22 June 2021

STEELPOORTDRIFT PFS DELIVERS SUPERIOR RESULTS

HIGHLIGHTS

DISCLAIMER

All financial outcomes as reported in this announcement are done so on a 100% project basis. VR8 currently holds 50% ownership in the Steelpoortdrift project, which will be increased to 73.95% ownership pending final S11 governmental approval (There is no further consideration payable by VR8 for the additional 23.95%). Adjusted values relating to VR8's ownership of project is shown in table 1 of the announcement.

- **AACE Level 4 PFS (accuracy of -15+25%) confirms Steelpoortdrift's potential to be a world class, large scale and low cost vanadium producer with competitive opex and capex metrics**

- **PFS completed on time and within budget indicating outstanding financial metrics:**

  VR8'S ATTRIBUTABLE NPV AS DISCLOSED IN TABLE 1:

  - **100% OWNERSHIP POST TAX NPV8%: USD 1.2B***
  - **73.95% OWNERSHIP POST TAX NPV8%: USD 884M***
  - **50% OWNERSHIP POST TAX NPV8%: USD 600M***

  FINANCIAL METRICS OF PREFEASIBILITY STUDY

  - **LOM EBITDA: USD 5.8B***
  - **AVERAGE ANNUAL FREE CASH FLOW FROM COMMENCEMENT: USD139M***
  - **IRR (post-tax): 45%**
  - **OPEX: USD3.08/lb**
  - **PRE-PRODUCTION CAPEX: USD200M (NOTE: Capex numbers quoted include a 15% contingency)**
  - **EXPANSION CAPEX: USD147M planned during year 6 of operation and funded through free cash flow**
  - **PAYBACK: 25 months**

Values might slightly differ due to rounding

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Jurie Wessels, Chairman of VR8 said: *"This PFS result is a giant leap for VR8. The PFS endorses the world class qualities of the Steelpoortdrift project and emphasises the substantial intrinsic value of a processing enterprise that is expected to be the beneficiary of superior grades arising from the favourable exploitation qualities of the orebody. Through this result, VR8 is aiming to become a major supplier of vanadium products to global markets, which are increasingly expectant and reliant on vanadium in a dawning alternative energy era.*

We are very pleased with the outcome and the prospect of firming up on the value of the project through the commencement and conclusion of a feasibility study, and the commencement of construction of a mining operation, concentrator and salt roast leach processing facilities soon thereafter. The size and scope of the resource at Steelpoortdrift, tied with the highly competitive financial metrics of the planned salt roast production plant, allows flexible funding options to be utilised, and to optimally unlock the project's inherent qualities. It also allows the Company flexibility to consider utilising parts of the large resource as feedstock for alternative processing technologies without affecting the base case financial metrics, thereby advancing VR8's value to the greatest extent possible."

Eugene Nel, Chief Executive Officer of VR8 said: *"The Company is delighted with the outcomes of the PFS which has once again confirmed our belief that the Steelpoortdrift project is well positioned to become a significant high volume and low cost producer in the market. The PFS has also given the Company a perfect platform to now progress the project further through more detailed design studies and ultimately construction and production. With a number of potential optimisation opportunities having been identified during the PFS, we are confident that future studies will be able to progressively build on the foundations laid by the PFS."*

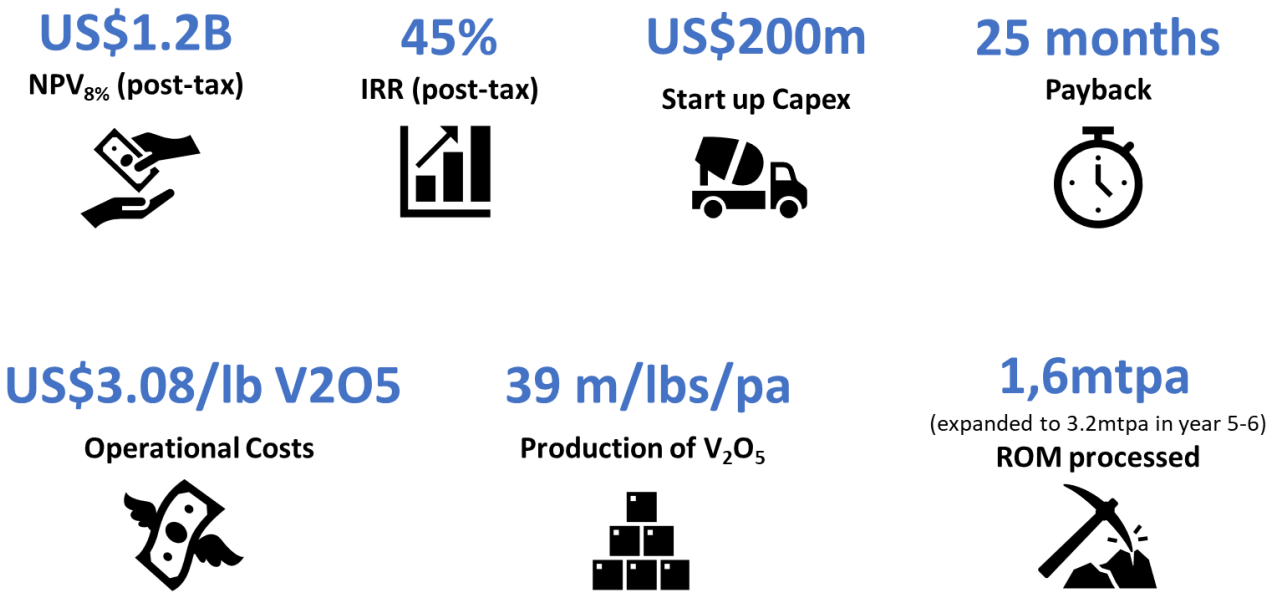


Figure 1: Key overall project outcomes as reported in total project PFS

Vanadium Resources Limited (ASX:VR8) is pleased to announce the completion of an Association for the Advancement of Cost Engineering ("**AACE**") class 4 Pre-Feasibility Study ("**PFS**") for the Steelpoortdrift Vanadium project located in Limpopo, South Africa. The PFS was completed with the aim to produce a high purity (>98% V_2O_5) vanadium product from primary Run Of Mine ("**ROM"**) mineralised material. The Steelpoortdrift Vanadium Project ("**Steelpoortdrift Vanadium Project**" or "**SPD Project**") is one of the world's largest and highest grade vanadium deposits (as illustrated in table 3 below) with a mining authorisation based on published Mineral Resources. Vanadium mineralisation is hosted in a titaniferous magnetite unit in the upper portion of the prolific Bushveld Geological Complex. The Company has the right to acquire 73.95% of the Project via acquisition of interest in Vanadium Resources (Pty) Ltd (VanRes), the holder of the Mining Right (refer ASX Announcements 22 March 2018 and 18 July 2018). The Company currently owns 50% of the Project, and will move to 73.95% (no additional consideration payable) upon receipt of approval for a change in control of VanRes from the Department of Mineral Resources under section 11 of the Mineral and Petroleum Resources Development Act. The application in terms of s.11 is progressing well, and the directors are confident that this approval will be granted in due course.

The PFS was completed by VR8's internal subject matter experts with the assistance from various industry leading companies (details of contributing authors and reviewers are available in Appendix 3) which includes:

Sound Mining Solution Pty (Ltd) ("**Sound Mining**")	-	Mining and Geology
United Mining Service ("**UMS**")	-	Concentrator processing plant
Consulmet Pty (Ltd) ("**Consulmet**")	-	Salt Roast and Leach plant
Nurizon Pty (Ltd) ("**Nurizon**")	-	Tailings storage facility
Red Kite Consulting ("**Red Kite**")	-	Environmental compliance

The project PFS was completed on the basis that each contributing subject matter expert company, developed standalone PFS compliant reports for their respective subsections as defined above. These individual reports were then combined into an overall project PFS, with the individual detailed reports included as appendices and financial evaluation done based on the outcomes of these individually supplied reports. It should be noted that as is industry best practice, the PFS was developed on a total project basis and did not take into consideration shareholding or ownership in the project.

The project financial metrics of the study are tabled below:

Study Outcomes	Based on existing 50% ownership	Based on final 73.95% ownership	Total project as reported in PFS
EBITDA LoM (US$M)	N/A	N/A	US$5 777m
EBITDA per annum (US$M)	N/A	N/A	US$231m
$NPV_{8\%}$ (US$M, post-tax)	US$598m	US$884m	US$1 196m
IRR (US$, post-tax, 100% equity)	N/A	N/A	45%
Payback Period	N/A	N/A	25 months
LoM (Mining schedule)	N/A	N/A	25 years
Pre-production CAPEX (US$, incl. contingency)	N/A	N/A	US$200m
Expansion CAPEX (US$, incl contingency)	N/A	N/A	US$147.2m
Sustaining CAPEX LoM (US$)	N/A	N/A	US$99.4m
Average cash operating costs (US$/lb V_2O_5) [1]	N/A	N/A	US$3.08/lb
Annual V_2O_5 production over LoM (Mlbs)	N/A	N/A	39m lbs
Vanadium Price (US$/lb)	N/A	N/A	US$9.03/lb
Average LoM Strip Ratio	N/A	N/A	1.92
Processing Rate Mtpa	N/A	N/A	1.6 (initial) - 3.2 (post expansion) Mtpa

Table 1 . Study outcomes for preferred base case option

SENSITIVITY ANALYSES					
Price Flex USD/lb V_2O_5	Discount Rate 7%	8%	9%	10%	12%
6.00	US$537m	US$458m	US$391m	US$333m	US$240m
7.00	US$801m	US$694m	US$603m	US$524m	US$398m
8.00	US$1,077m	US$941m	US$825m	US$726m	US$565m
9.00	US$1,352m	US$1,188m	US$1,047m	US$926m	US$731m
10.00	US$1,630m	US$1,437m	US$1,272m	US$1,129m	US$899m

Source: Vanadium Resources, 2021

Table 2: Total project NPV Sensitivity analyses based on price and Discount rate fluctuations

