

Australian Securities Exchange Announcement

10 May 2022

New Speewah Vanadium Testwork

Highlights

- ❖ Murdoch University salt roast testwork has reported excellent first pass results of up to 92% vanadium (V) extraction from a Speewah high grade vanadium-titanium magnetite concentrate.
- ❖ Investigations commenced into critical minerals funding options for KRR's new Vanadium process flow sheet development to support the transition to renewable energy.

Summary

King River Resources Limited (ASX: KRR) is pleased to provide this update on its 100% owned Speewah Vanadium/Titanium deposit located in the Kimberley of Western Australia, which is Australia's largest vanadium in magnetite deposit. Murdoch University's Hydrometallurgy Research Group is working to develop a new process flow sheet to produce high purity Vanadium Pentoxide (V_2O_5), Vanadium Electrolyte (VE), Titanium Dioxide (TiO_2) and metallic iron. These products are used in the manufacture of electrolyte for vanadium redox flow batteries (VRFB), master alloys (Al-Ti-V materials), and titanium oxide pigments.

This announcement reports on the first batch of salt roast results from this testwork programme.

Metallurgical Testwork to develop a new Process flow sheet

Murdoch University has been investigating two new processing opportunities:

- an oxidative salt roast process to recover vanadium
- trialling reductive roast approaches (including hydrogen) to recover other metals.

50 kg of our high grade vanadium-titanium magnetite (VTM) concentrate produced by magnetic separation methods from drill samples from the Central Vanadium deposit at Speewah (Attachment 1) has been provided for this testwork. Sample 1 used in the new test work contains 2.44% V_2O_5 (i.e., 2.01% V_2O_3) (Table 1).

Table 1: VTM Sample 1 - Grades of the sample as metals and equivalent assumed oxides.

Metals	Grade	Oxides	Grade
Fe	53.72%	Fe_3O_4	74.23%
Ti	9.17%	TiO_2	15.30%
V	1.37%	V_2O_3	2.01%
Si	1.92%	SiO_2	4.11%
Al	1.00%	Al_2O_3	1.88%
Mn	0.325%	MnO	0.420%
Ca	0.965%	CaO	1.350%
P	0.003%	P_2O_5	0.007%
Mg	0.315%	MgO	0.522%
K	0.027%	K_2O	0.033%
Na	0.063%	Na_2O	0.084%
		Total	99.96%

The first batch salt roast-water leach results report up to 92% vanadium (V) extraction. Table 2 summarises the conditions used in the salt roast-water leach tests and the vanadium extraction results.

Table 2: Conditions used in the first five roasts and the vanadium extractions obtained.

Test Number	Salt Reagent	Dose	Temp	Roast Time	Leach Time	Extractions (solids based)			
		kg/t	°C	hour	hour	V	Fe	Ti	Si
						%	%	%	%
A1	Na ₂ CO ₃	100	1000	2	1	78	1	0	13
A2	Na ₂ CO ₃	100	1100	2	1	90	0	1	14
A3	Na ₂ CO ₃	103	1200	2	1	92	0	1	15
A4	Na ₂ CO ₃	51	1100	2	1	81	0	1	6
A5	Na ₂ CO ₃	150	1100	2	1	80	0	1	9

The first batch of five salt roast tests on the VTM concentrate used soda ash (sodium carbonate) as the salt reagent, dosing at 50-150 kg/t and heating at 1000-1200°C for a period of two hours in a tube furnace (Figure 1). Subsamples of the roasted materials were subsequently subjected to leaching in water for 1 hour at room temperature. Samples of the washed leach residues and the roasted materials have been assayed to determine the extent of extraction of vanadium and dissolution of other elements.

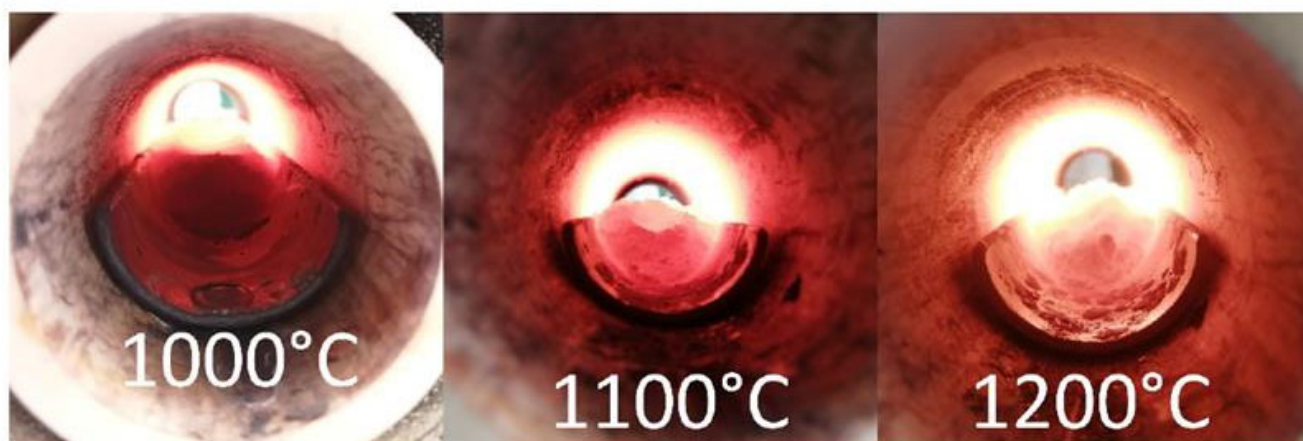


Figure 1: Samples of VTM concentrate inside the furnace at 1000-1200°C.

