

Disclaimer



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All financial outcomes as reported in this announcement are done so on a 100% project basis. VR8 currently holds 86.49% ownership in the Steelpoortdrift project.

Competent Person Statement, Previously Reported Information & Cautionary Statement

The information in the referenced in this presentation that relates to Exploration Results, including the Mineral Resources contained within the Production Target (and forecast financial information derived from the production targets) at the Steelpoortdrift project has previously been released to the ASX. Refer to ASX announcements released on 21 May 2018 titled "Exploration on High Grade Pipes Commences At SPD Vanadium Project", 23 September 2020 titled "Scoping Study Confirms Viability of V2O5 Production", 4 October 2022 titled "DFS Delivers A\$1.9BN NPV Confirming World Class Steelpoortdrift Vanadium Project" and 4 October 2022 titled VR8 updates Mineral Resources and Ore Reserve. The Company confirms that it is not aware of any information or data that materially affects the information included in the market announcement, and that all material assumptions and technical parameters underpinning the announcement continue to apply. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements referred to above.

Mineral Resources

The Company confirms it is not aware of any new information or data that materially affects the information included in the 4 October 2022 (VR8 updated mineral resource and ore reserve for the Steelpoortdrift Vanadium Project)

Vanadium Resource estimate and all material assumptions and technical parameters underpinning the estimate continue to apply and have not materially changed when referring to its resource announcement made on 04 October 2022. The

Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Ore Reserves

The Company confirms that it is not aware of any new information or data that materially affects the information included in the Ore Reserves Statement and that all material assumptions and technical parameters underpinning the estimates in the Ore Reserves Statement continue to apply and have not materially changed. The Information that has been presented in this report has been extracted from the announcement dated 4 October 2022 (VR8 updated mineral resource and ore reserve for the Steelpoortdrift Vanadium Project). The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Cautionary Statement LR 5.16.4

There is a low level of geological confidence associated with the inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that production target itself will be realised.

Emerging Vanadium Producer





One of the world's largest and highest-grade vanadium deposits



DFS indicates strong financial outcomes with post-tax NPV_{7.5%} of US\$1.2Bn (US\$1.05Bn att. 86.5%)¹, 42% IRR



Ore body easy to mine, low strip ratio & low operating cost



Using conventional / proven concentrate & Salt Roast Leach (SRL) processes to produce an average of 10.7kt to 21.0kt V_2O_5 flake per annum



Mining licence granted



Located in a major industrial region with established infrastructure – existing operating plants, power and water, proven road & rail options to port



Offtake MOU with Hexiang 4ktpa V₂O₅ flake & discussions underway with other potential offtakers



Experienced management team & commenced recruitment process for key technical & commercial roles

Corporate Overview





Top Shareholders

1	Matrix Resources (Zhejiang) Co Ltd	9.6%
2	Danterne Pty Ltd ¹	8.1%
3	Raubex Pty Ltd	7.9%
4	Romfal Sifat Pty Ltd	5.0%
5	Davy Corp Pty Ltd ²	3.0%
	Top 20 Shareholders	58.5%

Board of Directors



Jurie Wessels
Executive Chairman



John Ciganek
Managing Director & CEO



Michael Davy
Non-Executive Director



Mr Jurie Hendrik Wessels (Executive Chairman) is a director and shareholder of Danterne Pty Ltd
 Mr Michael Davy (Non-Executive Director) is the sole director and shareholder of Davy Corp Pty Ltd

Why Vanadium?



Listed as a Critical Mineral in Australia, the US, UK and European Union, Vanadium demand is expected to grow significantly from its energy storage capabilities

Vanadium Redox Flow Batteries (VRFBs)

- > VRFBs forecast to represent up to 20% of total battery capacity¹
- Significant advantages available over counterparts, particularly in the storage and grid-relief capacities with further development upside



Easily scalable – additional capacity easy to build in by adding more storage tanks



Sustainable – vanadium can be fully reused or recycled at end of battery lifespan



20+ year lifespan – zero degradation over time with battery life twice that of lithium



Reliable – no performance loss in harsh conditions and 100% depth of discharge available



Safety – non-flammable, nontoxic, water based battery that is safer than alternatives



Efficient – lower emissions and lower associated energy costs than alternative technologies



Dalian Flow Battery Energy Storage Peakshaving Power Station

A world-leading Vanadium Redox Flow Battery facility was recently switched on in China, with Stage 1 providing a capacity of 100MW / 400MWh. Stage 2 will double this capacity

¹ Eurometaux (2022), Metals for Clean Energy

Steel & Alloys

- Over 90% of the current demand for vanadium arises from its use to strengthen steel and alloys
- The performance benefit in strengthening steel has seen demand grow and imminent construction regulation changes in China to mandate higher quality Rebar is expected to drive further growth
- Development of strong, lightweight alloys has seen vanadium incorporated to a large range of products including jet engines, 3D printing and tools
 - Boeing's fleet of 787s and A350s include up to 100 tons of light weight vanadium alloys²





² SP Angel (2018), Commodity Research Note: Vanadium

Global Demand & Pricing Dynamics



Annual demand for VRFBs is expected to equate to between 50kt and 100kt of V₂O₅ by 2033.

