	71,527
Total revenue from contracts with customers	**89,988,078**	116,514,112

Revenue with contract customers is generated from sale of goods and is recognised upon delivery of the goods to the customer, at a point in time and comprises the invoiced amount of goods to customers, net of value added tax.

6. Administrative expenses by nature

	2020 US$	2019 US$
Staff costs	**8,146,473**	9,616,139
Depreciation of property, plant and equipment	**256,929**	232,131
Professional fees	**6,017,782**	7,619,272
Bad debts	**–**	3,016,120
Other	**5,361,992**	4,184,829
Total administrative expenses	**19,783,176**	24,668,491

7. Staff costs

Details of directors' remuneration are included in note 35 (related party transactions) and the Remuneration Report on page 141.

8. Acquisitions

8.1 Acquisition of Bushveld Vanchem Business

On 7 November 2019, the Bushveld Group completed the acquisition of 100% of the Vanchem Plant as well as 100 per cent of Ivanti Propriety Limited from Duferco Investments ("Duferco").

A viable business case for Vanchem Vanadium Products "VVP" was formulated with key focus on ore feedstock from within the Group (Mokopane) and a refurbishment programme, and presented to the Board of Directors ("BoD") in June 2018. The BoD approved that Bushveld reopened negotiations with Duferco, including revised commercial terms and an extended exclusivity period. An approach to Duferco was made and an initial agreement was reached with Duferco which resulted in the execution of the term sheet on 5 December 2018. The agreement was for a Transaction consideration of US$68 million. The US$68 million was made up of deposit of US$6.8 million payable when the definitive agreements had been executed (01 May 2019) with the balance of US$61.2 million payable on then-envisaged Transaction closing dates of 30 June 2019 or 30 September 2019 (long stop date). The final executed purchase price of US$53.5 million plus a working capital adjustment for the acquisition was renegotiated in September 2019, the fair value of the consideration price is reflected in section C below.

Notes to the Consolidated Financial Statements continued

For the year ended 31 December 2020

8. Acquisitions continued

8.1 Acquisition of Bushveld Vanchem Business continued

Acquisition rationale remained clear:

- Would significantly contribute toward Bushveld's Vanadium production growth strategy of 8,400 tVpa in the next five years;
- Brownfields expansion (total acquisition and refurbishment capex was estimated to be around US$140 million for circa 4,200 tVpa capacity including Mokopane mine development, this compared favourably against the then estimated US$350 million capital requirement to develop and build 5,400tV facility at Mokopane);
- Would facilitate the expeditious development of Mokopane, preserving the tenure of the project and ensuring the option for an end-to-end production facility would be crystalised;
- Would provide geographic diversification with Bushveld production now in two geographic locations;
- Would provide production diversification – moving from a one kiln company to a four-kiln Group;
- Would provide product diversification – moving from a single product offering to a wider range of products comprised of Nitrovan, FeV, V_2O_5 and specialized chemical products;
- Significant NPV at long term FeV price estimates at a conservative long term FeV price;
- Increased footprint reduces Group overhead cost structure;
- Improved IP and market presence adds value with long term off-take agreements;
- Assist and expedites the development of Bushveld's own marketing channel; and
- In a benign vanadium price environment of 2018, Vanchem's 6 months annual financial statements to 31 March 2019 presented net profit amount in excess of ZAR200 million operating at less than 20% of capacity.

This acquisition of Vanchem demonstrates the value in the Company's growth strategy of targeting brownfields processing infrastructure which can be acquired at a lower price compared to the cost of building a greenfield operation, providing a lower risk and a quicker path to production. This has been reflected in Bushveld agreeing and paying an amount far less than the fair value of the assets and liabilities assumed. The Mokopane resource will also enable Bushveld to create a fully integrated vanadium production facility within the Group.

A. Consideration transferred

The following table summarises the acquisition date fair value of each major class of consideration transferred.

Fair value consideration	US$
Cash	30,713,500
Deferred Consideration (i)	409,323
Working Capital Adjustment (ii)	1,665,063
Convertible Loan (iii)	23,000,000
Total fair value of consideration	**55,787,886**

i. Deferred consideration

The Group has agreed to pay the selling shareholder a deferred payment of US$0.5 million, payable in cash 2 years post completion of the acquisition.

ii. Working capital adjustment

The working capital adjustment was the difference between the original working capital included in the agreement versus the final balances transferred to Bushveld. The amount is payable in cash after 2 years post completion of the acquisition and disclosed as deferred consideration.

iii. Convertible loan

A payment of US$23.0 million satisfied through the issue of Bushveld Minerals unsecured convertible loan notes ("Loan Notes") with the following repayment, redemption and conversion terms (in addition to customary covenants, warranties and acceleration provisions):

- Interest at a coupon of 5% per annum payable annually in arrears or on conversion or redemption;
- Repayable in cash after the second anniversary of Transaction Closure, plus any accrued interest;
- Convertible at the holder's option in two tranches of up to US$11.5 million each, after the first and second anniversary of Transaction Closure respectively, at a 5% discount to the prevailing 10-day volume weighted average Bushveld Minerals share price leading up to conversion;
- Early redemption of the Loan Notes at the election of Bushveld Minerals, subject to the condition that the holder will have an option of converting up to 50% of the early redemption amounts into Bushveld Minerals shares on the same terms set out above;
- Scope for acceleration of redemption of up to US$5 million of the Loan Notes 12 months after Transaction Closure if an average ferrovanadium price of US$40/kgV is realised during any nine-month period during the12 month period after Transaction Closure;

- Obligation to repay an amount equal to 40% of any cash received on a new share issue which raises more than US$30m, provided no more than 50% of the Loan Notes have already been paid, redeemed or converted;
- Obligation to repay an amount equal to 50% of any debt raised over US$15 million, provided no more than 50% of the Loan Notes have been repaid, redeemed or converted;
- Obligation to repay on a substantial sale of assets or change of control;
- The holder will not be able to divest any Bushveld Minerals shares received for six months following conversion and be subject to an orderly market arrangement for the following six months.

Acquisition-related costs

The Group incurred acquisition-related costs of US$1,519,969. These costs have been included in the calculation of the bargain purchase below.

B. Identifiable assets and liabilities acquired

The following table summarises the recognised amounts of assets acquired, and liabilities assumed at the date of acquisition:

Assets and liabilities acquired	US$
Property, plant and equipment	114,668,826
Land and buildings	6,137,787
Inventories	7,480,482
Trade and other receivables	900,154
Cash and cash equivalents	10,492
Environmental rehabilitation liability	(10,382,628)
Trade and other payables	(906,727)
Provisions	(13,899)
Total identifiable net assets acquired at Fair Value	**117,894,487**

Measurement of fair values

An independent valuer was appointed to determine the fair value of the property plant and equipment. The fair values of other assets and liabilities were estimated by the directors.

Property, plant and equipment

Marsh (Propriety) Limited was appointed for the valuation.

Marsh has been in the industry in South Africa since 1984. Marsh's global experience coupled with professionals, who maintain the highest certifications and advanced professional accreditations, enable them to deliver accurate and timely valuations. Marsh adheres to the International Valuation Standards, strict ethical code of conduct and best practice prescribed by the South African Council for the Property Valuers Profession, South African Institute of Valuers, American Society of Appraisers and the Royal Institution of Chartered Surveyors.

The determination of Fair Market Value (FMV) was based on the estimate cost of acquiring and installing a new or similar equivalent to the current asset at hand. Marsh then determined the remaining life of the asset and therefore calculated the difference obtained from the new replacement value similar or to the next model in the market determining the effective age or life span and minus the remaining life. This determines the economic life of the asset which in turn is the condition rating percentage.

The cost of erecting the building, together with the cost of ancillary site works, was estimated. This cost included relevant professional fees and other associated expenses directly related to the construction of the building and ancillary site works but excluded any finance charges. The cost is then depreciated according to physical, functional and economic conditions to give the Depreciated Replacement Cost of the buildings.

The Market Value of the land, as if vacant, has been determined by the comparison of recent sales of similar properties in the area and similar areas. The sum of these values reflect the Depreciated Replacement Value of the property.

Notes to the Consolidated Financial Statements continued

For the year ended 31 December 2020

8. Acquisitions continued

8.1 Acquisition of Bushveld Vanchem Business continued

B. Identifiable assets and liabilities acquired continued

Key procedures conducted:

Plant, machinery & equipment (movable assets)

- A Fair Market valuation was performed.
- A physical on-site survey was performed to inspect and value all the assets on a per asset basis.
- Production asset per location was assessed for Useful life, Remaining Life and Condition rating.
- Assets were recorded per location and department.
- Sufficient detail and specifications was collected in order to value the assets according to the Fair Market.

Buildings (fixed assets)

- A Fair Market valuation was performed
- Each building was individually assessed for Useful life, Remaining Life and Condition rating.
- Building costs in the area was used to establish a Rate/m^2.
- Professional fees, escalations, demolition, and debris removal costs were included.
- Land Values for the plant and waste site were included.

Valuation process

The valuation process took place over four core components. These components are designed to ensure the highest degree of valuation accuracy while ensuring limited interruption to the operations of our clients.

An overview of the four main components is as follows:

Initial project research and preparation

This phase of the valuation program involved research, information gathering and preparation by Marsh Valuation Services to ensure a preliminary understanding of Bushveld Minerals SA (PTY) LTD operations, locations and accounting principles.

This is a crucial stage in the valuation process ensuring reduced time spent at each location as part of the physical inspection.

Physical inspection and information gathering

The aim of this step of the process was information gathering and data collection while ensuring minimal impact on the operations. The valuation process, whilst on site, was generally undertaken via the following process:

Research, analysis and reporting

This phase of the valuation process involves utilising the information gained during the inspection process, our internal databases of information, external sources of data, recent and planned capital expenditure details, information from suppliers and international research to undertake the valuation calculations. The analysis and calculations were then extrapolated and input into a detailed valuation report.

Delivery and findings

After the valuation research and reporting was completed, a valuation report was provided including the list of assets identified as well as the fair market values of those assets with remaining useful lives.

C. Accounting for the acquisition

The acquisition has been accounted for as follows:

Vanchem Acquisition	US$
Property, plant and equipment	114,668,826
Residential properties	6,137,787
Inventories	7,480,482
Trade and other receivables	900,154
Cash and cash equivalents	10,492
Environmental rehabilitation liability	(10,382,628)
Trade and other payables	(906,727)
Provisions	(13,899)
Total identifiable net assets acquired at Fair Value	117,894,487
Fair Value of Consideration	(55,787,885)
Acquisition related costs	(1,519,969)
Gain on Bargain Purchase	**60,586,633**

IFRS 3 requires an acquirer to measure the cost of the acquisition at the fair value of the consideration paid, and measure acquired identifiable assets and liabilities at their fair values, with any excess of acquired assets and liabilities over the consideration paid (a 'bargain purchase') recognised in profit or loss immediately. The Group engaged an independent valuation expert to value the assets acquired using the cost approach, which we consider to be the most appropriate fair value measurement technique given the nature of the assets acquired and the circumstances of the acquisition.

Where a business combination results in a bargain purchase, IFRS 3 requires the acquirer to reassess whether it has correctly identified all of the assets and liabilities acquired and to review the procedures used to measure the fair values recognised at the acquisition date.

We have completed this assessment and concluded that the recognition of a bargain purchase is appropriate. In coming to this conclusion we have considered the circumstances of the sale as Vanchem was in business rescue and therefore not an open market transaction, and the advantages of Vanchem which fit into the Group's diversity and growth strategy, advantages of which are disclosed above.

9. Finance income

	2020 US$	2019 US$
Bank interest	**1,077,991**	3,593,142

10. Finance costs

	2020 US$	2019 US$
Interest on unsecured convertible loan notes	**1,614,577**	173,288
Interest on rehabilitation liability	**1,663,602**	665,738
Interest on borrowings	**1,749,386**	366,179
Interest on lease liabilities	**466,032**	463,513
Other finance costs	**238,652**	738
	5,732,249	1,669,456

Notes to the Consolidated Financial Statements continued

For the year ended 31 December 2020

11. Taxation

The tax expense represents the sum of the tax currently payable and the deferred tax adjustment for the year.

	2020 US$	2019 US$
(Loss)/profit before tax	**(37,667,417)**	83,253,558
Tax at the applicable tax rate of 30% (2019: 30%)	**–**	–
South African tax – current tax	**3,237,060**	13,033,205
South African tax – deferred tax	**(3,721,714)**	267,538
USA – deferred tax	**–**	2,665,603
USA – current tax	**–**	(1,960,381)
Taxation expense for the year	**(484,654)**	14,005,965

Management believe that any unrecognised deferred tax assets relating to the accumulated losses in the subsidiary undertakings of the Group, would be immaterial to these financial statements.

USA – current tax charge in the prior year comprises irrecoverable withholding tax on dividends received and a tax liability pertaining to the conversion of a subsidiary from a corporation into a limited liability company in the United States of America resulted in an upfront prepayment of US$5,000,000 being payable to Internal Revenue Service (IRS) in 2018. In 2020 this amount was subsequently refunded once the final tax calculation was completed. Due to the conversion all tax credits including deferred tax assets were neutralised in 2019.

12. (Loss)/earnings per share from continuing operations

Basic (loss)/earnings per share

The calculation of a basic (loss)/earnings per share of (3.00) cents (December 2019: 5.51 cents), is calculated using the total loss for the year attributable to the owners of the company of US$36,680,615 (December 2019: Profit of US$61,968,301) and 1,164,710,352 shares (2019: 1,125,562,148) being weighted average number of share in issue during the year.

Diluted (loss)/earnings per share

Due to the Group being loss making for the period, instruments are not considered dilutive and therefore the diluted loss per share is the same as basic loss per share.

13. Intangible assets

	2020			2019		
	Cost/ Valuation US$	Accumulated amortisation US$	Carrying value US$	Cost/ Valuation US$	Accumulated amortisation US$	Carrying value US$
Vanadium and Iron ore	**54,950,331**	**–**	**54,950,331**	56,827,085	–	56,827,085
Coal	**4,053,494**	**–**	**4,053,494**	2,581,736	–	2,581,736
Total	**59,003,825**	**–**	**59,003,825**	59,408,821	–	59,408,821

Reconciliation of intangible assets – 2020

	Opening balance US$	Additions US$	Exchange differences US$	Total US$
Vanadium and Iron ore	**56,827,085**	**89,764**	**(1,966,518)**	**54,950,331**
Coal	**2,581,736**	**1,381,378**	**90,380**	**4,053,494**
	59,408,821	**1,471,142**	**(1,876,138)**	**59,003,825**

Reconciliation of intangible assets – 2019

	Opening balance US$	Additions US$	Exchange differences US$	Total US$
Vanadium and Iron ore	55,639,067	198,319	989,699	56,827,085
Coal	1,511,358	1,070,378	–	2,581,736
	57,150,425	**1,268,697**	**989,699**	**59,408,821**

Vanadium and iron ore

The Company's subsidiary, Bushveld Resources Limited has a 64% interest in Pamish Investment No 39 (Proprietary) Limited ("Pamish") which holds an interest in Prospecting right 95 ("Pamish 39"). Bushveld Resources Limited also has a 68.5% interest in Amaraka Investment No 85 (Proprietary) Limited ("Amaraka") which holds an interest in Prospecting right 438 ("Amaraka 85").

