

An emerging vanadium play

Mining and exploration

20 September 2018

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 at \$0.043/share (\$0.20/share adjusted for share split) and subsequently completed a placement to raise an additional \$2m at \$0.086/share (adjusted for share split). With the granting of a Mining Right, Tando has commenced an evaluation drilling programme on its recently acquired SPD Vanadium Project in the Bushveld Province of South Africa. Drilling success will define a JORC MRE proving the basis for scoping and mine feasibility studies...there appears to be a development here waiting to be progressed. The company believes the SPD Project to be world class and with vanadium prices surging on strong demand, the economic opportunity appears robust with favourable industry metrics forecast at least through the medium term.

Scope

This report has been commissioned by Xcel Capital Pty Ltd based on publicly available data to present investors with an explanation of the opportunities presented by Tando Resources' vanadium exploration venture and the value created from a range of possible outcomes.

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 has stated it 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.

Scenarios analysis

We have used a two-step process in our considerations: firstly, a development scenario that commercialises ~45% of the potential vanadium resource as currently defined, with a 15% probability overlay and a remainder value applied to the unmodelled resource. As the company defines the resource to JORC MRE through the soon-to-be-commenced drilling programme, we will be able to give more consideration to the value of the whole project.

Valuation of \$0.38/share...and breakeven at US\$5/lb V₂O₅

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) – in this case US\$0.72/lb V₂O₅. On this methodology we assign a base case valuation of \$0.38/share to TNO, which includes only a nominal value to the remainder of the portfolio. **On a back-solve basis, the current share price would suggest the market is weighting the SPD Project at a probability of <10%** which, we think reflects an exploration rather than appraisal/development opportunity.

It's worth highlighting – **we suggest the SPD project is economic at ~US\$5/lb V₂O₅**...and in the prevailing, much stronger commodity environment this provides economic confidence and margin potential above our modelling assumptions.

Share details

ASX Code	TNO
Share price (17 Sept 2018)	\$0.135
Market Capitalisation	\$22.7M
Shares on issue	167.8M
Net cash at 30 June 2018	\$4.3M
Free float	67.7%

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

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Tando Resources Limited – A vanadium play in waiting

Tando Resources Limited (TNO.AX) is an Australian exploration company, listed in late-2017. The primary asset in the company's portfolio and certainly the one garnering investor interest is the SPD Vanadium Project in the Limpopo province of South Africa (Exhibit 2). In March 2018, TNO announced it had entered into a binding Heads of Agreement to acquire a 73.95% stake in the SPD Vanadium Project, on a staged, scrip basis as detailed in Appendix 1. The transaction has now gone unconditional and TNO is moving ahead with an appraisal and evaluation drilling programme. The opportunity is timely with vanadium prices surging over the last two years, rising by more than 600% from lows of <US\$3.00/lb V₂O₅ at the end Feb-2106 to a current (30-Aug) price of US\$18.50-19.00/lb V₂O₅ (www.vanadiumprice.com). The SPD Vanadium project represents a near-term option over a very bullish industry outlook expected to remain supply-constrained with growing demand from both the steel and battery sectors. The strength in vanadium prices is expected to persist at least through the medium term and TNO is positioning itself to benefit from improving market conditions. The SPD Project has been ascribed a resource estimate of >500Mt, with the potential for V₂O₅ to grade >2% in concentrate...a high-quality opportunity.

Exhibit 1: TNO NAV – the share price reflects a <10% probability of commercial success

Reef	Ave Thickness	Tonnage	Whole Rock V2O5%	Magnetite %	Magnetite tonnage	V2O5% in Magnetite
Upper Layer	24m	184.2Mt	0.73%	42.40%	78.1t	1.99%
Lower Layer	22m	329.1Mt	0.81%	41.60%	136.0t	2.20%
Ave/Totals	23m	513.3Mt	0.78%	41.90%	215.0t	2.09%

Source: RaaS analysis

Valuation Considerations

We estimate the SPD Project to be worth ~A\$46mn or A\$0.29/share based on a US\$10.00/lb (V₂O₅) price, ungeared and a risk weighted (Pr=10%) development scenario.

Whilst the project is cum final resource definition and pre-feasibility, it is located in a province with operating vanadium mines as analogues and in a strongly similar geological setting. Operating and capital costs should be well known and predictable within a small error margin.

Our analysis is based on the assumptions contained in the pre-feasibility report for Bushveld Mineral's Mokopane Vanadium Project in the same geological province.

The most critical variable is the vanadium price and we model the project scenario as being NPV positive at ~US\$5/lb.

Tando has no currently producing assets so will be reliant on equity financing through the early stage of the evaluation process and we assume a SPD Vanadium project would be funded, 65% debt:35% equity.

DCF Valuation at \$0.38/share (market capitalisation of A\$63m)

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 is a subjective exercise with timing and capex estimates, assuming successful progress on SPD Vanadium is 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 JORC certified resource estimate as expected at the end of October will provide a significant valuation benchmark.

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\$0.27/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\$0.08/share).

