



# PROJECT HIGHLIGHTS



## World-class Vanadium Asset

- SPD Vanadium Project is a globally significant, high-grade Vanadium deposit located in an established producing region.
- Numerous drill intersections greater than 1%  $V_2O_5$
- Concentrate grade averaging 2%+.

## Substantial Resource

- Existing inferred resource of 513Mt at 0.78%  $V_2O_5$  (foreign resource under SAMREC).
- Drilling program completed to convert resource to JORC Code.
- Numerous high grade results received.
- Significant diamond hole & RC drill database to draw upon.

## Unmatched Grade Profile Versus Peers

- SPD Vanadium Project grade profile is one of the highest of all ASX-listed vanadium projects.
- Grade in concentrate averaging 2%  $V_2O_5$  and 13%  $TiO_2$ .
- Shallow mineralisation coupled with simple geology.

## Fast Track Production Option

- High grade +2%  $V_2O_5$  returned from surface sampling of vanadium pipes.
- Potential for mine gate or direct shipping style operation being investigated.
- Aggressively pursuing opportunities to enter production in near term, either vanadium pentoxide or precursor products.

## Located Near To Existing Infrastructure

- Significant regional infrastructure surrounding SPD Vanadium Project including road, rail & power.
- Nearby existing vanadium processing operations – Glencore (Rhovan) & Vametco (Bushveld).

## Attractive Terms

- Tando has the right to earn 73.95% of the SPD Vanadium Project.
- Staged acquisition (primarily back-ended) via project milestone completion.
- See "Terms of Acquisition" slide for further details.

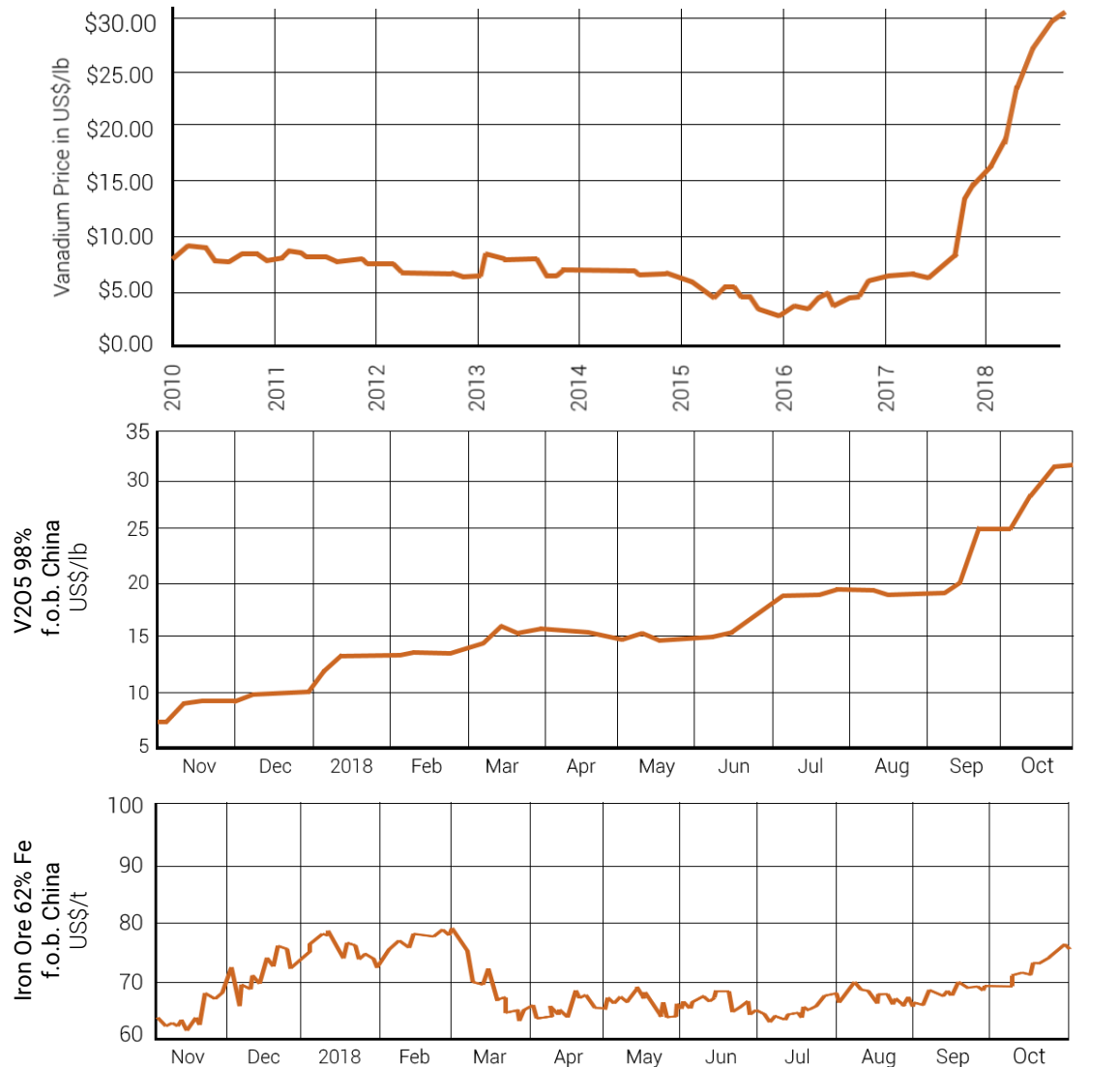
## Well Funded With Balance Sheet Flexibility

- Tando has cash reserves of circa ~A\$3million.
- Fully funded to carry out planned drilling along with resource, mining and metallurgical studies.
- Unencumbered resource off-take opportunities