The Department of Mineral Resources and Energy ("DMRE") granted a mining right to Pamish Investments No. 39 (Pty) Ltd ("Pamish") on the 28th of August 2019, in respect of the five farms Vliegekraal 783 LR, Vogelstruisfontein 765 LR, Vriesland 781 LR, Schoonoord 786 LR and Bellevue 808 LR situated in the District of Mogalakwena, Limpopo, which make up the Mokopane Project.

Mokopane is one of the world's largest primary vanadium resources, with a 298 Mt JORC compliant resource and a weighted average V_2O_5 grade of 1.75 per cent in magnetite (1.41 per cent in-situ). The Mokopane deposit is a layered orebody along a 5.5 km north-south strike at a dip of between 18 degrees and 22 degrees west. The project comprises three adjacent and parallel magnetite layers namely the Main Magnetite Layer ("MML"), the MML Hanging Wall ("MML-HW") layer and the AB Zone. 298 Mt (JORC) resources and reserves run across three parallel overlying magnetite layers with grades ranging from 1.6 per cent to over 2 per cent V_2O_5 as follows:

- MML: 52 Mt @ 1.48 per cent V_2O_5 (1.75 per cent V_2O_5 in magnetite);
- MML-HW & Parting: 233 Mt @ 0.8 per cent V_2O_5 (1.5-1.6 per cent V_2O_5 in magnetite); and
- AB Zone: 12 Mt @ 0.7 per cent V_2O_5 (greater than 2 per cent V_2O_5 in magnetite).

The mining right allows for the extraction of several other minerals over the entire Mokopane project resource area, including, titanium, phosphate, platinum Group metals, gold, cobalt, copper, nickel and chrome.

Brits vanadium project

Bushveld Minerals Limited has been granted Section 11 of the Mineral and Petroleum Resources Development Act (MPRDA) for acquiring control of Sable Platinum Mining Pty Ltd for NW 30/5/1/1/2/11124 PR, held through Great Line 1 Invest (Pty) Ltd and was executed in May 2021. The company has also applied for Section 102 of the Mineral and Petroleum Resources Development Act (MPRDA) and waiting for approval to incorporate NW 30/5/1/1/2/11069 PR into NW 30/5/1/1/2/11124 PR.

Bushveld Minerals Limited has applied for a prospecting right which has been accepted and environmental authorisation has been granted under GP 30/5/1/1/2/10576 PR held by Gemsbok Magnetite (Pty) Ltd.

A renewal application for expired Prospecting Right NW 30/5/1/1/2/11124 PR was lodged for Great 1 Line on Farm Uitvalgrond 431 JQ Portion 3. This prospecting right expired on the 3rd of November 2019 and currently awaiting approval.

Coal

Coal Exploration licences have been issued to Coal Mining Madagascar SARL a 99% subsidiary of Lemur Investments Limited.

The exploration is in South West Madagascar covering 11 concession blocks in the Imaloto Coal basin known as the Imaloto Coal Project and Extension.

Notes to the Consolidated Financial Statements continued

For the year ended 31 December 2020

14. Property, plant and equipment

	Buildings and other improvements US$	Plant and machinery US$	Motor vehicles furniture and equipment US$	Decommissioning assets US$	Right of use asset US$	Waste stripping asset US$	Assets under construction US$	Total US$
Cost								
At 1 January 2019	1,259,049	42,878,860	241,295	1,575,896	–	–	7,455,662	53,410,762
Additions	6,714,835	113,453,458	1,371,514	942,121	5,727,902	3,920,684	11,883,121	144,013,635
Disposals	(414,250)	(2,134,666)	(239,102)	–	–	–	–	(2,788,018)
Assets under construction capitalised	268,304	8,992,207	48,833	–	–	–	(9,309,344)	–
Foreign exchange differences	368,583	3,179,724	51,570	79,271	7,988	–	639,339	4,326,475
At 31 December 2019	**8,196,521**	**166,369,583**	**1,474,110**	**2,597,288**	**5,735,890**	**3,920,684**	**10,668,778**	**198,962,854**
Additions	–	2,256,794	62,665	–	–	–	6,950,465	9,269,924
Disposals	(336,491)	(2,490,766)	(192,023)	–	–	–	–	(3,019,280)
Transfers	190,930	11,645,072	121,070	–	–	–	(11,957,072)	1
Revaluations	–	–	–	(695,244)	–	–	–	(695,244)
Foreign exchange differences	(344,926)	(6,179,154)	(559,874)	33,180	(231,619)	(156,242)	(718,321)	(8,156,956)
At 31 December 2020	**7,706,034**	**171,601,529**	**905,948**	**1,935,224**	**5,504,271**	**3,764,442**	**4,943,850**	**196,361,298**
Depreciation								
At 1 January 2019	(237,758)	(5,028,852)	(179,873)	(83,106)	–	–	–	(5,529,589)
Disposals	414,251	1,804,752	234,711	–	–	–	–	2,453,714
Depreciation charge for the year	(1,177,756)	(5,947,944)	(617,794)	(848,939)	(627,475)	(1,168,237)	–	(10,388,145)
Foreign exchange differences	(21,021)	(211,965)	27,246	(22,543)	(1,488)	–	–	(229,771)
At 31 December 2019	**(1,022,284)**	**(9,384,009)**	**(535,710)**	**(954,588)**	**(628,963)**	**(1,168,237)**	**–**	**(13,693,791)**
Disposals	336,491	2,407,463	248,586	–	–	–	–	2,992,540
Depreciation charge for the year	(385,785)	(14,468,628)	(175,976)	(53,233)	(434,768)	(2,347,763)	–	(17,866,153)
Foreign exchange differences	3,367	301,705	(151,754)	31,352	(150,129)	(248,442)	–	(213,901)
At 31 December 2020	**(1,068,211)**	**(21,143,469)**	**(614,854)**	**(976,469)**	**(1,213,860)**	**(3,764,442)**	**–**	**(28,781,305)**
Net Book Value								
At 31 December 2019	**7,174,237**	**156,985,574**	**938,400**	**1,642,700**	**5,106,927**	**2,752,447**	**10,668,778**	**185,269,063**
At 31 December 2020	**6,637,823**	**150,458,060**	**291,094**	**958,755**	**4,290,411**	**–**	**4,943,850**	**167,579,993**

Refer to 3(v) on management's assumptions for the impairment of non-current assets.

15. Investment property

	2020			2019		
	Opening balance US$	**Fair value movements US$**	**Closing balance US$**	Opening balance US$	Fair value movements US$	Closing balance US$
Investment properties	**2,905,449**	**(94,432)**	**2,811,017**	2,816,007	89,442	2,905,449

Investment properties comprise residential housing in Brits and Elandsrand, North West Province.

Investment properties are stated at fair value, which has been determined based on valuations performed by Domus Estate Management, an accredited independent valuer, as at 31 December 2020. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The following valuation techniques and key inputs were used in the valuation of the investment properties:

i. Physical inspection of each property;
ii. Consultation with estate agencies to discuss current sales market trends; and
iii. Comparative sales reports for locations where properties are situated were obtained from South Africa.

16. Deferred tax

	2020 US$	2019 US$
Deferred tax assets	**5,085,154**	173,892
As at 31 December 2020	**5,085,154**	173,892

The evidence supporting recognition of a deferred tax asset is forecasts for the component to which the losses relate which indicate with reasonable certainty the availability of sufficient future taxable profits in the next 3 years against which the losses can be utilised.

17. Financial assets – investments

Name of company	2020 US$	2019 US$
Enerox Holdings Limited	–	420,891
Avalon	–	4,000,000
	–	4,420,891

Avalon

The Company agreed to support the merger of Avalon Battery Corporation ("Avalon") and redT energy plc (“redT”) (the "Merger") with interim funding of US$5 million which would give Bushveld the opportunity to acquire a strategic interest in the merged energy storage company.

In July 2019, AIM-quoted energy storage provider redT and Avalon, a North American-based vanadium redox flow battery ("VRFB") manufacturer, announced their plans to merge. The resulting business would be a leading player in the growing energy storage market. Traded on AIM in London, the merged entity had a global sales footprint, a robust near-term project pipeline, operations in North America, Europe and Asia, market-leading technology, and a strong management team.

Bushveld agreed to provide a convertible loan of up to US$5 million to Avalon (the "Interim Funding"), half of which was loaned by Avalon to redT, to support the companies through the due diligence process, finalisation of the Merger negotiation and completion of the Fundraising. These funds also allowed both companies to continue delivering on their current project pipelines.

The investment was in line with the Company's strategy of building a leading downstream vanadium-based energy storage platform, by:
- Increasing Bushveld's exposure to the massive potential of the stationary energy storage market, for the first time directly with a manufacturer of the VRFB technology;
- Partnering with selective VRFB companies with attractive upside potential, including the establishment of a VRFB Investment Platform; and
- Demonstrating upstream support from the vanadium industry for the development of the VRFB sector and encouraging additional investment into the combined company.

Refer to note 21 for details of the conversion of the loan into shares, which are now classified as financial assets at fair value.

18. Inventories

	2020 US$	2019 US$
Finished goods	**12,070,061**	17,062,028
Work in progress	**7,454,987**	4,544,303
Raw materials	**1,761,551**	1,702,062
Consumable stores	**12,795,026**	11,773,949
Inventories	**34,081,625**	35,082,342

The amount of write-down of inventories due to net realisable value provision requirement is nil (2019: nil).

Notes to the Consolidated Financial Statements continued

For the year ended 31 December 2020

19. Trade and other receivables

	2020 US$	2019 US$
Trade receivables	**3,854,461**	2,762,448
Other receivables	**1,610,261**	1,753,839
Loss allowance	**(32,826)**	–
Non-financial instruments:		
VAT	**4,993,467**	–
Total trade and other receivables	**10,425,363**	4,516,287

Categorisation of trade and other receivables

Trade and other receivables are categorised as follows in accordance with IFRS 9: Financial Instruments:

	2020 US$	2019 US$
At amortised cost	5,431,896	4,516,287
Non-financial instruments	4,993,467	–
	10,425,363	4,516,287

Trade receivables are amounts due from customers for goods sold or services performed in the ordinary course of business. They are generally due for settlement within 15-90 days and therefore are all classified as current.

Other receivables consist of prepayments and deposits, which are realised overtime.

Due to the short-term nature of the current receivables, their carrying amount is considered to be the same as their fair value.

Impairment and risk exposure

Information about the impairment of trade receivables and the Group's exposure to credit risk, foreign currency risk and interest rate risk can be found in note 32.

20. Restricted investments

	2020 US$	2019 US$
Rehabilitation trust fund and insurance fund	**3,111,465**	6,605,465

The Group is required by statutory law in South Africa to hold these restricted investments in order to meet decommissioning liabilities on the statement of financial position (refer to notes 25 and 33 for further details).

21. Financial assets at fair value

	2020 US$	2019 US$
As at 1 January	**1,952,227**	2,311,272
Additions	**7,304,099**	–
Disposals	**(286,643)**	–
Fair value movement	**13,483,194**	(359,045)
As at 31 December	**22,452,877**	1,952,227

AfriTin Mining Limited

The Group measures the fair value of the investment in AfriTin Mining Limited using the quoted price in an active market for that instrument. A market is regarded as active if transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.

Invinity Energy Systems

On 1 November 2019, Bushveld announced it had agreed to support the Merger with funding of US$5 million through a convertible loan to Avalon Battery, a Canadian VRFB company, to facilitate a Merger with redT Energy, a UK VRFB company, and a listing on the London AIM exchange. In accordance with the terms of the convertible loan, on successful completion of the Merger in March 2020, the loan was converted into shares in Invinity Energy Systems (AIM: IES). The previously provided US$5 million loan (together with the accrued interest and commitment fee) has been converted into 302,978,063 Ordinary Shares at a price of 1.65 pence in Invinity, representing up to 8.71 per cent of Invinity on 1 April 2020. The shares issued to Bushveld are not subject to a lock-in arrangement. In addition to the funding from Bushveld, Invinity has raised £7.9 million in equity and £3 million in convertible debt through an equity placing at 1.65 pence per share at the time. Subsequently, Invinity raised a further £22.5 million through a placing and open offer on 3 December 2020.

Post year end, the investment in Invinity was realised, resulting in capital appreciation. The proceeds of the sale were used towards Bushveld Energy's 2021 projects.

Enerox Holdings Limited

The investment in Enerox Holdings Limited is in line with Bushveld Minerals' strategy of partnering with Vanadium Redox Flow Battery ("VRFB") companies.

The Consortium, which currently includes Bushveld Energy Limited, a private North American investor and an East Asian Investment Holding Company, held 90% of EHL after an initial acquisition of 24.9% under an initial sale and purchase agreement ("ISPA"). In terms of the ISPA, the members of the Consortium have acquired, in equal proportions, 24.9 per cent of the issued share capital of Enerox for €150,000 from Cellcube Energy Storage Systems Inc (the "Seller"). The investment of US$2,304,099 (2019: US$420,891) represents Bushveld's share of the investment, which the directors consider to equate to the fair value of the investment at the recording date.

As of 31 December 2020, Bushveld Energy anticipates contributing not more than 50 per cent of the funds to be invested by the Consortium and is considering additional investors to participate as part of the Consortium. The Enerox investment is part of Bushveld Minerals' strategy of partnering with VRFB Original Equipment Manufacturers ("OEMs") that includes supply of vanadium and electrolyte, deployments and investment into the rapidly growing energy storage market.

22. Cash and cash equivalents

	2020 US$	2019 US$
Cash at hand and in bank	**50,540,672**	34,011,557

Cash and cash equivalents (which are presented as a single class of assets on the face of the Statement of Financial Position) comprise cash at bank and other short-term highly liquid investments with an original maturity of three months or less. Short-term deposits include funds received from Orion Mine Finance ("Orion") under the Production Financing Agreement (PFA) and Convertible Loan Notes Instrument (CLN). The PFA capital is ringfenced to provide the necessary funding for the Phase III expansion project to grow production at Vametco to more than 4'200 mtV per annum.

The total cash and cash equivalents denominated in South African Rand amount to US$34,165,671 (2019: US$17,469,385).

The directors consider that the carrying amount of cash and cash equivalents approximates their fair value.

Refer to Note 28 for further information in relation to the Production Financing Agreement and Convertible Loan Notes Instrument.

Notes to the Consolidated Financial Statements continued

For the year ended 31 December 2020

23. Share capital and share premium

	Shares Number	Share capital US$	Share premium US$	Total share capital and premium US$
At 1 January 2019	1,119,727,953	14,921,079	101,003,256	115,924,335
Shares issued – Yellow Dragon Holdings	33,914,729	436,192	10,063,808	10,500,000
At 1 January 2020	**1,153,642,682**	**15,357,271**	**111,067,064**	**126,424,335**
Shares issued – Duferco	37,115,210	501,157	5,998,843	6,500,000
At 31 December 2020	**1,190,757,892**	**15,858,428**	**117,065,907**	**132,924,335**

The Board may, subject to Guernsey Law, issue shares or grant rights to subscribe for or convert securities into shares. It may issue different classes of shares ranking equally with existing shares. It may convert all or any classes of shares into redeemable shares. The Company may also hold treasury shares in accordance with the law. Dividends may be paid in proportion to the amount paid up on each class of shares.

