

# VIKING DELIVERS 103% GROWTH AT CANEGRASS WITH 2.2 BILLION LBS OF VANADIUM PENTOXIDE

- Viking has completed an updated JORC (2012) Mineral Resource Estimate (MRE) report for the Canegrass Battery Minerals Project (the Project).
- MRE grows 103% and now contains >2.2 Billion Pounds of the critical mineral Vanadium Pentoxide (V<sub>2</sub>O<sub>5</sub>).
- Total Inferred MRE for the Project:
  - 146Mt at 0.70% V<sub>2</sub>O<sub>5</sub>, 31.8% Fe & 6.6% TiO<sub>2</sub> (>0.5% V<sub>2</sub>O<sub>5</sub> cut-off)
- High-grade subset of the MRE provides the basis to commence a Scoping Study to assess Project options:
  - 27.5Mt at 0.87% V<sub>2</sub>O<sub>5</sub>, 37.3% Fe & 8.0% TiO<sub>2</sub> (>0.8% V<sub>2</sub>O<sub>5</sub> cut-off)
- Thick zones of high-grade mineralisation >0.8% V<sub>2</sub>O<sub>5</sub> commence from surface indicating potential for a low strip-ratio mining operation.
- Maiden estimate for copper, nickel & cobalt at the Project, delivering:
  - 146Mt at 0.066% Cu, 0.062% Ni & 0.016% Co (>0.5% V₂O₅ cut-off).
  - Total metal content of 97Kt Cu, 90Kt Ni & 23Kt Co
  - Metallurgical testwork planned to assess process options for these additional valuable metals.
- Applying metallurgical testwork results to the high-grade subset of the MRE indicates the potential to deliver >16Mt concentrate at a grade of >60% Iron.<sup>1</sup>
- The opportunity to produce a direct ship concentrate with credits for Iron and Vanadium to be investigated.
- Viking to commence with preliminary activities ahead of Scoping Study.

**Viking Mines Ltd (ASX: VKA)** ("**Viking**" or "**the Company**") is pleased to provide an update on the highly anticipated Mineral Resource Estimate ("**MRE**") for the Canegrass Battery Minerals Project ("**the Project**" or "**Canegrass**"), located in the Murchison region of Western Australia.

The MRE has proven highly successful, with a 103% increase in the contained  $V_2O_5$  to 2.2 Billion Pounds within the total MRE (>0.5%  $V_2O_5$ ) of 146Mt at 0.70%  $V_2O_5$ , 31.8% Fe & 6.6% TiO<sub>2</sub>. Significantly, a **high-grade subset of the MRE contains 27.5Mt at 0.87% V\_2O\_5**, providing the basis to move forward and commence with a Scoping Study on the Project.

The opportunity to produce a direct ship Iron Ore concentrate from the Project with credits for Vanadium content to be investigated by the Company.

### Viking Mines' Managing Director & CEO, Julian Woodcock, said:

"I am extremely pleased with the outcome of the MRE. The Company identified the opportunity at Canegrass with the presence of outcropping mineralisation throughout the tenure which was not included in the 2017 MRE inherited with the Project.

<sup>&</sup>lt;sup>1</sup> Viking Mines (ASX:VKA) ASX Announcement 4 August 2023 - Viking Achieves Exceptional Vanadium Recoveries up to 99.3%



"Not only is it a significant achievement that we have more than doubled the contained Vanadium within the Deposit, but more importantly we have identified and defined a substantial high-grade portion of 27.5Mt at 0.87%  $V_2O_5$  which will form the basis for commencing a Scoping Study.

"With the positive results from the metallurgical testwork completed earlier this year that produced a magnetic concentrate >60% Fe<sup>1</sup>, we can now investigate the opportunity to produce a magnetite concentrate suitable for direct shipping.

"Combined with the first estimates for Cu, Ni and Co, this provides additional optionality for Viking to assess multiple pathways to release the huge inherent value in this large multicommodity Resource."

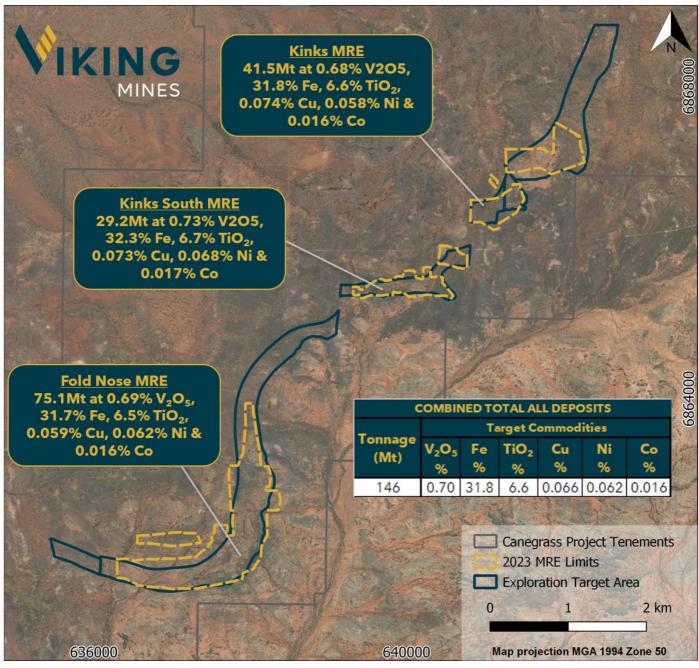


Figure 1; Map of the Canegrass Project showing the JORC (2012) MRE for each of the deposit areas and the total combined estimate. Note all Resources are Inferred category reported above a 0.5% V<sub>2</sub>O<sub>5</sub> cut-off. Totals may vary due to rounding.



### **CANEGRASS PROJECT MINERAL RESOURCE ESTIMATE**

Industry consultants, MEC Mining have completed the MRE update for Viking Mines Canegrass Project. The MRE update is the product of the extensive exploration campaign undertaken by Viking since announcing acquisition of the Project in November 2022.

The MRE has determined a significant increase at the Project over the previous estimate reported by Red Hawk Mining in 2017.<sup>2</sup> Table 1 below provides the summary of the MRE and comparison to the previous estimate.

The tonnage has increased substantially, with improvements in grade for all the target commodities. Further, the grade of the deleterious elements has decreased, which results in a higher quality ore more amenable to processing to produce a magnetic concentrate.

Table 1; 2023 Canegrass Project MRE update and comparison to 2017 model<sup>2</sup> showing substantial growth in tonnes and grade of the primary commodities (reported above a 0.5% V<sub>2</sub>O<sub>5</sub> cut-off). Note, Cu, Ni & Co were not estimated for the Project in 2017.

	JORC (2012)	Cut-Off	Toppage		Та	arget C	ommod		Delete	rious El	ements	LOI		
MDE	Classification		(Mt)	V <sub>2</sub> O <sub>5</sub> %	Fe %	TiO₂ %	Cu %	Ni %	<b>C</b> o %	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	P %	%	
VKA 2023 Model	Inferred	>0.5	146	0.70	31.8	6.6	0.066	0.062	0.016	11.7	21.7	0.005	1.7	
RHK 2017 Model	Inferred	>0.5	79	0.64	29.7	6.0	-	-	-	12.2	23.6	0.007	3.0	
% Change from 2017 Model	-	>0.5	85%	<b>9</b> %	7%	10%	-	-	-	-4%	-8%	- <b>26</b> %	-44%	

Most significantly is a high-grade subset of the MRE when reported above the higher cut-off of 0.8%  $V_2O_5$ . This cut-off has been selected as it represents the change from disseminated magnetite in gabbro to massive magnetite bands seen in the drilling data and forms continuous zones which the Company believe could be amenable to mining.

This high-grade subset of the MRE will form the basis for Vikings future work to assess the economic viability of the Project and aligns with the Company's aspirations to become a 15-20 year mine life operator processing 1.5-2.0Mtpa.

A summary of the MRE above a 0.8% cut-off is provided in Table 2 below.<sup>2</sup>

		Cut-0#	<b>T</b>	Target Commodities Deleterious Elements								LOI	
MRE	Inferred	V <sub>2</sub> O <sub>5</sub> %	Tonnage (Mt)	V₂O₅ %	Fe %	TiO₂ %	Cu %	Ni %	<b>C</b> o %	Al <sub>2</sub> O <sub>3</sub> %	SiO₂ %	P %	%
VKA 2023 Model	Inferred	>0.8	27.5	0.87	37.3	8.0	0.073	0.019	0.071	9.1	16.5	0.003	1.4
RHK 2017 Model	Inferred	>0.8	7.8	0.82	36.6	7.9	-	-	-	12.1	23.6	0.006	3.0
% Change from 2017 Model	-	>0.5	253%	<b>6</b> %	2%	1%	-	-	-	-24%	-30%	- <b>49</b> %	-53%

Table 2; 2023 Canegrass Project MRE high-grade subset >0.8% V<sub>2</sub>O<sub>5</sub> cut-off as a part of the total Resource.<sup>2</sup>

A full breakdown of the MRE by individual deposits is provided in Appendix 1 and shown on Figure 1.

<sup>&</sup>lt;sup>2</sup> Viking Mines (ASX:VKA) ASX Announcement 30 November 2022 - Viking to Farm Into Substantial Battery Minerals Project





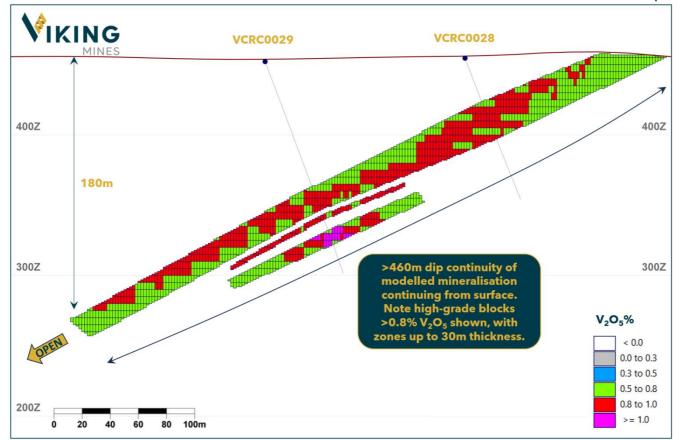


Figure 3; Cross-section through the Fold Nose Deposit looking to the NE showing the distribution of high-grade zones within the broader mineralised package. Note mineralisation extends from surface to depth with over 460m dip continuity and thicknesses up to 30m.

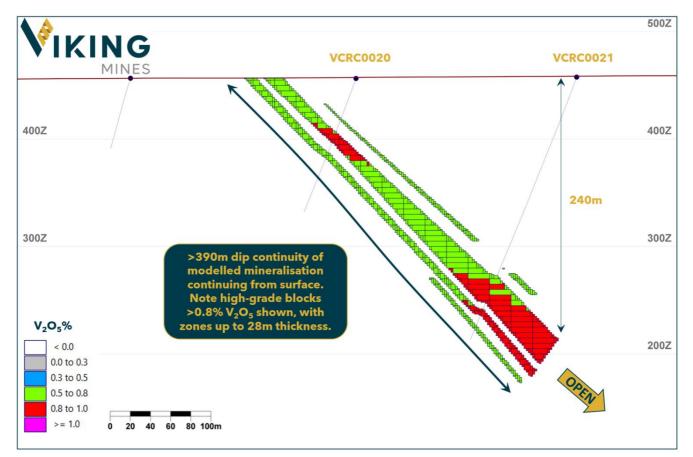


Figure 2; Cross-section through the Kinks Deposit looking to the West showing the distribution of high-grade zones within the broader mineralised package. Note mineralisation extends from surface to depth with over 390m dip continuity and thicknesses up to 28m.



