

Australian Securities Exchange Announcement

Highlights

- KRR to focus on new economy critical minerals like Vanadium and High Purity Alumina (HPA) for the transition to renewable energy.
- New "green" process flowsheet under investigation to extract V, Ti and Fe from the large Speewah deposit.

King River Resources Limited (ASX: KRR) is pleased to provide this update on its 100% owned Speewah Vanadium deposit located in the Kimberley of Western Australia (Figure 1). Test work and studies are underway to develop a new process flow sheet to produce high purity Vanadium Pentoxide (V_2O_5), Vanadium Electrolyte (VE), Titanium Dioxide (TiO₂) 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 the Board's decision to expand its Specialty Metals focus to include vanadium and outlines the programmes and targeted products to achieve these new developments.

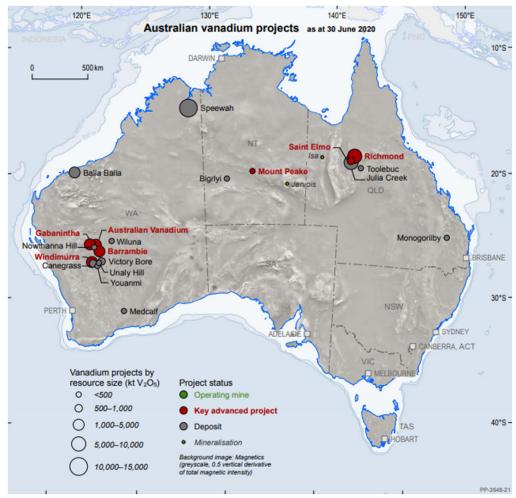


Figure 1: Vanadium deposits in Australia, including KRR's very large Speewah deposit. (Source: Australian Critical Minerals Prospectus 2020, Geoscience Australia, page 152)

Metallurgical Testwork to develop a new Process flow sheet

In 2022, Murdoch University's Hydrometallurgy Research Group commenced a new R&D program to develop a roast process for multi-commodity production from the Speewah Vanadium deposit.

The Murdoch University work is investigating both an oxidative salt roast-water leaching process and a reductive roast approach using a high grade magnetic concentrate feed from the Central Vanadium deposit at Speewah (Figure 2).

Sample 1 used in the new test work contains 2.44% V_2O_5 (i.e. 2.01% V_2O_3) (Table 1) which has been produced from a 6 tonne RC chips sample by magnetic separation methods in 2011.

Metals	Grade	Oxides	Grade
Fe	53.72%	Fe₃O₄	74.23%
Ti	9.17%	TiO₂	15.30%
V	1.37%	V ₂ O ₃	2.01%
Si	1.92%	SiO₂	4.11%
Al	1.00%	Al₂O₃	1.88%
Mn	0.325%	MnO	0.420%
Са	0.965%	CaO	1.350%
Р	0.003%	P₂O₅	0.007%
Mg	0.315%	MgO	0.522%
К	0.027%	K₂O	0.033%
Na	0.063%	Na₂O	0.084%
		Total	99.96%

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

A second test sample will be investigated next. Sample 2 will be made from PQ drill core (currently in storage) from metallurgical holes SDH11-06, SDH11-09 and SDH11-12 from the Central deposit (Figures 2 and 3, and Table 2).

The salt roast process will aim to produce V_2O_5 as the main product but an important objective of the test programme is to investigate the production of metallic iron by-product by reductive roasting. The opportunity to produce an iron metal rather than iron oxide or iron-titanium calcine from the salt roast process, can avoid disposing this material as a waste or remaining as low value iron furnace feedstock. The second stage reductive roast processes will trial the use of different reductants including hydrogen gas, which is considered a green alternative to coal and/or carbon gases. The use of hydrogen could offer a carbon neutral production of iron metal, with no CO_2 emissions and therefore significant environmental benefits.

In addition, the production of a second by-product which could be used a feedstock for titanium dioxide pigment production will be considered, as well as some other new extraction approaches. The programme has been planned and costed and is currently underway. Also, vanadium electrolyte production will be investigated under a separate agreement involving the Future Battery Industries Cooperative Research Centre.

