



January 2017

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Company Information

ASX Code	TNG
Share Price (30 Jan 2017)	A\$0.15
Ord Shares	803.5m
Options	42.4m
Market Cap undiluted	A\$120.5m
Est. Cash (31 Dec 2016)	A\$10.5m
Total Debt	A\$0.0m
Enterprise Value	A\$110.0m

Directors

Managing Director	Paul Burton
Non-Executive Director	Rex Turkington
Non-Executive Director	Stuart Crow

Substantial Shareholders

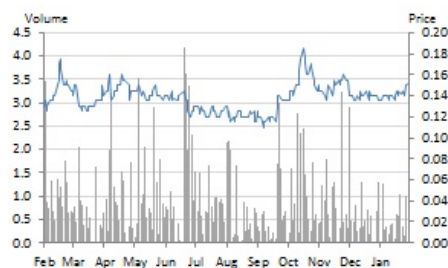
WWB Investments P/L, Mr & Mrs Brown	10.0%
Aosu Inv. & Develop. Co	7.0%
Ao-Zhong Int. Min Resources	4.7%
Directors	~3.5%

Source: TNG

Company Details

Address	Level 1, 282 Rokeby Rd Subiaco, WA, 6008
Phone	+618 9327 0900
Web	www.tnglimited.com.au

1 Year Price Chart



Source: Commsec

TNG Limited (TNG)

Poised to Deliver

Recommendation: Speculative BUY

Company Update

Key Points

- **Mount Peake V-Ti-Fe Project poised to commence development in 2017 – permitting & approvals on track, sales & marketing partners finalised and financing plans well advanced**
- **Commodity prices rebounding from recent cyclical lows, enhancing indicative Project returns**
- **Base case, risked valuation \$0.52/share; increasing to \$0.86/share as the Project achieves commercial production**
- **IPO associated with the demerger of NT exploration assets as Todd River Resources commencing**

TNG continues to make very encouraging progress at the Mount Peake Project, where its proprietary TIVAN® technology will be utilised to produce high quality vanadium, titanium and iron products. The Project is in the final stages of permitting, pre-engineering activities are nearing completion and Project financing is well advanced.

Mount Peake is on track to transition into development and construction during 2H 2017 – which is timely, coinciding with strong cyclical increases in commodity prices. TNG has taken advantage of the improving market conditions to firm up its sales and marketing plans. This includes the signing of MoU's with leading global titanium trader Wogen Pacific for its titanium dioxide products, and with Sumitomo and Energy Made Clean to develop the vanadium battery market in Australia.

In parallel, TNG is demerging its non-core metal exploration projects via the Todd River Resources IPO, with a listing on the ASX anticipated around March/April.

We maintain a SPECULATIVE BUY recommendation for TNG - with an increased short term price target of \$0.52/share, rising to \$0.86/share as commercial production is achieved. Likely near term price drivers are granting of the ML, Federal approval of the EIS and finalisation of Project financing.

Company Overview

TNG is building a major strategic metals business, leveraging off development of its 100%-owned flagship Mount Peake Project. This long-life, low cost Project will produce a suite of high-quality, high-purity products, including vanadium pentoxide, titanium dioxide and pig iron. It represents a 'company making' opportunity for TNG and its shareholders.

The Company's broader business plan involves further development and application of its TIVAN® hydrometallurgical process for cost efficient extraction of payable metals from vanadium bearing titanomagnetite ores.

TNG is also currently demerging a strong package of 'non-core' exploration projects in the Northern Territory via the Todd River Resources IPO.



Company Update

Project Background

*Strategic metals
focused company*

TNG Limited (“TNG” or “the Company”) is an ASX listed, emerging strategic metals company that is applying its proprietary TIVAN® hydrometallurgical process at its flagship 100%-owned Mount Peake V-Ti-Fe Project (“Mount Peake” or the “Project”).