# VANADIUM MARKET / PRICE

Vanadium (V<sub>2</sub>O<sub>5</sub>) Price Chart

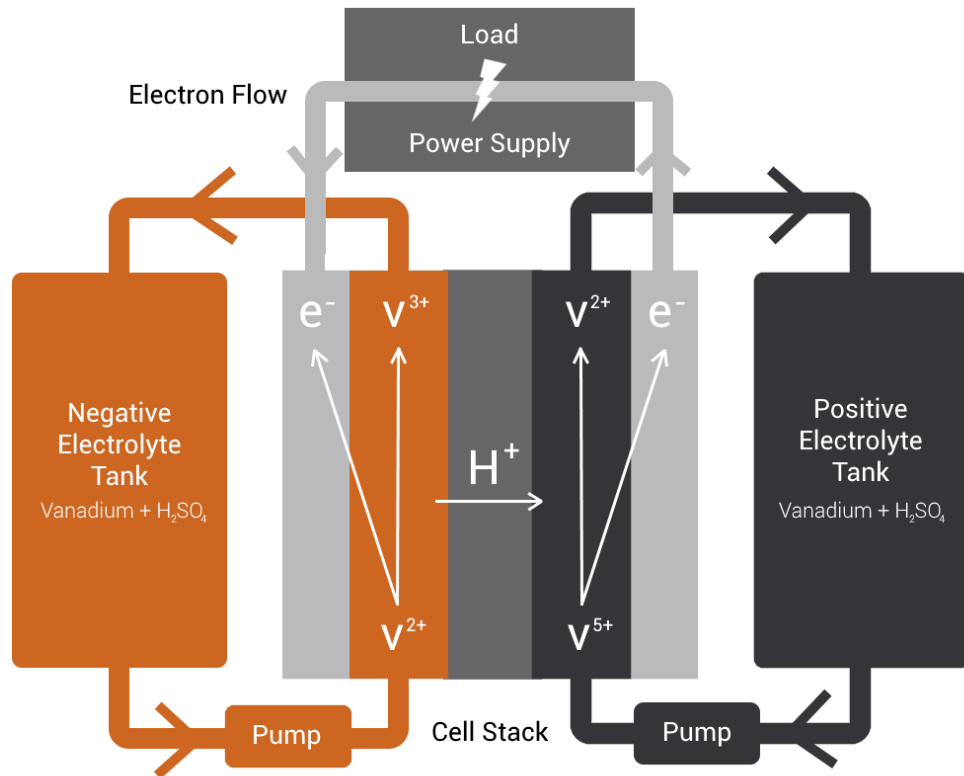


- Vanadium prices have increased 200% since Jan 2018
- Prices in uptrend since Jan 2016
- For the first time vanadium price has decoupled from iron ore price as a result of :
  - Changes in vanadium content of steel
  - Usage of vanadium in Vanadium Redox Flow Batteries (VRFBs)
- Price decreases improve economics of VRFBs
- Price increases reflect demand in steel making
- Marks a structural change in the sector

Source: Metal Bulletin

# DEMAND FOR ENERGY STORAGE

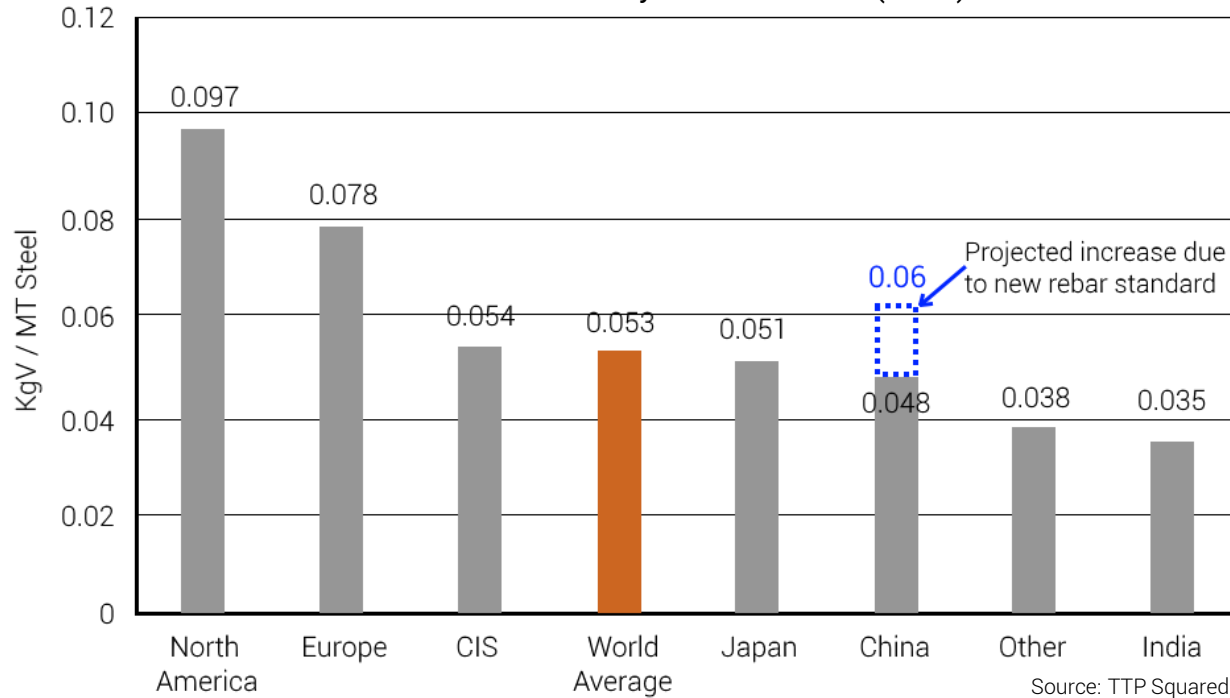
## Vanadium Redox Flow Batteries



- Energy storage is key factor in global change to renewable energy
  - “the wind doesn't always blow, the sun doesn't always shine”
  - “you might have an electric vehicle but you'll be charging it from a coal fired power station”
- VRFBs have characteristics key to providing grid scale energy storage solutions:
  - substantially longer lifespan than most batteries (up to 20 years)
  - able to hold charge for a significant time (up to 12 months)
  - able to discharge 100% charge without damage
  - scalability allowing large scale facilities to be constructed
  - greater chemical stability as only a single element is present in the electrolyte (ie safer)
- Requires high purity product > 98%  $V_2O_5$

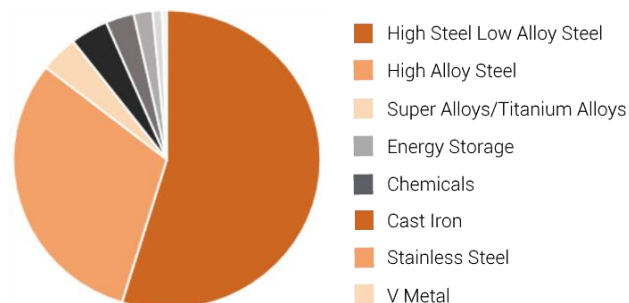
# DEMAND FROM STEEL

Vanadium Intensity of Use in Steel (2017)



