22 March 2018

TANDO TO ACQUIRE HIGH GRADE VANADIUM PROJECT

- **Tando has entered into a Binding Heads of Agreement to acquire the SPD Vanadium Project via staged all-scrip payments.**
- **The SPD Vanadium Project is a globally significant, high grade vanadium deposit located in a known vanadium producing region.**
- **Vanadium drill intersections: >1% V_2O_5 with mineralised units averaging 23m in thickness.**
- **Grade profile is one of the highest of all ASX listed vanadium projects with grade in concentrate averaging 2% V_2O_5 and 13% TiO_2.**
- **Historic drilling has delineated a resource > 500Mt under the SAMREC Code (a "foreign resource" as defined in the ASX Listing Rules)**
- **Capital raising of $2M at $0.40 completed to rapidly advance the SPD Vanadium Project.**

Tando Resources ("**Tando**" or "**the Company**") is pleased to announce that it has signed a binding Heads of Agreement ("**HoA**") to acquire 74% of the SPD Vanadium Project, a large, high grade vanadium deposit located in the established vanadium production hub of Gauteng, South Africa.

Mineralisation is hosted in two magnetite layers (Figure 1) with **drill intersections returning results > 1% V_2O_5 near surface** including *(all drilling is shown on Figure 4 and detailed in Appendix 1)*:

- 9m at 1.34% V_2O_5 + 10.5% TiO_2 from 9m (SFR019)
- 13m at 1.13% V_2O_5 + 7.43% TiO_2 from 10m (SFR017)
- 14m at 1.08% V_2O_5 + 7.07% TiO_2 from 9m (SFR013)
- 20m at 0.96% V_2O_5 + 8.35% TiO_2 from 11m (SFR011)
- 15m at 0.92% V_2O_5 + 6.44% TiO_2 from 8m (SFR018)
- 12.2m at 0.90% V_2O_5 from 127.2m & 26.9m at 0.80% V_2O_5 from 43.1m (SFDD001)
- 44m at 0.66% V_2O_5 TiO_2 + 4.24% TiO_2 from 35m (SFR008)
- 34m at 0.65% V_2O_5 + 4.58% TiO_2 from 23m (SFR009)

Drill samples were passed through a Davis Tube to obtain a magnetic concentrate. Vanadium and titanium content in the **concentrate** is consistent, **averaging 2% V_2O_5 and 13% TiO_2** (Appendix 1). The Company plans to complete a testwork programme to determine whether

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hydrometallurgical processes can extract high purity vanadium and titanium products, which are sought after for numerous uses including vanadium flow batteries, where demand is forecast to increase.

Based on historic drilling data, a resource of 513 million tonnes was delineated for the SPD Vanadium Project by GEMECS Pty Ltd. The resource for the SPD Vanadium Project as shown in Table 1 is estimated 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 Appendix 2). The resource was classed as inferred under the SAMREC Code.

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

Reef	Avge Thickness (m)	Tonnes (Mt)	Whole Rock V_2O_5%	Mt%	Magnetite Tonnes	V_2O_5% 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
Averages & Totals	**23**	**513.3**	**0.78**	**41.9**	**215.0**	**2.09**

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. $\%V_2O_5$ is calculated by multiplying elemental V from XRF analysis 1.785.

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. Independent geological consultants GEMECS completed the estimation of the resource presented here and Beacon Rock supervised all sampling. 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 in this announcement is consistent with the data it reported.

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.

Further information regarding the qualifying foreign resource is presented in Appendix 2 utilising the template prescribed by the JORC Code (2012). The Company plans to carry out further assessment and due diligence on the Mineral Resource, and then to implement a drilling programme to verify the Mineral Resource and, provided results are consistent with previous drilling, aim to increase the confidence in the Mineral Resource.

Managing Director Bill Oliver commented:

"We have been interested in gaining exposure to the energy storage market and see vanadium as a key commodity in the development of that sector. The opportunity to acquire a project of this scale with these grades, both whole rock and more importantly grade-in-concentrate, was very appealing and we look forward to completing the DD and commencing drilling and other work programmes on the SPD Vanadium Project."

