
Australian Securities Exchange Announcement

21 April 2017**Highlights:**

- A new Concept Study is to be undertaken on the Speewah Vanadium-Titanium Project, to take into consideration new technology and developing market opportunities for green metals in energy storage, chemicals, and titanium and steel alloys.
- Previous beneficiation test work at Speewah produced over 2% vanadium pentoxide (V₂O₅) in a magnetite concentrate, the highest grade vanadium magnetite concentrate in Australia.
- Previous 2004 JORC compliant resource delineated Australia's largest vanadium in magnetite deposit.
- The new studies need to include a Mineral Resource Estimate compliant with the 2012 JORC Code, new hydrometallurgical leach testwork, a pit design study, and overview of the developing vanadium and titanium market studies.
- A detailed review into the potential of producing vanadium electrolyte will be included in this study.

King River Copper Limited (ASX: KRC) is pleased to provide this update on the Speewah Vanadium-Titanium Project. In the past six months KRC has been encouraged by improvements in vanadium and titanium prices, and potential increases in the demand for high purity vanadium and titanium products and Vanadium Redox Flow Batteries ("VRFB").

KRC plans to complete a Concept Study to examine the feasibility of producing vanadium in the form of high purity vanadium pentoxide (V₂O₅) and vanadium electrolyte ("VE") and also titanium dioxide (TiO₂) from the Central Vanadium deposit at Speewah. This will address key studies that reduce the risks. Positive hydrometallurgical test outcomes, a resource upgrade, mining studies and marketing studies will assist KRC to undertake a scoping study dependent on prevailing vanadium and titanium market conditions. Other important studies, such as baseline water, soil, heritage and environmental surveys, have already been done.

A number of metallurgical tests and studies have already been conducted and reported on the Speewah Vanadium-Titanium deposit since its discovery in 2006. This work was undertaken for a ferrovanadium and titanium dioxide project development targeting the steel and pigment markets, and included:

- ❖ 2006 - Metallurgical Test work (Ammtec)
- ❖ 2008 - Metallurgical Test work (Amdel Mineral Laboratories (Amdel))
- ❖ 2009 - Mineral Resource Estimate (CSA Global Pty Ltd)
- ❖ 2010 - Flora and Fauna Surveys at Central Deposit (Animal Plant Mineral Pty Ltd)
Avian Survey (CSIRO)
Heritage Mapping Speewah Dome (Terra Rosa Cultural Resource Management Pty Ltd)
Pyrometallurgical Pig Iron and Vanadium Slag Test work (Mintek)
Mineral Resource Estimate (Runge Limited)
Magnetite and Vanadium Concept Study (Sinclair Knight Merz (SKM))
- ❖ 2011 - Mineral Resource Estimate (Runge Limited)
Preliminary Pit Design Speewah Vanadium Deposit (Runge Limited)
Metallurgical Test Work Study Report (Amdel, Spectrolabs and SKM)
Scoping Study Review of Alternative Process Routes (SKM)
Hydrometallurgical Leaching-Precipitation of TiO₂ and V₂O₅ (SMS Siemag)
Hydrometallurgical Test work (Process Research OrTech and Nagrom Metallurgy)
Baseline Hydrologic Assessment Speewah Dome (AECOM Australia Pty Ltd)
Groundwater Assessment Central Deposit (Groundwater Consulting Services Pty Ltd)
Soil Characterisation Assessment Central Deposit (Landloch Pty Ltd)
Archaeological and Ethnographic Survey (Terra Rosa Cultural Resource Management)
- ❖ 2012 - Mineral Resource Estimate 2004 JORC Code (Runge Limited)
Scoping Study (KRC)

KRC is satisfied that additional work on the Vanadium-Titanium project is justified based on the following four significant outcomes from these previous tests and studies:

- ❖ A combined Measured, Indicated and Inferred Resource totalling 4.7 Billion tonnes at 0.30% V₂O₅ and 2% Ti (at 0.23% V₂O₅ cut-off grade) in three deposits (Tables 1 and 2). This information was prepared and first disclosed under the JORC Code 2004 (refer KRC ASX announcement dated 12 March 2012). It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

The 2004 JORC compliant resources consists of three separate vanadium-titanium-iron deposits (see Table 1, Figure 1), which have been subdivided into high and low grade zones (see Table 2).

KRC believes these Mineral Resources at Speewah comprise Australia's largest vanadium in magnetite deposit.

An update of the Mineral Resources estimate is planned to comply with the guidelines of the 2012 JORC Code.

