

30 October 2018

# QUARTERLY ACTIVITIES REPORT SEPTEMBER 2018

- Multiple high grade assay results from drilling at the SPD Vanadium Project.
  - o Numerous shallow intersections + 1% V<sub>2</sub>O<sub>5</sub> including:
    - 34m at 1.03%V<sub>2</sub>O<sub>5</sub> from 22m (VDD001)
    - 24m at 0.73% V<sub>2</sub>O<sub>5</sub> from surface (VRC002)
       incl. 12m at 1.00% V<sub>2</sub>O<sub>5</sub> from 12m incl. 2m at 1.72% V<sub>2</sub>O<sub>5</sub>
    - 8m at 1.10% V<sub>2</sub>O<sub>5</sub> from 46m incl. 2m at 1.56% V<sub>2</sub>O<sub>5</sub> (VRC005)
       (within a wider interval of 37m at 0.65% V<sub>2</sub>O<sub>5</sub> from 47m)
    - 9m at 1.04% V<sub>2</sub>O<sub>5</sub> from 49m (VRC003)
       (within a wider interval of 35m at 0.65% V<sub>2</sub>O<sub>5</sub> from 23m)
    - 16m at 0.82% V<sub>2</sub>O<sub>5</sub> from 10m (VRC007) incl. 2m at 1.54% V<sub>2</sub>O<sub>5</sub>
    - 7m at 0.84%V<sub>2</sub>O<sub>5</sub> from 3m (VRC001)
    - 9m at  $1.12\% \text{ V}_2\text{O}_5$  from 73m incl. 2m at  $1.61\% \text{ V}_2\text{O}_5$  (VRC001) (within a wider interval of 35m at  $0.66\% \text{ V}_2\text{O}_5$  from 47m)
  - Phase One successfully completed; enabling SPD's historical 'foreign resource' to be converted to JORC Mineral Resource during November
  - Drilling moving to test high-grade vanadium pipes to support a DSO operation, potentially generating early cashflow at low cost
- SPD Vanadium Project is a globally significant project, with DSO potential
  - Located in a known vanadium producing region supported by excellent infrastructure
  - o Grade profile is one of the highest of all ASX listed vanadium projects with numerous whole rock drill intersections >1%  $V_2O_5$  and grade in concentrate averaging 2%  $V_2O_5$  and 13%  $TiO_2$
  - $_{\odot}$  Exploration has identified 12 vanadium pipes within a 3km radius of the existing vanadium deposit at SPD with high grade samples averaging 1.87% V<sub>2</sub>O<sub>5</sub> drill testing commenced subsequent to the end of the guarter
- Completion of the Acquisition of a 73.95% stake in SPD Vanadium Project during the Quarter
- Company retains cash reserves over \$3.5 million and is fully funded to complete
   Phase 1 and 2 drilling as well as associated studies



### Phase 1 Drilling Complete with 3 rigs continuing to drill on site

Drilling of the SPD Vanadium Project commenced during the Quarter and at the date of this report 33 holes had been completed for 2531.5m. This includes three diamond core holes which will be sampled for metallurgical testwork. A further 3 holes are currently in progress.

First whole rock, or pre-concentrate, assay results have been received including:

- 34m at 1.03%V2O5 from 22m (VDD001, Upper Layer)
- 8m at 1.02%V2O5 from 108.6m (VDD001, Lower Layer)
- 24m at 0.73% V<sub>2</sub>O<sub>5</sub> from 0m / surface (VRC002, Lower Layer)
  - o including 12m at 1.00% V<sub>2</sub>O<sub>5</sub> from 12m
  - o including 2m at 1.72% V<sub>2</sub>O<sub>5</sub> from 22m
- 1m at 1.31% V<sub>2</sub>O<sub>5</sub> from 0m / surface (VRC007)
- 16m at 0.82% V<sub>2</sub>O<sub>5</sub> from 10m (VRC007, Lower Layer)
  - o including 2m at 1.54% V<sub>2</sub>O<sub>5</sub> from 24m
- 37m at 0.65% V<sub>2</sub>O<sub>5</sub> from 13m (VRC005, Lower Layer)
  - o including 8m at 1.10% V<sub>2</sub>O<sub>5</sub> from 42m
  - o including 2m at 1.56% V<sub>2</sub>O<sub>5</sub> from 48m
- 35m at 0.65% V<sub>2</sub>O<sub>5</sub> from 23m (VRC003, Lower Layer)
  - o including 9m at 1.04% V<sub>2</sub>O<sub>5</sub> from 49m





Figure 1. Ongoing drilling operations at SPD Vanadium Project.