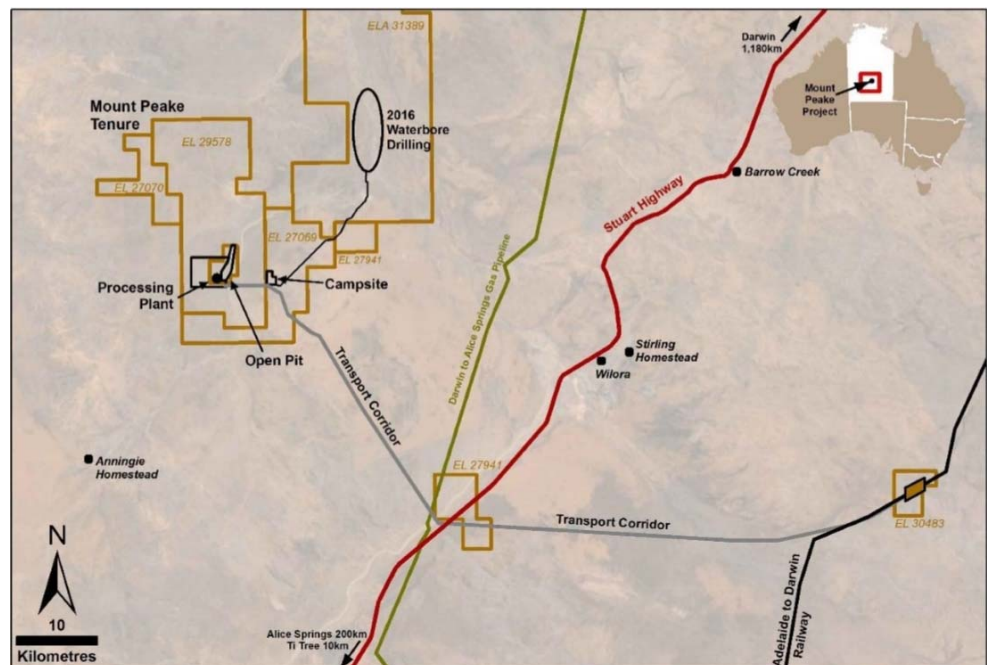
*Flagship Mount Peake
V-Ti-Fe Project, uses
proprietary TIVAN®
technology*

In 2015 TNG completed a DFS for Mount Peake, demonstrating a robust long-life project, which has been enhanced by subsequent flow sheet optimisation - resulting in cost savings of around \$50Mpa during Stage 1 of operations. The Project is now in the advanced phase of permitting and financing, with construction and development expected to commence in the second half of 2017.

The Mount Peake deposit is located 235km north of Alice Springs in the Northern Territory (“NT”) of Australia and is in close proximity to important infrastructure, including the Alice Springs–Darwin railway (providing good access to the planned refinery location near Darwin), the Stuart Highway and an LPG pipeline.

*Northern Territory
location...*

*...with good transport
links to refinery site
near Darwin*



Source: TNG

*Long life project
defined, with further
exploration upside*

At the Mount Peake deposit, TNG has delineated resources of 160Mt grading 0.28% V₂O₅, 5.3% TiO₂ and 23% Fe, with significant exploration upside. Within this resource a Probable Reserve of 41.1Mt grading 0.42% V₂O₅, 7.99% TiO₂ and 28% Fe has been defined, supporting a globally significant scale operation with an initial 17-year mine life.

*Staged development
approach...*

Staged development of the Mount Peake Project is proposed. It will commence with the mining and beneficiation of 3Mtpa of ore onsite to produce up to 0.9Mtpa of concentrate, which will be shipped to a TIVAN® plant located near Darwin port for refining and downstream processing into vanadium, titanium and iron products.