Demand for VRFBs in 2022 was ~9kt of V_2O_5 , largely for new installations in China.

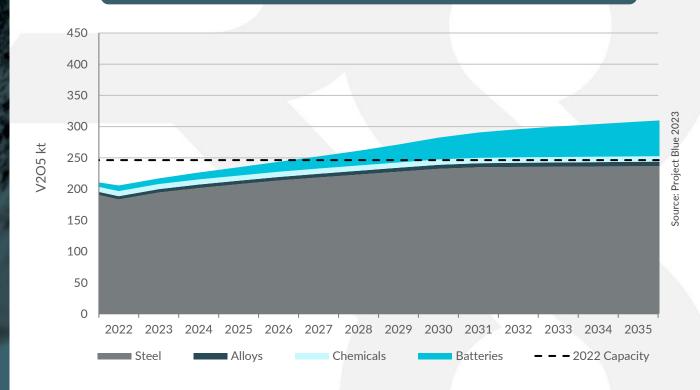
Source: Project Blue 2023

Vanadium demand for steel will grow strongly and may double by 2050.²

This will be driven by China and India, and an increased production of micro-alloyed steel.

Source: Vanitec & TTP Squared Inc

V₂O₅ Demand by Sector & Production Capacity

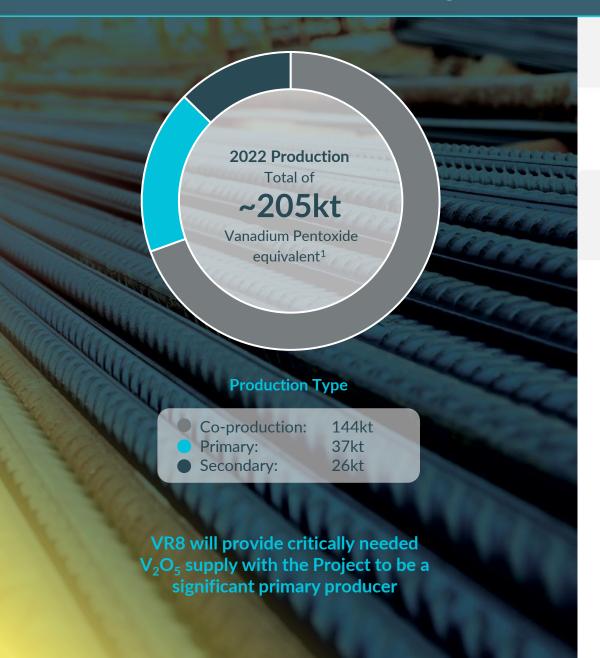


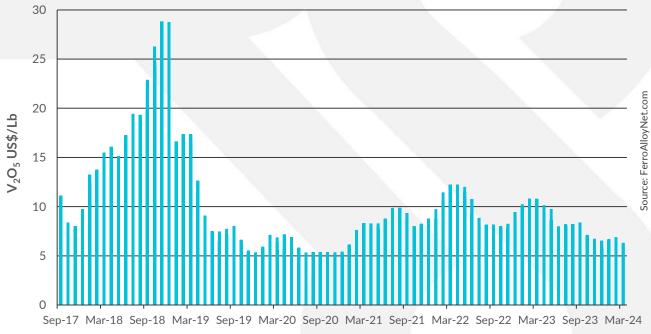
¹ Project Blue 2022 – based on contained vanadium, converted to V₂O₅ based on vanadium content of 56.016% in Vanadium Pentoxide

² Terry Perles 2022, Vanadium is a key steel additive for sustainable, decarbonised construction: Vanitec (referencing International Energy Agency)

Global Demand & Pricing Dynamics







¹ Project Blue 2022 – based on contained vanadium, converted to V₂O₅ based on vanadium content of 56.016% in Vanadium Pentoxide