The testwork programme has begun on Sample 1 to optimise the process conditions. Initial thermochemical modelling and mineral characterisation work is complete, and the first salt roast tests are underway. KRR will provide updates as they are released.



This announcement was authorised by the Chairman of the Company.

Anthony Barton

Chairman King River Resources Limited Email: info@kingriverresources.com.au Phone: +61 8 92218055

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% V2O5, 3.3% TiO2 and 14.7% Fe (reported at a 0.23% V₂O₅ 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 V₂O₅ 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% V₂O₅, 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 $\sim 2.4\%$ V₂O₅ with lower levels of SiO₂, CaO and Al₂O₃, 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 V₂O₅, TiO₂ and iron oxide (Fe₂O₃) 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 meta vanadate (AMV) using high V₂O₅ grade concentrates. The results showed further testwork is required to improve and optimise the recoveries and reagent consumption, and to produce high purity ~99.5% V₂O₅ products. The new R&D programme at Murdoch University 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/.



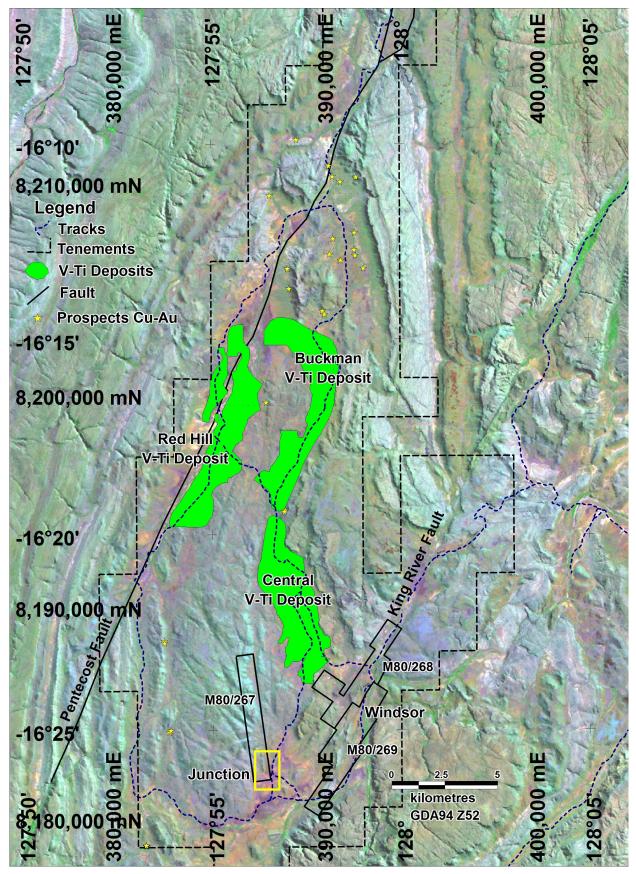


Figure 2: Location of the vanadium resources (green) and Junction V Prospect at Speewah.