*...with a doubling of
production funded
from cash flow*

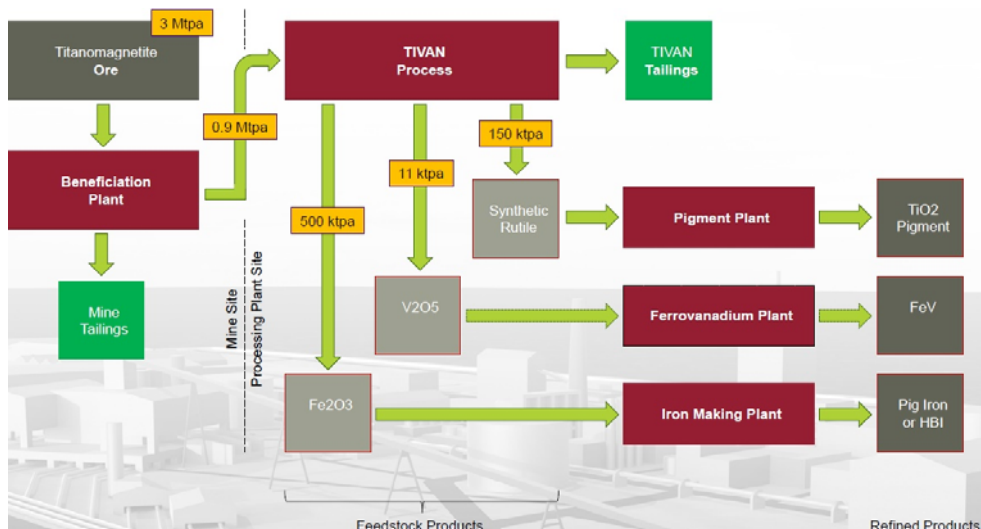
The capital requirements for Stage 1 were estimated at A\$970m in the 2015 DFS - although since that time there has been notable downward pressure on industry costs and areas of potential capital savings have also been identified during flow sheet optimisation and enhancement activities.

The second stage of development envisages a doubling of production, with the expansion capex requirements forecast to be funded out of operating cash flow.



The Stage 1 flow sheet is illustrated below:

Stage 1 mines 3Mtpa, producing 0.9Mtpa of concentrate



Source: TNG

Proprietary TIVAN® process is a key to unlocking value

A key to the success of Mount Peake is the application of the TIVAN® technology, which is an innovative hydrometallurgical process that can produce three main products:

- premium (>99%) battery grade vanadium pentoxide (V_2O_5) or ferro-vanadium (FeV) from high purity vanadium pentoxide (V_2O_5) for Vanadium Redox Batteries (VRB) and ferro-vanadium (FeV) applications
- pigment grade titanium dioxide (TiO_2), and
- high purity iron oxide powder (Fe_2O_3) or an intermediate pig iron product

The titanium dioxide concentrate and iron oxide are suitable to be further processed into higher value products.

A new process, with proven components

While TIVAN® is regarded as a new process, it comprises components that are all already commercially applied elsewhere i.e. it simply represents an innovative reconfiguration of proven components. This significantly mitigates investor perceptions of risk, which are typically associated with the application of “new technology”.

The process has been designed primarily for extracting vanadium, preferably as vanadium pentoxide, from titano-magnetite orebodies (igneous rocks that contain significant quantities of iron, titanium and vanadium) and also for separating the titanium and iron, preferably as ferric oxide and titanium dioxide.

Enduring partnership with SMS covering technology opportunities

This approach is unique for this type of orebody, in that existing processes cannot extract all three of these elements at industrial-commodity-grade commercial products. Accordingly, once the Mount Peake operation achieves commercialization it is likely to open opportunities for TNG (in strategic partnership with major German company SMS group GmbH (“SMS”) which is a leading global supplier of metallurgical plants) to apply the technology to third parties with similar deposits – in return receiving licensing fees, royalties or similar. While the TIVAN® IP is 100% owned by TNG, TNG and SMS are proposing an IP sharing agreement for future projects.

The fundamental difference and innovation introduced by the TIVAN® process route is that the vanadium is recovered entirely through a hydrometallurgical route incorporating leaching and then either solvent extraction (as per the DFS) or precipitation by atmospheric oxidation (as per subsequent flow sheet enhancements). Within the same flow-sheet,



Low environmental footprint

Flow sheet enhancements identify A\$50Mpa cost savings

hematite and titanium dioxide are separated and recovered as saleable by-products in addition to vanadium pentoxide.

Importantly, as a hydrometallurgical process (i.e. it doesn't involve smelting) it will have a relatively small environmental footprint.

The process was developed jointly by TNG and its consultants - METS Engineering ("METS"), CSIRO and SMS – and confirmed by pilot scale testwork. Subsequent optimisation and refinement of the TIVAN® process has resulted in a simplified method of vanadium extraction. In turn this has led to a reduction in both operating costs (around A\$50Mpa during Stage 1) and capital costs (not yet specified). These savings significantly enhance the already attractive DFS financial returns, but have not yet been incorporated into a formal revision of the DFS.

