

ASX RELEASE | 04 OCTOBER 2023

## STEELPOORTDRIFT AND TWEEFONTEIN PROJECTS UPDATE

**VANADIUM RESOURCES LTD (ASX: VR8, DAX: TR3) ("VR8" or the "Company")** is pleased to provide an update on the progress of the Steelpoortdrift Vanadium Project (the "**Project**") in Limpopo, South Africa. Following the release of the Definitive Feasibility Study ("**DFS**") in October 2022<sup>1</sup>, the Company has been busy progressing various workstreams with respect to the development, construction, offtake and financing of the Project.

### HIGHLIGHTS

- ◆ **Environmental authorisations and water use licence applications progressing well with approval expected H1 CY2024**
- ◆ **Social and Labour Plan amendments submitted to regulators for review after receiving clear community encouragement and support**
- ◆ **Front-end engineering design ("FEED") commenced with designs and tender packages to be finalised ahead of Final Investment Decision ("FID")**
- ◆ **Both VR8 and Matrix have reaffirmed their commitment to enter into agency and offtake agreements to achieve the outcomes envisioned in the memorandum of understanding concluded in May 2023**
- ◆ **Agreements to increase the Company's interest in the project to 86.49% remain conditional with one awaiting South African Reserve Bank ("SARB") approval and both being conditional upon the Company deciding, in its discretion, to proceed with the transactions.**
- ◆ **Environmental Impact Assessment for construction of Rope Conveyor between Steelpoortdrift and Tweefontein operations initiated**
- ◆ **VR8's engineering and support team to be expanded to include a Concentrate Manager, Salt Roast Leach ("SRL") Manager, Infrastructure (Power & Water) Manager, Contracts Manager, Mine Manager and HR Manager**
- ◆ **Various power and water solutions under investigation for provision to both the Steelpoortdrift and Tweefontein operations**

<sup>1</sup> Refer to ASX Announcement dated 4 October 2022 "*DFS Delivers A\$1.9BN NPV Confirming World Class Steelpoortdrift Vanadium Project*".

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- ◆ To mitigate construction risks, Project delivery model expected to lean on multiple Engineering, Procurement and Construction (“EPC”) contracts over core elements of the operation, with oversight by experienced project managers to mitigate interface risks
- ◆ Updated project implementation plan includes a revised target for FID to be targeted for H2 CY2024 with first production in H1 CY2026
- ◆ Negotiations continue with potential financing and offtake parties as the Company seeks to conclude binding offtake agreements and engage lead arrangers of construction funding solutions

*Mr John Ciganek, Managing Director of VR8, commented: “We are pleased to have made significant progress on the Steelpoortdrift Vanadium Project since finalising the DFS as we continue to plan for construction. The Company, our engineers and advisers are working hard to progress critical path items and ensure that the preparations are completed both diligently and efficiently to mitigate technical and financing risks. While the modified implementation plan includes a revised FID target, the plan now includes optimised processes and allows for greater visibility around construction, which will provide greater certainty and reduce overall project risk resulting in a more optimised and robust project. We look forward to achieving key developmental milestones in the coming months and updating the market as we deliver against the refined implementation plan.”*

## ENVIRONMENTAL AUTHORISATION & WATER USE LICENCE APPLICATIONS

Following the completion of the DFS, the Company has worked closely with Red Kite Environmental Solutions (Pty) Ltd (“Red Kite”) to prepare and apply for the relevant authorisations, licences or permits relevant to both the Mine / Concentrator (“Concentrator”) and Salt Roast Leach (“SRL”) sites. The initial Environmental Authorisation Applications and Scoping Reports for both sites have now been completed and reviewed, with acceptance of the final Scoping Reports received from the relevant authorities in June 2023.

The current focus of the Company and Red Kite is preparing and finalising the Environmental Impact Assessment and Environmental Management Program for each site. These are both well progressed and will be distributed for public comment in September 2023 before being submitted for final approval. The Department of Mineral Resources and Energy (“DMRE”) will assess the applications for the Mine / Concentrator site, while the SRL site application will be considered by the Limpopo Economic Development, Environment & Tourism. The current guidance provided to the Company regarding the timing of final approvals of these applications is early H1 CY2024.

Integrated Water Use Licence Applications for both sites have been significantly progressed and are in the final phase of the application process with the Department of Water and Sanitation (“DWS”). Technical reports have been drafted for each application in preparation for a consultation and review process before final submission to

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the DWS. Minor changes to the water usage following updates to the plant design will require review by the DWS before the reports can be finalised and submitted. It is expected that the initial review and final assessment by the DWS will take approximately three months, with approvals currently expected in early H1 CY2024.