This aggregates at ~A\$60mn or A\$0.36/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 2: TNO NAV – the share price reflects a <10% probability of commercial success

		Risked					
		Pr	A\$mn	A\$/share	FY19	FY20	FY21
SPD Vanadium	74%	10%	\$46	\$0.27	\$0.33	\$0.43	\$0.73
SPD Vanadium - upside	74%	5%	\$14	\$0.08	\$0.08	\$0.08	\$0.08
Other Assets	100%	10%	\$0.3	\$0.00	\$0.00	\$0.00	\$0.00
			\$60	\$0.36	\$0.41	\$0.51	\$0.81
Net Cash/(debt)			\$4	\$0.03	\$0.00	(\$0.03)	(\$0.17)
Corporate costs			(\$1)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)
TOTAL			\$63	\$0.38	\$0.41	\$0.48	\$0.63
Shares on issue (mn)*	168				234	339	696

Source: RaaS analysis; Issued capital adjusted for conversion of listed options and SPD Project payments as per Appendix 1

There's roll forward upside to come

If, as we have done, assume a vanadium project development scenario, then there will be roll-forward NPV upside, with the ungeared potential being a near tripling of the SPD Project value through FY21.

However, this has a more muted impact on the consolidated NAV being offset by debt drawdown and diluted by modelled equity issues and contingent issues with respect to the acquisition of the project as outlined in Appendix 1— we do project at a minimum 50% upside in the value of the company over that period.

Ascribing a value to assets at a conceptual stage is subject to conjecture and can be somewhat arbitrary, but is often the nature of small-cap stocks.

We ascribe nominal values only against the remainder of the portfolio given the still dominantly exploratory nature of the work programmes and small budgeted spend over FY19, despite these being the legacy assets from listing. We do not imply there is no intrinsic value but rather reflect on the early stage activity and focus of capital and management effort towards the SPD Vanadium Project in the short-medium term.

Looking at the SPD Project – awaiting the right signals

In March TNO announced it had entered into a binding Heads of Agreement to acquire a 73.95% stake in the SPD Vanadium Project in the Limpopo province of South Africa on a staged, scrip basis.

The details of the transaction are outlined as an Appendix to the report.

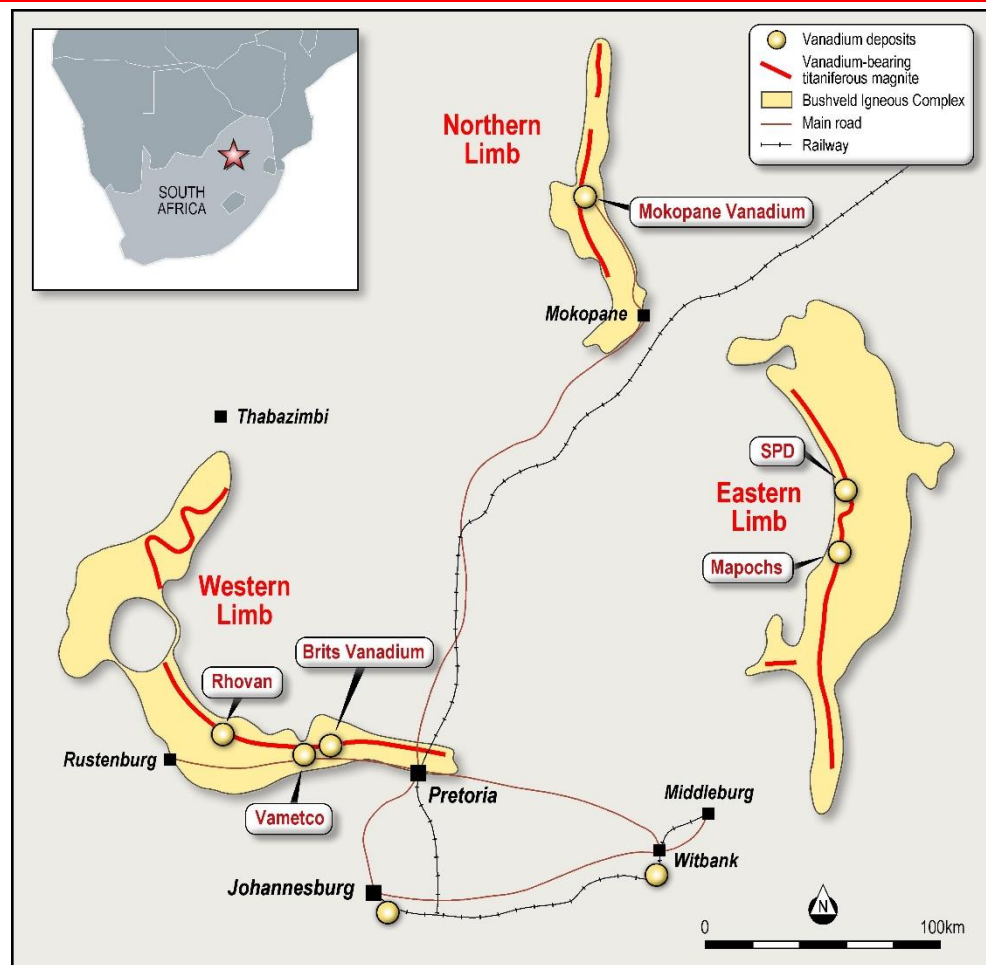
The SPD Project is described as being globally significant with an ascribed resource of 513Mt at 0.78% V₂O₅, which compares favourably to resources reported to its ASX listed peers. It should be noted that these resources are not yet compliant with the JORC Code, but management is confident and comfortable with the quality of the estimation.

Additional drilling activity has commenced to bring the resource estimate up to JORC compliance.

The project is currently at an early stage of evaluation with initial activity being designed to define a Measured Resource as the basis of a mining plan, but where we can take confidence is that the asset is located in a proven vanadium producing province, with infrastructure...so the economics should be favourable.

Our preliminary modelling suggests an SPD Project would be NPV positive at vanadium prices above US\$5/lb based on similar operating assumptions to the Feasibility Study on the nearby Bushveld Mineral's Mokopane Vanadium development.