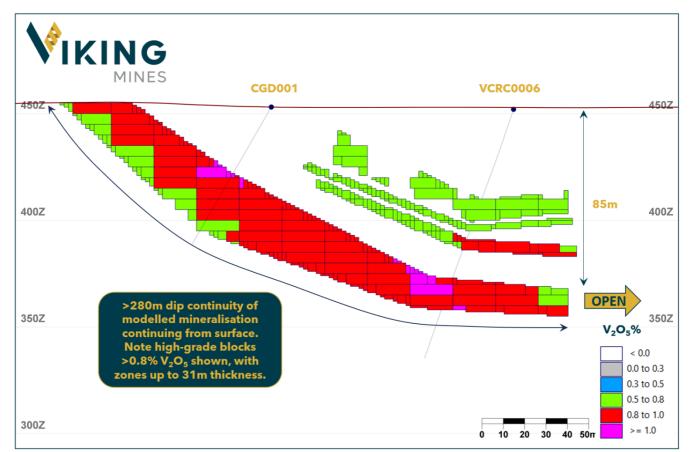


Figure 4; Cross-section through the Kinks South Deposit looking to the West showing the distribution of high-grade zones within the broader mineralised package. Note mineralisation extends from surface to depth with over 280m dip continuity and thicknesses up to 31m.

### **Target Commodities & Mineral Content**

The primary target commodities for the Project are Vanadium (as  $V_2O_5$ ), Iron, Titanium (as TiO<sub>2</sub>), Copper, Nickel and Cobalt. The MRE has resulted in substantial quantities of these valuable minerals being defined. Table 3 & Table 4<sup>2</sup> provide a summary of the contained commodities within the MRE at the stated cut-off grades. The tonnage and grade values used to determine these mineral quantities are provided in the tables above.

	al Content V2O5 cut-off)	V₂O₅ B Lbs	Fe Mt	TiO₂ Mt	Cu T	Ni T	Co T	
VKA 2	023 Model	2.24	46.4	9.6	96,503	90,172	23,359	
RHK 2	017 Model	1.06	22.7	4.6	Not estimated			
	ge from 2017 Model	110%	105%	109%	-	-	-	

Table 4; Contained quantities in the MRE of the target commodities above a 0.8%  $V_2O_5$  cut-off

Metal Content (>0.8% V <sub>2</sub> O <sub>5</sub> cut-off)	V₂O₅ B Lbs	Fe Mt	TiO <sub>2</sub> Mt	Cu T	NiT	Co T	
VKA 2023 Model	0.53	10.3	2.2	20,142	19,553	5,132	
RHK 2017 Model	0.12	2.4	0.5	Not estimated			
% Change from 2017 Model	339%	326%	318%	-	-	-	



### **GROWTH POTENTIAL**

With the extensive drilling completed by the Company and the completion of the MRE, areas for further growth have been identified at each of the three deposits (Figure 5, Figure 6 & Figure 7). This provides further upside opportunity to both increase the tonnes and grade of the high-grade subset of the total MRE.

With further drilling in these areas, it is anticipated that the total high-grade subset will grow and exceed the Company's target of >30Mtand commensurate growth of the total MRE >0.5% V<sub>2</sub>O<sub>5</sub> cut-off will likely occur as a byproduct of this work.

Drill programmes to test these areas will be investigated by the Company as part of future work programmes.

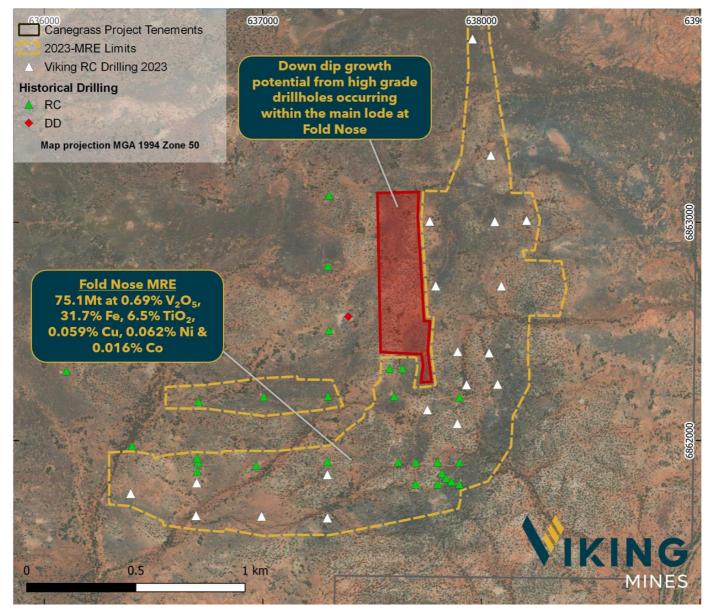


Figure 5; Map of the Fold Nose Deposit with 2023 MRE limits shown and target areas for further growth of the MRE illustrated.



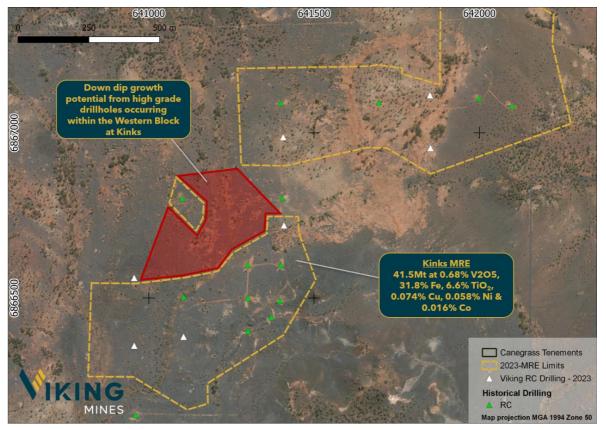


Figure 6; Map of the Kinks Deposit with 2023 MRE limits shown and target areas for further growth of the MRE illustrated.

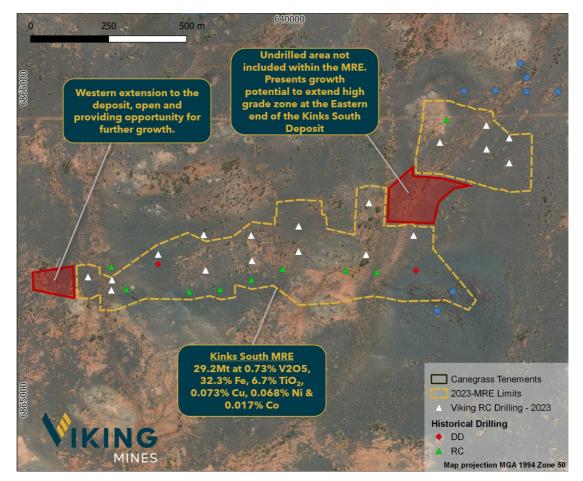
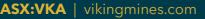


Figure 7; Map of the Kinks South Deposit with 2023 MRE limits shown and target areas for further growth of the MRE illustrated.





### **FORWARD STRATEGY**

With the high-grade subset of the total MRE reaching close to our aspirational target of 30Mt >0.9%  $V_2O_5$ , the Company is now focussed on determining the most effective method to release the high inherent value of the Project.

Further metallurgical testwork has commenced with the objective of producing  $V_2O_5$  flake as an end product suitable for sale from the Project. This testwork will also further evaluate the mineralisation and its suitability to produce a marketable Iron Ore concentrate. The benefit of this approach is that a much lower capital cost project could be undertaken to produce a magnetic concentrate which could be direct shipped to offtake partners.

In addition to investigating the metallurgy and potential of offtake partners for product from the Project, the Company will commence with initial economic assessments with a pit optimisation study. This is a key pre-cursor to commencing a Scoping Study as it will define an indication of the size of operation which could be supported by the updated MRE. Discussions have commenced with MEC Mining to undertake this work.

In parallel with the pit optimisation study, the Company will also commence determining the key steps required to complete a Scoping Study on the Project.

These next stage work programmes will collectively identify the economic potential of the project.

### **MINERAL RESOURCE ESTIMATE – MATERIAL INFORMATION SUMMARY**

Viking Mines engaged industry consultants MEC Mining to undertake a Mineral Resource Estimate (MRE) for the Canegrass Battery Minerals Project.

The MRE incorporates 3 deposits called Fold Nose, Kinks and Kinks South, with estimates completed for the following:  $V_2O_5$ , Fe, TiO<sub>2</sub>, Cu, Ni, Co, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, P, LOI, and Density.

A summary of sampling techniques and data, and estimation and reporting methodologies is contained in JORC Table 1 which is included as an attachment to this ASX release.

The Resource is reported above the 210 m RL, which effectively removes all blocks at a depth greater than 250 m below surface. MEC Mining consider that this approach results in a Mineral Resource Estimate which appropriately and transparently addresses the "Reasonable Prospects for Eventual Economic Extraction" requirement for Mineral Resources reported under the JORC Code (2012 Edition) with regards to mining potential.

#### **Geology and Geological Interpretation**

All domains were defined using a combination of grade, primarily vanadium, titanium, and iron; magnetic susceptibility, density, and lithology. Domains were modelled on the basis that the deposits were formed from differentiation of layers in the magma chamber melt and were subsequently folded. An implicit model was used to guide the explicit modelling. All MRE were reported above an economic cut-off grade of 0.5% V<sub>2</sub>O<sub>5</sub>, no top cuts were applied as no extreme values that could bias the estimation were observed.

The final wireframes constructed for each of the three deposits and coloured by domain are shown in plan view below for the Kinks South area (Figure 8), the Fold Nose area (Figure 9) and the Kinks area (Figure 10).

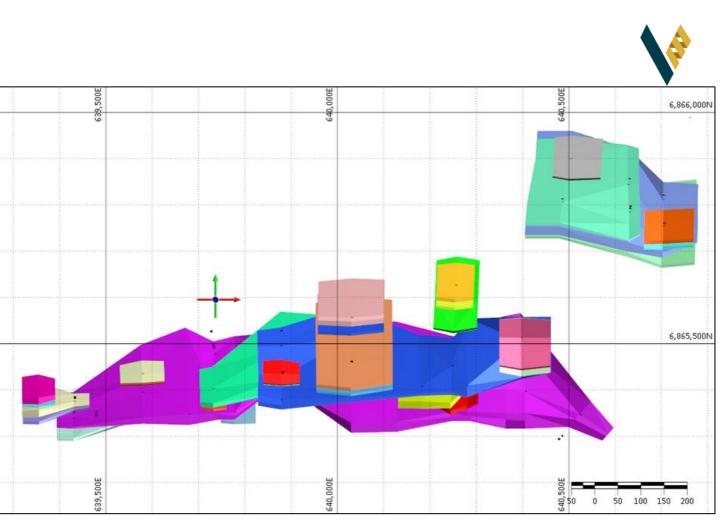


Figure 8; Plan view of Kinks South wireframes – Wireframe colours by sub-domains with the main domain coloured purple which provides the largest contribution of mineralisation to the final MRE statement >0.5% V<sub>2</sub>O<sub>5</sub>.