As at the 31 December 2020 the Company owns 670,000 (2019: 670,000) treasury shares with a nominal value of 1 pence.

Shares issued

Duferco Participations Holding S.A. ("Duferco")

As part of the acquisition of Vanchem on the 7th of November 2019, Bushveld Minerals Limited subscribed to US$23 million unsecured convertible loan notes ("Loan Notes").

Duferco, the previous owner of Vanchem, agreed to accept the partial early repayment of US$11.5 million of their US$23 million convertible loan notes, originally issued in accordance with the terms of the acquisition of Bushveld Vanchem as announced on 23 October 2019. Bushveld Minerals Limited repaid US$5 million of the Duferco loan notes, plus interest of US$1.28 million, in cash and satisfied the balance of US$6.5 million by the issue of 37,115,210 new Bushveld shares, using a conversion price of 12.97p, which is a 5 per cent discount to the prevailing 10-day volume weighted average Bushveld Minerals share price leading up to conversion.

Refer to note 28 for details on the Convertible Loan Note details.

Yellow Dragon

As part of the Vametco acquisition terms announced on 30 November 2017, Bushveld Minerals agreed to make further deferred payments to Yellow Dragon as follows:

- Two deferred payments of US$0.6 million each, payable following publication of the accounts for Vametco Holdings Limited for respectively the years ending 31 December 2018 and 31 December 2019; and
- A final payment to be made on publication of the Vametco Holdings Limited accounts for the year ended 31 December 2020 to be calculated by reference to Vametco Holdings Limited's EBITDA for the 2020 financial year. The payment being calculated on the following basis 4.5 x EBITDA (as shown in the 2020 Accounts) x 5.91 per cent.

The Company paid the first of the two US$0.6 million payments, following which the two parties agreed on an early settlement for the balance of amounts payable to be settled as follows:

- Full and final settlement of the earn out of US$13,500,000, being an all-in total payment comprising:
  - A cash component payment totalling US$3,000,000; and
  - A total of US$10,500,000 payable in 33,914,729 Bushveld Minerals Limited ordinary shares of 1.0 penny each to be issued at a price of £0.24 (which favourably compared to the 10 day volume weighted average price of £0.235 and the 20 day volume weighted average price of £0.226, as at 22 October 2019).

The shares issued to Yellow Dragon are subject to a 6 month lock-in arrangement and a further 6 month orderly market arrangement which are subject to certain exceptions and may otherwise only be waived with the consent of the Company's brokers.

Nature and purpose of other reserves

Share premium

The share premium reserve represents the amount subscribed for share capital in excess of nominal value.

Share-based payment reserve

The share-based payment reserve represents the cumulative fair value of share options granted to employees.

Convertible loan note reserve

This reserve represents the equity portion of a convertible loan.

Foreign exchange translation reserve

The translation reserve comprises all foreign currency differences arising from the translation of financial statements of foreign operations.

Fair value reserve

The fair value reserve comprises the cumulative net change in the fair value of financial assets at fair value through other comprehensive income until the assets are derecognised or impaired.

Accumulated profit/loss

The accumulated profit/loss reserve represents other net gains and losses and transactions with owners (e.g. dividends) not recognised elsewhere.

24. Post-retirement medical liability

Benefit liability

	2020 US$	2019 US$
Present value of the defined benefit obligation – wholly unfunded	**2,331,325**	2,377,737
Present value of the defined benefit obligation – partially or wholly funded	**(255,302)**	(46,412)
Balance at 31 December	**2,076,023**	2,331,325

The benefit comprises medical aid subsidies provided to qualifying retired employees. Actuarial valuations are made annually, and the most recent valuation was made on 31 December 2019.

Key assumptions used

	2020 US$	2019 US$
Actual age	**77.3 years**	76.9 years
Discount rates	**10.60%**	9.80%
Health care cost inflation	**7.30%**	7.30%
Duration of liability	**9.1 years**	9.7 years

A one percentage point change in the assumed rate of healthcare costs would have the following effect on the present value of the unfunded obligation: Plus 1%: US$2.5 million; Less 1%: US$2.2 million.

A one percentage point change in the assumed interest rate would have the following effect on the present value of the unfunded obligation; Plus 1%: US$0.24 million; Less 1%: US$0.20 million.

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25. Environmental rehabilitation liability

	2020 US$	2019 US$
Provision for future environmental rehabilitation costs	**17,998,336**	17,844,066

The Group makes full provision for the future cost of rehabilitating mine sites and related production facilities on a discounted basis at the time of developing the mine and installing and using those facilities.

The rehabilitation provision represents the present value of rehabilitation costs relating to mine sites, which are expected to be incurred up to 2037, which is when the producing mine properties are expected to cease operations. These provisions have been created based on the Group's internal estimates. Assumptions based on the current economic environment have been made, which management believes are a reasonable basis upon changes to the assumptions. However, actual rehabilitation costs will ultimately depend upon future market prices for the necessary rehabilitation works required that will reflect market conditions at the relevant time. Furthermore, the timing of rehabilitation is likely to depend on when the mines cease to produce at economically viable rates. This, in turn, will depend upon future vanadium prices, which are inherently uncertain.

The discount rate used in the calculation of the provision as at 31 December 2020 was 10.93% (2019: 10.07%).

26. Deferred consideration

	2020 US$	2019 US$
Opening balance	**7,108,819**	17,427,512
Cash payment	**(1,680,459)**	(3,600,000)
Shares settlement (see note 28)	**–**	(10,500,000)
Unwinding of discount	**–**	34,434
Movement in earnout estimate	**206,066**	1,510,572
Consideration for Vanchem acquisition (see note 8)	**–**	2,074,385
Foreign exchange	**(11,894)**	161,916
	5,622,532	7,108,819
Split between non-current and current portions		
Non-current	**1,802,884**	7,108,819
Current	**3,819,648**	–
	5,622,532	7,108,819

At the year-end management have updated their estimate of the earnout payable to EVRAZ on the acquisition of the Vametco Group, which is based on the expected EBITDA for the year ended 31 December 2020, to a maximum of US$3.53 million. The remaining balance relates to the consideration attributable to the acquisition of Vanchem.

27. Loans

	2020 US$	2019 US$
Industrial Development Corporation	1,597,972	–

The loan represents The Industrial Development Corporation's contribution and is governed by the tripartite agreement between Bushveld Energy Company (Pty) Ltd, Bushveld Electrolyte Company (Pty) Ltd & The Industrial Development Corporation of South Africa Limited. The loan represents the initial capitalised costs of US$260,366 plus the initial subscription amount of US$1,367,559 of the total US$3,821,028 to be advanced to Bushveld Electrolyte Company Pty Ltd. Bushveld Electrolyte Company is a South African producer of vanadium electrolyte. The company is jointly owned by Bushveld Energy and the IDC, with shareholding of 55% and 45% respectively. Its first manufacturing facility is under construction and located in East London, South Africa.

The loan is interest free, unsecured, subordinated in favour of Bushveld Electrolyte Company's creditors and have no fixed term of repayment in the next 12 months.

	2020 US$	2019 US$
Split between non-current and current portions		
Non-current liabilities	1,597,972	–

28. Borrowings

	2020 US$	2019 US$
Development Bank of Southern Africa	**845,588**	511,522
Nedbank Term Loan and Revolving Credit Facility	**8,636,535**	18,071,342
Convertible Loan Notes – Duferco	**11,585,068**	23,173,288
Production Financing Agreement – Orion Mine Finance	**30,105,886**	–
Convertible Loan Notes Instrument – Orion Mine Finance	**33,073,699**	–
	84,246,776	41,756,152
Split between non-current and current portions		
Non-current	**70,909,370**	41,756,152
Current	**13,337,406**	–
	84,246,776	41,756,152

Development Bank of Southern Africa – facility agreement

Lemur Holdings Limited, a subsidiary undertaking, entered into a US$1,000,000 facility agreement with the Development Bank of Southern Africa Limited in March 2019. The purpose of the facility is to assist with the costs associated with delivering the key milestones to the power project. The repayment is subject to the successful bankable feasibility study of the project at which point the repayment would be the facility value plus an amount equal to an IRR of 40% capped at 2.5 times which ever is lower. As at 31 December 2020, only US$845,588 was drawn down.

Nedbank term loan and revolving credit facility

Bushveld Minerals Limited secured ZAR375 million (approximately US$25 million) in debt facilities through its subsidiary Bushveld Vametco Alloys Proprietary Limited ("the Borrower") with Nedbank Limited (acting through its Nedbank Corporate and Investment Banking division), a South African based financial institution, in the form of a ZAR250 million loan and a ZAR125 million revolving credit facility.

Key highlights of the ZAR250 million loan which was drawn in November 2019:

- Five-year amortising loan;
- Interest rate calculated using the three year or six months JIBAR1 as selected by the Company plus a 3.4% margin;
- Interest payments are due semi-annually with first payment due in six months from financial close;
- Principal repayments will be made semi-annually in arrears over four years in eight equal instalments, with first payment due 18 months after financial close.

The Nedbank term loan was retired in December 2020.

Key highlights of the ZAR125 million revolving credit facility, which was drawn in March 2020 (2019: undrawn):

- Three-year term;
- Interest rate calculated using the three year or six months JIBAR1 as selected by the Company plus a 3.6% margin;
- Interest payments are due semi-annually with first payment due in six months from financial close.

The security provided is customary for a secured financing of this nature, including cession of shares in the Borrower, security over the assets of the Borrower, and a parent guarantee.

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28. Borrowings continued

Financial covenants undertaken

The Borrower shall ensure that for so long as any amount is outstanding under a Finance Document or any Commitment is in force, in respect of each Measurement Period:

- the Cumulative DSCR exceeds 1.4 times;
- the Interest Cover Ratio; and
- the Net Debt to EBITDA Ratio at a Borrower level shall not exceed 2.5 times.

Convertible loan note – Duferco

As part of the consideration related to the Bushveld Vanchem acquisition, a payment of US$23.0 million is to be satisfied through the issue of Bushveld Minerals unsecured convertible loan notes ("Loan Notes") with the following repayment, redemption and conversion terms (in addition to customary covenants, warranties and acceleration provisions):

- Interest at a coupon of 5% per annum payable annually in arrears or on conversion or redemption;
- Repayable in cash after the second anniversary of Transaction Closure, plus any accrued interest;
- Convertible at the holder's option in two tranches of up to US$11.5 million each, after the first and second anniversary of Transaction Closure respectively, at a 5% discount to the prevailing 10-day volume weighted average Bushveld Minerals share price leading up to conversion;
- Early redemption of the Loan Notes at the election of Bushveld Minerals, subject to the condition that the holder will have an option of converting up to 50% of the early redemption amounts into Bushveld Minerals shares on the same terms set out above;
- Scope for acceleration of redemption of up to US$5 million of the Loan Notes 12 months after Transaction Closure if an average ferrovanadium price of US$40/kgV is realised during any nine-month period during the 12 month period after Transaction Closure;
- Obligation to repay an amount equal to 40% of any cash received on a new share issue which raises more than US$30m, provided no more than 50% of the Loan Notes have already been paid, redeemed or converted;
- Obligation to repay an amount equal to 50% of any debt raised over US$15 million, provided no more than 50% of the Loan Notes have been repaid, redeemed or converted;
- Obligation to repay on a substantial sale of assets or change of control;

The holder will not be able to divest any Bushveld Minerals shares received for six months following conversion and be subject to an orderly market arrangement for the following six months.

In 2020 Bushveld Minerals Limited settled US$11.5 million of the US$23 million convertible loan notes. US$5 million plus interest of US$1.28 million was settled in cash and the balance of US$6.5 million was satisfied by the issue of 37,115,210 new Bushveld shares, using a conversion price of 12.97p, which is a 5 per cent discount to the prevailing 10-day volume weighted average Bushveld Minerals share price leading up to conversion.

Duferco continues to hold a total of US$11.5 million convertible loan notes, which are due for repayment on 8 November 2021.

Production Financing Agreement – Orion Mine Finance

Bushveld Minerals Limited signed a long-term Production Financing Agreement of US$30 million (or the "PFA") with mining-focused investment business Orion Mine Finance ("Orion"), primarily to finance its expansion plans at Bushveld Vametco Alloys (Pty) Ltd and debt repayment. Exchange control authorization from the South Africa Reserve Bank Financial Surveillance Department was granted in October 2020.

PFA transaction details

The Company will repay the principal amount and pay interest via quarterly payments determined initially as the sum of:

- a gross revenue rate (set at 1.175 per cent for 2020 and 2021 and 1.45 per cent from 2022 onwards, subject to adjustment based on applicable quarterly vanadium prices) multiplied by the gross revenue for the quarter; and
- a unit rate of US$0.443/kgV multiplied by the aggregate amount of vanadium sold for the quarter.

Once the Company reaches vanadium sales of approximately 132,020 mtV during the term of the facility, the gross revenue rate and unit rate will reduce by 75 per cent (i.e. to 25 per cent of the applicable rates).

On each of the first three loan anniversaries, the Company has the option to repay up to 50 per cent of both constituent loan parts (each may only be repaid once). If the Company utilises the loan repayment option, the gross revenue rate and/or the unit rate will reduce accordingly. The PFA capital will provide funding to continue to grow production at Vametco to more than 4,200 mtV per annual production level and debt repayment.

Part of the proceeds of the Instrument were used by the Company to prepay in full the Nedbank ZAR250 million term loan.

Convertible loan notes instrument – Orion Mine Finance

Bushveld Minerals Limited, through an affiliate of Orion Mine Finance, agreed to subscribe for US$35 million convertible loan notes instrument (the "Instrument"). The conversion price of the convertible loan notes was set at 17pence. The Instrument's proceeds will go towards the first phase of Vanchem's critical refurbishment programme and debt repayment.

Financing terms of the Instrument and convertible loan notes

- A fixed 10 per cent per annum coupon with a three year maturity date from the drawdown date.
- All interest will accrue and be capitalised on a quarterly basis in arrears but compounded annually.
- Accumulated capitalised and accrued interest is convertible into Bushveld ordinary shares. All interest and principal, to the extent not converted into ordinary shares, is due and payable at maturity date.
- Funds raised are to be used for capital investment purposes for the first phase of Vanchem's critical refurbishment programme, and the balance for debt repayment purposes.

Conversion feature

Between drawdown and the Instrument's maturity date Orion may, at their option, convert an amount of the outstanding debt, including capitalised and accrued interest, into Bushveld ordinary shares as follows:

- First six months: Up to one third of the outstanding amount;
- Second six months: Up to two thirds of the outstanding amount (less any amount previously converted);
- 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 per cent of the conversion price over a continuous 15 trading day period, a trading day being a day on which the AIM market is open for the trading of securities.

At any time until the convertible maturity date, Orion may convert the debt as above mentioned into an amount of ordinary shares equal to the total amount available for conversion under the Instrument divided by the conversion price of 17 pence.

The Orion and Nedbank borrowings are secured against certain group companies and associated assets.

