

25 October 2018

# More Shallow, High-Grade Assays at SPD Vanadium Project

Latest results will form part of imminent maiden JORC Resource

## *Key Points*

- More strong assays from SPD, including:
  - 34m at 1.03% V<sub>2</sub>O<sub>5</sub> from 22m (VDD001)
  - 24m at 0.73% V<sub>2</sub>O<sub>5</sub> from surface (VRC002)  
incl. 12m at 1.00% V<sub>2</sub>O<sub>5</sub> from 12m incl. 2m at 1.72% V<sub>2</sub>O<sub>5</sub>
  - 8m at 1.10% V<sub>2</sub>O<sub>5</sub> from 46m incl. 2m at 1.56% V<sub>2</sub>O<sub>5</sub> (VRC005)  
(within a wider interval of 37m at 0.65% V<sub>2</sub>O<sub>5</sub> from 47m)
  - 9m at 1.04% V<sub>2</sub>O<sub>5</sub> from 49m (VRC003)  
(within a wider interval of 35m at 0.65% V<sub>2</sub>O<sub>5</sub> from 23m)
  - 16m at 0.82% V<sub>2</sub>O<sub>5</sub> from 10m (VRC007)  
incl. 2m at 1.54% V<sub>2</sub>O<sub>5</sub>
- Drilling ongoing with three rigs operating
- Maiden JORC Resource expected to be published next month
- Drilling also underway to test nearby shallow vanadium pipes, which have the potential to to compliment a low-cost DSO operation at the project
- Vanadium pentoxide prices reported above US\$30/lb, a 300% increase in 2018

Tando Resources (ASX: TNO, **Tando** or **the Company**) is pleased to announce continued high quality assay results from its SPD Vanadium Project in South Africa (refer Figure 1).

The results come from the recently-completed Phase One drilling program, which targeted the established SPD deposit, where there is currently a resource of 513 million tonnes at a grade of 0.78% V<sub>2</sub>O<sub>5</sub> defined under the SAMREC code. This resource is a "foreign resource" (as defined in the ASX Listing Rules) and is detailed in Appendix 1 below.



The latest assays, which are quoted as whole-rock, or pre-concentrate, grades, include:

- 34m at 1.03%V<sub>2</sub>O<sub>5</sub> from 22m (VDD001, Upper Layer)
- 8m at 1.02%V<sub>2</sub>O<sub>5</sub> from 108.6m (VDD001, Lower Layer)
- 24m at 0.73% V<sub>2</sub>O<sub>5</sub> from 0m / surface (VRC002, Lower Layer)
  - including 12m at 1.00% V<sub>2</sub>O<sub>5</sub> from 12m
  - including 2m at 1.72% V<sub>2</sub>O<sub>5</sub> from 22m
- 1m at 1.31% V<sub>2</sub>O<sub>5</sub> from 0m / surface (VRC007)
- 16m at 0.82% V<sub>2</sub>O<sub>5</sub> from 10m (VRC007, Lower Layer)
  - including 2m at 1.54% V<sub>2</sub>O<sub>5</sub> from 24m
- 37m at 0.65% V<sub>2</sub>O<sub>5</sub> from 13m (VRC005, Lower Layer)
  - including 8m at 1.10% V<sub>2</sub>O<sub>5</sub> from 42m
  - including 2m at 1.56% V<sub>2</sub>O<sub>5</sub> from 48m
- 35m at 0.65% V<sub>2</sub>O<sub>5</sub> from 23m (VRC003, Lower Layer)
  - including 9m at 1.04% V<sub>2</sub>O<sub>5</sub> from 49m

