

### A maiden resource – another positive step

Tando Resources (TNO.ASX) is a junior minerals company established to explore and develop gold, zinc, copper and more recently vanadium opportunities. The company listed on the ASX in November 2017 after raising \$4.5m a \$0.20/share and subsequently completed a placement to raise an additional \$2m. Tando also completed a stock split with 4.62 new shares issued for every 1 old share held. With the granting of a Mining Right, Tando is significantly progressed through an evaluation drilling programme on its recently acquired SPD Vanadium Project in the Bushveld Province of South Africa. Drilling success has now defined a maiden JORC MRE (Inferred) providing the basis for future scoping studies...we are confident there is a development here waiting to be progressed. The company believes the SPD Project to be world class and with vanadium prices still high on strong demand, the economic opportunity appears robust with favourable industry metrics forecast, at least, through the medium term.

#### Business model

Tando is a junior minerals company established with the purpose of exploring and developing gold zinc, lead, copper and most recently vanadium opportunities. The company plans to rapidly advance its SPD Vanadium Project through a resource definition phase into a firm development plan whilst continuing to explore and progress its other assets in the Pilbara in Western Australia.

#### Drilling programme delivers a maiden JORC booking

An extensive drilling programme has been completed and the company has now declared a maiden JORC MRE (Inferred) of **588Mt @ 0.78% V<sub>2</sub>O<sub>5</sub>**. Receipt of the final assay results will enable the declaration of an Indicated resource and the initiation of a scoping study including the evaluation of a DSO option supported by an **80Mt @ 1.07% V<sub>2</sub>O<sub>5</sub>** as outlined.

#### Valuation unchanged at \$0.40/share

Valuing pre-production assets is a subjective exercise, particularly when the resource is cum-evaluation. We use a discounted cashflow methodology to assign a 'likely' value to the resource where possible, applying a discretionary probability weighting as a secondary overlay to determine a unit Net Present Value (NPV). On this methodology we retain our base case valuation of \$0.40/share, which includes only a nominal value to the remainder of the portfolio ex-SPD Project.

The company is well through the process of unwinding the risk on the SPD Project by declaring a maiden JORC MRE and determining the economics of a DSO option with the potential for early cashflow (refer our Upside Case events) – this upside case is not currently captured in our financial estimates.

**The current share price discount to NAV indicates the market is weighting the SPD Project at a probability of <10%.**

We think continuing positive outcomes should close this discount as the project moves through the JORC MRE Phase and feasibility evaluation, although changes in commodity price (V<sub>2</sub>O<sub>5</sub>) sentiment are likely to have the strongest impact on short-term share price performance, in our view.

It's worth highlighting – **we suggest the SPD project is economic at ~US\$5/lb V<sub>2</sub>O<sub>5</sub>** and with V<sub>2</sub>O<sub>5</sub> prices reported around US\$24-25/lb, there is strong economic confidence and margin potential above our modelling assumptions.

### Mining and Exploration

19 December 2018

#### Share details

ASX Code	TNO
Share price at 18 Dec	\$0.089
Market Capitalisation	\$17.23M
Shares on issue	159.3M
Net cash at 30 Sep 18	\$3.65M
Free float	68%

#### Share performance (12 months)



#### Upside Case

- DSO option could provide early cashflow, financing options
- Resource potential above 'modelled' mine scenario
- Va price significantly higher than modelled through med-long term

#### Downside Case

- Financing may be more expensive, dilutive than modelled
- Va price significantly lower than modelled through med-long term
- Timing of start-up could be later than modelled particularly given the still early nature of the evaluation programme

#### Board of Directors

Bill Oliver	Managing Director
Jeremy King	Non-Executive Director
Patrick Burke	Non-Executive Director