	STEELPOORTDRIFT	MOKOPANE* (Bushveld)	TMT GABANINTHA+ *	AVL PROJECT◊**
V_2O_5 Price	US$9.03/lb	US$7.50/lb	US$8.78/lb	US$8.67/lb
NPV	NPV_8 **(Post Tax)** US$1.2B	NPV_9 **(Post Tax)** US$259.35M	NPV_8 **(Post Tax)** AU$870M	NPV_8 **(Post Tax)** AU$542M
IRR (Post Tax)	45%	20.36%	27.3%	17.5%
Plant Feed	720ktpa + 520ktpa (in year 6)	672,600tpa	unclear	900,000tpa
Production (V_2O_5)	18,500tpa (12,5ktpa + 6ktpa)	9,525tpa	12,655tpa	11,022tpa
Capex	US$200M + USD147M (in year 6)	US$298M	AU$454M + AU$64M	US$399M
Opex US$/lb	$3.08	Unclear	$4.04	$3.66

Sources:
** Bushveld Minerals PFS study results: http://www.bushveldminerals.com/wp-content/uploads/2017/08/201602040458050.pdf*
*+ *TMT DFS Announcement: https://www.tmtlimited.com.au/sites/default/files/asx-announcements/6941650.pdf*
**** Australian Vanadium PFS Update announcement: https://www.australianvanadium.com.au/wp-content/uploads/2020/12/AVL-PFS-Update-final-22122020.pdf*

Table 3: Peer comparison of projects in development

PROJECT BACKGROUND

The SPD Project is located on the farm Steelpoort 365KT which is approximately 30km south-west of the town of Steelpoort, Limpopo Province (Figure 2). The SPD Project area is situated within the Sekhukhune District Municipality in the Greater Tubatse Local Municipality, which is one of the five local municipalities falling under the Sekhukhune District Municipality ("**SDM**").

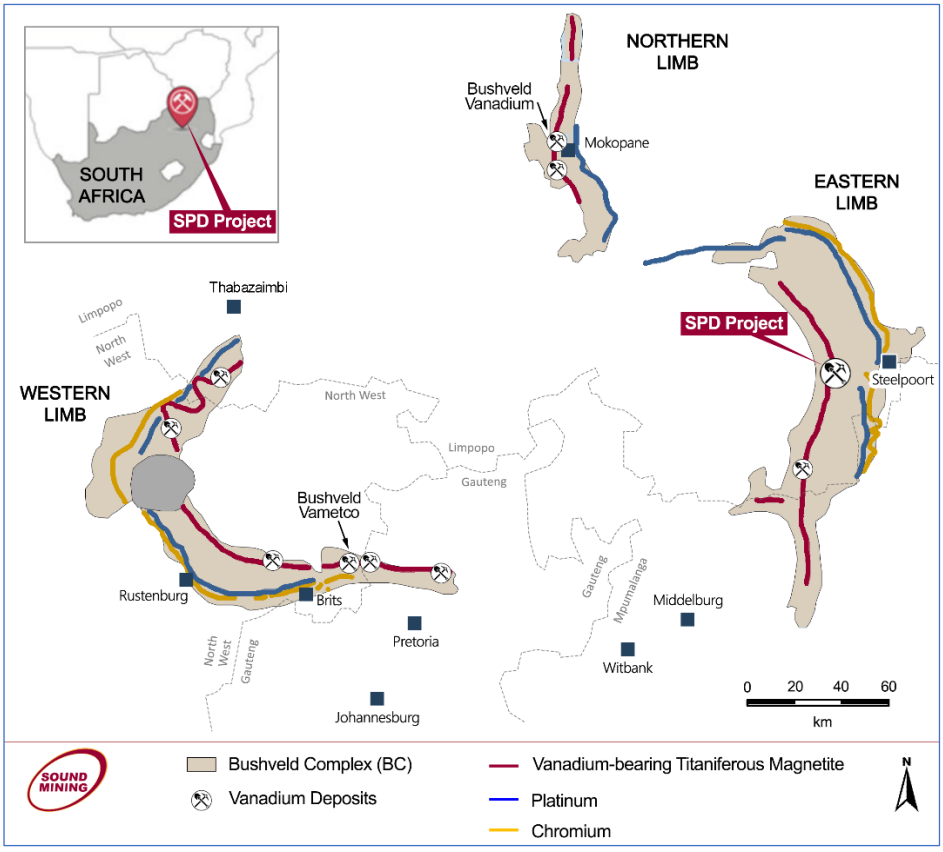


Figure 2: Project location

VR8 completed a Scoping Study on the 23rd September 2020 (Refer to ASX announcement of 23 September 2020 "*Scoping Study confirms viability of V2O5 production*") which indicated the project financial feasibility. Based on the outcomes of the Scoping Study report, the Company decided to progress the project confidence further by commissioning a PFS (-20+25% accuracy) based on an initial throughput rate of 1.6Mtpa ROM, with a capacity expansion to 3.2Mtpa allowed for during year 5-6 of the operation. The on-site operation will produce V_2O_5 concentrate which will be further upgraded to high purity flake (>98%) through a conventional Salt Roast and Leach process. Even though the proprietary ESG TCM process (Refer to ASX announcement of 1st April 2021: "*Acquisition of ESG processing technology and Captial raise*") does not form part of this PFS, consideration was taken during all current PFS design facets to ensure allowance is made for future incorporation of this process.

Figure 3: View of mining site with drilling in foreground

MINERAL RESOURCES

The Mineral Resource for the Steelpoortdrift Vanadium Project was updated in April 2020 by Mining Plus Pty Ltd ("**Mining Plus**") to be 662 million tonnes at an in situ grade of 0.77% V_2O_5 in the Measured, Indicated and Inferred categories. The Mineral Resource update reflected increased data density and confidence achieved by infill drilling and the simple, outcropping nature of the vanadium mineralisation. Measured and Indicated material makes up 57% of the Global Mineral Resource, corresponding to 376 million tonnes at an in situ grade of 0.78% V_2O_5. For the purpose of the PFS mine design only material within the Measured and Indicated categories were considered with no material from the Inferred category included in production scheduling. The Resource is contained in ASX announcement of 29th April 2020 titled *"Mineral Resource confirms global Vanadium Standing"* with a summary shown in tables below.

The Mineral Resource Estimate as at 31 July 2020

V_2O_5 Range (%)	Volume (Mm^3)	Quantity (Mt)	V_2O_5 (%)	Fe_2O_3 (%)
0.45* to 0.90	145.3	474.1	0.60	20.50
≥0.90	51.2	187.9	1.23	34.99
Total	**196.5**	**662.0**	**0.77**	**24.62**

Source: Mining Plus, Steelpoortdrift Vanadium Project Mineral Resource Estimate Report, July 2020
Note: *0.45% V_2O_5 being the Mineral Resource cut-off grade as declared by the Mining Plus Competent Person

The Mineral Resource Estimate by Mineral Resource Category

Mineral Resource Category	V_2O_5 Range (%)	Volume ($M\ m^3$)	Quantity (Mt)	V_2O_5 (%)	Fe_2O_3 (%)
Measured	≥0.45*	27.5	92.3	0.77	24.03
Indicated	≥0.45*	84.5	284.4	0.78	24.55
Inferred	≥0.45*	84.5	285.3	0.77	24.87
Total		**196.5**	**662.0**	**0.77**	**24.62**

Source: Mining Plus, Steelpoortdrift Vanadium Project Mineral Resource Estimate Report, July 2020
Note: *0.45% V_2O_5 being the Mineral Resource cut-off grade as declared by the Mining Plus Competent Person

The Mineral Resource Estimate by Mineral Resource Category and Grade Range

Mineral Resource Category	V_2O_5 Range (%)	Volume (m^3)	Quantity (t)	V_2O_5 (%)	Fe_2O_3 (%)
Measured	0.45* to 0.90	20.3	66.0	0.59	19.98
	≥0.90	7.2	26.3	1.22	34.20
	Sub-total	**27.5**	**92.3**	**0.77**	**24.03**
Indicated	0.45* to 0.90	61.8	201.2	0.59	20.21
	≥0.90	22.7	83.2	1.24	35.06
	Sub-total	**84.5**	**284.4**	**0.78**	**24.55**
Inferred	0.45* to 0.90	63.2	206.9	0.60	20.96
	≥0.90	21.3	78.4	1.22	35.18
	Sub-total	**84.5**	**285.3**	**0.77**	**24.87**
Total		**196.5**	**662.0**	**0.77**	**24.62**

Source: Mining Plus, Steelpoortdrift Vanadium Project Mineral Resource Estimate Report, July 2020
Note: *0.45% V_2O_5 being the Mineral Resource cut-off grade as declared by the Mining Plus Competent Person