Phase One of the drilling program comprised 16 holes for 1446m and aimed to convert the current SAMREC resource at SPD of 513 million tonnes at a grade of 0.78% V<sub>2</sub>O<sub>5</sub> (defined as Inferred under the SAMREC code) to a Mineral Resource estimate (MRE) as defined in the JORC Code. The current SAMREC resource is a "foreign resource" (as defined in the ASX Listing Rules) and is detailed below and in the ASX Announcement of 22 March 2018. Tando expects the MRE will be published during November, 2018.

Following completion of the Phase One drilling program, Tando has immediately commenced the Phase Two drilling program, aimed at upgrading the maiden JORC Resource to an Indicated category (provided results are as anticipated). To achieve this goal Phase Two is currently designed to comprise 58 holes for 5,550m.

In addition the first holes to be drilled at the shallow, high-grade vanadium pipes will be carried out. These pipe sit within a 3km radius of the SPD deposit and Tando has reported a host of high-grade vanadium assays from samples taken from the surface of these pipes with results consistently above  $2\% V_2O_5$  (see below).

All holes drilled to date are shown on Figure 2 and details, including those relating to assay results, are contained in the announcements of 12 October 2018 and 25 October 2018

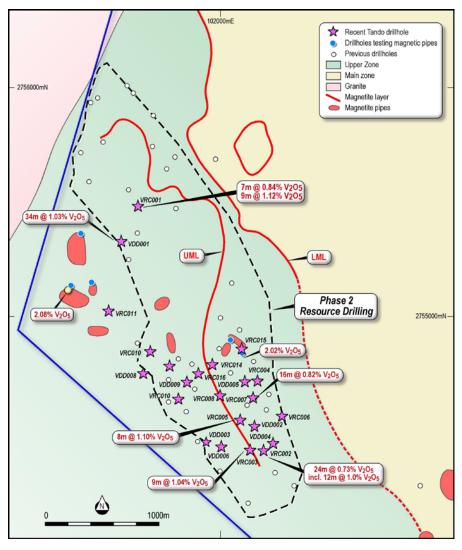


Figure 2. Plan showing location of drilling at SPD as well as historical and planned drilling.



# High grade vanadium pipes being drill tested, potential for near term DSO

Exploration by Tando at the SPD Vanadium Project has identified a total of 12 high grade vanadium pipes within the property. 20 surface samples from these pipes returned an average of 1.87%  $V_2O_5$  with seven samples returned grades of more than 2%  $V_2O_5$  (refer ASX Announcements 7 May 2018, 5 July 2018; Figure 3).

It should be emphasised that the results discussed here are **whole rock (or in situ) results, not concentrate** grades, and compare favourably to the already-high in-situ grade of the SPD Project (0.78%  $V_2O_5$ ). These excellent results provide firm evidence of the potential for these pipes to underpin a low-cost, high-grade DSO operation with a short development timetable. Metallurgical results indicate that material from the magnetic pipes could represent a DSO material which, after a relatively simple concentration process, may be able to be sold to an end-user as feedstock for a downstream processing plant or processed cost-effectively using a different method (refer ASX Announcement 5 June 2018).

Drill testing of these pipes had commenced at the date of this report.

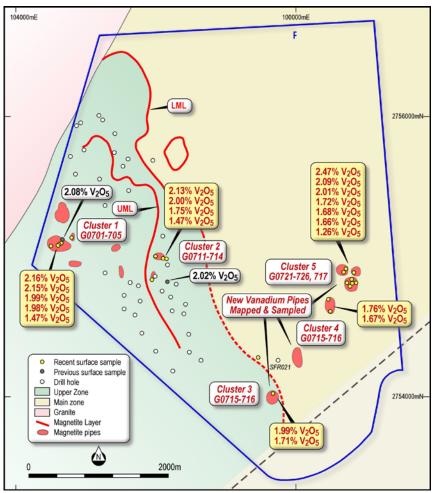


Figure 3. Plan showing location of surface samples and magnetite pipes at the SPD Vanadium Project along with historical drilling and geology.





Figure 4. Drilling in progress at the pipes at the SPD Vanadium Project.

### Background on the SPD Vanadium Project

Global vanadium projects are summarised in Figure 5, demonstrating that the SPD Vanadium Project has the potential to be globally significant based on its tonnage and grade in concentrate. Currently approximately 85% of the world's vanadium is produced in China, Russia and South Africa, and with the SPD Project ocated in one of these producing regions there is potential for the Project to be fast tracked into production.