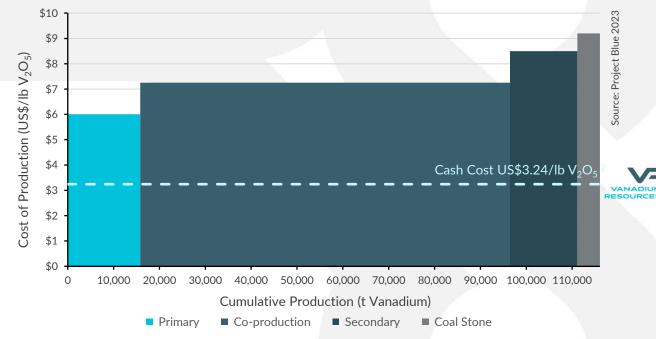
² Terry Perles 2022, Vanadium is a key steel additive for sustainable, decarbonised construction: Vanitec (referencing International Energy Agency)

International Cost Curve





Vanadium Pentoxide Production Costs, 2022



¹ Project Blue 2023 - Cost Curve Analysis (2022)

² Refer ASX Announcement dated 4 October 2022 "DFS Delivers A\$1.9BN NPV Confirming World Class Steelpoortdrift Vanadium Project"

Global VRFB Installation Projects



280+

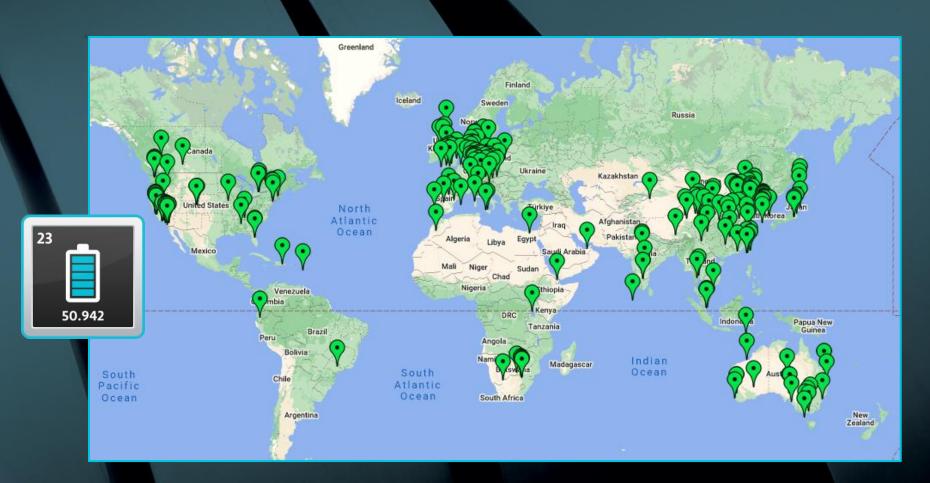
VRFB Installations constructed or announced¹

9GWh

Capacity of VRFB Installations (>2.6GW)¹

78

VRFB Installations in Europe (excl. residential units) ¹



Source: Vanitec Website - 2023 VRFB Project Map

DFS Delivers World Class Vanadium Project¹





US\$1.21bn

(A\$1.9bn)

NPV_{7.5%} (post-tax)



US\$1.05bn

(A\$1.62bn)

Attributable 86.49% NPV²



US\$152m

(A\$237m)

Yearly Free Cashflows



42%

IRR (post-tax)



27 months

Payback

US\$211m

(A\$329m) incl. contingency

Start up Capex



US\$3.24

Cash Costs V₂O₅/lb



US\$9.50

(Deloitte forward mid-range)

Price per V₂O₅/lb

^{1.} Refer ASX Announcement dated 4 October 2022 "DFS Delivers A\$1.9BN NPV Confirming World Class Steelpoortdrift Vanadium Project"

^{2.} Refer ASX Announcement dated 15 November 2023 "VR8 Increases Project Interest in Steelpoortdrift to 86.49%"

Location – in the Bushveld Complex



This world-renowned mining location is host to several mining operations, multiple major mining companies are active in the area, and is in close proximity to existing infrastructure.

Other Mines in the Bushveld Complex



Vametco – Vanadium Mine Mokopane – Vanadium Project **GLENCORE**

Rhovan – Vanadium Mine Lion Smelter - Ferrochrome samancor[©]