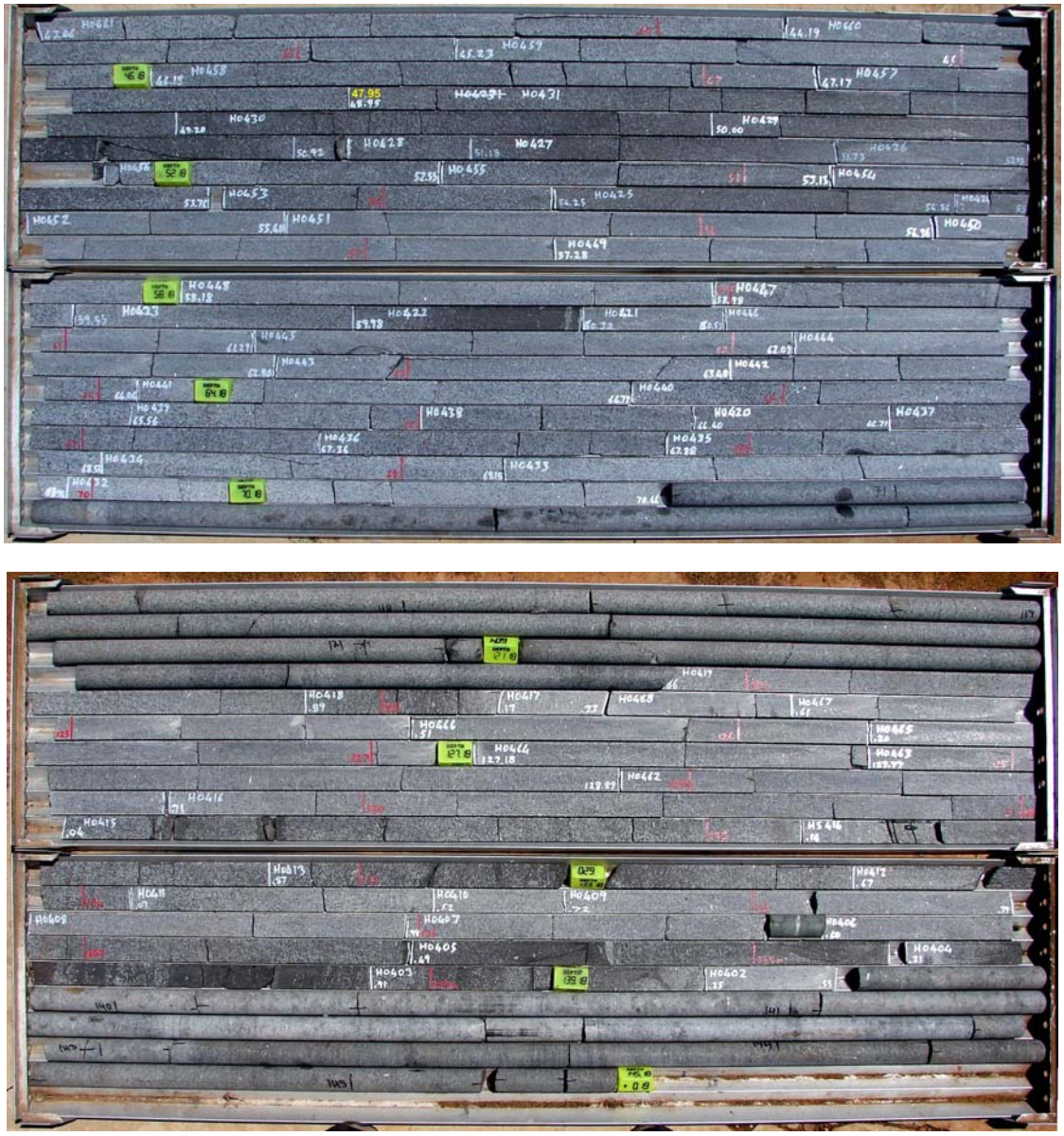

Figure 1. *Drill core from SFDD001 showing the Upper (top) and Lower (bottom) Magnetite Layers.*