Table 3: Resource statements

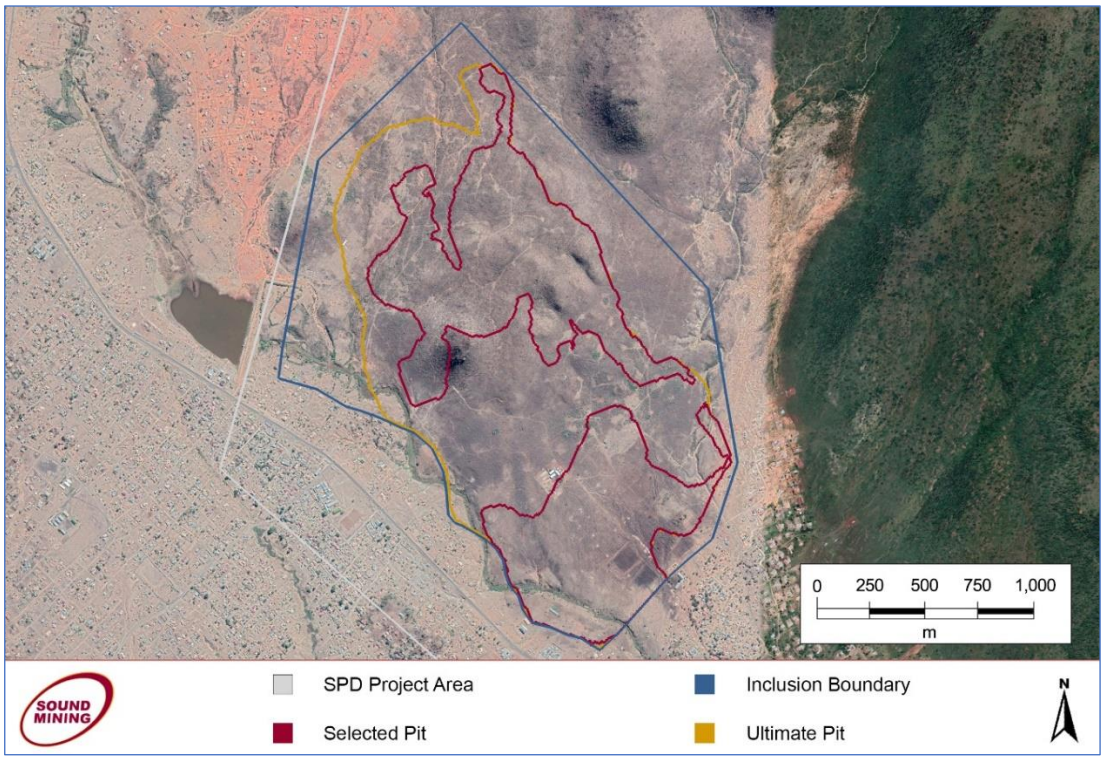
MINING DESIGN

Sound Mining was appointed to complete pit optimisation, pit shell and mine design based on the existing Resource estimate and Geological information (ASX announcement 29th April 2020). The focus of the pit optimisation was to maximise concentrator head grade for a minimum 25 year life of mine ("**LoM**") based on Measured and Indicated material only. A total of 95 pit shells were constructed with the optimal pit shell selected (see figure 4) being based on the highest potential profitability within a 25 year LoM. The ultimate pit shell as indicated in figure 4 indicates the final pit shell without any LoM constraint (i.e. includes extending LoM beyond 25 years). This ultimate pit shell was not considered during the PFS modelling as the current Mining Licence is limited to 25 years with an extension of another 25 years possible pending application during operations.

Conventional drill and blast bench mining methods using 5m blasted bench heights have been recommended by Sound Mining. Opportunities for non-blasting mining methods including free digging and stripping are considered to be generally limited due to the relatively unweathered nature of the orebodies and the surrounding host rocks.

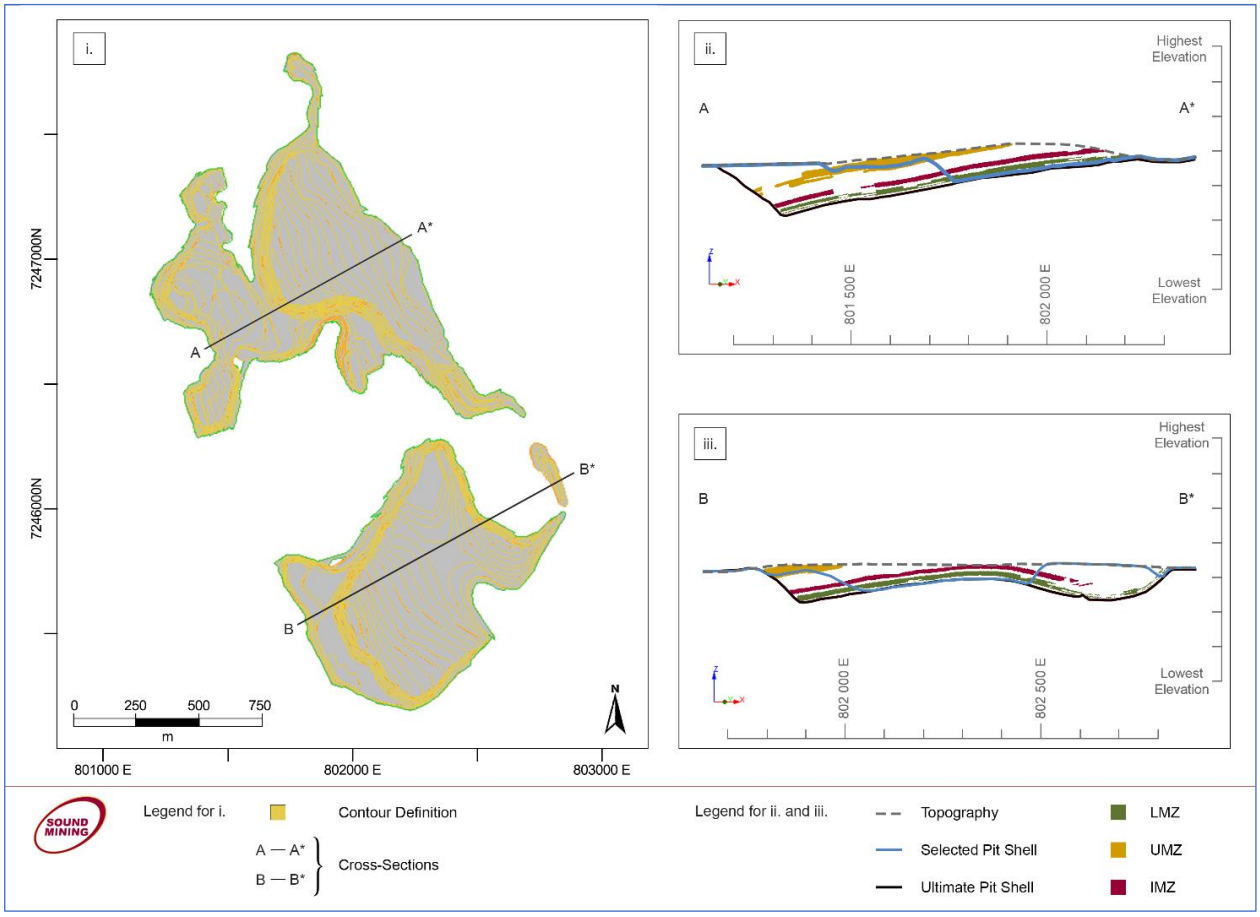
All high-grade ("**HG**") mineralised material will be hauled directly to a dedicated ROM pad located near the plant area. All medium-grade ("**MG**") mineralised material will be hauled to demarcated MG stockpiles for storage and eventually blended and treated. All overburden waste will be sent initially to dedicated Waste Rock Dump sites. All recovered topsoil will be recovered and stored separately, to be used for future rehabilitation requirements. An important aspect of the mining operation will be the operational sequencing of in-pit backfill operations. As soon as practicable, all waste material will be backfilled into the open pit void. This will include mineralised material currently classified

low-grade ("**LG**") and any mineralised material currently classified in the Inferred mineralised material category. Refer to Appendix 1 of this announcement for an updated production schedule.



Source: Sound Mining, 2021

Figure 4: Plan View of Selected Pit Shell and Ultimate Pit Shell



Source: Sound Mining, 2021

Figure 5: Plan View of the Designed Pit and (ii and iii) Cross-sections of the Selected Pit (Pit Shell 25) and Ultimate Pit (Pit Shell 48)

Concentrator:

UMS completed the concentrator design and costing section of the PFS. The concentrator plant will process ROM material from the open pit mining operation and produce a V_2O_5 concentrate which will be further beneficiated at a separate Salt Roast Leaching ("**SRL**") Plant. The SRL Plant will produce a final V_2O_5 Flake product. The concentrator plant will be located on the SPD Project site which will be found within an established vanadium and Platinum Group Metals ("**PGM**") mining region and is well serviced by railway and national road routes, along with existing power and water bulk services infrastructure. The concentrator has been planned to process the vandiferous bearing titano-magnetite at a steady state feed rate 1.6Mtpa ROM material and a typical plant feed grade range of 0.9% to 1.1% V_2O_5.

The concentrator plant will be sited within the demarcated greenfield project area which will be located adjacent to the R555 and R579 provincial routes, approximately 26km south west of the town of Steelpoort, Limpopo Province.

The concentrator plant has been designed to include crushing, milling, wet magnetic separation, dewatering as well as re-grind magnetic separation sections as shown in the block flow below.

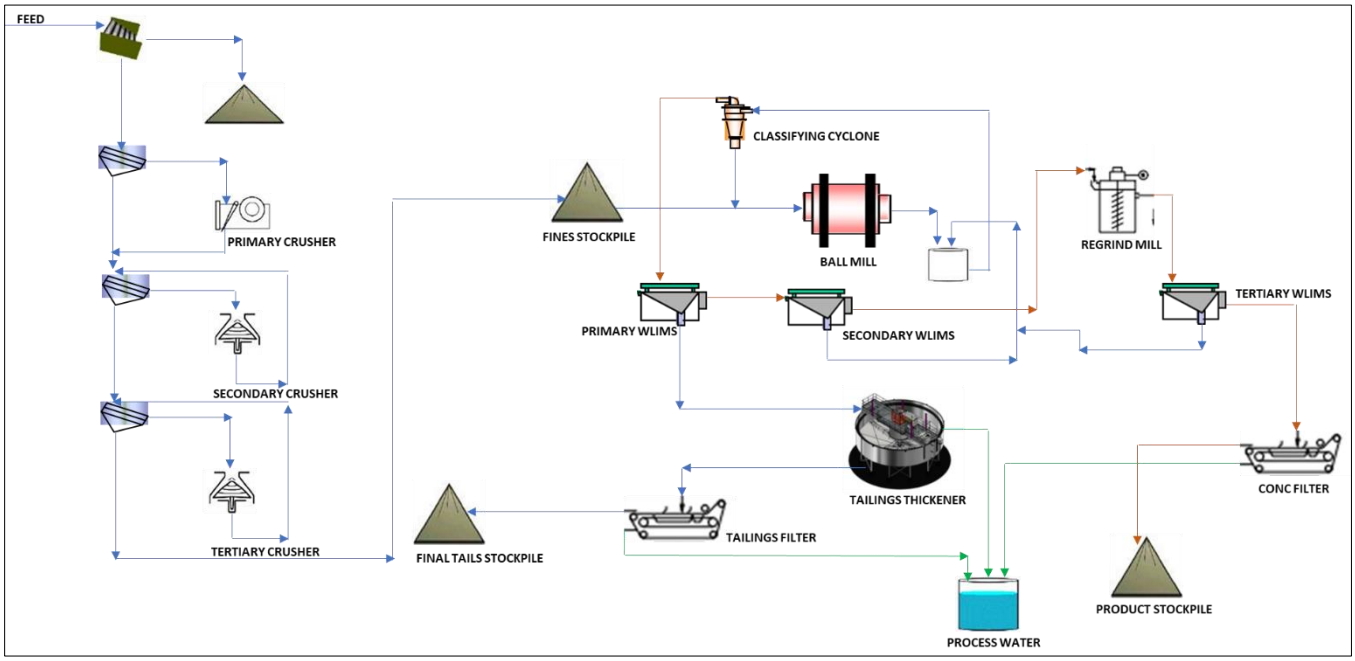


Figure 6: Concentrator block flow diagram

Salt Roast and Leach process (SRL):

Consulmet completed the costing and design initially for a 520ktpa Vanadiferous Titano Magnetite Concentrate Processing Plant to produce 9,000 tpa of a dry V_2O_5 flake (98%) which was then increased to a 720ktpa processing plant to produce 12,500 tpa of Flake. The SRL processing plant consists of the following main process areas:

- Salt Roasting Kiln
- Leach
- Desilication
- Ammonium Metavanadate ("**AMV**") precipitation
- Flash drying, deammoniation, fusion and flaking of final V_2O_5 product
- Evaporation and crystallization of barren stream to recirculate process liquor and crystallize Sodium Sulphate for subsequent discard.
- Reagents
- Utilities

FINANCIAL EVALUATION

The PFS investigated several production schedule options with a view to optimising NPV, minimising investment risk and recognising potential changes in future market forecasts. From trade off studies performed as part of the PFS, a preferred base case production profile was selected. In conjunction with the preferred base case scenario, two alternative options were also identified and evaluated, with the two options aimed at mitigating investment and market volatility risks.