Tweefontein – Ferrochrome Mine



Twickenham - PGE Mine





Regional Infrastructure in the Bushveld Complex



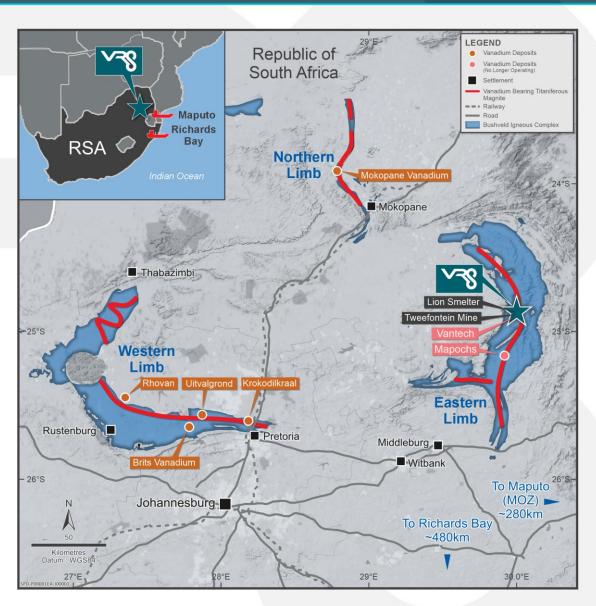
Eskom Substation 12km away



De Hoop Dam 15km away



Rail Siding 30km away

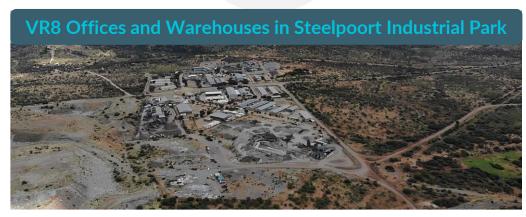


Mine, Concentrator & SRL

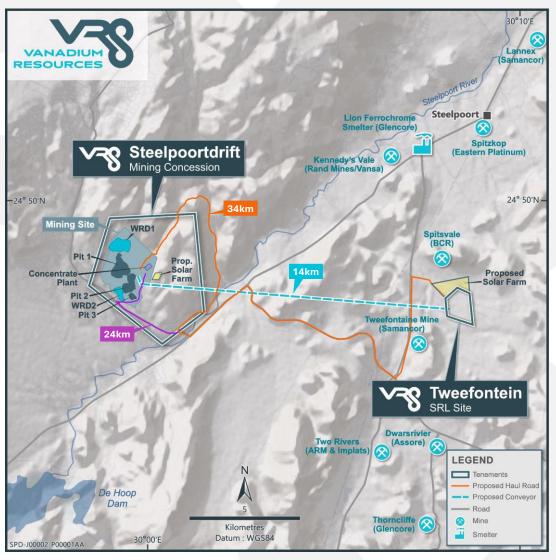




The mine site, concentrator and SRL sites are located within a substantial mining and smelting district, with well established infrastructure (including water, power, sealed roads, rail, etc.)



VR8 administration offices, core shed, main laboratory and SRL site are located within the Steelpoort Industrial Park



Note 1: DFS haul road is 24km, an alternative haul road (34km) is proposed to reduce disruption to communities Note 2:WRD means waste rock dump

Resources & Ore Reserves



- Global Mineral Resource of 680Mt at 0.70% V₂O₅
- Total Ore Reserve of 77Mt at 0.72% V₂O₅
- Mineralisation outcrops at surface and dips shallowly (~10°) less waste to mine, low strip ratios (0.88x waste : ore) and cheaper mining cost
- Orebody able to achieve a high-grade concentrate of greater than 2% V₂O₅

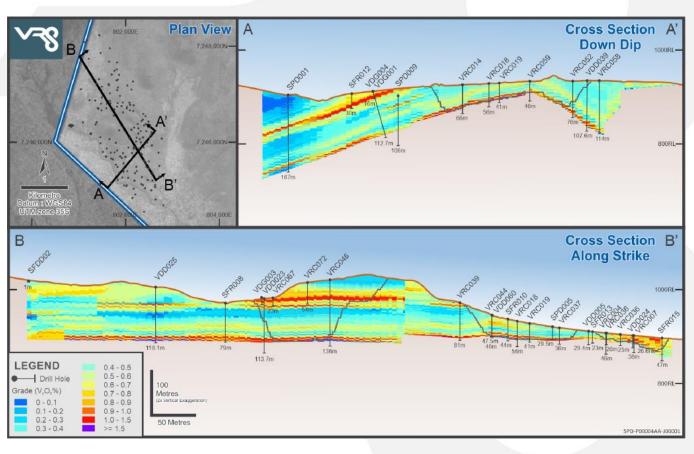
Mineral Resource^{1&2}

Mineral Resource Category	Tonnage (Mt)	V ₂ O ₅ (%)	Fe ₂ O (%)	Contained V ₂ O ₅ (Mt)
Measured	145.5	0.72	22.47	1.05
Indicated	327.3	0.70	22.80	2.29
Inferred	207.4	0.68	22.90	1.40
Total / Average	680.1	0.70	22.76	4.74

Ore Reserve¹

Ore Reserve Category	Tonnage (Mt)	V ₂ O ₅ (%)	Contained V ₂ O ₅ (Mt)	Tonnage by Category (%)
Proved	30.2	0.70	0.21	39.3%
Probable	46.6	0.72	0.34	60.7%
Total / Average	76.8	0.72	0.55	100.0%