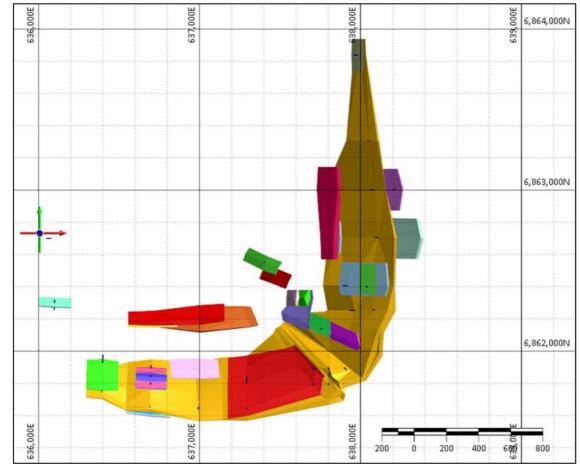
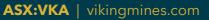


Figure 9; Plan view of Fold Nose Deposit wireframes – Wireframe colours by sub-domains with the main domain coloured orange which provides the largest contribution of mineralisation to the final MRE statement >0.5% V<sub>2</sub>O<sub>5</sub>.



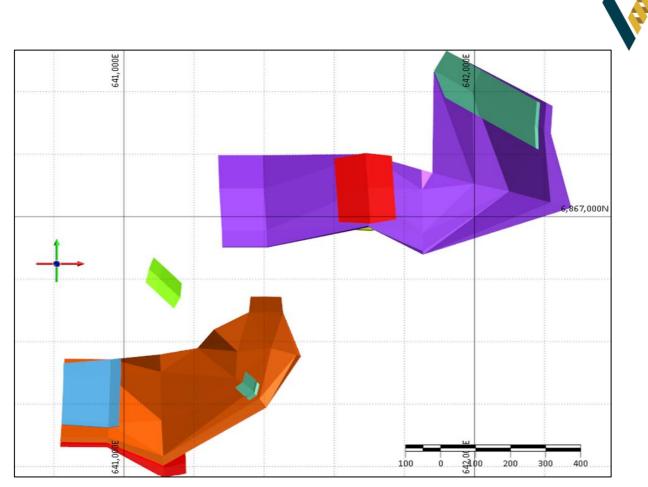


Figure 10; Plan view of Kinks wireframes – Wireframe colours by sub-domains with the main domain coloured orange which provides the largest contribution of mineralisation to the final MRE statement >0.5% V<sub>2</sub>O<sub>5</sub>.

#### **Sampling and Sub-Sampling Techniques**

Reverse circulation ("**RC**") drilling was the primary sampling method, with lessor diamond (NQ2 size) drilling. Cone splitters were used for sampling 1m intervals during RC drilling programmes with the 2m and 4m composite samples obtained by spear or scoop sampling of bags.

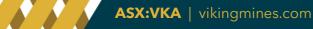
Diamond core was cut in quarter with a core saw and sampled at variable intervals. RC recoveries were reported as all very good based on visual estimates but not quantified. The diamond recoveries reported as excellent but not quantified.

Samples were then sorted, dried and weighed at the laboratory. The whole sample was then crushed, and split with a riffle splitter to collect a sub-sample, which was then pulverised using a vibrating pulveriser.

#### **Drilling Techniques**

One hundred and five (105) drill holes for 15,833m were used for the MRE; inclusive of 102 Reverse Circulation (RC) drillholes for 14,978m, and 3 Diamond drill holes for 678m. Drillhole depths range from 7m to 500.7m. Viking drilled 43 drillholes for 7,104m, 45% of the total 15,833m.

- Fold Nose has 47 drillholes for 7,426.7m; inclusive of 46 RC drill holes for 6,926m, and 1 Diamond drillhole for 500.7m. Viking Drilled 17 holes for 2,768m which is 37%, and Historic drilling is 30 drillholes for 4,658.7m which is 63%.
- Kinks South has 34 drillhole for 4,578.3m; inclusive of 2 Diamond drillhole for 177.3m, and 32 RC drillholes for 4,401m. Viking Drilled 19 drillholes for 3,237m which is 71%, and Historic drilling is 15 holes for 1,164.3m which is 29%.





• Kinks has 24 drillholes for 3,828m. All Kinks drillholes are RC. Viking Drilled 7 holes for 1,099m which is 29%, and Historic drilling is 17 drillholes for 2,729m which is 71%.

The drillhole spacing at Fold Nose varies from  $100m \times 50m$  to  $300m \times 100m$ . The drillhole spacing at Kinks South varies from  $50m \times 100m$  to  $300m \times 100m$ . The drillhole spacing at Kinks varies from  $100m \times 100m$  to  $300m \times 150m$ .

#### **Classification Criteria**

The Mineral Resource has been classified in accordance with guidelines contained in the JORC Code (2012 Edition). Data quality, data distribution, and the geological and grade continuity at the project were considered prior to forming a judgement on Mineral Resource confidence. Following consideration of these aspects, Fold Nose, Kinks South and Kinks Mineral Resources were classified as Inferred.

#### **Sample Analysis Method**

The majority of samples used to estimate the Mineral Resource were derived from drilling completed by Maximus Resources, Flinders Mines (now Red Hawk Mining) and Viking Mines.

Theses samples were submitted to laboratories in Perth for analysis. A prepared sample is fused using a 12:22 lithium tetraborate – lithium metaborate flux to form a glass bead then determined by x-ray fluorescence (XRF). Loss on ignition results were determined using a robotic TGA system. Furnaces in the system were set at 425, 650 and 1000° C. Samples were analysed by XRF for 21 elements including V, Fe, TiO<sub>2</sub>, Cu, Ni, Co, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, P and LOI, in addition to other constituents that weren't estimated. The techniques are considered total.

#### **Estimation Methodology**

Assays were composited to 1m. The geology model wireframes were assigned to the assay file. The grades within the wireframes were then used to model experimental variograms using two components and spherical variogram models.

The Ore Block Model parent blocks were 20m x 20m east/west and north/south and 5m in elevation, subcelled to 2m x 2m east/west and north/south and 1m in elevation. All blocks were restricted to the geological wireframes.

Only those composited sample intervals which occur within the wireframed mineralisation were used to interpolate grades into the block model, using ordinary block kriging, with discretisation of  $2 \times 2 \times 2$  to partially address change of support issues. Negative kriging weights were reset to zero and subcells were estimated to obtain resolution of estimation as the narrow geometry of the lodes did not permit estimation to parent cells only.

The Fold Nose MRE were estimated using flattening and extension to allow for the training of the search ellipse to include all relevant samples. The Kinks South and Kinks MRE were not unfolded or flattened as they were linear.

Experimental semivariograms were modelled for:

- Vanadium (with cobalt, copper and nickel using these variogram parameters for the estimation of these elements);
- Iron (with LOI, phosphorous, silica, and alumina using these variogram parameters for the estimation of these elements); and
- Titanium.

Search ellipse distances were defined initially from the semivariogram range distances and were then increased to ensure all blocks were populated. Search ellipses used a minimum of





three drillholes for Run 1 to avoid isolated estimation of blocks. The search ellipse dimensions were increased for Run 2 to populate all remaining blocks.

Some lodes included assay results for commodities such as Vanadium but did not include LOI and other variables. As such, the average interpolated grade for the variable being estimated was defaulted to blocks within the OBM which were not interpolated due to the absence of values. This occurred for LOI in all three deposits and for SiO<sub>2</sub> in the Kinks deposit.

#### **Cut-off Grades**

A cut-off grade of 0.5% V<sub>2</sub>O<sub>5</sub> has been applied when reporting the Mineral Resource. A 0.5% V<sub>2</sub>O<sub>5</sub> cut-off grade is within the range adopted for reporting Mineral Resources at other Australian VTM deposits for planned open cut operations.

#### **Modifying Factors**<sup>1,3</sup>

Davis Tube Recovery (DTR) test work has been completed at the Project, with the most recent work completed by Viking on samples collected from the Kinks South Deposit. Results have demonstrated that a magnetic concentrate can be produced with the Vanadium, Iron and Titanium reporting to the concentrate. Recoveries over 90% vanadium reporting to the magnetic concentrate were achieved. Further testwork is required to demonstrate that a Vanadium Pentoxide flake product can be produced and is currently underway on samples collected from the Fold Nose deposit.

#### **Reasonable Prospects Hurdle**

Clause 20 of the JORC (2012) Code requires that all reports of Mineral Resources must have reasonable prospects for eventual economic extraction, regardless of the classification of the resource.

MEC Mining deems that there are reasonable prospects for eventual economic extraction using open pit mining on the following basis:

- The Canegrass lodes outcrop or occur close to surface and will be amenable to opencut mining to commence production.
- A restriction of depth to 210 m RL was applied to all MRE that are prospective for opencut mining, correlating with an average depth of 250m, which may be confirmed by recommended pit optimisation studies.
- The Canegrass Mineral Resource occurs within a prolific Vanadium region with several projects in a pre-operations phase, there is strong nearology, and extensive infrastructure.
- The Canegrass project is 60km from the township of Mount Magnet, with sealed airstrip & regular commercial flights. There is a bitumen road to within 22km of the Canegrass project. The Midwest gas pipeline passes 22km north of the Project. The Canegrass project is 419km from an established Port at Geraldton already used to export iron ore and mineral sands.
- The metallurgical testwork completed to date demonstrates that a magnetic concentrate can be produced from the Project which indicates the potential to deliver a marketable product.
- A cut-off grade of 0.5% V<sub>2</sub>O<sub>5</sub> has been applied when reporting the Mineral Resource. A 0.5% V<sub>2</sub>O<sub>5</sub> cut-off grade is within the range adopted for reporting Mineral Resources at other Australian VTM deposits for planned open cut operations.

 $<sup>^3</sup>$  Viking Mines (ASX:VKA) ASX Announcement 2 March 2023 – Viking Receives High-Grade Vanadium Results up to 1.47% V2O5





• Demand for vanadium is likely to increase in the future, particularly given potential battery applications.

#### **NEXT STEPS**

With the completion of the MRE and the substantial increase in both the quantity and quality of the Resource, the Company has achieved a significant milestone, less than 12 months since acquiring the Project. Work continues to advance the Project forward with the following key items underway:

- Second stage metallurgical testwork underway to produce  $V_2O_5$  flake and demonstrate a saleable product for offtake discussions.
- Undertake a preliminary pit optimisation study to assess the potential production opportunities and to feed into key objectives for a Scoping Study.
- Further assessment of magnetic concentrate products to review options for a direct ship iron ore product with vanadium credits.
- Engage with potential offtake partners and commence discussions on marketing of Canegrass concentrate.