### SOCIAL AND LABOUR PLAN, COMMUNITY ENGAGEMENT & RE-ZONING APPLICATIONS

A key component of obtaining and maintaining the Mining Right is to have a Social and Labour Plan (“SLP”) approved by the DMRE. Vanadium Resources (Pty) Ltd (“VanRes”), as the entity holding the Mining Right, had the original SLP approved in order to be awarded the Mining Right and has continued to update the SLP as the Project has evolved. Following the release of the DFS, the SLP required a number of amendments based on the updated designs and planning that underpinned the Ore Reserve Estimate<sup>2</sup>. The Company has continued to work with Sound Mining Xcellence (Proprietary) Limited (“Sound Mining”) to ensure that the appropriate processes and background work is completed to meet the required regulations.

The additional work undertaken on the SLP by Sound Mining and the Company has included an assessment of the impact of the proposed activities on the local communities, including both the social and economic impacts and benefits. It also includes significant planning and development of procedures around employment, training, procurement and potential infrastructure to ensure that the Project has a positive socio-economic impact. Significant engagement and consultation with the local communities is a key part of this work to ensure a full understanding of the matters of importance to each community and that the best solutions are implemented to achieve beneficial long-term development. The Company has built strong relationships with the local communities and has had productive engagement and discussions throughout this process.

The revised SLP has been completed and provided to the DMRE for review, with approval expected to take approximately three to four months following submission.

In parallel with the SLP, the Company has also progressed re-zoning applications to ensure the relevant zoning is in place for the land on which the mining and concentrating activities will take place. While the Mining Right has been granted over the whole property, Steelpoortdrift 365-KT, it is important that the individual areas are zoned appropriately for the activities that will take place including mining, concentrating and installing the photovoltaic (“PV”) solar plant. The appropriate applications have all been prepared and were recently submitted to the Municipality for their review and approval.

<sup>2</sup> Refer to ASX Announcement dated 4 October 2022 “VR8 Updates Mineral Resource and Ore Reserve for the Steelpoortdrift Vanadium Project”.

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## ENGINEERING – DESIGN, TENDERING & AWARDING CONTRACTS

As previously announced<sup>3</sup>, the Company appointed Mr Alex Oehmen as the General Manager Operations in February 2023<sup>4</sup>. He immediately commenced an internal review of the process flowsheets, equipment selection and designs for the Concentrator plant and SRL plant. Several minor changes to the initial design and equipment selection were identified as part of this review, with the changes focused on improving the efficiency and reliability of the operations to ensure it will achieve the targeted vanadium pentoxide specifications and production rate.

The Company has now commenced work on the front-end engineering design (“FEED”), working with the key engineering firms for the Concentrator and SRL plants to make the Project construction ready. The current focus is on locking down the final detailed designs of the plants and drafting maps to show the position of equipment and plant in relation to each other. These maps, one for each site, include waste disposal sites, buildings, roads and various other relevant plant. The FEED work will also include schedule optimisation and the development of the Project Execution and Operational Readiness plans.

As the detailed designs are completed, a tender will be drawn up for each specific piece of plant/equipment by the appropriate technical experts and reviewed from a legal/contract perspective. Finalisation of these tenders is expected by the end of CY2023, at which point they will be issued to pre-identified suppliers. The Company expects to receive responses to the tenders in H1 CY2024, and once received, the Company will aim to award tenders and finalise contracts in early H2 CY2024.

## CONTRACTOR DELIVERY AND PROJECT MANAGEMENT

In preparation for FID and construction, the Company has been finalising the delivery strategy for the Project. The Company plans to implement a series of Engineering, Procurement and Construction (“EPC”) contracts across the Project with a view to ensuring that the appropriate engineering firm and/or equipment manufacturer has the necessary expertise, experience and ability to provide relevant performance guarantees and liquidated damages for that part of the plant. Given the specialised nature of key pieces of equipment, the variety of suppliers required and the experience of local engineering firms, the delivery will be split into a series of EPC contracts instead of one individual contract.

The Company has identified several suppliers for the key pieces of plant and equipment, with many of these having specific experience in the vanadium industry. To reduce the number of construction packages, several sections of the equipment will be combined into packages to be managed as a mini-project within the wider construction scope.

<sup>3</sup> Refer to ASX Announcement dated 20 February 2023 “Vanadium Resources appoints General Manager Operations”.

<sup>4</sup> Refer to ASX Announcement dated 25 July 2023 “Quarterly Activities/Appendix 5B Cash Flow Report”.

