

Australian Securities Exchange Announcement

21 March 2018

Highlights

- ❖ New magnetic separation testwork on drill core has delivered a further positive upgrade to concentrates by assaying **2.11% V₂O₅, 16.23% TiO₂ and 66.27% Fe₂O₃**, the highest vanadium concentrate grade of all Australian deposits.
- ❖ Mass yield has also been increased to **16.58%** with improved V₂O₅ and TiO₂ recoveries at a coarser grain size that has rejected 67% of waste at 0.5mm with final concentrate grain size of P₈₀ 120 micron.

King River Copper Limited (ASX: KRC) is pleased to provide this metallurgical update on its 100% owned Speewah Vanadium-Titanium-Iron Project in the East Kimberley of Western Australia. The Speewah deposit is Australia's largest vanadium-in-magnetite resource (KRC announcement 26 May 2017) and produces the highest vanadium grade concentrate (KRC ASX announcement 27 February 2018).

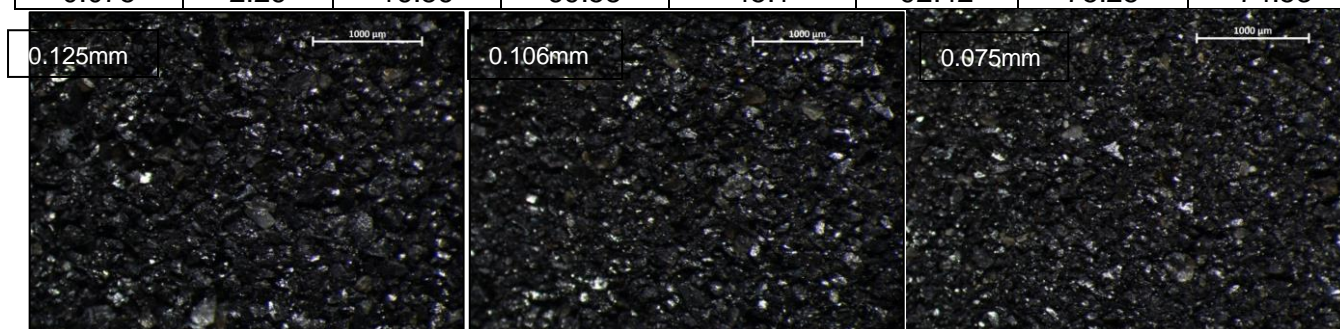
Beneficiation Testwork by Nagrom

Nagrom received a 29.47kg ¼ core composite magnetite gabbro sample for beneficiation testwork from drillhole SDH08-06 sampled from 42.66-59.45m downhole within the high grade zone of the Central Vanadium Deposit. The sample assayed 0.393% V₂O₅, 3.561% TiO₂ and 21.225% Fe₂O₃.

The entire core sample was crushed to 2mm. A 10kg subsample was ground to P₁₀₀ 0.5mm grain size to liberate the magnetite and ilmenite grains, and then passed through a Medium Intensity Magnetic Separation (MIMS) at 3000 Gauss. This produced an intermediate vanadiferous titano-magnetite concentrate that assayed 1.143% V₂O₅, 10.431% TiO₂ and 42.276% Fe₂O₃. The mass yield of this upgrade step was 33.19% into the magnetic fraction, recovering 88.47% V, 89.05% Ti and 21.05% Fe from the original core sample. It shows that 66.81% of the mass can be rejected at a coarser grind size.

The MIMS magnetic fraction was split into three equal portions and ground to P₈₀ 0.125, 0.106 and 0.075mm. Small subsamples were used for Particle Size Distribution (PSD) and Davis Tube Wash (DTW) magnetic separation tests. The DTW tests produced vanadiferous titano-magnetite concentrates grading 2.16-2.26% V₂O₅, 16.68-16.86% TiO₂ and 67.2-69.58% Fe₂O₃, for overall mass yields from core to DTW concentrate of 14.97-15.96% (see Table below).