The key outputs from the DFS are outlined in the following table:

DFS defined a robust, long life Project

Mount Peake Project	2015 DFS - Key Metrics
Project life	17 years
Mining rate	3Mtpa (Stage 1) expanding to 6Mtpa (Stage 2) after 4 years
Pre-production capital estimate (incl. all infrastructure)	A\$970 million (Stage 2 expected to be covered from revenue)
Total operating costs (incl. mining, processing, transport & royalties)	A\$167 per tonne concentrate
Total revenue (life-of-mine)	A\$27.3 billion
Operating cash flow (life-of-mine)	A\$13.6 billion
Net cash flow (life-of-mine)	A\$11.6 billion
Payback period	4 years
Net annual operating cash flow	A\$780M
IRR pre-tax	41%
NPV (at 8% discounted)	A\$4.9 billion

Source: TNG

Final Offtake Partner Identified

Agreement signed with Wogen Pacific covering TiO₂ sales & marketing

TNG is well positioned to complete sales and marketing agreements covering all its planned production from Mount Peake – which is an important step towards securing Project finance.

Sales and offtake plans now in place for all products

The latest step in this process has been the signing of a Memorandum of Understanding ("MoU") with leading global titanium trader, Wogen Pacific, for the long-term sales and marketing of titanium dioxide products from Mount Peake. The MoU covers key aspects of a proposed life-of-mine Sales and Marketing Agreement and also provides for potential pre-financing of TiO₂ products from Mount Peake.

The Wogen deal covers the third and final product suite from the Project, with off-take agreements already being in place covering a minimum of 60% of forecast vanadium production and all of the forecast production of iron products i.e.:

- A binding life-of-mine off-take Agreement and Technology Transfer agreement with Korean group WOJIN Metals. WOJIN's proprietary technology currently



has the world's highest vanadium recovery rate and is expected to significantly enhance Mount Peake's profitability.

- A binding Term Sheet for a life-of-mine off-take agreement with major global commodity trader Gunvor (Singapore) for its iron products.

The Wogen agreement supports TNG's strategic plan to become a major player in the global TiO₂ supply chain, in partnership with a world leading trader in the sector.

By way of background, the Wogen Group was formed in 1972 and has been involved in the global titanium and mineral sands supply chains for several decades. It deals in the whole range of exotic non-ferrous metals, specialising in electronic, precious, noble, light and minor metals, ferro alloys and minerals. Key services provided by Wogan, include marketing and distribution, sourcing and procurement, logistics, financing and investing. It has offices in China, Hong Kong, Russia, South Africa and London.

Improving outlook and pricing for TiO₂

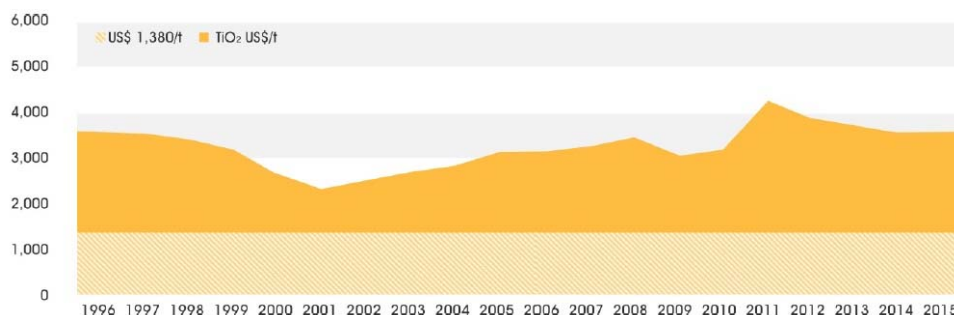
TiO₂ Prices Recovering

The formation of a sales and marketing relationship with Wogan Pacific has occurred against a backdrop of improving sentiment and pricing in the TiO₂ market. This largely reflects an improving global GDP performance and outlook, particularly in the US.

Recapping, TiO₂ is widely used as a pigment in common consumer applications (paints & coatings, plastics, pulp & paper, cosmetics) and demand typically aligns closely to global economic growth trends – although we note there is potential for above trend demand growth in the near term on the back of increasing application in the emerging 3D printing sector.