29. Lease liabilities

A reconciliation of total operating lease commitments to the IFRS 16 lease liability at 31 December 2020 is as follows:

	2020 US$	2019 US$
As at 1 January	**5,464,909**	–
Additions	**–**	5,735,890
Accretion of interest	**497,042**	455,687
Payments	**(753,302)**	(726,668)
Foreign exchange	**(206,505)**	–
	5,002,144	5,464,909

	2020 US$	2019 US$
Non-current lease liabilities	**4,376,483**	4,677,338
Current lease liabilities	**625,661**	787,571
	5,002,144	5,464,909

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For the year ended 31 December 2020

30. Trade and other payables

	2020 US$	2019 US$
Financial instruments:		
Trade payables	**17,074,422**	12,651,751
Accruals and other payables	**4,991,179**	3,069,751
Non-financial instruments: VAT	**–**	88,494
	22,065,601	15,809,996

Trade and other payables principally comprise amounts outstanding for trade purchases and on-going costs. The average credit period taken for trade purchases is 30 days.

The Group has financial risk management policies in place to ensure that all payables are paid within the pre-arranged credit terms. No interest has been charged by any suppliers as a result of late payment of invoices during the year.

The directors consider that the carrying amount of trade and other payables approximates to their fair value.

The total trade and other payables denominated in South African Rand amount to US$15,895,209 (2019: US$12,027,091).

31. Provisions

Reconciliation of provisions – 2020

	Opening balance US$	Additions US$	Utilised during the year US$	Foreign exchange US$	Total US$
Leave pay	1,193,630	504,394	–	(42,567)	1,655,457
Performance bonus	2,098,565	1,602,991	(2,290,117)	(36,292)	1,375,147
Other	140,424	221,983	(92,680)	(3,437)	266,290
	3,432,619	**2,329,368**	**(2,382,797)**	**(82,296)**	**3,296,894**

Reconciliation of provisions – 2019

	Opening balance US$	Additions US$	Utilised during the year US$	Foreign exchange US$	Total US$
Leave pay	836,455	387,945	–	(30,770)	1,193,630
Performance bonus	809,085	2,640,764	(1,327,699)	(23,585)	2,098,565
Surface lease	622,616	(622,616)	–	–	–
Other	2,052,809	147,869	(2,057,581)	(2,673)	140,424
	4,320,965	**2,553,962**	**(3,385,280)**	**(57,028)**	**3,432,619**

Leave pay and bonus

Leave pay represents employee leave days due multiplied by their cost to the company employment package. The bonus represents the estimated amount due to employees based on their approved bonus scheme.

Performance bonus

The performance bonus represents an incentive bonus due to senior employees, calculated in terms of an approved scheme based on the company's operating results.

Other

The other provisions represents estimates for Group tax, legal and consulting fees to be charged.

32. Financial instruments

The Group is exposed to the risks that arise from its use of financial instruments. This note describes the objectives, policies and processes of the Group for managing those risks and the methods used to measure them. Further quantitative information in respect of these risks is presented throughout these financial statements.

Capital risk management

The Group manages its capital to ensure that entities in the Group will be able to continue as going concerns while maximising returns to shareholders. In order to maintain or adjust the capital structure, the Group may issue new shares or arrange debt financing. At the reporting date, the Group had borrowings of US$84,246,776 (2019: US$41,756,152).

The capital structure of the Group consists of cash and cash equivalents, equity and borrowings. Equity comprises of issued capital and retained profits.

The Group is not subject to any externally imposed capital requirements.

Significant accounting policies

Details of the significant accounting policies and methods adopted including the criteria for recognition, the basis of measurement and the bases for recognition of income and expenses for each class of financial asset, financial liability and equity instrument are disclosed in note 3.

Principal financial instruments

The principal financial instruments used by the Group, from which financial instrument risk arises, are as follows:

- Trade and other receivables
- Cash at bank
- Trade and other payables
- Borrowings
- Investments

Categories of financial instruments

The group holds the following financial assets:

	2020 US$	2019 US$
Financial assets at amortised cost		
Trade and other receivables	**10,451,736**	4,427,793
Restricted investment	**3,111,465**	6,605,465
Cash and cash equivalents	**50,540,672**	34,011,557
Financial assets – Investment	**2,785,507**	4,420,891
Total financial assets at amortised cost	**66,889,380**	49,465,706
Financial assets at fair value	**20,439,565**	1,952,227
Total financial assets	**87,328,945**	51,417,933

The group holds the following financial liabilities:

	2020 US$	2019 US$
Financial liabilities at amortised cost		
Trade and other payables	**23,853,676**	15,721,502
Lease liabilities	**5,002,144**	5,464,909
Deferred Consideration	**5,416,466**	7,108,819
Loans	**1,597,972**	–
Borrowings	**84,246,776**	41,756,152
Total financial liabilities	**120,117,034**	70,051,382

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For the year ended 31 December 2020

32. Financial instruments continued

General objectives, policies and processes

The Board has overall responsibility for the determination of the Group's risk management objectives and policies. The Board receives reports through which it reviews the effectiveness of the processes put in place and the appropriateness of the objectives and policies it sets.

The overall objective of the Board is to set policies that seek to reduce risk as far as possible without unduly affecting the Group's competitiveness and flexibility. Further details regarding these policies are set out below:

Price risk

The Group's exposure to commodity price risk is dependent on the fluctuating price of the various commodities that it mines, processes and sells.

The average market price of each of the following commodities was:

Vametco	**2020 US$/kgV**	2019 US$/kgV
NV	**23.56**	48.87
MVO	**17.18**	–
AMV	**17.53**	19.09
FEV	**22.33**	–

Vanchem	**2020 US$/kgV**	2019 US$/kgV
Vanadium Pentoxide Flake (FVP)	**19.86**	76.10
Vanadium Pentoxide Chemical (VCM)	**22.79**	38.47
Sodium Ammonium Vanadate (SAV)	**32.97**	–
Ammonium Metavanadate (AMV)	**26.79**	–
Ferro Vanadium (FEV)	**22.56**	–
Vanadyl Oxalate Solution (VOX)	**–**	14.17

If the average price of each of these commodities increased/decreased by 10%, the total sales related to each of these commodities would have increased/decreased as follows:

Vametco	**Effect on 2020 revenue US$**	Effect on 2020 net income US$
NV	**7,733,450**	5,568,084
MVO	**25,272**	18,196
AMV	**14,352**	10,334
FEV	**32,194**	23,180
	7,805,268	5,619,794

Vametco	Effect on 2019 revenue US$	Effect on 2019 net income US$
NV	11,692,487	8,418,591
FEV	–	–
MVO	–	–
AMV	14,391	10,361
	11,706,878	8,428,952

Vanchem	Effect on 2020 revenue US$	Effect on 2020 net income US$
Vanadium Pentoxide Flake (FVP)	**831,607**	598,757
Vanadium Pentoxide Chemical (VCM)	**114,420**	82,382
Sodium Ammonium Vanadate (SAV)	**5,246**	3,777
Ammonium Metavanadate (AMV)	**12,704**	9,147
Ferro Vanadium (FEV)	**994,299**	715,896
	1,958,276	1,409,959

Credit risk
Credit risk is the risk that the counterparty fails to repay its obligation to the Group in respect of the amounts owed.

Credit risk arises from cash and cash equivalents, contractual cash flows of debt investments carried at amortised cost, at fair value through other comprehensive income (FVOCI) and at fair value through profit or loss (FVPL), as well as credit exposures to customers, including outstanding receivables.

Risk management
Credit risk is managed on a Group basis. For banks and financial institutions, only independently rated parties with a minimum rating of 'A' are accepted.

If customers are independently rated, these ratings are used. Otherwise, if there is no independent rating, risk control assesses the credit quality of the customer, taking into account its financial position, past experience and other factors. Individual risk limits are set based on internal or external ratings in accordance with limits set by the board. The compliance with credit limits by customers is regularly monitored by line management.

The Group's investments in debt instruments are considered to be low risk investments. The credit ratings of the investments are monitored for credit deterioration.

Security
At 31 December 2020, the company held no collateral as security against any financial asset. The carrying amount of financial assets recorded in the financial statements, net of any allowances for losses, represents the company's maximum exposure to credit risk without taking account of the value of any collateral obtained. At 31 December 2020, no financial assets were past their due date. As a result, there has been no impairment of financial assets during the year. An allowance for impairment is made where there is an identified loss event which, based on previous experience, is evidence of a reduction in the recoverability of the cash flows. Management considers the above measures to be sufficient to control the credit risk exposure.

Impairment of financial assets
The Group's only financial assets that are subject to the expected credit loss model are third party trade receivables.

Trade receivables
The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables and contract assets.

To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due.

The expected loss rates are based on the payment profiles of sales over a period of 36 month before 31 December 2020 and the corresponding historical credit losses experienced within this period. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables. The Group has identified the GDP and the unemployment rate of the countries in which it sells its goods and services to be the most relevant factors, and accordingly adjusts the historical loss rates based on expected changes in these factors.

Notes to the Consolidated Financial Statements continued

For the year ended 31 December 2020

32. Financial instruments continued

On that basis, the loss allowance as at 31 December 2020 was determined as follows for trade receivables:

Subsidiary	Expected credit loss rate	Gross carrying amount US$	Loss allowance US$
Bushveld Vametco Alloys (Pty) Ltd	0.95%	312,230	2,966
Bushveld Vanchem (Pty) Ltd	1.94%	38,169	740
Bushveld Minerals SA (Pty) Ltd	1.94%	69,189	1,342
Bushveld Energy Company (Pty) Ltd	1.94%	72,651	1,409
Bushveld Vametco Limited	0.93%	2,835,340	26,369
			32,826

Trade receivables are written off when there is no reasonable expectation of recovery. Indicators that there is no reasonable expectation of recovery include, amongst others, the failure of a debtor to engage in a repayment plan with the Group, and a failure to make contractual payments for a period of greater than 120 days past due.

Impairment losses on trade receivables are presented as net impairment losses within operating profit. Subsequent recoveries of amounts previously written off are credited against the same line item. There were no impairment losses on trade receivables for the 2020 financial year.

It is the Group's policy that all suppliers who wish to trade on credit terms are subject to credit verification procedures. Credit risk arises from credit exposure to customers, including outstanding receivables and committed transactions.

Trade account receivables comprise a limited customer base. Ongoing credit evaluation of the financial position of customers is performed and granting of credit is approved by directors.

The Group's credit risk is considered by counterparty, geography and by currency. The Group has a significant concentration of cash held on deposit with large banks in South Africa, Mauritius and the United Kingdom and America with A ratings and above (Standard and Poors).

The concentration of credit risk by currency was as follows:

Currency

	2020 US$	2019 US$
Sterling	**663,914**	169,071
South African Rand	**34,165,671**	17,469,394
United States Dollar	**15,711,087**	16,373,092
	50,540,672	34,011,557

At 31 December 2020, the Group held no collateral as security against any financial asset. The carrying amount of financial assets recorded in the financial statements, net of any allowances for losses, represents the Group's maximum exposure to credit risk without taking account of the value of any collateral obtained. At 31 December 2020, no financial assets were past their due date. As a result, there has been no impairment of financial assets during the year. An allowance for impairment is made where there is an identified loss event which, based on previous experience, is evidence of a reduction in the recoverability of the cash flows. Management considers the above measures to be sufficient to control the credit risk exposure.

Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting its financial obligations as they fall due. Ultimate responsibility for liquidity risk management rests with the Board of directors. The Board manages liquidity risk by regularly reviewing the Group's gearing levels, cash-flow projections and associated headroom and ensuring that excess banking facilities are available for future use.

The Group maintains good relationships with its banks, which have high credit ratings and its cash requirements are anticipated via the budgetary process. At 31 December 2020, the Group had US$50,540,672 (2019: US$34,011,557) of cash reserves and borrowings of US$84,246,776 (2019: US$41,756,152). The Group will maintain its ability to service its borrowings over the next 12 months.

Market risk

The Group's activities expose it primarily to the financial risk of changes in foreign currency exchange rates and interest rates.

Interest rate risk

The Group has interest bearing assets and liabilities, the Group's income and operating cash flows are dependent of changes in market interest rates.

As part of the process of managing the Group's interest rate risk, interest rate characteristics of new borrowings and the refinancing of existing borrowings are positioned according to expected movements in interest rates.

2020 **Interest bearing instruments**	**Value of loan**	**Interest change by 100 basis point**	**Effect**
Borrowings	**84,246,776**	**1 %**	**(842,468)**
Cash and cash equivalents	**40,260,188**	**1 %**	**402,602**
			(439,866)

2019 Interest bearing instruments	Value of loan	Interest change by 100 basis point	Effect
Borrowings	41,756,172	1 %	(417,562)
Cash and cash equivalents	25,462,528	1 %	254,625
			(162,937)

Foreign exchange risk

As highlighted earlier in these financial statements, the functional currency of the Group is US Dollars. The Group also has foreign currency denominated assets and liabilities. Exposure to exchange rate fluctuations therefore arise. The carrying amount of the Group's foreign currency denominated monetary assets and liabilities, all in US Dollars, are shown below:

	2020 **US$**	2019 US$
Cash and cash equivalents	**34,829,585**	17,638,465
Other receivables	**4,818,931**	2,170,847
Trade and other payables	**(17,715,850)**	(11,563,170)
	21,932,666	8,246,142

The group has transactional foreign exchange exposures, which arise from sales or purchases by an operating unit in currencies other than the unit's functional currency. The Vanadium market is predominately priced in US dollars which exposes the group to the risk of fluctuations in the SA rand/US dollar. The Group monitors and manages risk via the newly established internal audit function.

The Group does not enter into any derivative financial instruments to manage its exposure to foreign currency risk.

Fair value

The directors are of the opinion that the book value of financial instruments approximates fair value. The carrying value less impairment provision of trade receivables and payables are assumed to approximate their fair values.

The Group used the following hierarchy for determining and disclosing the fair value of financial instruments which are measured at fair value by valuation technique:

- Level 1: Quoted (unadjusted) market prices in active markets for identical assets or liabilities.
- Level 2: Other techniques for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly.
- Level 3: Techniques which use inputs that have a significant effect on the recorded fair value that are not based on observable market data.

Of the Group's financial assets at fair value as described in note 21, US$20,148,778 is measured using level 1 techniques and US$2,304,099 is measured using level 3 valuation techniques.

Notes to the Consolidated Financial Statements continued

For the year ended 31 December 2020

32. Financial instruments continued

Financial liabilities	2020 Carrying amount	2020 Fair value	2019 Carrying amount	2019 Fair value
Trade and other payables	**23,853,676**	**23,853,676**	15,721,500	15,721,500
Borrowings	**84,246,776**	**84,246,776**	41,756,153	41,753,153
Deferred consideration	**5,416,466**	**5,416,466**	7,108,819	7,108,819
Loans	**1,597,972**	**1,597,972**	–	–

* Management assessed that the fair values of cash and cash equivalents, restricted investment, trade and other receivables and trade and other payables, approximate their carrying amounts largely due to the short-term maturities of these instruments.

Financial assets	2020 Carrying amount	2020 Fair value	2019 Carrying amount	2019 Fair value
Trade and other receivables	**6,692,165**	**6,692,165**	4,427,793	4,427,793
Restricted investments	**3,111,465**	**3,111,465**	6,605,465	6,605,465
Financial assets – investments	**2,785,507**	**2,785,507**	4,420,891	4,420,891
Financial assets at fair value	**20,439,565**	**20,439,565**	1,952,227	1,952,227
Cash and cash equivalents	**50,540,672**	**50,542,672**	34,011,557	34,011,557

33. Contingent liabilities

Bank guarantee

As required by the Minerals and Petroleum Resources Act (South Africa), a guarantee amounting to US$6,204,018 (2019: US$6,461,513) before tax and US$4,446,893 (2019: US$4,652,290) after tax was issued in favour of the Department of Mineral Resources for the unscheduled closure of the Bushveld Vametco Alloys mine. This guarantee was issued on condition that a portion be deposited in cash with Guard Risk Insurance Company Ltd with restricted use by the Group, as per the below.

