

17 June 2024

## STEELPOORTDRIFT VANADIUM PROJECT UPDATE

**Vanadium Resources Limited (ASX: VR8; DAX: TR3) (the “Company”)** provides the following update for its world-class Steelpoortdrift Vanadium Project (the “**Project**”) in South Africa.

### CHINESE VANADIUM INDUSTRY ROADSHOW: CONCLUSION AND IMMEDIATE NEXT STEPS

The Company wishes to advise that its Chinese Vanadium Industry Roadshow (“**Roadshow**”)<sup>1</sup>, which involved a series of high-quality meetings throughout China with potential offtake partners, strategic equity investors, Engineering-Procurement-Construction (“**EPC**”) firms and financiers, concluded on 24 May 2024.

The Memorandums of Understanding (“**MOUs**”) for offtake already signed with ‘Hexiang’<sup>2</sup>, ‘Enerflow’<sup>3</sup> and ‘Zhongxin’<sup>4</sup> represent over 100% of planned production from Phase 1 of the Project. The Company is continuing discussions with a range of other parties across China, Japan, Korea, North America and Europe in relation to further potential offtake agreements, strategic equity interest, EPC and financing. The objective is to run a competitive process to secure binding agreements for offtake, potentially including additional features such as EPC and financing, with the most suitable and value-accretive partners.

### CHINESE VANADIUM INDUSTRY ROADSHOW: IMPORTANT FEEDBACK

The key takeaway from the Roadshow was that China is highly focused on the rapid deployment of a substantial number of grid-scale Vanadium Flow Battery (“**VFB**”) power storage systems. Consequently, there is a significant need for large quantities of high-quality Vanadium Pentoxide (>99.5%) over the next 3 to 5 years. In addition, potential offtake partners emphasised the appeal of the Project as a reliable, long-term source of Vanadium Pentoxide. They noted its advantageous position on the global cost curve and its ability to supply up to 180 years' worth of Vanadium Pentoxide (at the proposed mining rates), as detailed in the Company’s previously released Definitive Feasibility Study (“**DFS**”).<sup>5</sup>

### DUAL PRODUCT STREAM SUITED TO THE STEEL AND VFB SECTORS

In line with this anticipated increase in demand for VFB energy storage systems over the coming years, the Company has elected to modify the back end of the salt-roast-leach (“**SRL**”) processing plant to be able to produce two product streams. This includes: 98% V<sub>2</sub>O<sub>5</sub> for the steel markets and 99.5% V<sub>2</sub>O<sub>5</sub> for the VFB market. The final split between 98% and 99.5% V<sub>2</sub>O<sub>5</sub> produced is yet to be determined and will be driven by finalised offtake agreements. This modification is different to the single 98% V<sub>2</sub>O<sub>5</sub> product which formed the basis of the original DFS, and it has now been incorporated into the front-end engineering and design (“**FEED**”) process. This will have the benefit of enhancing

<sup>1</sup> See ASX Announcement, 14<sup>th</sup> May 2024, “Chinese Vanadium Industry Roadshow”

<sup>2</sup> See ASX Announcement, 11<sup>th</sup> April 2024, “Off-take MOU with large Vanadium nitride producer”

<sup>3</sup> See ASX Announcement, 30<sup>th</sup> April 2024, “Additional MOU offtake signed with major VFB Producer”

<sup>4</sup> See ASX Announcement, 13<sup>th</sup> May 2024, “Over 100% of Phase 1 Production subject to Offtake MOUs”

<sup>5</sup> See ASX Announcement, 4<sup>th</sup> October 2022, “DFS delivers A\$1.9BN NPV confirming World Class Project”

realised sales pricing by targeting higher-purity forms of  $V_2O_5$ <sup>6</sup>. Consequently, the Company believes the likely overall net-effect of these changes will result in an enhancement in post-tax NPV when compared to the DFS (all else remaining equal).

The FEED will now form the basis of the proposed project implementation plan and contracting strategy. This will involve finalising material contracts which will include the completion of remaining detailed design work, provide fixed price, target schedules and performance guarantees for the Project. Work has already begun on preparing these tender packages, which will be issued under a competitive tender process.