At a sodium carbonate dose of 100 kg/t, the extraction of vanadium during leaching increases with an increase in roast temperature, from 78% at 1000°C to 90% at 1100°C and 92% at 1200°C. Elemental accountabilities for vanadium in these tests were around 97%.

At half the salt dose of ~50 kg/t very good V extractions of 81% were still obtained at 1100°C. Further optimisation work should increase these extractions and lower the reagent consumption.

The initial oxidative roast-water leach results will be used to select the optimal reagent suite, dosages and temperature conditions to be tested in subsequent optimisation salt-roast-water leach testwork.

The solutions from these salt roast-water leach tests, which contain the vanadium, will undergo a series of staged tests to produce vanadium pentoxide (V₂O₅), including:

1. desilication to reduce the silica in solution and final product.
2. reaction with ammonium sulphate to precipitate ammonium-metavanadate (AMV).
3. calcination of the AMV to produce V₂O₅.

KRR will provide further updates as they are released.

Critical Minerals Funding

The Australian Federal Government has added Vanadium to Australia's critical minerals list and is taking action to grow Australia into a critical minerals powerhouse, capitalising on the strength of our world-leading resources sector, expertise in processing and highly skilled workforce. \$200 million has been committed to the Critical Minerals Accelerator Initiative to support strategically significant projects at challenging points in their development. This funding will accelerate projects to market and drive investment.

KRR sees the addition of Vanadium to the Critical Minerals list as a very supportive opportunity to access an increase level of funding opportunities and grant levels than were previously available to the industry.

Development of Vanadium Electrolytes FBICRC

KRR involvement in the Future Batteries Industry Cooperative Research Centre (FBICRC) Project on the Development of Vanadium Electrolytes is in the final contracting phase. This project is one of several research initiatives by the FBICRC designed to assist in enabling the growth of battery industries to power Australia's future.

Director's Comments

The extraction percentages achieved in the 90's under some of the tested conditions were well above expectations for these initial sighter tests. It is most encouraging to see these high levels of vanadium extraction at the start of the study before we have commenced optimisation.

KRR is currently examining several potential conceptual pathways to commercialisation including mining, and concentrating in Australia and exporting the concentrates overseas for processing.

This announcement was authorised by the Chairman of the Company.

Anthony Barton

Chairman

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Background on the Vanadium-Titanium-Iron SSMP

KRR's Vanadium and Titanium Speewah Specialty Metals Project ("SSMP") is based on its 100% owned vanadium deposit located at Speewah in the Kimberley of Western Australia. The deposit comprises a Measured, Indicated and Inferred Mineral Resource of 4,712 million tonnes at 0.3% V_2O_5 , 3.3% TiO_2 and 14.7% Fe (reported at a 0.23% V_2O_5 cut-off grade from the Central, Buckman and Red Hill deposits, Figure 2) (refer KRR ASX announcements 26 May 2017 and amendments 1 April 2019 and 6 November 2019 for the full resource statement details). Speewah is Australia's largest vanadium-in-magnetite deposit based on tonnes and V_2O_5 content (Figures 1 and 5, KRR ASX release 27 February 2018). KRR envisages an open cut mining operation on the Central Vanadium deposit which outcrops, is fresh rock from near the surface, has shallow dipping geometry with a low strip ratio of 0.4 (Figure 4 and refer KRR ASX announcement 20 June 2018). KRR's plan is to develop an integrated process flow sheet involving beneficiation and extraction that processes high grade vanadium concentrate from the Central Vanadium deposit, produced by crushing, grinding and magnetic separation (refer KRR ASX announcements 1 April 2010, 15 July 2010, 9 November 2010, 8 February 2012 and 21 April 2017). The beneficiation process results in concentrate grades of 2.15-2.64% V_2O_5 , which is higher than other Australian vanadium deposits (Figure 5, KRR ASX release 27 February 2018). It was developed by fine grinding of RC chips from the basal high grade zone of the Central vanadium deposit. Further magnetic separation test work is planned to produce a concentrate grading ~2.4% V_2O_5 with lower levels of SiO_2 , CaO and Al_2O_3 , optimised for processing by roasting. This test work will use PQ drill core (available in storage) from metallurgical holes SDH11-06, SDH11-09 and SDH11-12 from the Central deposit (Figures 2 and 3 and Table 2).

