

29 APRIL 2020

MINERAL RESOURCE UPDATE CONFIRMS STEELPOORTDRIFT'S GLOBAL VANADIUM STANDING

HIGHLIGHTS

- ◆ **High grade Mineral Resource of 188Mt at 1.23% V₂O₅ in the Measured, Indicated and Inferred categories**
- ◆ **Includes 110Mt at 1.23% V₂O₅ in the Measured and Indicated categories as a result of recent infill drilling and resultant improvements in geological model**
- ◆ **Majority of 188Mt high grade resource at surface and open pittable**
- ◆ **Includes 68Mt at 1.37% V₂O₅ in massive magnetite layer (LM1A)**
- ◆ **Steelpoortdrift continues to have the largest resource above 1% V₂O₅ globally, with conversion into Measured & Indicated categories demonstrating increasing confidence in the geological and resource models**
- ◆ **Updated Mineral Resource Estimate includes 377Mt at 0.78% V₂O₅ in the Measured and Indicated categories, 57% of the Global Mineral Resource of 662Mt at 0.77% V₂O₅ in the Measured, Indicated and Inferred categories**
- ◆ **Focus now moves to updating open pit designs and mining schedules for input into the current Scoping Study into V₂O₅ production**

The management of Vanadium Resources Limited (ASX:VR8) (**VR8** or **the Company**) is pleased to announce an update to the Mineral Resource for the Steelpoortdrift (SPD) Vanadium Project in South Africa.

The new Mineral Resource includes the upgrade of a significant proportion to Measured and Indicated categories as a result of the Company's 2019 infill drilling (refer ASX announcement 19 November 2019) and the resultant improved geological model for the Steelpoortdrift Vanadium Deposit (Figure 1).

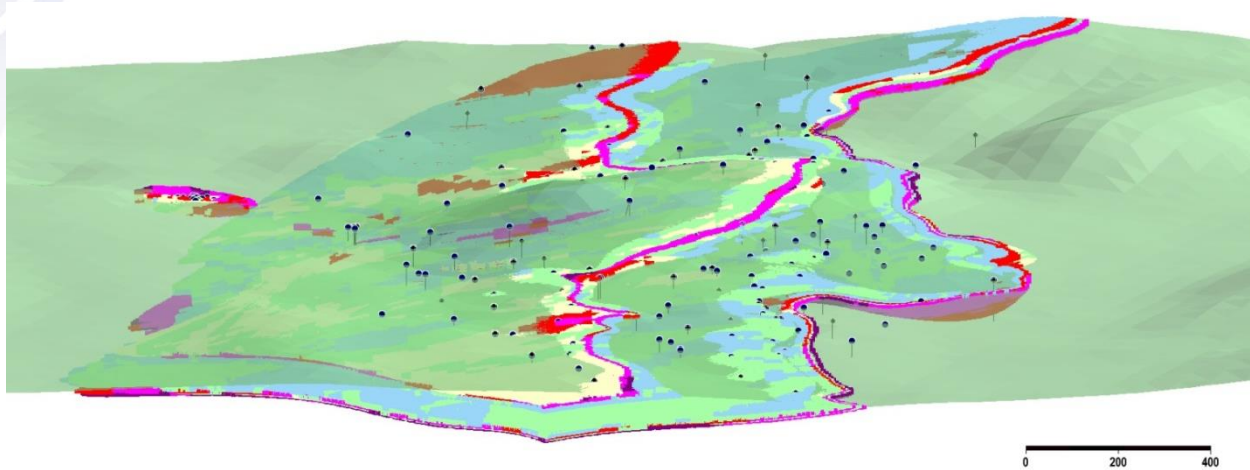


Figure 1. Mineral Resource at the Steelpoortdrift Vanadium Project (oblique view, looking N).

The Mineral Resource continues to compare highly favourably to other vanadium deposits globally, as **the largest published global undeveloped Mineral Resource** (defined above an in-situ grade of 0.45% V_2O_5), as well as **the largest published high grade undeveloped resource** (defined as in situ resource grade > 1% V_2O_5 , Figure 2, Appendix 1).

The resource continues to include a substantial high grade, near surface component which has been newly estimated at 188 million tonnes at an in situ grade of 1.23% V_2O_5 , a 175% increase from the April 2019 estimate (Measured, Indicated and Inferred categories, detailed in Appendix 2).

Of this high grade resource Measured and Indicated material comprises 59%, being 110 million tonnes at an in situ grade of 1.23% V_2O_5 (Appendix 2). The size of the Mineral Resource is anticipated to result in a long life of mine for the project, which will be confirmed once the mining studies currently underway have been completed.

A sizeable portion of this high grade resource (68Mt at 1.37% V_2O_5 , Appendix 2) is hosted in a discrete, massive magnetite unit at the base of the lower magnetite zone (denoted LM1A in modelling). This unit is easily mapped from drillhole to drillhole and in outcrop with excellent continuity along strike. Concentrate analysis on drillhole samples returned mass recoveries between 63% and 74% from this unit (refer ASX announcement 5 August 2019).

