

SPD Project- another step closer

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 on its SPD Vanadium Project in the Bushveld Province of South Africa, Tando has completed its evaluation drilling programme of 83 holes and delivered a maiden JORC MRE (inferred) of 588mt@ 0.78% V₂O₅. Tando is anticipating delivering an upgraded JORC MRE to an Indicated category sufficient to provide the basis for scoping studies by end 1QCY19. Drilling outside of the JORC area has delivered further positive results and the broad definition of a new area of interest with almost 150m of massive and potentially high-grade mineralisation. The SPD Project is the key focus but the opportunity set may not stop there.

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 and progress its other assets in the Pilbara in Western Australia.

Moving towards a Scoping Study

The drilling programme of 83 holes (6002m) has been completed and the evaluation takes a step forward. The maiden JORC MRE (Inferred) of **588Mt @ 0.78% V₂O₅** will be reviewed with the potential to be upgraded to an Indicated category by end 1QCY19 providing the basis for a detailed Scoping Study. Initial processing results of the shallow, high-grade ore lend confidence to the development potential of a DSO option supported by an **87Mt @ 1.07% V₂O₅** as outlined.

Valuation \$0.32/share

Valuing pre-production assets is a subjective exercise, particularly when the resource is cum final 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 \$0.32/share, which includes only a nominal value to the remainder of the portfolio ex-SPD Project.

The company is well through the process of entering a Scoping Study for project definition which could materially adjust out assumptions on a success case. We also assess that the potential for early cashflow via an early phase DSO option (refer our Upside Case events) 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 (Indicated) Phase and feasibility evaluation, although changes in commodity price (V₂O₅) 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 V₂O₅** and with V₂O₅ prices reported >US\$17.00/lb, there is strong economic confidence and margin potential above our modelling assumptions.

Mining and Exploration

26 February 2019

Share details

ASX Code	TNO
Share price at 22 Feb	\$0.105
Market Capitalisation	\$21.32M
Shares on issue	193.84M
Net cash at 31 Dec 18	\$2.04M
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

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Drilling completed at SPD and the evaluation process moves forward

The recent Quarterly update highlights the continuing, significant progress made by the company on the SPD Vanadium Project with both the Phase-1 and -2 drilling programmes completed, totalling 83 holes (6002m).

As at 31-Dec, sample analysis was well advanced and this data will be integrated into an updated JORC Mineral Resource estimate, which be the basis of a scoping study for an SPD development plan. The new JORC numbers are expected to be available around end-1Q19.

We remind that TNO released a maiden JORC Mineral Resource on 18-Dec, with 588Mt of Inferred ore @ 0.78% V₂O₅ defined.

The current analyses should better define the resource categories and tonnages for feasibility studies but certainly these initial numbers are strongly positive and support the basis of a commercial development in our view.

Exhibit 1: SPD Vanadium Project – Inferred JORC Resource				
Reef	Ave Thickness	Tonnage	Whole Rock V ₂ O ₅ %	
Upper Layer	19m	211Mt	0.84%	
Intermediate Layer	14m	188Mt	0.55%	
Lower Layer (disseminated)		137Mt	0.77%	
Lower Layer (massive)	12m	52Mt	1.37%	12m represents the average thickness of the combined lower layers
Totals		588Mt	0.78%	

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

The second phase of drilling campaign included activity on the high-grade vanadium pipes and now has defined a near surface resource of ~87Mt @ 1.07% V₂O₅ with some results >2% V₂O₅, using a 0.9% cut-off grade, within 100m of surface.

The scoping study will consider dual development options based on the larger resource generating a V₂O₅ end product and a lower capex, shorter lead time project using the near shallower resource to produce a V₂O₅ precursor product.

We also note that the company ended Q2FY19 with just over \$2.0m in cash and an expectation that its cash burn in Q3FY19 would be \$680,000. As we highlighted in our scoping report [Tando Resources - An Emerging Vanadium Play](#), as a company with no current revenue streams, TNO will be dependent on equity markets for financing through the initial development phase, even allowing for the conversion of some 52mn listed (8-Dec-2019) options at 5.4cents). Our model assumes that the company's in the money options (52m at \$0.054/share at 8 December 2019 and 23m at \$0.054/share at 19 December 2020) convert and that it raises \$6m in equity in FY20.