Exhibit 3: Vanadium in the Bushveld Igneous Complex – SPD resides in the midst of expanding operations and new developments with infrastructure and an experienced workforce



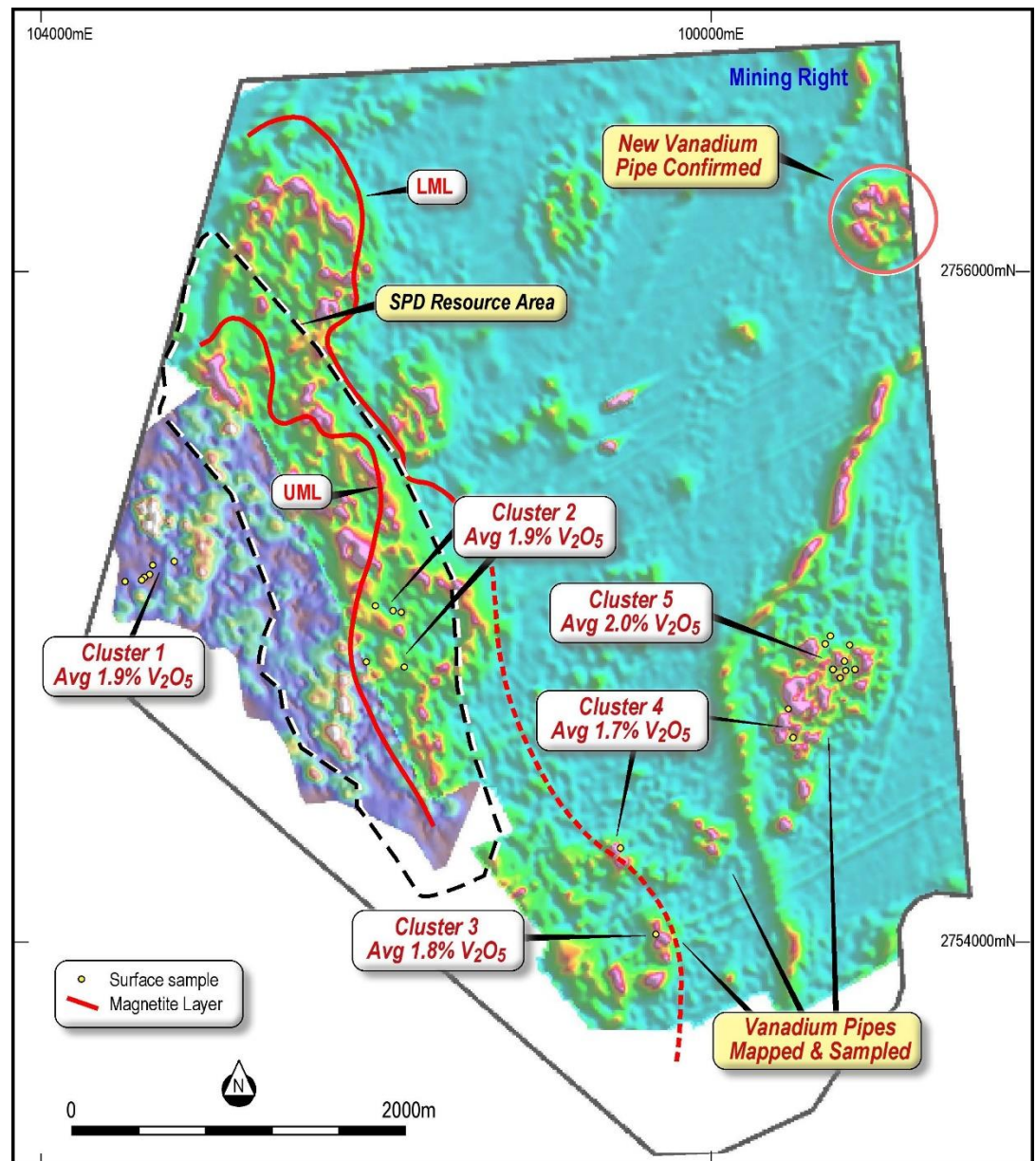
Source: Company announcements

As outlined in its announcement of 3 September 2018 the company has been granted its Mining Right over the SPD Project and has commenced a multi-phase drilling campaign.

- Phase-1 will comprise 18 holes (1,650m) aiming to deliver a JORC Mineral Resource Estimate (MRE) by October. This phase will also include the first holes over the shallow, high-grade vanadium pipes which sit within 3km radius of the SPD Resource Area.
- Phase-2 will comprise some 58 holes for 5,550m and aim to upgrade the MRE to an Indicated category upon success, providing the basis for a (ultimately) a development feasibility study.

As part of the drilling campaign, the company will also be testing the high-grade pipes identified in a magnetic survey and reported on 13-Aug.

Exhibit 4: Helimag data and surface sampling points to additional high-grade vanadium pipes



Source: Company announcement 13 August 2018

The drilling will provide data aimed at progressing management's strategy to unlock a lower-cost, high-grade DSO operation to generate cash flow in the near term ahead of a bigger more conventional mine development.

We note sampling results to date appear to be supportive of a 'high grading' option with a number of samples assaying above 2% V₂O₅, in-situ. However, the population is small and further, definitive analysis will be required.

Pursuing a DSO option will also be dependent on the results of a marketing study being conducted by the company on the environment for demand and pricing of a DSO product.

It is too early to proffer an opinion as to the whether a DSO development is feasible at this stage and our preliminary assessment of the economics of the SPD project is restricted to a full mine development scenario based on the 513Mt of resources as defined in the SPD Resource Area (refer Exhibit: 3).