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To assist in coordinating the vendors and individual EPC contracts, a Project Manager will be appointed for each site who will be tasked with managing the interface risks, together with a further Project Manager who will oversee the entire development and construction of the Project. While the costs of adopting this EPC delivery model are potentially higher than the Engineering, Procurement and Construction Management model, the fixed price contracts will provide greater certainty and reduce overall project risk. All contracts, including project management, will include incentives around delivering the project on time and on budget as well as liquidated damages where relevant.

On this basis, the Company has identified relevant engineering firms with appropriate experience in the construction and operation of vanadium projects to develop detailed designs and tender packages with a view to ensuring that the Company maintains close control of the flowsheet, equipment selection and preferred engineering firm and/or supplier.

#### STEELPOORTDRIFT AND TWEEFONTEIN PROJECT UPDATE

In addition to the above workstreams, the Company is progressing the following key areas around the project:

- **Site Access Road:** Preparations are underway for the construction of an alternative site access road to the Steelpoortdrift project from the main road that will bypass the existing access road through community residential areas in the interests of safety to the community and efficiency of operations. The Company is in the process of obtaining quotes and the relevant approvals required.
- **Solar Power:** Kadoma Investments (Pty) Limited (“Kadoma”) has continued to advance the proposed 35MW PV solar plant which will be located adjacent to and will supply power to the SRL site at Tweefontein.  
Kadoma has also been recently engaged to assist in designing the 10MW PV solar farm at the mining and concentrator site at Steelpoortdrift.
- **Rope Conveyor:** Discussions with potential suppliers and initial analysis show a rope conveyor transporting the concentrate to the SRL site would be a more economic and efficient way than by trucks as proposed in the DFS. The Company plans to mandate a group to complete a Pre-Feasibility Study on the Rope Conveyor to better understand the economics, timing and environmental impact.
- **Project Management Team:** The Company has commenced recruitment of additional engineers and staff to assist with the management of the Project and preparing for Construction.
- **Acquisition of SRL Site<sup>5</sup>:** The Company remains in discussions with Kadoma with respect to an extension of the timing for the option to acquire the proposed SRL site from Kadoma (currently set to expire on 30 September 2023). The Company expects to exercise the option prior to expiry but has the support of Kadoma to extend this option if required.

<sup>5</sup> Refer to ASX Announcement dated 19 August 2022 “Acquisition of property to locate salt roast facility”.



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- Increased Project Interest:** Having concluded agreements to increase the Company's interest in the project to 86.49%<sup>6</sup>, one transaction remains conditional upon South African Reserve Bank ("SARB") for approval and both are conditional upon the Company deciding, in its discretion, to proceed with the transaction after receiving legal advice in relation to the "*once empowered, always empowered*" principle that the transaction may complete without reactivating minimum Black Economic Empowerment ownership requirements and whether it is a requirement for the Minister of Mineral Resources and Energy to consent to an amendment of the mining rights held by VanRes pursuant to the agreements. At this stage, the Company has obtained approval from SARB with respect to Obeec (Pty) Ltd (in relation its 7.95% shareholding of VanRes) and SARB has requested the holder of Math-pin Trust ("**Math-pin**") to restructure the entity into a company structure, which has been completed and is about to be resubmitted to the SARB. No guidance on the timing of SARB's decision with respect to Math-pin is available and both agreements will remain incomplete until a final decision by the Board of the Company to proceed has been made. The conditions are to be satisfied or waived by the Company by no later than 23 October 2023, unless renewed. Once any one of the agreements have become unconditional, the Company will announce it.

A revised Project timeline is set out below in line with the updated project implementation plan with FID targeted by H2 CY2024. While the revised timeline is a delay to the original FID target, the Board and Management are confident in the implementation plan and are focused on delivering a high-quality project that is robust, efficient and will maximise the potential value of the Steelpoortdrift deposit.

## OFFTAKE PROCESS

Following the completion of the strategic placement to Matrix in May 2023<sup>7</sup>, the Company has been focused on negotiating the terms of agency and offtake agreements for 40% of vanadium products produced from Phase 1 operations of the Project over a 10-year term. While the initial four-month exclusivity period granted to Matrix has expired, the Company is pleased to report that these discussions are progressing with Matrix and that both parties have reaffirmed their commitment to seek to enter into agency and offtake agreements to achieve the outcomes envisioned in the memorandum of understanding concluded in May 2023. The outcome aimed for by both parties is consensus that will ensure mutually beneficial terms and terms that are both suitable to potential construction debt financiers and to the Asian market.