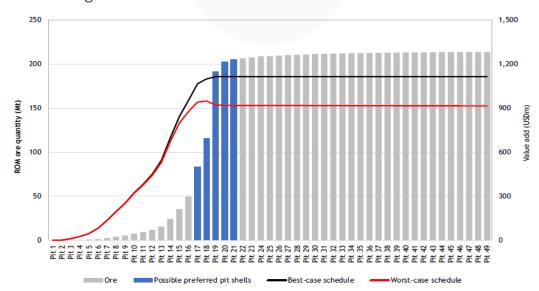
- 1. Refer ASX Announcement dated 4 October 2022 "VR8 Updates Mineral Resource and Ore Reserve"
- Source: Sound Mining CPR (2022). Notes: V₂O₅ cut off >= 0.45%, tonnage rounded down to nearest 100,000t and metal content to nearest 10.000t

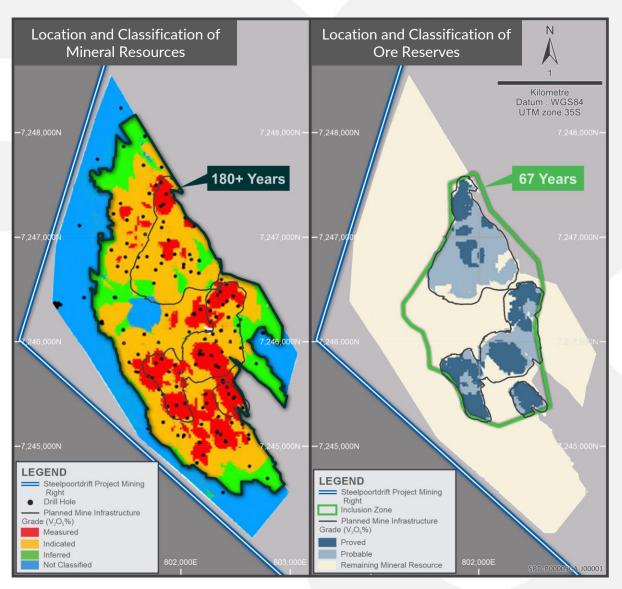


Location of Mineral Resources & Ore Reserves



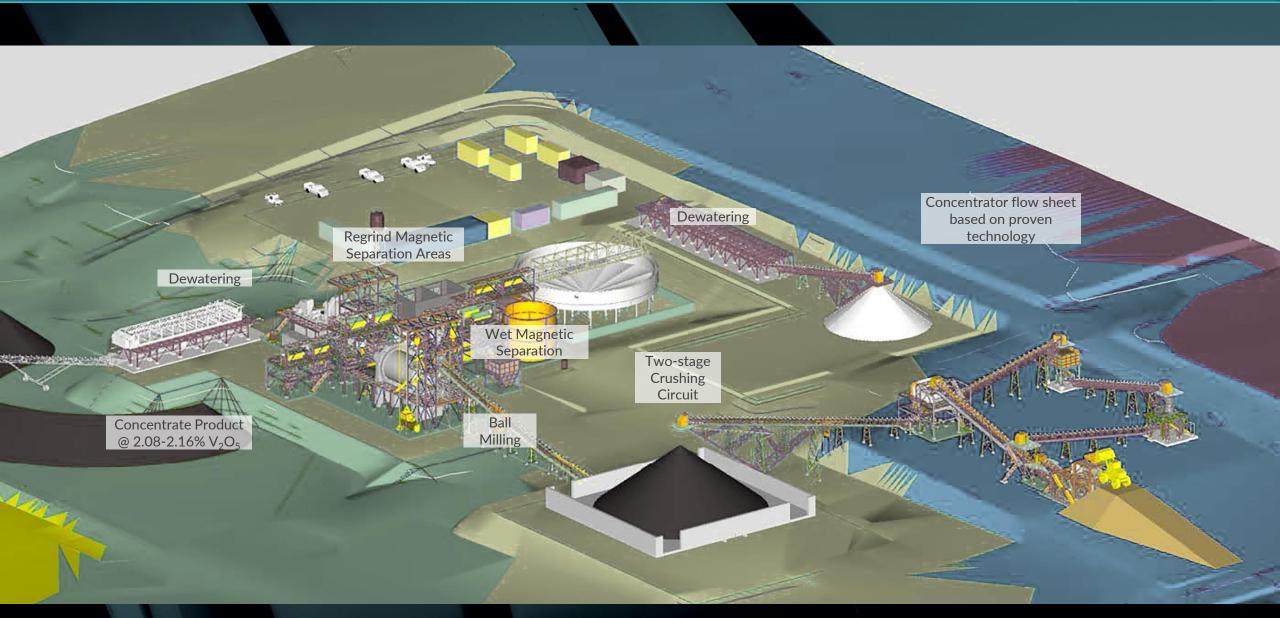
- The final pit design and Ore Reserves based on LOM of 25 years (designed to match Mining Right term)
- Final pit design was based on Pit 17, which highlights potential for a larger ultimate pit design
- Ore Reserves represent 12% of Mineral Resources and highlight the substantial scale of the project
- Additional LOM of up to 67 years readily available in the designed open pits within a low environmental and social impact inclusion zone
- Based on a ROM ore production rate of 3.5Mtpa, the project would have a mine of over 180 years
- Potential opportunity to increase Resources and Reserves with infill drilling within "Not Classified" zones