An SPD quick look – the economics look good on a first pass basis

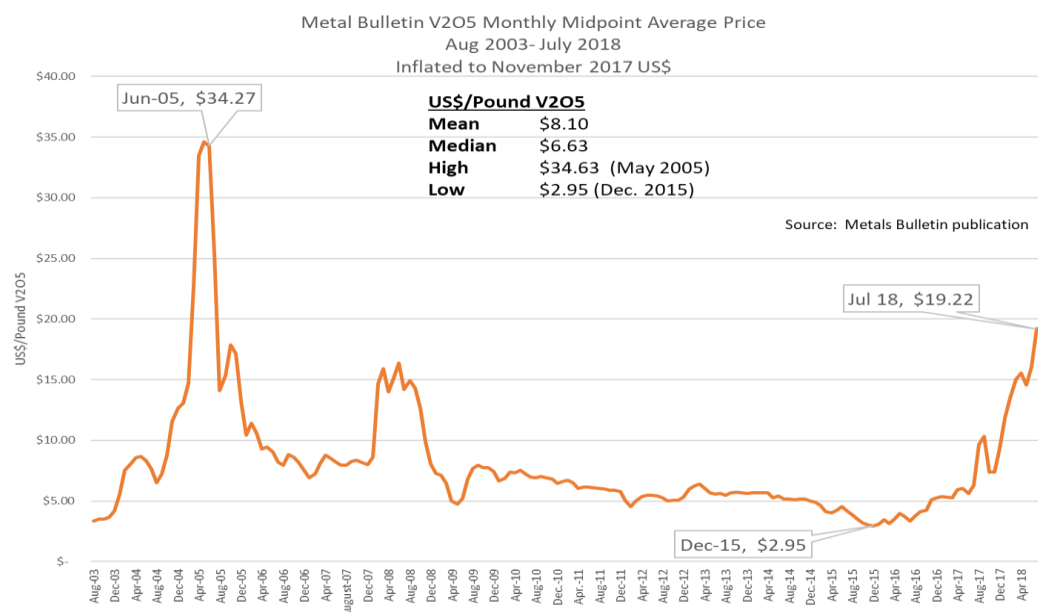
Given the early stage nature of the asset which is still 'pre-reserves' we have used the assumptions associated with Bushveld Mineral's Mokopane Project Pre-Feasibility Study as a template (refer Appendix 2).

We are comfortable to do that given the geological similarities of the region, working mine analogues at Rhovan (Glencore) and Vametco (Bushveld Minerals); and location within an extensive infrastructure network.

On a preliminary assessment we can't see a strong reason at this stage to suggest capital and operating costs should be significantly different and certainly, the mine throughput parameters should be deliverable from the resource tonnages as initially assessed at SPD.

We would highlight TNO may be able to secure a capital cost advantage over our assumptions should it be able to utilise the infrastructure associated with the currently dormant Mapochs mine. Mapochs is located 30km from the project area and contains a railway and processing plant which operated at 2.2Mtpa.

Exhibit 5: The three-year V₂O₅ historical price curve – is the current price breakout shifting the curve to a sustainably higher long-run price?



Source: Metals Bulletin

We acknowledge our assumptions contain a high degree of uncertainty and our estimates should be considered as 'one' scenario, subject to definition and adjustment. Whilst the numbers are very preliminary at this stage, indicatively the embedded value within the resource becomes quite evident.

We model a development scenario, which unsurprisingly delivers a similar economic outcome to Mopokane - a NPV(10) of US\$343mn (TNO net) on an ungeared basis, using a vanadium price of US\$10.00/lb. The NPV maximises at >US\$810mn (TNO net) in the first year of full nameplate production.

Intrinsically, the key sensitivity for any project is the commodity price – if a project doesn't make any revenue, discussions on capital and operating costs are largely irrelevant. We have used US\$10.00/lb as a conservative assumption based on the last 12 months of published prices and noting that the most recent price quote of US\$18-50-19/lb as of 30-August. We would also highlight that the commodity has risen by >150% over the last 12 months with projections that the market could continue to see supply tightness over the medium term.

We discuss the pricing market further under the Risks section of this report.

However, this exercise is really about determining the breakeven price of a potential SPD development over a range of operating and capital costs and the project is quite robust as modelled.

Using a combination of changes to the operating and capital cost assumptions of $\pm 20\%$, the required breakeven vanadium price calculates out to be US\$4.80-5.90/lb...the economics look robust around our long run price assumption.

It should be highlighted that we use an average concentrate grade of 1.75% Va noting early indications suggest the SPD could have the potential for concentrate grades of ~2%.

We have also looked at the project potential under a range of vanadium prices as per Exhibit 6 and remain comfortable with our analysis, which under the base case scenario suggests operating margins >50% on a unit NPV of around 7% of the realised price.