Previous vanadium-titanium-iron extraction test work undertaken by KRR in 2018-2021, on various lower grade concentrates and lump material from Speewah, using hydrochloric acid and sulphuric acid leaching followed by chemical precipitation and solvent extraction showed the potential to produce high purity V_2O_5 , TiO_2 and iron oxide (Fe_2O_3) products (refer KRR ASX releases 27 February 2018, 25 June 2018, 23 July 2018, 7 June 2019 and 23 July 2021). In 2011 and 2019, KRR completed initial process development work for a salt roast-water leach-precipitation process involving ammonium metavanadate (AMV) using high V_2O_5 grade concentrates. The results showed further testwork was required to improve and optimise the recoveries and reagent consumption, and to produce high purity ~99.5% V_2O_5 products. The new R&D programme at Murdoch University Hydrometallurgy Research Group will focus on the pyrometallurgical approach to support and extend these earlier roasting results with the objective of developing an optimised process flow sheet to produce V, Ti and Fe products from the ore.

KRR has also joined the Future Battery Industries Cooperative Research Centre (FBI-CRC) by providing financial support to two projects, including the development and application of Vanadium Redox Flow Batteries (VRFB) (KRR ASX announcement 6 October 2021). For further information on the FBI-CRC visit: <https://fbicrc.com.au/>.

Attachment 1

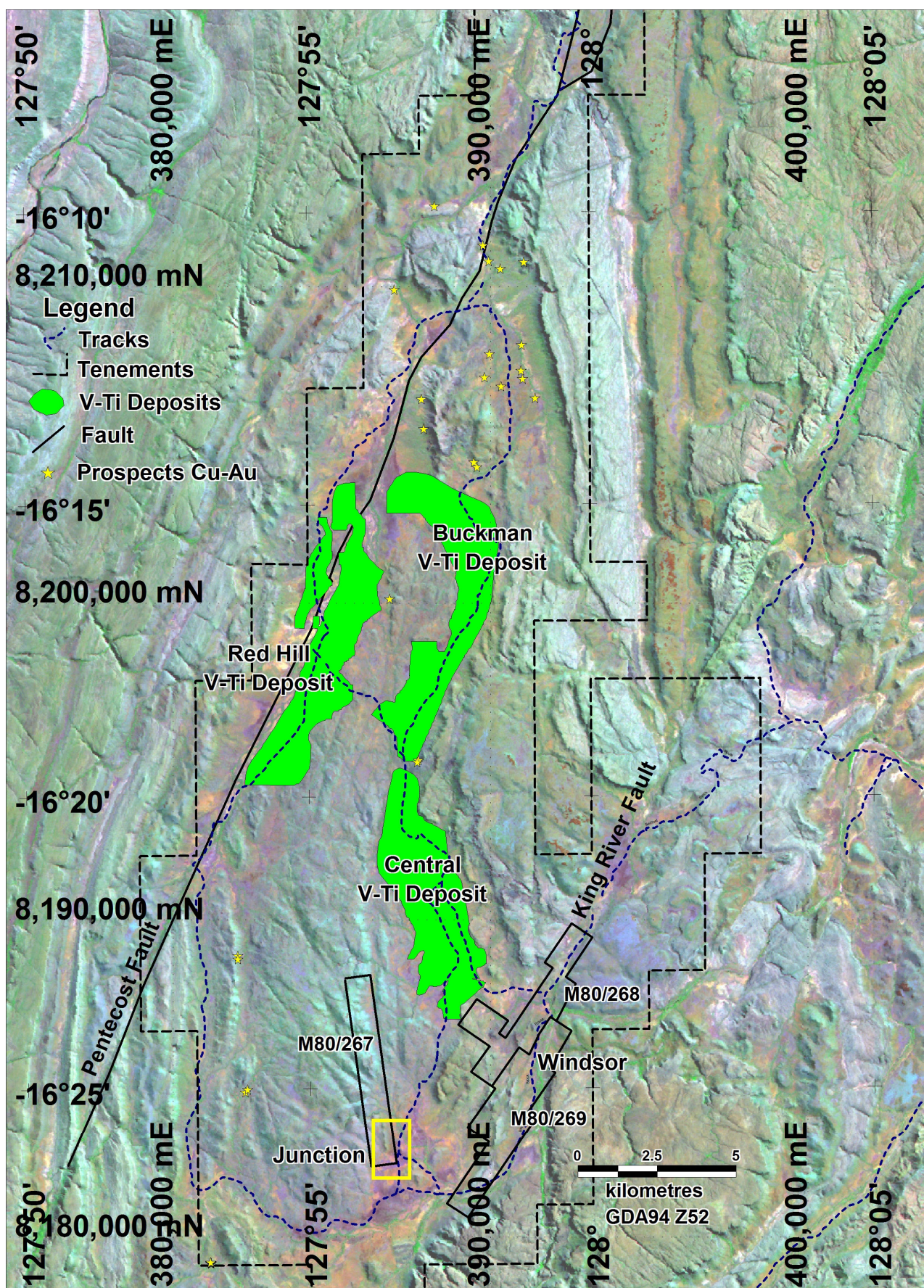


Figure 2: Location of the vanadium resources (green) and Junction V Prospect at Speewah.