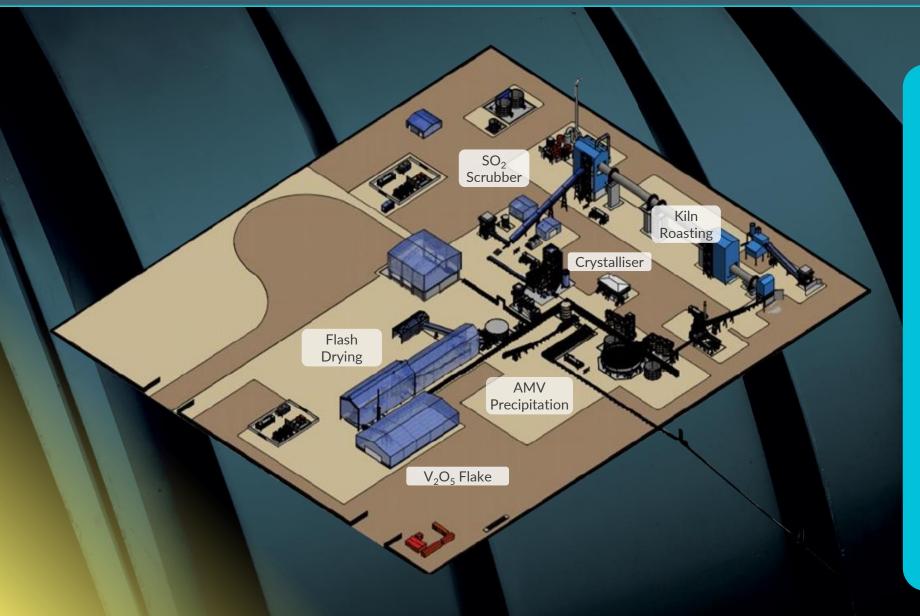
Steelpoortdrift Concentrator Plant





Tweefontein SRL Plant





SRL flow sheet based on proven technology

SRL Plant comprises kiln roasting, desilification, ammonium metavanadate (AMV) precipitation, flash drying and V_2O_5 flake production

Concentrate feed rate of 724ktpa with a grade of >2.00% V_2O_5 to produce ~10.7ktpa of vanadium flake of >98% V_2O_5

Evaporation and crystallisation to recover Na₂SO₄ crystals for recirculation to the kiln has also been included

Offtake, Strategic Investment and Project Financing



Offtake Agreements & Strategic Investment

- Offtake MOU with Panjin Hexiang New Materials Technology Co., Ltd ("Hexiang")1
 - One of China's largest vanadium nitride producers
 - \triangleright To purchase 4,000tpa of vanadium pentoxide (V_2O_5) for an initial 5-year term with an option to extend for a further 5 years
 - \triangleright Represents approximately 37% of VR8's planned V_2O_5 production in Phase 1
 - Underlines the continued demand for vanadium products in the mainland China market
- VR8 is concurrently in discussions for further offtake MOUs and agreements with Chinese, Japanese, Korean and European end-users and traders for the balance of its planned production in Phase 1 of approximately 7,000 tonnes per annum
- Discussions continue with Matrix with respect to offtake and potential equity investment into the project including continued due diligence and the completion of a recent second site inspection
- GC Partners is financial adviser to VR8 in relation to the offtake and strategic equity process

Project Financing

- The debt financing process continues with several financing streams such as conventional bank project financing, non-bank lending and customer/offtake financing
- Commenced with a process of assessing debt funding appetite of non-bank lenders by making use of the services of a major European Investment Bank
- HCF International Advisers Limited is financial adviser to VR8 in relation to the debt financing