Exhibit 4: Variance of project metrics under a range of V₂O₅ prices – we like how this looks						
V₂O₅ price	US\$/lb	5.00	7.50	10.00	12.50	15.00
Gross Operating Margin	US\$mn	24.8	72.9	120.9	168.9	217.0
NPAT	US\$mn	11.9	46.5	81.1	115.7	150.3
Gross Operating Margin	%	26%	51%	63%	70%	75%
NPAT	%	12%	32%	42%	48%	52%
NPV @ 10%		(33)	215	463	712	960
Unit NPV	US\$/lb V ₂ O ₅	(0.05)	0.34	0.72	1.11	1.50
Source: RaaS analysis – 100% Project basis						

Exhibit 7: Broad operating economics of potential SPD Vanadium project highlighting strong operating margins and robust returns at US\$10/lb

Project Life	30.0 years															
YEAR		(3)	(2)	(1)	0	1	2	3	4	5	6	~	28	29	30	31
Revenue																
V2O5 price	US\$/t															
V2O5 price (post royalty)	US\$/lb	9.30			9.30	9.30	9.30	9.30	9.30	9.30	9.30		9.30	9.30	9.30	
Sales Revenue	US\$mn				128.4	197.6	197.6	197.6	197.6	197.6	197.6		197.6	197.6	98.8	
Op Costs																
	US\$/t															
Mining - ROM																
	Up to Year	5	8.96		8.96	8.96	8.96	8.96	8.96	8.96						
	From Year	6	16.22								16.22		16.22	16.22	16.22	
	Unit cost as used				8.96	8.96	8.96	8.96	8.96	8.96	16.22		16.22	16.22	16.22	
Mineral Processing																
	Concentrator	14.00	V2O5		14.00	14.00	14.00	14.00	14.00	14.00	14.00		14.00	14.00	14.00	
	Salt Roast Plant	49.30			49.30	49.30	49.30	49.30	49.30	49.30	49.30		49.30	49.30	49.30	
	US\$mn															
Mining					6	9	9	9	9	9	16		16.2	16.2	8.1	
Beneficiation	Concentration				6	9	9	9	9	9	9		9.4	9.4	4.7	
	Roasting				22	33	33	33	33	33	33		33.2	33.2	16.6	
					33	52	52	52	52	52	59		58.8	58.8	29.4	
Tailings and Stockpile Management	0.4				0.4	0.4	0.4	0.4	0.4	0.4	0.4		0.4	0.4	0.4	
Corporate	15.0				15	15	15	15	15	15	15		15.0	15.0	15.0	
Revenue					128	198	198	198	198	198	198		197.6	197.6	98.8	
Op Costs					(49)	(67)	(67)	(67)	(67)	(67)	(74)		(74.2)	(74.2)	(44.8)	
D&A					(17)	(17)	(17)	(17)	(17)	(17)	(17)		0.0	0.0	0.0	
Profit before tax					62	113	113	113	113	114	107		123.4	123.4	54.0	
Tax	28%				(17)	(32)	(32)	(32)	(32)	(32)	(30)		(34.5)	(34.5)	(15.1)	
Valuation																
	US\$mn															
Revenue		0	0	0	128	198	198	198	198	198	198		198	198	99	0
Cash Op Costs		0	0	0	(49)	(67)	(67)	(67)	(67)	(67)	(74)		(74)	(74)	(45)	0
Capex		(5)	(22)	(205)	(29)											(9)
Cash Tax					(9)	(25)	(32)	(32)	(32)	(32)	(31)		(35)	(35)	(25)	(8)
	US\$mn	(5)	(22)	(205)	42	106	99	99	99	99	93		89	89	29	(16)
NPV	US\$mn	10%	463	515	588	852	895	878								
	A\$mn	10%	619	687	786	1,139	1,196	1,174								
IRR		35%														

Source: RaaS analysis; 100% Project basis

Financials – not much to see yet

The financials reflect the state of a company seeking to progress a development project looking to roll-out of a project feasibility phase into a bankable project and eventually first production.

Assuming success from the drilling campaigns currently being conducted, our development scenario would see an SPD Project start-up in FY22 with a full year contribution in FY23...still outside the forecast window, but soon enough to warrant some impact through the financial statements, with perhaps an initial debt drawdown in FY20.

Exhibit 8: Summary profit/loss results (reporting currency AUD, balance date 30-June) – we anticipate the company to remain in a loss-making position through the forecast period

P&L	FY18e	FY19e	FY20e	In A\$000's
Revenue				
Other income	9	13	18	
Employee expenses:	(949)	(980)	(1,180)	'Project' related employee costs are capitalised
Proforma EBIT	(938)	(967)	(1,162)	
Finance costs				We model debt drawdown beginning in FY20 on our development scenario but with interest capitalising
Tax benefit				
Net Loss	(938)	(967)	(1,162)	
EPS (cps)	(0.59)	(0.54)	(0.50)	

Source: RaaS analysis

Capital requirements should remain somewhat modest through FY20 before the heavy capex commitments for SPD Vanadium in FY21 as modelled.

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 53mn listed (8-Dec-2019) options at 5.4cents).

Exhibit 9: Summary Balance Sheet – growing net assets heading towards a development

BALANCE SHEET	FY18e	FY19e	FY20e	In A\$000's
Cash & Equivalents	4,335	748	603	Low working capital assumptions suggest bigger equity raises
PP&E & Development	0	0	16,294	
Exploration	1,845	5,945	6,445	
Total Assets	6,475	6,692	23,341	
Debt	0	0	11,194	Includes capitalised interest
Total Liabilities	250	673	11,404	
Total Net Assets/Equity	6,225	6,019	11,937	Building an equity base
Net Cash/(Debt)	4,335	748	(10,591)	
Gearing (d _n /(d _n +e))			47%	

Source: RaaS analysis

A reasonable cash position but dependent on the FY19 cash burn

The company is in a relatively comfortable short-term cash position holding ~A\$4.3mn as at 30-Jun against an expected expenditure commitment for 3Q18 of \$0.9mn and we suspect, a similar budget for 4Q18.

Our assumptions include continuation of the work programmes in the remainder of the portfolio, totalling ~A\$1.6mn for FY19.

We have made no assumptions with respect to further funding requirements for the remainder of the portfolio beyond the current period.