The financial evaluation was based on contract mining operations with the concentrator and salt roast plant to be owner operated. The preferred base case economic evaluation for the Project was based on a 1,600 ktpa ROM HG mill feed rate, allowing for the initial production of approximately 720ktpa of vanadium concentrate, which in turn will be fed into a conventional SRL to produce an initial 12.5ktpa (12.30ktpa over LoM) of vanadium pentoxide (V_2O_5) Flake (>98 % contained V_2O_5). The PFS has been prepared on the basis that, in year 6, the Concentrator capacity and feed rate will be increased by an additional 1,600ktpa (i.e., up to 3,200ktpa) to process MG material from stockpiles concurrently to the ROM HG material. If this eventuates, it is anticipated to increase concentrate production to approximately 1.1mtpa concentrate (up from 720ktpa), which subsequently would also require the expansion of the SRL plant capacity by 520kt through the addition of a second SRL processing circuit. The combined processing expansion included in the PFS will result in flake production increasing to approximately 18,5 ktpa V_2O_5. This preferred base case option was selected based on the following:

- It allows flexibility to increase the tonnage of concentrate produced, without changing the mine plan (the material for the production increase is already mined and on stockpile as MG material);
- The additional capacity increases of the concentrator and SRL facility can be funded from operational cash flow, and/or debt if necessary, thus reducing Project Capex exposure;
- The option to supply concentrate to a third party could be adopted should the proposed second SRL build not be considered risk appropriate; and
- The option to feed the additional concentrate into a different technological refining plant is available if such technology is developed prior to the decision point for the second SRL build in year 5 (i.e., VR8 are currently investigating such new technologies).

The long term V_2O_5 (98 %) price assumed is US$ 9.03/lb or US$ 19.90/kg. The price selected has been based on the mean long term sales prices as at December 2020 over the period January 2004 to December 2020 available in the public domain (see figure 13).

The techno-economic parameters were sourced from capital expenditure and cash operating cost estimates which were generated by various specialist project consultants as described earlier and specified in tables 4 and 5 , as well as illustrated in the graphs below. The selected base case scenario is based on the construction of the mine and concentrator, concurrent with an SRL plant, followed by a subsequent concentrator (year 4) and SRL expansion build in year 5 of operations. It is anticipated that the expansion will be self-funded with cash flows from the early operations. Material from the medium grade ore stockpiles will constitute the feed to the expanded concentrator and salt roast facilities.

Item	Initial (including 15% Contingency) (USD M)	Expansion (including 15% Contingency) (USD M)	Sustaining LoM (including 15% Contingency) (USD M)	Total (USD M)	Contributing Source
Mining	0.7			0.7	Sound Mining
Concentrator Plant Build	26.5	26.5	18.3	71.3	UMS
TSFs (Concentrator)	1.8	1.8		3.7	Nurizon
Site Infrastructure Mine Site	13.0			13.0	VR8
SPL Plant Build	118.9	90.93	81.0	290.9	Consulmet
Site Infrastructure SRL Plant	10.9			10.9	VR8
Tailings Facilities (SRL Plant)	28.0	28.0		56.0	Nurizon
Total	**199.8**	**147.2**	**99.4**	**446.3**	

Source: Vanadium Resources, 2021

Table 4: Estimated Capital Expenditure including Contingency (100% project basis)

Parameter	Units	Quantum	Contributing Sources
Fixed Mining Costs	USD M per annum	2.85	Sound Mining
Mine Site G&A, P&G, ESG	USD M per annum	5.37	VR8
RoM Production Variable Costs (HG and MG Mineralised Material)	USD M/t	2.39	Sound Mining
Waste Mining Variable Costs	USD M/t	1.99	Sound Mining
Fixed Concentrator Costs	USD M per annum	2.39	UMS
Variable Concentrator Costs	USD/t RoM mineralised material	4.67	UMS
Concentrate Transport Costs	USD/t concentrate	2.30	VR8
SRL Plant Fixed Costs (per SRL Plant)	USD M per annum	10.80	Consulment
SRL Plant Variable Costs/Tonne Concentrate	USD/t concentrate	49.40	Consulmet
SRL Plant G&A, P&G, ESG and Logistics Costs	USD M per annum	7.88	VR8

Source: Vanadium Resources, 2021

Table 5: Estimated Operating Cost Metrics Over LoM

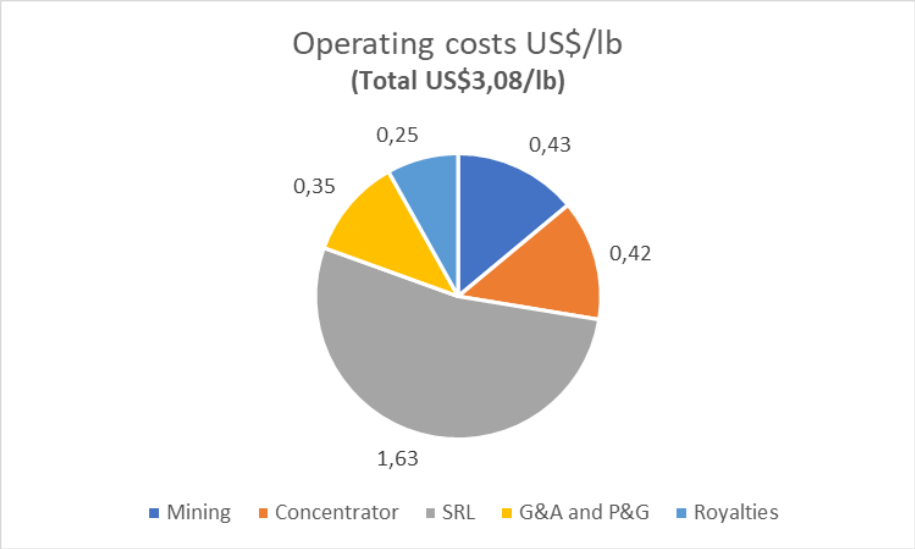


Figure 7: Operating cost breakdown

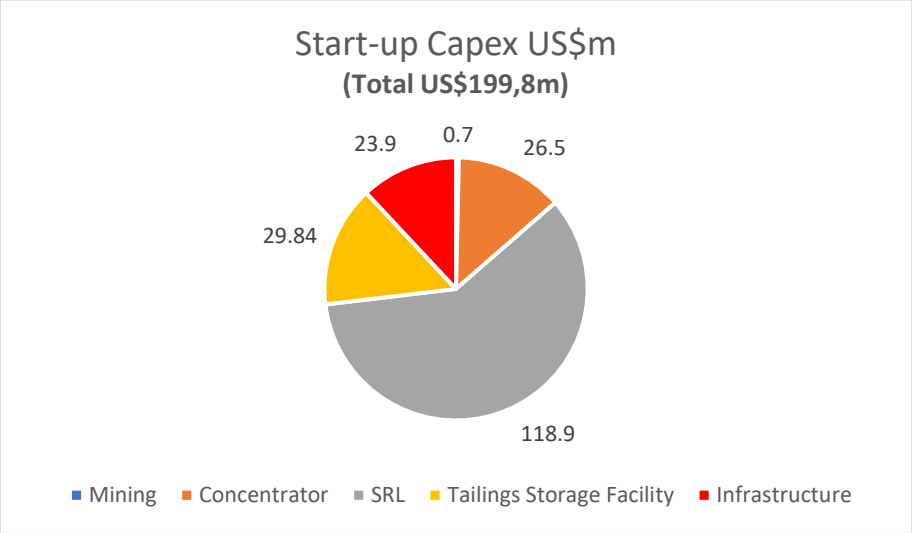


Figure 8: Start up Capital cost breakdown 100% project basis (excluding expansions)

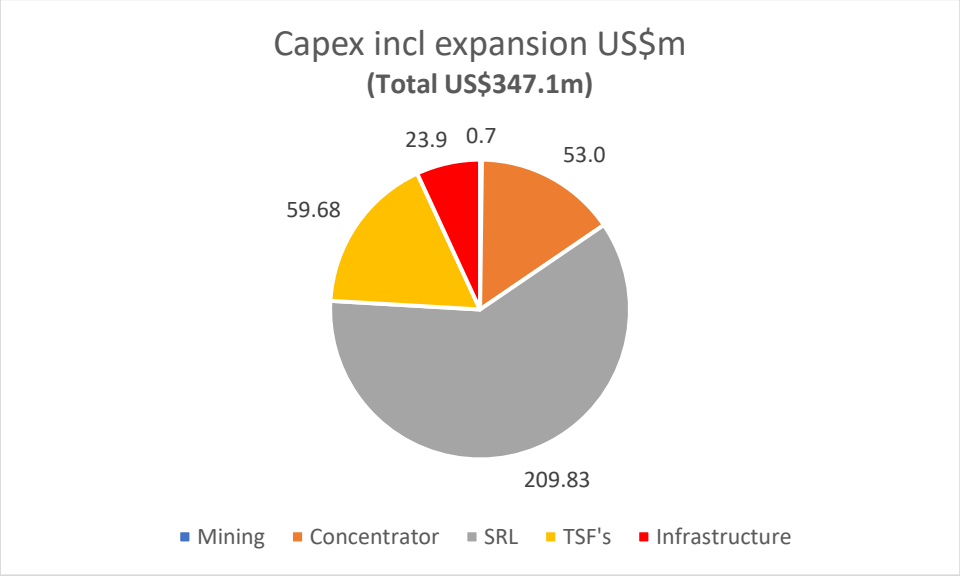


Figure 9: Total Capital cost breakdown 100% project basis (including expansion)

Two additional operating strategies were investigated in order to mitigate any market risk associated with future depressed off take demand and/or price with the view of not implementing the production capacity expansion during year 5-6 of operations. These two strategies were based around:

- **Option 2** – Only process HG ROM material and stockpile MG material for future processing to potentially extend LoM by a further 15-20 years.