- ❖ The vanadium and titanium metals occur in vanadiferous titanomagnetite and ilmenite disseminated in a magnetite gabbro unit that is flat to shallow dipping and up to 80m thick in the Hart Dolerite sill complex (Figure 2). The deposit has very favourable geometry for mining with a potentially low strip ratio and is mostly fresh from near surface (KRC ASX announcement 10 May 2011).
- ❖ Beneficiation of the magnetite gabbro sourced from Reverse Circulation drill chips from the high grade zone, using conventional low intensity magnetic separation on feed material with a grind size P80 45 microns, produced a high tenor magnetite concentrate assaying over 2.0% V₂O₅ and typically 14-16% TiO₂ (KRC ASX announcements of 1 April 2010 and KRC ASX announcement of 15 July 2010). Variability tests from all three deposits reported in a range 2.15 to 2.64% V₂O₅, with vanadium recoveries of up to 77.73% V₂O₅ and mass recoveries up to 14.18% magnetite in concentrate. A similar result of 2.07% V₂O₅ and 16.12% TiO₂ was obtained in staged magnetic separation tests on diamond core from the Central deposit crushed to P100 1mm then ground to 75 microns, for an overall 71% vanadium recovery and mass yield of 13%.
- ❖ Hydrometallurgical leaching testwork on the fine grind, high grade vanadium magnetite concentrate demonstrated that vanadium pentoxide (V₂O₅), titanium dioxide (TiO₂) and iron oxide (Fe₂O₃) products could be produced at high recoveries (KRC ASX announcements 9 November 2010 and 8 February 2012).

Planned Concept Study Outcomes

A Concept Study is planned to examine the feasibility of producing vanadium in the form of vanadium pentoxide (V₂O₅) and titanium dioxide (TiO₂) from the Speewah Central vanadium deposit. The study will build on the original testwork and studies listed above, and focus on:

- ❖ Updating the Speewah Vanadium resource to comply with the guidelines of the 2012 JORC Code.
- ❖ Exploring a new hydrometallurgical process that:
 - uses a fine or coarser grind magnetite concentrate feedstock
 - examines process routes for the manufacture of high purity V₂O₅ and TiO₂
- ❖ Facilitates a review into the direct production of vanadium electrolyte for vanadium flow batteries
- ❖ Preliminary pit design study for a smaller mining operation to maximise insitu and concentrate grade
- ❖ Market studies on producers, consumers, future demand and prices of vanadium pentoxide, titanium dioxide and VE.

The major objective of the Concept Study will be to provide the framework for further testwork and studies so a Scoping Study can be completed that addresses project economics, further environmental and heritage studies can be planned, and permitting work including a Mining Lease on the Central deposit commenced. In particular, the study will investigate the production and marketability of electrolyte vanadium products.

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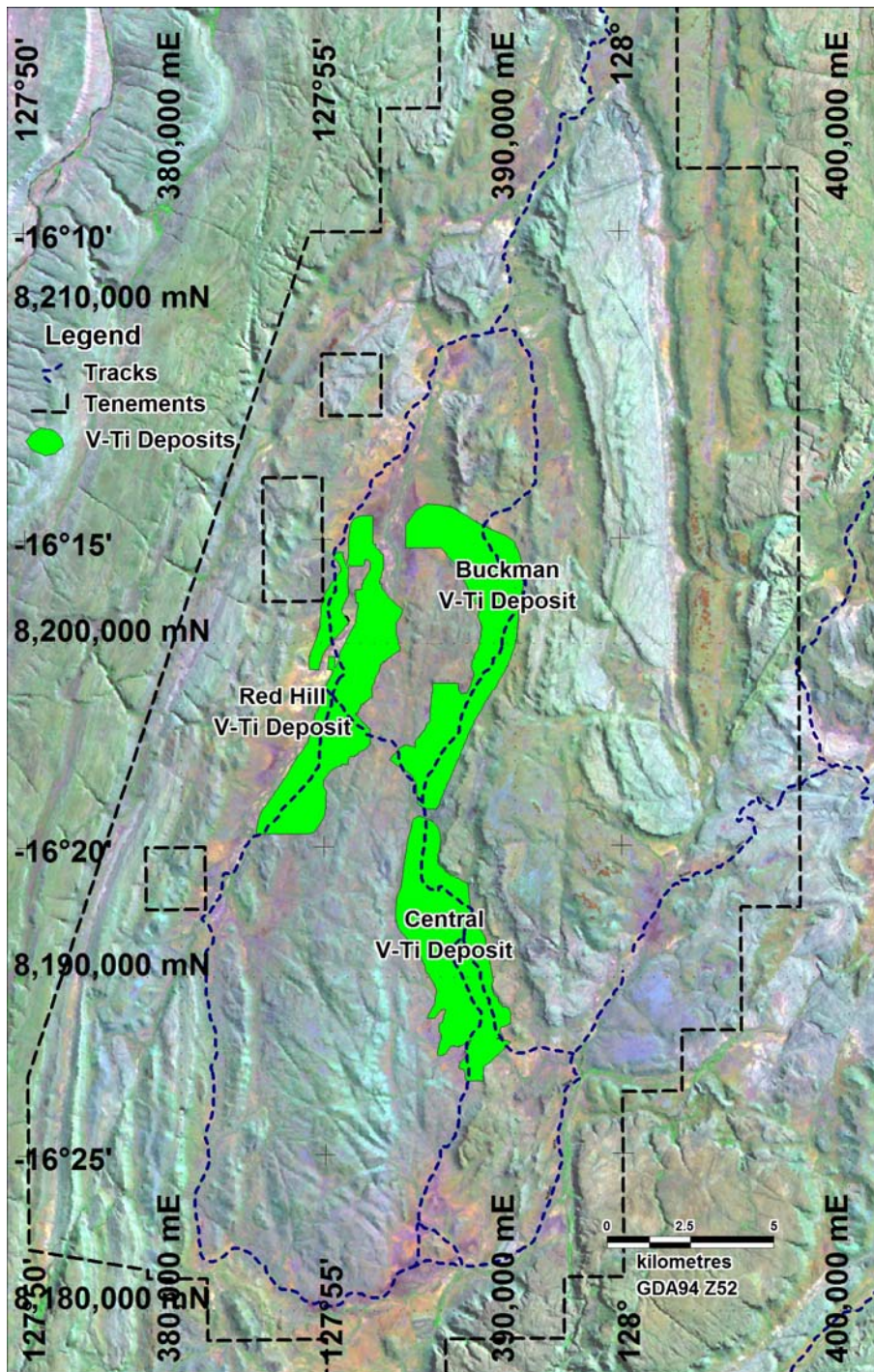


