

## VIKING COMMENCES STAGE 2 METALLURGICAL TESTWORK AT CANEGRASS

- Viking Mines has engaged ALS Metallurgy to undertake Stage 2 metallurgical testwork on samples obtained from the recent 7,500m drilling campaign at the Canegrass Battery Minerals Project
- 29 samples have been submitted, with the main zone at Fold Nose from hole VCRC0026 being evaluated.<sup>1</sup>
  - 29m at 0.80% V<sub>2</sub>O<sub>5</sub>, 36.6% Fe and 8.8% TiO<sub>2</sub> from 138m
- The testwork objectives are aimed at producing a vanadium pentoxide (V<sub>2</sub>O<sub>5</sub>) flake, via a series of processes to extract and purify vanadium from the ore samples.

Viking Mines Limited (ASX: VKA) ("Viking" or "the Company") is pleased to provide an update on the ongoing progress at the Company's flagship Canegrass Battery Minerals Project ("the Project" or "Canegrass"), located in the Murchison Region of Western Australia.

The recent 7,500m drill program at Canegrass infilled and extended the main mineralised zones as well as assessing new target areas. The program was successful in expanding the mineralised zones and the infill drilling confirmed the continuity of mineralisation. As such, the Company is currently undertaking a Mineral Resource Estimate upgrade for Canegrass with results due shortly.

The Stage 2 testwork is aimed at assessing the metallurgical properties on areas assessed by the recent drilling, with a two-stage process planned, initially producing a concentrate before then processing further to a V<sub>2</sub>O<sub>5</sub> flake.

### Commenting on the commencement of the Stage 2 metallurgical testwork, Viking Mines Managing Director & CEO Julian Woodcock said:

*"I'm pleased to announce the initiation of Stage 2 metallurgical testwork for the Canegrass Battery Minerals Project, a critical next step forward towards producing a high-quality Vanadium Pentoxide flake."*

*"The start of this next phase aims to build on the success of the previous sighter testwork completed by the Company and represents our commitment to advancing the project forward."*

*"Viking are rapidly advancing this high-value Project, and with these results we will be able to determine the best pathway to extract value for the benefit of shareholders. I look forward to sharing the progress and results with the market as we achieve key milestones."*

### Stage 2 Metallurgical Testwork Programme

ALS Metallurgy have been engaged to conduct stage two metallurgical testwork on 29 samples collected from hole VCRC0026, which was completed as part of Vikings March extensive 7,500m exploration drill program.

<sup>1</sup> ASX Announcement Viking Mines (ASX:VKA) 4 September 2023



29 one metre samples were selected from the main intercept within hole VCRC0026 above a 0.5% V<sub>2</sub>O<sub>5</sub> cut-off (Figure 1).

The stage 2 testwork is a critical next step for the Company focusing on the optimisation of processes to produce a bulk concentrate that can be refined to produce a Vanadium Pentoxide (V<sub>2</sub>O<sub>5</sub>) flake.

The stage 2 metallurgical testwork is expected to be completed by late in the March quarter 2024, with the Company providing an update on milestones achieved throughout this period.