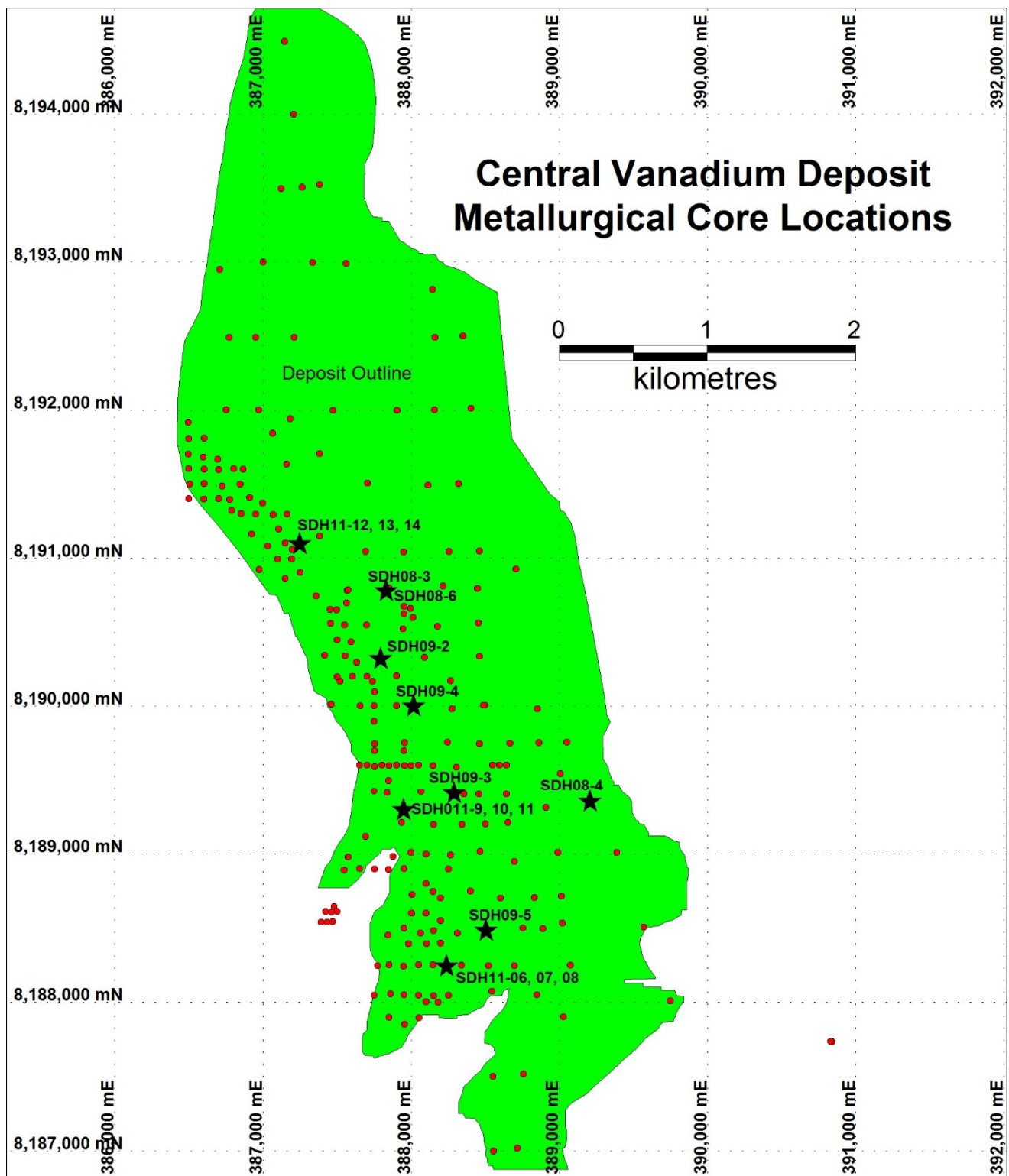


Figure 3: Diamond core hole locations (black stars) and Reverse Circulation drill holes (red dots) within the Central Vanadium Deposit, including the RC holes and metallurgical core holes referred to in this announcement. Diamond core hole collar data is given in Table 4.