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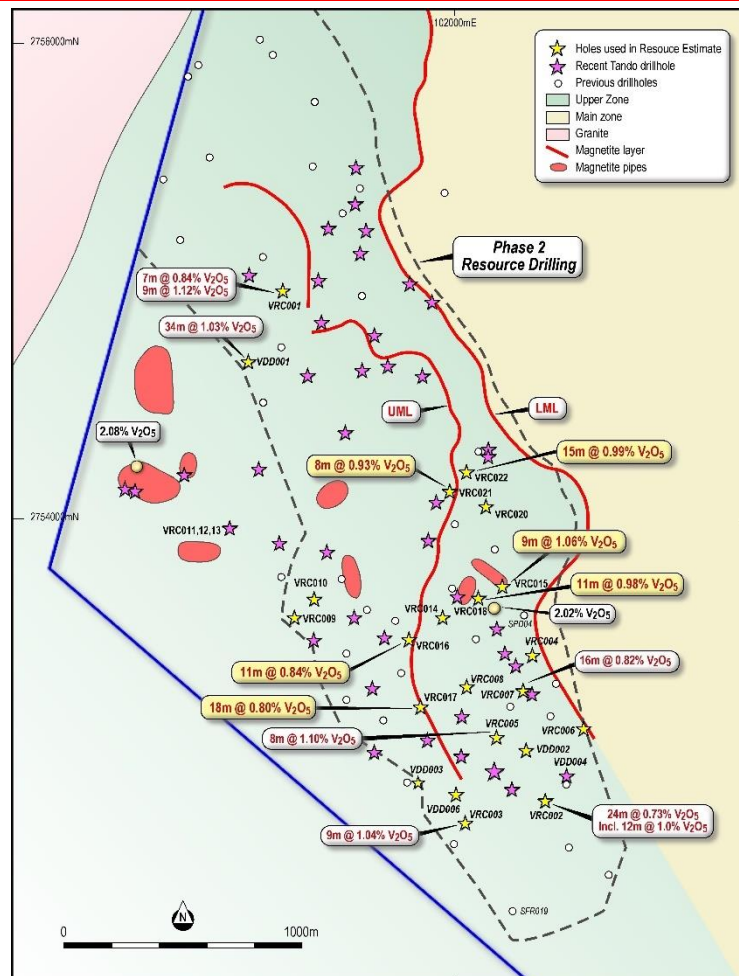
## Drilling is delivering and a JORC Resource declared

As prefaced in our *Initiation Report* (20-Sep) and recently updated in ASX releases dated 12-Nov, 23-Nov and 18-Dec, Tando has commenced and is well through its multi-phase drilling campaign with:

- Phase-1 comprising 18 holes (1,650m) now completed, providing sufficient data to underpin the estimation of a maiden JORC Mineral Resource (MRE) by end December. This phase included the first holes over the shallow, high-grade vanadium pipes which sit within 3km radius of the SPD Resource Area.
- Phase-2 drilling has been completed comprising some 83 holes in total with assay activity continuing. These results will be used to define reserves to an Indicated category within the MRE and upon success, (ultimately) provide the basis for a development feasibility study.  
The second phase of campaign also included activity on twelve previously identified high-grade vanadium pipes with previously reported surface samples returning an average of 1.87% V<sub>2</sub>O<sub>5</sub> and some results >2% V<sub>2</sub>O<sub>5</sub>, on a whole rock basis.
- The company has declared a maiden JORC Resource of 588Mt 0.78% V<sub>2</sub>O<sub>5</sub> which includes 80Mt of high grade, 1.07% V<sub>2</sub>O<sub>5</sub> and will be the focus of a lead development opportunity. Engineering and metallurgical studies are already underway.

Assay results to date support the commercial potential of the SPD Project and we see the delivery of the maiden JORC MRE as a 'bankable' event.

**Exhibit 1: Drilling plan noting completed holes– with Phase 2 outlined**



Source: Company data

Once assay results are complete the resultant MRE will form the basis for a Scoping Study and deliver a base from which to calibrate out project assumptions.