#### END

This announcement has been authorised for release by the Board of Directors.

Julian Woodcock Managing Director and CEO **Viking Mines Limited**  For further information, please contact: Viking Mines Limited Sarah Wilson - Company Secretary +61 8 6245 0870

#### 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 and exploration target 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.

The information in this announcement that relates to the Mineral Resource estimate is derived from information compiled by Mr Dean O'Keefe, a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM, #112948), and Competent Person for this style of mineralisation. Mr O'Keefe is a consultant to Viking Mines Limited, and is employed by MEC Mining, an independent mining and exploration consultancy. Mr O'Keefe 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). Mr O'Keefe consents to the inclusion in the report of the matters based on the results in the form and context in which they appear. **Competent Persons Statement - Metallurgical Results** 

The information contained in this report, relating to metallurgical results, is based on, and fairly and accurately represent the information and supporting documentation prepared by Mr Damian Connelly. Mr Connelly is a full-time employee of METS Engineering who are a Contractor to Viking Mines Ltd, and a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Connelly 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, Exploration Targets, Mineral Resources and Ore Reserves. 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 announcements.



### **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 ( $V_2O_5$ ) 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 Mineral Resource has been calculated across three separate areas called the Fold Nose, Kinks and Kinks South deposits, each with. The 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).

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).

	JORC (2012)	Cut-Off	Tonnage	Target Commodities Deleterious Elements								LOI		
MRE	Classification			<b>V</b> <sub>2</sub> <b>O</b> <sub>5</sub>	Fe	TiO <sub>2</sub>	Cu	Ni	Со	$Al_2O_3$	SiO <sub>2</sub>	Р	%	
		-2-3	(1110)	%	%	%	%	%	%	%	%	%		
VKA 2023 Model	Inferred	>0.5	146	0.70	31.8	6.6	0.066	0.062	0.016	11.7	21.7	0.005	1.7	

#### **VIKING MINES FARM-IN AGREEMENT**

Viking, via its wholly owned subsidiary, Viking Critical Minerals Pty Ltd, commenced with a Farm-In arrangement with Red Hawk Mining Ltd (formerly Flinders Mines Ltd) (ASX:RHK) 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, Red Hawk Mining may offer to sell to Viking the remaining 1% of the Project for future production and milestone related payments totalling \$850,000. If Red Hawk Mining 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 Red Hawk Mining acquired it from Maximus Resources in 2009.

As of August 2023, Viking has completed the first stage of the Farm-In and acquired a 25% equity interest in the tenements hosting the Deposits.

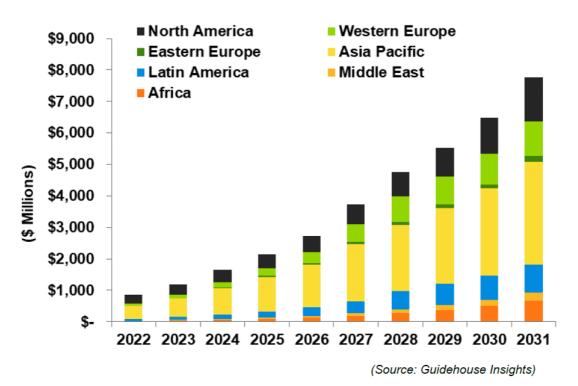


### **VANADIUM REDOX FLOW BATTERIES - GREEN ENERGY FUTURE**

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 11).

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



#### Figure 11; 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



		Cut-Off	V <sub>2</sub> O <sub>5</sub> %		Tenner										
Model	Deposit	From	То	JORC (2012) Classification	Tonnag e (Mt)	V <sub>2</sub> O <sub>5</sub> %	Fe %	TiO₂ %	Cu %	Ni %	<b>Co</b> %	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	Р%	LOI %
		0.00	0.50	Inferred	19.7	0.44	21.8	4.1	0.056	0.046	0.012	15.8	31.9	0.005	1.4
	Fold Nose	0.50	0.80	Inferred	60.6	0.65	30.3	6.2	0.057	0.059	0.015	13.1	23.2	0.004	1.8
	Fold Nose	0.80		Inferred	14.5	0.87	37.5	8.0	0.070	0.071	0.018	9.9	16.5	0.004	1.3
-		>0.5		Inferred	75.1	0.69	31.7	6.5	0.059	0.062	0.016	12.5	21.9	0.004	1.7
Model		0.00	0.50	Inferred	7.8	0.42	21.2	4.4	0.044	0.041	0.011	18.0	31.4	0.007	3.7
Ř	Kinks South	0.50	0.80	Inferred	19.6	0.65	30.1	6.1	0.071	0.066	0.016	11.8	22.4	0.003	2.5
33	Kinks Journ	0.80		Inferred	9.6	0.88	36.8	8.0	0.076	0.071	0.019	8.6	16.3	0.003	1.7
2023		>0.5		Inferred	29.2	0.73	32.3	6.7	0.073	0.068	0.017	10.7	20.4	0.003	2.3
5		0.00	0.50	Inferred	3.3	0.47	22.9	5.0	0.051	0.037	0.012	16.7	30.1	0.010	0.7
ġ	Kieles	0.50	0.80	Inferred	38.0	0.66	31.2	6.4	0.074	0.057	0.016	11.3	22.8	0.009	1.3
Ver	Kinks	0.80		Inferred	3.5	0.84	38.2	8.1	0.080	0.069	0.020	7.6	16.8	0.004	1.0
November		>0.5		Inferred	41.5	0.68	31.8	6.6	0.074	0.058	0.016	11.0	22.3	0.008	1.3
		0.00	0.50	Inferred	30.8	0.44	21.8	4.3	0.053	0.044	0.011	16.4	31.6	0.006	1.9
	Combined	0.50	0.80	Inferred	118.3	0.66	30.6	6.3	0.065	0.060	0.015	12.3	22.9	0.006	1.8
	Combined	0.80		Inferred	27.5	0.87	37.3	8.0	0.073	0.071	0.019	9.1	16.5	0.003	1.4
		>0.5		Inferred	145.8	0.70	31.8	6.6	0.066	0.062	0.016	11.7	21.7	0.005	1.7

#### **APPENDIX 1 - 2023 MINERAL RESOURCE ESTIMATE SUMMARY BY DEPOSIT**



### APPENDIX 1 - JORC CODE, 2012 EDITION - TABLE 1

JORC Table 1, Section 1 - Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	Viking Mines 2023 Drilling         In 2023, RC drilling collected samples during the drilling process using industry standard techniques including face sampling drill bit and cone splitter. Chip samples are collected from the drill cuttings and sieved and put into chip trays for geological logging.         Historical Information         WMC Rock chip samples were collected from outcrop identified during geological mapping. The historical reports do not detail how the samples were selected or taken.         WMC and Maximus Resources Percussion and Reverse Circulation drilling samples were collected from drillholes. Samples are taken from the pulverised and broken rock material produced by the drilling process. No information in the historical reports details any specific methods were employed.         WMC and Maximus Resources Diamond Drilling samples were collected from the drillcore by cutting the core to produce a whole rock sample. No information in the historical reports details any specific methods were employed other than those detailed in the sections below.         Red Hawk Mining (formerly Flinders Mines) collected RC and diamond samples for analysis. All samples are safely sealed in labelled calico bags. There was no downhole geophysics assisting in the sampling.         Rock chip samples collected by CSA Global for Red Hawk Mining were collected from outcrop identified during geological mapping. The historical reports do not detail how the samples were selected or taken.
Sampling techniques	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Viking Mines 2023 Drilling         Cone splitter is an industry standard sampling device which sup-splits the metre drilled into representative samples. QAQC measures including the use of duplicate samples checks the suitability of this method to retain representative samples. Based on a review of the sampling data, samples are representative of the interval drilled.         Historical Information       WMC Rock Chips - The nature of these samples is that they are random and not fully representative of the outcrop sampled. These samples are used in the exploration process to give indications to the Company on prospectively and to plan follow up exploration results.         WMC Drilling - No information is available in WAMEX reports.         Maximus Resources & Red Hawk Mining (formerly Flinders Mines) drilling -No measures were taken to ensure sample representivity. No calibration of any measurement tools were required.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or	Viking Mines 2023 Drilling Reverse circulation drilling was used to obtain 1m samples which were collected from the cone splitter. Samples have been composited in some cases to either 2 or 4m composites by scooping from the calico bag collected from the cone splitter at the rig. Samples have been dispatched to ALS laboratories in Perth for analysis by XRF fused bead analysis. If sample weight exceed 3kg they are crushed and split using a rotary splitter at the laboratory to produce a 3kg sample. The samples are then pulverized to 85% <75um to produce a sample for analysis XRF methods. <u>Historical Sample Preparation</u> WMC completed Percussion Drilling, Reverse Circulation (RC) drilling and Diamond drilling (DD). Sample lengths varied from 1-2m for percussion holes and sample length was adjusted in diamond holes based on lithology, up to 1m maximum lengths. It is unknown what weight of samples were collected in the field and how the laboratory prepared the samples for analysis. No information is available in the reports on the sample details for the rock chip sampling.



Criteria	JORC Code explanation	Commentary
	mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information	Maximus Resources completed RC drilling and Diamond drilling. Maximus sample lengths for RC drilling varied from 2-4m in initial drilling with sub samples of 1m when results were received for areas of interest. Sample length was adjusted in diamond holes based on lithology, up to 1m maximum lengths. It is unknown what weight of samples were collected in the field and how the laboratory prepared the samples for analysis. <u>Summary of Red Hawk Mining (formerly Flinders Mines) RC Exploration Drilling and Sampling</u> Prior to 2017 before CSA Global commenced managing the exploration for Flinders Mines, RC drilling collected cone split 1m samples. RC samples weighed approximately 3-4kg. Samples were rifle split to 250g then pulverised by analysis. Subsequent to 2017, when CSA Global commenced managing the exploration for Flinders Mines, samples used in reporting the exploration results were obtained through reverse circulation percussion (RCP) and air core (AC) drilling methods. Samples were split through a cone splitter with a 12.5% chute attached to a calico bag. Vanadium samples were taken at various intervals (2m and 3m) and aircore samples at 2m intervals.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc.).	Viking Mines 2023 Drilling         Reverse circulation drilling using a 5 ½ inch bit and a face sampling hammer.         Historical Drilling         The historical reports state that WMC completed open hole percussion drilling for holes PCG1-4 and then RC drilling for holes PCG5-14. Diamond drilling was completed for CDG1 and CGD2.         Maximus resources completed RC drilling and diamond drilling (commencing with HQ and reducing to NQ) and core was drilled standard tube and not orientated.         Summary of Red Hawk Mining (formerly Flinders Mines) <u>RC Exploration Drilling</u> Prior to 2017 before CSA Global commenced managing the exploration for Flinders Mines, drilling was completed by RC percussion with a face sampling bit.         Subsequent to 2017, when CSA Global commenced managing the exploration for Flinders Mines, RCP and Air core drilling was completed.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Viking Mines 2023 Drilling         Recovery of sample is recorded by the field assistant when sampling and noted as either Good, Fair or Poor. Of the samples collected from the drilling programme, very few samples reported fair or poor recovery and no issues were identified with sample recovery for any samples related to the mineralised horizons. <u>Historical Information</u> Historical diamond drilling has core recovery recorded on the paper logs for the WMC drilling and in the digital logs for Maximus Resources. No records have been identified in the reports detailing recovery of RC or Percussion drilling for the WMC or Maximus Resources drilling.         Summary of Red Hawk Mining (formerly Flinders Mines) <u>RC Exploration Drilling and Sampling</u> Prior to 2017 before CSA Global commenced managing the exploration for Flinders Mines, RC sample recovery was not measured but visual estimates indicate it was very high.         Subsequent to 2017, when CSA Global commenced managing the exploration for Flinders Mines, the measurement of the RCP chip recoveries was subjective in nature, described visually as poor, fair or good by the field geologist viewing the sample spoils on the ground. The recoveries were generally reported as good.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Viking Mines 2023 Drilling         Drilling recovery is assessed by observing sample size. Samples are collected from the cyclone using a cone splitter and monitored for size to determine that they are representative.         Historical Information         No information is available in the historical reports which detail measures taken to maximise sample recovery and ensure representative nature of the samples.         Summary of Red Hawk Mining (formerly Flinders Mines) <u>RC Exploration Drilling and Sampling</u>