Vanadium Consumption by Application 2017

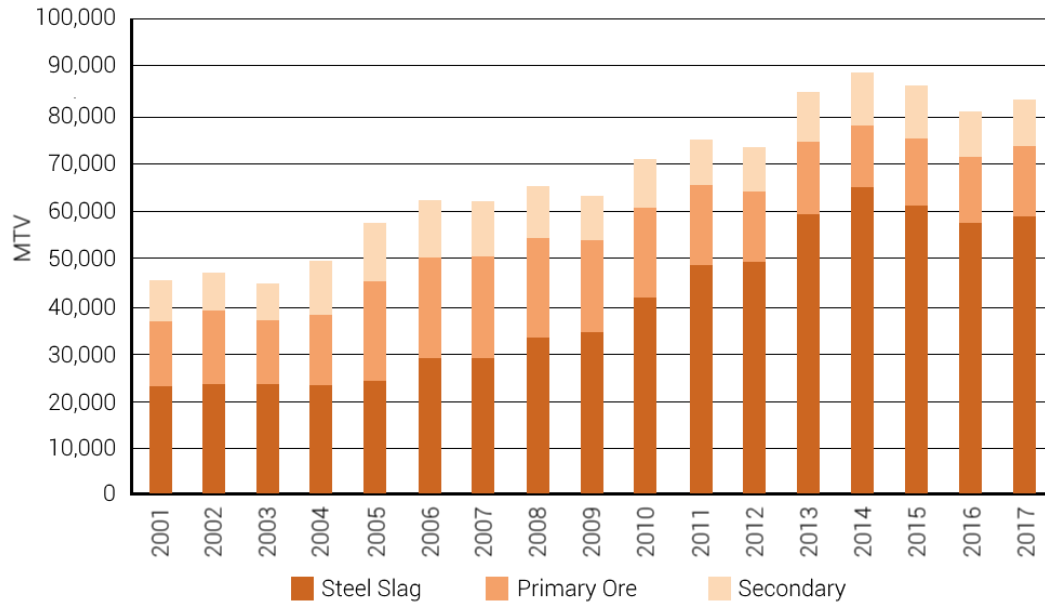
Total: 85,818 Metric Tons V



- Over 90% of the current demand for vanadium arises from its use to strengthen steel.
- Demand increasing due to more stringent regulations in China for rebar and other steel products used in construction.
- New Chinese standards forecast to increase vanadium consumption in rebar by 20%.
- Strengthened steel also used in EVs and other applications where weight of steel needs to be decreased.
- Actual demand for steel is steady, so demand for vanadium is not being fed by increased iron ore production ("co-production").

# VANADIUM SUPPLY

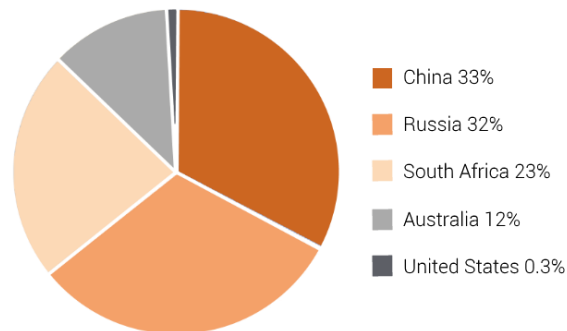
Vanadium Production by Raw Material



Source: TTP Squared

World Vanadium Reserve

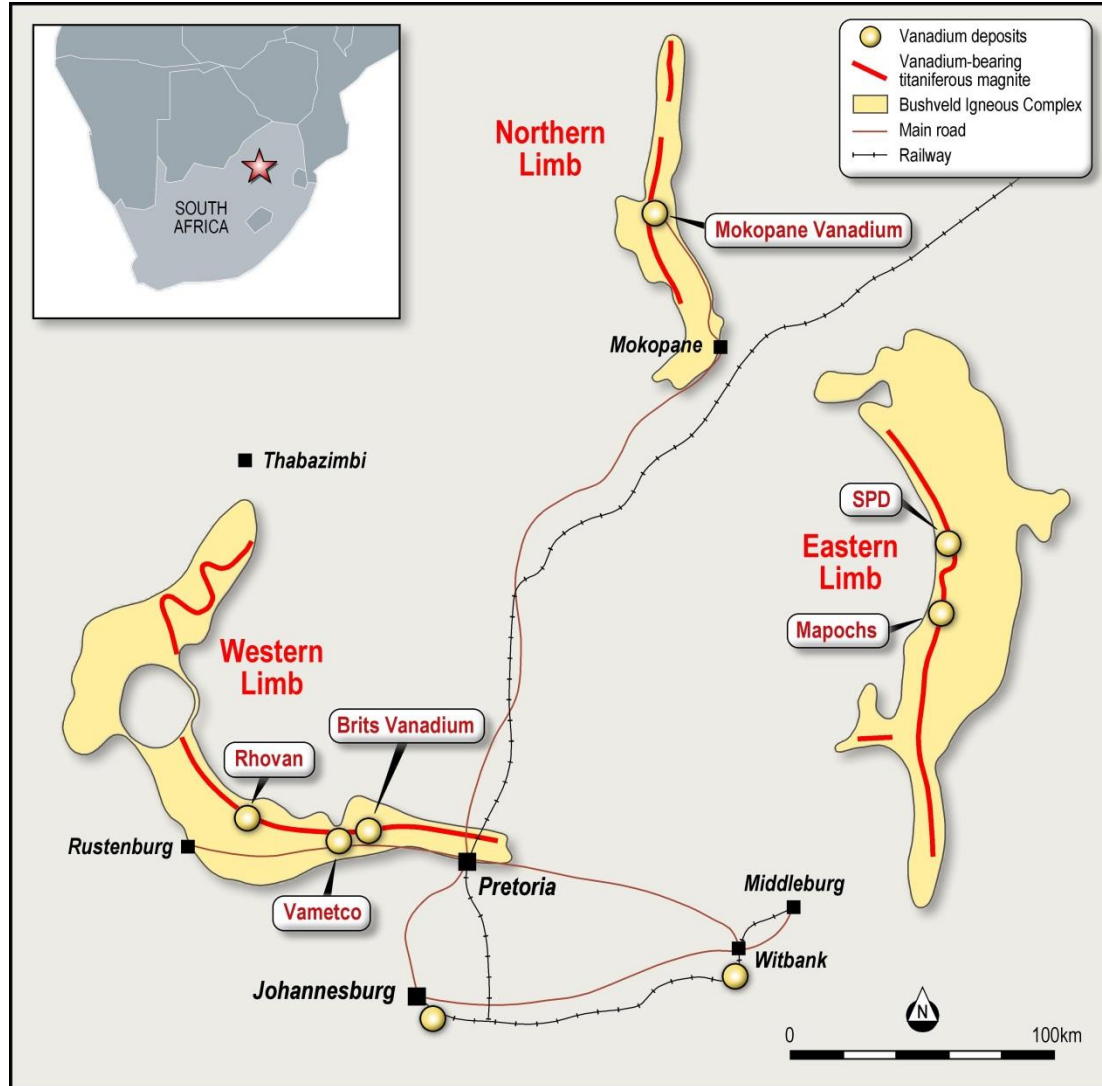
Total: 15 million metric tonnes



- Over 85% of the worlds vanadium is produced from China, Russia and South Africa
- Production from primary sources (i.e. new mines such as SPD) increasing due to environmental issues with production from slag
- Primary deposit types:
  - Titaniferous magnetite – predominant style being mined globally
  - Phosphate rock – used for production of fertilizers and produces vanadium as a by product. Not a major source of commercial vanadium
  - Uraniferous sandstones / siltstones – no current commercial production