The majority of this high grade resource is anticipated to be able to be mined by open pit methods given that 127 million tonnes at an in situ grade of 1.20% V_2O_5 occurs within 100m of surface (Appendix 2). Pit optimisations and open pit schedules are being designed currently to confirm this and for input into the current Scoping Study into downstream production of V_2O_5 from the Steelpoortdrift Vanadium Project.

Measured and Indicated material now makes up 57% of the Global Mineral Resource, corresponding to 376 million tonnes at an in situ grade of 0.78% V_2O_5 within the Global Mineral Resource of 662 million tonnes at an in situ grade of 0.77% V_2O_5 (Appendix 2).

The previous Mineral Resource released in April 2019 comprised 612 million tonnes at a similar in situ grade with 37% in the Indicated category (corresponding to 231 million tonnes) and the balance classified as Inferred (refer ASX Announcement 16 April 2019).

The increased confidence level in the new Mineral Resource Estimate is due to the infill drilling providing increased data density and confidence, and the simple, outcropping nature of the vanadium mineralisation at the Steelpoortdrift Vanadium Project. Mineralisation is hosted in massive, vanadium bearing, titanomagnetite layers easily mappable within the project area (Figure 1) and along strike within the well studied Bushveld Complex.

Vanadium mineralisation in the Bushveld Complex is amongst the highest grade mineralisation found globally meaning the Steelpoortdrift Vanadium Project continues to compare favourably to other global vanadium projects (Figure 2, Appendix 1).

The Company is currently progressing its Scoping Study into downstream V_2O_5 production under the supervision of Mr Les Ford, a globally renowned vanadium expert. The vanadiferous titanomagnetite at Steelpoortdrift produces a high-quality concentrate containing approximately 2.2% V_2O_5 , 12% TiO_2 and 55% Fe (ASX Announcement 18 March 2019). The current Scoping Study is anticipated to confirm the advantage of this concentrate in the production of V_2O_5 .

Due to restrictions on industry currently in place in South Africa the progress of metallurgical testwork for use in the Scoping Study has been slowed and as a result the Scoping Study is now expected to be completed during Q3 2020.

While the COVID-19 pandemic has affected vanadium production to date in 2020, demand for 98% vanadium and ferrovanadium is already increasing as steel producers come back online. The new Mineral Resource Estimate and accompanying report is being supplied to interested parties in Asia and South Africa, which the Company will continue to engage with regarding strategic investment opportunities, and potential collaborations to develop downstream processing options, provision of project finance, prepayments for offtake and other financial partnerships.

This announcement has been authorised for release by the directors of Vanadium Resources Limited.

For and on behalf of the board:

Kyla Garic

Company Secretary

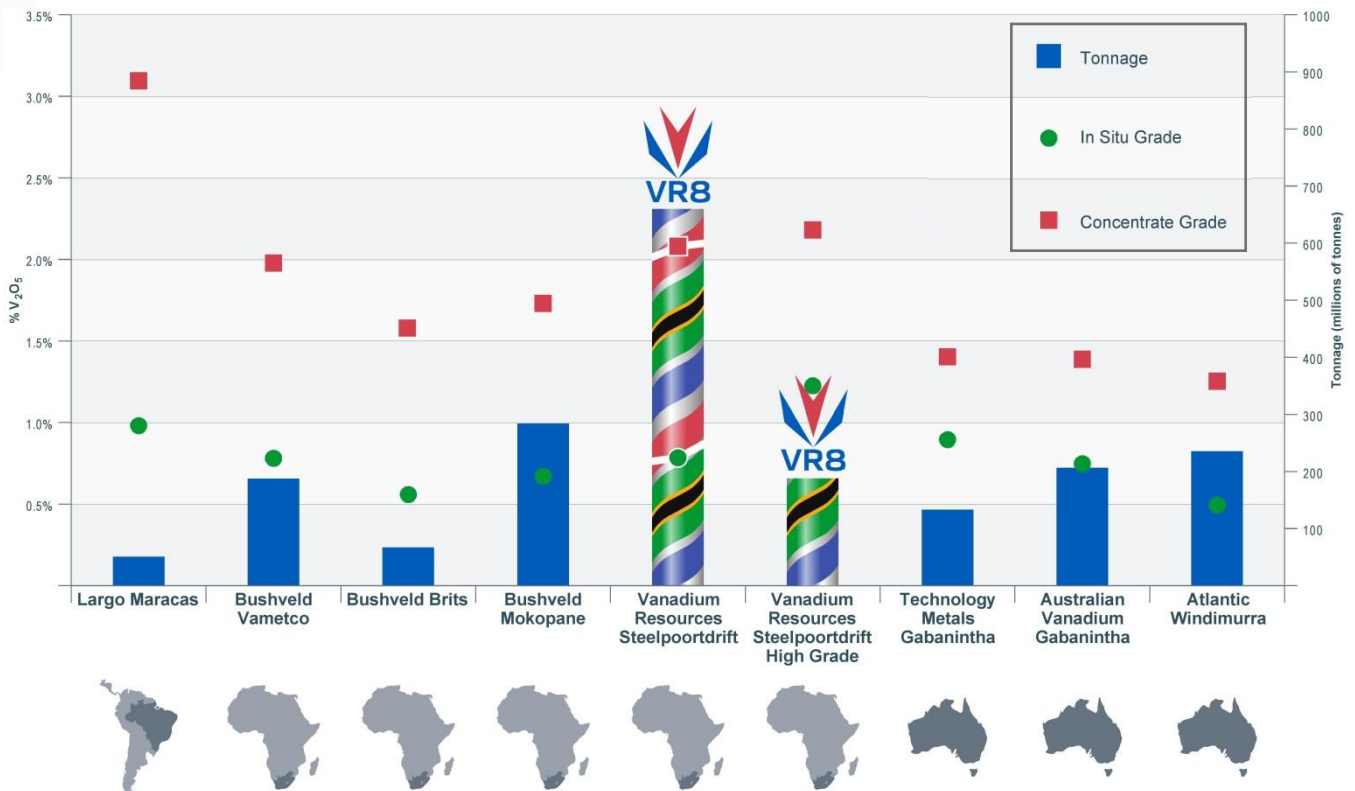


Figure 2. Global vanadium projects categorised by resource grade and grade in concentrate.

Chart compares resources reported under different codes and companies at different stages of development as detailed in Appendix 2. Only resources with a quoted in situ grade > 0.45% V₂O₅ are shown in figure.

Competent Persons Statement

The information in this announcement that relates to Exploration Results and other technical information relating to drilling, sampling and the geological interpretation derived from the 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 Vanadium 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 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.

The information in this announcement that relates to Mineral Resources, including the Mineral Resources contained within the Production Target, complies with the **JORC Code** and has been compiled, assessed and created by Mr Kerry Griffin BSc.(Geology), Dip Eng Geol., a Member of the Australian Institute of Geoscientists and a Principal Consultant at Mining Plus Pty Ltd, consultants to the Company. Mr Griffin 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 Griffin is the competent person for the resource estimation and has relied on provided information and data from the Company, including but not limited to the geological model and database. Mr Griffin consents to the inclusion in this announcement of matters based on his information in the form and context in which it appears. Further details on the Mineral Resource can be found in Appendices 1 and 3.

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 VR8 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 VR8's control.

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APPENDIX 1: Data and sources for Peer Comparison (Figure 2)

Company	Project	Stage	Resource Category	Resource Tonnes	Resource Grade	Concentrate Grade	Information Source
Largo LGO.TSX	Maracas	Production	Measured, Indicated & Inferred (43-101)	49.25	0.99	3.10	43-101 Technical Report dated 26/10/2017 http://www.largoresources.com/operations/maracas-menchen-mine
Bushveld BMN.LSE	Vametco	Production	Indicated & Inferred	186	0.78	1.98	Competent Persons' Report on the Vametco Vanadium Mine Jan 2020 https://www.bushveldminerals.com/technical-reports/
	Brits	Development	Indicated & Inferred	66.8	0.56	1.58	Competent Persons' Report on the Brits Vanadium Project Jan 2020 https://www.bushveldminerals.com/technical-reports/
	Mokopane	Development	Indicated & Inferred	285	0.68	1.75	Mokopane PFS Study Report Jan 2016 https://www.bushveldminerals.com/technical-reports/
TNG TNG.ASX	Mt Peake	Development	Measured, Indicated & Inferred	160	0.28	1.20	ASX Announcement 26/03/2013
King River KRR.ASX	Speewah	Development	Measured, Indicated & Inferred	4,712	0.30	2.11	ASX Announcement 01/04/2019 06/11/2019
Pursuit Minerals PUR.ASX	Koitelainen Vosa	Development	Inferred	116.4	0.11	2.25	ASX Announcement 06/02/2019
	Airijoki	Development	Inferred	44.3	0.23	1.70	ASX Announcement 08/03/2019
Australian Vanadium AVL.ASX	Gabanimtha	Development	Measured, Indicated & Inferred	208.2	0.74	1.39	ASX Announcement 04/03/2020, 17/03/2020
Technology Metals TMT.ASX	Gabanimth	Development	Indicated & Inferred	131	0.90	1.36	ASX Announcement 29/03/2019

APPENDIX 2: Mineral Resource Statement for the Steelpoortdrift Vanadium Project

Table 1. *Steelpoortdrift Vanadium Project Global Mineral Resource by Resource Category.*

Category	V ₂ O ₅ Cutoff	SG	Tonnes (Mt)	Whole Rock V ₂ O ₅ %	Tonnes V ₂ O ₅ in magnetite (kt)
Measured	0.45%	3.35	92	0.77	711
Indicated	0.45%	3.37	284	0.78	2,219
Inferred	0.45%	3.38	285	0.77	2,197
Total			662	0.77	5,098

Table 2. *Steelpoortdrift Vanadium Project Mineral Resource by Zone (Measured, Indicated & Inferred).*