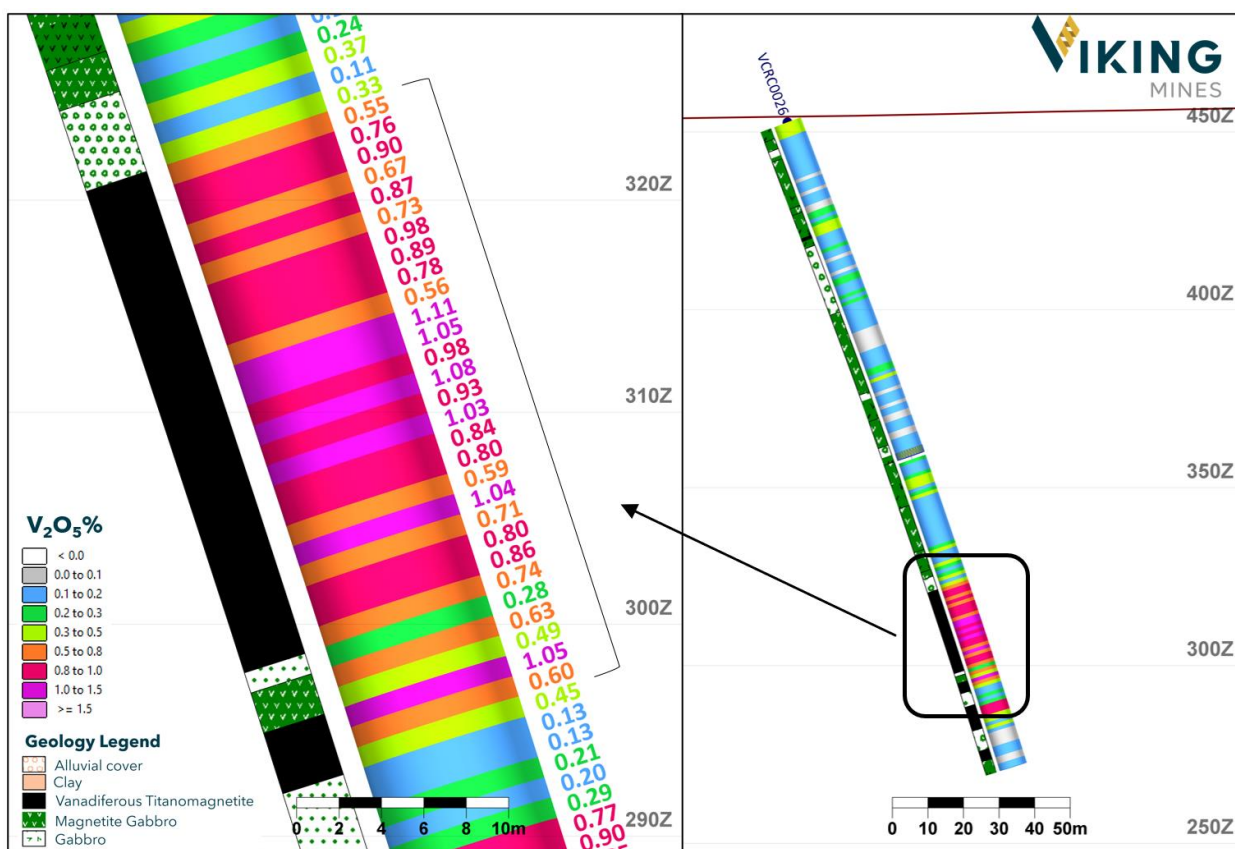


Figure 1 – Cross section through hole VCRC0026 showing the samples selected for metallurgical testwork with the intercept reporting 29m at 0.80% V<sub>2</sub>O<sub>5</sub>, 36.6% Fe and 8.8% TiO<sub>2</sub> from 138m. Values shown are for V<sub>2</sub>O<sub>5</sub>.

**END**

This announcement has been authorised for release by the Managing Director of the Company.

*JW*

Julian Woodcock  
Managing Director and CEO  
**Viking Mines Limited**

For further information, please contact:  
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### **Forward-Looking Statements**

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Viking Mines Limited's planned exploration programme and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may", "potential," "should," and similar expressions are forward-looking statements. Although Viking Mines Limited believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.

### **Competent Persons Statement - Exploration Results**

Information in this release that relates to Exploration Results is based on information compiled by Mr Julian Woodcock, who is a Member and of the Australian Institute of Mining and Metallurgy (MAusIMM(CP) - 305446). Mr Woodcock is a full-time employee of Viking Mines Ltd. Mr Woodcock has sufficient experience which 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 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Woodcock consents to the disclosure of the information in this report in the form and context in which it appears.