Grind Size (mm)	Assay Grade (%)			Mass Yield (%)	Recoveries (%)		
	V ₂ O ₅	TiO ₂	Fe ₂ O ₃		V ₂ O ₅	TiO ₂	Fe ₂ O ₃
0.125	2.16	16.68	67.2	48.1	93.1	78.57	76.54
0.106	2.22	16.83	68.5	46.1	92.25	76.31	75.08
0.075	2.26	16.86	69.58	45.1	92.42	75.25	74.53



Final magnetite-ilmenite concentrates produced by DTW magnetic separation method

The MIMS magnetic and PSD MIMS magnetic fractions from the three size groups were recombined and the particle size was estimated to be P_{80} 0.120mm based on the particle size and mass of the fractions.

The composite was passed through a cleaner MIMS test at 3000 Gauss which produced a concentrate grading 1.77% V_2O_5 , 15.09% TiO_2 and 59.27% Fe_2O_3 , for a mass yield of 58.2% and recovering 95.58% V, 89.31% Ti and 83.21% Fe.

To increase the V_2O_5 grade above 2% the cleaner MIMS magnetic fraction was treated with a recleaner LIMS (Low Intensity Magnetic Separation) at 1200 Gauss, which produced a concentrate grading 2.11% V_2O_5 , 16.23% TiO_2 and 66.27% Fe_2O_3 , for a mass yield of 85.85% and recovering 98.06% V, 91.43% Ti and 93.99% Fe.

This MIMS-cleaner MIMS-recleaner LIMS testwork circuit on drill core produced a final concentrate with a grain size of P_{80} 0.12mm grading 2.11% V_2O_5 , 16.23% TiO_2 and 66.27% Fe_2O_3 , for an overall mass yield of 16.58% and recovering 82.9% V, 72.38% Ti and 49.03% Fe.

Directors Comment

This beneficiation result shows that Speewah high grade zone magnetite gabbro can be significantly upgraded by initially coarse grinding and magnetic separation methods to produce a magnetite-ilmenite concentrate at good grade and vanadium and titanium recoveries and reject about 67% of the waste minerals in the sample.

This intermediate concentrate can then be further upgraded by grinding to P_{80} 120 microns (0.12mm) and with further magnetic separation produce a magnetite-ilmenite concentrate of 2.11% V_2O_5 , the highest vanadium concentrate grade of all Australian vanadium deposits.

Importantly, the overall mass yield has increased 27% from a mass yield of 13% used in the Scoping Study of 2012 (KRC ASX announcement 23 April 2012). The beneficiation circuit reported in this announcement has also increased V and Ti recoveries, particularly Ti.

All previous beneficiation testwork had been done at much finer grind sizes where all the rock was ground to 45 micron (0.045mm) before magnetic separation. This new staged beneficiation circuit at coarser grain sizes has the potential to reduce the cost of producing a magnetite-ilmenite concentrate at Speewah.

The final concentrate grind size of P_{80} 120 microns compares very favourably with other Australian vanadium projects where grain sizes of P_{80} 75 and 106 microns are reported.

Further testwork is planned to further improve the beneficiation process.