- **Option 3** – Reduce pit shell and mining footprint to only mine and process HG material up to year 16 of operations. At this point mining activity is ceased and processing continuos based on MG material stockpiled during mining operations.

Both alternative strategies returned NPV's of between USD700-750m (100% project basis) which indicated that any project risk associated with commodity market fluctuations may be managed and absorbed by the project. As the returns of these two options were significantly lower than the preferred base case they were not developed further.

A further advantage of the 3 selected options is that the decision point at which to select a potential expansion, or not, will be after the initial construction and production in all cases. This will provide VR8 with the option to re-assess the V_2O_5 market during the mid 2020's to ensure that the forecasts made at DFS stage are still valid. This will reduce investment risk and allow for enhanced and cost effective flexibility in mining and concentrate production profiles going forward.

Sensitivities of the calculated NPV to variations in salient metrics for the base case scenario have been calculated with the Project being most sensitive to commodity price fluctuation, recoveries in the SRL Plant and least sensitive to capital expenditure.

Sensitivity to commodity prices are shown in table 2 above which also indicates that the project can remain profitable even at commodity prices of lower than US$6.00/lb.

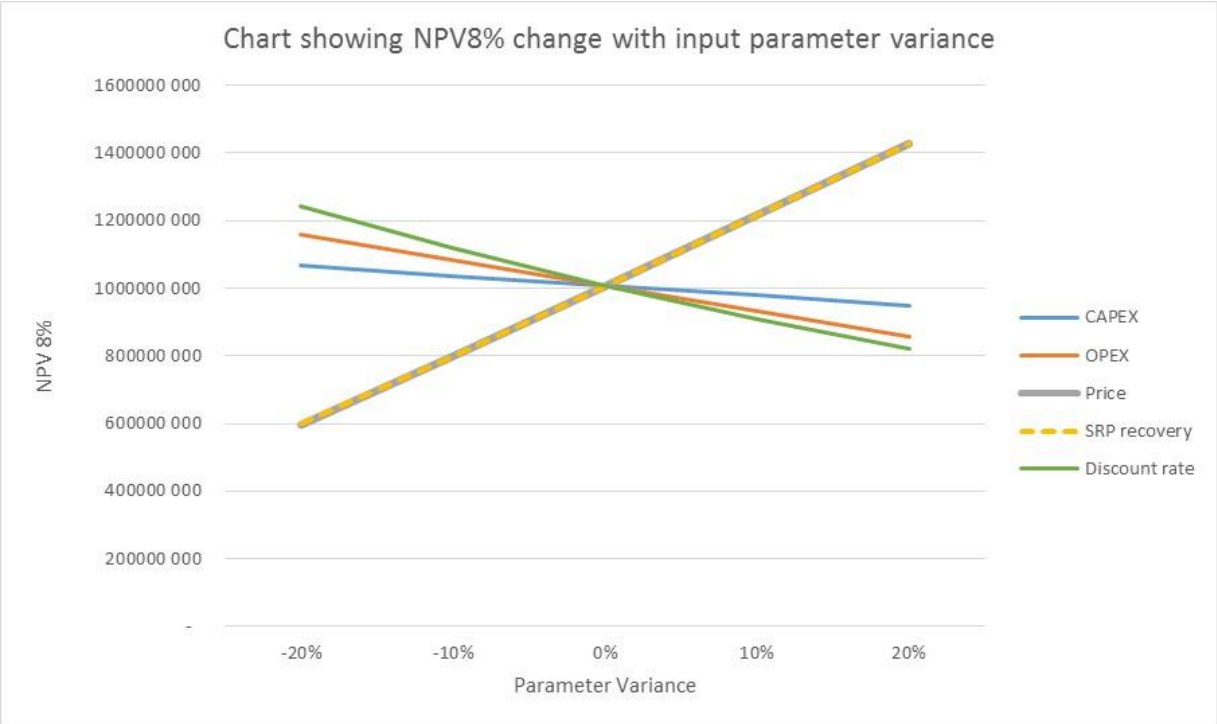


Figure 10: Project sensitivity analyses (100% project basis)

PROJECT SCHEDULE

The PFS has been developed based on the following indicative schedule:

1. Completion of PFS – June 2021
2. Commence DFS – July 2021
3. Completion of DFS – March 2022
4. Final investment decision – July 2022
5. Construction commence – Q3 2022
6. Commence concentrate production – Q4 2023
7. Commence flake production (SRL) – Q1 2024

It should be noted that the above timeline is indicative in nature only and purely used for the purposes of financial modelling during the PFS. The actual timelines achieved would be subject to sufficient financing being secured at specific tmes during project development.

INTEGRATED ESG STRATEGY

The completed PFS forms an integral part of VR8's integrated ESG strategy which is aimed at positioning the Company as not only a low cost green Vanadium metal producer, but also to achieve this with a minimal carbon footprint and environmental impact. The Company's ESG strategy is built around the following initiatives:

- Renewable solar PV electricity supply to mining and concentrator site to reduce reliance on fossil fuel based grid energy supply.
- Continuous backfilling rehabiliation of open pit mine with both waste and concentrator tailings to minimise requirement for a tailings storage facility and also minimise environmental footprint of operations.
- Implementation of the ESG TCM process to treat the Salt Roast circuit tailings material which results in:
    - Carbon capture from both Salt Roast and TCM process resulting in minimising carbon emissions;
    - Carbon capture will produce CO – gas and reagents for re-use in process or for sale of excess volumes;
    - Producing Fe and Ti products from the waste stream for sale;
    - Processing of tailings stream will minimise or potentially even eliminate requirement for tailings storage facility thereby reducing environmental impact; and
    - Generation of Oxygen and Hydrogen off gas to be used for fuel cell based electricity generation to satisfy Salt Roast and TCM process energy requirements with excess produced available for sale.

Refer to announcement dated 1 April 2021 for further detail with respect to the TCM processing technology.

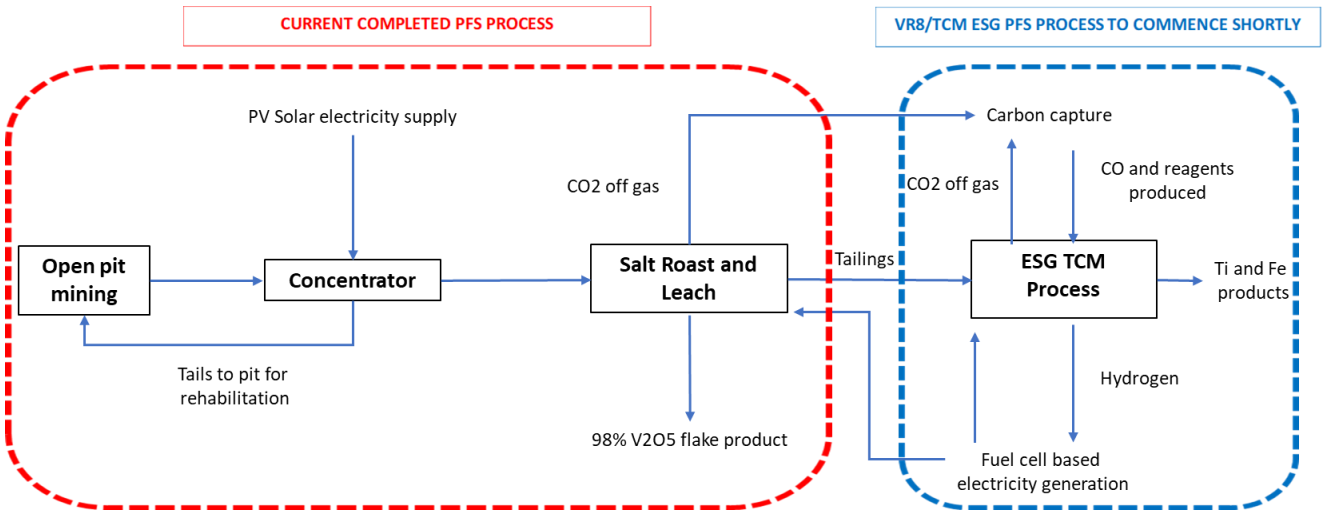


Figure 11: VR8 integrated ESG strategy

MARKET ANALYSES

Vanadium Overview

Vanadium is a high-value metal which is grey, soft, ductile and has several other unique characteristics. Vanadium is commonly used in the production of alloys and within the chemical industry, however, in recent years there has been a growing interest in vanadium within the energy industry. Approximately 90% of vanadium is currently being recovered from magnetite and titanomagnetite iron ore through three main methods:

- **Co-production:** Vanadium sourced from the processing of iron for steel production, which up until 2020 remained the main source of vanadium, accounted for some 71% of global supply;
- **Primary Production:** most commonly (but not exclusively) involves salt roasting, water leaching, filtration, desilication and precipitation through a salt roast method. This accounted for about 18% of global supply in 2019; and
- **Secondary Production:** involves the recovery of Vanadium products from sources such as fly ash, petroleum residues, alumina slag, and the recycling of spent catalysts used in some crude oil refining. Secondary production contributed approximately 11% of global supply in 2019.

The two most widely traded vanadium products are vanadium pentoxide and ferrovanadium however other products include ammonium metavanadate and vanadium chlorides. Vanadium pentoxide is commonly produced through the treatment of magnetite iron ores, vanadium-bearing slags and secondary materials.