Table 4: Diamond drill core holes in the Central Vanadium deposit

Hole_id	Deposit	East_GDA	North_GDA	RL	Depth	Dip	Azimuth	Tenement
		m	m	m	m	degrees	degrees	
SDH08-3	Central	387830.42	8190778.6	197.037	80	-90	0	E80/2863
SDH08-4	Central	389203.71	8189358.8	190.014	75	-90	0	E80/2863
SDH08-6	Central	387831.84	8190783.9	197.187	450.5	-90	0	E80/2863
SDH09-2	Central	387793.53	8190327.7	196.267	50	-90	0	E80/2863
SDH09-3	Central	388287.08	8189417.5	189.987	70.5	-90	0	E80/2863
SDH09-4	Central	388016.74	8190007.5	194.698	42.1	-90	0	E80/2863
SDH09-5	Central	388502.3	8188487.8	186.4	57.1	-90	0	E80/2863
SDH11-06	Central	388234.08	8188240.6	188.018	39.4	-90	0	E80/2863
SDH11-07	Central	388234.04	8188243.7	187.999	41.6	-90	0	E80/2863
SDH11-08	Central	388234.08	8188246.9	187.941	40.9	-90	0	E80/2863
SDH11-09	Central	387946.28	8189294	191.676	40.9	-90	0	E80/2863
SDH11-10	Central	387945.75	8189295.9	191.643	39.4	-90	0	E80/2863
SDH11-11	Central	387945.33	8189297.8	191.706	40.9	-90	0	E80/2863
SDH11-12	Central	387243.47	8191101.7	212.529	41	-90	0	E80/2863
SDH11-13	Central	387242.63	8191101.2	212.467	41	-90	0	E80/2863
SDH11-14	Central	387241.65	8191100.6	212.457	40.1	-90	0	E80/2863

Statement by Competent Person

The information in this report is based on information compiled by Ken Rogers (BSc Hons) and fairly represents this information. Mr. Rogers is the Chief Geologist and an employee of King River Resources Ltd, and a Member of both the Australian Institute of Geoscientists (AIG number 2359) and The Institute of Materials Minerals and Mining (IMMM number 43552), and a Chartered Engineer of the IMMM. Mr. Rogers has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Rogers consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

Compliance Statement

The information in this report that relates to Mineral Resource Estimates for the Speewah Vanadium Project are extracted from the ASX Announcements entitled "Speewah V-Ti-Fe resource conversion to JORC 2012" lodged 26 May 2017, the amendment to report Ti as TiO_2 entitled "Vanadium Resource Amendment" lodged 1 April 2019, and a further amendment to add alumina and magnesia entitled "Central Deposit Mineral Resource Amendment" lodged 6 November 2019. The Company confirms that it is not aware of any new information or data that materially affects the information included on the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Appendix 1: King River Resources Limited Speewah Project JORC 2012 Table 1

SECTION 1 : SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
Sampling Techniques	<p><i>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 down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>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 mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</i></p>	<p>This ASX Release dated 10 May 2022 provides an update on the planned production of high purity Vanadium Pentoxide (V_2O_5), Titanium Dioxide (TiO_2) and metallic iron (Fe) by Oxidative Salt Roast and Reductive Roast methods from magnetic concentrates from the high grade zone of the Central Vanadium deposit at KRR's Speewah Specialty Metals Project (Figures 1, 2 and 3).</p> <p>Sample 1 – Magnetic Concentrate Sample from Reverse Circulation (RC) drill samples Sample 1 used by the Murdoch University testwork programme is a 50kg p80 -45 micron high grade concentrate that assayed 2.44% V_2O_5 or 2.01% V_2O_3 (Table 1) produced from a 6 tonne RC chips sample by magnetic separation methods in 2011.</p> <p>RC Drill Samples RC drill chip/powder samples were collected by re-sampling the RC bags for every metre from the basal high grade zone of the magnetite gabbro interval. Most of the drill holes sampled were from the Measured and Indicated parts of the Central Vanadium Mineral Resource (Figure 3). All the RC samples were then composited into one sample that weighed about 6 tonnes.</p> <p>Beneficiation Testwork Nagrom received one sample from KRR weighing approximately 6 tonne for grinding and Low Intensity Magnetic Separation (LIMS) to concentrate a magnetite/vanadium/titanium bearing gabbro. The received material was initially screened at 1mm and oversize crushed to -1mm. A 50kg head was split from the -1mm crush material.</p> <p>From the 50kg head, a 5kg split was taken for assay and 10kg split for sizing and analysis. The head assay reported 15.052% Fe, 3.516% TiO_2, 0.2093% V (0.374% V_2O_5), 12.59% Al_2O_3, 8.61% CaO, 4.46% MgO, 44.77% SiO_2 and <0.0001% Cr for the -1mm crush material.</p> <p>The -1mm crush material was fed to a grinding circuit consisting of a wet ball mill and vibrating screen with recirculating oversize to produce p80 -45um.</p> <p>The p80 45um material was fed into a rougher LIMS, with the con stream continuing to a 3 stage cleaner LIMS circuit.</p> <p>The tertiary cleaner product yielded 12.76% of the mass, accounted for 42.80% Fe, 73.90% of the V and 51.67% of the TiO_2, and assayed 2.38% V_2O_5, 14.94% TiO_2, 54.12% Fe, 3.95% SiO_2, 1.85% Al_2O_3, 1.36% CaO, 0.57% MgO, 0.028% Cr, with LOI (1000) -3.36%. This Concentrate assay compares favourably with the new Murdoch University assay in Table 1.</p> <p>Sample 2 - Magnetic Concentrate Sample from Diamond drill core Sample 2 will be prepared by Nagrom by magnetic separation methods using PQ ½ Diamond Drill (DD) Core in storage targeting a concentrate ~2.4% V_2O_5 grade for the High Grade (HG) Zone of the Central vanadium deposit.</p> <p>Diamond Core Samples to be used 16 HQ and PQ DD core holes were drilled in the Central Vanadium deposit (see Figure 2 and Table 1 for locations). Three PQ holes have previously been used in beneficiation and hydrometallurgical testwork by Nagrom (SDH11-09, SDH11-06 and SDH11-12, Figure 2). The assays of the high grade (HG) intervals from these holes were previously reported (22 July 2021) as follows:</p> <p>SDH11-06 – 19m-34.8m composite sample reported a head grade of 0.379% V_2O_5, 3.636% TiO_2, 21.516% Fe_2O_3, 13.099% Al_2O_3, 8.748% CaO, 4.333% MgO and 44.731% SiO_2.</p> <p>SDH11-09 – 21m-37.5m composite sample reported a head grade of 0.368% V_2O_5, 3.575% TiO_2, 21.167% Fe_2O_3, 13.029% Al_2O_3, 8.471% CaO, 4.35% MgO, 44.581% SiO_2, 1.111% K_2O, 2.466% Na_2O, 0.198% MnO, 0.045% P, 0.043% S, 0.002% Cr_2O_3.</p> <p>SDH11-12 – 18.2m-38.6m composite sample reported a head grade of 0.351% V_2O_5, 3.45% TiO_2, 20.665% Fe_2O_3, 13.243% Al_2O_3, 9.10% CaO, 4.469% MgO and 44.591% SiO_2.</p>