Restricted cash

As required by the Minerals and Petroleum Resources Act, a guarantee amounting to US$6,204,018 before tax and US$4,466,893 after tax was issued in favour of the Department of Mineral Resources for the unscheduled closure of the mine. This guarantee was issued on condition that a portion be deposited in cash with Centriq Insurance Company Ltd with restricted use by the Group as per the below:

The restricted cash disclosed as a current asset consist of US$3,111,465 (2019: US$ Nil) paid to Centriq Insurance Company Limited; US$ Nil (2019: US$3,051,487).

For commercial reasons, the Company decided to consolidate its rehabilitation obligations into one insurance product. Guarantees previously held with Guardrisk Insurance Company Ltd (2019: US$3,553,978) and the Environmental Rehabilitation Trust (2019: US$3,051,487) where therefore consolidated into one guarantee from Centriq Insurance Company Ltd.

The guarantee is valid for three years, commencing on 1 June 2020 and the funds are only available if the agreement is terminated with a six months' notice period.

Suretyship

On 22 May 2019, the Company announced that it had agreed to provide a short-term standby working capital support facility to AfriTin for the amount of ZAR 30,000,000 (approximately US$2.1 million on 22 May 2019). AfriTin has subsequently secured a working capital facility for the amount of NAD 35,000,000 from Nedbank Namibia (the "Nedbank Facility"), with the support of Bushveld Minerals providing to stand surety for the Nedbank Facility to the value of NAD 30,000,000 (approximately US$2.0 million).

In the unlikely event of default, Nedbank will first call on the suretyship of the parent company of the AfriTin Group (i.e. AfriTin Mining Limited). In the event that AfriTin Mining Limited cannot meets its obligations under the facility, Nedbank will call upon the Bushveld Minerals suretyship.

The above is less onerous on Bushveld Minerals as it is not a cash collateralised guarantee. In addition, the terms agreed for the Working Capital Facility announced on the 22 May 2019 remain unchanged with respect to Bushveld Minerals. The Company is comfortable with the progress that AfriTin has made towards production at its Namibian flagship project and with the security it retains from AfriTin for the suretyship in the form of a notarial bond over the AfriTin processing plant.

34. Capital commitments

	2020 US$	2019 US$
Authorised and contracted for	–	2,449,568
Authorised but not contracted for	–	608,778
	–	3,058,346

35. Related parties

Relationships

Balances and transactions between the Company and its subsidiaries, which are related parties, have been eliminated on consolidation and are not disclosed in this note.

VM Investments Limited is a related party due to two of the Executive Directors (Fortune Mojapelo and Anthony Viljoen) of Bushveld Minerals Limited being majority shareholders of VM Investments. VM Investments owns the offices rented by Bushveld Minerals Limited. The rent paid in 2020 financial period is US$159,651 (2019: US$176,474).

Services rendered by Ondra LLP for the amount of US$566,056 (2019: US$376,800) is classified as a related party transaction due to a non executive director (Michael Kirkwood) being a senior advisor at the firm.

The remuneration of key management personnel, being the directors and other executive committee members, is set out below. Further information about the remuneration of individual directors is provided in the Directors' remuneration report.

	2020 US$	2019 US$
Salaries and fees	**2,181,022**	1,772,702
Short-term incentives	**144,055**	881,934
Long-term incentives	**564,420**	346,157
	2,889,497	3,000,793

36. Events after the reporting period

The unprecedented impact of the COVID-19 pandemic, as well as the depressed governing sales price has had a negative impact on the Group's operational and financial position during the 2020 financial year. As such the Group has proactively engaged with Nedbank and have agreed to a covenant waiver for the testing periods 29 June 2021.

Bushveld Minerals Limited's strong balance sheet, including significant cash holdings, coupled with the actions it has taken to date demonstrates the Groups capacity to navigate through the uncertainties caused by the impacts of the COVID-19 pandemic. The subsequent price recovery has also improved the overall financial position of the business as its ability to operate as a going concern for the foreseeable future.

Enerox GmbH investment

On 31 March 2021 Bushveld Energy invested US$5.0 million into VRFB-H and invested approximately another US$2.7 million to retain its 50.5 percentage holding of VRFB-H. In turn, VRFB-H has invested US$15 million into EHL to fund its part of the US$30 million investment into Enerox. The investment of VRFB-H into Enerox is in line with Bushveld Minerals' strategy to mobilise capital to scale up growth and capacity of VRFB manufacturers, either through self-funding mechanisms or through funding sharing arrangements. This strategy has been recently and successfully illustrated by Bushveld Minerals' investment and subsequent realisation of an interest in AIM-quoted Invinity Energy Systems.

Mineral Resources and Reserves

Mineral Resources are the estimated quantities of material with potential for eventual economic extraction from the Group's properties.

Ore Reserves are a subset of Measured and/or Indicated Mineral Resources that can be demonstrably extracted, economically and legally.

Ore Reserves are declared for open pits inside the Life of Mine pit design (the optimised pit shell in this instance), including diluting materials and allowances for losses which may occur when the material is mined or extracted. They are defined by studies at pre-feasibility or feasibility level, as appropriate, that include the application of modifying factors. Those studies demonstrate that, at the time of reporting, extraction could reasonably be justified (JORC, 2012). Ore Reserves are declared for in-whole rock tonnes in the pits and exclude any stockpiles. Economic assumptions used to estimate reserves change from one period to another as additional technical and operational data is generated.

Bushveld Minerals: vanadium resource and reserves

Vametco mine

The Vametco Mine is situated about 6.5 km northeast of the town of Madibeng (formerly known as Brits). The mine is an operational opencast vanadium mine, located in the Bojanala Platinum District within the North-West Province of the Republic of South Africa.

The operation comprises an open pit mine which supplies ore directly to the vanadium processing plant which is located on the same property. The open pit is approximately 3.5 km long, in an east-west direction. The vanadium is extracted from magnetite layers occurring near the basal contact of the Upper Zone of the Bushveld Igneous Complex. The mine has been in operation since 1967.

The location of the Vametco Mine is shown in Figure 1.

Mineral resources & reserves

The Mineral Resources and Reserves estimates for Vametco Mine reported herein are based on the Competent Person's depletion statement prepared by an independent consultancy company, MSA Group, as at 31 December 2020.

Key highlights

- Ore Reserves have been depleted after 12 months of mining by approximately two per cent from previous Ore Reserve estimate as at 31 December 2019. As at 31 December 2020, Ore Reserves are reported at 267,200 tonnes V_2O_5 in magnetite at a grade of 2.02 per cent V_2O_5 in magnetite (previously 274,100 tonnes V_2O_5 in magnetite).
- Combined Inferred and Indicated Mineral Resource across three Seams (The Lower, Intermediate and Upper Seams) reported as at 31 December 2020 is 184.2 Mt at an average grade of 1.98 per cent V_2O_5 in magnetite, with an average magnetite content of 35.0 per cent in whole rock for 709.8 thousand tonnes of contained vanadium (previously 185.5 Mt at an average grade of 1.98 per cent V_2O_5 in magnetite, with an average magnetite content of 35.0 per cent in whole rock for 714.7 thousand tonnes of contained vanadium).
- Within this, the Ore Reserve in the Probable Category is reported as 46.4 Mt at an average grade of 2.02 per cent V_2O_5 in magnetite, with an average magnetite content of 28.4 per cent in whole rock for 149,700 tonnes of vanadium (previously 47.4Mt V_2O_5 in magnetite across the same three seams at an average grade of 2.02 per cent V_2O_5 in magnetite, with an average magnetite content of 28.5 per cent in whole rock for 156,300 tonnes of vanadium).
- The Lower Seam is the main ore seam and the thickest, ranging from 13.8 to 52.0 metres in thickness, comprising a Probable Reserve of 38.8 Mt at an average grade of 2.05 per cent V_2O_5 in magnetite, with an average magnetite content of 29.3 per cent in whole rock for 130,500 tonnes of vanadium.
- The decrease in the 2020 Mineral Resource, by 0.68 per cent less tonnes than the 31 January 2019 estimate, is attributed to mining of the seams over the last nine months. No Mineral Resource Exploration was carried out over this period.
- The decrease in the ore tonnages to 46.4 Mt as at 31 December 2020 is due to the depletion of lower and Intermediate seams over the nine month period based on the pit to plant reconciled production data from Vametco.

Table 1: Vametco mineral resource at a cut-off grade of 20% magnetite, as at 31 December 2020 – gross basis

Class	Seam name	Tonnes (Millions)	V_2O_5 grade of whole rock %	Magnetite grade of whole rock %	V_2O_5 grade in-magnetite %	Tonnes V_2O_5 in-magnetite (Thousands)	Tonnes V in-magnetite (Thousands)
Indicated	Upper	5.7	1.44	65.9	1.78	66.2	37.1
	Intermediate	27.9	0.67	32.8	1.91	174.8	97.9
	Lower	107.9	0.72	32.3	2.03	709.4	397.4
	Total	**141.5**	**0.74**	**33.8**	**2.00**	**950.5**	**532.4**
Inferred	Upper	10.3	1.46	63.6	1.75	114.8	64.3
	Intermediate	7.0	0.67	32.1	1.92	43.3	24.3
	Lower	25.4	0.74	31.3	2.00	158.4	88.7
	Total	**42.7**	**0.90**	**39.2**	**1.93**	**316.6**	**177.3**
Indicated and Inferred	Upper	16.0	1.45	64.4	1.76	181.0	101.4
	Intermediate	35.0	0.67	32.7	1.91	218.1	122.2
	Lower	133.3	0.72	32.1	2.03	867.9	486.1
	Total	**184.2**	**0.78**	**35.0**	**1.98**	**1,267.2**	**709.8**

Notes:
1. All tabulated data have been rounded and as a result minor computational errors may occur.
2. Mineral Resources which are not Ore Reserves have no demonstrated economic viability.
3. Mineral Resources are inclusive of Ore Reserves (not indicated in the table).
4. Magnetite content (grade) is determined as the proportion of magnetite concentrate recovered using Davis Tube methodology.
5. Due to the magnetite grade being a recovered grade, differences will occur between whole rock V_2O_5 grades back-calculated from concentrate, versus those derived from whole rock assays.
6. Depleted using 31 December 2020 pit survey.
7. Reported on a Gross Basis. Bushveld Minerals shareholding in Vametco Alloys is 74%.

Table 2: Vametco mineral resource at a cut-off grade of 20% magnetite, as at 31 December 2020 – attributable basis

Class	Seam name	Tonnes (Millions)	V_2O_5 grade of whole rock %	Magnetite grade of whole rock %	V_2O_5 grade in-magnetite %	Tonnes V_2O_5 in-magnetite (Thousands)	Tonnes V in-magnetite (Thousands)
Indicated	Upper	4.2	1.44	65.8	1.78	49.0	27.4
	Intermediate	20.7	0.67	33.2	1.91	129.3	72.4
	Lower	79.9	0.72	31.8	2.03	525.0	294.0
	Total	**104.7**	**0.75**	**33.9**	**1.99**	**703.4**	**394.0**
Inferred	Upper	7.6	1.46	63.7	1.75	84.9	47.5
	Intermediate	5.2	0.67	32.1	1.92	32.1	17.9
	Lower	18.6	0.74	31.3	2.00	117.2	65.6
	Total	**31.6**	**0.90**	**39.3**	**1.93**	**234.3**	**131.2**
Indicated and Inferred	Upper	11.8	1.45	64.4	1.76	133.9	75.0
	Intermediate	25.9	0.67	32.9	1.91	161.4	90.4
	Lower	98.7	0.72	31.6	2.02	642.2	359.7
	Total	**136.3**	**0.79**	**35.5**	**1.97**	**937.7**	**525.2**

Notes:
1. All tabulated data have been rounded and as a result minor computational errors may occur.
2. Mineral Resources which are not Ore Reserves have no demonstrated economic viability.
3. Mineral Resources are inclusive of Ore Reserves (not indicated in the table).
4. Magnetite content (grade) is determined as the proportion of magnetite concentrate recovered using Davis Tube methodology.
5. Due to the magnetite grade being a recovered grade, differences will occur between whole rock V_2O_5 grades back-calculated from concentrate, versus those derived from whole rock assays.
6. Depleted using 31 December 2020 pit survey.
7. Reported on an Attributable Basis. Bushveld Minerals shareholding in Vametco Alloys is 74%.

Mineral Resources and Reserves continued

Table 3: Vametco ore reserves, 31 December 2020 – gross basis

Class	Seam name	Tonnes (Millions)	V_2O_5 grade of whole rock %	Magnetite grade of whole rock %	V_2O_5 grade in-magnetite %	Tonnes V_2O_5 in-magnetite (Thousands)	Tonnes V in-magnetite (Thousands)
Indicated	Upper	0.9	0.57	26.8	1.77	4.1	2.3
	Intermediate	6.8	0.52	23.4	1.88	30.0	16.8
	Lower	38.8	0.63	29.3	2.05	233.1	130.5
	Total	**46.4**	**0.62**	**28.4**	**2.02**	**267.2**	**149.7**

Notes:
1. All tabulated data have been rounded and as a result minor computational errors may occur.
2. Ore Reserve tonnes and grades reported on dry ROM (plant feed) basis after mining modifying factors have been applied but before beneficiation down-stream recoveries/losses have been applied.
3. Reporting was prepared on a Mineral Resource model developed by MSA.
4. Ore Reserves depleted as at 31 December 2020 using 31 December 2020 pit survey.
5. Reported on a Gross Basis. Bushveld Minerals shareholding in Vametco Alloys is 74%.
6. Ore Reserve estimate depleted using latest topography supplied by Vametco as of 31 December 2020, based on the pit design and Ore Reserves compiled in March 2019.

Table 4: Vametco ore reserves, 31 December 2020 – attributable basis

Class	Seam name	Tonnes (Millions)	V_2O_5 grade of whole rock %	Magnetite grade of whole rock %	V_2O_5 grade in-magnetite %	Tonnes V_2O_5 in-magnetite (Thousands)	Tonnes V in-magnetite (Thousands)
Indicated	Upper	0.6	0.57	26.8	1.77	3.0	1.7
	Intermediate	5.0	0.52	23.4	1.88	22.2	12.4
	Lower	28.7	0.63	29.3	2.05	172.5	96.6
	Total	**34.4**	**0.62**	**28.4**	**2.02**	**197.8**	**110.7**

Notes:
1. All tabulated data have been rounded and as a result minor computational errors may occur.
2. Ore Reserve tonnes and grades reported on dry ROM (plant feed) basis after mining modifying factors have been applied but before beneficiation down-stream recoveries/losses have been applied
3. Reporting was prepared on a Mineral Resource model developed by MSA
4. Ore Reserves depleted as at 31 December 2020 using 31 December 2020 pit survey.
5. Reported on an Attributable Basis. Bushveld Minerals shareholding in Vametco Alloys is 74%.
6. Ore Reserve estimate depleted using latest topography supplied by Vametco as of 31 December 2020 based on the pit design and Ore Reserves compiled in March 2019.