Growth Catalysts to Increase Shareholder Value



Key Catalysts to FID

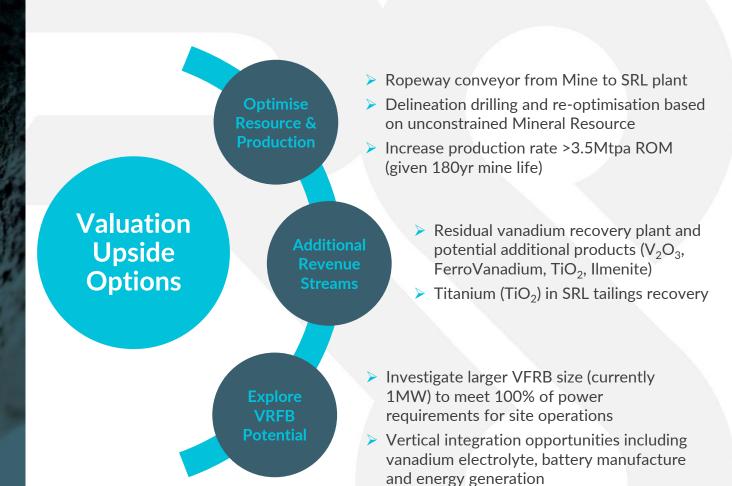
- Secure long-term offtake(s)
- Secure project funding from combination of:
 - i. Debt ~65% PF debt
 - ii. Equity ~35% from offtakers, strategic equity & ECMs

Build Phase 1

- Flake Production of avg 10.7ktpa V_2O_5
- \triangleright ROM Ore avg. of 1.6Mpta at 0.83% V_2O_5
- \triangleright Concentrate avg. of 724ktpa at >2.0% V_2O_5
- Capex US\$211M (pre-production)

Build Phase 2 (4 years after Phase 1)

- Flake Production of avg 21.0ktpa V_2O_5
- ROM Ore avg. of 3.5Mpta at 0.70% V_2O_5
- \triangleright Concentrate avg. of 1,247ktpa at >2.0% V_2O_5
- Capex US\$188M



Investment Highlights



- Strong financials with attributable NPV of US\$1.05bn, IRR of 42% and payback period of 27 months
- Competitive capex (US\$211m) and lowest quartile opex (Cash cost US\$3.24/lb)
- Long life project with a 25 years mine life based on the DFS / Ore Reserves & 180 years based on Mineral Resources
- Established mining jurisdiction with significant infrastructure and expertise nearby
- Offtake MOU with Hexiang one of China's largest vanadium nitride producers

- Offtake & strategic equity process ongoing with respect to remaining offtake & investment for Phase 1
- Commenced process of assessing debt funding appetite of non-bank lenders by making use of the services of a major European Investment Bank
- Building a strong project development and execution team
- Significant upside potential with a range of opportunities and initiatives identified to increase value
- Targeting first concentrate and flake production in H2 CY2026



VANADIUM RESOURCES

Appendix

April 2024





JURIE WESSELS
Executive Chairman

Jurie Wessels has 26 years' experience in the exploration industry and co-founded a number of exploration and mining companies, including Bauba Resources Ltd (BAU.J), which owns three operating chrome mines, GoldStone Resources Ltd (GRL.L), which company is mining the Homase-Akrokerri Gold Mine in Ghana acquired and developed by GoldStone when Jurie was CEO, Arcadia Minerals Ltd (AM7.ASX), which company owns an advanced Tantalum project, the Bitterwasser Lithium Clay and Brine Projects and tier 1 exploration assets, and Vanadium Resources Ltd. Jurie has significant experience in the sourcing and assessment of exploration and exploitation projects and in the governance, funding and management of resource companies. He explored for various minerals in Africa, South America, the Indian subcontinent and Europe, and explored and developed several mining projects to successful conclusion.



JOHN CIGANEK
Managing Director &
Chief Executive Officer

John Ciganek is a qualified Mining Engineer, holds a Master of Business Administration and has more than 30 years of mining and finance experience. His experience spans working in mining operations, project development, project finance, offtake agreements, M&A and the equity capital markets. Through his career to date, John has been involved with successfully raising debt and equity funding in excess of ~A\$5 Bn for various clients. Mr Ciganek's previous roles are Principal / Director of Euclase Capital, Executive Director of BurnVoir Corporate Finance, General Manger Corporate Development at PMI Gold, Senior Banks Engineer and Risk Executive at Commonwealth Bank, and Senior Mining Engineering positions with Hargraves Resources, Reynolds Yilgarn Gold and Comalco / Rio Tinto (CRA). John is a Non-Executive Director of Calidus Resources Limited (CAI.ASX) and Ookami Limited (OOK.ASX).