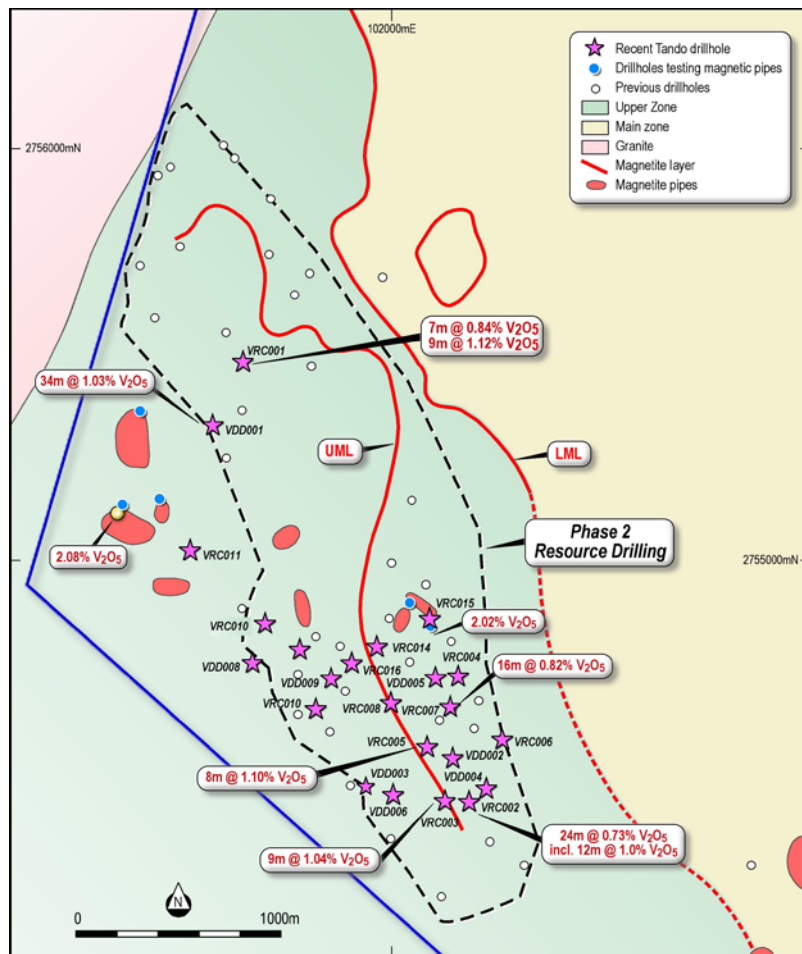
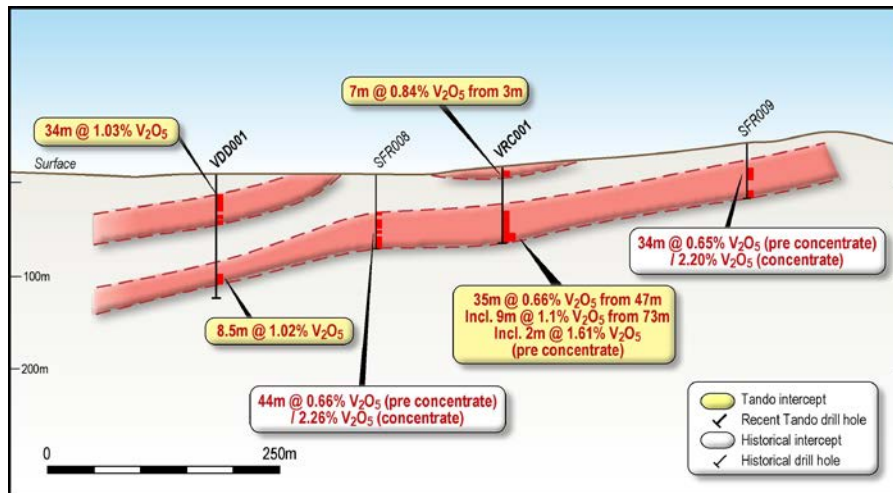


Figure 1. Plan showing location of drilling at SPD as well as historical and planned drilling.



Historical drilling at SPD returned magnetic concentrate grades above 2.2% V<sub>2</sub>O<sub>5</sub> (refer Figure 2 and ASX release 17 September 2018).

Tando has now submitted samples from VRC001 – VRC003 for magnetic separation by Davis Tube and analysis of the magnetic concentrate.



**Figure 2.** Cross Section showing results from VDD001, VRC001 and adjacent holes.

The Phase 1 drilling was aimed at allowing a maiden JORC-compliant Mineral Resource to be calculated. As announced last week, drilling of Phase 1 is now completed (refer Figure 1 and Appendix 2) and all outstanding assays are expected to be received during the next month.