Layer	V ₂ O ₅ Cutoff	SG	Tonnes (Mt)	Whole Rock V ₂ O ₅ %	Tonnes V ₂ O ₅ in magnetite (kt)
Upper Zone	0.45%	3.40	244	0.75	1,830
Intermediate Zone	0.45%	3.23	158	0.57	898
Lower Zone (all)	0.45%	3.43	260	0.94	2,414
Lower Zone (LM1A only)	0.45%	3.73	68	1.37	928
Total			662	0.77	5,098

Table 3. *Steelpoortdrift Vanadium Project Mineral Resource by Grade*

V ₂ O ₅ Range	Category	SG	Tonnes (Mt)	Whole Rock V ₂ O ₅ %	Tonnes V ₂ O ₅ in magnetite (kt)
> 0.90%	Measured	3.65	26	1.22	321
> 0.90%	Indicated	3.67	83	1.24	1,032
> 0.90%	Inferred	3.67	78	1.22	957
Sub Total	> 0.90%		188	1.23	2,309
0.45% - 0.90%	Measured	3.25	66	0.59	389
0.45% - 0.90%	Indicated	3.26	201	0.59	1,187
0.45% - 0.90%	Inferred	3.28	207	0.60	1,241
Sub Total	0.45% - 0.90%		474	0.59	2,818
Total			662	0.78	5,098

Table 4. *Steelpoortdrift Vanadium Project Mineral Resource within 100m of surface by Grade*

V ₂ O ₅ Range	Category	SG	Tonnes (Mt)	Whole Rock V ₂ O ₅ %	Tonnes V ₂ O ₅ in magnetite (kt)
> 0.90%	Measured	3.65	22	1.22	268
> 0.90%	Indicated	3.66	53	1.19	635
> 0.90%	Inferred	3.67	52	1.19	614
Sub Total	> 0.90%		127	1.20	1,518
0.45% - 0.90%	Measured	3.25	60	0.59	353
0.45% - 0.90%	Indicated	3.26	159	0.60	953
0.45% - 0.90%	Inferred	3.29	113	0.60	677
Sub Total	0.45% - 0.90%		332	0.60	1,984
Total			459	0.76	3,486

Notes to Tables 1 - 4: The Mineral Resource Estimate was completed using the following parameters:

- The Steelpoortdrift Vanadium Resource extends over a strike length of 4000m and has been drilled up to 150m vertically below surface (1100m down-dip);
- Mineralisation is hosted in a series of magnetite bearing layers near the contact between the Upper and Main Zone of the Bushveld Igneous Complex. These layers have been denoted the Upper, Intermediate and Lower Zones with average thicknesses of 19, 14 and 12m respectively. At the base of the Lower Layer there is a marker horizon of massive magnetite which is 2 – 3m thick and is denoted LM1A in modelling.
- 120 drillholes (79 RC and 41 diamond core holes) were used in the resource estimate representing a total of 8,762.1m of drilling. Drillhole information is listed in ASX Announcements of 16 April 2019 and 19 November 2019.
- 59 RC holes and 27 diamond core holes drilled by VR8 were included along with 20 RC holes and 1 diamond core hole drilled previously by Vanadium Resources (Pty) Ltd (**Vanres**) and 13 DD holes drilled by Vanadium Technology (Pty) Ltd, a subsidiary of Xstrata (**Vantech**). Drilling in the core of the deposit has been carried out at a 90m spacing with the remainder of the deposit drilled on sections spaced 150m – 200m apart, with mineralisation intersected at 150m intervals on section.
- RC drilling by VR8 and Vanres was sampled via face sampling hammer, collected by a rig mounted cyclone and split using a riffle. Diamond core drilling by VR8 sampled NQ core by splitting the core in half. Historical drilling also sampled diamond core, predominantly BQ size, by sawing in half.
- Samples were analysed at commercial laboratories (SGS, ALS) using pressed disc XRF.
- Quality control protocols for all drilling included the use of certified reference materials (CRMs), blanks and duplicates as detailed in Appendix 3.

- All drillholes were surveyed in both South Africa LO29 grid (WGS84 projection) and UTM Zone 35S.
- All except 2 holes were vertical. Downhole surveys have been carried to confirm no excessive deviation.
- Geological domains were constructed using the interpreted stratigraphy.
- Wireframe surfaces were constructed based on the geological interpretation. Samples within the wireframe were composited to 1m intervals.
- Block grades were estimated using interpolation of the 1m composite data by the Ordinary Kriging method. Search ellipses were set based on geostatistics with search distances ranging from 120 to 950m along strike.
- A Surpac block model was used for the estimate with a block size of 40m X by 40m Y by 5m Z, with sub-blocking to 5mX by 5m Y by 1.25m Z.
- Bulk density values used for mineralisation are detailed in the tables above. These were sourced from SG data measurements on core.
- The numbers tabulated in Appendix 1 may not sum correctly as a result of rounding.
- Diagrams of the Mineral Resource are shown below.
- The Mineral Resource has been classified as Measured, Indicated and Inferred based on data quality, sample spacing, geological understanding and geostatistical analysis as detailed below.
- Further infill drilling will increase geological and grade data quality and possibly upgrade resource categories and supply data required for higher level mining studies.

These notes should be read in conjunction with the information detailed in Appendix 3.