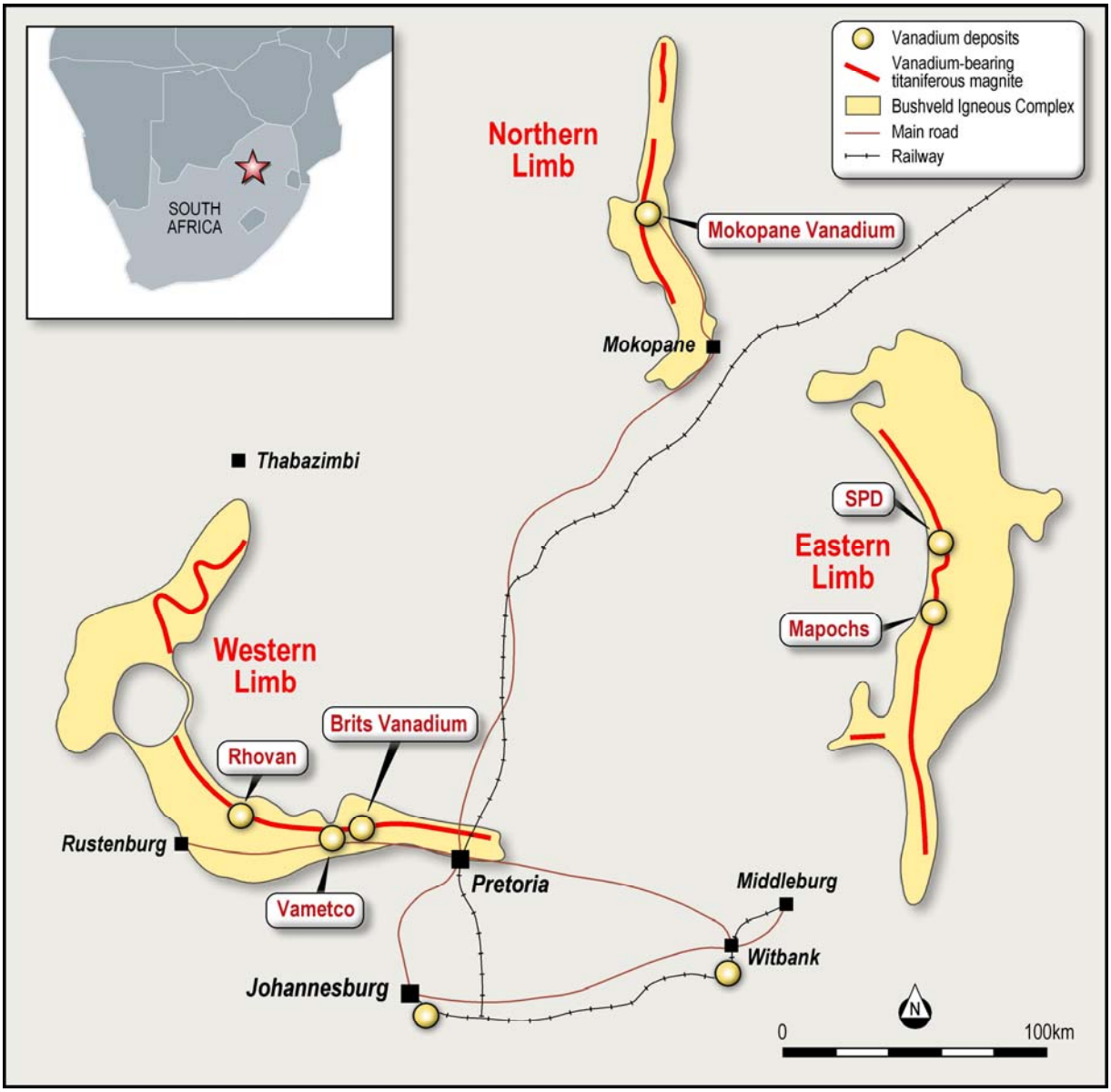

***Figure 2**.* *Location of the SPD Vanadium Project and other vanadium deposits in the Bushveld Igneous Complex.*

Background on the SPD Vanadium Project

Global vanadium projects are summarised in Figure 3. Currently approximately 85% of the world's vanadium is produced in China, Russia and South Africa. The SPD Vanadium Project has the potential to be globally significant based on its tonnage and grade in concentrate.

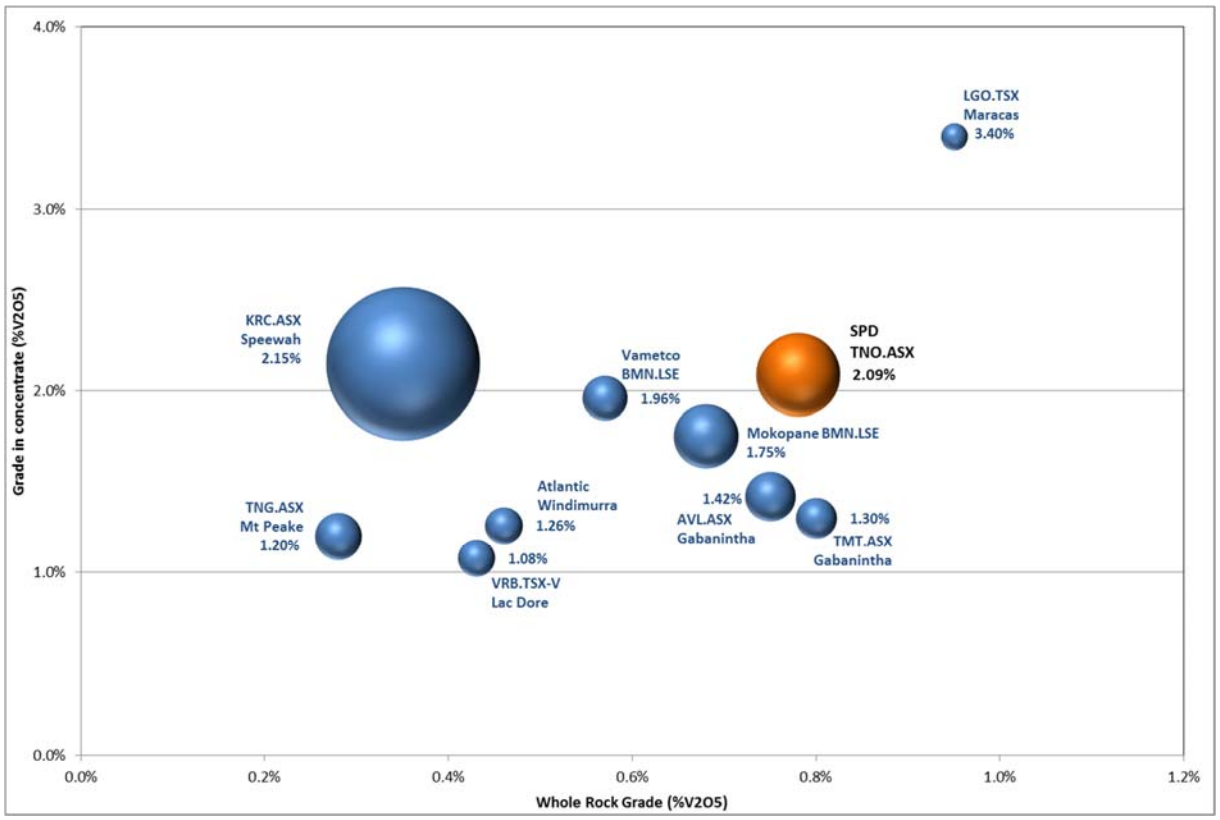

Figure 3. *Global vanadium projects categorised by resource grade and grade in concentrate.*

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.

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 region of South Africa (Figure 2). 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.

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 and Lower Magnetite Layer, which dip shallowly (10-12deg) to the west (Figure 4).

The SPD Vanadium Project was discovered in the 1990's during a regional exploration campaign to find new supply for active vanadium operations. Initial exploration in 1997 comprised 16 diamond core drill holes for 1051.6m (refer Figure 4 and Appendix 1) as well as geological mapping. VanRes

held a prospecting right over the SPD Project from 2009 until 2015 when an application for a Mining Right was lodged. This is currently under review, and pursuant to the current Mining Code VanRes is deemed to hold the rights over the license area while the application progresses. Exploration by VanRes comprised 23 RC drillholes for 1,073m and 2 diamond core drillholes for 278m drilled in 2010 (refer Figure 4 and Appendix 1), leading to the estimation of the resource discussed above.