		<p>Salt Roast Sample ~170g of the Sample 1 concentrate was used in each salt roast test. The leaching tests were conducted at pulp density of 10% (i.e. 50 g of calcined material in 500 g of water).</p>
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.).	<p>RC and Diamond (NQ and HQ3 size) drilling were completed to support the preparation of the Mineral Resource estimate (Figure 3). Holes drilled vertical. Metallurgical testwork reported in this announcement was completed on a concentrate derived from RC drilling with a face-sampling bit. Future metallurgical tests with use concentrates from ½ PQ core composite sample from three metallurgical diamond drill core hole (Figure 3 and Table 2):</p> <ul style="list-style-type: none"> • SDH11-06 - 19m-34.8m (High Grade Zone). • SDH11-09 - 21-37.5m (High Grade Zone). • SDH11-12 - 18.2m-38.6m (High Grade Zone).
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	No qualitative recovery data was recorded. Qualitative examination and photography suggested RC and diamond recoveries are very high. Good ground conditions exist which suggests recovery is likely to be very high.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	RC chip samples from every 1 metre drilled interval were sampled and composited. The host gabbro is fresh from near surface and sample recovery into the RC bags was high. PQ drilling was used to maximise diamond 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 between grade and recovery has been identified.
Logging	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.	Diamond Drill (DD) Core and RC chips were geologically logged, with descriptions of mineralogy and lithology noted.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Logging was generally qualitative in nature. DD core photographed wet.
	The total length and percentage of the relevant intersections logged.	RC drill 1 metre intervals logged 100% from surface to end-of-hole. DD Core SDH11-06 - 0m-39.4m, 100% logged. DD Core SDH11-09 – 0m-40.9m, 100% logged. DD Core SDH11-12 – 0m-41m, 100% logged.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	DD core was cut in half with a core saw. Some half sections sawn in quarters. ¼ and ½ core used in testwork.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	RC bags were re-sampled to collect a 6 tonne composite sample for testwork.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The RC samples were composited into a 6 tonne sample for testwork. The average grade of the 6 tonne sample compares with the drill and DD core assayed intervals for the HG Zone. Whole continuous lengths of DD ½ core samples collected, composited and used in testwork. These were collected to represent the composite intervals of the High Grade Zone.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Subsampling is performed during the preparation stage according to the metallurgical laboratories' internal protocol.
	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.	RC chip samples from every 1 metre drilled interval were sampled and composited. The final composited grade compares favourably with the average V, Ti and Fe grades from the drill assays and the metallurgical diamond drill core average grades for the High Grade Zones of the Vanadium deposit. Use of DD core in metallurgical testwork gives a continuous insitu sample. PQ ensures high recovery rates. DD core twinned previous RC drill holes. Whole sample interval used in testwork.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered 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.	<p>Nagrom Beneficiation Testwork All solid samples have been analysed via X-Ray Fluorescence (XRF) Spectrometry. The prepared sample is fused in a lithium borate flux with a lithium nitrate additive. The resultant glass bead is analysed by XRF. Loss on Ignition (LOI) is also conducted to allow for the determination of oxide totals.</p>