### **Competent Persons Statement - Mineral Resources**

The information in this report that relates to Mineral Resources is based on, and fairly reflects, information compiled by Mr Aaron Meakin, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Meakin is a consultant to Red Hawk Mining Ltd and Viking Mines Ltd, employed by CSA Global Pty Ltd, independent mining industry consultants. Mr Meakin has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code). The Company is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. 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 on 30 November 2022.

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## CANEGRASS BATTERY MINERALS PROJECT

The Canegrass Battery Minerals Project is located in the Murchison region, 620km north-east of Perth, Western Australia. It is accessed via sealed roads from the nearby township of Mt Magnet to within 22km of the existing Resources. The Project benefits from a large undeveloped Inferred Vanadium Resource hosted in vanadiferous titanomagnetite (VTM) Mineralisation as part of the Windimurra Layered Igneous Complex.

The Project benefits from ~95km<sup>2</sup> of exploration tenements with very limited follow up exploration targeting the growth potential of the vanadium pentoxide (V<sub>2</sub>O<sub>5</sub>) Resources in the +10 years since the Resource was first calculated. Multiple drill ready targets are present which have the potential to significantly add to the already large Resource base, with high grade intercepts presenting an opportunity to substantially increase the average grade.

### JORC (2012) MINERAL RESOURCE

The Canegrass Battery Minerals Resource has been calculated across two separate areas called the Fold Nose and Kinks deposits, each with eight and four separate mineralised domains modelled respectively. The Mineral Resource has subsequently been reported above a cut-off grade of 0.5% V<sub>2</sub>O<sub>5</sub> and above the 210 RL (equivalent to a maximum depth of ~250m) (refer to ASX Announcement on 30 November 2022).

*Canegrass Project Vanadium Mineral Resource estimate, 0.5% V<sub>2</sub>O<sub>5</sub> cut-off grade, >210m RL (due to the effects of rounding, the total may not represent the sum of all components).*

Deposit	JORC Classification	Tonnage (Mt)	V <sub>2</sub> O <sub>5</sub> %	Fe %	TiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P %	SiO <sub>2</sub> %	LOI %
Fold Nose	Inferred	59	0.66	30.5	6.5	11.9	0.006	22.9	2.9
Kinks	Inferred	20	0.57	27.4	5.5	13.0	0.009	25.9	3.1
<b>TOTAL</b>		<b>79</b>	<b>0.64</b>	<b>29.7</b>	<b>6.0</b>	<b>12.2</b>	<b>0.007</b>	<b>23.6</b>	<b>3.0</b>

### VIKING MINES FARM-IN AGREEMENT

Viking, via its wholly owned subsidiary, Viking Critical Minerals Pty Ltd, commenced with a Farm-In arrangement with Flinders Mines Ltd (ASX:FMS) on 28 November 2022 to acquire an equity interest in the Canegrass Battery Minerals Project. Through the terms of the Farm-In, Viking can acquire up to 99% of the Project through completion of 4 stages via a combination of exploration expenditure of \$4M and staged payments totalling \$1.25M over a maximum period of 54 months. If Viking complete the Farm-In to 99% equity interest, Flinders may offer to sell to Viking the remaining 1% of the Project for future production and milestone related payments totalling \$850,000. If Flinders do not offer to sell within a prescribed timeframe their right lapses, they must offer Viking the right (but not the obligation) to buy the remaining 1% for the same terms. The Project has a legacy 2% Net Smelter Royalty over the project from when Flinders Mines acquired it from Maximus Resources in 2009.