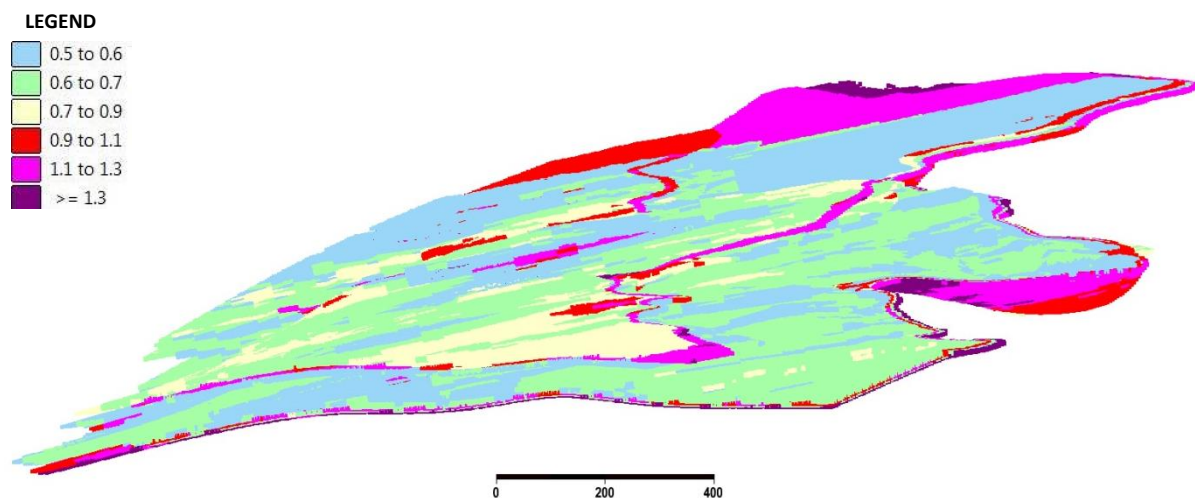


Figure 3. Oblique view (along strike) of the Mineral Resource at the Steelpoortdrift Vanadium Project.