Concentration results support an early phase project

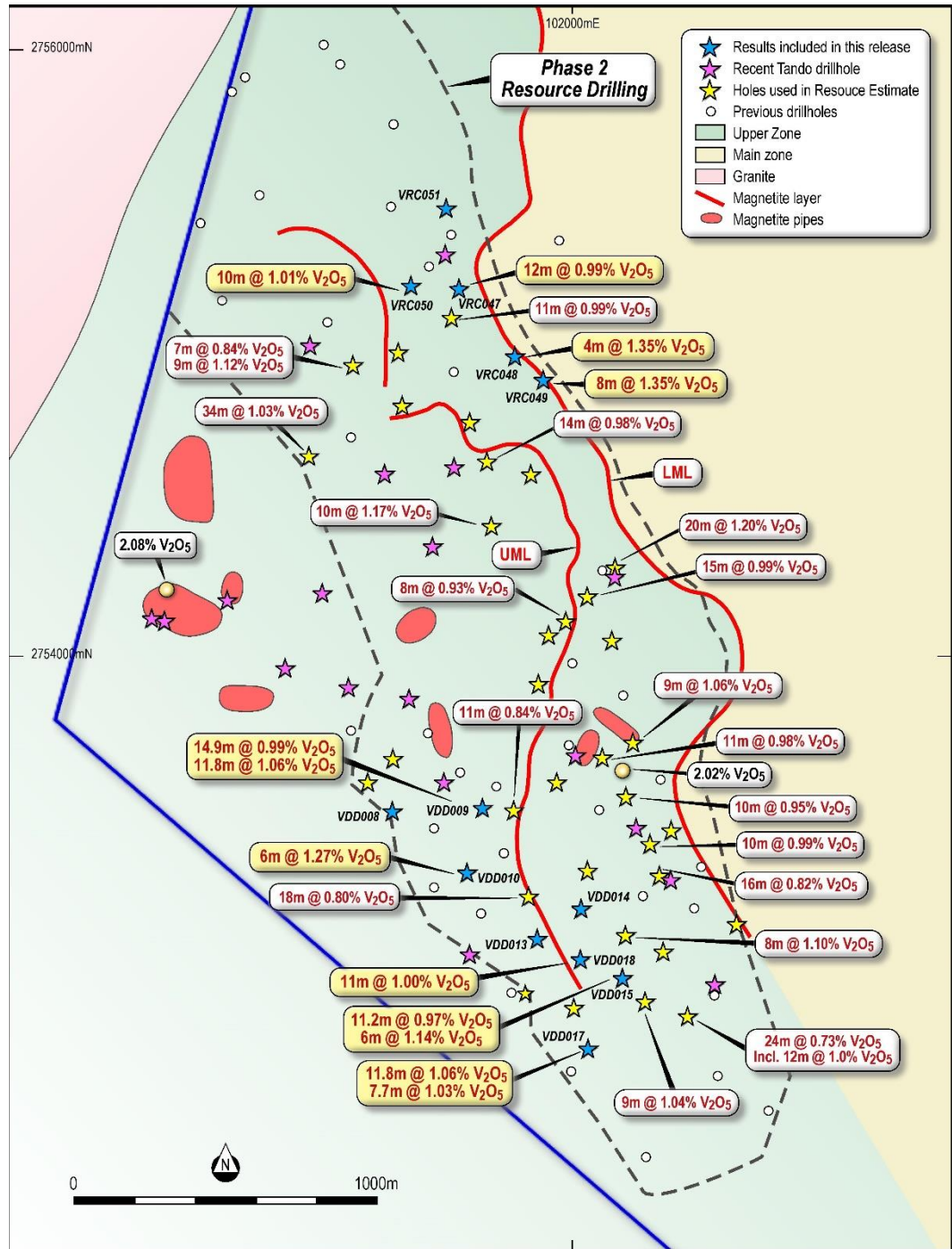
TNO has received the results from a preliminary concentrate analysis by simple magnetic concentration with positive outcomes with results demonstrating **“...that vanadium concentrates grading well over 2% V₂O₅ can be produced by simple magnetic separation of high-grade samples (>1% V₂O₅ unprocessed).”**

Management has commented previously that pursuing a DSO (Direct Shipping Ore) option would be partly dependent on the results of a marketing study being conducted by the company and we note that concentrate samples have been provided to potential customers for review and commentary.

On balance it appears to be a reasonable probability that an early phase, (relatively) low capex development of the high-grade, shallower resource will lead a whole resource, large-scale project, **providing customer indications are positive.**

We highlight that the DSO phase is not currently captured within our financial assumptions and could represent material upside to our numbers.