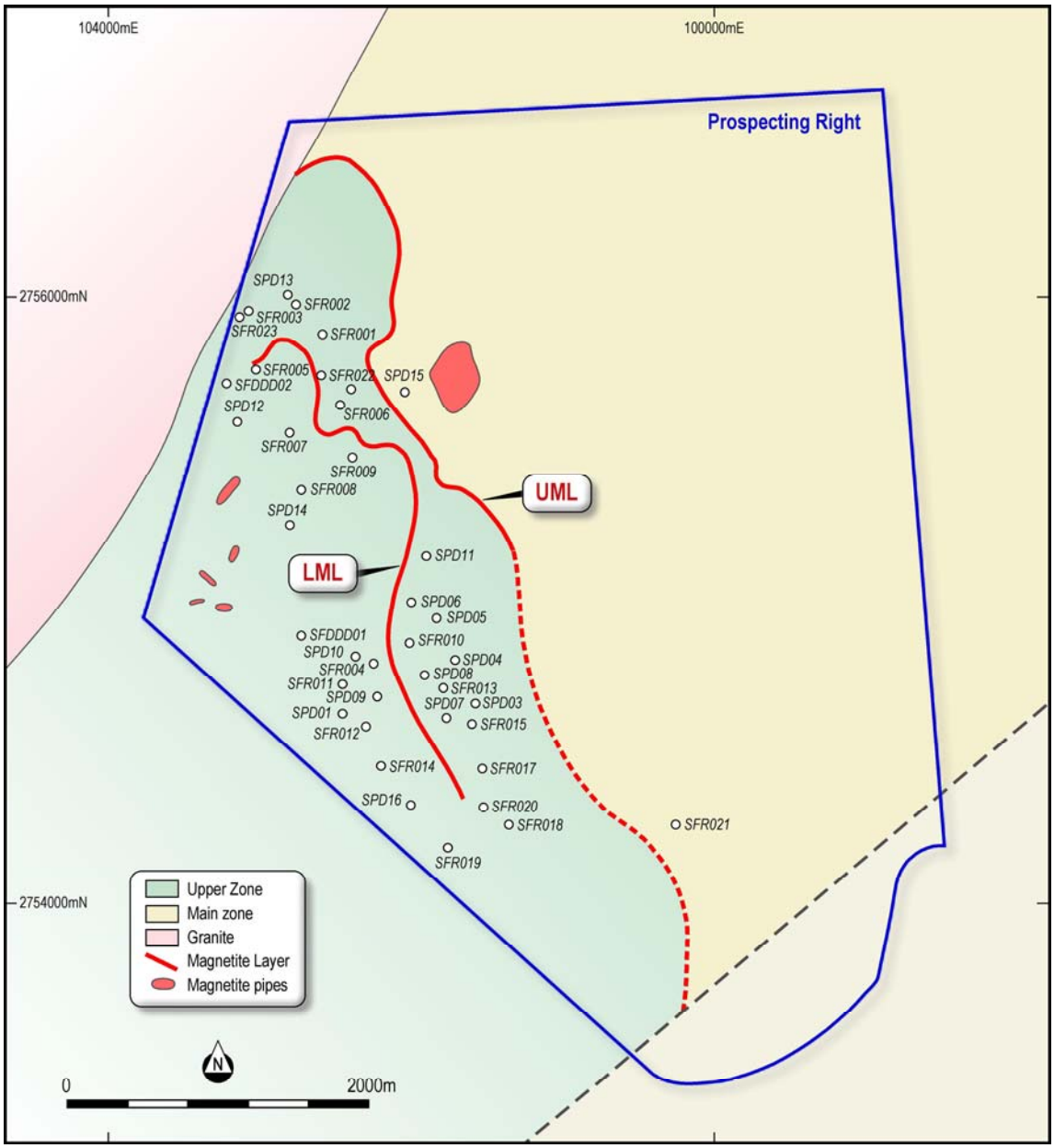

Figure 4. *Plan showing drilling and geology at the SPD Vanadium Project.*

Terms of the Acquisition:

Tando will acquire 100% of the issued capital in Steelpoortvan Pty Ltd, which has a right to acquire 74% of Vanadium Resources (Pty) Ltd (**VanRes**), a South African domiciled company which owns 100% of the SPD Vanadium Project. The remaining 26% of VanRes is held by the Steelpoort Development Trust, in trust for the communities of Ga-Malekane and Ga-Masha, and Broad Based Black Economic Empowerment (BBBEE) entities Obeec (Pty) Ltd and the Math-pin Trust.

In addition to customary conditions precedent, he HoA is conditional upon:

- both Tando and VanRes completing due diligence;
- Tando receiving shareholder approval for the acquisition and a waiver of the ASX Listing Rules to enable it to issue the consideration shares outside of a 3 month period following receipt of shareholder approval;
- The Vendors receiving South African Reserve Bank Exchange Control approval; and
- The Vendors receiving a formal waiver of any pre-emptive rights from the shareholders of VanRes other than the Vendors.

The total consideration under the HoA is 35 million shares at a deemed price of 30c. These shares are subject to shareholder approval and payable when the project reaches the following milestones:

- At completion of due diligence (45 days) = 12.5% (4,250,000 shares)
- Delineation of a Measured Resource of at least 75Mt at 0.78% V_2O_5 in situ = 25% (7,500,000 shares)
- Completion of a Scoping Study= 12.5% (4,250,000 shares)
- Completion of a Pre Feasibility Study = 20% (8,000,000 shares)
- Completion of a Feasibility Study = 30% (11,000,000 shares)

(All terms are as defined in the JORC Code).