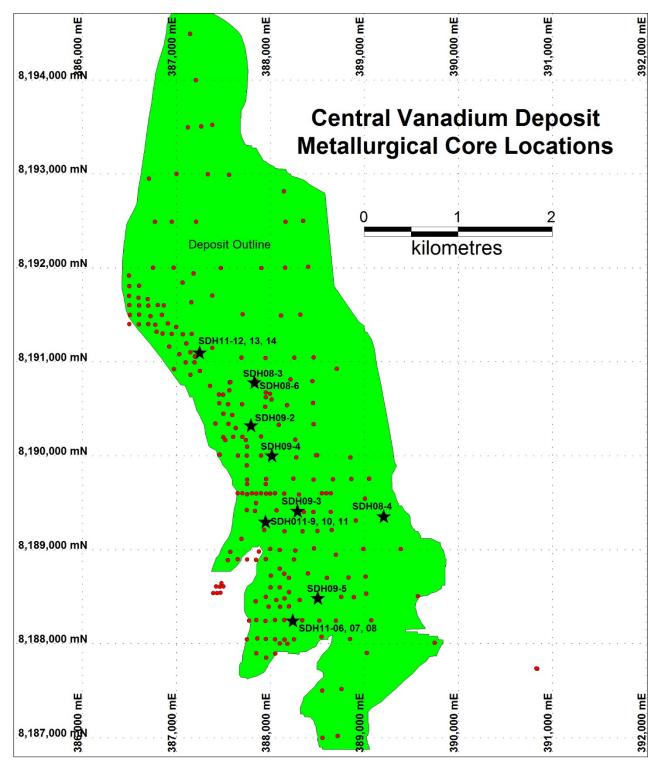


Figure 3: Diamond core hole locations (black stars) and Reverse Circulation drill holes (red dots) within the Central Vanadium Deposit, including the RC holes and metallurgical core holes referred to in this announcement. Diamond core hole collar data is given in Table 2.



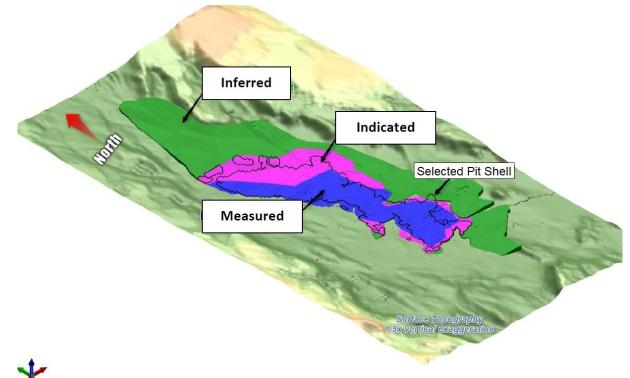


Figure 4: 3D view of Central Vanadium resource with outline of a pit shell with 0.4 strip ratio. (KRR ASX announcement 20 June 2018)

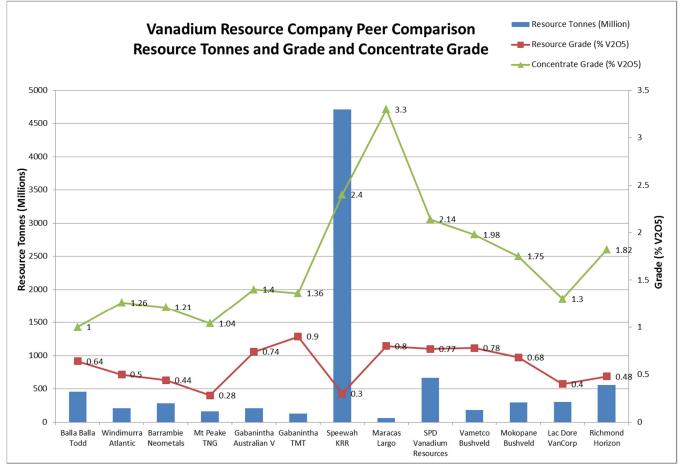


Figure 5: Vanadium deposits highlighting Speewah large size, low grade and high grade concentrate. Source: Company websites, ASX announcements, Technical Reports and Studies, and metallurgical updates. Tonnes and grade based on reported total resources. Concentrate grade commonly from beneficiation of High Grade zone material.

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

Table 2: Diamond of	drill core holes	in the Central	Vanadium deposit
			Vanadiani aopoole