Criteria	JORC Code explanation	Commentary
		Subsequent to 2017, when CSA Global commenced managing the exploration for Flinders Mines face sampling hammers and an external booster were used to maximise sample recovery.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No relationship has been identified between sample recovery and grade. This is reflected by all samples collected having a good recovery. Further, due to the nature of the mineralisation under investigation and the relatively high values obtained, the impact of fines is not considered to be of significance.
	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Viking Mines 2023 Drilling         All chip samples have been geologically logged to a sufficient level to support any future mineral resource estimation, mining studies and metallurgical studies. All chip samples are retained at the Company offices and are available for further inspection when undertaking this future work.         Historical Information         All historical drilling has been geologically logged. WMC data was logged on to paper and copies of the reports are available and have been digitised.         Digital logs from drilling completed by Maximus Resource has been completed and incorporated in to the database.         Summary of Red Hawk Mining (formerly Flinders Mines) RC Exploration Drilling and Sampling         Drill chips and core were logged, including lithology, mineralisation and grainsize. Lithology codes were assigned to all intervals. No geotechnical logging has been completed.         For some drill samples, magnetic susceptibility has been measured and collected.         Viking Mines has completed a translation of logging codes in to a consistent standard set by assessing all historical codes used and aligning them with a common type. The Competent Person considers the logging methods appropriate for this style of mineralisation and suitable to support appropriate Mineral Resource estimation.
Logging	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Viking Mines 2023 Drilling         Logging of samples is qualitative in nature. Chip photos are taken of the chip trays. All the drill spoils at the drill site are photographed to retain a record of the colour variation within the hole. <u>Historical Information</u> Lithological logging is qualitative in nature. No core photographs have been identified. <u>Summary of</u> Red Hawk Mining (formerly Flinders Mines) <u>RC Exploration Drilling and Sampling</u> Logging is generally qualitative in nature and core has been photographed, both wet and dry. The Competent Person considers the logging methods appropriate for this style of mineralisation.
	The total length and percentage of the relevant intersections logged.	Viking Mines 2023 Drilling         All metres drilled have been geologically logged. <u>Historical Information</u> Logging exists for all drillholes. The entire of the hole was logged by appropriate methods with the relevant information recorded. Graphic log sheets are available for the historical WMC drilling and digital logs are available for the Maximus Resources drilling.         Summary of Red Hawk Mining (formerly Flinders Mines)RC Exploration Drilling and Sampling         Logging exists for all drillholes. The entire of the hole was logged by appropriate methods with the relevant information recorded.
Subsampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	<u>Viking Mines 2023 Drilling</u> Not applicable. <u>Historical Information</u> Historical core drilled by WMC is recorded as being cut but no details on if half or quarter core. Core drilled by Maximus resources was quarter core sampled.



Criteria	JORC Code explanation	Commentary
	lf non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Viking Mines 2023 Drilling         Samples were collected from the cyclone using a cone splitter for each metre drilled in to 2 calico bags. When composite samples were collected, a scoop is used to collect equal amounts from each metre interval used to make the composite sample. Dry samples are collected. <u>Historical Information</u> There is no information available in the historical reports on sample splitting method for the percussion drilling or whether sampled wet or dry. This applies to all work completed prior to Red Hawk Mining (formerly Flinders Mines). <u>Summary of</u> Red Hawk Mining (formerly Flinders Mines) <u>RC Exploration Drilling and Sampling</u> RC samples were logged on 1m intervals and sampled using a cone splitter at 3m intervals. All samples were dry.         Rock chip samples were crushed to 6mm and pulverised and riffle split to 250g, then pulverised to ≥75 micron with >85% passing.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Viking Mines 2023 DrillingThe sample preparation of the RC samples follows industry best practice, involving oven drying, pulverising, to produce a homogenous sub sample for analysis. All samples were pulverised to a nominal 85% passing 75-micron sizing and sub sampled for assaying and LOI determination tests. The sample preparation techniques are of industry standard and are appropriate for the sample types and proposed assaying methods. Historical Information There is no information available on the nature, quality and appropriateness of the sample preparation technique in the historical reports to determine its suitability. Summary of Red Hawk Mining (formerly Flinders Mines) RC Exploration Drilling and Sampling RC samples were cone split and composited into bags at 3m intervals and then sent to ALS Perth for analysis. Samples were riffle split to 250g and then pulverised. Analysis was by inductively couple plasma-atomic emission spectroscopy (ICP-AES) and couple plasma-mass spectroscopy (ICP-MS) (48 element – MEMS61 method). Fire assay was used for Au, Pt and Pd, with ICP-AES finish.The Competent Person considers that the sub sampling techniques and sample preparation are appropriate for reporting of Exploration Results and for Mineral Resource Reporting
	Quality control procedures adopted for all subsampling stages to maximise representivity of samples.	Viking Mines 2023 DrillingOther than field duplicate sampling, the laboratory conducts duplicate analysis on pulp samples to confirm repeatability of the pulverised material.A batch of umpire analysis are being selected and scheduled for analysis to provide an additional check on repeatability of results and determineappropriateness of the subsampling and homogenisation process.Historical InformationNo information has been identified in the historical reports reviewed on the quality control measures adopted for all subsampling stages to maximiserepresentivity.Summary of Red Hawk Mining (formerly Flinders Mines)No fails for any of the elements indicating a reasonable to good control over the laboratory cleaning methods used whilst processing the samplesand sampling practices.
	Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.	Viking Mines 2023 Drilling Drilling was conducted using a 5 ½ inch hammer to collect 1m samples. As the style of mineralisation is massive to disseminated with results for V2O5 being measured in %, the samples collected are deemed representative. To monitor this, duplicate samples are collected from the cyclone at a frequency rate of approximately 1 per 40 samples collected (~2.5%).Samples are selected from expected mineralised intervals to provide meaningful data to compare the original vs the duplicate. Duplicate samples show a good correlation against the original sample collected indicating that sampling is representative of the in-situ material collected. <u>Historical Information</u>



Criteria	JORC Code explanation	Commentary
		No blanks, CRM's or standards have been identified as being submitted in the reports reviewed associated with the historical data and the Competent Person can not verify if the results are representative of the in-situ material collected. <u>Summary of</u> Red Hawk Mining (formerly Flinders Mines) <u>RC Exploration Drilling and Sampling</u> Drilling prior to 2017 was primarily focussed on the Mineral Resource areas and for this drilling RC field duplicates were inserted in the sample stream as a check on sample precision at a rate of 3%. No CRM's were submitted to the laboratories. It is unknown whether any blanks were submitted For areas outside of the resource drilling it is noted that no field duplicates were collected. No blanks, CRM or standards were submitted. Subsequent to 2017 when CSA Global have managed the exploration for Flinders Mines, routine sampling QC has been inserted in to the sampling stream at reported levels of 1 blank per 20 samples and 1 duplicate per 20 samples. No fails have been noted in the reports received by Viking Mines from Flinders Mines analysis of the QC data indicates reasonable to good control of the laboratory cleaning methods used whilst processing the samples and the sampling practices. The CP considers that the sub-sampling techniques and sample preparation was appropriate for reporting Exploration Results.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The Competent Person considers the current methods and processes described as appropriate for this style of mineralisation. The nature and style of the mineralisation is relatively homogenous and as such the sample sizes collected are appropriate to the grain size of the material being sampled.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Viking Mines 2023 DrillingSample collected by Viking and submitted to ALS geochemistry for analysis were assayed for the full iron ore suite by XRF (24 elements) (lab codeME-XRF21n) and for total LOI by thermo-gravimetric technique (ME-GRA05). The method used is designed to measure the total amount of eachelement in the sample. A prepared sample (0.66g) is fused with a 12:22 lithium tetraborate – lithium metaborate flux which also includes anoxidizing agent (Lithium Nitrate), and then poured into a platinum mould. The resultant disk is in turn analysed by XRF spectrometry for major rockforming elements and selected trace element concentrations. The method is deemed suitable and appropriate for the style of mineralisation.Historical InformationWMC data – Historical reports state that for the rock chip sampling, Fe and V were analysed by various methods and laboratories using peroxidefusion and atomic absorption or XRF. Titanium was analysed by AMDEL laboratories using fusion and atomic absorption. For percussion anddiamond drilling, no information on the analytical method has yet been identified in the reports reviewed.Maximus Resources – The historical reports indicate that samples were sent to Ultratrace in Canning Vale or Spectrolabs in Geraldton and both labsutilised the Iron Ore analysis suite using XRF.Summary of Red Hawk Mining (formerly Flinders Mines) <u>RC Exploration Drilling and Sampling</u> Data prior to 2017 – Samples were sent to Wangarra Perth for preparation and analysis. Samples were riffle split to 250g then pulverised to a nominal85% passing 75 microns.Depending on target commodity, the following analysis methods were employed:The Vanadium and Gold samples both underwent analysis by ME-GRA5 (H20 LOI)
	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and	<ul> <li>Field tools were used to assist in identification of the VTM horizon for sampling. A KT-10 magnetic susceptibility meter has been used which measures the magnetic susceptibility of the sample. Unit specifications are:</li> <li>Circular coil design</li> <li>Sensitivity: 10-6 SI units</li> <li>Measurement range:</li> </ul>