The Phase Two drilling program is now underway with two rigs operating. Phase Two aims to upgrade the maiden JORC Resource to an Indicated category (provided results are as anticipated), with 58 holes for 5,550m currently planned.

Drilling is also underway to test the potential of the surrounding high-grade vanadium pipes at SPD to compliment a Direct Shipping Ore (DSO) operation, which is currently being investigated by the Company.



**Figure 3.** Drilling in progress at the pipes at the SPD Vanadium Project.



Tando's Managing Director Bill Oliver said: *"These results are further evidence of the high-grade, near-surface vanadium mineralisation at SPD."*

*"Results such as these will underpin the impending maiden JORC Resource."*

*"While we await assays to finalise the resource estimation, the phase two drilling program is continuing along with drilling of the shallow vanadium pipes nearby."*

*"This multi-pronged strategy will give us strong newsflow for several months as we push to unlock the value of this outstanding asset."*

As part of drilling activities, the drilling contractor has recruited employees from the local communities, assisted by Tando, which is expected to be the first of many opportunities for the project to provide benefits such as employment and training for these communities.

The cost to complete the entire Phase 1 and Phase 2 drilling programme and the resultant resource estimations is estimated at A\$1.4 million. The Company is fully funded for the drilling programme as well as the metallurgical and mining studies which will follow completion of the drilling programme.

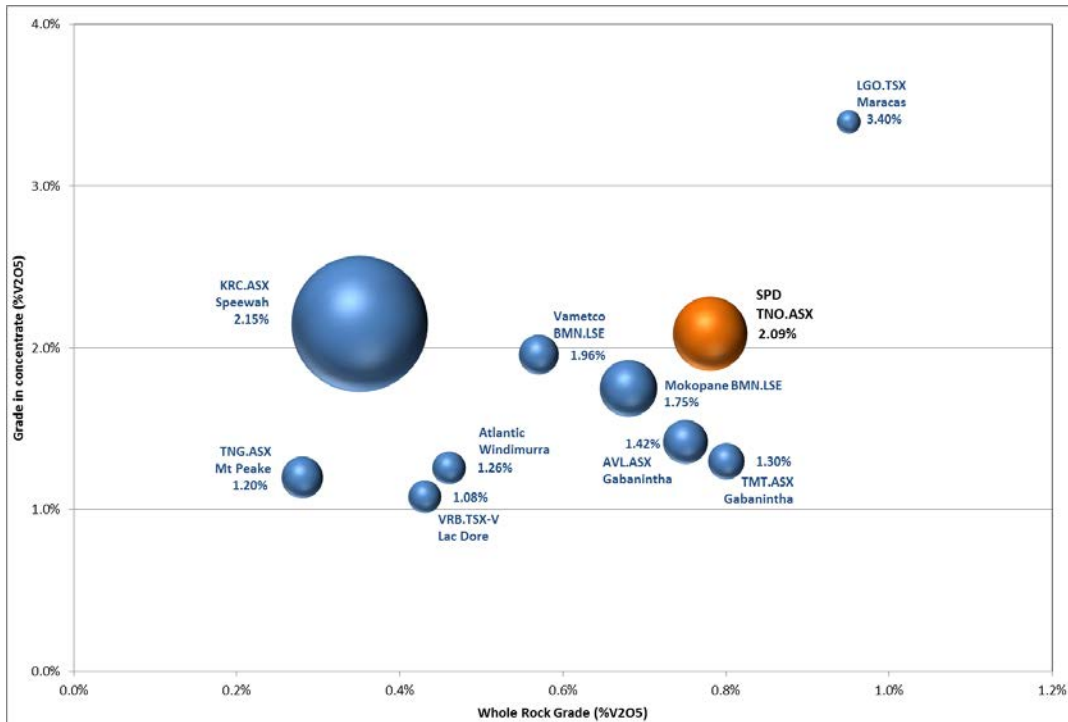
## **Background on the SPD Vanadium Project**

Global vanadium projects are summarised in Figure 4. Currently approximately 85% of the world's vanadium is produced in China, Russia and South Africa. The SPD Vanadium Project is located in one of these producing regions and has the potential to be globally significant based on its tonnage and grade in concentrate (Figure 4).