## OPPORTUNITIES OUTSIDE THE STEEL AND VFB MARKET

In addition to the opportunity to directly address the VFB market, the Company is also considering alternative value-accretive product options, including the potential to produce ammonium metavanadate (“AMV”) and other related products such as vanadium electrolyte, vanadium nitride and ferrovandium. The consideration of these alternatives by the Company is in direct response to requests for supply/offtake from Chinese parties received during the Roadshow.

### Commenting on the Steelpoortdrift Vanadium Project Update, Mr John Ciganek, Chief Executive of VR8 said:

*“We have always anticipated that Steelpoortdrift would be banked and developed solely on the back of the steel market, which currently accounts for 89.2%<sup>7</sup> of vanadium demand. However, after our recent Roadshow, it became evident that the demand for high-quality Vanadium Pentoxide in China for grid-scale VFB systems is significantly larger than previously estimated. Our strategic decision to enable dual product streams of 98% and 99.5%  $V_2O_5$  is a direct response to this market demand, futureproofing Steelpoortdrift’s production profile and maximising its total long-term sales value.”*

### Commenting on the Steelpoortdrift Vanadium Project Update, Mr Jurie Wessels, Executive Chairman of VR8 said:

*“During our visit it became increasingly clear that many Chinese consumers of vanadium require a reliable supply for manufacturing products aimed at the steel market, as well as a consistent supply of high-purity vanadium for the VFB and specialist alloy markets. We left China with the impression that the domestic supply of vanadium is inconsistent, at times scarce and frequently lacks the required purity levels. As such, the perception we gained was that China’s vanadium supplies are either inconsistent or inadequate, resulting in higher purification costs in the energy storage and alloy markets.*

*Considering these supply-side complications, we firmly believe that VR8 is privileged to be advancing a world-class asset like Steelpoortdrift, given the anticipated exponential growth of VFB systems on the horizon. Thanks to its lower impurity levels, Steelpoortdrift holds a clear competitive advantage over its slag-sourced  $V_2O_5$  counterparts in the VFB market, an advantage that VR8 intends to fully capitalise on*

<sup>6</sup> At 13 June 2024, the current sale price for 99.5%  $V_2O_5$  Powdered Vanadium is CNY114,000/t versus 98.0%  $V_2O_5$  Flake product of CNY83,500/t. This current pricing implies a ~36% premium for 99.5%  $V_2O_5$  product over the 98%  $V_2O_5$  product. Refer to the “The Shanghai Metals Market” for daily spot prices of vanadium products: [vanadium price | SMM \(metal.com\)](https://www.smm.com.cn/price/priceDetail.do?commodityCode=V2O5&commodityName=V2O5)

<sup>7</sup> Project Blue, March 2024, “Vanadium Medium-term Outlook”

*for the benefit of shareholders. Coupled with its potential 180-year mine life and projected bottom quartile operating costs, Steelpoortdrift is in the box seat for development.”*

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

For further information, please visit <https://vr8.global> or contact:

Jurie H. Wessels  
Executive Chairman

**VANADIUM RESOURCES LIMITED**

E: [contact@vr8.global](mailto:contact@vr8.global)

John Ciganek

Managing Director and Chief Executive Officer

**VANADIUM RESOURCES LIMITED**

E: [contact@vr8.global](mailto:contact@vr8.global)

Erik Bergseng, CFA®

Investor Relations

P: (612) 8350 0882

E: [eberg seng@nrinvestor.com.au](mailto:eberg seng@nrinvestor.com.au)

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### Competent Person's Statement and Compliance Statements

The information in the referenced announcements 8 and 9 footnoted below 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. 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.

- 8) ASX: VR8 4 October 2022, DFS delivers A\$1.9Bn NPV confirming World Class Project
- 9) ASX: VR8 4 October 2022, VR8 Updates Mineral Resource and Ore Reserve for the Steelpoortdrift Vanadium Project

### 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.

## APPENDIX 1 – MINERAL RESOURCE ESTIMATE

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

### 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 86.49%;
- The Mineral Resources are inclusive of Ore Reserves; and

Reported in-situ with any apparent computational errors due to rounding not considered significant.

## APPENDIX 2 – ORE RESERVE

The updated Ore Reserve statement as at 30 September 2022 .

### 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 86.49%;
- 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 4 October 2022 "VR8 Updates Mineral Resource and Ore Reserve for the Steelpoortdrift Vanadium Project"