		<p>The testwork is conducted by experienced personnel at Nagrom's Kelmscott metallurgical laboratory under the supervision of a senior metallurgist.</p> <p>Murdoch Testwork The as received concentrate sample was sent for XRF analysis in triplicate at Bureau Veritas' analytical lab in Canning Vale. The grade of the sample in terms of elements and oxides are shown in Table 1. The oxides add up to almost exactly 100%, and the phosphorus content is well below 0.05%, the concentration at which it can cause problems with the quality of iron produced. Vanadium was expressed as the equivalent content of V₂O₃ as that is the oxidation state it forms in magnetite/coulsonite, Fe₂+(Fe₃⁺,V₃⁺)₂O₄. The equivalent grade of V₂O₅ is 2.44%.</p> <p>The Salt roast and Water leach samples were analysed at Bureau Veritas' analytical lab in Canning Vale. The solid samples were analysed by the XRF method for V, Fe, Ti, Si, Al, Mn, P, Mg, Ca and Na. The liquor samples were analysed by the ICP-MS method for V, Fe, Ti, Si, and Al.</p> <p>The assay techniques are considered total. The method chosen is considered appropriate for the style of mineralisation under consideration.</p>
	<p><i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></p>	No geophysical data was collected.
	<p><i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></p>	<p>Nagrom is Certified to a minimum of ISO 9001:2008. Bureau Veritas is Certified to ISO 9001 for all of its activities.</p>
Verification of sampling and assaying	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p>	Significant drill intersections have been verified by alternative company personnel.
	<p><i>The use of twinned holes.</i></p>	All metallurgical DD core holes twinned previous RC holes. In addition, all three metallurgical holes used in this announcement are one of a set of three holes drilled at the same location. For example, SDH11-12 has been twinned by SDH11-13 and SDH11-14 (see Figure 3 and Table 2).
	<p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p>	Templates have been set up to facilitate geological logging. Prior to the import into the central database, logging data is validated for conformity and overall systematic compliance by the geologist. Assay results are received from the laboratory in digital format. Assays, survey data and geological logs incorporated into a database.
	<p><i>Discuss any adjustment to assay data.</i></p>	No adjustments or calibrations will be made to any primary assay data collected for the purpose of reporting assay grades and mineralised intervals.
Location of data points	<p><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></p>	Almost 90% of the collars used in the resource estimate have been surveyed using a differential global positioning system (DGPS) instrument, with the remaining surveyed using a hand-held GPS. Downhole deviations have been measured by downhole survey instruments on 3 holes only using a Globaltech Pathfinder digital downhole camera. All but four holes are vertical. All metallurgical holes are vertical. The vertical and shallow nature of the drilling means that the absence of downhole surveys is not considered a material risk.
	<p><i>Specification of the grid system used.</i></p>	The adopted grid system is GDA 94 Zone 52.
	<p><i>Quality and adequacy of topographic control.</i></p>	A topographic file provided by KRR was calibrated for use in the Mineral Resource estimate using DGPS and GPS collar data. The Competent Person considers that the topography file is accurate given the use of DGPS data in the Mineral Resource area.
Data spacing and distribution	<p><i>Data spacing for reporting of Exploration Results.</i></p>	<p>RC drill spacing is mostly 250 m by 250 m at the Central deposit, closing down to 100 m by 100 m in the western area (see Figure 2). Metallurgical DD core holes are spaced about 500 m apart (see Figure 2).</p>
	<p><i>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.</i></p>	The Competent Person believes the mineralised domains have sufficient geological and grade continuity to support the classification applied to the Mineral Resources given the current drill pattern.
	<p><i>Whether sample compositing has been applied.</i></p>	Metallurgical samples were composited to represent the High Grade Zone within the magnetite gabbro and within the resource envelope. This was considered appropriate given the metallurgical testwork was

		designed to test the high grade zones of the mineralisation and it provided for a bulk sample suitable for the testwork.
<i>Orientation of data in relation to geological structure</i>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	All RC and metallurgical DD core holes are vertical. This allows the holes to intersect the mineralisation at a high-angle as the magnetite gabbro has a very shallow dip to the east.
	<i>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.</i>	The relationship between the drilling orientation and the orientation of key mineralised structures is not considered to have introduced a sampling bias.
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Chain of Custody is managed by the Company until samples pass to a duly certified metallurgical laboratory or Murdoch University for subsampling, assaying, beneficiation and pyrometallurgical test work. The magnetic concentrate reported in this announcement is stored at Nagrom under Job Number T687. The DD core samples are stored on secure sites and delivered to the metallurgical laboratory by the Company or a competent agent. The chain of custody passes upon delivery of the samples to the metallurgical laboratory or Murdoch University.
<i>Audits or Reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No external audits have been completed.