Exhibit 10: Summary cashflow statement noting commencement of debt drawdown and further equity raisings

CASHFLOW	FY18e	FY19e	FY20e	In A\$000's
Operational Cash Flow	(516)	(580)	(680)	
Net Interest	11	13	18	
Net Operating Cashflow	(505)	(567)	(662)	
Exploration	(1,545)	(4,100)	(500)	We assume investment at SPD Vanadium will be categorised as Exploration and Evaluation until a project is formally sanctioned
Development	0	0	(16,294)	TNO share of development capital as RaaS assumptions
Net Investing Cashflow	(1,545)	(4,100)	(16,794)	
Net Debt Drawdown	0	0	10,591	We assume a development will be 65% debt funded
Equity Issues/(Buyback)*	5,980	1,080	6,720	We assume the conversion of listed options with a A\$6mn equity issue
Other	113	0	0	
Net Financing Cashflow	6,093	1,080	17,311	
Net Change in Cash	4,044	(3,587)	(145)	

Source: RaaS analysis; we assume equity issues at a reference share price of A\$0.16/share (30-Aug)

A risk assessment

The most critical factor in determining and delivering the value of the SPD Vanadium Project is, in our view the prevailing V_2O_5 price. The recent strength in vanadium prices, we suggest reflects a supply constrained market with growing demand pull from the steel and renewable energy sectors, but whether it represent the beginning of 'super cycle' pricing or a short-term peak is questionable particularly given the opaqueness of the price setting mechanism.

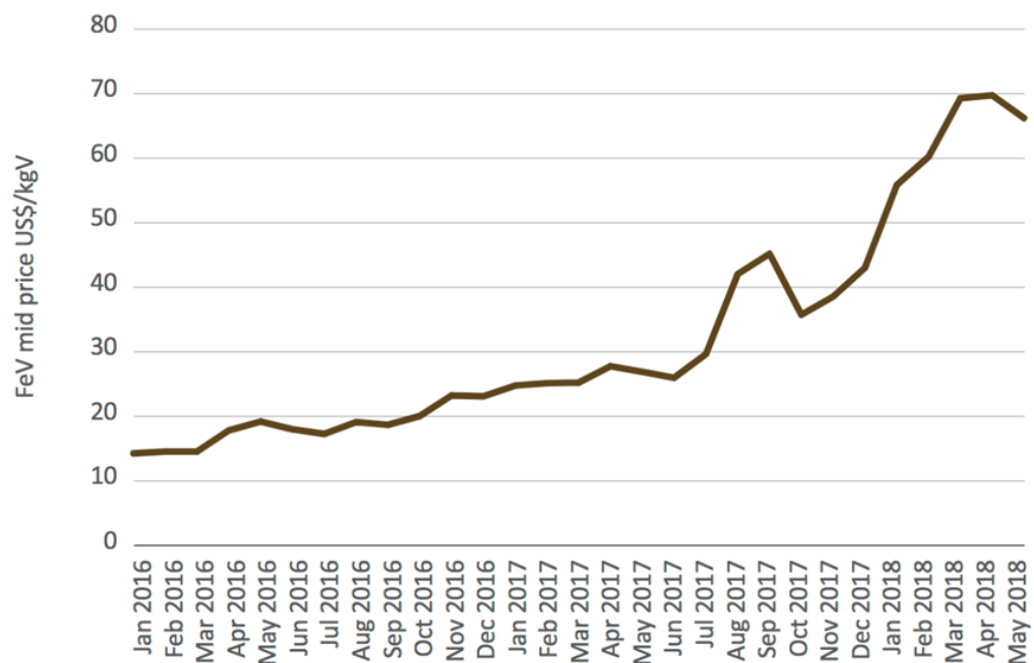
Certainly, at current vanadium prices, we see the economics of a potential SPD Project as very robust.

Commodity Prices

Commodity (product) pricing is the most obvious area of risk for any resources company but the changes in vanadium pricing seem to almost come from nowhere. The commodity is opaque with no exchange-trading options. Pricing is determined by negotiated contract between supplier and customer. Vanadium pentoxide prices are quoted in US\$/lb V_2O_5 (generally on an FOB basis), ferrovanadium prices are quoted by US\$/kg of contained Vanadium (with a range of prescribed minimum Vanadium levels, e.g. 50% and 80%).

Exhibit 11: Historical ferro-vanadium prices (US\$/kg) showing a near 400% increase from the lows in early 2016

FeV mid price



Source: www.bushveldminerals.com

As reported in numerous industry participants and news sites, the current strength in vanadium prices has been attributed to a supply squeeze driven by unexpected(?) and growing demand from the steel industry; and emerging demand from battery markets for VRFBs (Vanadium Redox Flow Batteries).

Approximately 85% of the world's vanadium is produced in China, Russia and South Africa and although widely distributed, is either mined or produced as a by-product, so supply is constrained and slow to respond to surges in demand.

The steel industry is estimated to account for ~90% of vanadium demand so, any changes in steel markets are crucial to vanadium production....strengthening demand leads to tightening supply. However, the steel

industry itself is driven by the vagaries of the iron ore price and as such vanadium demand is indirectly linked to other commodity price trends.

China has recently announced stricter standards on rebar, effectively increasing the vanadium content. It's estimated that new regulations could increase vanadium consumption by 30% (~10,000t per annum).

Vanadium is also rapidly becoming a critical material for the renewable energy markets, with VFRB's potentially delivering a structural change to modern electricity grids although the price of vanadium electrolyte potentially remains the limiting factor, making up some 30-50% of the cost of a battery.

The current market dynamics continue to support a positive price outlook, underpinned by a supply deficit with limited new supply options.