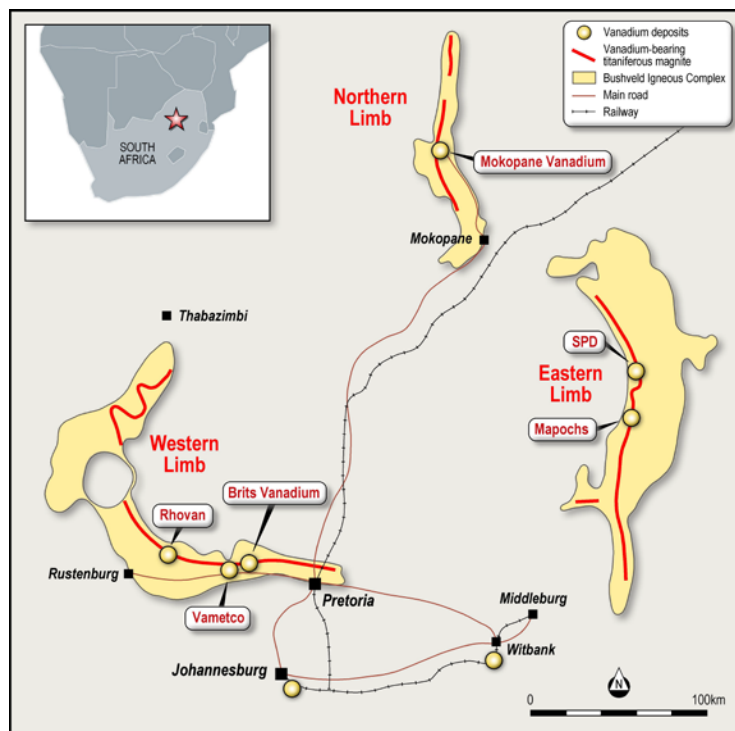
The SPD Vanadium Project is located in a similar geological setting to the mining operations of Rhovan (Glencore), Vametco (Bushveld Minerals) and Mapochs (International Resources Ltd) in the Gauteng and Limpopo provinces of South Africa (Figure 5). Both the Rhovan and Vametco processing plants include refining to generate products used in the global steel making industry and aim to develop downstream processing to produce materials used in the battery market. The SPD Vanadium Project is located only 30km from the currently dormant Mapochs mine which has a processing plant and railway infrastructure.

The region around the SPD Vanadium Project contains critical infrastructure such as:

- High voltage power lines and sub stations operated by the state provider ESKOM,
- Water resources including the De Hoop Dam 15km south of the project,
- Rail links,
- Sealed roads around the project area,
- Mining service companies and support business in the immediate area,
- Available skilled workforce within the local community and the region.



**Figure 4.** Global vanadium projects categorised by resource grade and grade in concentrate. Label states concentrate grade based on reported testwork. Bubble size denotes tonnage. Tonnes and grade based on reported total resources, due to different host exchanges these are reported under differing reporting regimes (JORC, 43-101 or SAMREC). Source: Company websites, ASX / TSX / LSE announcements.



**Figure 5.** Location of the SPD Vanadium Project and other vanadium deposits in the Bushveld Igneous Complex.



## Background on Vanadium

The Company has targeted vanadium as a commodity of interest due to its usage in energy storage, specifically vanadium redox flow batteries (**VRFB**). It is anticipated that forecast increase in battery usage for large scale energy storage will lead to a significant increase in the demand for vanadium. VRFB technology was developed in Australia and has the following advantages:

- a substantially longer lifespan than most current batteries (up to 20 years),
- being able to hold charge for a substantial time (up to 12 months),
- the ability to discharge 100% of its charge without damage,
- scalability to enable larger scale storage facilities to be constructed, and
- greater chemical stability as only a single element is present in the electrolyte.