Tando will also issue 7,000,000 options to the Vendors and 13,000,000 options to advisors that have assisted with implementation of the transaction and associated capital raising (exercisable at $0.50 on or before the date that is 3 years following the date of issue).

On and from the acquisition of an initial interest in VanRes, Tando will have the right to manage the SPD Vanadium Project and appoint a majority of directors to the board of VanRes.

As part of the proposed transaction Martin Pawlitschek will join the board of Tando Resources as a Non-Executive Director. Mr Pawlitchek currently serves as Senior Vice President of Geology for a mining focussed Private Equity fund. Mr Pawlitchek is based in Europe and is responsible for undertaking technical due diligence on mining projects, principally from a geology and resource risk perspective, but also to evaluate exploration upside. He has part taken in over forty detailed due diligence reviews and site visits over the last three years and was a key member in the selection of the funds projects to date. Mr Pawlitschek is a Fellow of the Australasian Institute of Geoscientists and currently holds non-executive board roles with ASX listed companies Raiden Resources (ASX.RDN) and Jadar Lithium (ASX.JDR).

Capital Raising

In parallel with the transaction the Company proposes to raise A$2 million at $0.40 per share ("Placement"). The proceeds from the Placement will be used to fund due diligence and initial work at the SPD Vanadium Project which will encompass resource delineation drilling including infill and confirmatory drilling along with metallurgical test-work on drill core.

Xcel Capital Pty Ltd acted as Lead Manager to the Placement which is being completed at a 5.3% discount to the 5-day VWAP.

The Placement of 5,000,000 new shares will be completed in a single tranche comprising 3,050,055 pursuant to ASX Listing Rule 7.1A and 1,949,945 pursuant to ASX Listing Rule 7.1. The Placement is expected to settle on the 28th of March 2018 and quotation of the Placement shares is expected to occur on the 29th of March 2018. Tando is paying the Lead Manager a Placement Fee of 6% of the funds raised via the Placement.

To facilitate trading in an orderly market Tando is also preparing to undertake a 10:1 share split.

Background on Vanadium

The Company has targeted vanadium as a commodity of interest due to its usage in energy storage, specifically vanadium flow redox batteries (VFRB). 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. VFRB 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. 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 to current prices around US$15.40/lb (source: Metal Bulletin 15 March 2018) and a substantial premium is currently ascribed for higher purity vanadium electrolyte.

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 todays market (with the balance supplying chemical usages including as a catalyst for sulphuric acid production). Demand from steel makers is forecast to increase with stricter standards on the strength of steel to be used in construction (specifically rebar). A substantial amount of vanadium for steel making is derived as a by-product from

steelmaking furnaces and re cycling of steel products. However in most cases these products are not high purity and only useful for further usage in steel making.

For and on behalf of the board:

Mauro Piccini

Company Secretary

Competent Persons Statement

The information in this announcement that relates to Exploration Results 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 2.

Disclaimer

Some of the statements appearing in this announcement may be in the nature of forward looking statements. You should be aware that such statements are only predictions and are subject to inherent risks and uncertainties. Those risks and uncertainties include factors and risks specific to the industries in which Tando operates and proposes to operate as well as general economic conditions, prevailing exchange rates and interest rates and conditions in the financial markets, among other things. Actual events or results may differ materially from the events or results expressed or implied in any forward looking statement. No forward looking statement is a guarantee or representation as to future performance or any other future matters, which will be influenced by a number of factors and subject to various uncertainties and contingencies, many of which will be outside Tando's control.

Tando does not undertake any obligation to update publicly or release any revisions to these forward looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events. No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions or conclusions contained in this announcement. To the maximum extent permitted by law, none of Tando, its Directors, employees, advisors or agents, nor any other person, accepts any liability for any loss arising from the use of the information contained in this announcement. You are cautioned not to place undue reliance on any forward looking statement. The forward looking statements in this announcement reflect views held only as at the date of this announcement.

This announcement is not an offer, invitation or recommendation to subscribe for, or purchase securities by Tando. Nor does this announcement constitute investment or financial product advice (nor tax, accounting or legal advice) and is not intended to be used for the basis of making an investment decision. Investors should obtain their own advice before making any investment decision.