Brits

This project is located directly east of the Bushveld Vametco Vanadium Mine in the Bojanala Platinum District within the North-West Province (Figure 2) and hosts high-grade vanadium mineralisation in several magnetite layers. The mineralisation, which is outcropping in places, is a continuation of the Vametco strike. The project offers a potential extension of Vametco's Life of Mine and a cheap source of near-surface ore for the Vametco plant.

Brits has the potential to provide additional feed tonnage for Vametco and, if required, concentrate feed for the Vanchem plant.

The Company's interest in the asset ranges between 51 per cent and 74 per cent through three different companies, one of which is Caber Trade Mining and Invest 1 (Pty) Ltd ("Caber Trade"), the mining right applicant, in which the Company holds an interest of 51 per cent.

Caber Trade is currently waiting for the Department of Mineral Resource and Energy to make a decision on the appeal that was lodged against the decision by the Department to refuse the Mining Right Application.

The Caber Trade properties were not included in the CPR, therefore the refusal of the mining right has no impact on the mineral resource statement.

Minerals resources

A JORC compliant maiden Mineral Resource was declared in June 2019 on Portion 3 of the farm Uitvalgrond 431 JQ of the project and no further exploration work has been conducted on the project after this mineral resource estimate. This resource was classified into the Indicated and Inferred categories.

The aggregate Inferred and Indicated Mineral Resource distributed across the three seams (the Lower, Intermediate, and Upper Seams) is reported as 66.8Mt at an average grade of 1.58 per cent V_2O_5 in magnetite, at a cut-off grade of 20 per cent magnetite in whole rock for 175,400 tonnes of contained vanadium.

The Mineral Resource is reported up to a depth of 150m below the surface and based on the drilling on the western and central blocks of the farm Uitvalgrond Portion 3 which extends over a strike length of approximately 1.65km to the most eastern fault where the last line of drilling was completed. As such there is potential to increase the resource on the remaining eastern unexplored portion of the farm on a strike length of 1km.

Key highlights

- The aggregate Inferred and Indicated Mineral Resource distributed across the three seams (the Lower, Intermediate, and Upper Seams) is reported as 66.8 Mt at an average grade of 1.58 per cent V_2O_5 in-magnetite, at a cut-off grade of 20 per cent magnetite in-whole rock for 175,400 tonnes of contained vanadium.
- The Indicated Mineral Resource tonnages account for 67 per cent of the total combined Mineral Resource and stand at 44.9 Mt with an average grade of 1.59 per cent V_2O_5 in-magnetite for 115,600 tonnes of contained vanadium across the three seams.
- The Lower Seam represents a major portion of the total combined Mineral Resource tonnages at the cut-off grade of 20 per cent, with 55.5 Mt at an average grade of 1.58 per cent V_2O_5 in-magnetite for 137,000 tonnes of contained vanadium. This represents approximately 83 per cent of the total combined tonnage of the maiden Mineral Resource.
- Within the combined Mineral Resource, the Intermediate Seam has the highest grade of the three seams at 1.76 per cent V_2O_5 in-magnetite, although the tonnages are low at the current cut-off grade of 20 per cent magnetite in-whole rock.
- A geological trend of decreasing grade in vanadium for magnetite-rich layers from west to east in the Bushveld Complex accounts for the lower grades on the Brits Project in comparison to the grades at the operating Vametco Mine.
- The Mineral Resource is reported up to a depth of 150 meters below surface and is based on the drilling on the western and central blocks of the farm Uitvalgrond Portion 3 which extends over a strike length of approximately 1.65 kilometres to the most eastern fault where the last line of drilling was completed. There is potential to increase the resource on the remaining eastern unexplored portion of the farm on a strike length of 1 km.

Table 5: Brits vanadium mineral resource at a cut-off grade of 20% magnetite, as at 18 June 2019 – gross basis

Class	Seam name	Tonnes (Millions)	V_2O_5 grade of whole rock %	Magnetite grade of whole rock %	V_2O_5 grade in-magnetite %	Tonnes V_2O_5 in-magnetite (Thousands)	Tonnes V in-magnetite (Thousands)
Indicated	Upper	2.0	0.66	43.64	1.51	13.4	7.5
	Intermediate	1.9	0.47	21.52	1.75	7.0	3.9
	Lower	41.0	0.56	28.54	1.59	185.9	104.2
	Total	**44.9**	**0.56**	**28.94**	**1.59**	**206.3**	**115.6**
Inferred	Upper	7.1	0.65	43.89	1.50	46.7	26.2
	Intermediate	0.4	0.44	21.13	1.85	1.4	0.8
	Lower	14.5	0.50	26.09	1.55	58.8	32.9
	Total	**22.0**	**0.55**	**31.78**	**1.54**	**106.9**	**59.9**
Indicated and Inferred	Upper	9.2	0.65	43.84	1.50	60.1	33.7
	Intermediate	2.2	0.46	21.46	1.76	8.4	4.7
	Lower	55.5	0.54	27.90	1.58	244.6	137.0
	Total	**66.8**	**0.56**	**29.87**	**1.58**	**313.2**	**175.4**

Notes:
1. All tabulated data have been rounded and as a result minor computational errors may occur.
2. Mineral Resources which are not Ore Reserves have no demonstrated economic viability.
3. Magnetite grade is determined as the proportion of magnetite concentrate recovered using Davis Tube methodology.
4. Due to the magnetite grade being a recovered grade, differences will occur between whole rock V_2O_5 grades back calculated from concentrate, versus those derived from whole rock assays.
5. The Mineral Resource is reported as 100% of the Mineral Resource for the project. Bushveld Minerals shareholding in Brits is 62.5%.
6. Bushveld Minerals is the operator of Brits Vanadium Project.

Mineral Resources and Reserves continued

Table 6: Brits vanadium mineral resource at a cut-off grade of 20% magnetite, as at 18 June 2019 – net attributable basis

Class	Seam name	Tonnes (Millions)	V_2O_5 grade of whole rock %	Magnetite grade of whole rock %	V_2O_5 grade in-magnetite %	Tonnes V_2O_5 in-magnetite (Thousands)	Tonnes V in-magnetite (Thousands)
Indicated	Upper	1.3	0.66	43.64	1.51	8.4	4.7
	Intermediate	1.2	0.47	21.52	1.75	4.4	2.4
	Lower	25.6	0.56	28.54	1.59	116.2	65.1
	Total	**28.0**	**0.56**	**28.94**	**1.59**	**129.0**	**72.2**
Inferred	Upper	4.4	0.65	43.89	1.50	29.2	16.3
	Intermediate	0.2	0.44	21.13	1.85	0.9	0.5
	Lower	9.1	0.50	26.09	1.55	36.7	20.6
	Total	**13.7**	**0.55**	**31.78**	**1.54**	**66.8**	**37.4**
Indicated and Inferred	Upper	5.7	0.65	43.84	1.50	37.6	21.0
	Intermediate	1.4	0.46	21.46	1.76	5.2	2.9
	Lower	34.7	0.54	27.90	1.58	152.9	85.6
	Total	**41.8**	**0.56**	**29.87**	**1.58**	**195.8**	**109.7**

Notes:
1. All tabulated data have been rounded and as a result minor computational errors may occur.
2. Mineral Resources which are not Ore Reserves have no demonstrated economic viability.
3. Magnetite grade is determined as the proportion of magnetite concentrate recovered using Davis Tube methodology.
4. Due to the magnetite grade being a recovered grade, differences will occur between whole rock V_2O_5 grades back calculated from concentrate, versus those derived from whole rock assays.
5. Bushveld Minerals shareholding in Brits is 62.5%.
6. Bushveld Minerals is the operator of Brits Vanadium Project.

Mokopane

Mokopane is located on the central portion of the northern limb of the Bushveld Complex. The project is in the Mokopane District of Limpopo Province of South Africa, approximately 65 kilometres west of the provincial capital, Polokwane and 45 kilometres northwest of Mokopane town (Figure 2). The project includes one of the world's largest primary vanadium resources, with an average grade of 1.80 per cent V_2O_5 in-magnetite.

Licensing

On 29 January 2020, the Department of Mineral Resources and Energy in South Africa executed a 30-year mining right in favour of the company's subsidiary, Pamish Investments No. 39 (Pty) Ltd ("Pamish"), over five farms: Vogelstruisfontein 765 LR; Vriesland 781 LR; Vliegekraal 783 LR; Schoonoord 786 LR; and Bellevue 808 LR (Figure 2).

Ownership

While the Mokopane's mining right is subject to Mining Charter II regulations, the Company is committed to adopting Mining Charter III regulations in respect of host community and employee shareholding requirements. In accordance with Mining Charter III, a free-carried interest of five per cent of the equity in Pamish, will in due course, be transferred by the existing shareholders (Bushveld Minerals and Izingwe Capital (Pty) Ltd) to the Bakenberg Community Trust, a trust established for the benefit of the local communities. Bushveld Minerals' interest in the Mokopane Project will accordingly reduce from 64 per cent to 60.8 per cent, while Izingwe's shareholding will reduce from 36.0 per cent to 34.2 per cent. Pamish has further committed to allocate an additional five per cent to an Employee Share Ownership Participation Scheme once the mine is operational, which will result in Bushveld Minerals ultimately holding 57.6 per cent and Izingwe 32.4 per cent.

Geology & mineral resources & reserves

The Mokopane deposit is a layered orebody along a 5.5 kilometre north-south strike, dipping at between 18 and 22 degrees west. The project comprises three adjacent and parallel magnetite layers, namely the Main Magnetite Layer ("MML"), the Main Magnetite Layer-Hanging Wall ("MML-HW") layer and the AB Zone. Its 298 Mt (JORC) resources and reserves run across three parallel overlying magnetite layers with grades ranging from 1.6 per cent to over 2.0 per cent V_2O_5 as follows:

- MML: 52 Mt @ 1.48 per cent V_2O_5 (1.6-1.8 per cent V_2O_5 in-magnetite);
- MML-HW & Parting: 233 Mt @ 0.8 per cent V_2O_5 (1.5-1.6 per cent V_2O_5 in-magnetite); and
- AB Zone: 12 Mt @ 0.7 per cent V_2O_5 (greater than 2.0 per cent V_2O_5 in-magnetite.

Mokopane resources and reserves

The Mokopane Project has a 298 Mt JORC-compliant Resource, including 28.5 Mt Reserves and a weighted average V_2O_5 grade of 1.41 per cent in-whole rock and 1.75 per cent in-magnetite.

Table 7:

Layer name	Mineral resource category	Width (m)	Tonnes (Mt)	Density (t/m)	V_2O_5 (%)	Fe (%)	Fe_2O_3 (%)	TiO_2 (%)	SiO_2* (%)	Al_2O3* (%)	P_2O_5* (%)	S* (%)	V_2O_5 (kt)	Fe (Mt)
UG-C	Inferred	4.04	31.8	3.48	0.64	25.7	36.7	5.9	30.2	15.4	0.01	0.12	202.8	8.2
UG-A	Inferred	1.64	12.7	3.31	0.59	23.2	33.1	5.3	32.5	17.5	0.01	0.01	75.6	3.0
UMG1	Inferred	3.24	25.5	3.30	0.59	22.9	32.7	5.4	32.6	17.6	0.01	0.01	150.4	5.8
UMG2	Inferred	2.03	15.7	3.40	0.69	25.9	37.0	6.2	29.4	16.7	0.01	0.01	107.7	4.1
MAG1 HW GAB**	Inferred	17.53	72.3	3.02	0.31	13.1	18.8	2.9	42.0	21.9	0.01	0.12	223.3	9.5
MAG1	Inferred	1.31	12.0	3.96	1.07	40.0	57.1	9.7	15.6	10.8	0.01	0.06	128.7	4.8
MAG2	Inferred	1.10	9.2	3.57	0.83	30.2	43.1	7.2	25.1	15.1	0.01	0.06	76.3	2.8
MML HW	Inferred	5.89	42.3	3.01	0.32	13.4	19.2	2.5	42.2	21.6	0.02	0.11	136.0	5.7
Total	Inferred	36.77	221.5	3.21	0.50	19.8	28.3	4.4	35.7	18.9	0.01	0.08	1,100.8	43.8
MAG3	Indicated	4.09	27.5	4.08	1.50	45.5	65.1	10.0	10.6	7.8	0.01	0.12	412.5	12.5
PART	Indicated	2.16	11.4	3.16	0.58	20.9	29.9	3.5	34.5	19.0	0.01	0.17	66.3	2.4
MAG4	Indicated	3.59	24.3	4.00	1.46	43.9	62.7	9.3	11.8	8.9	0.01	0.24	354.9	10.7
Total	**Indicated**	**9.84**	**63.2**	**3.85**	**1.32**	**40.4**	**57.8**	**8.6**	**15.4**	**10.2**	**0.01**	**0.18**	**833.7**	**25.6**
Total Mineral Resources		**46.61**	**284.8**	**3.33**	**0.68**	**24.4**	**34.8**	**5.4**	**31.2**	**17.0**	**0.01**	**0.10**	**1,934.5**	**69.4**

* Included for information purposes only, no value will be derived from these materials.

** A 0.30 per cent V_2O_5 cut-off has been applied laterally across this layer, so only material greater than 0.30 per cent V_2O_5 is included in the tonnage listed in this table.

Table 8: MML probable ore reserves as at 19 January 2016

Orebody	True Thickness (m)	SG (t/m^3)	Tonnes (million)	V_2O_5 (%)
MML Upper, MAG 3	4.09	4.08	15.3	1.425
MML Lower, MAG 4	3.59	4.00	13.2	1.387
***Total/Average**	**7.68**	**4.04**	**28.5**	**1.41**

Table 9: AB zone mineral resource at 0.3 Per cent V_2O_5 cut-off, ≤120 m vertical depth, as at 15 October 2017

Layer	Category	Tonnes (Millions)	Thickness[1] (metres)	Density t/m3	V_2O_5 %	Fe2O3 %	TiO_2 %	P_2O5 %	SiO_2 %	Al_2O3 %	MgO %	CaO %	Cu ppm
Upper AB	Inferred	2.7	1.93	3.29	0.89	34.7	5.41	0.01	30.3	17.1	1.05	6.54	466
AB Parting	Inferred	3.7	2.86	3.07	0.48	20.9	2.98	0.01	40.0	19.7	1.93	9.29	47
Lower AB	Inferred	6.0	4.51	3.21	0.75	29.1	4.32	0.01	34.6	18.6	1.29	7.52	33
Total	**Inferred**	**12.5**	**9.30**	**3.18**	**0.70**	**27.9**	**4.16**	**0.01**	**35.3**	**18.6**	**1.43**	**7.83**	**132**

Note:
1. Refers to stratigraphic thickness.

The PQ iron & titanium and PQ phosphate projects

The PQ Iron & Titanium Project is a multi-commodity project which forms part of the Mokopane Project, located 45 kilometres north-northwest of the town of Mokopane in Limpopo Province, South Africa.

Both projects are based on the same licence area as Mokopane, where there is a mining right held by Pamish Investments No. 39 (Pty) Ltd ("Pamish"). Bushveld Minerals currently owns an effective controlling interest of 64 per cent in the PQ Iron & Titanium and PQ Phosphate projects. While the mining right is subject to Mining Charter ll regulations, the Company is committed to adopting Mining Charter III regulations in respect of host community and employee shareholding requirements. Therefore, a five per cent share for these stakeholders will be vendor-financed and repaid from future proceeds from the mine. Bushveld Minerals' interest in the PQ Iron & Titanium Project and PQ Phosphate Project will accordingly reduce from 64 per cent to 60.8 per cent, while Izingwe's shareholding will reduce from 36 per cent to 34.2 per cent.