# SOUTH AFRICA

ESTABLISHED VANADIUM  
PRODUCTION HUB



- Active vanadium mining and processing operations:
  - Rhovan (Glencore)
  - Vametco (Bushveld)
- SPD Project adjacent to dormant Mapochs vanadium operation (formerly Evraz, now private)





# INFRASTRUCTURE RICH REGION





# GLOBALY SIGNIFICANT PROJECT

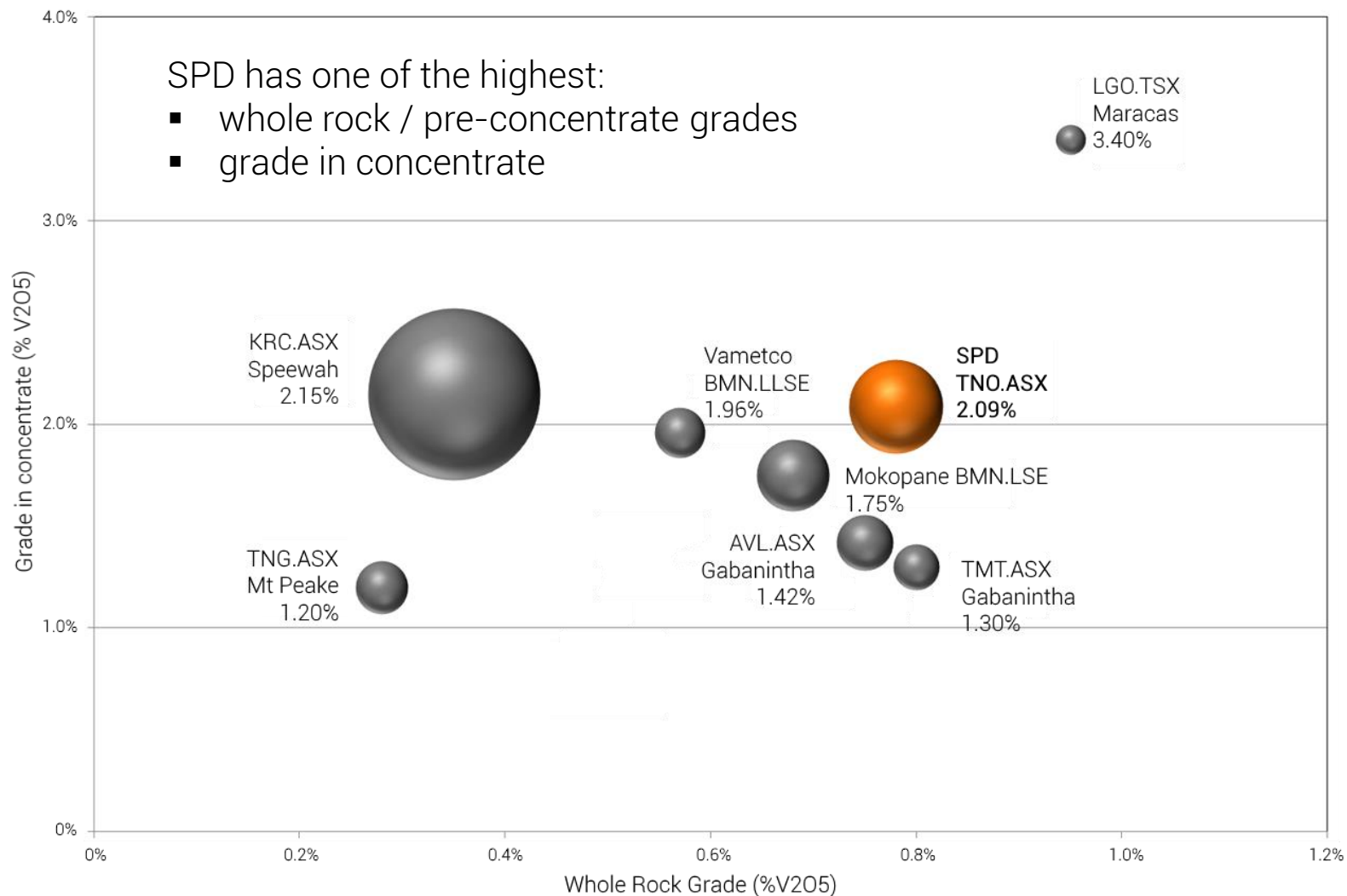


Chart compares resources reported under different codes and companies at different stages of development as detailed in slide 23.

