



Bushveld Minerals
AIM: BMN

PFS POINTS TO EXCELLENT PROJECT ECONOMICS FOR MOKOPANE VANADIUM

Repositioning Bushveld Minerals in the vanadium market space

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AIM-listed Bushveld Minerals Limited today released the results of a pre-feasibility study (PFS) performed at the Mokopane Vanadium Project (Mokopane), its 64%-owned South African vanadium project.

Chief executive Fortune Mojapelo said today, "The results of the PFS confirm the emergence of Mokopane Vanadium as a market-leading vanadium project. Mokopane compares more than favourably with other leading vanadium deposits in the world, and this study defines its importance as a major asset, with strategic significance to the future market for vanadium.

"For us, a notable take-away from this study points to its low-cash costs of production and significant market share for the Mokopane project – with run-of mine production contributing ~6% of global annualised vanadium output and ~50 % of South African output, thereby totally repositioning Bushveld in the vanadium market space."

The PFS has highlighted the following areas relating to the deposit:

- **Massive resource:** Ore reserve of 28.56 million tonnes delineated from total resource of 298Mt -
- **Long-term mine life:** 30-year life-of-mine (from less than 10% of the total project resource of 298Mt)
- **Project risk minimised:** The proven and established salt roast processing method lowers project risks

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- **High-quality product:** The PFS suggests a 1.0 Mtpa run-of-mine operation producing on average 9.525 tpa of vanadium pentoxide flakes at 99.5 weighted percent purity
- **Low cost product:** Over the life-of-mine the average combined total cost is estimated at US\$3.28/lb V₂O₅, indicating one of the lowest-cost vanadium producers globally
- **Robust project economics:** Pay-back period of four years with a pre-tax NPV of US\$418m (based on a 9% base case discount rate) and an IRR of 24.8% (pre-tax) using a conservative long-term US\$:ZAR12.75 exchange rate and a real vanadium price of US\$7.50/lb V₂O₅ (US\$16.53/kg V₂O₅)

Bushveld hopes to progress the project to the next phase to prove up further value and to reduce residual project risk. The company also hopes to secure a strategic partner to advance the project with.

Says CEO Mojapelo, “We are pleased to present such a positive PFS for the Mokopane Vanadium Project. The results support our long-held goal to develop this project into a highly profitable, significant contributor to South African and global vanadium market output.

With a first quartile cash cost proposition, the project provides precisely the sort of asset we require to pursue our recently announced integrated vanadium development strategy. We have taken a conservative approach in determining the PFS parameters and, in my view, as the global economic environment improves the economics of the project will only get better.

“While we are mindful of the recent low commodity price environment including sub-US\$3.50/lb V₂O₅ prices, an analysis of the fundamentals of the market, backed by independent research, suggests that a significant proportion of the current global vanadium production is unsustainable at these levels. Significant reductions in vanadium supply during the past 6-12 months, coupled with a robust demand outlook, present a compelling argument for sustainable vanadium price recovery in the medium to long term.

“We continue to engage with potential partners on ways to take this project forward towards a Definitive Feasibility Study. We also continue to explore, assisted by insights developed by this PFS, potential brownfield opportunities that could serve to further reduce the capital expenditure



requirements from what are already very modest levels, thereby providing an option to bring forward the date of production commencement and cashflow generation.”

The unabridged results of the feasibility are available in the RNS announcement published on the LSE and Bushveld website today.

For further information on Bushveld please visit www.bushveldminerals.com or see the various contacts on page 1 of this announcement.

NOTE TO EDITORS:

The Bushveld Vanadium Project is located in an important vanadium-producing region, responsible for 26% of the world’s vanadium supply. The Bushveld Vanadium Project is a world-class vanadium project boasting some of the best in-situ (1.48% V₂O₅) and in-concentrate (2.01% V₂O₅) vanadium grades in the world. The deposit is based on the same license area as the P-Q Iron & Titanium Project and is a layered orebody along a north-south strike and dipping at 18-22° to the west running 2km to the east and parallel to the P-Q Iron & Titanium Project resource.

Vanadium is a silvery-grey, soft, ductile, high-value metal with attractive market fundamentals. Demand for the metal is anchored in the steel industry where it is used as an alloying element offering high-strength-to-weight characteristics, corrosion resistance, weldability and fabricability. The most common application of vanadium is in reinforced bar (rebar) for the construction industry, while steel containing the metal is used for axles, bicycle frames, crankshafts and gears as well as for high-speed tool steels. When combined with aluminium in titanium alloys, vanadium can be used in the production of jet engines and high-speed airframes. A shift towards stronger steels in the construction sector has seen vanadium consumption grow at almost twice the rate of growth of steel production. In China particularly, authorities have promulgated regulations in favour of strong vanadium containing steels. Use of vanadium in energy storage applications is also poised to drive demand of vanadium going forward although supply is concentrated. In terms of feedstock, 64 % of vanadium supply is derived from co-product slag produced by steel plants processing vanadium-bearing magnetites.