Criteria	JORC Code explanation	Commentary
	model, reading times, calibrations factors	0.001 x 10-3 to 1999.99 x 10-3 SI units
	applied and their derivation, etc.	No calibration factors are applied to the data. The duration for the measurement sequence is 7 seconds.
	0	Viking Mines 2023 Drilling         A comprehensive QAQC programme involving the insertion of standards (certified reference materials – CRM's), blanks and duplicates has been implemented. Viking inserts standards at a frequency of 1:25, blanks 1:40 and duplicates 1:40. 3 x CRM's have been used by the company which were sourced from GeoStats and are certified for 21 elements (including Vanadium) and LOI. Results from the laboratory for the CRM's are plotted against the CRM values for the mean and 1,2, and 3 standard deviations from the mean. 2 of the 3 standards all performed within expected levels with 1 standard demonstrating good precision and a minor positive bias for accuracy. Further check assaying on 10 standards has been completed and confirmed that the minor positive bias is repeatable, indicating that the standard is reporting positive and is inherent to the standard samples being analysed. The magnitude of the bias has been reviewed and is deemed insignificant with respect the values being reported (~0.02% V2O5 positive bias).         QAQC results including CRMs, duplicate samples, repeat analysis and blanks for both Viking sample submissions and internal lab checks show no material issues for the recent assaying programmes.         Historical Information         WMC drilling and rock chip data – No sample QAQC has been identified in the historical reports for this data or any information on the laboratory performance. WMC did maintain a reputation for high quality exploration activities and on this basis the CP has a moderate degree of confidence in the data reported but is unable to verify the results through analysis of QAQC data.         Summary of Red Hawk Mining (formerly Flinders Mines) <u>RC Exploration Drilling and Sampling</u> Prior to 2017, no independent QC Samples were submitted. All sample QC was compl
		samples, which will include Vanadium CRM's at a future date to validate the historical datasets
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Viking Mines 2023 Drilling         MEC Mining completed an independent audit of the Viking Mines Database and as such have verified the significant intersections previously reported by the Company.         Historical Information         WMC drilling and rock chip data - Due to the samples being sampled and collected over 35 years ago, independent verification is difficult and has not been undertaken.         Data collected by Maximus Resource (pre-2011) - Due to the samples being sampled and collected over 15 years ago, independent verification is difficult and has not yet been undertaken. Viking Mines are in the process of attempting to source more details of the historical data including historical assay laboratory reports to validate and verify the results reported. However, given the limited extent of this drilling outside of the reported resource areas, it will be used to drive exploration targeting which will be followed up with further drilling, the CP considers the risk and impact to be low if any errors are present in the data.         Summary of Red Hawk Mining (formerly Flinders Mines) <u>RC Exploration Drilling and Sampling</u>



Criteria	JORC Code explanation	Commentary								
		Prior to 2017, alternative Flinders Mines personnel have verified significant intersections over the projects history. CSA Global managed drilling programmes on behalf of Flinders Mines (since 2017) and verified the intersections reported. The Competent Person considers the process described in the reports produced by CSA Global and provided by Flinders Mines as appropriate.								
	The use of twinned holes.	No twinned holes have been completed.								
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	No twinned holes have been completed. <u>Viking Mines 2023 Drilling</u> Data is collected in the field into digital devices and loaded into the company database by the companies database manager. All records are collected and stored on the company's server and cloud-based storage systems (SharePoint). Physical paper copies are also created as a part of the data collection process and are scanned and saved to SharePoint. <u>Historical Information</u> WMC data – All data were recorded on to paper logs and submitted in annual exploration reports. These paper reports have been used to review the results and subsequently digitised for assessment and evaluation. No further information on documentation of primary data, data entry procedures, data verification protocols is available. Maximus Resources Data – All data were recorded into digital logs and submitted in annual exploration reports. These digital logs have been consolidated into a database held by Flinders Mines and provided to Viking Mines as part of the due diligence process in assessing the project. No documentation has been identified or reviewed detailing the documentation of the primary data, data entry protocols, or data verification. Data is stored in an Access database. <u>Summary of</u> Red Hawk Mining (formerly Flinders Mines) <u>RC Exploration Drilling and Sampling</u> CSA Global managed drilling programmes on behalf of Flinders Mines (since 2017) and verified the intersections reported. Logging was carried out using templates derived for the project. All primary data collected was verified and loaded into an Access database where it is stored securely on the CSA Global server. The drill database is free from any obvious validation errors.								
	Discuss any adjustment to assay data.	No adjustment is made to the assay data. % V2O5, % TiO2 and % SiO2 are all calculated from the laboratory analysis of V, Ti and Si respectively using the following formulas. Compositing has been undertaken for reporting of results and is discussed below.         Element Analysis       Conversion to %         V       V ppm / 10,000         V% X 1.7852 = V2O5%								
		Ti         Ti ppm / 10,000         Tl% X 1.6681 = TiO2%           Si         Si ppm / 10,000         Si% X 2.1392 = SiO2%								



Criteria	JORC Code explanation	Commentary
Location of data points	Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Viking Mines 2023 Drilling         Drillholes locations are initially collected using a handheld GPS instrument to ~3m accuracy and subsequently surveyed by an external contractor using a Leica DGPS with mm accuracy. Downhole surveys are completed using a north seeking gyro instrument. Accuracy of the instruments used is determined acceptable for future use in mineral resource estimation.         Historical Information         For the historical drilling, survey grids were established and sample and collar coordinates determined and coordinates have been transcribed into the Flinders Mines database. These are expected to be of a suitable standard given the methods employed. For the historical rock chip sampling collected by WMC, no coordinates were available and were determined using a map containing sample locations. This map has been georeferenced in to GIS software using known infrastructure locations and the rock chip sample locations digitised. The accuracy of this methodology is considered to be within 50m of the expected sample locations.         No downhole survey data for the historical drilling has been evaluated and it is unknown at this time if any were collected. As such planned drillhole azimuth and dip have been used where no other information is available.         Summary of Red Hawk Mining (formerly Flinders Mines) <u>RC Exploration Drilling and Sampling</u> Collars have been surveyed using a handheld GPS instrument considered accurate within 5m. Downhole surveys have not been completed for any Air-Core drilling, formerly Flinders Mines) <u>RC Exploration Drilling and Sampling</u> Collars have been surveyed using a handheld GPS instrument considered accurate within 5m. Downhole surveys have not been completed for any spacing. Due to the magnetic intensity of some layers within the
	Specification of the grid system used.	The adopted grid system is MGA94_50 and all data are reported in these coordinates unless otherwise specified.
	Quality and adequacy of topographic control.	Viking Mines 2023 Drilling Collar locations for the drilling results reported in this release are compared to the DTM for topography at the Canegrass Project. No significant variations have been noted, indicating that the topographic model being utilised correlates well with the surveyed drilling collar locations. <u>Historical Drilling and</u> Red Hawk Mining (formerly Flinders Mines) <u>RC Exploration Drilling</u> There has been no topographical control established. Given the terrain is relatively flat, the Competent Person does not consider this a material risk. <u>The method used to create the topography file is unknown, however the topography file matches the drillhole collar coordinates, hence the Competent Person considers it likely to be relatively accurate.</u>
Data spacing and	Data spacing for reporting of Exploration Results.	The drill spacing is not considered relevant or a material risk by the Competent Person for the reporting of Exploration Results. <u>Viking Mines 2023 Drilling</u> Drillhole spacing varies across the project from 80m x 80m to 150m x 300m. Assessment of the drilling as part of the MRE has determined that drillholes spacing is sufficient for the reporting or exploration results. <u>Historical Information</u> The historical drilling data is considered initial exploration drilling and consists predominantly of individual targeted drillholes. In the area south of the Kins resource, percussion and diamond drill spacing varies between 100m to 400m
distribution	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The Competent Person believes the mineralised domains have sufficient geological and grade continuity to support the classification applied to the Mineral Resource given the current drill pattern.



Criteria	JORC Code explanation	Commentary
	Whether sample compositing has been applied.	Viking Mines 2023 Drilling Sample compositing in the field has been used at the discretion of the field geologist. 4m, 2m and 1m composites have been selected during drilling for samples delivered to the laboratory for analysis. For reporting of exploration results, sample results have been composited to a minimum composite length of 6m at both 0.5% and 0.8% cut-offs for V2O5 and 600ppm for Cu. Compositing rules are set to permit values below the cut-off to be included within the composited interval with a maximum continuous length of 6m so as long as the resultant composite grade remains above the cut-off being reported to. <u>Historical Information</u> Some of the historical drilling has been initially conducted with larger sampling intervals up to 4m in width. Where high grade values have been intersected, follow up 1m sampling has taken place. <u>Summary of</u> Red Hawk Mining (formerly Flinders Mines) <u>RC Exploration Drilling and Sampling</u> Recent drilling occurring since 2017 is reported to have had no sample compositing applied.
Orientation of data in	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Viking Mines 2023 Drilling         Drillholes have been designed to intersect perpendicular to the VTM mineralisation at the target area and drilled at -70 dip to mitigate any sampling bias effects. At this time it is not known if the true thickness has been determined. <u>Historical Information</u> The orientation of the drilling data has been designed to intersect the mineralised horizons perpendicular to strike and at a high angle to mitigate any bias. No comments were identified in the historical data to indicate any bias was of concern. Given the deposit type and orientation and to the extent which this is known, the drill angles are considered appropriate based on what has been reviewed by the Competent Person.
relation to geological structure	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Viking Mines 2023 Drilling         Given the nature and style of mineralisation, a sampling bias is not expected. <u>Historical Information</u> The historical data sourced from WAMEX does not reference any evident sample bias. Given the nature and style of mineralisation, a sampling bias would not have been expected.         Summary of Red Hawk Mining (formerly Flinders Mines)RC Exploration Drilling and Sampling         The relationship between the drilling orientation and the orientation of key mineralised structures is not considered to have introduced a sampling bias.
Sample security	The measures taken to ensure sample security.	Viking Mines 2023 Drilling         Samples were collected from the rig in tied calico bags and packaged in to tied polyweave bags and stored in bulka bags at the freight company's laydown yard prior to shipment to the laboratory in Perth. The yard is locked at night and sample security is determined to be effective. <u>Historical Information</u> The Competent Person is unaware of what measures were undertaken to ensure sample security during past exploration activity and no information was identified in the historical reports sourced from WAMEX.         Summary of Red Hawk Mining (formerly Flinders Mines)RC Exploration Drilling and Sampling         A geologist or field assistant is recorded as being present at the drill rig while samples were being drilled and collected. Additional measures taken to ensure sample security are unknown.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Viking Mines 2023 Drilling         MEC Mining have completed a full audit of the Viking database and confirmed that the data is of a sufficient standard for the proposes of Mineral         Resource Estimation. No significant issues were identified with the database. The audit applied to both new data collected by Viking Mines and the collated historical data collected by other parties. <u>Historical Information</u> No external audit of sampling techniques and data could be sourced from the documents sourced off WAMEX by Viking Mines.



Criteria	JORC Code explanation	Commentary			
	Summary of Red Hawk Mining (formerly Flinders Mines) RC Exploration Drilling and Sampling				
		No external audits or reviews have been reported as being undertaken on the sampling data in the reports provided by Flinders Mines.			