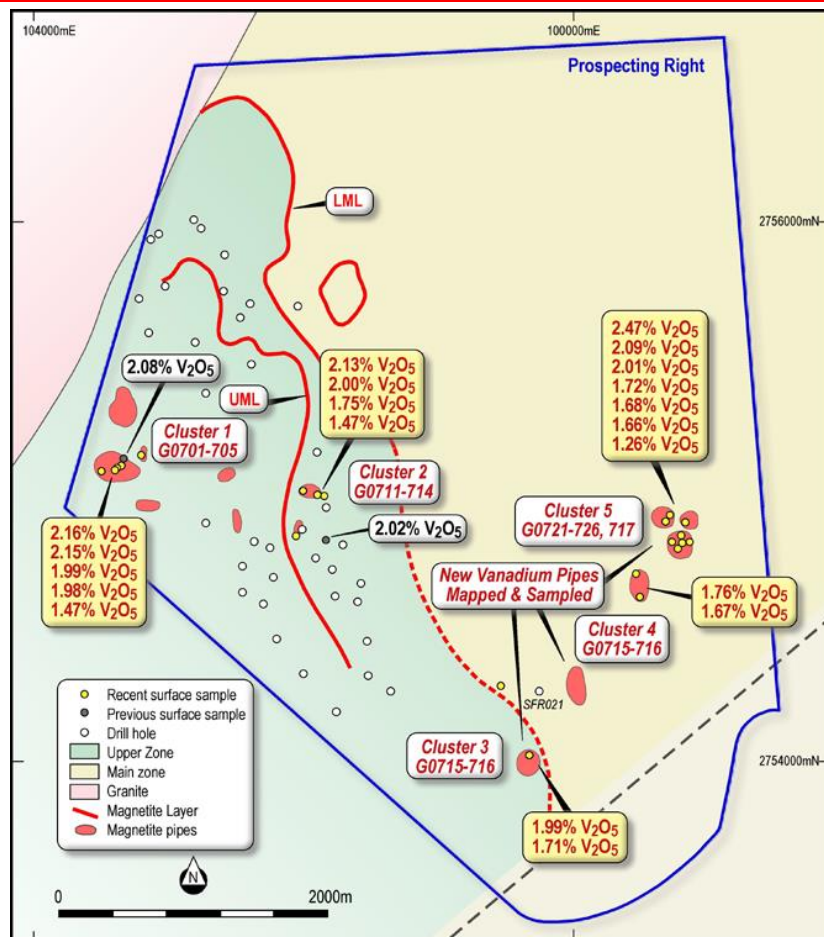
We would anticipate seeing a development outline for an early phase DSO (Direct Shipping Ore) project targeting higher grades with relatively low capex ahead of a full scale, whole resource development project.

**The DSO phase is not currently captured within our financial assumptions and could represent material upside to our numbers.**

We have commented previously that pursuing a DSO option will be partly dependent on the results of a marketing study being conducted by the company on the commercial environment for demand and pricing of a DSO product.

The last month or so has seen a slide in the  $V_2O_5$  price, with the 18-Dec price of US\$24.60/lb representing a c.27% fall off recent highs. We would highlight, however, that this still represents a comfortable margin above our nominal breakeven project estimate (US\$5/lb), although this remains subject to final feasibility capex and cost estimates.

**Exhibit 2: Phase 2 and the testing of a series of vanadium pipes – high whole rock Va-grades are evident**



Source: Company data

## The maiden JORC MRE is an upgrade

The initial JORC MRE is 588Mt @ 0.78% V<sub>2</sub>O<sub>5</sub> defined to an Inferred level compared to the initial SAMREC estimates of 513Mt @ 0.78% V<sub>2</sub>O<sub>5</sub> potential representing a material increase the project size. We note that further work is required to deliver an Indicated tonnage but certainly these initial numbers are positive and underpin the move to Scoping Studies and a feasibility evaluation

### Exhibit 3: SPD Vanadium Project – Inferred JORC Resource

Reef	Ave Thickness	Tonnage	Whole Rock V2O5%
Upper Layer	19m	211Mt	0.84%
Intermediate Layer	14m	188Mt	0.55%
Lower Layer (disseminated)	10m	137Mt	0.77%
Lower Layer (massive)	2m	52Mt	1.37%
<b>Totals</b>		<b>588Mt</b>	<b>0.78%</b>

Source: Company data (quoted above a 0.45% cut-off to a 200m depth)

## DCF Valuation unchanged at \$0.40/share

We value TNO using a combination of the estimated NPV of producing and development assets; and unit values on contingent resources adjusted for our discretionary project probability weighting (1-risk %), to derive a value per share. **Probability weightings are subject to change as the company delivers key milestones.**

Putting a value on TNO at this point in the evaluation of its assets remains a subjective exercise with timing and capex estimates, assuming successful progress on SPD Vanadium, still to be determined. Our estimates are underpinned by a significant number of assumptions and a probability weighted confidence assessment of ultimate commercial outcomes. The assignment of probability weightings is subjective, but with drilling activity underway, the delivery of a final JORC (Indicated) MRE and Scoping Study will provide a significant valuation benchmark.