Ferrovanadium is used as a strengthening agent in manufacturing high-strength and shock resistant steel (such as rebar, high-speed tools and wear-resistant cast iron). Non-metallurgical applications of vanadium include producing vanadium chemicals for niche markets. However, more momentous in recent years, vanadium could possibly play a significant role in advancing the energy storage industry as vanadium is used in both lithium-ion batteries for electric vehicles and in vanadium redox flow batteries ("**VRFB's**") for large scale energy storage.

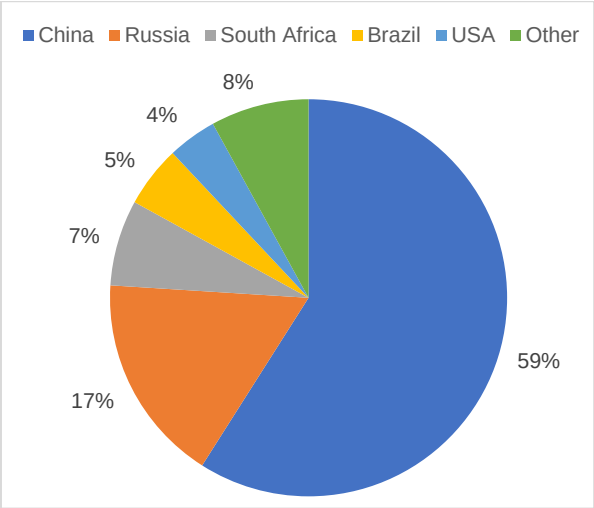


Figure 12: Major Vanadium producing countries 2019

In 2019, global vanadium production increased by 15% year-on-year to 111,225metric ton vanadium. This increase was supported by higher slag production in China (which increased by 19% year-on-year). China is the world's largest vanadium producer (about 59%of global vanadium supply in 2019) with most of its vanadium derived from co-production and specifically the processing of slags from steel production furnaces. Vanadium production in the rest of the world increased moderately across all forms of production. Russia is the second largest producer followed by South Africa, the third largest producer, accounting for 17% and 7% of 2019 global supply respectively. The majority of the vanadium produced in South African was derived from primary production from Bushveld Minerals and Glencore.

Vanadium Marketing Fundamentals

While co-production remains the source for the majority of global vanadium feedstock supply, this source does face practical constraints. These constraints include high processing costs due to the intrinsic link with steel production where producers have no leverage on iron ore and steel prices. Another constraint is based on environmental-related restrictions where Chinese steel furnaces production outputs are being limited thereby capping the volume of slags being produced for Vanadium recovery.

In 2019, global vanadium feedstock production totalled 111,225mtv, exceeding the previous peak of 101,791mtv recorded in 2014. During the period 2017 to 2019 the consumption of vanadium exceeded production, and an equilibrium position was only

achieved again during Q3 and Q4 2019. The result of demand exceeding supply was a net draw down of global vanadium stocks by approximately 10,000mtv over this period.

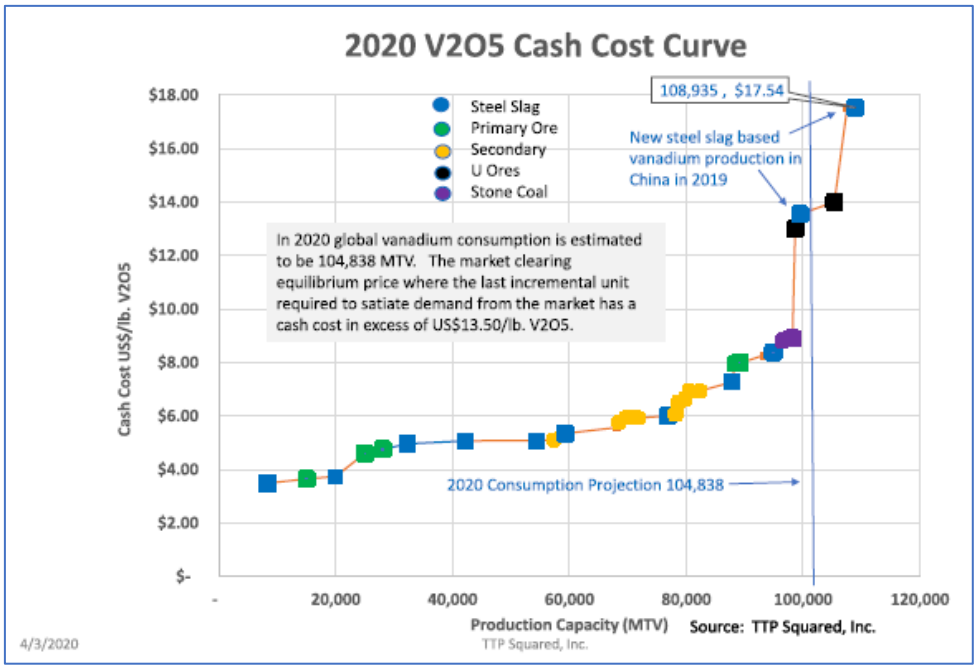
The fastest growth in supply is from primary production, which has grown by over 50% in the period 2017 to 2019 (from just under 13,000mtv and 14% of the market in 2017 to nearly 20,000mtv and 18% of the market in 2019). This primary production contribution to supply is considered to further increase during 2020 and 2021 due largely to Largo increasing outputs and to some extent expansion at the South African producers. Opportunistic stone coal production, which accounted for about 9% of China's production, also contributed to this increase to a much lesser extent.

Growth in the market share of primary suppliers at the expense of co-producers may appear modest at present however it is underpinned by a possible long-term trend to move away from vanadium sourced from steel production. Historically, vanadium supply and demand has relied upon or been coupled with steel supply and demand, respectively. The inelasticity of vanadium-producing steel plants to the vanadium price is one example of this coupling that contributes to vanadium's price volatility. With growth in primary production of vanadium, the dependency of vanadium supply from steel is starting to fall or decouple. 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 in energy storage applications.

Supply of secondary materials is largely in the form of 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 also be considered across 3 categories: capacity expansions of current producers, restarts 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. According to Roskill, this category could add as much as 5,000mtv in new supply by 2029. Restarts are expected to add a further potential 4,000mtv to 12,000mtv in new supply by 2029. New greenfield projects face the most significant hurdles. Most of the recent greenfield projects that have been 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."

The 2020 V_2O_5 Cash Cost Curve (see figure 13 below) indicates that there is significant market share space for new entrants in the market, if they can maintain a production cost

of lower than USD5.00/lb. At these low production costs, any new entrant would supplant the high-cost steel slag vanadium producers in China.



Source: TTP Squared inc.

Figure 13: 2020 Cash cost curve

Impact of Covid-19

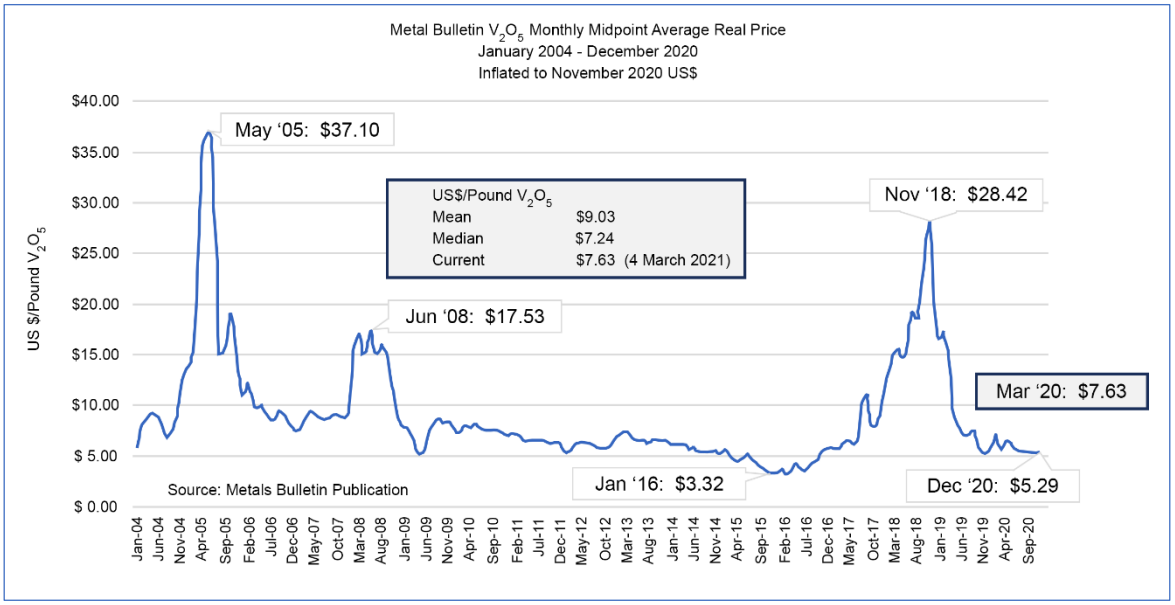
2020 saw a significant divergence in supply prices between China and Europe mainly driven by the faster post pandemic economic revival in China while Europe struggled to exit lockdowns. Chinese steel mill reached peak production and for the first time since 2014 China became a net exporter of vanadium. This was further driven by lockdowns imposed in other vanadium producing areas most notably South Africa where operations were suspended for a two to three-month period. This divergence has since reversed due to European countries starting to exit lockdown situations.

It is anticipated that the post Covid-19 period (2022 to 2025) will see a significant upswing in demand for vanadium in both the steel making as well as renewable energy market segment. This is seen as being largely driven by major infrastructure build projects initiated by various countries to stimulate post pandemic economic activity. Most notably is the large infrastructure build program announced by the USA which relies heavily on construction as well as installation of renewable energy sources. It has been reported that the USA is already planning to increase their offshore wind generating capacity from 42MW currently to approximately 30,000MW in 2030. Even though VRFB's might not be

exclusively used as energy storage for these projects even a small fraction of this market share would require a major increase in vanadium supply. Additionally, to the infrastructure and renewable energy projects, it is also anticipated that the aeronautical industry will experience a rebound from 2022 onwards. With vanadium being a key component used in manufacturing of aeronautical parts it is anticipated this market segment should also show strong growth.