Mineral Resources and Reserves continued

Pamish has further committed to allocate an additional five per cent to an Employee Share Ownership Participation Scheme once the mine is operational, which will result in Bushveld Minerals ultimately holding 57.6 per cent and Izingwe 32.4 per cent.

Progress to date has been limited to understanding the economic parameters necessary for success and how these projects can be configured in line with the Company's approach towards developing projects. No further work is planned on these projects while the Company advances its vanadium platform.

PQ iron & titanium mineral resources

The Project has a JORC-compliant Inferred and Indicated Mineral Resource of 955 Mt, with an average grade of 33.7 per cent Fe and 10.8 per cent TiO_2 in magnetite as shown in the tables 10, 11 and 12.

The project boasts some of the highest in-magnetite grades of titanium in the world and could be developed as a titanium and pig iron project in the long run, depending on the evolution of low capital-intensive methods for processing the ore. Bushveld Minerals is following, with interest, advances in metallurgical processing used for similar deposits and exploring partnerships with technology partners. No further work is planned on the project at this stage.

The Mineral Resources and Reserves estimates are based on the Competent Person's Report prepared by MSA Group as at 15 October 2017.

Table 10: N-Q zone (weathered+unweathered) indicated mineral resource less than 200 meters depth, as at 8 March 2013

Layer	Tonnes (Millions)	SG (g/cm³)	Fe (%)	Fe2O3 (%)	Fe Metal Millions tonnes	TiO_2 (%)	V_2O_5 (%)	SiO_2 (%)	Al_2O3 (%)	P_2O_5 (%)	S (%)
Q3	138.63	3.61	31.7	45.5	43.99	10.2	0.13	25.2	9.9	0.06	0.40
Q2	81.17	4.01	41.9	59.1	34	15.2	0.28	12.6	6.5	0.02	0.27
Q1	26.36	3.59	32.5	45.6	8.58	10.5	0.28	22.3	9.9	0.02	0.27
PMAG	34.44	3.62	32.4	45.4	11.15	10.1	0.29	21.3	10.5	0.03	0.80
PFWDISS*	67.28	3.38	26.9	38.5	18.13	7.1	0.22	30.1	12.8	0.03	0.33
OMAG*	2.63	4.00	37.2	53.2	0.98	11.1	0.49	18.5	7.9	1.01	0.12
NMAG	4.58	4.41	48.7	69.6	2.23	16.0	0.56	6.9	5.3	0.03	0.11
Total	**355.09**	**3.67**	**33.51**	**47.65**	**119.06**	**10.85**	**0.22**	**22.37**	**9.66**	**0.05**	**0.38**

* Layer reported at a 35 per cent Fe_2O_3 cut-off; no geological losses applied.

Table 11: N-Q zone (unweathered) inferred mineral resource, 200 meters to 400 meters depth, as at 8 March 2013

Layer	Tonnes (Millions)	SG (g/cm³)	Fe (%)	Fe_2O_3 (%)	Fe Metal Millions tonnes	TiO_2 (%)	V_2O_5 (%)	SiO_2 (%)	Al_2O_3 (%)	P_2O_5 (%)	S (%)
Q3	139.03	3.59	30.2	43.3	42.05	8.80	0.09	28.3	10.3	0.13	0.61
Q2	92.64	3.99	40.2	57.5	37.27	14.10	0.23	15.3	7.6	0.02	0.55
Q1	23.42	3.64	32.7	46.8	7.66	10.80	0.27	22.2	10.6	0.02	0.36
PMAG	38.28	3.58	30.6	43.7	11.70	9.80	0.26	23.5	11.5	0.04	0.74
PFWDISS*	76.51	3.37	26.8	38.3	20.49	6.90	0.21	30.2	12.8	0.03	0.43
OMAG*	1.87	3.77	32.4	46.3	0.61	9.5	0.4	23.1	10.4	0.02	0.10
NMAG	7.22	4.32	46.3	66.2	3.34	15.6	0.49	8.3	5.8	0.02	0.14
Total	**378.97**	**3.66**	**32.47**	**46.47**	**123.12**	**10.07**	**0.19**	**24.24**	**10.20**	**0.06**	**0.55**

* Layer reported at a 35 per cent Fe_2O_3 cut-off; no geological losses applied.

Table 12: P-Q zone inferred mineral resource, less than 300 meters vertical depth at a 35 per cent Fe_2O_3 cut-off for the farms schoonoord 786LR and bellevue 808LR, as at 28 February 2014

Layer Name	Tonnes (Millions)	Density t/m³	Fe (%)	Fe_2O_3 (%)	Fe Metal Millions tonnes	TiO_2 (%)	V_2O_5 (%)	SiO_2 (%)	Al_2O3 (%)	P_2O_5 (%)	S (%)
Q3	75.3	3.77	34.3	49.1	25.82	10.5	0.10	23.0	9.4	0.28	0.55
Q2	85.5	4.14	42.6	60.9	36.40	14.9	0.26	13.1	6.9	0.03	0.50
Q1	13.1	3.82	36.4	52.1	4.76	12.2	0.30	19.1	9.8	0.03	0.46
PMAG	19.7	3.52	27.6	39.5	5.45	8.3	0.23	29.1	12.4	0.06	1.00
PFWDISS*	27.3	3.45	27.8	39.8	7.60	8.0	0.22	28.3	12.9	0.06	0.55
Total	**220.8**	**3.85**	**36.2**	**51.9**	**80.03**	**11.8**	**0.2**	**20.1**	**9.2**	**0.12**	**0.57**

Notes:
1. Total = All tabulated data has been rounded and as a result minor computational errors may occur.
* Layer reported at a 35 per cent Fe2O3 cut-off; no geological losses applied.

The PQ phosphate project mineral resources

The PQ Phosphate Project resource lies immediately above the iron ore and titanium resource of the PQ Project. The Company reported on 3 June 2014, a maiden phosphate resource statement for the PQ deposit of 442 Mt, with average phosphate grades of 3.6 per cent P_2O_5 as shown in Table 13. Although the grades are low, the PQ Phosphate deposit is in the immediate hanging wall of the PQ Project and would be mined concurrently with the stripping of the latter. Of particular interest is that laboratory-scale test work has shown that 37 per cent P_2O_5 concentrate grades are achievable from this deposit.

Figures are based on the Competent Person's report prepared by MSA Group as at 15 October 2017.

Table 13: Summary of the phosphate zone resource at a three per cent P_2O_5 cut-off for the farms Vliegekraal 783LR, Malokong 784LR, Schoonoord 786LR and Bellevue 808LR, at 12 April 2014.

Farm	Tonnes (Millions)	P_2O_5 %	Fe_2O_3 %	S %	SiO_2 %	CaO %	Density g/cm³
Vliegekraal	330.0	3.6	32.1	0.39	34.0	9.1	3.30
Malokong	1.8	3.2	35.5	0.37	35.4	8.6	3.27
Schoonoord	104.9	3.6	34.1	0.40	33.0	8.8	3.37
Bellevue	5.0	3.6	34.4	0.42	33.3	8.9	3.36
Total [1]	**441.6**	**3.6**	**32.6**	**0.39**	**33.7**	**9.0**	**3.32**

Note:
1. All tabulated data has been rounded and as a result minor computational errors may occur.

Lemur Holdings Limited

The Mineral Resource estimates are based on the competent person's report prepared by Sumsare Consulting Group CC as at 30 November 2017.

Table 14: Resource for the Imaloto coal project

Category	Gross			Net attributable (99%)			Operator
		Raw Coal Quality (ADB)			Raw Coal quality (ADB)		
Coal Resource per asset	Tonnes (Millions)	Ash (%)	CV (MJ/Kg)	Tonnes (Millions)	Ash (%)	CV (MJ/Kg)	
Measured	91.613	32.5	19.62	90.697	32.5	19.62	Lemur Holdings Limited
Indicated	31.497	35.7	18.14	31.182	35.7	18.14	
Inferred	12.627	34.4	18.80	12.501	34.4	18.80	
Sub total	135.737	33.4	19.20	134.380	33.4	19.20	
Total	**135.737**	**33.4**	**19.20**	**134.380**	**33.4**	**19.20**	

Acronyms

AET	Adult Education and Training
AMV	Ammonium Meta Vanadate
AGM	Annual General Meeting
Avalon	Avalon Battery Corporation
Brits	Brits Vanadium Project
BV	Bureau Veritas
CAGR	Compound Annual Growth Rate
CSP	Conditional Share Plan
DFS	Definitive feasibility study
Enerox	Enerox GmbH
EIA	Environmental Impact Assessment
EMS	Environmental Management System
EPC	Engineering, Procurement and Construction
ESG	Environment, Social and Governance
FeV	Ferrovanadium
GW	Gigawatt
GWh	Gigawatt hour
HRD	Human Resources Development
IDC	Industrial Development Corporation
IRP	Integrated Resource Plan
IWUL	Integrated Water Use Licence
IFC	International Finance Corporation
Invinity	Invinity Energy Systems plc
JSE	Johannesburg Stock Exchange
JORC	Joint Ore Reserves Committee
kt	Thousands of tonnes
LTI	Long-term incentive
LTIFR	Lost time injury frequency rate
MML	Main Magnetite Layer
MML-HW	Main Magnetite Layer Hanging Wall
mtV	Metric ton of Vanadium
MtVp.a.	Metric ton of Vanadium per annum
MW	Megawatt
MWh	Megawatt hour
Mt	Millions of tonnes
MVO	Modified vanadium oxide
OEM	Original Equipment Manufacturer
P_2O_5	Phosphate
QMS	Quality Management System
QCA Code	Quoted Companies Alliance Corporate Governance Code
redT	redT energy plc
RONA	Return on Net Assets
STI	Short-term incentive
SMMEs	Small, Medium and Micro Enterprises
TiO_2	Titanium Dioxide
TIFR	Total Injury Frequency Rate
TGP	Total guaranteed pay
TSR	Total Shareholder Return
Vametco	Vametco mine & processing plant
VCN	Vanadium Carbon Nitride
V_2O_5	Vanadium Pentoxide
V_2O_3	Vanadium Trioxide
VRFB	Vanadium Redox Flow Battery
VIP	VRFB Investment Platform
Vanchem	Vanchem Vanadium Plant
WACC	Weighted Average Cost of Capital

Glossary

Mining terms

Beneficiation
Any process that improves (benefits) the economic value of the ore by removing the gangue minerals prior to further metallurgical treatment.

Brownfield
The development or exploration of assets located inside the area of influence of existing mine operations which can share infrastructure/management.

Competent Person's Report
A report on the technical aspects of a project or mine prepared by a Competent Person ("CP"). The contents are determined by the nature/status of the project/mine being reported and may include a techno-economic model as appropriate for the level of study. A Competent Person must have a minimum of five years' relevant experience in the style of mineralisation or type of deposit under consideration and in the activity that the person is undertaking (JORC Code, 2012).

Crushing
First stage of mineral processing which involves reducing large rocks or boulders into smaller sizes using equipment such as gyratory crushers, jaw crushers and cone crushers.

Greenfield
The development or exploration of assets located outside the area of influence of existing mine operations/infrastructure.

Hanging Wall
The strata situated above the targeted mineralised ore zone.

Indicated Mineral Resource
An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing of information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

Inferred Mineral Resource
An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing of information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

Leaching
The process by which a soluble metal can be economically recovered from minerals in ore by dissolution.

Life of Mine
Life of Mine ("LoM") is the time in which the ore reserves (or such reasonable extension of the reserves as conservative geological analysis may justify) will be mined economically to completion.

Magnetic Separation
The process of concentrating magnetic ore where the magnetic rock particles are separated from non-magnetic rock particles by using a magnet.

Magnetite
A naturally occurring mineral form of iron ore with the chemical formula Fe_3O_4.

Main Magnetite Layer
The vanadium-bearing magnetite layer in the lower portion of the upper zone of the Bushveld Complex, consisting of heavy to disseminated magnetite. It varies in thickness from 1 to 10 metres.

Measured Mineral Resource
A Measured Mineral Resource' is that part of a mineral resource for which quantity, grade (or quality), densities, shape and physical characteristics are so well established that they can be estimated with sufficient confidence to allow the appropriate application of technical and economic parameters to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing of information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity

Milling
The process of breaking down aggregate rock material into even smaller sizes (usually into powder-like form) using equipment such as a ball mill.

Mineralisation
A concentration (or occurrence) of material of possible economic interest, in or on the Earth's crust, for which quantity and quality cannot be estimated with sufficient confidence to be defined as a Mineral Resource. Mineralisation is not classified as a Mineral Resource or Mineral Reserve and can only be reported under Exploration Results. The data and information relating to it must be sufficient to allow a considered and balanced judgement of its significance.

Mineral Deposits
A mass of naturally occurring mineral material, usually of economic interest, without regard to mode of origin.

Glossary continued

Mineral Reserves
Mineral Reserves are sub-divided into two categories. The proven category is the highest level of reserves or the level with the most confidence. The probable category is the lower level of confidence of the reserves. Reserves are distinguished from Resources as all the technical and economic parameters have been applied and the estimated grade and tonnage of the resources should closely approximate the actual results of mining. The guidelines state: "Mineral Reserves are inclusive of the diluting material that will be mined in conjunction with the Mineral Reserve and delivered to the treatment plant or equivalent facility." The guidelines also state that, "The term 'Mineral Reserve' need not necessarily signify that extraction facilities are in place or operative or that all government approvals have been received. It does signify that there are reasonable expectations of such approvals."

Mineral Resource
A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

Mineral Resource/Reserve Depletion
Reconciling the metal quantity within the latest resource/reserve estimate that has been mined from a previous resource/reserve estimate.

Modified Vanadium Oxide ("MVO")
An oxide form of vanadium (a mixture of V_2O_5, V_2O_4 and V_2O_3)that is chemically produced by reducing Ammonium Metavanadate (NH_4VO_3) and is used as feedstock for final vanadium products such as Nitrovan (NV) and Ferrovanadium (FeV).

Open Pit Mining
A method of mining rock or minerals by removing them from an open pit commencing from the earth's surface.

Ore Reserves
A subset of Measured and/or Indicated Mineral Resources that can be demonstrably extracted, economically and legally.

Ore Reserves are declared for open pits inside the Life of Mine pit design (the optimised pit shell in this instance), including diluting materials and allowances for losses which may occur when the material is mined or extracted. They are defined by studies at pre-feasibility or feasibility level, as appropriate, that include the application of modifying factors. Those studies demonstrate that, at the time of reporting, extraction could reasonably be justified (JORC, 2012). Ore Reserves are declared for in-whole rock tonnes in the pits and exclude any stockpiles. Economic assumptions used to estimate reserves change from one period to another as additional technical and operational data is generated.

Qualified Person
A professionally qualified member in good standing of an appropriate recognised professional association who has at least five years' relevant experience within the sector. A professional association is a Recognised Professional Organisation (RPO) of engineers and/or geoscientists.

Reserve Life
Current stated Ore Reserves estimate divided by the current approved nominated production rate at the end of the financial year.