### Exhibit 4: TNO NAV – the share price reflects a <10% probability of commercial success

		Risky					
		Pr	A\$m	A\$/share	FY19	FY20	FY21
SPD Vanadium	74%	10%	\$46	\$0.29	\$0.33	\$0.43	\$0.73
SPD Vanadium - upside	74%	5%	\$14	\$0.09	\$0.09	\$0.09	\$0.09
Other Assets	100%	10%	\$0.3	\$0.00	\$0.00	\$0.00	\$0.00
			<b>\$60</b>	<b>\$0.38</b>	<b>\$0.42</b>	<b>\$0.52</b>	<b>\$0.81</b>
Net Cash/(debt)			\$4	\$0.03	\$0.00	(\$0.03)	(\$0.17)
Corporate costs			(\$1)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)
<b>TOTAL</b>			<b>\$63</b>	<b>\$0.40</b>	<b>\$0.41</b>	<b>\$0.48</b>	<b>\$0.63</b>
Shares on issue (mn)*	159				234	339	696

Source: RaaS analysis; Issued capital adjusted for conversion of listed options and SPD Project payments

We run a two-step process on the SPD Vanadium Project to determine a notional asset value:

1. a development scenario that commercialises ~45% of the potential vanadium resource as currently defined, with a 10% probability overlay - (A\$46mn, A\$0.29/share). This part of the process provides a commodity unit NPV, which in this case is ~US\$0.72/lb of vanadium.
2. a 'remainder' value noting the unmodeled resource which could either provide extension or expansion opportunity. We have discounted the unit NPV (assuming a longer dated development) and assigned a lower probability weighting of 5% due to the greater uncertainty associated with the option (A\$14mn, A\$0.09/share).

**This aggregates at ~A\$60mn or A\$0.38/share on a stand-alone, ungeared basis.**



We note the project is at an early stage and our development scenario and assumptions are subject to change but intuitively we suggest our ascribed value is not unreasonable given the asset is located in a similar geological setting with a number of operating analogues as template development options.

### Exhibit 5: Financial Summary

TANDO RESOURCES		TNO				
YEAR END		June				
NAV	A\$	\$0.40				
SHARE PRICE	A\$	\$0.086 priced COT 18-Dec				
MARKET CAP	ASM	14				
ORDINARY SHARES	M	160				
OPTIONS	M	53				
COMMODITY ASSUMPTIONS		FY16A	FY17A	FY18E	FY19E	FY20E
Vanadium Price	US\$/lb					
AUD:USD				0.7557	0.7432	
RATIO ANALYSIS		FY16A	FY17A	FY18E	FY19E	FY20E
Shares Outstanding	M			159	234	340
EPS (pre sig items)	Acps			(0.6)	(0.4)	(0.3)
EPS (post sig items)	Acps					
PER (pre sig items)	x			na	na	na
OCFPS	Acps			(0.3)	(0.2)	(0.2)
CFR	x			na	na	na
DPS	Acps					
Dividend Yield	%					
BVPS	Acps			3.9	2.6	3.5
Price/Book	x			2.2x	3.3x	2.5x
ROE	%					
ROA	%					
(Trailing) Debt/Cash	x					
Interest Cover	x					
Gross Profit/share	Acps					
EBITDAX	ASM					
EBITDAX Ratio	%					
EARNINGS		A\$'000s	FY18E	FY19E	FY20E	
Revenue			0	0	0	
Cost of sales			0	0	0	
<b>Gross Profit</b>			<b>0</b>	<b>0</b>	<b>0</b>	
Other revenue			2	0	0	
Other income			9	13	18	
Exploration written off						
Finance costs						
Impairment						
Other expenses			(950)	(980)	(1,180)	
<b>Profit before tax</b>			<b>(938)</b>	<b>(967)</b>	<b>(1,162)</b>	
Taxes			0	0	0	
<b>NPAT Reported</b>			<b>(938)</b>	<b>(967)</b>	<b>(1,162)</b>	
Underlying Adjustments			0	0	0	
<b>NPAT Underlying</b>			<b>(938)</b>	<b>(967)</b>	<b>(1,162)</b>	
CASHFLOW		A\$'000s	FY18E	FY19E	FY20E	
<b>Operational Cash Flow</b>			<b>(516)</b>	<b>(580)</b>	<b>(680)</b>	
Net Interest			11	13	18	
Taxes Paid						
Other						
<b>Net Operating Cashflow</b>			<b>(505)</b>	<b>(567)</b>	<b>(662)</b>	
Exploration			(1,545)	(4,098)	(500)	
PP&E						
Development			0	0	(16,283)	
Net Asset Sales/other						
<b>Net Investing Cashflow</b>			<b>(1,545)</b>	<b>(4,098)</b>	<b>(16,783)</b>	
Dividends Paid						
Net Debt Drawdown			0	0	10,584	
Equity Issues/(Buyback)			5,980	1,080	6,720	
Other			113	0	0	
<b>Net Financing Cashflow</b>			<b>6,093</b>	<b>1,080</b>	<b>17,304</b>	
<b>Net Change in Cash</b>			<b>4,044</b>	<b>(3,585)</b>	<b>(141)</b>	
BALANCE SHEET		A\$'000s	FY18E	FY19E	FY20E	
Cash & Equivalents			4,335	750	609	
PP&E & Development			0	0	16,283	
Exploration			1,845	5,942	6,442	
<b>Total Assets</b>			<b>6,475</b>	<b>6,692</b>	<b>23,334</b>	
Debt			0	0	11,187	
<b>Total Liabilities</b>			<b>250</b>	<b>673</b>	<b>11,397</b>	
<b>Total Net Assets/Equity</b>			<b>6,225</b>	<b>6,019</b>	<b>11,938</b>	
Net Cash/(Debt)			4,335	750	(10,577)	
Gearing ( $d_e/(d_e+e)$ )					47%	