We note recently published V_2O_5 price forecasts as used in the Gabanintha Project PFS (Western Australia) which range from US\$11/lb in 2020 through to a high of US\$14.74/lb in 2026 and down to US\$12.73/lb by the end of the forecast period in 2027, based on the anticipated vanadium market developments and demand scenarios. Refer www.tmtlimited.com.au; Technology Metals Ltd [TMT.ASX]).

We remain comfortable with our modelled price outlook.

Geology and engineering

Much of the technical risk associated with any new resources venture should be uncovered and eliminated through the resource definition and feasibility evaluation stages (by definition). But geology, mining and metallurgy can surprise when scaled up from testing and simulations; and have done so on numerous projects in the past. Generally, these risks though are small and like most engineering problems can be solved by the application of capital.

We are confident in the producibility of the deposit given its location in a broad and geologically consistent province with SPD in an analogous geological setting to producing analogues at Rhovan (Glencore), Vametco (Bushveld Minerals) and Mapoch (International Resources).

Due to its proximity to major operations, SPD also has access to an extensive and modern infrastructure network with an experienced and skilled work force.

Although each project has its own specific requirements in mining and processing terms, in broad terms the producing analogues provide look-through support to project set-up, capital and operating costs, certainly sufficient enough to confidently underpin our modelling assumptions.

The project is still subject to final resource definition and further mineralogical testing so subject to changes to underlying assumptions, but we suggest the broad risks are low and with high grade magnetite pipes the development options are greater.

Financing

Financing issues will be multi-layered. Before the company gets to a SPD project sanction it needs to keep itself financed for evaluation and working capital purposes. With no revenue stream, that only leaves recourse to equity markets.

Although a financial quick-look suggests the company is adequately financed under cash burn assumptions through its work programmes to end-2018, we suggest the company could likely seeking additional equity capital sometime in early 2019, although we have modelled the exercise of listed options to raise A\$1mn in FY19.

Delivery of success in the drilling programme would deliver a JORC MRE to an Indicated category and support development studies, providing a strong platform for re-rating and capital raising we suggest.

Markets have been supportive of the small resource space through 2018 but investors will likely need to see progress towards a development outcome.

We would also highlight the retail investor nature of the share register and at some point, the need to attract long-term, institutional investors with stronger financing capacity, particularly as capex commitments ahead of debt negotiations and through FY21 increase significantly for development as modelled.

It's worth considering the issues and risks associated with the availability and cost of debt financing and there are a number of factors that will determine the availability and cost of debt to the company:

- Tando is a small company with no current offset revenue streams to support debt servicing so will be dependent on the continuing success of operations after start-up
- No effective way to hedge vanadium price risk
- Opaque nature of the vanadium pricing mechanism.

On this basis, debt could be relatively expensive with strict debt ratio (interest cover) covenants and full recourse to project cashflow. Although we have assumed a DER for the project of 65:35, debt availability may be lower and require cash 'bonds' or escrow accounts on an initial basis – likely financed through equity markets.

- SPD should be a long life 'annuity' style development
- Look through from producing analogues should give confidence in capital and operating costs estimates
- Market dynamics should support a 'stronger for longer' commodity price outlook.

Board and management

Tando Resources has a small Board of Directors, fitting for a small capitalisation company with technical expertise provided by the Managing Director and corporate acumen from the remaining members. We feel this is appropriate for the position the company is in – technical evaluation of a pre-development assets that will require both debt and equity financing through a construction and start-up phase.

If there is an area of concern, we would note there will likely need to be more technical support, particularly given the corporate and engineering complexities associated with delivering a project from evaluation through construction, that will take up an increasing proportion of management time. However, given the project is located in a global mining hub with an abundance of skilled consultants, this issue should be readily manageable.

Bill Oliver, Managing Director. With over 20 years' in the international resources industry, Bill Oliver brings a broad range of relevant experience to Tando's strategy and outlook in the areas of near-mine exploration/resource extension and resource definition as well as significant experience in the technical and economic evaluation of resources projects for both large scale (Rio Tinto Iron Ore, Iberian Resources and small scale (Bellamel Mining, BC Iron) companies. Mr Oliver was previously Managing Director of Signature Metals, where he was responsible for bringing the Konongo Gold Project into production within 2 years of acquisition, and Technical Director of Orion Gold NL. He holds an Honours Degree in Geology from the University of Western Australia as well as a Post-Graduate Diploma in Finance and Investment from FINSIA. He is currently a non-executive director of Minbos Resources Ltd (ASX:MNB), Koppar Resources Ltd (ASX:KRX) and Celsius Resources (ASX:CLA).

Jeremy King, Non-Executive Chair, has extensive corporate experience in domestic and international legal, financial and corporate matters. particularly in respect of various debt and equity capital raisings. Mr King is currently a non-executive director of Red Mountain Mining Ltd (ASX:RMX), DTI Group Limited (ASX:DTI), Smart Parking Limited (ASX:SPZ), Transcendence Technologies Limited (ASX:TTL) and Cott Oil & Gas Limited (ASX:CMT).

Patrick Burke, Non-Executive Director has extensive legal and corporate advisory experience and over the last 10 years has acted as a Director for a large number of ASX, NASDAQ and AIM listed companies. His legal expertise is in corporate, commercial and securities law, in particular, capital raisings and mergers and acquisitions. Mr Burke holds a Bachelor of Law from the University of Western Australia and is currently a Non-Executive Director of ASX listed Bligh Resources Limited (ASX:BGH), Triton Minerals Limited (ASX:TON), Meteoric Resources Ltd (ASX:MEI), Koppar Resources Ltd (ASX:KRX) as well as NASDAQ listed Westwater Resources Inc.