Run of Mine
Ore mined in the course of regular mining activities and extracted from the mining operation. Tonnes include allowances for diluting materials and for losses that occur when the material is mined.

Salt Roasting
Process where a magnetite concentrate is roasted with salts (sodium carbonate and sodium sulphate) in an extremely high temperature rotary kiln with temperatures of up to 1,150°C to form water soluble solids containing vanadium.

Strike
Horizontal direction or trend of a geological structure, perpendicular to its down dip direction.

Other terms

Bankable Feasibility Study
A feasibility study is bankable if it has been prepared in detail and with objectivity so that the company could submit it to investors or lenders when seeking financing for the project.

Definitive Feasibility Study
A feasibility study based on the best alternative identified in the preliminary feasibility study, and suitable as a basis for detailed design and construction. The definitive feasibility study is based on indicated and measured mineral resources.

Pre-feasibility Study
A pre-feasibility study is an early stage analysis of a potential mining project. It is conducted and designed to give company stakeholders the basic information required to choose between potential investments.

EBITDA
Earnings before interest, tax, depreciation and amortization is a measure of a company's operating performance.

Free Cash Flow
Free cash flow represents the net cash generated from operating activities, after taking into consideration capital expenditure.

Notice of Annual General Meeting

Bushveld Minerals Limited
(Incorporated in Guernsey under registered number 54506)

Registered Office:
Oak House, Hirzel Street, St Peter Port, Guernsey, GY1 3RH
29 June 2021

THIS DOCUMENT IS IMPORTANT AND REQUIRES YOUR IMMEDIATE ATTENTION

If you are in any doubt as to what action you should take, you are recommended to seek your own financial advice immediately from your stockbroker, bank manager, solicitor, accountant or other independent financial advisor who specialises in advising on shares or other securities and who is, in the case of UK shareholders, authorised under the Financial Services and Market Act 2000.

If you have sold or transferred your shares in Bushveld Minerals Limited, please forward this document at once to the purchaser or transferee or to the stockbroker, bank or other agent through whom the sale or transfer was effected, for delivery to the purchaser or transferee. If you have sold or transferred part of your registered holding of shares, please consult the stockbroker, bank or other agent through whom the sale or transfer was effected.

Notice of an Annual General Meeting of Bushveld Minerals Limited to be held at 11.00 am on 5 August 2021 at Oak House, Hirzel Street, St Peter Port, Guernsey, GY1 3RH.

PLEASE READ CAREFULLY – ARRANGEMENTS FOR THE ANNUAL GENERAL MEETING IN LIGHT OF COVID-19

The Company is carefully monitoring the COVID-19 situation, including the guidance issued by the States of Guernsey, and will continue to do so in the lead up to the Meeting.

At the date of this Notice, restrictions on movement within Guernsey have been lifted but persons arriving into the Bailiwick of Guernsey are presently required to self-isolate for periods of up to 14 days depending on the country from and/or through which they have travelled (and subject to one or more negative COVID-19 tests). With effect from 1 July 2021, persons who are fully vaccinated and who in the previous 14 days have only been within the Common Travel Area of the UK, Ireland, Jersey and the Isle of Man will be able to travel to Guernsey without having to self-isolate or undergo a COVID-19 test. However, this concession may change prior to the date of the Meeting.

It is expected that shareholders in Guernsey, or those who wish to travel to Guernsey for the Meeting subject to quarantine measures, will be able to attend the Meeting as normal. However, the Board recognises that this may not be possible for the majority of shareholders and has put in place the following precautions (the "**COVID-19 Precautions**"):

1. The Company urges shareholders to vote by proxy and to appoint the chairman of the Meeting as their proxy for that purpose. If a shareholder appoints someone other than the chairman of the Meeting as their proxy, that proxy, if not present in Guernsey, may not be able physically to attend the Meeting or cast the shareholder's vote. All votes on the resolutions contained in this Notice will be held by poll, so that all voting rights exercised by shareholders who are entitled to do so at the Meeting will be counted.
2. The Board encourages all shareholders to exercise their votes by proxy, and to submit any questions in respect of the Meeting in advance. This should ensure that your votes are registered in the event that attendance at the Meeting is not possible. Shareholders are encouraged to use the online voting facilities detailed below where possible rather than submitting a paper proxy card, as in the current circumstances the Board cannot guarantee that there will be staff at the office of the Company's Registrar to receive post.
3. Shareholders who do choose to attend the Meeting in person are asked to comply with the States of Guernsey's guidance on respecting personal space and practising good hand hygiene, and with any distancing requirements requested by the Chairman.
4. The security arrangements proposed by the Board are subject to constant review, and should they be subject to change in line with changing guidance from the States of Guernsey, or in the event that the situation surrounding COVID-19 should affect the plans to hold the Meeting at the proposed date and time or at the proposed address, the Company will update shareholders through a market announcement and will provide further details on the Company's website. The Board reserves the right, should it become necessary, to restrict attendance at the Meeting as part of security arrangements pursuant to Article 73.2 of the Articles of Incorporation of the Company (the "**Articles**").

ORDINARY RESOLUTIONS

1. To receive and adopt the Annual Financial Statements of the Company and the Directors report and the report of the Auditors for the financial year ended 31 December 2020.
2. To approve the Directors Fees as reflected in Remuneration Report and in Note 35 of the Annual Financial Statements.
3. That Messrs RSM UK Audit LLP be reappointed as Auditors to the Company.
4. That the Directors be authorised to approve the remuneration of the Company's Auditors to the Company.
5. That Anthony Viljoen shall be re-elected as a Director, having retired by rotation and offered himself for re-election.
6. That Michael Kirkwood shall be re-elected as a Director, having retired by rotation and offered himself for re-election.

Notice of Annual General Meeting continued

7. The Company be generally and unconditionally authorised for the purposes of Articles 50.3 of the Articles to make on market acquisitions (as defined in Article 50.5 of the Articles) of Ordinary Shares on such terms and in such manner as the Directors determine provided that:
   (i) the maximum aggregate number of Ordinary shares which may be purchased is 119,156,154 Ordinary Shares;
   (ii) the minimum price (excluding expenses) which may be paid for each Ordinary share is £0.01;
   (iii) the maximum price (excluding expenses) which may be paid for any Ordinary Share does not exceed 105 per cent of the average closing price of such shares for the 5 business days of AIM prior to the date of purchase; and
   (iv) this authority shall expire at the conclusion of the next Annual General Meeting of the Company unless such authority is renewed prior to that time (except in relation the purchase of Ordinary Shares the contract for which was concluded before the expiry of such authority, in which case such purchase may be concluded wholly or partly after such expiry).
8. The Directors of the Company be and are hereby authorised to exercise all powers of the Company to issue, grant rights to subscribe for, or to convert any securities into, up 397,187,181 shares (together "**Equity Securities**") in the capital of the Company being approximately one third of the issued share capital of the Company (excluding treasury shares) in accordance with Article 8.3 of the Articles of Incorporation of the Company such authority to expire, unless previously renewed, revoked or varied by the Company by ordinary resolution, at the end of the next Annual General Meeting of the Company or, if earlier, at the close of business on the date falling 15 months from the date of the passing of this Resolution, but in each case, during this period the Company may make offers, and enter into agreements, which would, or might, require Equity Securities to be issued or granted after the authority given to the Directors of the Company pursuant to this Resolution ends and the Directors of the Company may issue or grant Equity Securities under any such offer or agreement as if the authority given to the Directors of the Company pursuant to this Resolution had not ended. This Resolution is in substitution for all unexercised authorities previously granted to the Directors of the Company to issue or grant Equity Securities; and

SPECIAL RESOLUTION

9. If Resolution 8 is passed, the Directors of the Company be and they are hereby authorised to exercise all powers of the Company to issue or grant Equity Securities in the capital of the Company pursuant to the issue or grant referred to in Resolution 8 as if the pre-emption rights contained in Article 9.9 of the Articles of Incorporation of the Company did not apply to such issue or grant provided that: (A) the maximum aggregate number of Equity Securities that may be issued or granted under this authority is 119,156,154 shares, being approximately 10.0 per cent of the issued share capital of the Company (excluding treasury shares); and (B) the authority hereby conferred, unless previously renewed, revoked or varied by the Company by special resolution, shall expire at the end of the next Annual General Meeting of the Company or, if earlier, at the close of business on the date falling 15 months from the date of the passing of this Resolution, save that the Company may before such expiry make an offer or agreement which would or might require Equity Securities to be issued or granted after such expiry and the Directors may issue or grant Equity Securities in pursuance of such an offer or agreement as if the authority conferred by the above resolution had not expired. This Resolution is in substitution for all unexercised authorities previously granted to the Directors of the Company to issue or grant Equity Securities in the capital of the Company as if the pre-emption rights contained in Article 9.9 of the Articles of Incorporation of the Company did not apply to such issue or grant.

By order of the Board

K BREDIN
Company Secretary
29 June 2021

Notice of Meeting Notes:

The following notes explain your general rights as a shareholder and your right to attend and vote at this Meeting or to appoint someone else to vote on your behalf.

1. To be entitled to attend and vote at the Meeting (and for the purpose of the determination by the Company of the number of votes they may cast), shareholders must be registered in the Register of Members of the Company at close of trading on 3 August 2021. Changes to the Register of Members after the relevant deadline shall be disregarded in determining the rights of any person to attend and vote at the Meeting. As noted in the Notice convening the Meeting, it may be necessary to restrict the right of shareholders to attend the Meeting in order for the Company to comply with any changes to guidelines or legal requirements in relation to COVID-19.
2. To allow effective constitution of the Meeting, if it is apparent to the chairman of the Meeting that no shareholders will be present in person or by proxy, other than by proxy in the chairman's favour, then the chairman may appoint a substitute to act as proxy in his stead for any shareholder, provided that such substitute proxy shall vote on the same basis as the chairman.

3. Shareholders are entitled to appoint another person as a proxy as set out below to exercise all or part of their rights to attend and to speak and vote on their behalf at the Meeting. A shareholder may appoint more than one proxy in relation to the Meeting provided that each proxy is appointed to exercise the rights attached to a different ordinary share or ordinary shares held by that shareholder. A proxy need not be a shareholder of the Company, but please note that in accordance with the COVID-19 Precautions set out above, shareholders are encouraged to appoint the Chairman of the Meeting as their proxy for the purposes of ensuring that their proxy will be able to attend the Meeting.
4. In the case of joint holders, where more than one of the joint holders purports to appoint a proxy, only the appointment submitted by the most senior holder will be accepted. Seniority is determined by the order in which the names of the joint holders appear in the Company's Register of Members in respect of the joint holding (the first named being the most senior).
5. A vote withheld is not a vote in law, which means that the vote will not be counted in the calculation of votes for or against the resolution. If no voting indication is given, your proxy will vote or abstain from voting at his or her discretion. In the absence of any specific instructions from you, your proxy will vote (or abstain from voting) as he or she thinks fit in relation to any other matter which is put before the Meeting.
6. You can vote either:
   - by logging on to www.signalshares.com and following the instructions. This system allows you to appoint a proxy and to instruct your proxy how to vote. If you have note used the service before you will need to register online, for which you will need your investor code (IVC). In order for a proxy appointment to be made in this way, you will need to submit your instructions via www.signalshares.com by 11.00 am on 3 August 2021;
   - by requesting a hard copy form of proxy directly from the registrars, Link Group (previously called Link Asset Services), on Tel: 0371 664 0300. Calls cost 12p per minute plus your phone company's access charge. Calls outside the United Kingdom will be charged at the applicable international rate. Lines are open between 09.00 – 17.30, Monday to Friday excluding public holidays in England and Wales. In order for a proxy appointment by way of a hard copy form of proxy to be valid, the form of proxy must be received by Link Group at 10th Floor, Central Square, 29 Wellington Street, Leeds, LS1 4DL by 11.00 am on 3 August 2021.
   - in the case of shareholders holding their shares through CREST, by submitting a CREST Proxy Instruction utilising the CREST electronic proxy appointment service in accordance with the procedures set out below.
7. If you return more than one proxy appointment, either by paper or electronic communication (including via www.signalshares.com), the appointment received last by the Registrar before the latest time for the receipt of proxies will take precedence. You are advised to read the terms and conditions of use carefully. Electronic communication facilities are open to all shareholders and those who use them will not be disadvantaged.
8. The return of a completed form of proxy or any CREST Proxy Instruction (as described in note 10 below), or the submission of instructions via www.signalshares.com, will not prevent a shareholder from attending the Meeting and voting in person if he/she wishes to do so.
9. Shareholders holding their shares through CREST who wish to appoint a proxy or proxies through the CREST electronic proxy appointment service may do so for the Meeting (and any adjournment of the Meeting) by using the procedures described in the CREST Manual (available from www.euroclear.com/site/public/EUI). Shareholders holding their shares through a CREST sponsor or service provider(s) should refer to their CREST sponsor or voting service provider(s), who will be able to take the appropriate action on their behalf.
10. In order for a proxy appointment or instruction made by means of CREST to be valid, the appropriate CREST message (a 'CREST Proxy Instruction') must be properly authenticated in accordance with Euroclear UK & Ireland Limited's specifications and must contain the information required for such instructions, as described in the CREST Manual. The message must be transmitted so as to be received by the issuer's agent (ID RA10) by 11.00 am on 3 August 2021. For this purpose, the time of receipt will be taken to mean the time (as determined by the timestamp applied to the message by the CREST application host) from which the issuer's agent is able to retrieve the message by enquiry to CREST in the manner prescribed by CREST. After this time, any change of instructions to proxies appointed through CREST should be communicated to the appointee through other means.
11. Shareholders holding their shares through CREST and, where applicable, their CREST sponsors or voting service providers should note that Euroclear UK & Ireland Limited does not make available special procedures in CREST for any particular message. Normal system timings and limitations will, therefore, apply in relation to the input of CREST Proxy Instructions. It is the responsibility of the shareholder concerned to take (or, if the shareholder is a CREST personal member, or sponsored member, or has appointed a voting service provider(s), to procure that his CREST sponsor or voting service provider(s) take(s)) such action as shall be necessary to ensure that a message is transmitted by means of the CREST system by any particular time. In this connection, shareholders holding their shares through CREST and, where applicable, their CREST sponsors or voting system providers are referred, in particular, to those sections of the CREST Manual concerning practical limitations of the CREST system and timings. The Company may treat as invalid a CREST Proxy Instruction in the circumstances set out in Regulation 34(1) of the Uncertificated Securities (Guernsey) Regulations, 2009.
12. Any corporation which is a shareholder can appoint one or more corporate representatives who may exercise on its behalf all of its powers as a shareholder provided that no more than one corporate representative exercises powers in relation to the same shares.
13. As at 29 June 2021 (being the latest practicable business day prior to the publication of this Notice), the Company's ordinary issued share capital (excluding treasury shares) consists of 1,191,561,543 ordinary shares, carrying one vote each. Therefore, the total voting rights in the Company as at 29 June 2021 are 1,191,561,543.
14. You may not use any electronic address (within the meaning of Section 523(2) of the Companies (Guernsey) Law, 2008) provided in either this Notice or any related documents (including the form of proxy) to communicate with the Company for any purposes other than those expressly stated.
15. A copy of this Notice can be found on the Company's website at https://www.bushveldminerals.com/financial-reports/.

Company Information

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