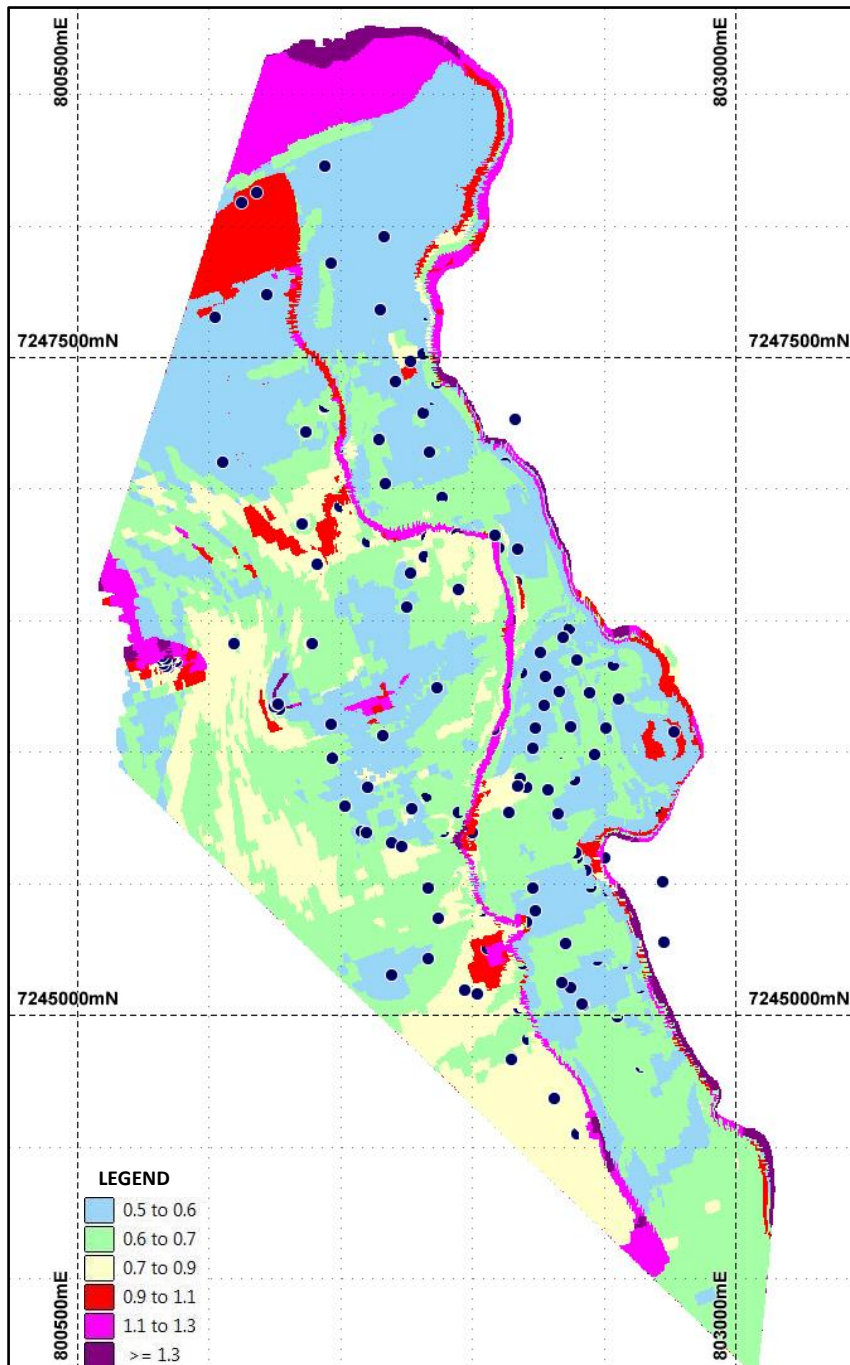


Figure 4. Plan showing the Mineral Resource at the Steelpoortdrift Vanadium Project.

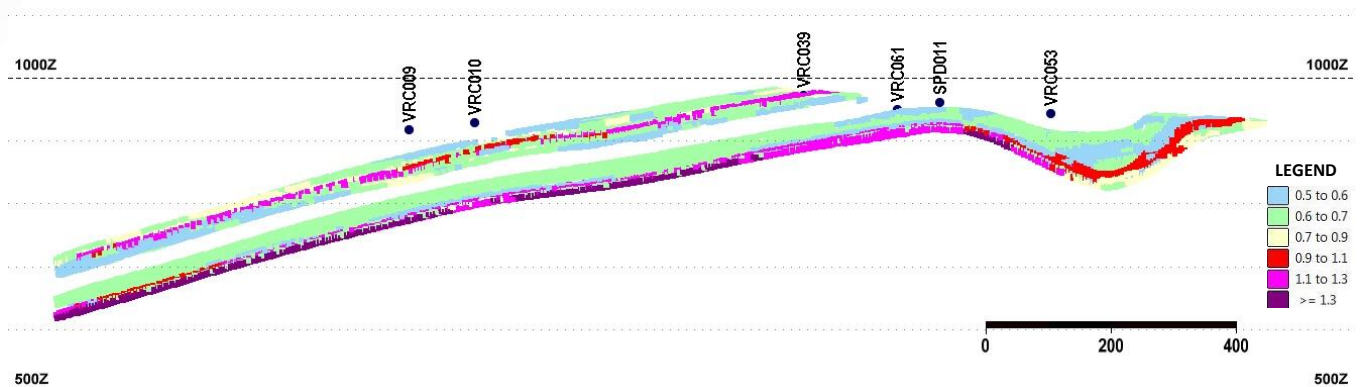


Figure 5. Typical cross section through the Mineral Resource.

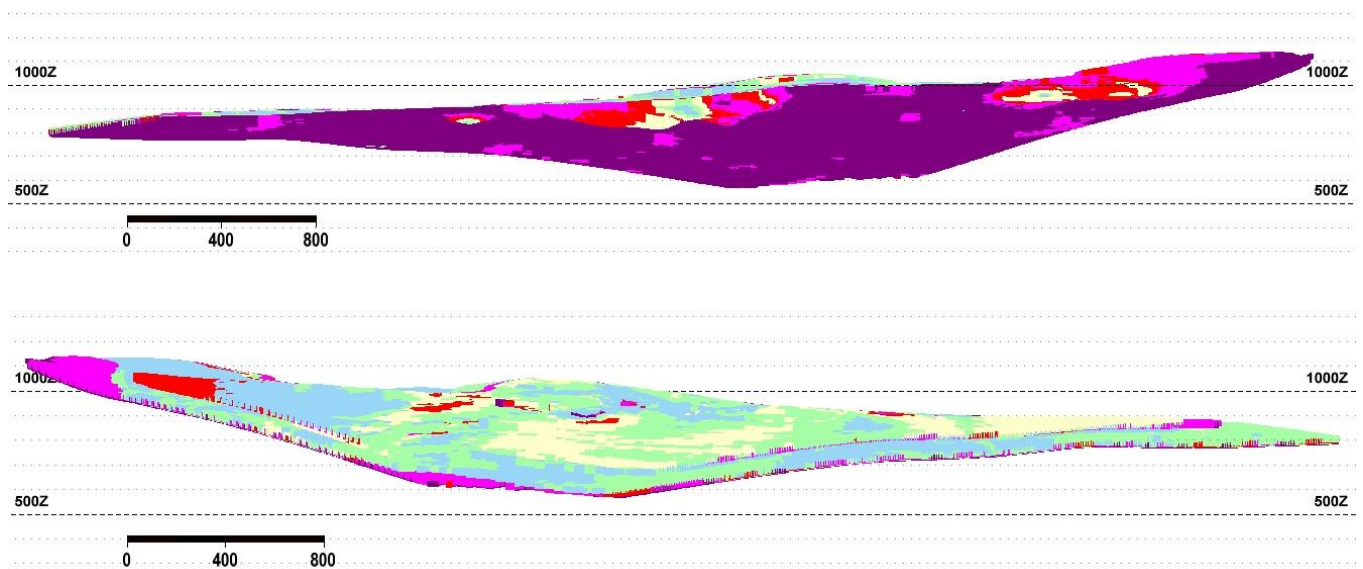


Figure 6. Long section views of the Mineral Resource (top: looking NW, bottom: looking SE).