Significant interest has been shown in the remaining agency and offtake available, with multiple indicative term sheets and expressions of interest provided to the Company over the last six months from North American and European groups. Following evaluation of the available options, the Company has progressed discussions and entered into negotiations with a view to securing an agency and/or offtake agreement and strategic equity investment. While the Company is pleased to have progressed negotiations on securing further agency and/or offtake, there is no guarantee that these discussions will culminate in a completed transaction.

<sup>6</sup> Refer to ASX Announcement dated 03 May 2023 "*VR8 Increase Project Interest from 73.95% to 86.49%*".

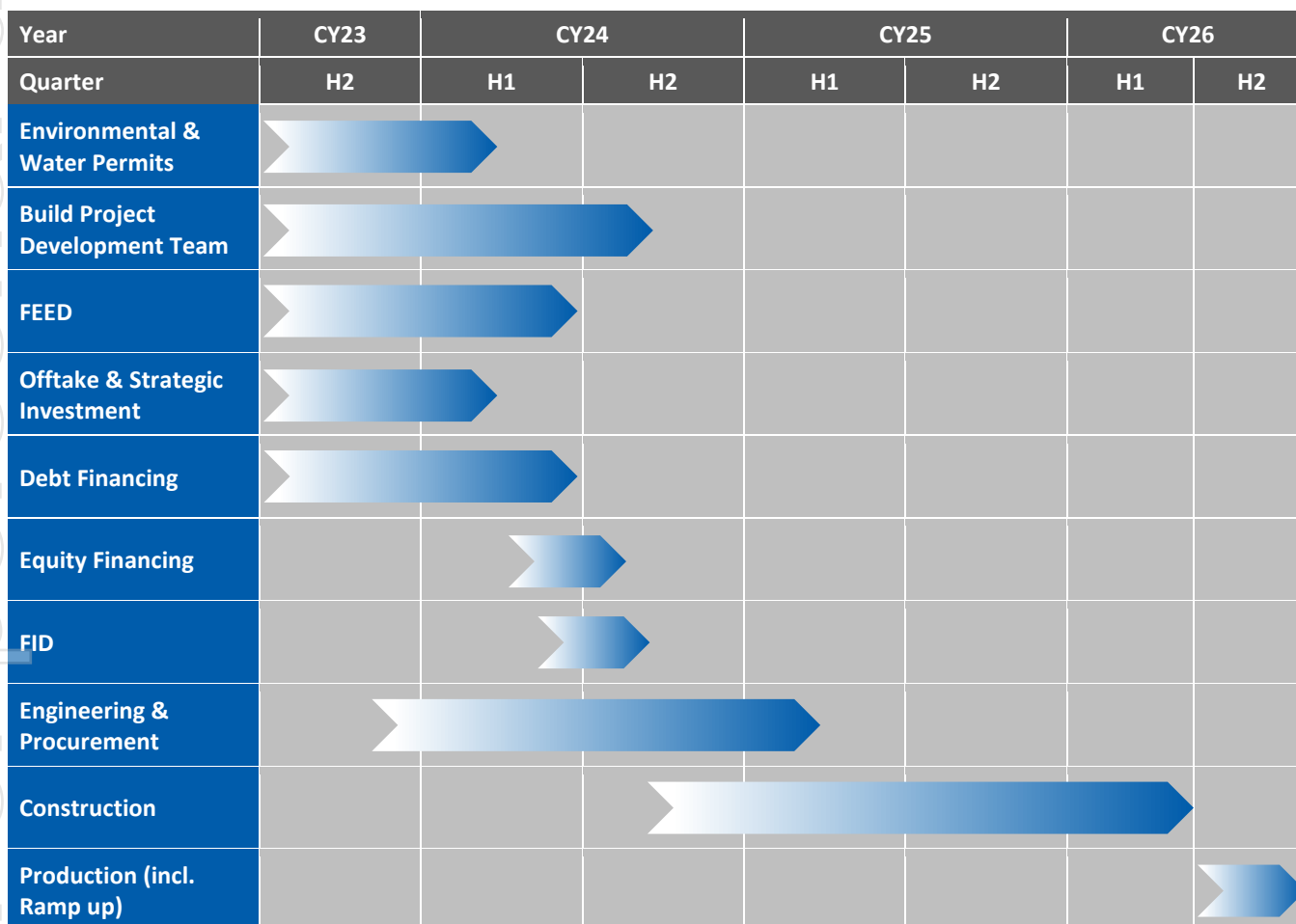
<sup>7</sup> Refer to ASX Announcement dated 03 May 2023 "*Premium Strategic Placement and MOU*"

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## FUNDING PROCESS

As previously reported, the Company is pleased to have several potential funding pathways available to finance the Project having received a number of non-binding indicative term sheets from debt financiers. Discussions with potential debt financiers have continued as the Company aims to progress to obtaining credit approved term sheets and ensure that the Project is ready for a due diligence process. With the engineering and technical side of the Project progressing well and the preparation of binding offtake agreements taking place, the Company will aim to proceed to mandating debt financiers during the next few months.