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 TiO₂ 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 form 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	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.	This ASX Release dated 5 April 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).
	These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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.	Semple 1 - Magnetic Concentrate Sample from Reverse Circulation (RC) drill samples Sample 1 is a p80-45 micron high grade concentrate that assayed 2.44% V ₂ O ₅ or 2.01% V ₂ O ₃ (Table 1) produced from a 6 tonne RC chips sample by magnetic separation methods in 2011. RC Drill Samples RC drill chip/powder samples were collected by re-sampling the RC bags for every meter from the basal high grade zone of the magnetile 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. 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. 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% TiO2, 0.2093% V (0.374% V ₂ O ₃), 12.59% Al ₂ O ₃ , 8.61% CaO, 4.46% MgO, 44.77% SiO ₂ and <0.0001% Cr for the -1mm crush material. The -1mm crush material was fed into a rougher LIMS, with the con stream continuing to a 3 stage cleaner LIMS circuit. 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 TiO2, and assayed 2.38% V2O5, 14.94% TiO2, 54.12% Fe, 3.95% SiO2, 31.36% CaO, 0.57% MgO, 0.028% Cr, with LOI (1000) -3.36%. This Concentrate assay compares favourably with the new Murdoch assay in Table 1. 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 ₂ O ₈ grade for the High Grade (HG) Zone of the Central vanadium deposit. Diamond Core Samples to be used 16 HQ and PQ DD core holes were drilled in the Central Vanadium deposit (see Figure 2 an



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	RC and Diamond (NQ and HQ3 size) drilling were completed to support the preparation of the Mineral Resource estimate (Figure 3). Holes drilled vertical.
	tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	Metallurgical testwork reported in this announcement was completed on ½ PQ core composite sample from three metallurgical diamond drill core hole (Figure 3 and Table 2): • SDH11-06 - 19m-34.8m (High Grade Zone).
		• SDH11-09 - 21-37.5m (High Grade Zone).
Drill sample	Method of recording and assessing core and chip sample recoveries and	SDH11-12 - 18.2m-38.6m (High Grade Zone). No qualitative recovery data was recorded. Qualitative examination and photography suggested RC and
recovery	results assessed.	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.
<u> </u>		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. If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	DD core was cut in half with a core saw. Some half sections sawn in quarters. ¼ and ½ core used in testwork. 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.	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. The testwork is conducted by experienced personnel at Nagrom's Kelmscott metallurgical laboratory under the supervision of a senior metallurgist.
		Murdoch Testwork As reported in Murdoch's interim progress report, 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%.
	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.	No geophysical data was collected.
	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.	Nagrom is certified to a minimum of ISO 9001:2008.
Verification of sampling and	The verification of significant intersections by either independent or alternative company personnel.	Significant intersections have been verified by alternative company personnel.
assaying	The use of twinned holes.	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).
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	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.
	Discuss any adjustment to assay data.	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	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.	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.
	Specification of the grid system used.	The adopted grid system is GDA 94 Zone 52.
	Quality and adequacy of topographic control.	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	Data spacing for reporting of Exploration Results.	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).
	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 Resources given the current drill pattern.
	Whether sample compositing has been applied.	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.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	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.
	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.	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.	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.
Audits or Reviews	The results of ay audits or reviews of sampling techniques and data.	No external audits have been completed.



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. 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 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 December 2021 reported previously in the December 2021 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.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No exploration completed by other parties is relevant for the metallurgical testwork reported herein.
Geology	Deposit type, geological setting and style of mineralisation.	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: • K felsic granophyre (youngest) • Mafic granophyre • Pegmatoidal gabbro • Magnetite gabbro (host unit) • Felsic gabbro (lodest). 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. 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 titano-magnetite 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	 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: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. 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.



Criteria	JORC Code explanation	Commentary
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.	Exploration results are not being reported.
	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	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.
	aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	Continuous lengths of ½ core composited for metallurgical samples from the High Grade Zones. No metal equivalent values are used for reporting.
Relationship between mineralisation widths and intercept lengths	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').	Due to the very shallow dip of the mineralisation, the vertical metallurgical DD core holes represent almost the true width of the mineralisation.
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.	Figure 3 shows the location of RC and diamond core holes within the Central Vanadium deposit referred to in this announcement.
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.	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, 25 March 21, 30 April 2021, 21 May 2021, 16 June 2021, 22 July 2021, 27 July 2021, 8 September 2021, 4 October 2021, 2 December 2022, 10 December 2021, 4 January 2022, 24 January 2022 and 16 March 2022.
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.	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.
Further work	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.	Further metallurgical tests are underway to refine and optimise the salt roast and reductive roast processes to produce V_2O_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_2O_5 grade concentrate for roast testwork and estimate the mass yield and V, Ti and Fe deportment into the concentrate.