APPENDIX 3.

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

Section 1: Sampling Techniques and Data

(Criteria in this section applies to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<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>	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 sampled at 1m intervals RC drilling 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. 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.
Drilling techniques	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc) and details (e.g. core diameter, triple 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>	RC drilling uses face sampling hammer and 5 ¼" bit sizes.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	RC drill samples are weighed to give a quantitative basis to estimation of recovery.
	<i>Measures taken to maximise sample recovery and</i>	RC drilling – consistent drilling technique, cleaning of

Criteria	JORC Code explanation	Commentary
	<i>ensure representative nature of the samples.</i>	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.
Logging	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	RC drill chips are being 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 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.
Sub-sampling techniques and sample preparation	<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 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 sampling followed the same methodology at all times, 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.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	The samples were sent to ALS Johannesburg, an ISO accredited commercial laboratory, for preparation and whole rock analysis. All samples were analysed by XRF fusion for Al₂O₃, As, Ba, CaO, Cl, Co, Cr₂O₃, Cu, Fe, K₂O, MgO, Mn, Na₂O, Ni, P, Pb, S, SiO₂, Sn, Sr, TiO₂, V, Zn and Zr as well as loss on ignition. Davis Tube analysis was carried out by SGS Laboratories Johannesburg, an ISO accredited commercial laboratory. Davis Tube analysis carried out at magnetic field of 1000G with magnetic and non-magnetic fractions analysed by XRF fusion for Fe, TiO₂, V₂O₅, P₂O₅, SiO₂, Al₂O₃, CaO, Cr₂O₃, MgO, MnO, Na₂O, K₂O and 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. 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 assay batch to confirm acceptable accuracy and precision.
Verification of sampling and assaying	<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.
	<i>Discuss any adjustment to assay data.</i>	Analytical result for V converted to V ₂ O ₅ by multiplying by 1.785.
Location of data points	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral</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.

Criteria	JORC Code explanation	Commentary
	<i>Resource estimation.</i>	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 UAV and heliborne surveys.
Data spacing and distribution	<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, refer ASX Announcement 16 April 2019.
	<i>Whether sample compositing has been applied.</i>	No sample compositing has been applied.
Orientation of data in relation to geological structure	<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.
Sample security	<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.
Audits or reviews	<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
Mineral tenement and land tenure status	<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.
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	The Project has previously been explored for magnetite-hosted Fe-V-Ti deposits.
Geology	<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.
Drill hole Information	<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> • 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.	Previously released in ASX announcements and no new results used in the Mineral Resource Estimation.
	<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.
Data aggregation methods	<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 ₂ O ₅ have been averaged weighted by downhole length, and inclusive of a maximum of 2m internal waste. Davis Tube results are reported for the same intervals as the whole

Criteria	JORC Code explanation	Commentary
		rock analyses.
	<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 ₂ O ₅ and 1.5% V ₂ O ₅ 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.
Relationship between mineralisation widths and intercept lengths	<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.
Diagrams	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Appropriate diagrams are shown in the text.
Balanced reporting	<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>	All results included in exploration reporting.
Other substantive exploration data	<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>	Exploration data is contained in previous ASX Announcements.
Further work	<i>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.</i>	As detailed in the text – completion of a Scoping Study into production of V ₂ O ₅ which will comprise mine studies and process design / costing..

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.	- The database is managed by an external, independent database consultant. Data imported to the database goes through a series of visual and database routine validations before being accepted. Assay results are also compared to the recorded lithologies. Exports from this database were used for the Mineral Resource estimation. - Following importation into the modelling software the data was also checked by the software's inbuilt validation tools followed by manual validation and checks by the competent person
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 site was visited by NJ Denner from Gemecs. Gemecs is responsible for the overall geological database and signing off on sampling activities and verification of assay results and database management - The Competent Person for the Mineral Resource completed a site visit in February 2019 prior to initiating the MRE - Personnel who supervised the sampling of the 2010 drilling programme and the estimation of the previous SAMREC Resource were on site during the 2018 drilling campaign and have verified there is no new or material data that would have an adverse effect on the acceptance of the historical drilling, modelling and interpreted geology.
Geological interpretation	- Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. - 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	- The confidence in the geological interpretation is considered to be moderate to high. The geological setting is well known and documented in the literature. Local geologists very familiar and experienced in the BIC geology has been performing the logging and sampling activities. - A geological model was established based on historical and follow-up surface mapping and