Exhibit 2: Drilling plan noting completed holes and selected results



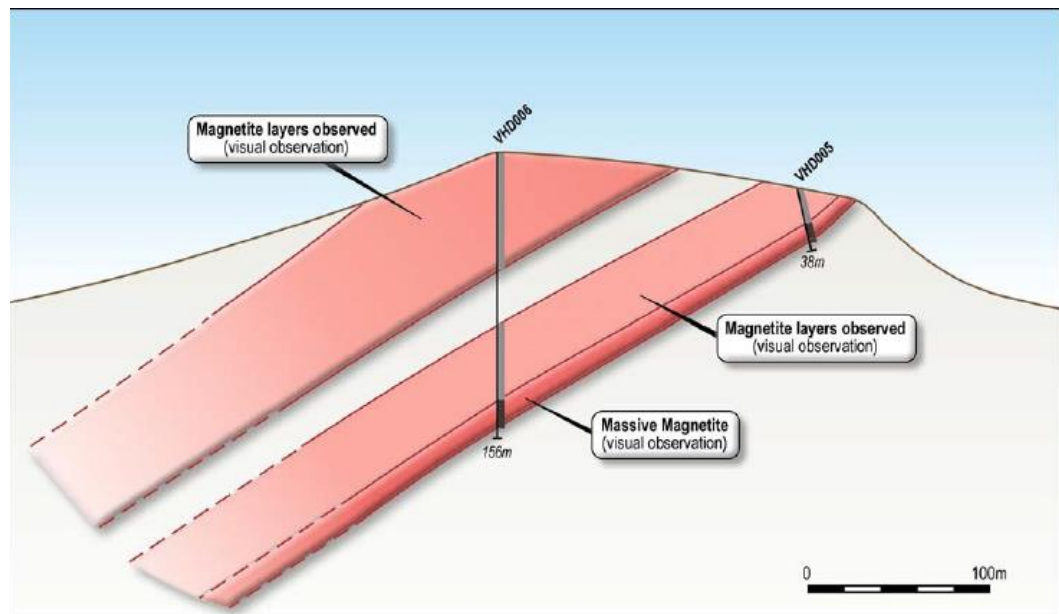
Source: Company data

The last month or so has seen a slide in the V₂O₅ price, with the 10-Feb price of US\$16.90/lb representing a c.50% fall from recent highs (which were at a 300% premium to the price at the beginning of 2018). We would highlight, however, that this continues to represent a comfortable margin above our nominal breakeven project estimate (US\$5/lb), although this remains subject to final feasibility capex and cost estimates.

But wait...there's more

TNO has continued to evaluate its properties outside of the SPD Project area and has reported the discovery of potential high-grade Vanadium mineralisation in similar geology to the SPD resource. Importantly, the magnetite section was detected down to 150m, but noting this a downhole (vertical) depth against dipping intervals and as such does not represent the true width of the mineralised horizon (ref Exhibit 3).

Exhibit 3: Limited drilling leaves more to be determined...but interpretation points to the potentials



Source: Company data

We would highlight **this is very preliminary only** with assay results expected in around 3 weeks and no guarantee of commerciality, however, this is encouraging and being located only 4km from the SPD Project area has the potential, on success, to be a significant value addition, possibly as a longer-dated extension of the project.

Given the very early stage of the discovery, we don't consider this result to materially impact our valuation but would note we only carry a small, nominal value for opportunities outside of the SPD Project. Additional de-risking of this style of opportunity (assay results, better definition of the resource) would have the capacity to add materially to our assessed NAV rapidly.

DCF Valuation adjusted to \$0.32/share on higher issued capital and reduce cash

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 completed, the delivery of a final JORC (Indicated) MRE and Scoping Study will provide a significant valuation benchmark.

The completion of a scoping study would likely underpin a re-rating in our Probability (risk) assessment of the SPD Project – simply assigning Pr=15% to the project would add c.12cps to our current NAV and the crystallisation of development and cost assumptions has the potential to alter the risk outlook significantly. The unrisksed, ungeared valuation is \$2.50 per share assuming 100% commercial success.

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

		Risksed					
		Pr	A\$m	A\$/share	FY19	FY20	FY21
SPD Vanadium	74%	10%	\$48	\$0.25	\$0.33	\$0.43	\$0.73
SPD Vanadium - upside	74%	5%	\$14	\$0.07	\$0.07	\$0.07	\$0.07
Other Assets	100%	10%	\$0.3	\$0.00	\$0.00	\$0.00	\$0.00
			\$62	\$0.32	\$0.40	\$0.50	\$0.80
Net Cash/(debt)			\$2	\$0.01	\$0.00	(\$0.03)	(\$0.17)
Corporate costs			(\$1)	(\$0.00)	(\$0.01)	(\$0.01)	(\$0.01)
TOTAL			\$63	\$0.32	\$0.40	\$0.47	\$0.62
Shares on issue (mn)*	194				234	339	697