These features make VRFBs attractive for household or small town sized energy storage requirements. According to research conducted by Lazard (NYSE.LAZ) VRFB's already have a levelised cost of storage that exceeds Li-ion battery storage by 26% to 32% on a comparative basis (full report available at <https://www.lazard.com/perspective/>). Current VRFB facilities in usage or in development are located in China and Japan with development of further facilities constrained by an absence of supply of "battery grade"  $V_2O_5$ .

The price for >98% Vanadium Pentoxide ( $V_2O_5$ ), a more commonly traded intermediate product, has increased from US\$3.50/lb at the start of 2017 and approximately US\$10/lb at the start of 2018 to current prices at and above US\$30/lb (fob China, source: Metal Bulletin).

Current day demand for vanadium arises from its use in steel making. Vanadium is principally used to add strength via various alloys as well as other speciality uses. This usage accounts for over 90% of current vanadium demand in today's market (with the balance supplying chemical usages). Demand from steel makers is forecast to increase with the recent implementation of stricter standards on the strength of steel to be used in construction (specifically rebar).

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## **Competent Persons Statement**

The information in this announcement that relates to Exploration Results and other technical information complies with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (**JORC Code**) and has been compiled and assessed under the supervision of Mr Bill Oliver, the Managing Director of Tando Resources Ltd. Mr Oliver is a Member of the Australasian Institute of Mining and Metallurgy and the Australasian Institute of Geoscientists. He has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code. Mr Oliver consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears. The Exploration Results are based on standard industry practises for drilling, logging, sampling, assay methods including quality assurance and quality control measures as detailed in Appendix 3.

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## APPENDIX 1.

The resource for the SPD Vanadium Project as shown in Table 1 was estimated by GEMECs Pty Ltd based on all available drilling data in accordance with the SAMREC Code (2007) and is therefore a “qualifying foreign resource estimate” as defined in the ASX Listing Rules (further detail below and in the ASX Announcement of 22 March 2018). The resource was classed as inferred under the SAMREC Code. Bill Oliver, Managing Director of Tando, is acting as the Competent Person and has reviewed reports and data compiled and used in the resource estimation. The authors of the report on the 2010 exploration activities and resource estimate have confirmed that there are no material changes to the resource or underlying data since the date of the report (June 2010), and that the information presented here is consistent with the data it reported.

**Table 1.** SPD Vanadium Project resource (classed as inferred under the SAMREC Code).

Reef	Avge Thickness (m)	Tonnes (Mt)	Whole Rock V <sub>2</sub> O <sub>5</sub> %	Mt%	Magnetite Tonnes	V <sub>2</sub> O <sub>5</sub> % in Magnetite
Upper Layer	24	184.2	0.73	42.4	78.1	1.99
Lower Layer	22	329.1	0.81	41.6	136.0	2.20
<b>Averages &amp; Totals</b>	<b>23</b>	<b>513.3</b>	<b>0.78</b>	<b>41.9</b>	<b>215.0</b>	<b>2.09</b>

**Table 1 Notes:** While this foreign resource is not reported in compliance with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (**JORC Code**), it is the Company’s opinion (and the opinion of the Competent Person for this document), that the data quality and validation criteria, as well as the resource methodology and check procedures, are reliable and consistent with criteria as defined by the JORC Code. All tabulated data has been rounded to one decimal place for tonnage and two decimal places for grades. %V<sub>2</sub>O<sub>5</sub> is derived from XRF analysis by multiplying %V by 1.785.

The resource for the SPD Vanadium Project is based on two phases of drilling detailed in the ASX Announcement of 22 March 2018 (also refer Figure 1). Initial exploration by Vantech in 1997 comprised 16 diamond core drill holes for 1051.6m as well as detailed geological mapping. Exploration by VanRes comprised 23 RC drillholes for 1,073m and 2 diamond core drillholes for 278m drilled in 2010. Best whole-rock drilling results from the SPD Vanadium Project include:

- 9m at 1.34% V<sub>2</sub>O<sub>5</sub> + 10.5% TiO<sub>2</sub> from 9m (SFR019)
- 13m at 1.13% V<sub>2</sub>O<sub>5</sub> + 7.43% TiO<sub>2</sub> from 10m (SFR017)
- 14m at 1.08% V<sub>2</sub>O<sub>5</sub> + 7.07% TiO<sub>2</sub> from 9m (SFR013)
- 20m at 0.96% V<sub>2</sub>O<sub>5</sub> + 8.35% TiO<sub>2</sub> from 11m (SFR011)
- 15m at 0.92% V<sub>2</sub>O<sub>5</sub> + 6.44% TiO<sub>2</sub> from 8m (SFR018)
- 12.2m at 0.90% V<sub>2</sub>O<sub>5</sub> from 127.2m & 26.9m at 0.80% V<sub>2</sub>O<sub>5</sub> from 43.1m (SFDD001)

Drill samples were passed through a Davis Tube to obtain a magnetic concentrate. Vanadium and titanium content analyses in the concentrate are very consistent, **averaging 2% V<sub>2</sub>O<sub>5</sub> and 13% TiO<sub>2</sub>** (ASX Announcement 22 March 2018).

The Competent Person has not yet completed sufficient review on the qualifying foreign resource estimate to classify it in accordance with the JORC Code at this time and consequently it is uncertain that, following evaluation and/or further exploration work that the qualifying foreign resource estimate will be able to be reported as a Mineral Resource in accordance with the JORC Code. As detailed in this announcement the Company plans to implement a drilling programme to establish a Mineral Resource and, provided results are consistent with previous drilling, carry out further drilling aimed at increasing the confidence in the Mineral Resource.





## APPENDIX 2: Significant Drillhole Intercepts from Phase 1 at the SPD Vanadium Project

HOLE ID	Drill Type	EAST	NORTH	EOH (m)	UNIT	INTERSECTION (whole rock)				(magnetic concentrate)				
						From (m)	Width (m)	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Fe* %	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %
VDD001	DD	801358	7246865	135	UML	21	34	1.03	5.92					
						LML	108.6	8.5	1.02	6.64				
VRC001	RC	801520	7247155	90	UML	3	7	0.84	5.60					
						LML	47	35	0.66	4.59				
						<i>incl.</i>	73	9	1.12	7.49				
VRC002	RC	802548	7245002	39	UML	0	24	0.73	5.02					
						<i>incl.</i>	12	12	1.00	6.77				
						<i>incl.</i>	22	2	1.72	11.2				
VRC003	RC	802414	7245050	69	UML	23	35	0.65	4.53					
						<i>incl.</i>	49	9	1.04	6.95				
VRC004	RC	802503	7245603	46	UML									
VRC005	RC	802351	7245271	62	UML	13	37	0.65	4.52					
						<i>incl.</i>	42	8	1.10	7.43				
						<i>incl.</i>	48	2	1.56	10.2				
VRC006	RC	802723	7245283	36	UML	16	2	0.53	3.06					
VRC007	RC	802495	7245445	38	UML	0	1	1.31	11.1					
							10	16	0.82	5.06				
						<i>incl.</i>	24	2	1.54	9.86				
VRC008	RC	802230	7245480	76		<i>Assay results pending</i>								
VRC009	RC	801520	7245793	156		<i>Assay results pending</i>								
VRC010	RC	801614	7245874	134		<i>Assay results pending</i>								
VRC011	RC	801286	7246236			<i>Assay results pending</i>								
VDD002	DD	802477	7245218	57		<i>Assay results pending</i>								
VDD003	DD	802040	7245103	132		<i>Assay results pending</i>								
VDD004	DD	802634	7245063	25		<i>Assay results pending</i>								
VDD005	DD	802400	7245603	29		<i>Assay results pending</i>								
VDD006	DD	802185	7245045	102		<i>Assay results pending</i>								
VDD007	DD	801760	7245770	135		<i>Assay results pending</i>								
VDD008	DD	801590	7245680	141		<i>Assay results pending</i>								

### Notes:

- All coordinates are in UTM Zone 35S (WGS 84).
- All holes are vertical (-90 dip).
- Results should be read in conjunction with the data provided in Appendix 3.



## APPENDIX 3.

The following Tables are provided to ensure compliance with the JORC Code (2012 Edition) requirements for the reporting of Exploration Results at the SPD Vanadium Project.