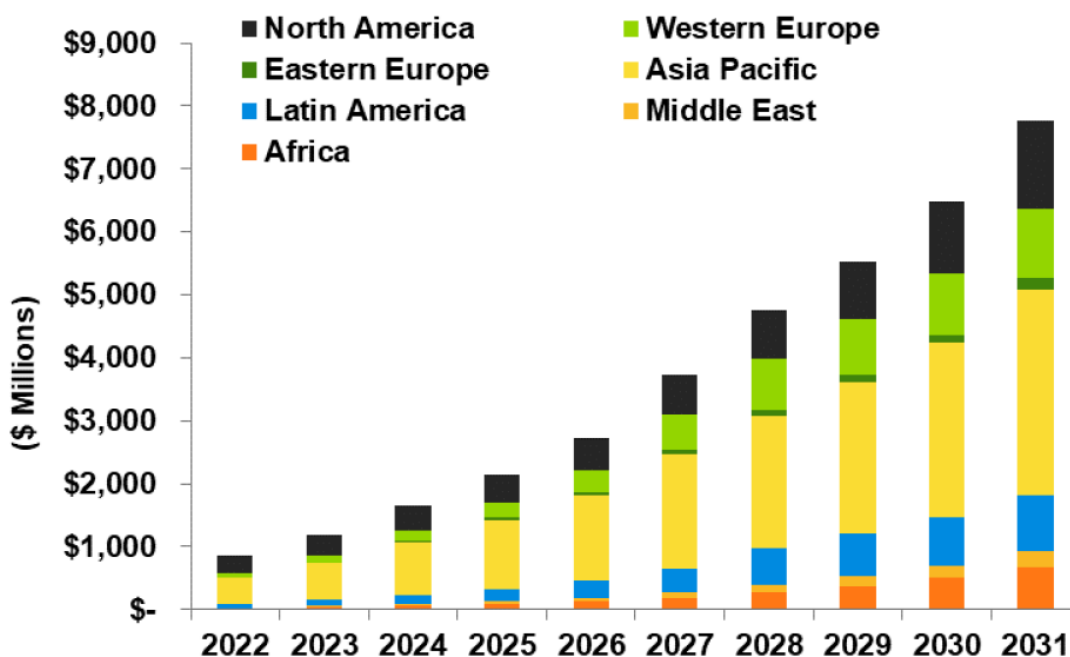


## VANADIUM REDOX FLOW BATTERIES - GREEN ENERGY FUTURE

Viking Mines recognise the significant importance of Vanadium in decarbonisation through the growth of the Vanadium Redox Flow Battery (“VRFB’s”) sector.

VRFB’s are a developing market as an alternate solution to lithium-ion (“Li-ion”) in specific large energy storage applications. Guidehouse Insights Market Intelligence White Paper<sup>i</sup> published in 2Q 2022 forecasts the VRFB sector to grow >900% by 2031 through the installation of large, fixed storage facilities (Figure 2).

### Annual Installed VRFB Utility-Scale and Commercial and Industrial Deployment Revenue by Region, All Application Segments, World Markets: 2022-2031



(Source: Guidehouse Insights)

Figure 2; Forecast growth of the VRFB Sector through to 2031 (source – Guidehouse Insights<sup>i</sup>)

The reason for this forecast growth is that VRFB’s have unique qualities and advantages over Li-ion in the large energy storage sector to complement renewable energy sources to store the energy produced. They are durable, maintain a long lifespan with near unlimited charge/discharge cycles, have low operating costs, safe operation (no fire risk) and have a low environmental impact in both manufacturing and recycling. The Vanadium electrolyte used in these batteries is fully recyclable at the end of the battery’s life.

Importantly, and unlike Li-ion, the battery storage capacity is only limited by the size of the electrolyte storage tanks. This means that with a VRFB installation, increasing energy storage capacity is only a matter of adding in additional electrolyte (via the installation of additional electrolyte storage tanks) without needing to expand the core system components. Increasing the energy storage directly reduces the levelized cost per kWh over the installation’s lifetime. This is not an option with Li-ion batteries.

It is for these reasons that VRFB’s are an ideal fit for many storage applications requiring longer duration discharge and more than 20 years of operation with minimal maintenance.

i) Guidehouse Insights White Paper Vanadium redox Flow Batteries Identifying Market Opportunities and Enablers Published 2Q 2022 [https://vanitec.org/images/uploads/Guidehouse\\_Insights-Vanadium\\_Redox\\_Flow\\_Batteries.pdf](https://vanitec.org/images/uploads/Guidehouse_Insights-Vanadium_Redox_Flow_Batteries.pdf)