MICHAEL DAVY
Non-Executive Director

Michael Davy is an Australian executive and Accountant with over 18 years' experience across a range of industries. Michael previously held a senior management role in Australia for Songa Offshore (listed Norwegian Oil and Gas drilling company), where he assisted with the start-up of the Australian operations and managed the finance team for a two rig operation with multi-hundred million dollar revenues. Prior to that he worked in Australia and London for other large organisations overseeing various finance functions. Michael is currently a director and owner of a number of successful private businesses all under his personal management. During the past five years Michael has held directorships in several ASX listed companies and is currently the Non-Executive Chairman of Raiden Resources Limited (ASX: RDN) and Haranga Resources Ltd (ASX:HAR) and is a non-executive director of Arcadia Minerals Ltd (ASX:AM7).



KYLA GARIC Company Secretary

Kyla Garic is a Chartered Accountant and a Founder and Director of Onyx Corporate Pty Ltd (Onyx). Onyx provides corporate services to listed companies or those that are in the process of listing. These services include the provision of financial reporting, disclosures, corporate compliance and governance. Kyla's qualifications include a Bachelor of Commerce, Master of Accounting, Grad Dip Institute of Chartered Accountants Australia and New Zealand and Grad Dip in Applied Corporate Governance. Kyla currently holds several other roles as Company Secretary for ASX listed and Unlisted Public Companies.

Management





JURIE WESSELS
Executive Chairman



JOHN CIGANEK Managing Director & Chief Executive Officer



KYLA GARICCompany Secretary



TIM FEATHER
Chief Financial Officer

Tim Feather has over 25 years of experience in corporate finance. Following a law degree at the University of Nottingham, he qualified as a chartered accountant with Deloitte in the UK. In 1995 he moved into corporate finance in the City of London by joining Brown Shipley before leaving to co-found Westhouse Securities, where he was head of corporate finance and specialised in advising and fundraising for mining and oil and gas companies. He joined WH Ireland in 2012 and continued to focus on the resource sector. In 2019, he joined the Sumner Group, a privately held group with interests in mining, healthcare and defence, where he was Business Development Director. He is a non-executive director of Orcadian Energy plc, a North Sea oil development company



ALEX OEHMEN
General Manager
Operations

Alex Oehmen has over 40 years industry experience across the resources, mineral processing and engineering sectors, with a demonstrated track record in the management of vanadium and steel making operations within the Bushveld region of South Africa. Alex holds a Bachelor of Engineering (Metallurgical) and Master of Business Leadership. Most recently, Alex was Operations Manager at Bushveld Minerals Ltd for their Vanchem operations and General Manager Operations at Vanchem Vanadium Products (Pty) Ltd prior to its acquisition by Bushveld, whose operations are within the same geological and mineralogical terrain as the Steelpoortdrift Project. Alex was responsible for operations and production of various vanadium products including vanadium pentoxide flake, ferrovanadium and various vanadium chemicals. He also held roles in the marketing of vanadium products to domestic and international markets.



LEON REPSOLD
Project Manager

Leon Repsold has over 35 years industry experience across the project, engineering and maintenance sectors, with a proven track record in the engineering and maintenance of vanadium and steel making operations. Leon holds a Bachelor of Engineering (Electrical). In the early 1990's he was part of the Columbus Stainless expansion project followed by the greenfield Duferco Steel Processing steelmaking facility on the West coast of South Africa in the late 1990's. After the successful commissioning of the facility, he was the Engineering Manager until he joined Vanchem Vanadium Products (Pty) LTD as Maintenance and Projects Manager prior to its acquisition by Bushveld Minerals Ltd. In 2015 he was the Project Manager at Lesedi and Letsatsi, two 75MW Solar PV Power facilities in the Free State province of RSA. Most recently Leon was Engineering and Project Manager at Bushveld Minerals for their Vanchem operations situated within the same geological and mineralogical terrain as the Steelpoortdrift Project



ILZE-MARI WENTZEL
Contracts & Project Manager

Ilze-Mari Wentzel has over nine years of experience in mining infrastructure projects, of which three years were as part of the management team for a R3.3 billion Greenfields Mega project (coal) and the other six years in SIB projects and was involved with mining operations the last two years. Ilze-Mari holds a Bachelor of Commerce (Honours) in Econometrics and is a registered Project Management Professional with PMI International. Her principal areas of expertise are procurement, contract management and project management and the setup of projects to ensure all controls are in place with a focus on continuous improvement and streamlining processes. Most recently she was Contracts Manager at Bushveld Minerals where she helped to establish the contracts department.

Project Timeline



ear CY		/24 CY25		25		26
Quarter	H1	H2	H1	H2	H1	H2
Environmental & Water Permits						
Build Project Development Team						
FEED						
Offtake & Strategic Investment						
Debt Financing						
Equity Financing						
FID						
Engineering & Procurement						
Construction						
Production (incl. Ramp up)						



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