### Section 1: Sampling Techniques and Data

(Criteria in this section applies to all succeeding sections)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<i>Nature and quality of sampling (eg 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>	Diamond core drilling using NQ sized core.  RC drilling using 5 ¼" face sampling hammer.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	RC drilling and the core sampled at 1m intervals except where these are adjusted for geological features (core only).  Core will be cut in half, with all core being photographed for reference.  RC drilling will be split on site using a riffle splitter.
	<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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</i>	All aspects of the determination of mineralisation are described in this table.  Diamond core drilling and RC drilling using these methods are considered appropriate for sampling the vanadiferous titanomagnetite unit which hosts the mineralisation.  All of the drill samples have been sent to a commercial laboratory for crushing, pulverising and chemical analysis by industry standard practises.
<b>Drilling techniques</b>	<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 of standard tube, depth of diamond tails, face-sampling bit or other type, whether core is orientated and if so, by what method, etc).</i>	Diamond drilling uses HQ and NQ2 core sizes. Coring was from surface using HQ. Core was changed to NQ2 when ground conditions were competent. All diamond core is stored in industry standard core trays labelled with the drill hole ID and core interval.  RC drilling uses face sampling hammer and 5 ¼" bit sizes.
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Diamond drill core recovery is being recorded as a percentage of measured recovered cores versus drilled distance. Recoveries have been high to date.  RC drill samples are weighed to give a quantitative basis to estimation of recovery.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Diamond drilling - coring only changed to NQ2 when ground conditions were competent.  RC – consistent drilling technique, cleaning of cyclone.
	<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 relationship observed between recovery and grade.  There is no known or reported relationship in historical drilling between sample recovery and grade.
<b>Logging</b>	<i>Whether core and chip samples have been geologically</i>	Diamond drill core and RC drill chips are being



Criteria	JORC Code explanation	Commentary
	<i>and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	geologically logged for the total length of the hole. Logging is recording lithology, mineralogy, alteration, veining, structure, mineralisation and weathering. Logs are coded using the company geological coding legend and entered into Excel worksheets prior to being loaded into the company database. All core is being photographed with images to be stored on the company server.  Logging is appropriate and sufficiently detailed to support Mineral Resource estimates.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Logging of chips and diamond core is both qualitative (eg. colour) and quantitative (eg. minerals percentages).
	<i>The total length and percentage of the relevant intersections logged.</i>	100% of all drilling to date by the Company has been logged.
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Sampling for all diamond core samples will be undertaken on split core, halved via a core saw.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	RC drilling will be sampled dry and split through a riffle splitter.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	The sampling techniques for both diamond drilling and RC drilling are of consistent quality and appropriate.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	To ensure representivity core was taken from the same side of the hole each time, with field duplicates taken and inserted. Certified Reference Materials (CRMs) were selected to be similar in chemistry to the mineralisation being targeted.
	<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>	One field duplicate is collected per 20 samples in addition to laboratory duplicates which were also reported.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The material and sample sizes are considered appropriate given the magnetite unit being sampled.
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	The samples were sent to ALS Johannesburg, an ISO accredited commercial laboratory, for preparation and analysis.  All samples were analysed by XRF fusion for Al <sub>2</sub> O <sub>3</sub> , As, Ba, CaO, Cl, Co, Cr <sub>2</sub> O <sub>3</sub> , Cu, Fe, K <sub>2</sub> O, MgO, Mn, Na <sub>2</sub> O, Ni, P, Pb, S, SiO <sub>2</sub> , Sn, Sr, TiO <sub>2</sub> , V, Zn and Zr as well as loss on ignition.
	<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>	Hand held assay devices have not been reported.
	<i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	For RC drilling QA/QC samples are inserted every 10 samples. These alternate between a CRM & blank, and a field duplicate.  For diamond core drilling QA/QC samples, being a CRM and a blank, are inserted every 20 samples.  CRM are sourced from an accredited source and are of similar material to the mineralisation being sampled.  QA/QC samples are checked following receipt of each