TiO₂ prices rose ~30% during 2016

While the TiO₂ market lacks the transparency of the main exchange traded commodities, it appears that a cyclical low point was reached in the first quarter of 2016 at a price level of around US\$2,300/tonne. Since that time prices have recovered strongly to around US\$3,000/tonne - which is more in keeping with longer term trend prices, as illustrated in the following chart covering the past decade. The chart also illustrates indicative operating costs for Mount Peake:



Source: TNG

Expanding Market Opportunities

With all of its the critical sales, marketing and offtake partners now locked in, TNG is examining incremental commercial opportunities to further enhance Project returns.

Deal signed with Sumitomo Electric collaborating on the Vanadium Redox Flow Battery market

In this regard, a strategic MoU has recently been signed with Japan's Sumitomo Electric Industries ("SEI") and Perth-based Energy Made Clean ("EMC") - a subsidiary of Carnegie Clean Energy (ASX: CCE) - to collaborate on the promotion, development and growth of Australia's Vanadium Redox Flow Battery ("VRF") market.

V₂O₅ from Mount Peake ideal for VRF batteries

The follows TNG demonstrating that high-purity, commercial grade vanadium electrolyte can be produced using vanadium pentoxide from Mount Peake - which opens up an exciting



Commercial VRF to be established as a showcase

potential growth area for TNG, positioning it to supply the fast-growing Vanadium Redox Flow Battery (“VRF”) industry - which in turn is boosting the traditional usage for vanadium in strengthening/hardening steel. This deal is consistent with TNG’s corporate strategy for full vertical integration of its vanadium supply chain.

Under the MoU, TNG will work together with SEI and EMC to review all of the potential applications of VRF in Australia with a view to subsequently co-operating on the marketing and sales of VRF. In addition, the parties have agreed to jointly establish a demonstration VRF of commercial size in Australia to showcase SEI’s technology.

Meanwhile, the vanadium market has recovered strongly during 2016 – with V₂O₅ prices rebounding from historical lows of around US\$2.5/lb at the end of 2015, to as much as US\$5.20/lb in recent trading, as illustrated below:

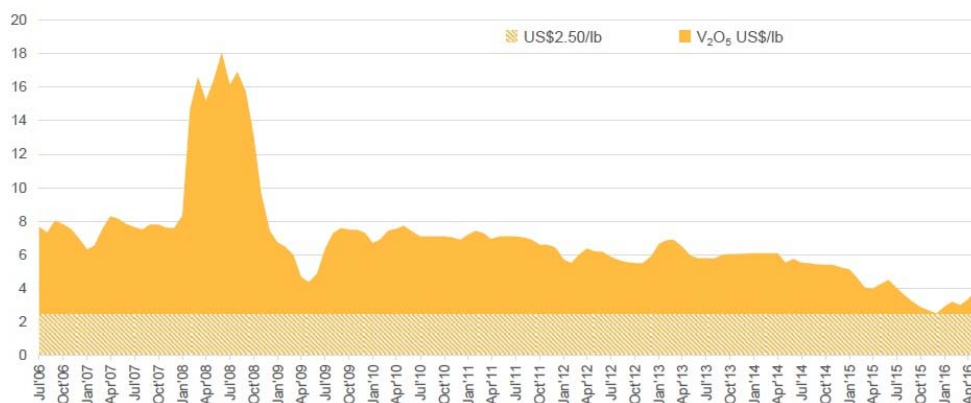
V₂O₅ prices doubled during 2016



Source: TNG

Vanadium prices are now back in line with long term levels

With the vanadium market now appearing to be well balanced, pricing is essentially reverting towards its long term mean levels - as illustrated in the following chart of V₂O₅ pricing over the past two decades, relative to the DFS operating cost estimate:



Source: TNG

Permits and approvals all on-track

Permitting & Approvals On Track

All permitting and approvals for Mount Peake are on track for finalisation in the coming months, including the completion of all field-related activities associated with a Supplement for the Environmental Impact Statement (“EIS”) which is currently being submitted.