Figure 1: Central, Buckman and Red Hill Vanadium JORC 2004 resource outlines

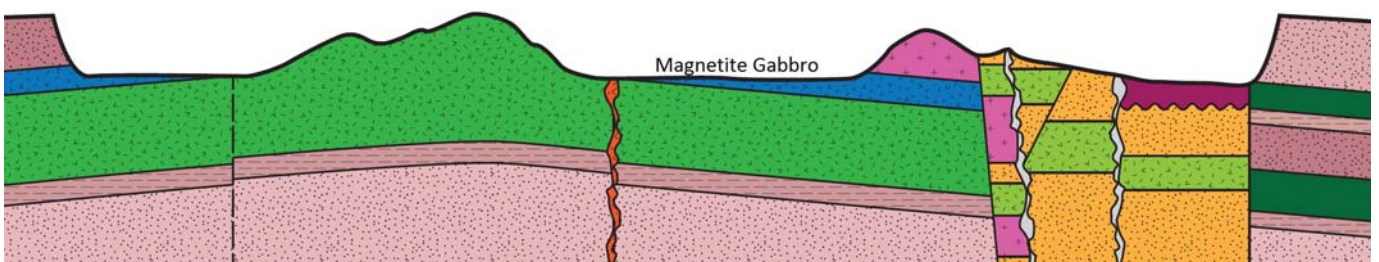


Figure 2: Schematic West to East Cross Section across the Speedwah Dome showing the vanadium-titanium-iron bearing magnetite gabbro unit (blue).

Table 1: Speewah Mineral Resource Estimate (0.23% V₂O₅ cut-off) 2004 JORC Code

Deposit	Tonnes Mt	V %	V ₂ O ₅ %	Fe %	Ti %
Central	1,240	0.17	0.31	14.6	2.0
Buckman	1,495	0.16	0.29	14.7	1.9
Red Hill	1,977	0.16	0.29	14.7	2.0
Grand Total	4,712	0.17	0.30	14.7	2.0

V₂O₅ calculated by multiplying V assay by 1.785.

Table 2: Speewah Mineral Resource Estimate (0.23% V₂O₅ cut-off) 2004 JORC Code

Speewah Project		Tonnes Mt	V %	V ₂ O ₅ %	Fe %	Ti %
Zone	Class					
High Grade	Measured	181	0.21	0.37	15.1	2.1
	Indicated	404	0.20	0.35	15.0	2.0
	Inferred	1,139	0.19	0.34	14.9	2.0
High Grade Total		1,725	0.20	0.35	15.0	2.0
Low Grade	Measured	141	0.15	0.27	14.6	2.0
	Indicated	650	0.15	0.27	14.5	1.9
	Inferred	2,196	0.15	0.27	14.4	1.9
Low Grade Total		2,987	0.15	0.27	14.5	1.9
Combined Zones	Measured	322	0.18	0.32	14.9	2.0
	Indicated	1,054	0.18	0.33	14.9	2.0
	Inferred	3,335	0.16	0.29	14.6	2.0
Grand Total*		4,712	0.17	0.30	14.7	2.0

V₂O₅ calculated by multiplying V assay by 1.785.

Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled by Ken Rogers and fairly represents this information. Mr. Rogers is the Chief Geologist and an employee of the Company and a member of the Australian Institute of Geoscientists. 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.

The Resources reported in Tables 1 and 2 have been sourced from a Resource Estimate Report which was last reported in KRC ASX announcement dated 12 March 2012. This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported. KRC confirms it is not aware of any new information or data that materially affects the resource information referenced in this announcement.