	<i>Mineral Resource estimation.</i> <i>The factors affecting continuity both of grade and geology.</i>	drilling results Results from additional drilling will improve the detail of the sub surface geology.
Dimensions	<i>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.</i>	The UMZ and LMZ have been mapped along strike (NW-SE) for approximately 4km 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 by the assay results released by the Company and ranges from 5m to 37m (not true thickness).
Estimation and modelling techniques	<i>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.</i> <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i> <i>The assumptions made regarding recovery of by-products.</i> <i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i> <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i> <i>Any assumptions behind modelling of selective mining units.</i> <i>Any assumptions about correlation between variables.</i> <i>Description of how the geological interpretation was used to control the resource estimates.</i>	- Interpolation of V₂O₅ grade was undertaken using Gemcom Surpac software. 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 high and low grade stratigraphic layers within the Upper, Intermediate or Lower Zones (refer Appendix 1). - The previous JORC compliant Mineral Resource Estimate was documented in the ASX Announcement of 16 April 2019 and contained material classified as Indicated and Inferred. A previous JORC compliant Mineral Resource Estimate was documented in the ASX Announcement of 18 December 2018 and contained material wholly classified as Inferred, and prior to this a resource was estimated under the SAMREC Code and is documented in the ASX Announcement of 22 March 2018. - Block sizes were selected with the assistance of Quantitative Kriging Neighbourhood Analysis and consideration of drillhole spacing and the 1/3 rule to avoid volume variance effect. - No assumption of mining selectivity has been incorporated into the estimate, although minimum grade cut-off was used to determine

	• 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.	and report the mineral resource, and block size selection in the z direction considered possible minimum bench heights • Visual validation was completed and show reasonable correlation between estimated grades and drill sample grades. • No cutting or capping was applied after statistical review of V₂O₅ distribution showed no significant outliers • 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, as moisture is not relevant in the geological setting.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• The cut-off grade is based on likely economic concentrations of V₂O₅ based on review of similar projects. Mining studies will be carried out to determine a more precise cut-off grade and marketing studies will be used to refine this based on economic value of other metals (or presence of deleterious elements).
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. Mineralised zones occur in strong correlation with lithological layers (Magnetite) that can be easily identified and used for mining selections.
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	• Metallurgical testwork results were reported in an ASX Announcement dated 18 March 2019. • Where required area analogues (e.g. Rhovan, Mapochs, Vametco) were used to determine the prospects of eventual economic extraction.

	<i>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.</i>	
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.	- Density measurements were completed on both core (water displacement method) and RC chips (using a pycnometer) from the 2018 and historical drilling. - Block values for Bulk Density were calculated using the high correlation ($r=0.82$) of Fe grade and density value, with the equation $(0.028*[Fe_{OK}])+2.692$. This level of precision is deemed appropriate for a Mineral Resource at a Measured level of confidence.
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 metal values, quality, quantity and distribution of the data). - Whether the result appropriately reflects the	- The resource for the SPD Project was classified as Measured, Indicated and inferred based on geological understanding, data quality, sample spacing and geostatistical analysis. - The Resource classification has been completed by weighting key parts of the estimate including, confidence in drillholes / wireframe location, number of contributing samples, the estimate pass, the number of contributing drillholes,

	Competent Person’s view of the deposit.	Kriging Variance (KV), Kriging Efficiency (KE), and the Regression Slope (RS), to produce a Weighted Resource Category Score (WRCS). <table><tr><th>Item / Weight</th><th>1</th><th>2</th><th>3</th></tr><tr><td>Drillholes</td><td>TDO/VR8</td><td>Historical w/dgps</td><td>Historical w/gps</td></tr><tr><td>Pass</td><td>1/3 var range</td><td>2/3 var range</td><td>3/3 var range</td></tr><tr><td>Sample Numbers</td><td>24-32</td><td>16-23</td><td>1 – 15</td></tr><tr><td>Contributing Drillholes</td><td>7</td><td>4</td><td>1</td></tr><tr><td>KV</td><td><0.2</td><td>0.2 to 0.4</td><td>>0.4</td></tr><tr><td>KE</td><td>>=0.7</td><td>0.3 to 0.5</td><td><=0.3</td></tr><tr><td>RS</td><td>>=0.7</td><td>0.2 to 0.6</td><td><=0.2</td></tr></table> • The MRE has been classified as Measured where WRCS is 1.2 or less • The MRE has been classified as Indicated where WRCS is between 1.2 and 2. • The Mineral Resource is classified as Inferred where WRCS is greater than 2 and the model estimates fall within 1 variogram range of informing drill holes. • 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 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.	Item / Weight	1	2	3	Drillholes	TDO/VR8	Historical w/dgps	Historical w/gps	Pass	1/3 var range	2/3 var range	3/3 var range	Sample Numbers	24-32	16-23	1 – 15	Contributing Drillholes	7	4	1	KV	<0.2	0.2 to 0.4	>0.4	KE	>=0.7	0.3 to 0.5	<=0.3	RS	>=0.7	0.2 to 0.6	<=0.2
Item / Weight	1	2	3																															
Drillholes	TDO/VR8	Historical w/dgps	Historical w/gps																															
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RS	>=0.7	0.2 to 0.6	<=0.2																															
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	• Where appropriate a statement of the relative	• The lode geometry and continuity has been																																

accuracy/ confidence	<i>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.</i> • <i>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.</i> • <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i>	adequately interpreted to reflect the level of Measured, Indicated and Inferred Mineral Resources. • 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, nor has it ever been mined, therefore there is no reconciliation data available.
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