# JORC 2012 Table 1, Section 2 - Reporting of Exploration Results

Criteria JORC Code explanation	Commentary
Mineral tenement and land tenure status       Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	CommentaryTenements and locationThe Canegrass Battery Minerals Project tenements are located approximately 60 km east-southwest the town of Mount Magnet, Western Australia. The tenements are situated in both the Mount Magne and Sandstone Shires and cover parts of the Challa, Meeline and Windimurra pastoral leases. Details the tenements are presented in the table below:TenementStatusHolder1Holder 2Area (Blocks)E58/232-1LIVEFlinders Canegrass Pty LtdViking Critical Minerals5E58/232-1LIVEFlinders Canegrass Pty LtdViking Critical Minerals4E58/232-1LIVEFlinders Canegrass Pty LtdViking Critical Minerals8E58/232-1LIVEFlinders Canegrass Pty LtdViking Critical Minerals8E58/221LIVEFlinders Canegrass Pty LtdViking Critical Minerals8E58/520LIVEFlinders Canegrass Pty LtdViking Critical Minerals8E58/521LIVEViking Critical Mineralsn/a0.24 HaP58/1942LIVEViking Critical Mineralsn/a1The Fold Nose Mineral Resource is located on tenement E58/232-1 and the Kinks and Kinks SouthMineral Resources are located on tenement E58/232-1 and the Kinks and Kinks SouthMineral Resources are located on tenement E58/232-1Third Party InterestsViking Mines Ltd subsidiary Viking Critical Minerals Pty. Ltd. has signed a binding term sheet to earn uto a 99% interest in the project tenements. At this time, Viking has completed stage-1 of the farm in agreement and has acquired a 25% equ



Criteria	JORC Code explanation	Commentary
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenements are held in good standing by Flinders Canegrass Pty. Ltd., a wholly owned subsidiary of Red Hawk Mining Ltd. There are no fatal flaws or impediments preventing the operation of the exploration licences.
		Based on historical data searches completed to date by Viking, the Canegrass Battery Minerals Project exploration history for vanadium magnetite deposits dates back primarily to 1977 when WMC commenced exploration in the area. Exploration was completed through to 1984 and over this time they undertook mapping, rock chip sampling, soil sampling, geophysics (magnetics and induced polarisation) surveys, percussion drilling and diamond drilling. No resources were defined, but high- grade Vanadium mineralisation was discovered as part of the exploration programme. Viking have not completed searches for exploration data for the period 1984 to 2011 when Red Hawk Mining acquired the project, and this work is ongoing.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Previous JORC table reports compiled by Red Hawk Mining state the following: The previous exploration across the Canegrass Project conducted by Red Hawk Mining, and previous companies previously associated with the tenements such as Apex Minerals, Falconbridge Limited and Maximus Resources is significant, dating back to at least 2003. Activities primarily concentrated on four key commodity groupings: <ul> <li>Nickel-Cobalt-Copper massive sulphide in marginal facies of the Windimurra Igneous Complex (WIC) proper, or in cross-cutting later intrusive bodies that postdate and penetrate across the WIC.</li> <li>PGE bearing internal layers within the WIC.</li> <li>Fe-Ti-V bearing internal layers within the WIC.</li> <li>Au hosted in later fault structures that cross cut the WIC and offset the WIC internal geology.</li> </ul> </li> </ul>
		Red Hawk Mining have also provided detailed exploration history since 2017 in their most recent announcement dated 10 June 2022 – Canegrass Project Exploration Update. Further information can be obtained by reading this release.
Geology	Deposit type, geological setting and style of mineralisation	Regional Geology         The geology is dominated by the Windimurra Igneous Complex (WIC). The WIC is a large differentiate layered ultramafic to mafic intrusion emplaced within the Yilgarn craton of Western Australia. It outcrops over an area of approximately 2,500km2 and has an age of approximately 2,800Ma. The complex is dominantly comprised of rocks that can broadly be classified as gabbroic in composition. It is dissected by large scale, strike slip shear zones.         Deposit Geology Kinks & Fold Nose (30 January 2018 Canegrass Vanadium Mineral Resource Estimate & Exploration Update Release by Red Hawk Mining)         The deposit represents part of a large, layered intrusion. Mineralisation which comprises magnetite-titanium-vanadium horizons, with distinct vanadiferous titanomagnetitie (VTM) mineralisation occurring within the Windimurra Complex – a large differentiated layered ultramafic to mafic intrusion within the Murchison Province of the Yilgarn Craton.         Given the mode of formation, mineralisation displays excellent geological and grade continuity.



Criteria	JORC Code explanation	Commentary				
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level - elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	Drillholes referred to in this release are referenced with a footnote to the original release which contains all the required drillhole information. No new drillholes are being reported in this release.				
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	No new exploration results are being reported. For previously reported exploration results, sample results have been composited using a length weighted averaging method to a minimum composite length of 6m at 0.3%, 0.5% and 0.8% cut-offs for V2O5 and 600ppm for Cu. Compositing rules are set to permit values below the cut-off to be included within the composited interval with a maximum continuous length of 6m so as long as the resultant composite grade remains above the cut-off being reported to. See original referenced announcements for reporting of exploration results with further information.				
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	Drilling has been planned to intercept perpendicular to mineralisation however further data is required to confirm this and as such downhole length is reported and true width not know.				
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views	Drillhole location maps showing hole locations and an example cross-section are referred to in the original announcements referenced accordingly. Appropriate maps and sections related to the reporting of the mineral resource estimate can be found in the body of this report.				
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	References to previous releases used to provide the information in this report have been made and those respective releases provide the disclosure of the drilling results. All appropriate information is included in the report.				
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances	Susceptibility meter and portable XRF analyser were used to provide further confidence that the VTM				



Criteria	JORC Code explanation	Commentary					
		All historical data is either publicly available through WAMEX, has been released previously by previous owners of the Project and referenced to the appropriate releases or is disclosed in the body of this report.					
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	The ongoing activity and further work is described in the report with the next steps defined. The next phase of activity will involve undertaking further metallurgical testwork and the commencement of a preliminary pit optimisation study. At this time no further drilling is planned. The CP is of the opinion that no additional information for Further Work needs to be reported.					

# JORC 2012 Table 1 Section 3 - Key Classification Criteria

Criteria	JORC Code explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	Data was validated by checking grade against logging and photos of the Viking drilled samples, correlation was strong. Beyond this MEC has no knowledge of processes applied to mitigate entry errors.
	Data validation procedures used.	Data was validated using Micromine validation tools, to check that downhole survey did not exceed drillhole depth, that drillholes were present in the collar, downhole survey, and interval files. All errors were identified and remedied.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	A site visit was conducted on October 18 2023 by MEC Principal Advisor Mr Dean O'Keefe (Competent Person for this study) and Mr Julian Woodcock, Managing Director and CEO of Viking Mines limited. The site visit confirmed the presence of extensive vanadium and iron rich outcropping and subcrops. The CP also viewed the RC drill chips that remained at the Viking drilled holes for Kinks, Kinks South, and Fold Nose deposits. The CP confirmed the location of the drill collars using a hand held GPS, the correlation between the coordinates in the database and the GPS readings was good.
	If no site visits have been undertaken indicate why this is the case.	Not applicable.
	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	Extensive interpretation and wireframing confirmed good continuity of mineralisation and geometry of lodes. This is consistent with the understanding of the layered ultramafic source of mineralisation that formed as layers differentiated out of the melt that were folded post deposition.
Geological interpretation	Nature of the data used and of any assumptions made.	All domains were defined using a combination of grade, primarily vanadium, titanium, and iron; magnetic susceptibility, density, and lithology. Domains were modelled on the basis that the deposits were formed from differentiation of layers in the magma chamber melt and were subsequently folded. An implicit model was used to guide the explicit modelling. All MRE were reported above an economic cut-off grade of 0.5% V <sub>2</sub> O <sub>5</sub> , no top cuts were applied as no extreme values that could bias the estimation were observed.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Alternative interpretations are unlikely to vary greatly from the implicit and explicit modelling interpretation.
	The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	Geological units were rationalised and the presence of massive magnetite was a strong signature for higher grade domains. All geological modelling was based upon the geological implicit model of the tightly folded units.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width,	Fold Nose is folded and has overall dimensions of 3,700m x 50m x 300m Kinks South has dimensions of 1,300m x 100m x 300m.



Criteria	JORC Code explanation	Commentary								
	and depth below surface to the upper and lower limits of the Mineral Resource.	Kinks has two separate sections of lodes, 1. 1000m x 230m x 50m; and 2. 650m x 250m x 50m.								
		All estimation was completed using Micromine software. The Ore Block Model parent blocks were 20m x 20m east/west and north/south and 5m in elevation, subcelled to 2m x 2m east/west and north/south and 1m in elevation. All blocks were restricted to the geological wireframes. Only those grades within the lodes were used to interpolate lode grades, using ordinary block kriging, with discretisation of 2 x 2 x 2 to partially address change of support issues. Negative kriging weights were reset to zero and subcells were estimated to obtain resolution of estimation as the narrow geometry of the lodes did not permit estimation to parent cells only. The Fold Nose MRE were estimated using flattening and extension to allow for the training of the search ellipse to include all relevant samples. Experimental semivariograms were modelled for Vanadium; and cobalt, copper and nickel were bundled under these variograms; semivariograms were modelled for Iron; and LOI, phosphorous, silica, and alumina were bundled under these variograms; and semivariograms were modelled for Titanium. Search ellipse distances were defined initially from the semivariogram range distances and were then increased to ensure all blocks were populated. Some lodes included assay results for commodities such as Vanadium but did not include LOI and other variables, as such the average interpolated grade was defaulted to blocks within the OBM that were not interpolated due to the absence of values, where there was no data to interpolate within a lode. This occurred for LOI in all three deposits and for SiO <sub>2</sub> in Kinks deposit. The Kinks South and Kinks MRE were not unfolded or flattened as they were linear. Semivariogram parameters are as follows -								
		AZIUMTH	PLUNGE	NUGGET	PARTIAL SILL 1	PARTIAL SILL 2	PS1 RANGE m	PS2 RANGE m		
		180	0	0.015	0.01	0.095	171	430		
Estimation and		90	0	0.015	0.01	0.095	56	124		
modelling		0	90	0.015	0.01	0.095	9	25		
techniques	extrapolation from data points. If a computer assisted estimation method was chosen include a description of	Variogram Fold Nose east, Fe2O3								
	computer software and parameters used.	AZIUMTH	PLUNGE	NUGGET	PARTIAL SILL 1	PARTIAL SILL 2	PS1 RANGE m	PS2 RANGE m		
		180	0	15	103	114	130	475		
		90	0	15	103	114	155	275		
		0	90	15	103	114	3	15		
		Variogram	Fold Nose south, V2	05						
		AZIUMTH	PLUNGE	NUGGET	PARTIAL SILL 1	PARTIAL SILL 2	PS1 RANGE m	PS2 RANGE m		
		90	0	0.009	0.035	0.055	130	333		
		180	0	0.009	0.035	0.055	184	378		
		0	90	0.009	0.035	0.055	7.5	28.5		