# SAMREC INFERRED RESOURCE

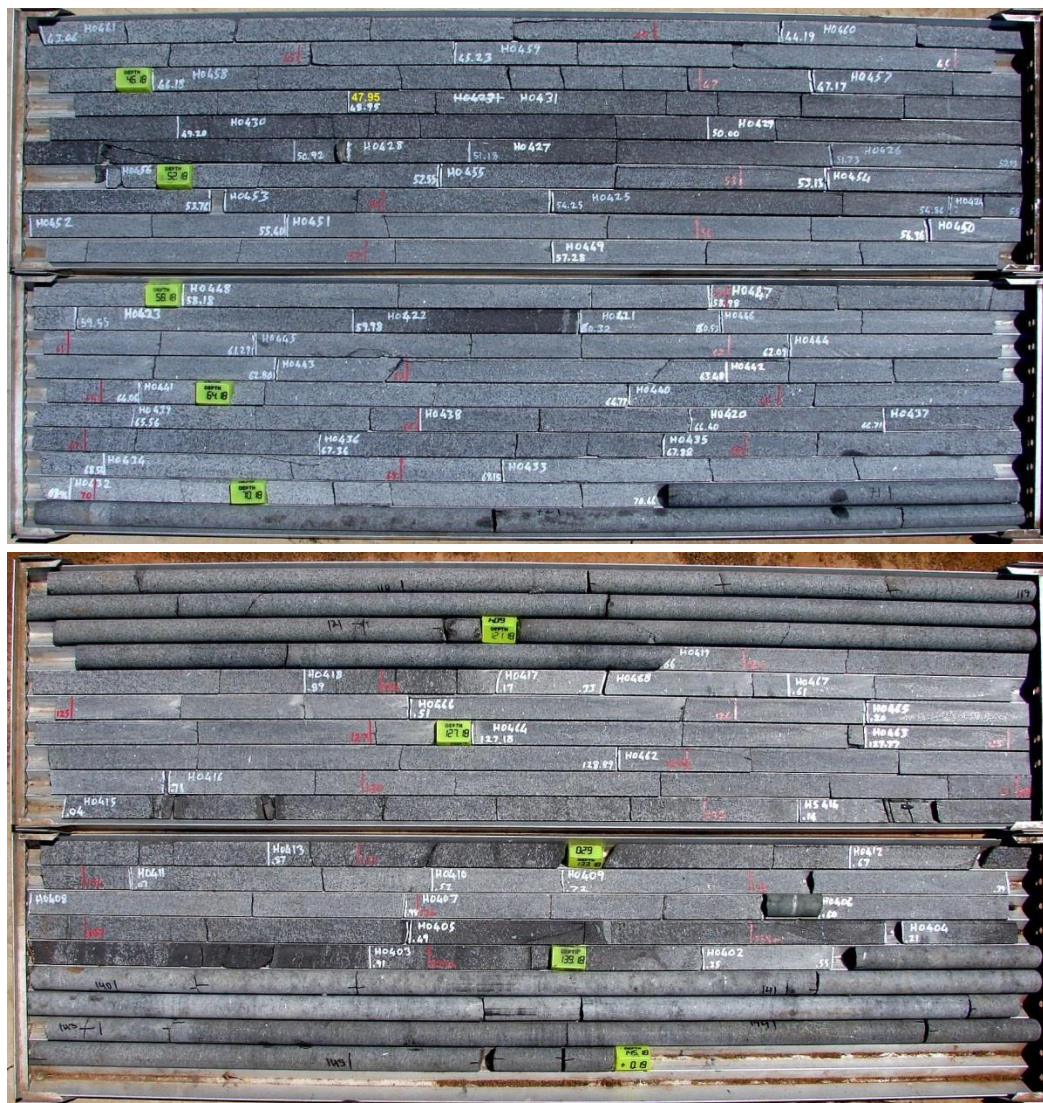


| Reef              | Avg Thickness (m) | Tonnes (Mt) | Whole Rock V <sub>2</sub> O <sub>5</sub> % | Mt%  | Magnetite Tonnes | V <sub>2</sub> O <sub>5</sub> % in Magnetite |
|-------------------|-------------------|-------------|--|------|------------------|--|
| Upper Layer       | 24              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

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.

- The resource for the SPD 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 information regarding the qualifying foreign resource is presented in the ASX Announcement of 22 March 2018 utilising the template prescribed by the JORC Code (2012).
- Bill Oliver, Managing Director of Tando, is acting as the Competent Person for the Mineral Resource and has reviewed reports and data compiled by GEMECS Pty Ltd, independent geological consultants. GEMECS implemented the 2010 drill programme for Vanadium Resources (Pty) Ltd and the estimation of the resource presented here, including supervision of all drilling and sampling. GEMECS has confirmed that there are no material changes to the resource or underlying data since it was estimated in June 2010, and has confirmed that the information presented in this announcement is consistent with the data it reported to Vanadium Resources (Pty Ltd)
- 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.
- 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.

# HIGH GRADE DRILL RESULTS



## Significant Whole Rock Results include<sup>1</sup>:

- 9m at 1.34% V<sub>2</sub>O<sub>5</sub> + 10.5% TiO<sub>2</sub> from 9m (SFR019)
- 14m at 1.08% V<sub>2</sub>O<sub>5</sub> + 7.07% TiO<sub>2</sub> from 9m (SFR013)
- 13m at 1.13% V<sub>2</sub>O<sub>5</sub> + 7.43% TiO<sub>2</sub> from 10m (SFR017)
- 26.9m at 0.80% V<sub>2</sub>O<sub>5</sub> from 43.1m  
& 12.2m at 0.90% V<sub>2</sub>O<sub>5</sub> from 127.2m (SFDD001)
- 15m at 0.92% V<sub>2</sub>O<sub>5</sub> + 6.44% TiO<sub>2</sub> from 8m (SFR018)
- 44m at 0.66% V<sub>2</sub>O<sub>5</sub> + 4.24% TiO<sub>2</sub> from 35m (SFR008)
- 34m at 0.65% V<sub>2</sub>O<sub>5</sub> + 4.58% TiO<sub>2</sub> from 23m (SFR009)

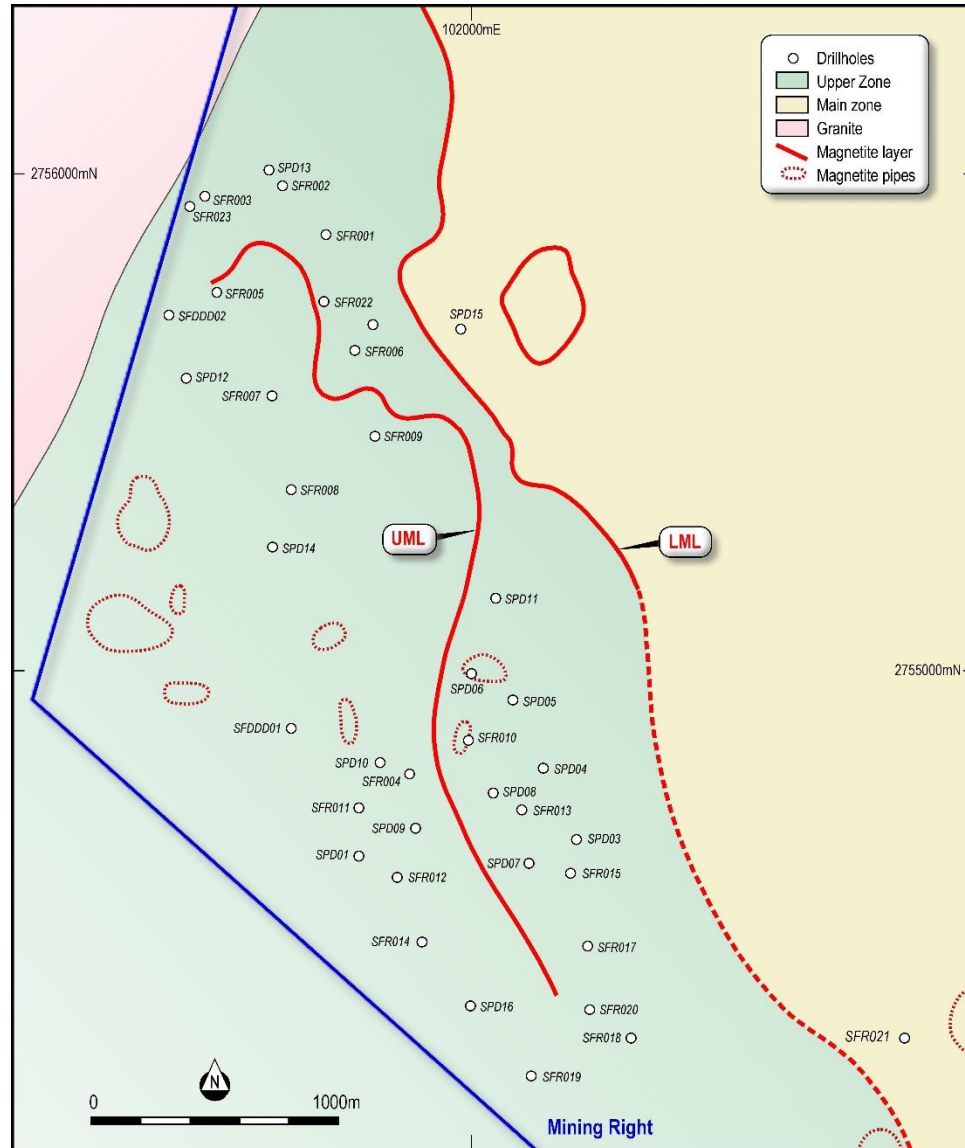
## Concentrates from above intersections return<sup>1</sup>:

- 9m at 2.03% V<sub>2</sub>O<sub>5</sub> + 14.2% TiO<sub>2</sub> from 9m (SFR019)
- 14m at 2.36% V<sub>2</sub>O<sub>5</sub> + 12.8% TiO<sub>2</sub> from 9m (SFR013)
- 13m at 2.28% V<sub>2</sub>O<sub>5</sub> + 12.9% TiO<sub>2</sub> from 10m (SFR017)
- 26.9m at 1.93% V<sub>2</sub>O<sub>5</sub> from 43.1m  
& 12.2m at 2.10% V<sub>2</sub>O<sub>5</sub> from 127.2m (SFDD001)
- 15m at 2.28% V<sub>2</sub>O<sub>5</sub> + 12.1% TiO<sub>2</sub> from 8m (SFR018)
- 44m at 2.26% V<sub>2</sub>O<sub>5</sub> + 11.8% TiO<sub>2</sub> from 35m (SFR008)
- 34m at 2.20% V<sub>2</sub>O<sub>5</sub> + 12.3% TiO<sub>2</sub> from 23m (SFR009)

<sup>1</sup> Refer ASX Announcement 22 March 2018



# SIMPLE MINERALISATION



- Near surface mineralisation
  - Both units outcrop in project area
- Two magnetite units averaging 23m thick
  - Upper Magnetite Layer (UML)
  - Lower Magnetite Layer (LML)
- Both units outcrop in project area are near surface mineralisation
- Located at base of Upper Zone of Bushveld Complex
- 42 historical RC & DD holes drilled for 2398.6m

# DRILLING IN PROGRESS ON SITE

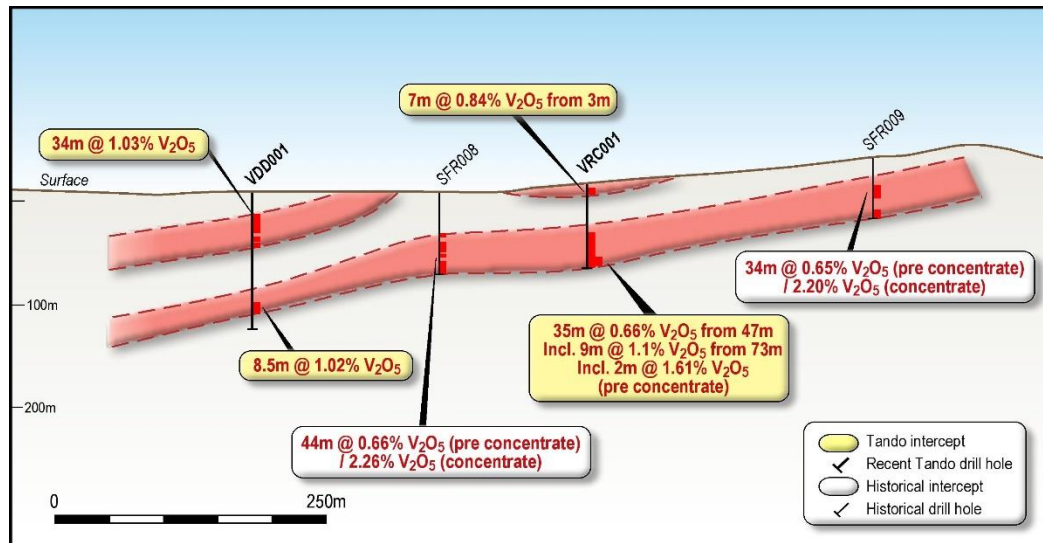
- Phase 1 drilling completed providing data for estimation of maiden JORC resource.
- Drilling has successfully intersected mineralised units and is consistent (to date) with historical results.
- 3 rigs in operation on site – RC and diamond core.
- Samples from diamond core drilling collected for metallurgical testwork.
- Numerous high grade results > 1.0% V2O5.

1 Refer to ASX Announcements 12 October 2018 and 25 October 2018





# HIGH GRADE RESULTS



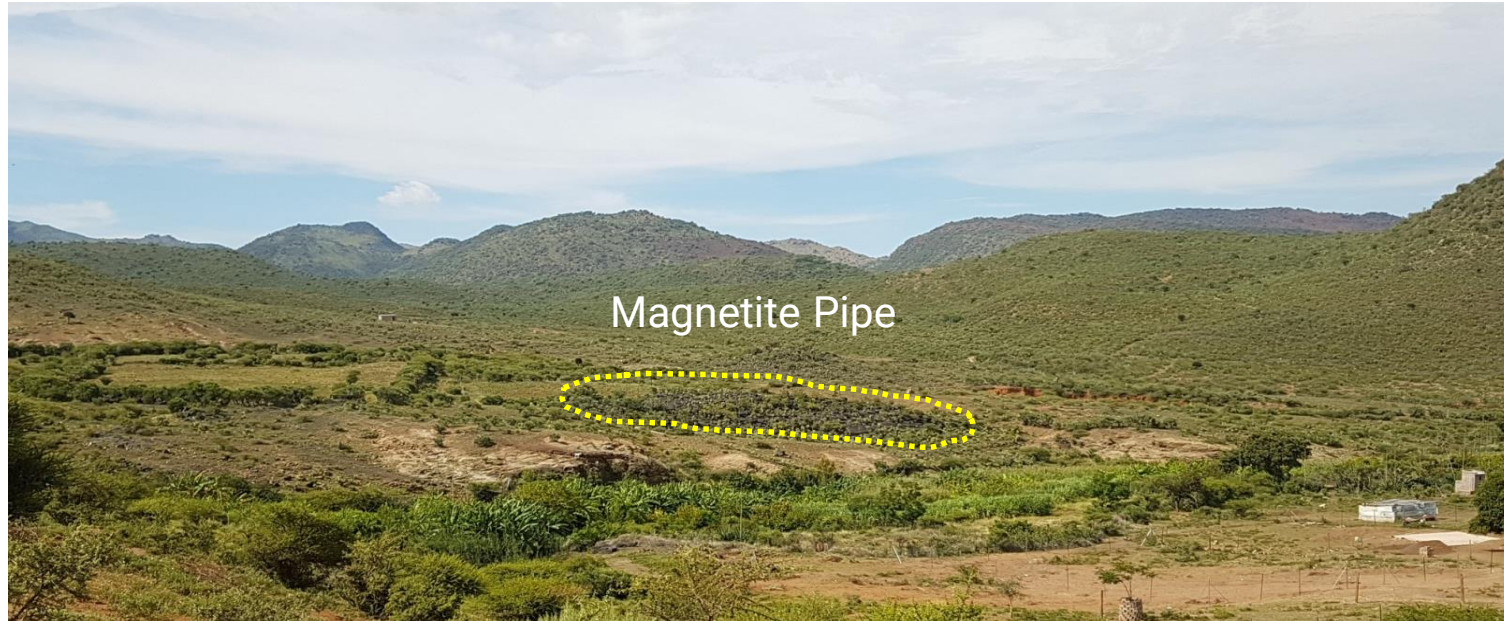
- High grade results from initial assays
- Shallow near surface mineralisation
  - 34m at 1.03%V<sub>2</sub>O<sub>5</sub> from 22m
  - 8m at 1.02%V<sub>2</sub>O<sub>5</sub> from 108.6m
  - 24m at 0.73% V<sub>2</sub>O<sub>5</sub> from 0m / surface
    - including 12m at 1.00% V<sub>2</sub>O<sub>5</sub> from 12m
    - including 2m at 1.72% V<sub>2</sub>O<sub>5</sub> from 22m
  - 1m at 1.31% V<sub>2</sub>O<sub>5</sub> from 0m / surface
  - 16m at 0.82% V<sub>2</sub>O<sub>5</sub> from 10m
    - including 2m at 1.54% V<sub>2</sub>O<sub>5</sub> from 24m
  - 8m at 1.10% V<sub>2</sub>O<sub>5</sub> from 42m
  - 7m at 0.84% V<sub>2</sub>O<sub>5</sub> from 3m
  - Results are whole-rock, or pre-concentrate grades.
- Adjacent drilling returned magnetic concentrate grades above 2.2% V<sub>2</sub>O<sub>5</sub>