Criteria	JORC Code explanation	Commentary
		assay batch to confirm acceptable accuracy and precision.
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Assay results and intersections have been reviewed by independent geological consultants.
	<i>The use of twinned holes.</i>	Twinned holes are being drilled as part of the drilling programme.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Primary data is collected in the field and entered into Excel worksheets prior to being loaded into a database managed by an independent consultant.  All core is being photographed with images to be stored on the company server.
	<i>Discuss any adjustment to assay data.</i>	Analytical result for V converted to V <sub>2</sub> O <sub>5</sub> by multiplying by 1.785.
<b>Location of data points</b>	<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>	Location data has been recorded by handheld GPS (±5m accuracy on easting and northing) and will be regularly checked by survey by a licensed surveyor.  Drillhole deviation for drilling is being measured via in-rod surveys during drilling.
	<i>Specification of the grid system used.</i>	The grid system for the SPD Vanadium Project is UTM Zone 35 S (WGS 84 Datum).
	<i>Quality and adequacy of topographic control.</i>	Good, based on recent survey.
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	Drilling to date over the SPD Vanadium Prospect is on approximately 150m - 300m centres east-west and 300m -450m centres north-south over the mineralised body.
	<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>	Data spacing is deemed sufficient to establish geological and grade continuity to establish a mineral resource estimate, this was estimated under the SAMREC Code which is not JORC compliant but is a "foreign resource" as defined in the ASX Listing Rules..
	<i>Whether sample compositing has been applied.</i>	No sample compositing has been applied.
<b>Orientation of data in relation to geological structure</b>	<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>	The majority of the drilling at the SPD Vanadium Project is inclined to the north-east which is considered appropriate given the regional and local geological stratigraphy.
	<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>	To date, orientation of the mineralised domain has been favourable for perpendicular drilling and sample widths are not considered to have added a significant sampling bias.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	Samples are stored at a secure yard. Samples are then delivered to the assay laboratory in Johannesburg by representatives of the Company.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No independent audits have been undertaken.



## Section 2: Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<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>	The SPD Project comprises a Mining Right covering the farm Steelpoortdrift 365 KT.
	<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 tenure is in good standing.
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	The Project has previously been explored for magnetite-hosted Fe-V-Ti deposits.
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	Vanadium mineralisation at the SPD Project is located close to the contact between the Upper Zone and Main Zone of the Bushveld Igneous Complex and adjacent to the Steelpoort Fault. Mineralisation is hosted in two layers, the Upper Magnetite Layer (UML) and Lower Magnetite Layer (LML), which dip shallowly (10-12deg) to the west.
<b>Drill hole Information</b>	<p><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></p> <ul style="list-style-type: none"> <li>• <i>easting and northing of the drill hole collar</i></li> <li>• <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>• <i>dip and azimuth of the hole</i></li> <li>• <i>down hole length and interception depth</i></li> <li>• <i>hole length.</i></li> </ul>	Refer Appendix 2.
	<i>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.</i>	Not applicable, information has been included.
<b>Data aggregation methods</b>	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i>	All results > 0.5% V <sub>2</sub> O <sub>5</sub> have been averaged weighted by downhole length, and inclusive of a maximum of 2m internal waste.
	<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>	High grade intervals > 1% V <sub>2</sub> O <sub>5</sub> and 1.5% V <sub>2</sub> O <sub>5</sub> have also been reported. No internal waste used for these.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalent values are being used for reporting exploration results.
<b>Relationship between mineralisation widths and intercept lengths</b>	<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 (eg 'down hole length, true width not known').</i>	Downhole lengths reported, true widths not known at this time.
<b>Diagrams</b>	<i>Appropriate maps and sections (with scales) and</i>	Appropriate plans are shown in the text.



Criteria	JORC Code explanation	Commentary
	<p><i>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></p>	
<p><b>Balanced reporting</b></p>	<p><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></p>	<p>All results &gt; 0.5% V<sub>2</sub>O<sub>5</sub> included.</p>
<p><b>Other substantive exploration data</b></p>	<p><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></p>	<p>Exploration data is contained in previous ASX Announcements.</p>
<p><b>Further work</b></p>	<p><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></p> <p><i>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></p>	<p>As detailed in the text drilling is ongoing to verify and infill historical drilling and provide a sub surface test of the extent of the pipes.</p>