Price Forecast

An internal review by VR8 of analysts' forecasts and commentaries in the public domain has indicated that there is a universal consensus that vanadium consumption will increase by 3% to 5% annually till at least 2030. This increase could break through the 5% level if the adoption of Vanadium Redox Flow Batteries ("**VRFB**") technology occurs more rapidly than expected. One of the major barriers to large scale adoption of VRFB's has been vanadium price. As can be seen in the Cash Cost graph earlier, low-cost production of vanadium is constrained and as soon as demand (whether real or perceived) exceeds 100ktpa to 110ktpa the high-cost Chinese slag producers are required to fill the shortfall which in turn results in a spike in vanadium prices. This can also be seen in the historical price chart (Figure 14) where periods of perceived or actual shortfalls resulted in significant spikes in the vanadium prices.



Source: Metal Bulletin

Figure 14: Historical pricing

In VR8's opinion, the entry of a low-cost primary producer with significant production capacity, such as VR8, will potentially result in stable vanadium supply at low cost to reduce price volatility. From VR8's perspective of market sentiment, vanadium remains competitive at prices of around USD10/lb with any major movement above this mark resulting in substitute materials such as Niobium entering the steel market specifically. In terms of battery metals, the most competitive price range for vanadium is currently considered by VR8 to be between USD7.50 to USD10/lb with any movement above that level also leading to substitution with alternative metals.

Based on VR8's view of various industry and market commentary available in the public domainand in conjunction with Metal Bulletin's historical monthly real prices reported (see figure 14) Vanadium Resources have forecasted a vanadium price of USD9.03 which corresponds with the average price achieved during the period 2004 to 2020.

This announcement has been authorised for release by the Board of Vanadium Resources Limited.

FOR FURTHER INFORMATION PLEASE CONTACT

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DISCLAIMER

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COMPETENT PERSONS STATEMENT

The information in this announcement that relates to Mineral Resources, including the Mineral Resources contained within the Production Target, complies with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (**JORC Code**) and has been compiled, assessed and created by Mr Kerry Griffin BSc.(Geology), Dip Eng Geol., a Member of the Australian Institute of Geoscientists and a Principal Consultant at Mining Plus Pty Ltd, consultants to the Company. Mr Griffin has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code. Mr Griffin is the competent person for the resource estimation and has relied on provided information and data from the Company, including but not limited to the geological model and database. Mr Griffin consents to the inclusion in this announcement of matters based on his information in the form and context in which it appears. Further details on the Mineral Resource can be found detailed in the ASX Announcement of 29 April 2020. The Company confirms that all material assumptions and parameters underpinning the Mineral Resource Estimate reported in the market announcement dated 29 April 2020 continue to apply and have not materially changed and that it is not aware of any new information or data that materially affects the information that has been included in this announcement.

The information in this announcement that relates to geotechnical studies, the mine design criteria and the mine design only, is aligned with the JORC Code and has been compiled and assessed under the supervision of Vaughn Duke, a Professional Engineer of the Engineering Council of South Africa and a Fellow of the South African Institute of Mining and Metallurgy. Mr Duke is a Principal Mining Engineer and Partner of Sound Mining Solution Pty Ltd. He has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code. Mr Duke consents to the inclusion in this announcement of the information related to the geotechnical and mining engineering components of the PFS in the form and context in which it appears.

The information in this announcement that relates to metallurgy has been compiled and assessed under the supervision of Mr Eugene Nel, a Professional Engineer of the Engineering Council of South Africa and a Member of the South African Institute of Mining and Metallurgy (both Recognised Professional Organisations as defined in the JORC Code). Mr Nel is the Chief Executive Officer (CEO) of VR8, and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code. Mr Nel consents to the inclusion in this announcement of matters based on his information in the form and context in which it appears.

APPENDIX 1: PRODUCTION SCHEDULE

Description		Total	Years																						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
HG Mineralised Material (RoM Mineralised Material) Quantity (kt)																											
IMZ	Measured	**1,8755**	-	-	1	16	53	60	20	3	232.	93	102	3	14	124	303	162	119	114	22	79	140	88	41	56	30
	Indicated	**1,614**	0*	17	46	16	4	-	-	1	94	-	8	1	0*	3	43	44	61	138	215	206	160	169	160	169	56
	Sub-total	**3,489**	**0***	**17**	**47**	**32**	**57**	**60**	**20**	**4**	**326**	**93**	**110**	**5**	**14**	**128**	**346**	**206**	**180**	**251**	**238**	**285**	**300**	**256**	**201**	**225**	**86**
UMZ	Measured	**4,872**	27	166	140	152	195	321	404	551	27	188	177	233	195	134	257	179	74	70	89	266	296	190	113	128	54
	Indicated	**12,905**	-	105	241	242	344	593	446	435	320	495	464	511	614	675	570	647	772	850	565	573	558	688	853	765	579
	Sub-total	**17,777**	**27**	**272**	**381**	**394**	**540**	**914**	**850**	**986**	**592**	**683**	**642**	**744**	**809**	**809**	**827**	**826**	**846**	**920**	**654**	**839**	**854**	**878**	**966**	**893**	**632**
LMZ	Measured	**8,821**	217	372	376	223	477	468	618	409	240	371	366	211	390	539	404	478	441	283	481	343	283	284	225	181	140
	Indicated	**10,162**	1,373	962	774	947	535	177	140	220	463	482	513	667	410	144	86	125	166	161	251	173	203	232	254	341	361
	Sub-total	**18,983**	**1,590**	**1,334**	**1,150**	**1,170**	**1,012**	**645**	**757**	**629**	**704**	**853**	**880**	**878**	**800**	**683**	**490**	**603**	**607**	**443**	**731**	**516**	**486**	**516**	**480**	**522**	**501**
Total		**40,250**	**1,617**	**1,623**	**1,578**	**1,597**	**1,609**	**1,620**	**1,627**	**1,620**	**1,622**	**1,629**	**1,632**	**1,627**	**1,624**	**1,620**	**1,662**	**1,635**	**1,633**	**1,614**	**1,622**	**1,640**	**1,640**	**1,650**	**1,647**	**1,640**	**1,219**
MG Mineralised Material Quantity (kt)																											
IMZ	Measured	**11,309**	154	414	614	864	795	861	785	350	631	878	750	967	469	203	188	50	37	165	343	279	346	590	439	86	47
	Indicated	**9,600**	1,224	983	831	807	229	92	279	235	551	387	522	1183	164	204	355	632	566	602	293	235	130	140	18	0*	3
	Sub-total	**20,909**	**1,378**	**1,397**	**1,446**	**1,671**	**1,024**	**953**	**1,064**	**586**	**1,182**	**1,265**	**1,272**	**1,085**	**633**	**407**	**543**	**682**	**603**	**767**	**635**	**513**	**476**	**730**	**457**	**87**	**50**
UMZ	Measured	**1,679**	23	147	171	76	42	76	87	251	78	74	46	43	76	44	75	27	9	-	1	72	112	59	4	49	35
	Indicated	**3,332**	1	35	49	68	58	109	150	222	64	35	173	126	210	125	28	64	71	158	118	152	230	273	423	236	153
	Sub-total	**5,011**	**24**	**182**	**220**	**144**	**100**	**184**	**237**	**473**	**142**	**110**	**219**	**169**	**.5**	**169**	**104**	**90**	**81**	**158**	**119**	**224**	**343**	**332**	**427**	**285**	**188**
LMZ	Measured	**2,610**	14	18	89	86	102	161	143	46	87	128	117	211	201	229	285	97	146	74	22	110	140	80	5	0*	18
	Indicated	**11,976**	558	873	947	903	546	619	615	333	587	656	732	540	358	126	227	302	538	406	578	440	327	239	153	152	219
	Sub-total	**14,587**	**572**	**890**	**1,036**	**989**	**648**	**781**	**758**	**380**	**674**	**784**	**840**	**751**	**559**	**355**	**512**	**399**	**684**	**480**	**600**	**550**	**468**	**318**	**158**	**152**	**237**
Total		**40,507**	**1,974**	**2,470**	**2,702**	**2,805**	**1,772**	**1,918**	**2,060**	**1,438**	**1,998**	**2,159**	**2,340**	**2,005**	**1,479**	**931**	**1,159**	**1,172**	**1,368**	**1,405**	**1,354**	**1,287**	**1,286**	**1,381**	**1,043**	**524**	**476**
Waste Quantity (kt)																											
HG Inferred		**4,910**	166	207	57	112	183	343	135	192	194	210	174	224	292	335	363	191	283	228	119	116	158	86	243	175	124
MG Inferred		**4,864**	1,343	557	279	208	73	66	262	215	182	193	160	92	52	38	52	261	162	177	92	56	171	100	17	34	22
LG		**5,329**	551	452	328	157	24	33	146	225	324	102	137	116	189	254	127	74	61	111	161	244	402	423	434	187	65
Waste		**62,179**	2,847	4,031	4,291	4,391	3,722	2,946	2,416	2,533	2,399	1,947	1,953	1,734	2,164	1,747	2,704	2,379	2,210	3,013	2,407	2,419	2,631	2,527	1,466	926	377
Total		**77,283**	**4,908**	**5,247**	**4,956**	**4,868**	**4,002**	**3,388**	**2,959**	**3,165**	**3,098**	**2,452**	**2,425**	**2,166**	**2,697**	**2,373**	**3,246**	**2,905**	**2,717**	**3,530**	**2,779**	**2,835**	**3,362**	**3,136**	**2,160**	**1,322**	**588**
Total Waste including MG Mineralised Material		**117,790**	**6,881**	**7,718**	**7,658**	**7,672**	**5,773**	**5,307**	**5,019**	**4,603**	**5,097**	**4,611**	**4,765**	**4,171**	**4,176**	**3,305**	**4,405**	**4,077**	**4,085**	**4,935**	**4,133**	**4,122**	**4,648**	**4,517**	**3,203**	**1,845**	**1,063**
Strip Ratio (t/t)																											
Strip Ratio Considering MG Mineralised Material as Waste		**2.93**	4.25	4.76	4.85	4.80	3.59	3.28	3.08	2.84	3.14	2.83	2.92	2.56	2.57	2.04	2.65	2.49	2.50	3.06	2.55	2.51	2.83	2.74	1.94	1.13	0.87
Volume (m^3 000's)																											
HG (RoM) Mineralised Material		**11,579**	459	461	450	460	463	471	464	465	468	467	467	464	464	468	481	471	470	468	468	479	474	480	474	474	347
MG Mineralised Material		**12,715**	625	779	849	884	560	606	652	453	627	671	737	632	463	291	359	362	423	437	424	404	403	431	327	165	150
LG and Inferred Mineralised Material and Waste		**27,295**	1,683	1,855	1,777	1,756	1,450	1,206	1,035	1,119	1,089	857	850	758	951	826	1,152	1,027	958	1,258	990	1,011	1,187	1,111	745	453	194