APPENDIX 1: Significant Drillhole Intercepts from the SPD Vanadium Project

HOLE ID	Drill Type	EAST	NORTH	RL	EOH (m)	UNIT	INTERSECTION (whole rock)				INTERSECTION (magnetic. concentrate)		
							From	Width	V_2O_5 %	TiO_2 %	Magnetite %	V_2O_5 %	TiO_2 %
SFDDD01	DD	102724	2752203	925	141.0	UML	43.06	26.9	0.80	6.29	42.2	1.93	14.6
						LML	127.2	12.15	0.90	6.26	43.5	2.10	14.7
SFDDD02	DD	103216	2750543	1017	132.0						Not Sampled		
SFR001	RC	102586	2750218	1036	83	LML	28	40	0.55	3.95	28.2	2.29	12.6
SFR002	RC	102818	2749954	1053	44		35	4	1.31	8.88	65.2	2.4	12.1
SFR003	RC	103129	2750106	1054	27						Not Sampled		
SFR004	RC	102239	2752396	936	96	LML	57	34	0.72	4.92	34.7	2.24	12.0
SFR005	RC	103023	2750451	1024	41		25	4	1.07	7.20	50.0	2.24	13.2
SFR006	RC	102470	2750686	1001	41						Not Sampled		
SFR007	RC	102794	2750868	1003	29	UML	5	22	0.80	6.04	41.0	2.03	13.1
SFR008	RC	102723	2751248	967	81	LML	35	44	0.66	4.24	32.3	2.26	11.8
SFR009	RC	102388	2751031	1002	59	LML	23	34	0.65	4.58	32.0	2.20	12.3
SFR010	RC	102008	2752257	935	45	LML	19	24	0.68	4.71	33.1	2.31	10.6
SFR011	RC	102452	2752530	918	34	UML	11	20	0.96	8.35	53.3	1.90	13.4
SFR012	RC	102302	2752801	905	30	UML	13	17	0.92	7.29	49.4	1.94	13.0
SFR013	RC	101786	2752552	909	23	LML	9	14	1.08	7.07	50.6	2.36	12.8
SFR014	RC	102195	2753067	888	35	UML	11	24	0.88	7.50	49.0	1.89	13.2
SFR015	RC	101599	2752791	896	47	LML	22	25	0.56	5.88	42.9	1.62	14.2
SFR016	RC	102010	2753324	888	45	UML	22	23	0.62	6.52	38.8	1.69	13.8
SFR017	RC	101531	2753082	885	23	LML	10	10	1.13	7.43	53.9	2.28	12.9
SFR018	RC	101346	2753453	864	26	LML	8	15	0.92	6.44	42.8	2.25	12.1
SFR019	RC	101756	2753602	885	27	LML	9	9	1.34	10.5	70.9	2.03	14.2
SFR020	RC	101517	2753342	871	39	LML	19	19	0.79	5.78	40.6	2.24	12.7
SFR021	RC	100253	2753458	874	49	LML	30	19	0.85	6.57	46.7	2.08	12.5
SFR022	RC	102591	2750496	1015	65	LML	28	34	0.62	4.48	31.2	2.22	12.3
SFR023	RC	103076	2750066	1056	85	LML	68	14	0.99	6.78	49.0	2.27	12.3
SPD01	DD	102454	2752721	907	166.41	UML	50	37	0.54		35.1	2.00	10.9
						LML	145	11	0.76		42.6	2.38	12.5
SPD02	DD	102466	2752218	918	45.6	UML	11	22	0.78		39.9	2.02	12.7
SPD03	DD	101572	2752655	893	40.14						No Magnetite Intersected		
SPD04	DD	101709	2752364	906	50.66	LML	12	13	0.74		36.6	2.47	11.3

SPD05	DD	101836	2752092	922	37.39	LML	23	7	0.78	45.7	2.42	12.8
SPD06	DD	101994	2751990	936	47.49	UML	15	10	0.86	49.1	2.14	12.5
						LML	37	9	0.82	42.6	2.55	11.8
SPD07	DD	101772	2752750	893	59.2	LML	49	8	0.92	47.5	2.36	12.7
SPD08	DD	101912	2752462	902	50.23	LML	41	9	0.91	46.4	2.45	11.1
SPD09	DD	102220	2752608	903	105.96	UML	7	34	0.56	34.2	2.09	12.3
						LML	95	10	0.75	43.1	2.45	12.5
SPD10	DD	102365	2752342	918	34.21	UML	0	33	0.54	51.9	2.04	13.6
SPD11	DD	101902	2751679	962	60.31	LML	15	27	0.75	46.7	2.02	13.5
SPD12	DD	103150	2750793	996	181.23	UML	70	31	0.66	40.2	2.20	12.8
SPD13	DD	102759	2750025	1032	67.19		32	3		30.0	2.06	12.1
SPD14	DD	102805	2751470	958	45.87	UML	18	25	0.67	43.1	1.99	13.4
SPD15	DD	102045	2750598	971	28.38					No Magnetite Intersected		
SPD16	DD	102395	2750585	999	31.34	LML	21	9	0.91	49.6	2.17	11.2

Notes:

- All coordinates are in South Africa Coordinate Reference System Lo 31 Zone (WGS84 projection).
- UML = Upper Magnetite Layer
- LML = Lower Magnetite Layer.
- Results should be read in conjunction with the data provided in Appendix 2.

APPENDIX 2.

Under ASX Listing Rule 5.12 (LR 5.12), an entity reporting qualifying foreign estimates of mineralisation in relation to a material mining project must include all of the information shown in LR 5.12. Tando considers the SPD Project to be a material mining project and as such provides the following information regarding the SPD Project in accordance with LR 5.12:

The source and date of the historical estimates (LR5.12.1).

The foreign resource is contained in a report "THE VANADIFEROUS MAGNETITE RESOURCE ON THE FARM STEELPOORTDRIFT 365 KT" completed by Beacon Rock and GEMECS (Pty) Ltd, independent geological consultants and dated 24 June 2010.

Whether the historical estimates use categories of mineralisation other than those defined in JORC Code (2012) and if so, an explanation of the differences (LR5.12.2)

The authors of the report, who are competent persons under the SAMREC Code, classified the resource as inferred. This category is similar to the Inferred category under the JORC Code (2012) but the Competent Person for this release has not yet completed sufficient review on the qualifying foreign resource estimate to classify it in accordance with the JORC Code at this time. 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.

The relevance and materiality of the historical estimates to the entity (LR5.12.3)

The competent person considers the historical estimates to be both material and relevant to the SPD Project as it provides a broad indication of the approximate size and grade of the SPD Project subject to the qualifications expressed in the relevant sections of the announcement.

The reliability of the qualifying foreign estimates, including reference to any criteria in Table 1 of JORC Code 2012 which are relevant to understanding of the reliability of the qualifying foreign estimates (LR 5.12.4)

The competent person considers that the qualifying foreign resource estimates do not meet the requirements of the JORC Code (2012) for reporting Mineral Resources and should be used as a broad guide only.