1 Refer to ASX Announcements 12 October 2018 and 25 October 2018





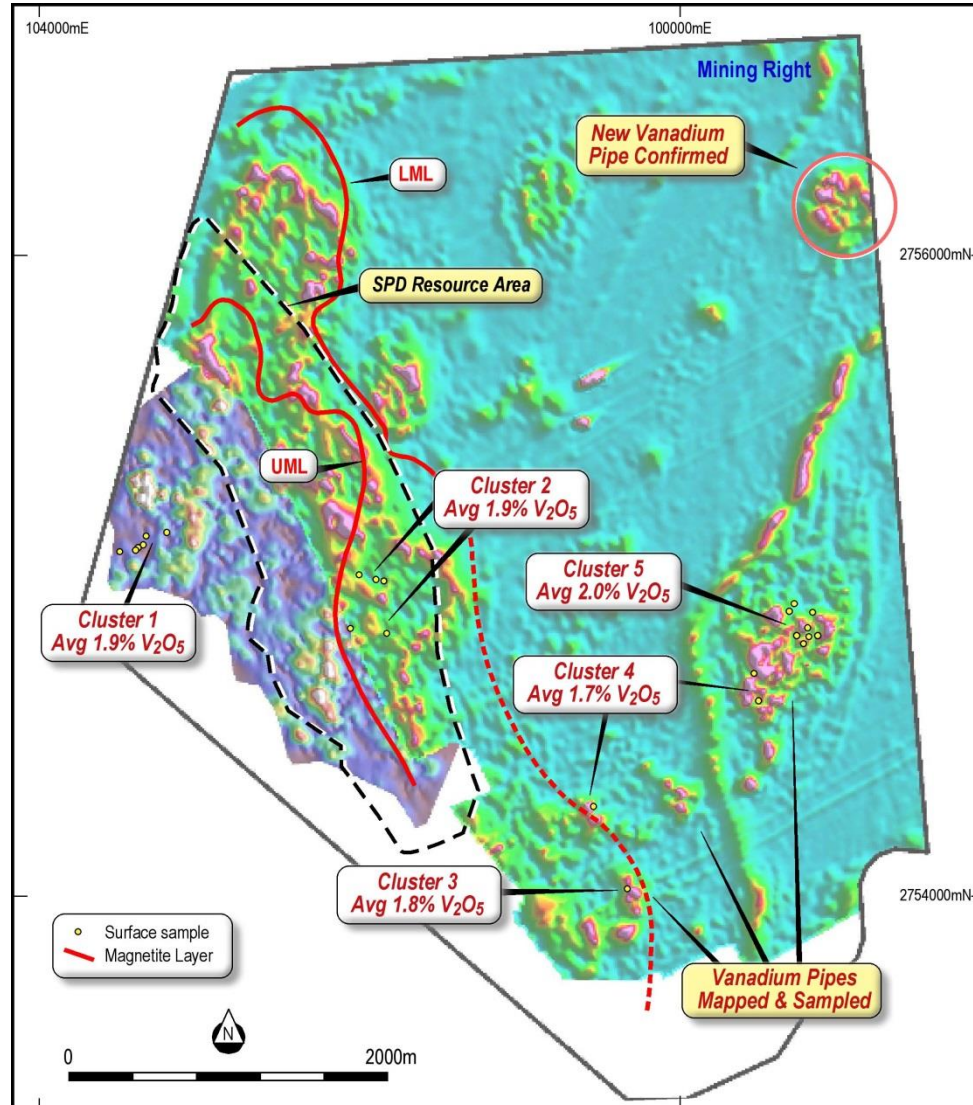
# NEAR TERM PRODUCTION POTENTIAL



- Potential for fast-track to production
- High grade pipes identified at surface
- Investigating simple, low cost production start-up
- Potential to sell at mine gate or direct ship to customer
- Drilling identifying higher grade zones within resource



# HIGH GRADE VANADIUM PIPES



- 6 clusters of pipes have now been mapped and sampled on the SPD Project
- Average of 20 samples = 1.87%  $V_2O_5$
- 7 samples above 2%  $V_2O_5$
- High resolution magnetic survey delineates scale:
  - Cluster 5 600m x 600m
  - New target 400m x 400m
- Drill testing to commence



# CAPITAL STRUCTURE



|                  | Shares      |
|------------------|-------------|
| Current Shares   | 193,587,061 |
| Listed Options   | 52,237,043  |
| Unlisted Options | 23,100,000  |
| Vendor Options   | 41,580,001  |

- Current Issued Shares 193.6M
- Enterprise Value at 12c ~ \$23M
- Cash at bank ~ \$3M

Fully funded for all upcoming drilling, resource work, metallurgical testwork, and mining studies.