The SPD Vanadium Project is located in a similar geological setting to the mining operations of Rhovan (Glencore), Vametco (Bushveld Minerals) and Mapochs (International Resources Ltd) in the Gauteng and Limpopo provinces of South Africa (Figure 6). 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 with other critical infrastructure in the region including:

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

LGO.TSX Maracas 3.40% 3.0% Grade in concentrate (%V2O5) KRC.ASX SPD Speewah 2.15% Vametco BMN.LSE TNO.ASX 2.09% 2.0% 1.96% Mokopane BMN.LSE 1.75% Atlantic Windimurra 1.42% TNG.ASX AVL.ASX 1.30% 1.26% TMT.ASX Gabanintha Gabanintha 1.08% 1.0% VRB.TSX-V Lac Dore 0.0% 0.0% 0.2% 0.4% 0.6% 0.8% 1.0% 1.2% Whole Rock Grade (%V2O5)

Figure 5. Global vanadium projects categorised by resource grade and grade in concentrate.

Label states concentrate grade based on reported testwork. Bubble size denotes tonnage.

Tonnes and grade based on reported total resources, due to different host exchanges these are reported under differing reporting regimes (JORC, 43-101 or SAMREC).

Source: Company websites, ASX / TSX / LSE announcements.

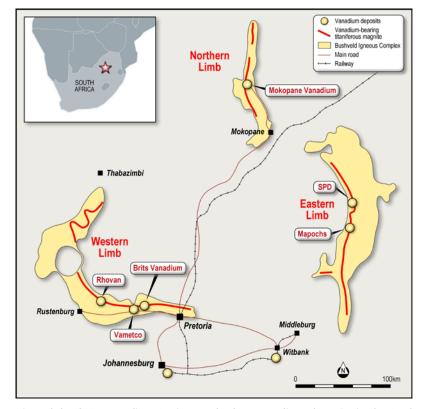


Figure 4 Location of the SPD Vanadium Project and other vanadium deposits in the Bushveld Igneous Complex.



Mineralisation at the SPD Vanadium Project is hosted in two magnetite layers with drill intersections returning several results > 1% V2O5 near surface including:

- 9m at 1.34% V2O5 + 10.5% TiO2 from 9m (SFRO19)
- 13m at 1.13% V2O5 + 7.43% TiO2 from 10m (SFR017)
- 14m at 1.08% V2O5 + 7.07% TiO2 from 9m (SFR013)
- 20m at 0.96% V2O5 + 8.35% TiO2 from 11m (SFR011)
- 15m at 0.92% V2O5 + 6.44% TiO2 from 8m (SFR018)
- 12.2m at 0.90% V2O5 from 127.2m & 26.9m at 0.80% V2O5 from 43.1m (SFDD001)
- 44m at 0.66% V2O5 TiO2 + 4.24% TiO2 from 35m (SFR008)
- 34m at 0.65% V2O5 + 4.58% TiO2 from 23m (SFR009)

(Refer ASX Announcement 22 March 2018)

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  $13\% \ TiO_2$  (refer ASX Announcement 22 March 2018). The Company plans to complete a testwork programme to determine whether hydrometallurgical processes can extract high purity vanadium and titanium products, which are sought after for numerous uses including vanadium redox 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 in the ASX Announcement of 22 March 2018). 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 V₂O₅%	Mt%	Magnetite Tonnes	V₂O₅% 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.

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 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. As detailed above the Company is currently implement a drilling programme to verify the Mineral Resource.

#### Quartz Bore – High Grade Zinc Mineralisation in the Pilbara

The Quartz Bore Project is located in the Pilbara region of Western Australia, adjacent to Venturex Resources' Whim Creek Project. The Project contains the Balla Balla Prospects which were discovered via heliborne EM with some 11,193 metres of RC and DD drilling by previous explorers successfully delineating high grade zinc mineralisation (refer ASX Announcement CCC). The Company completed a successful diamond drilling programmes at the Quartz Bore Project in Dec 2017 with intersections including a high grade copper zone (17m at 2.95 % Cu + 1.48% Zn incl. 7m at 6.44% Cu + 3.21% Zn incl. 2m at 14.3% Cu + 6.33% Zn, refer ASX Announcement 21 February 2018).

In addition surveying of QBDD0002 detected a strong, coincident, DHEM and DHMMR anomalies interpreted to represent the extension of mineralisation intersected in historical drillhole BBD009 (which returned 15m at 5.92%Zn + 0.80% Cu, refer Figure 6 and ASX Release 3 November 2017). Surface MMR surveying also identified potential drill targets at Balla Balla and the potential for this technique to identify further mineralised zones along the prospective horizon within the Mons Cupri Volcanics.