Criteria	JORC Code explanation	Commentary									
		Va	ariogram	Fold Nose	south, Fe	203					
		AZIUMTH		PLUNGE		NUGGET	PARTIAL SILL 1	PARTIAL SILL 2	PS1 RANG	GE m	PS2 RANGE m
		90	)	0		24	47.4	173	19	8	378
		180		0		24	47.4	173	12	5	286
		0		9	)	24	47.4	173	2		14
		Va	ariogram	Kinks Sou	th, V2O5						
		AZIUMTH		PLUNGE		NUGGET	PARTIAL SILL 1	PARTIAL SILL 2	PS1 RAN	GE m	PS2 RANGE m
		90	)		)	0.01	0.05	0.03	23		535
		0	)	4	5	0.01	0.05	0.03	16	5	250
		18	0	4	5	0.01	0.05	0.03	1	6	33
		Va	ariogram	Kinks Sou	th, Fe2O3						
		AZIUMTH		PLUNGE		NUGGET	PARTIAL SILL 1	PARTIAL SILL 2	PS1 RAN	GE m	PS2 RANGE m
		90	)	0		25	105	135	14	0	517
		0		4	5	25	105	135	12	2	192
		180		4	ō	25	105	135	2:	1	47
		Va	ariogram	Kinks, V20	95						
				PLUNGE NUGGET		NUGGET	PARTIAL SILL 1	ARTIAL SILL 1 PARTIAL SILL 2		GE m	PS2 RANGE m
		80	)	0		0.01	0.025	0.01	18	5	409
		32	5	32		0.01	0.025	0.01	60	D	215
		170	0	58		0.01	0.025	0.01	13	3	35
		Va	ariogram	Kinks, Fe2	03						
		AZIUMTH		PLUNGE		NUGGET	PARTIAL SILL 1	PARTIAL SILL 2	PS1 RAN	GE m	PS2 RANGE m
		80	)	C		30	80	38	11	.3	450
		325	5	34	1	30	80	38	62	2	175
		170	0	5	5	30	80	38	8		25
		Search ellipses were based on semivariogram modelled ranges and used a minimum of three drillholes for Run 1 to avoi estimation of blocks. The search ellipse dimensions were increased for Run 2 to populate all remaining blocks. Search ellipse dimensions for Fold Nose East flat						1 to avoic	lisolated		
				M HOLES	SECTOR	S AZIMU	ITH 1 RADIUS m	AZIMUTH 2	RADIUS m A	AZIMUTH	/DIP RADIUS m
		1		3	1	18	0 500	90	200	0/-90	) 50
		2		0	1	18	0 800	90	320	0/-90	80
											1



Criteria	JORC Code explanation	Commentary									
		Search ellipse dimensions for Fold Nose South flat									
		RUN	MINIMUM HOLES	SECTORS	AZIMUTH 1	RADIUS m	AZIMUTH 2	RADIUS m	AZIMUTH/DIP	RADIUS m	
		1	3	1	90	500	180	200	0/-90	50	
		2	0	1	90	2000	180	800	0/-90	200	
		S	earch ellipse dimension	ns for Kinks So	uth						
		RUN	MINIMUM HOLES	SECTORS	AZIMUTH 1	RADIUS m	AZIMUTH/DIP	RADIUS m	AZIMUTH/DIP	RADIUS m	
		1	3	1	90	300	180/-45	150	0/-45	30	
		2	0	1	90	2000	180/-45	1600	0/-45	200	
		Search ellipse dimensions for Kinks									
		RUN	MINIMUM HOLES	SECTORS					AZIMUTH/DIP		
		1	3	1	65	300	155/-30	240	335/-60	130	
		2	0	1	65	1000	155/-30	800	335/-60	300	
		ineral Resources (the "Historic Mineral resource") were estimated by "Optiro Pty Ltd for Flinders Mines Limited, Canegrass Iron and anadium Project Mineral Resource Estimate in August of 2011". All Mineral Resources were classified as Inferred Mineral Resources.									
		2	2011 Optiro Mineral F	Resource est	imate						
		Proje	oct	July 2011 Mineral Resource for V <sub>2</sub> O <sub>5</sub> >= 0.5%							
		Proje	Mt \	/ <sub>2</sub> O <sub>5</sub> % Ti	O <sub>2</sub> % Fe%	6 Al <sub>2</sub> O <sub>3</sub>	% P%	SiO <sub>2</sub> %	LOI%		
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	Fold Nos	e 87	0.63 5	.91 29.3	4 12.5	6 0.005	24.14	2.67		
		Kinks	20	0.57 5	.49 27.3	5 12.9	9 0.009	25.93	3.09		
		Global	107	0.62 5	.83 28.9	8 12.6	4 0.006	24.47	2.74		
		A review of the Optiro Mineral Resource estimate was conducted by CSA Global in 2017. The CSA Global review stated MRE above 0.5 $V_2O_5\%$ , with all MRE reported above the 210 m RM level.									
		2017 CSA G	lobal MRE statement								



Criteria	JORC Code explanation	Commentary									
		Project	JORC classification	Tonnage (Mt)	V <sub>2</sub> O <sub>5</sub> (%)	TiO <sub>2</sub> (%)	Fe (%)	Al <sub>2</sub> O <sub>3</sub> (%)	P (%)	SiO <sub>2</sub> (%)	LOI (%)
		Fold Nose	Inferred	59	0.66	6.5	30.5	11.9	0.006	22.9	2.9
		Kinks	Inferred	20	0.57	5.5	27.4	13.0	0.009	25.9	3.1
		Grand tota	ıl	79	0.64	6.0	29.7	12.2	0.007	23.6	3.0
		<ul> <li>* The CSA MRE was reported at ≥V<sub>2</sub>O<sub>5</sub>. CSA reported the MRE above the 210m RL, which restricted Mineral Resources to within 250m of surface.</li> <li>S. Vanadium is considered the primary economic element of interest, in addition to Iron and titanium. Cobalt, copper, and nickel were estimated and may potentially become credit elements.</li> </ul>						ces to withir	1 250m of		
	The assumptions made regarding recovery of by-products.							were			
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	P, SiO2 and Al	2O3 have been estimate	d. LOI was also est	imated.						
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	ch       north/south and 1m in elevation. The drillhole spacing is 75m x 75m in the most densely drilled sections. The block size was chosen to provide a local map and with regard to the 75m spacing.         19       No assumptions were made regarding selective mining units.         25       No assumptions have been made regarding correlation between variables.         26       All domains were defined using a combination of grade, primarily vanadium, titanium, and iron; magnetic susceptibility, density, and lithology. Domains were modelled on the basis that the deposits were formed from differentiation of layers in the magma chamber melt and were subsequently folded. An implicit model was used to guide the explicit modelling. All MRE were reported above an economic cut-off grade of 0.5% V <sub>2</sub> O <sub>5</sub> , no top cuts were applied as no extreme values that could bias the estimation were observed.         0 or       No grade cuts were applied due to the absence of extreme values.         All ore block models were validated globally and locally, global validation compared the wireframe volume and grade with the ore block models was very close. The global grade comparisons of grade within the wireframes compared to the modelled grades is very close, small differences occur due to clustering of grades within the wireframes.         Global validation       Global validation									
	Any assumptions behind modelling of selective mining units.										
	Any assumptions about correlation between variables										
	Description of how the geological interpretation was used to control the resource estimates.							nber melt			
	Discussion of basis for using or not using grade cutting or capping.										
								e block			
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	DEPOSIT	WF VOLUME	OBM VOLUM	e volume	DIFF m3	WF V2O	5% OBM	V2O5%	% DIFF	
		FOLD NOS		27,658,232		21,356	0.671		636	0.05	-
		KINKS SOL		9,749,064		2,042	0.680		664	0.02	-
		Generally the smoothing eff Min/max che	12,120,368 on was completed by correverse was close correlation beet of ordinary kriging. cks were used to ensure ence of overlapping block	nparing the composite between composite all blocks were pop	osite grades u e assays and	estimated b	lock grade	ock values ag s, with some	small diffe	erences resu	lting from the



Criteria	JORC Code explanation	Commentary
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated on a dry basis. No moisture values were reviewed.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	A cut-off grade of 0.5% V2O5 has been applied when reporting the Mineral Resource. The 0.5% V2O5 cut-off grade is within the range adopted for reporting Mineral Resources at other Australian Fe-V-Ti deposits for planned open cut operations.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	The 2023 MRE is reported above the 210 m RL, which is approximately 250m depth from surface, assuming future development will be by open pit mining.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	The metallurgical testwork completed to date demonstrates that a magnetic concentrate can be produced from the Project which indicates the potential to deliver a marketable product.
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	Environmental considerations have not yet been considered due to the early stage of this project. It is therefore assumed that waste could be disposed in accordance with a site-specific mine and rehabilitation plan.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	Bulk density has been calculated for the deposit via estimation of data collected by downhole logging on Viking Mines drillholes. Measurements were collected on all Viking drillholes at 10cm intervals using a GeoVista downhole Formation Density Probe (FDSB): This combinable sonde is suitable for quantitative formation density measurements in uncased holes. It uses a bottom loading gamma ray source (Typically 100 mCi activity) and a set of two or optionally three detectors at different spacing to detect the gamma rays scattered by the formation. The amount of scattered gamma rays is a function of the electron density of the formation material and hence, a function of its



Criteria	JORC Code explanation	Commentary			
		<ul> <li>bulk density. This relationship is used to calibrate the density sonde and then use it to log the bulk density of the formations crossed by the borehole.</li> <li>In order to optimise performance, the sonde is designed with three main features: <ol> <li>A side-walling calliper to ensure that the detector measures only the radiation scattered by the formation.</li> <li>A detector mandrel diameter that is large enough to minimise the sonde and borehole curvature mismatch and improve sonde to formation contact to minimise the effect of the borehole fluid.</li> </ol> </li> </ul>			
		<ol> <li>An efficient detector shield to prevent gamma rays from travelling up, inside the sonde body.</li> <li>The density measurements collected have been used to estimate density throughout the 3 deposits. The method is deemed appropriate and</li> </ol>			
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.	more effective than using a constant density value. The methods adopted adequately account for void spaces.			
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Density measurements were interpolated using Inverse distance cubed within the lodes. Where there were no density measurements within a lode, the Vanadium grade was checked and the most proximate lodes with similar grade were queried to obtain a mean value which was then defaulted to that lode. The OBM density was applied to estimate tonnage for the MRE.			
	The basis for the classification of the Mineral Resources into varying confidence categories.	The Mineral Resource has been classified as Inferred following due consideration of all criteria contained in Section 1, Section 2 and Section 3 of JORC 2012 Table 1.			
Classification	Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	Appropriate account has been taken of all relevant criteria including data integrity, data quantity, geological continuity, and grade continuity.			
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The Mineral Resource estimate reflects the Competent Person's views of the deposit.			
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	The 2017 CSA Global review of the 2011 Optiro MRE was in agreeance with the Optiro numbers with the exception of an application of a depth criteria of 210 m RL to address the RPEEE hurdle.			
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	The MRE is classified as Inferred MRE, which reflects the level of confidence and the need to complete infill drilling of the deposits, that is supported by QAQC data.			
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	The Mineral Resource statement relates to a global tonnage and grade estimate. Grade estimates have been made for each block in the			



Criteria	JORC Code explanation	Commentary			
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.				