Further shares to be issued to enable Tando to earn up to 73.95% of the SPD Project:

- 25.8M shares on delineation of a Measured Resource
- 19.6M shares on completion of a Scoping Study
- 4.6M shares & 32.3M options on successful completion of a Pre-Feasibility Study
- 30.3M shares & 20.6M options on successful completion of a Feasibility Study

# PEER COMPARISON

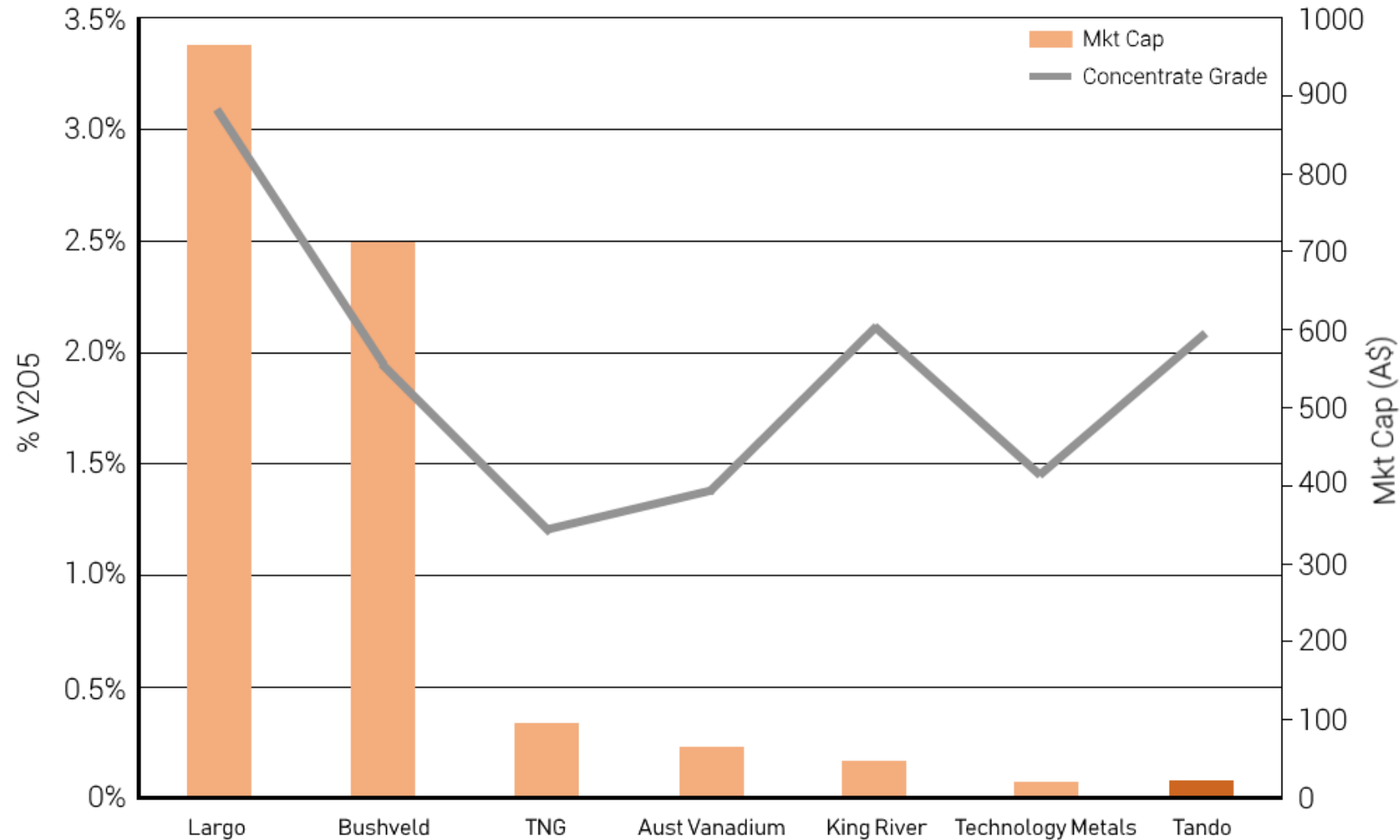


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# MANAGEMENT TEAM



**Bill Oliver**  
Managing Director

- Geologist with over 20 years wide ranging exploration experience in a range of commodities and jurisdictions.
- Enviably track record in project identification and evaluation.

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**Jeremy King**  
Non-Executive Chairman

- Corporate advisor with over 15 years' experience in domestic and international legal, financial and corporate matters.
- Extensive corporate experience and substantial global network.

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**Pat Burke**  
Non-Executive Director

- Lawyer with extensive legal, commercial and corporate advisory experience for ASX listed companies.
- Has acted as a director for a number of ASX and AIM listed small to mid-cap resources companies over the past 10 years.



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- All amounts in A\$ unless stated otherwise.
- The information in this report that relates to Exploration Results and other technical information for the Company's Projects complies with the JORC Code and has been compiled by Mr Bill Oliver, a Competent Person who is a Member of The Australasian Institute of Geoscientists and the Australasian Institute of Mining and Metallurgy. Mr Oliver is the Managing Director of Tando Resources Limited. 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 document of the matters based on his information in the form and context in which it appears. The Exploration Results are based on standard industry practices for drilling, logging, sampling, assay methods including quality assurance and quality control measures as detailed in the ASX Announcements stated in the text.
- In relying on the above mentioned ASX announcements, the Company confirms that it is not aware of any new information or data that materially affects the information included in the above mentioned announcements

# APPENDIX: PEER COMPARISON INFORMATION



| Company           | Code    | 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 <a href="http://largoresources.com/operations/maracas-menchen-mine">largoresources.com/operations/maracas-menchen-mine</a>  |
| Bushveld          | BMN.LSE | Vametco    | Production  | Indicated & Inferred                    | 142             | 0.57           | 1.96              | <a href="http://bushveldminerals.com/bushveld-vametco/">bushveldminerals.com/bushveld-vametco/</a><br><a href="http://www.bushveldminerals.com/presentations/">www.bushveldminerals.com/presentations/</a> |
|                   |         | Mokopane   | Development | Indicated & Inferred                    | 285             | 0.68           | 1.75              | Mokopane PFS Study Report Jan 2016 <a href="http://bushveldminerals.com/technical-reports/">bushveldminerals.com/technical-reports/</a>  |
| TNG               | TNG.ASX | Mt Peake   | Development | Measured, Indicated & Inferred          | 160             | 0.28           | 1.20              | ASX Announcement 26/03/2013  |
| King River        | KRC.ASX | Speewah    | Development | Measured, Indicated & Inferred          | 4,712           | 0.30           | 2.11              | ASX Announcement 02/11/2018<br>21/03/2018  |
| Aust Vanadium     | AVL.ASX | Gabanintha | Development | Measured, Indicated & Inferred          | 176             | 0.77           | 1.39              | ASX Announcement 26/09/2018  |
| Technology Metals | TMT.ASX | Gabaninth  | Development | Indicated & Inferred                    | 120             | 0.8            | 1.39 –<br>1.53    | ASX Announcement 21/06/2018<br>21/06/2018  |