Review by the Company indicates a spacing of 80m by 20m is be the optimum drill spacing to delineate a Mineral Resource (assuming results are consistent with historical intersections). The current drill spacing at the Balla Balla Prospect is 80m by 80m (approximately) and the Company is considering the best methodology to advance the project.

## Mt Sydney –Shallow EM anomalies along strike from known mineralisation

The Mt Sydney Project is 100% owned by the Company and is located adjacent to, and along strike from, Rumble Resources (ASX.RTR, "**Rumble**") Braeside Project (Figure 7).

In January Rumble announced zinc-lead mineralisation had been intersected in its maiden drilling programme including a high grade zinc discovery at the Braeside Project (refer ASX.RTR Announcement 16 January 2018). The reconnaissance nature of this drilling makes the presence of mineralisation very encouraging for regional base metal prospectivity and enhances the potential of the base metal targets within Tando's Mt Sydney Project.

Tando flew a VTEMmax survey over the Mt Sydney Project in December 2017 (refer ASX Announcement 18 January 2018). Careful examination of the electromagnetic data has delineated numerous conductors that correlate with important target structures interpreted to be part of the Braeside Fault Zone, as well as stratigraphic contacts of prospective volcanic lithologies. EM anomalies are also evident over strike limited portions of these significant structures which extend directly from Rumble Resources' Braeside Project further north. These conductors are considered high priority targets and warrant follow-up.



# Mt Vernon – Zn-Pb targets in same region as Abra Deposit

The Mt Vernon Project overlies sediments of the Edmund and Collier Groups adjacent to the regional scale Mt Vernon Fault in the Pilbara region of Western Australia. The Company has completed a detailed review of historical exploration at the project and identified geophysical and geochemical targets worthy of further inspection:

- Four airborne EM anomalies have been identified from a survey flown by BHP in 1997 and named MV\_Geotem\_01-04 (Figure 8)
- Surface geochemical surveys across the project area have identified discrete copper and zinc targets separated by the Mt Vernon Fault (Figure 9)

(refer ASX Announcement 15 March 2018)

E52/3560 lies wholly within the Nharnuwangga Wadjarri Ngarlawangga (**NWN**) Indigenous Land Use Agreement area and therefore access to the area of E52/3560 is not permitted until an agreement has been entered into with the NWN. The Company has received a draft heritage agreement from the legal representatives of the Jidi Jidi Aboriginal Corporation (JJAC), which is the registered native title body corporate for the NWN determination area and is reviewing this.

# Corporate

During the Quarter the Company completed the acquisition of the SPD Vanadium Project and accordingly issued 25,756,503 shares and 32,430,001 options. This followed receipt of shareholder approval at a general meeting held on 20 August 2018 and receipt of approvals in South Africa and Australia including South African Reserve Bank approval and granting of a Mining Right covering the SPD Vanadium Project.

As at 30 September 2018, the Company had \$3.65 million cash on hand.

The Company will hold its annual general meeting of shareholders on 15 November 2018.

#### For and on behalf of the board:

Mauro Piccini

Company Secretary

#### Media

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#### **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 the Announcements referred to in the text.

#### **Disclaimer**

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**Tenement Table: ASX Listing Rule 5.3.3** 

	Mining tenement	interests he	eld at the end of the qu	arter and	their location	n				
	PERMIT NAME	PERMIT NUMBER	REGISTERED HOLDER / APPLICANT	AREA IN km²	PERMIT STATUS	PERMIT EXPIRY	INTEREST / CONTRACTUAL RIGHT			
	Pilbara Region, Western Australia									
	Quartz Bore	E47/3352	VMS Resources Pty Ltd	15	Granted	21/12/2021	100%			
	Mt Sydney	E45/4939	Tando Resources Ltd	508	Application		100% on grant			
	Mt Vernon	E52/3560	Tando Resources Ltd	463	Granted	23/08/2022	100%			
	Limpopo Region, South Africa									
	Steelpoortdrift KT365	10095MR	Vanadium Resources (Pty) Ltd	24.6	Granted	04/09/2048	Right to own 73.95%			

The mining tenement interests relinquished during the quarter and their location

Nil.

The mining tenement interests acquired during the quarter and their location

Steelpoortdrift KT365 (10095MR) – right to own 73.95% (refer ASX Announcement CCC).

Beneficial percentage interests held in farm-in or farm-out agreements at the end of the quarter Not applicable.

Beneficial percentage interests in farm-in or farm-out agreements acquired or disposed of during the quarter

Not applicable.