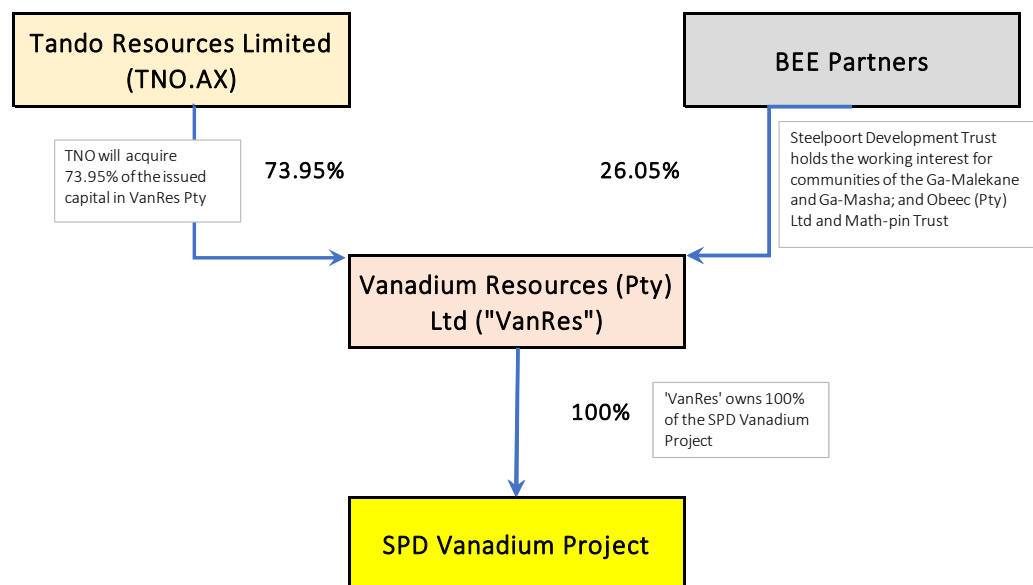
Appendix 1 – The SPD Project transaction

The original total consideration for the deal was 35mn TNO 'old' shares at a deemed price of 30cps on a staged basis.

Following TNO's recent share split and restructure of the transaction to meet regulatory approvals a total of 108.8mn TNO new shares and 85.2mn options will be issued.

At completion (September 2018)	25.8mn shares & 32.3mn options
Delineation of a Measured Resource	28.5mn shares
Completion of a scoping study	19.6mn shares
Completion of a PFS	4.6mn shares & 32.3mn options
Completion of a Feasibility Study	30.3mn shares & 20.6mn options

Exhibit 12: The transaction – what Tando is actually buying to obtain the SPD Project



Source: Company data

Appendix 2 – Mokopane Vanadium Project pre-feasibility study operational and economic assumptions

The Mokopane PFS is the basis for our modelling assumptions on the SPD Vanadium Project development scenario given the geological and logistic similarities of the opportunities.

Exhibit 13: Mokopane Vanadium Project (LHS) versus Gabanintha Vanadium Project PFS assumptions (RHS)

Mineral resource	300Mt	Mineral resource	120Mt@ 0.8% V ₂ O ₅
Ore reserve	28Mt	Ore reserve	19.2Mt@ 0.9% V ₂ O ₅
Life of mine	30 years	Life of mine	13 years
Vanadium (V ₂ O ₅) production	9,525 tonnes pa	Vanadium (V ₂ O ₅) production	13,500 tonnes pa
Vanadium (V ₂ O ₅) price	US\$16.53/kg US\$7.50/lb	Vanadium (V ₂ O ₅) price	US\$13.00/lb
Initial capital costs	US\$298mn	Initial capital costs	US\$284mn
Sustaining capex	1.3% pa of initial capex	Sustaining capex	
Operating costs	US\$3.28/lb V ₂ O ₅ flakes	Operating costs	US\$3.20/lb V ₂ O ₅ flakes
Gross revenue	US\$4,720mn, Life of Mine	Gross revenue	US\$3,701mn, Life of Mine
Un-gearred cash flow	US\$1,476mn, Life of Mine	Un-gearred cash flow (~EBITDA)	US\$2,303mn, Life of Mine
Ave EBITDA pa, post-royalties	52.6%	Ave EBITDA pa, post-royalties	62.2%
NPV at 9% (base case)	US\$418mn, pre-tax US\$259mn, post-tax	NPV at 19% (base case)	US\$958mn, pre-tax US\$637mn, post-tax
IRR, real	24.8%, pre-tax 20.4%, post-tax	IRR, real	55%, pre-tax 43%, post-tax
Payback from start of production ramp-up	4 years	Payback from start of production ramp-up	2.5 years

Source: www.bushveldminerals.com (LHS), www.tmtlimited.com.au (RHS)

We compare the assumptions of the Gabanintha Vanadium Project (Technology Metals Limited [TMT.ASX]) which is about to enter a DFS seeking a 2021 project start-up, for comparison and point to the more conservative assumptions, especially on V₂O₅ pricing, but certainly similarities across capital and operating costs, which again lends comfort and confidence in our assumptions and outlook.

We would note TMT ascribe and error range to its economic analysis of -15% to +25%.

FINANCIAL SERVICES GUIDE

RaaS Advisory Pty Ltd

ABN 99 614 783 363

Corporate Authorised Representative, number 1248415

of

BR SECURITIES AUSTRALIA PTY LTD

ABN 92 168 734 530

AFSL 456663

Effective Date: 11th May 2017

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