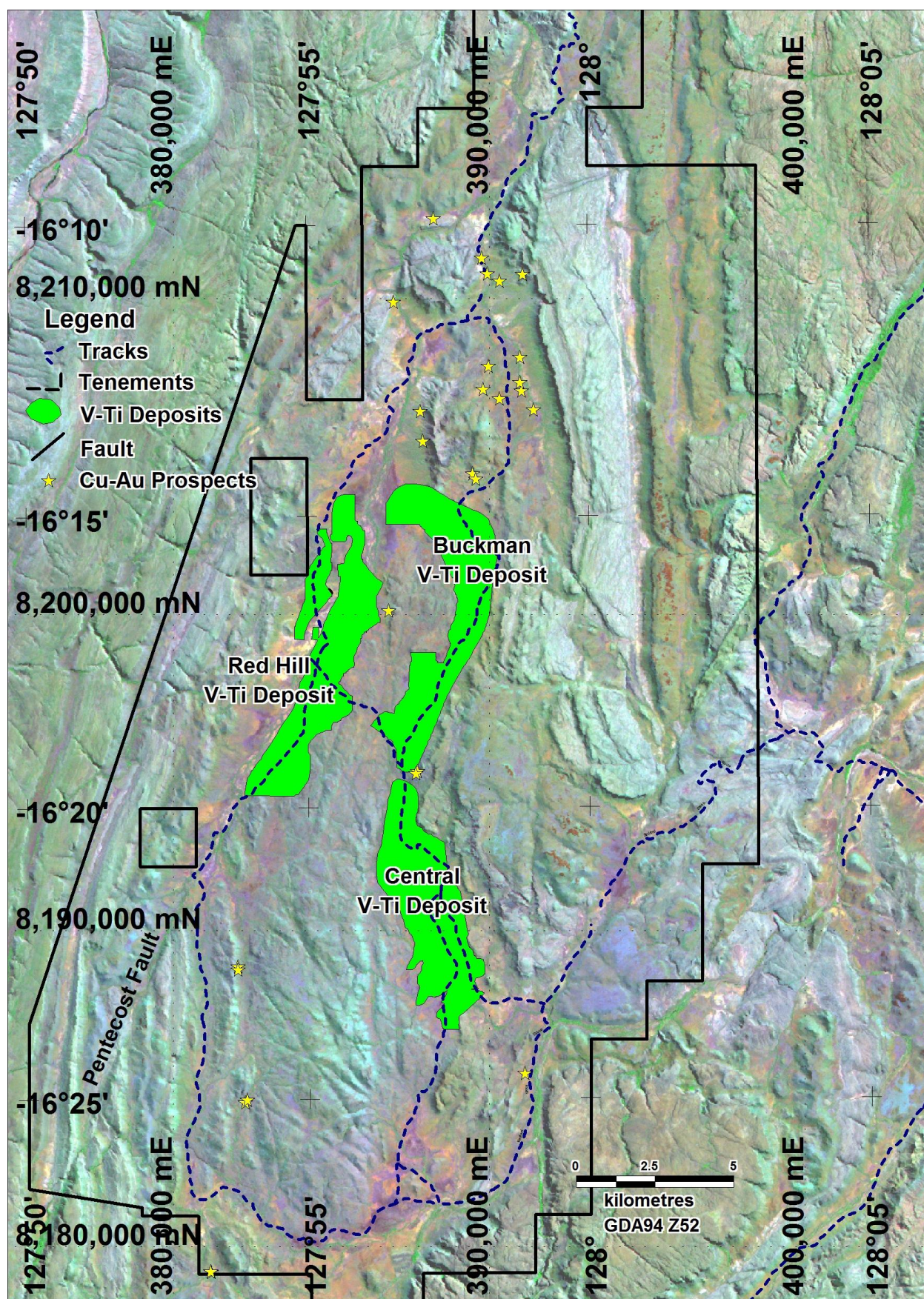


Figure 1: Location of the Speewah Vanadium resources (green outlines) including the Central Vanadium deposit.

1.1 Competent Persons Statement – Dr Shane Wilson

Metallurgical statements and analytical data presented in the section of this report entitled “Beneficiation Testwork by Nagrom” have been based on test work compiled and/or reviewed by Dr Shane Wilson BSc, PhD, PGDip (Chemistry/Analytical Chemistry/Ext Metallurgy) who is a Member of The Australasian Institute of Mining and Metallurgy. Dr Wilson is a Senior Chemist with sufficient experience with the ore types under consideration and the metallurgical processing techniques employed in this report 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’. Dr Wilson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

1.2 Competent Persons Statement – Ken Rogers

The information in this report that relates to Exploration Results and Mineral Resources 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 Copper Ltd, and a Member of both the Australian Institute of Geoscientists (AIG) and The Institute of Materials Minerals and Mining (IMMM), 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.

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

The following section is provided to ensure compliance with the JORC (2012) requirements for the reporting of exploration results:

SECTION 1 : SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
Sampling Techniques	<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>	This ASX Release dated xx March 2018 reports on metallurgical test work programmes on the Vanadium deposits at the Company's Speewah Project. <i>Metallurgical Sample:</i> Nagrom The Mineral Processor received a 29.47kg HQ ¼ core composite sample of core from drillhole SDH08-06 at 42.66-59.45m downhole was selected for beneficiation test work.
Sampling Techniques (continued)	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<i>Metallurgical Sample:</i> The Diamond core (DC) was selected from within the high grade zone of the Central Vanadium Resource to deliver a grade similar to the resource grade of that zone, namely 0.393% V ₂ O ₅ , 3.561% TiO ₂ and 21.225% Fe ₂ O ₃ .
	<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>	<i>Metallurgical Sample:</i> The DC was sampled from across the entire high grade intersection which comprised fresh unaltered mineralised rock.
Drilling techniques	<i>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.).</i>	No drilling was undertaken.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	No drilling was undertaken.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	No drilling was undertaken.
	<i>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.</i>	No drilling was undertaken.
Logging	<i>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.</i>	No drilling or logging was undertaken.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	No drilling or logging was undertaken.
	<i>The total length and percentage of the relevant intersections logged.</i>	No drilling or logging was undertaken.

Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No diamond core drilling was undertaken.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	No drilling was undertaken.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	No drilling was undertaken.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	No drilling was undertaken.
	<i>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.</i>	No drilling was undertaken.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	No drilling was undertaken.
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	Nagrom produced a magnetite-ilmenite concentrate by a combination of Medium Intensity Magnetic Separation (MIMS) and Low Intensity Magnetic Separation (LIMS) tests to be used for hydrometallurgical tests. All solid samples have been analysed via XRF. 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.
	<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>	No geophysical data was collected.
	<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>	Nagrom is certified to a minimum of ISO 9001:2008.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	No drilling or other sampling was undertaken.
	<i>The use of twinned holes.</i>	No twinned holes have been completed.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	No drilling or other sampling was undertaken.
	<i>Discuss any adjustment to assay data.</i>	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	<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>	No drilling or other sampling was undertaken.
	<i>Specification of the grid system used.</i>	No drilling or other sampling was undertaken.
	<i>Quality and adequacy of topographic control.</i>	No drilling or other sampling was undertaken.
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	No drilling or other sampling was undertaken.
	<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>	No drilling or other sampling was undertaken.
	<i>Whether sample compositing has been applied.</i>	No drilling or other sampling was undertaken.

<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>	No drilling or other sampling was undertaken.
	<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>	No drilling or other sampling was undertaken.
<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 for subsampling, assaying, beneficiation and hydrometallurgical test work. The RC assay pulp bags 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.
<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>	<p><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></p> <p><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></p>	<p>The Speewah Project comprises 16 exploration licences. Details are listed in Table 1 Schedule of Tenements held at 31 December 2017 reported previously in the December Quarterly Report. The Speewah test work 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 Copper Limited), located over the Speewah Dome, 100km SW of Kununurra in the NE 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.</p>
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<p>Prior work carried out by Elmina NL in the Windsor area included rock chip sampling and RC and DC drilling to delineate the ABC fluorite deposit in 1988-1993. Mineral Securities Ltd in joint venture with Doral Mineral Industries completed further drilling of the ABC fluorite deposit, a new resource estimate, heritage, environmental and hydrology studies, and a prefeasibility study into the development of an acid grade fluorspar operation.</p>
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	<p>The ferrovanadium titanium (Ti-V-Fe) deposits occur within the Palaeo-Proterozoic Speewah Dome, which is an elongated anticline trending N-S in the East Kimberley Region of Western Australia. The dome is about 30 km long and attains a maximum width of about 15 km. It comprises sediments and minor volcanics of the Speewah Group, intruded by the Hart Dolerite sill, a large layered, mafic intrusive complex which forms the core of the dome. 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.</p> <p>Exposure is limited and fresh rock either outcrops or is at a shallow depth of a few metres.</p> <p>Ti-V-Fe mineralisation occurs as disseminations of vanadiferous titanomagnetite and ilmenite.</p> <p>Within the tenement the layered deposit has been divided into three deposits – Central, Buckman and Red Hill. The test work reported in this announcement was sampled from the Central vanadium deposit.</p>

<i>Drill hole Information</i>	<p>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:</p> <ul style="list-style-type: none"> • 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. 	No drilling or other sampling was undertaken.
<i>Data aggregation methods</i>	<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>	No drilling or other sampling was undertaken.
	<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>	No drilling or other sampling was undertaken.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalent values are used for reporting.
<i>Relationship between mineralisation widths and intercept lengths</i>	<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>	No drill results reported.
<i>Diagrams</i>	<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>	Maps are included in the body of the ASX Release (see Figure 1).
<i>Balanced reporting</i>	<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 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 and 27 February 2018.
<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 KRC ASX announcement 26 May 2017.
<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 optimisation tests are planned to increase metal recoveries, shorten leach times and reduce acid consumption, and trialing selective precipitation, solvent extraction and thermal hydrolysis methods to precipitate vanadium pentoxide and titanium dioxide.