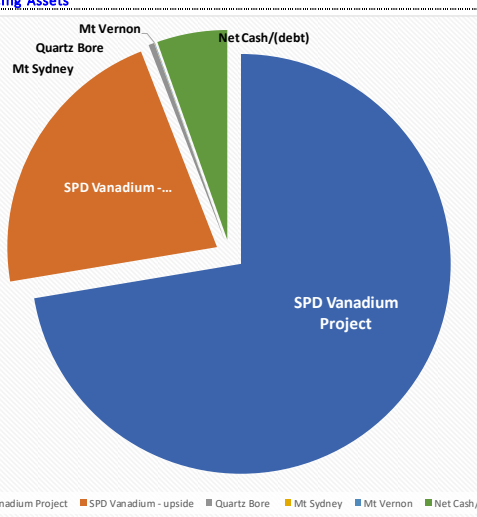
PRODUCTION		FY16A	FY17A	FY18E	FY19E	FY20E
Project	Tonnage					
	Mt					
	Whole Rock V205 %					
	Magnetite %					
	Magnetite tonnage					
	V205 % In Magnetite					
	V205 M lbs					
<b>SPD Vanadium</b>						
Upper Layer	184	0.73%	42.4%	78	2.0%	3.0
Lower Layer	329	0.81%	41.6%	136	1.2%	6.0
<b>TOTAL</b>	<b>513</b>	<b>0.78%</b>	<b>41.9%</b>	<b>215</b>	<b>2.1%</b>	<b>9.0</b>

RESERVES & RESOURCES		Interest	Pr	ASM	Acps
SPD Vanadium Project		74%	10%	\$46	\$0.29
SPD Vanadium - upside			5%	\$14	\$0.09
Quartz Bore			10%	\$0	\$0.00
Mt Sydney			10%	\$0	\$0.00
Mt Vernon			10%	\$0	\$0.00
<b>TOTAL</b>				<b>\$60</b>	<b>\$0.37</b>
Net Cash/(debt)		100%		\$4	\$0.03
Corporate costs				(\$1)	(\$0.01)
<b>TOTAL</b>				<b>\$63</b>	<b>\$0.40</b>
					0.22

EQUITY VALUATION		FY18E	FY19E	FY20E
<b>Cash Producing Assets</b>				
SPD Vanadium Project				
SPD Vanadium - upside				
Quartz Bore				
Mt Sydney				
Mt Vernon				
Net Cash/(debt)				

Source: RaaS Advisory



## FINANCIAL SERVICES GUIDE

RaaS Advisory Pty Ltd

ABN 99 614 783 363

Corporate Authorised Representative, number 1248415

of

BR SECURITIES AUSTRALIA PTY LTD

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AFSL 456663

Effective Date: 26<sup>th</sup> November 2018



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- how we transact with you
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In writing to: Australian Financial Complaints Authority, GPO Box 3, Melbourne, VIC, 3001.

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