Supplement to EIS completed, with no issues arising

Recapping, TNG submitted the EIS in late 2015 and it was released for public comment in February 2016. During the statutory government and public review processes, a number of issues were raised that required supplemental assessment - centred on flora, fauna and



Mining Lease anticipated in the coming months

ecological surveys, and water aquifer and acid-mine drainage risk. TNG has completed all the necessary work associated with these additional studies, and no issues have emerged.

All site-related heritage clearances have also been received by TNG. This follows Central Land Council (“CLC”) arranged clearance surveys during 2016 and a Traditional Owner Group (“TOG”) meeting on site in October, 2016. TNG is now well advanced in negotiating a Mining Agreement with the TOG through the CLC, after which the Mining Licence can be issued by the Northern Territory Minister for Mines.

Successful capital raising completed

Capital Structure

During December 2016, TNG successfully raised \$6.985 million (before costs) via a Share Purchase Plan (SPP). Under the SPP, eligible shareholders were able to subscribe for up to \$15,000 worth of fully-paid ordinary TNG shares at an issue price of 13.5c per share, including a free attaching listed option on a 1-for-2 basis. The options have an exercise price of 20c per share and an expiry date of 15 June 2018.

R&D refund received

The SPP resulted in the issue of 51,741,501 ordinary shares and 25,870,437 attaching options. The capital structure of the Company is currently 803,514,214 ordinary shares, 25,870,437 listed options (exercisable at 20 cents and expiring 15 June 2018) and 16,500,000 unlisted options on issue (various exercise prices and expiry dates).

Cash on hand was also recently boosted by receipt of a Research & Development refund, totalling \$962,600 before costs. The claim covered eligible test work during FY16 under the Federal Government’s R&D tax incentive scheme.

\$10.5m cash at 31 December 2016

Under the R&D tax incentive scheme, companies with a turnover of less than \$20 million which undertake research and development activities are entitled to a cash refund of 45 cents per dollar spent on eligible research and development in Australia. TNG’s research relates to the commercial extraction of high purity vanadium, titanium and iron from vanadiferoustitanomagnetite using its TIVAN™ hydrometallurgical process.

As at 31 December 2016, TNG had cash on hand of \$10.5 million, leaving it well funded to complete all the necessary steps and tasks to enable a final investment decision for the Mount Peake Project.

Gresham advising on funding package structure

Project Financing

As noted previously, in September 2016 TNG appointed Gresham Advisory Partners as corporate advisor to assist in structuring a final funding package for development of Mount Peake. Gresham’s role includes:

- developing a funding strategy for Mount Peake with a view to optimising the funding mix and maximising value to TNG’s shareholders;
- preparing financial models to support a robust internal valuation and cash flow assessment (including debt capacity) of the Project;
- the identification of debt and equity funding sources;
- the negotiation of equity and debt terms;
- the negotiation of further off-take agreements to the extent that this supports the proposed funding of Mount Peake; and
- all other necessary aspects of the negotiation, execution and completion of the funding of the Project.

IM being prepared for potential funding partners

Gresham is well advanced in preparing an Information Memorandum for interested parties, including a number of potential funding partners that have already completed the due



Support anticipated from German ECA's

diligence assessment phase. An indicative 70:30 debt:equity package is envisaged which is likely to involve a combination of:

- German Export Credit Agencies (“ECA’s”)
- Syndicated Debt
- Institution Placement
- Equity
- Development Partners
- Federal / NT funding

SMS a key partner in refinery design and construction, plus long term commercial exploitation of the technology

On the debt side of the equation, significant support is anticipated from ECA’s introduced by strategic partner SMS Group. Recapping, SMS is a German engineering company that is a leading global supplier of metallurgical plants and is one of the most significant writers of new business for German ECA’s. The ECA’s provide finance on competitive terms to new projects or industries which could benefit German industry.