SECTION 2 : REPORTING OF EXPLORATION RESULTS

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<i>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.</i> <i>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.</i>	The Speewah Project comprises 3 Exploration Licences, three Mining Leases and two Miscellaneous Licences. Details are listed in Table 1 Schedule of Tenements held at 31 March 2022 reported previously in the March 2022 Quarterly Report. The Speewah testwork reported in this announcement are from samples collected entirely within E80/2863. The tenements are 100% owned by Speewah Mining Pty Ltd (a wholly owned subsidiary of King River Resources Limited), located over the Speewah Dome, 100km SW of Kununurra in the East Kimberley. The tenements are in good standing and no known impediments exist. No Native Title Claim covers the areas sampled and drilled. The northern part of the tenements (but not E80/2863) is in the Kimberley Heritage Area.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	No exploration completed by other parties is relevant for the metallurgical testwork reported herein.
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	The ferrovanadium titanium (Ti-V-Fe) deposits represent part of a large layered intrusion (the Hart Dolerite), which was intruded c1790 Ma into the Palaeo-Proterozoic sediments and minor volcanics of the 1814 Ma Speewah Group in the East Kimberley Region of Western Australia. The deposits occur within the Speewah Dome, which is an elongated antiform trending N-S. The dome is about 30 km long and attains a maximum width of about 15 km. The Hart Dolerite sill forms the core of the dome. Since the deposit discovery in 2006, at least two distinct types of felsic granophyres and three mafic gabbros have been identified in the Hart Dolerite as follows: <ul style="list-style-type: none"> • K felsic granophyre (youngest) • Mafic granophyre • Pegmatoidal gabbro • Magnetite gabbro (host unit) • Felsic gabbro (oldest). The vanadium-titanium mineralisation is hosted within a magnetite bearing gabbro unit of the Hart Dolerite, outcropping in places and forming a generally flat dipping body that extends over several kilometres of strike and width. The layered sill is up to 400m thick containing the magnetite gabbro unit which is up to 80m thick. Given the mode of formation, mineralisation displays excellent geological and grade continuity which was considered when classifying the Mineral Resource estimate.

Criteria	JORC Code explanation	Commentary
		Exposure is limited and fresh rock either outcrops or is at a shallow depth of a few metres. Ti-V-Fe mineralisation occurs as disseminations of vanadiferous titanomagnetite and ilmenite. Within the tenements the vanadium deposits have been divided into three deposits – Central, Buckman and Red Hill. The test work reported in this announcement was sampled from the Central vanadium deposit (Figure 1). High purity alumina (HPA) is sourced from samples from the same magnetite gabbro unit within the Central deposit that hosts the Ti-V-Fe deposit.
Drill hole Information	<i>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:</i> <ul style="list-style-type: none"> o easting and northing of the drill hole collar o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar o dip and azimuth of the hole o down hole length and interception depth o hole length. o 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. 	New exploration results are not being reported. Locations of diamond (DD) core holes, including metallurgical core holes used in this announcement, are shown on Figure 3 and Table 2.
Data aggregation methods	<i>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.</i>	Exploration results are not being reported.
	<i>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.</i>	RC chip samples from every 1 metre drilled interval were sampled and composited. The final composited grade compares favourably with the average V, Ti and Fe grades from the drill assays and the metallurgical diamond drill core average grades for the High Grade Zones of the Vanadium deposit. Continuous lengths of ½ core composited for metallurgical samples from the High Grade Zones.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalent values are used for reporting.
Relationship between mineralisation widths and intercept lengths	<i>These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i>	Due to the very shallow dip of the mineralisation, the vertical metallurgical DD core holes represent almost the true width of the mineralisation.
Diagrams	<i>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.</i>	Figure 3 shows the location of RC and diamond core holes within the Central Vanadium deposit referred to in this announcement.
Balanced reporting	<i>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.</i>	Reports on previous metallurgical and study results can be found in ASX Releases that are available on our website, including announcements 1 April 2010, 15 July 2010, 9 November 2010, 8 February 2012, 21 April 2017, 21 August 2017, 9 October 2017, 4 December 2017, 30 January 2018, 27 February 2018, 21 March 2018, 25 June 2018, 23 July 2018, 15 October 2018, 19 November 2018, 18 January 2019, 1 March 2019, 21 March 2019, 22 March 2019, 9 May 2019, 7 June 2019, 27 September 2019, 26 November 2019, 6 December 2019, 22 January 2020, 24 March 2020, 23 April 2020, 13 May 2020, 17 June 2020, 7 September 2020 and 13 October 2020, 11 November 2020, 19 November 2020, 26 November 2020, 15 December 2020, 25 March 2021, 30 April 2021, 21 May 2021, 16 June 2021, 22 July 2021, 27 July 2021, 8 September 2021, 4 October 2021, 2 December 2021, 10 December 2021, 4 January 2022, 24 January 2022, 16 March 2022, 5 April 2022 and 19 April 2022.

Criteria	JORC Code explanation	Commentary
<i>Other substantive exploration data</i>	<i>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.</i>	Updated vanadium resource estimates in accordance with the JORC 2012 guidelines were reported in KRR ASX announcements 26 May 2017, 1 April 2019 and 6 November 2019.
<i>Further work</i>	<i>The nature and scale of planned further work (e.g. 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.</i>	Further metallurgical tests are underway to refine and optimise the salt roast and reductive roast processes to produce V ₂ O ₅ , TiO ₂ and metallic iron. In addition, further beneficiation magnetic separation tests are planned on diamond core samples from the Central Vanadium deposit to produce a high V ₂ O ₅ grade concentrate for roast testwork and estimate the mass yield and V, Ti and Fe deportment into the concentrate.