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\$0.37/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\$	\$0.32
SHARE PRICE	A\$	\$0.105 priced intraday
MARKET CAP	A\$M	20
ORDINARY SHARES	M	186
OPTIONS	M	53

nm = not meaningful
na = not applicable

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	339
EPS (pre sig items)	Acps		(0.6)	(0.5)	(0.4)
EPS (post sig items)	Acps				
PER (pre sig items)	x		na	na	na
OCFPS	Acps		(0.3)	(0.3)	(0.2)
CFR	x		na	na	na
DPS	Acps				
Dividend Yield	%				
BVPS	Acps		3.9	2.5	3.5
Price/Book	x		2.7x	4.2x	3.0x
ROE	%				
ROA	%				
(Trailing) Debt/Cash	x				
Interest Cover	x				
Gross Profit/share	Acps				

EBITDAX	A\$M
EBITDAX Ratio	%

EARNINGS	A\$'000s	FY18E	FY19E	FY20E
Revenue		0	0	0
Cost of sales		0	0	0
Gross Profit		0	0	0
Other revenue		2	0	0
Other income		9	57	16

NPAT Reported	A\$'000s	FY18E	FY19E	FY20E
NPAT Reported		(938)	(1,246)	(1,201)
Underlying Adjustments		0	0	0
NPAT Underlying		(938)	(1,246)	(1,201)

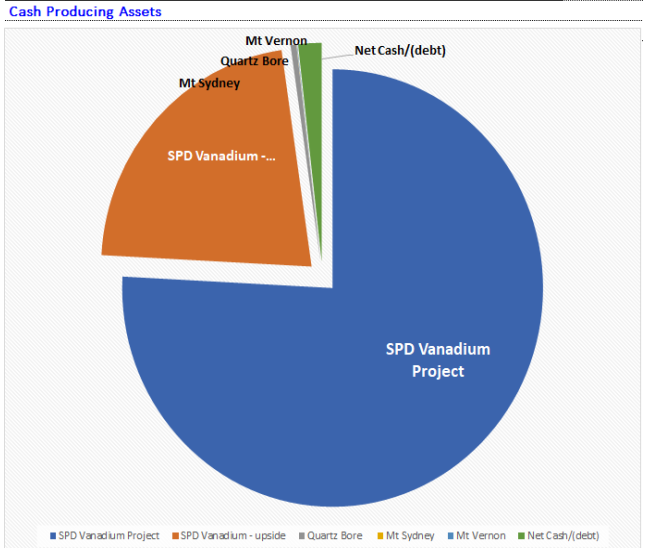
CASHFLOW	A\$'000s	FY18E	FY19E	FY20E
Operational Cash Flow		(516)	(760)	(717)
Net Interest		11	57	16
Taxes Paid				
Other				
Net Operating Cashflow		(505)	(703)	(701)
Exploration		(1,545)	(4,241)	(500)
PP&E				
Development		0	0	(16,283)
Net Asset Sales/other				
Net Investing Cashflow		(1,545)	(4,241)	(16,783)
Dividends Paid				
Net Debt Drawdown		0	0	10,584
Equity Issues/(Buyback)		5,980	1,028	6,720
Other		113	0	0
Net Financing Cashflow		6,093	1,028	17,304
Net Change in Cash		4,044	(3,916)	(180)

BALANCE SHEET	A\$'000s	FY18E	FY19E	FY20E
Cash & Equivalents		4,335	419	239
PP&E & Development		0	0	16,283
Exploration		1,845	6,085	6,585
Total Assets		6,475	6,504	23,107
Debt		0	0	11,187
Total Liabilities		250	673	11,397
Total Net Assets/Equity		6,225	5,831	11,710
Net Cash/(Debt)		4,335	419	(10,948)
Gearing (d _t /(d _t +e))				48%

PRODUCTION	FY16A	FY17A	FY18E	FY19E	FY20E

RESERVES & RESOURCES						
Project	Tonnage	Whole Rock	Magnetite	Magnetite	V2O5 % in	V2O5
	Mt	V2O5 %	%	tonnage	Magnetite	M lbs
SPD Vanadium						
Upper Layer	184	0.73%	42.4%	78	2.0%	3.0
Lower Layer	329	0.81%	41.6%	136	1.2%	6.0
TOTAL	513	0.78%	41.9%	215	2.1%	9.0

EQUITY VALUATION					
	Interest	Pr	A\$M	Acps	
SPD Vanadium Project	74%	10%	\$48	\$0.25	
SPD Vanadium - upside		5%	\$14	\$0.07	
Quartz Bore		10%	\$0	\$0.00	
Mt Sydney		10%	\$0	\$0.00	
Mt Vernon		10%	\$0	\$0.00	
			\$62	\$0.32	
Net Cash/(debt)		100%	\$2	\$0.01	
Corporate costs			(\$1)	(\$0.00)	P/NAV
TOTAL			\$63	\$0.32	0.32



Source: RaaS Advisory; priced intra-day 25-Feb



FINANCIAL SERVICES GUIDE

RaaS Advisory Pty Ltd

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of

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AFSL 456663

Effective Date: 26th November 2018



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- how we transact with you
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