## UPDATED PROJECT TIMELINE



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

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#### ASX announcements referenced to directly, or in commentary of, this release

- <sup>1</sup> ASX: VR8 4 October 2022, *DFS delivers A\$1.9Bn NPV confirming World Class Project*
- <sup>2</sup> ASX: VR8 4 October 2022, *VR8 Updates Mineral Resource and Ore Reserve for the Steelpoortdrift Vanadium Project*
- <sup>3</sup> ASX: VR8 20 February 2023, *Vanadium Resources appoints General Manager Operations*
- <sup>4</sup> ASX: VR8 25 July 2023, *Quarterly Activities/Appendix 5B Cash Flow Report*
- <sup>5</sup> ASX: VR8 19 August 2022, *Acquisition of property to locate salt roast facility*
- <sup>6</sup> ASX: VR8 03 May 2023, *VR8 Increase Project Interest from 73.95% to 86.49%*
- <sup>7</sup> ASX: VR8 03 May 2023, *Premium Strategic Placement and Offtake MOU*

#### Competent Persons Statement and Compliance Statements

The information in the referenced announcements footnoted above that relate 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 have previously been released to the ASX. The Company confirms that it is not aware of any information or data that materially affects the information included in the previously announced market announcements, and that all material assumptions and technical parameters underpinning the announcements 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.

#### 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.

## MINERAL RESOURCE ESTIMATE

The Resource statement as reported on the 4 October 2022<sup>8</sup> was updated and is as follows:

**Table 1: Mineral Resource Estimate (as at 30 April 2022)**

CLASSIFICATION	VOLUME (M m <sup>3</sup> )	QUANTITY (Mt)	QUALITY (% V <sub>2</sub> O <sub>5</sub> In-situ)	CONTAINED V <sub>2</sub> O <sub>5</sub> (Mt)	QUALITY (% Fe <sub>2</sub> O In-Situ)	CONTAINED Fe <sub>2</sub> O (Mt)
Measured	43.77	145.46	0.72	1.05	22.47	32.68
Indicated	98.75	327.29	0.70	2.29	22.80	74.62
Inferred	63.41	207.38	0.68	1.40	22.90	47.49
<b>Total Mineral Resource</b>	<b>205.93</b>	<b>680.13</b>	<b>0.70</b>	<b>4.74</b>	<b>22.76</b>	<b>154.80</b>

Source: Sound Mining, 2022

Notes:

- Stated at a cut-off grade of 0.45% V<sub>2</sub>O<sub>5</sub>;
- The Mineral Resources are stated on a 100% attributable basis for VanRes, of which VR8 owns 73.95%;
- The Mineral Resources are inclusive of Ore Reserves; and
- Reported in-situ with any apparent computational errors due to rounding not considered significant.

## ORE RESERVE

The updated Ore Reserve statement as at 30 September 2022

**Table 2: Ore Reserves as at 30 September 2022**

CLASSIFICATION	QUANTITY (Mt)	QUALITY (% V <sub>2</sub> O <sub>5</sub> RoM)	CONTAINED V <sub>2</sub> O <sub>5</sub> (Mt)
Proved Ore Reserves	30.23	0.70%	0.21
Probable Ore Reserves	46.62	0.72%	0.34
<b>Total Ore Reserves</b>	<b>76.86</b>	<b>0.72%</b>	<b>0.55</b>

Source: Sound Mining, 2022

Notes:

- The Ore Reserves are stated at a price of USD9.50/lb;
- The Ore Reserves are stated on a 100% attributable basis for VanRes, of which VR8 owns 73.95%;
- The LoM was restricted to a production forecast of 25 years whereafter the mining licence will need to be renewed.
- The Ore Reserves are reported at the point of delivery for processing;
- The Quantity is reported in metric tonnes and the Grade reported as a percentage of contained V<sub>2</sub>O<sub>5</sub>;
- Any apparent computational errors due to rounding are not considered significant;
- The Ore Reserves may be subject to legal, political, environmental or other risks;
- Losses that could occur as a result of transportation of content or Flake are considered to be negligible; and
- 39% of the Ore Reserves are in the Proved category and no Inferred Mineral Resources included in the Ore Reserve estimate.

<sup>8</sup> Refer to ASX Announcement dated 4 October 2022 "VR8 Updates Mineral Resource and Ore Reserve for the Steelpoortdrift Vanadium Project"