To the extent known, a summary of the work programs on which the qualifying foreign estimates are based and a summary of the key assumptions, mining and processing parameters and methods used to prepare the qualifying foreign estimate (LR 5.12.5)

- 16 diamond core drillholes for 1051.6m completed in 1997.
- 23 RC drillholes for 1,073m and 2 diamond core drillholes for 278m drilled in 2010.

Any more recent estimates or data relevant to the reported mineralisation available to Tando (LR 5.12.6)

The authors of the report have stated to the Competent Person that they are not aware of any new data, or any material changes to the data reported.

The evaluation and/or exploration work that needs to be completed to verify the qualifying foreign estimates as mineral resources in accordance with the JORC Code (LR 5.12.7)

Verification drilling including twinned holes as well as infill drilling to confirm geological continuity and grade distribution.

The proposed timing of any evaluation and/or exploration work that Tando intends to undertake and a how Tando will fund that work (LR 5.12.8)

Following completion of due diligence on the project the Company plans to commence the drilling mentioned above.

Accuracy of historical information (LR 5.12.10)

The author considers that the information included in this report relating to historical estimates is an accurate representation of the available data and studies for the SPD Project.

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

Section 1: Sampling Techniques and Data
(Criteria in this section applies to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	*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.*	SPD and SFDD series = diamond core drilling using BQ sized core. SFR series = RC drilling
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	SPD series holes sampled at 1m intervals. SFDD and SFR series sampled at 2m intervals
	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.	All aspects of the determination of mineralisation are described in this table. The drilling and sampling method is considered appropriate for the mineralisation. All of the samples (whole rock and magnetic separates) were sent to a commercial laboratory for crushing, pulverising and chemical analysis by industry standard practises.
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 of standard tube, depth of diamond tails, face-sampling bit or other type, whether core is orientated and if so, by what method, etc).*	Diamond drilling from surface using BQ core sizes. Reverse Circulation percussion drilling. All diamond core is stored in industry standard core trays labelled with the drill hole ID and core interval.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Diamond drill core recovery was recorded as a percentage of measured recovered cores versus drilled distance. Recoveries are reported to be excellent.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Diamond drilling - coring from surface uses HQ and only changes to NQ2 when ground conditions were competent.
	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 recovery and grade observed. Loss of heavier fraction would result in a bias, however RC and DD results are consistent indicating this has not

Criteria	JORC Code explanation	Commentary
		occurred.
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.*	SFDD and SPD series holes were qualitatively logged for the total length of the hole. Logging recorded lithology, mineralogy, alteration, veining, grainsize, mineralisation and weathering. SFR series holes (RC chips) were logged on a metre basis with an allocation of colour, grain size, and rock name to each metre. Logging is appropriate and sufficiently detailed to support Mineral Resource estimates.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging of chips and diamond core is both qualitative (eg. colour) and quantitative (eg. minerals percentages).
	The total length and percentage of the relevant intersections logged.	100% of all holes drilled have been logged.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	For the diamond drill holes (XSPD and SFDD series) half core was used.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	For the RC holes (SFR series) the entire recovered sample for each metre was collected and riffle split down to a 1kg sub sample. Samples were then combined to form a 2m composite.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sampling techniques for both diamond drilling and RC drilling are of consistent quality and appropriate.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Collection of full metre of sample
	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.	One field duplicate was collected per batch (approx. 80 samples) in addition to laboratory duplicates which were also reported.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The material and sample sizes are considered appropriate given the style of mineralisation being targeted.
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.*	For the SPD series holes the split core was crushed to <10mm then split down to a 200g sample. Two 20g sub samples were taken with one passed through a Davis Tube set at 4350 gauss to obtain a magnetic separate sample. A pressed briquette from both samples (whole rock and magnetic separate) were then analysed by XRF for SiO_2, Al_2O_3, CaO, V_2O_5, Fe (total), TiO_2 and Cr_2O_3. For the SFDD and SFR series holes the 2kg composite samples were riffle split to form an A samples and a B sample. The B sample was milled to <106micron and passed through a Davis Tube to obtain a magnetic separate sample. Both samples (whole rock and magnetic separate) were then analysed by full fusion XRF, the whole rock for SiO_2, Al_2O_3, CaO, Na_2O, K_2O, P_2O_5, MgO, MnO, V_2O_5, Fe_2O_3, TiO_2 and Cr_2O_3 and the magnetic separate for V_2O_5, Fe_2O_3, TiO_2, Al_2O_3, MgO, MnO, and Cr_2O_3.