Source: Sound Mining, 2021

Note: * Due to rounding, certain values may reflect as 0

APPENDIX 2 – SUMMARY OF REVENUE, COSTS AND FREE CASHFLOW FORECASTS FOR THE SPD PROJECT (100% PROJECT BASIS)

Year	Year -1	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Revenue																											
V_2O_5 Recovered (Mlbs)	-	-	17	28	27	27	27	42	44	43	44	44	44	44	44	43	41	41	42	41	42	42	41	41	41	41	41
Revenue (USD M)	-	-	185	293	289	287	285	450	468	463	466	468	469	469	467	455	443	443	444	442	447	444	442	441	437	438	442
Royalty (USD M)	-	-	4	7	7	7	7	10	11	11	11	11	11	11	11	11	10	10	10	10	10	10	10	10	10	10	10
Net Revenue (USD M)	**-**	**-**	**180**	**286**	**282**	**280**	**279**	**440**	**457**	**452**	**455**	**457**	**458**	**458**	**456**	**444**	**433**	**433**	**434**	**432**	**437**	**434**	**432**	**431**	**427**	**428**	**432**
Operating Costs (USD M)																											
Mining Cost	-	-	21	23	23	23	19	18	18	16	18	17	17	16	16	14	16	15	15	17	15	15	17	16	14	11	8
Concentrator Cost	-	-	10	10	10	10	17	17	18	17	17	18	18	18	17	17	18	18	18	17	17	18	18	18	18	18	16
Mine G&A Cost	-	-	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mine P&G Cost	-	-	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Mine ESG Cost	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SRP Cost	-	-	27	42	42	42	42	69	71	71	71	71	71	71	71	70	69	69	69	69	69	69	69	69	69	69	69
G&A, P&G, Flake Transport Cost	-	-	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Cone Transport Cost	-	-	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
ESG Cost	-	-	0.3	0.4	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tailings Dam Cost	-	-	0.2	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Total Operating Costs	**-**	**-**	**69**	**88**	**87**	**87**	**91**	**118**	**121**	**119**	**121**	**120**	**120**	**119**	**119**	**115**	**117**	**116**	**116**	**117**	**116**	**116**	**117**	**117**	**114**	**111**	**107**
Cost of Concentrate SRP Cost	**-**	**-**	**27.0**	**43.2**	**43.2**	**43.2**	**43.2**	**69.0**	**72.0**	**72.0**	**72.0**	**72.0**	**72.0**	**72.0**	**72.0**	**70.5**	**69.0**	**69.0**	**69.0**	**69.0**	**69.0**	**69.0**	**69.0**	**69.0**	**69.0**	**69.0**	**69.0**
Capital Costs (USD M)																											
Mining Cost	0	1	-					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Concentrator Plant Cost	5	20	-	-	-	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mine Site Infrastructure Cost	2	9	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mine Sustaining Capital Cost	0	0	-	-	0.4	0	0.4	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
SRP Refinery Cost	17	69	17.2	-	-	0	79.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRP Tailings Dam Cost	4	16	4.1	-	-	0	24.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRP Site Infrastructure Cost	2	6	1.6	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRP Sustaining Capital Expenditure Cost	0	0	-	-	1.8	2	1.8	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Contingency Cost	5	18	3	0.0	0.3	4	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total Capital Cost	**35**	**139**	**26.3**	**-**	**2.6**	**31**	**121**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**
Cashflow (USD M)																											
Cashflow	**(35)**	**(139)**	**28**	**151**	**154**	**113**	**29**	**229**	**258**	**257**	**258**	**260**	**261**	**262**	**261**	**255**	**244**	**244**	**244**	**241**	**247**	**245**	**241**	**240**	**240**	**243**	**251**
Tax	-	-	-	14	41	40	39	68.1	71	70	71	72	72	72	72	70	67	67	67	66	68	67	66	66	66	67	69
Free Cashflow after Tax	**(35)**	**(139)**	**28**	**137**	**113**	**73**	**(10)**	**161**	**186**	**186**	**187**	**189**	**189**	**190**	**189**	**185**	**177**	**177**	**177**	**175**	**179**	**178**	**175**	**174**	**174**	**176**	**181**

Source: Vanadium Resources, 2021
Note: Rounding errors may occur

APPENDIX 3 – CONTRIBUTING EXPERTS AND REVIEWERS

The information, discussions and conclusions within the PFS report are based on documents made available by Vanadium Resources and their various external consultants (contributing experts) prior to the compilation of the Report. It was edited and compiled using best endeavours, given the diverse contributions. It was assumed that all of the information and technical documents, as received from the following experts and listed in the Appendices of the report, are accurate and complete in all material respects.

Vanadium Resources Limited

Client Project Sponsor: Eugene Nel

Chief Executive Officer, Pr.Tech.Eng., B.Tech. Extr. Met., MBA, MSAIMM, MMMMA

28 years' metallurgical processing experience in operations and design

Mining Plus (Proprietary) Limited

Vanadium Resources Limited, SPD Vanadium Project Mineral Resource Estimate Report

Document Number: MP_MDE7418_SPD Vanadium_MRE_Jul2020, July 2020

14 August 2020

Lead Mineral Resource Specialist: Kerry Griffin

Principal Geology Consultant B.Sc. Geology Diploma in Engineering Geology, MAIG SEG

26 years' experience in Mine Geology and Resource Development

Sound Mining Solution (Proprietary) Limited

The Steelpoortdrift Project. Mining Preliminary Feasibility Study for Vanadium Resources Limited

Report Number PR/SMS/1029/21

May 2021

Lead Geotechnical Specialist: Mehdi Nasiri

Principal Mining and Geotechnical Engineer, Pr.Eng., B.Sc. Mining, M.Sc. Rock Mechanics

23 years' mining and tunnelling experience in consulting and design; 17 years' experience in geotechnical projects and slope stability studies, MECSA, MSAIMM, MSANIRE, MISRM, MIRSRM, MIRTA.

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The Steelpoortdrift Project. Mining Preliminary Feasibility Study for Vanadium Resources Limited

Report Number PR/SMS/1029/21

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UMS Group

Vanadium Pre-Feasibility Study, Vanadium Resources Limited -PFS Steelpoortdrift

Document Number: PP0774.0-PIMC-9110-RPT-26-E0009-A

14 April 2021

Lead Process Specialist: Francois Spies

Senior Project Manager, B.Eng. Electrical Eng., Pr. CPM, SACPCMP

22 years' experience with engineering and construction projects, including mining, minerals processing, energy and infrastructure projects

Consulmet Metals (Proprietary) Limited

Steelpoortdrift Mine, Pre-Feasibility Study

520kt per annum Vanadium Concentrate Processing Plant

Project Number: VANA-21-001

Document Number: VANA21001-HEN-000G-C05-02-02

29 April 2021

Lead Process Specialist: Rupert Swanepoel

Managing Director, HND Extractive Metallurgy 30 years' mineral processing experience including 22 years in process

plant design on various capital projects around the globe

Nurizon Consulting Engineers (Proprietary) Limited

Steelpoortdrift Vanadium Project - Prefeasibility Study (PFS) - Design of Tailings Storage Facilities Prefeasibility Study (PFS) - Design of Tailings Storage Facilities

Report Number: P0418/RPRT/01

16 April 2021

Lead TSF Specialist: Michael Einkamerer

Technical Director, Senior Civil and Structural Engineer

Pr. Eng., B. Eng (Hons), MSAICE, 16 years' engineering design and consulting experience. including the design and management of various mine infrastructure projects across Africa, including geotechnical (including TSF), bulk services, material handling, haul roads, access roads, stormwater management, structures, offices and buildings related projects

Red Kite Environmental Solutions (Proprietary) Limited

Pre-Feasibility Study: Environmental Aspects

Steelpoortdrift Mine on Portions 1-6 and remaining extent of the Farm Steelpoortdrift 365KT

April 2021

Lead Environmental Specialist: Nicole Upton

Environmental Specialist, Environmental Assessment Practitioner (EAP), B.Sc. (Hons.) Animal, Plant and Environmental Sciences, 10 years' experience in integrated environmental management and analysis for predominantly mining and industrial projects, SACNASP, WISA IAIAsa

Financial Models (Excel)

May 2021

Financial Modelling Lead: James Wilson

Pr.Sci.Nat, MA (Geol,), MBA, Geologist,

30 years mining experience in exploration, evaluation and investment analysis

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Mr Vaughn Duke: Overall document review - Principal Mining Engineer, Pr.Eng., PMP, B.Sc. Min. Eng. (Hons.), MBA, FSAIMM, MECSA, MPMI, MMASA, Mine Manager's Certificate of Competency, over 30 years' mining experience in operations, consulting and project management.

Ms Diana van Buren: Geology - Principal Geologist Pr.Sci.Nat., B.Sc. (Hons) Geology, Geologist, 13 years' geological modelling and resource estimation.

Dr Graham Stripp: Processing, Tailings Storage Facility, Forward Works Programme and Risk - Principal Mining Engineer, B.Sc. (Hons). Mining Engineering, M.Sc., Ph.D., Mine Manager's Certificate of Competency, FSAIMM, over 30 years' mining experience in operations, consulting and research.

Ms Sara Turnbull: Exploration Geologist and overall document compilation and supporting figures - Pr.Sci.Nat. M.Sc. (Hons.) Geology, MGSSA, MSACNASP, Geologist with 9 years' experience exploration and geological modelling.

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Mr Mark Turnbull: Marketing Analysis and the Economic Analysis - Financial Modeller, B.Sc. Zoology and Environmental Management, B.Sc. Zoology (Hons.), M.Sc. Zoology, CFA Level Two Candidate, MGISSA, MZSSA, with four years' mining experience in operations, mining economics/valuation, financial analysis and consulting.