Criteria	JORC Code explanation	Commentary
	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.	Hand held assay devices have not been reported.
	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.	Industry standard quality control procedures were utilised including the use of CRMs and blanks inserted blind into the sample stream.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Significant intersections reported by historical explorers have been verified by the CP.
	The use of twinned holes.	No twinned holes have been drilled.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary data is collected in the field and entered into logsheets or Excel worksheets. Data provided by the vendor has been validated using Micromine.
	Discuss any adjustment to assay data. XRF data was received as elemental analysis and converted to oxide contents using standard calculations.	No adjustment to assay data.
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.*	All holes were surveyed by a licensed surveyor to <1m accuracy. All holes are vertical and were not surveyed.
	Specification of the grid system used.	The grid system is the South Africa Coordinate Reference System Lo 31 Zone (WGS84 projection).
	Quality and adequacy of topographic control.	Adequate.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	The spacing and location of the drilling at the SPD Vanadium Project is, by the nature of early exploration variable. Drilling to date over the SPD Prospect is approximately 150m spaced both along strike and on section.
	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.	Data spacing is deemed sufficient to establish geological and grade continuity for an initial mineral resource estimate.
	Whether sample compositing has been applied.	No sample compositing has been applied.
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.*	Drillholes are all vertical therefore no bias due to drilling orientation.
	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.	No material bias is likely due to drilling orientation.
Sample security	*The measures taken to ensure sample security.*	Samples were taken from the rig and stored in a locked yard.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	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
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 SPD Project comprises a single prospecting right, covering the farm Steelpoortdrift 365 KT, and an application for a Mining Right. .
	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 tenement is represented to be in good standing. Title DD will verify this.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	The Project has previously been explored for magnetite-hosted Fe-V-Ti deposits.
Geology	*Deposit type, geological setting and style of mineralisation.*	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.
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.*	All hole collar locations, depths, azimuths and dips are provided within this announcement (Appendix 1).
	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.	Not applicable, information has been included.
Data aggregation methods	*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.*	Results are length weighted.
	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.	Intervals reported in Appendix 1 correspond to the stratigraphic units identified by logging, and confirmed by % magnetite collected by magnetic separation as well as back calculation from assay. An approximate cut off of 25% magnetite matches the geological boundary.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values are currently being used for reporting exploration results.
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*	All intersections are reported as downhole lengths. Additional drill holes are required to confirm the relationship between downhole lengths and true

Criteria	JORC Code explanation	Commentary
	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').	widths.
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.*	A plan view of drill collars along with mapped geology is shown as Figure 1.
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.*	All magnetite intervals reported in Appendix 1, including holes where no magnetite was intersected.
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.*	Exploration data will be reviewed and compiled as part of the DD process.
Further work	*The nature and scale of planned further work (eg 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.*	• Due diligence investigations. • Drilling to verify and infill historical drilling.

Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Following importation, the data goes through a series of digital and visual checks for duplication and non-conformity, followed by manual validation by the competent person • The drill data has been reviewed by the CP. Original drilling records were compared to the equivalent records in the database. No major discrepancies were found.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The GEMECS personnel who estimated the SAMREC resource have visited the site. The authors of the technical report who supervised the sampling of the 2010 drilling programme and the estimation of the resource are competent persons under the SAMREC Code and have visited the site.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	• The confidence in the geological interpretation is considered to be moderate to high. The geological setting is relatively simple and mineralisation is

	• *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	outcropping. • A geological model was established based on surface mapping and drilling. • Additional drilling will improve the detail of the sub surface geology.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The UML and LML have been mapped along strike (NW-SE) for approximately 3km and intersected in drilling for approximately 1.7km to the SW (distance from outcrop to furthest drilling). At this point the UML is 45m below surface and the LML is 125m below surface. The thickness of the layers is shown in Appendix 1 and ranges from 9m to 44m (not true thickness).
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• Interpolation of V_2O_5 grade, % magnetite and thickness of magnetite layer was undertaken using Gemcom Minex software using the Minex gridding algorithm. Basic statistical investigations were completed on the captured estimation data set (1m composites). • No extreme grades or magnetite contents were observed therefore no top cuts were required. • The magnetite layers were modelled as hard boundaries based on logging, with drill intersections assigned to Upper or Lower layer (refer Appendix 1). Only 4 holes intersected both layers. • No previously released JORC compliant Mineral Resource Estimates have been completed on the SPD Vanadium Deposit. • No assumption of mining selectivity has been incorporated into the estimate. • Visual validation was completed and show reasonable correlation between estimated grades and drill sample grades. • No reconciliation data is available as no mining has taken place.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages have been estimated on a dry in situ basis. No moisture values were reviewed.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The cut-off grade is based on the proportion of magnetite and its suitability for concentration using magnetic and density separation techniques.

Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• The resource model assumes open cut mining is completed and a reasonable level of mining selectivity is achieved in mining. It has been assumed that grade control will be applied to ore/waste delineation processes.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• No detailed metallurgical data exists; where required area analogues (e.g. Rhovan, Mapochs, Vametco) were used to determine the prospects of eventual economic extraction. • Suitable metallurgical tests are planned to be carried out as part of the initial work programmes.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• No assumptions have been made regarding environmental factors. The Company will work to mitigate environmental impact as a result of any future mining or mineral processing.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Bulk density measurements were completed on both core and RC samples and used in the resource estimation process.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and*	• The resource for the SPD Project is estimated in accordance with the SAMREC Code (2007) and is therefore a "qualifying foreign resource estimate" as defined in the ASX Listing Rules. The resource was classified as inferred based on data quality, sample spacing, and lode continuity.

	metal values, quality, quantity and distribution of the data). • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• Significant factors that should be addressed to increase confidence in the resource include additional infill and extensional drilling and twinning/confirmation of historical holes, and more detailed QA/QC and geostatistical studies. • The input data is comprehensive in its coverage of the mineralisation and does not favour or misrepresent in-situ mineralisation. The definition of mineralised zones is based on a good geological understanding producing a robust model of mineralised domains. This model has been confirmed by infill and extensional drilling which supported the interpretation. • The resource estimate appropriately reflects the view of the Competent Person, that while this foreign resource is not reported in compliance with the 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. It should be noted that 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.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No audits or review of the Mineral Resource estimate has been conducted.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The lode geometry and continuity has been adequately interpreted to reflect the level of Inferred Mineral Resource. • The data quality is good and all drill holes have detailed logs produced by qualified geologists. A recognized laboratory has been used for all analyses. • The Mineral Resource statement relates to global estimates of tonnes and grade. • The deposits are not currently being mined.