TNG has two agreements with SMS, covering:

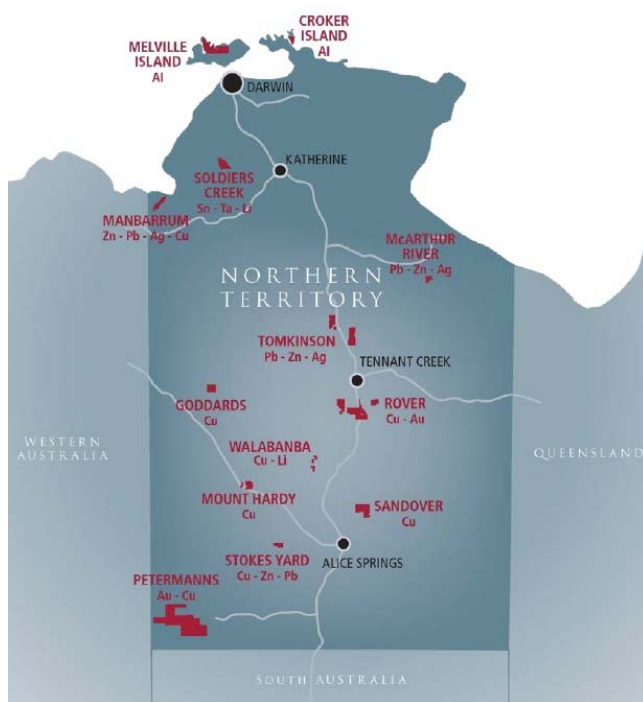
- development, licencing and financing of the proposed Darwin TIVAN® refinery and the related technology
- joint commercial exploitation of the TIVAN® technology

Demerger of Non-Core Assets

Todd River IPO commencing

TNG has built a strong portfolio of base metal exploration projects in the NT. However, in recent years its core focus has shifted towards strategic metals, including implementing the TIVAN® technology and developing Mount Peake. Accordingly, the exploration assets are now regarded as ‘non-core’ and are being demerged into a new entity, Todd River Resources – with in-specie distribution of shares and priority entitlements for existing TNG shareholders via an IPO.

Strong portfolio of NT base metal prospects generated by TNG



Source: TNG



Todd River Resources will hold a total of 13 exploration projects including the large Manbarrum Zinc Project, the Mount Hardy Copper-Zinc Project, the Stokes Yard Zinc Project and the McArthur Copper-Zinc project, as well as a number of other exploration projects covering base metals and other commodities including but not limited to gold, lithium, tantalum, tin and bauxite.

Details for Todd River Resources can be found on its website at www.trrltd.com.au

A series of investor meetings will be held in Brisbane, Sydney, Melbourne, Adelaide and Perth during the 13th-17th February 2017 – with further details being available at www.resourcesrisingstars.com.au

In-specie Distribution

Under the demerger TNG will distribute 28M Todd River shares to its existing shareholders and retain 7M. At the same time it will raise up to \$6M at the IPO price of 20cps (possibly with an attaching option for every two shares issued).

Assuming the full \$6M is raised, the initial capital structure should be as follows:

TNG shareholders receive in specie distribution

Todd River Resources	Shares / Value	
TNG shareholders	28,000,000	43.08%
TNG Limited	7,000,000	10.77%
New IPO shareholders	30,000,000	46.15%
Total Ordinary Shares	65,000,000	
Cash raised (A\$)	\$6,000,000	
Market Cap at 20cps	\$13,000,000	
Enterprise Value	\$7,000,000	

Source: Todd River Resources Prospectus

Valuation

The only changes to our Project valuation methodology and assumptions since our October 2016 report are:

Minimal changes to our valuation assumptions

- a marginal increase in the assumed share price for any new equity raised as part of the Project financing – resulting in a small increase in our share price targets
- an update of the current capital structure of TNG following the recent SPP - resulting in minor decreases in Project outcomes expressed on a per share basis.

We also note that we are yet to incorporate potential Project capital cost enhancements that have been identified, but are yet to be fully quantified.

Recapping, our Mount Peake valuation is on a geared, taxed basis and incorporates the following key assumptions:

- \$1 billion raised during Stage 1 via a combination of debt and equity
- A debt to equity ratio of 70% / 30% for Project Financing
- A ten year 6% debt facility
- New equity raised at a share price of 16cps



- DFS operating cost estimates updated to incorporate the \$50Mpa of savings subsequently identified for Stage 1, and doubling during Stage 2
- TIVAN® process vanadium recovery 98%
- Base case prices - TiO₂ US\$3,000/t and V₂O₅ US\$12,000/t
- 8% real discount rate

Higher iron ore prices not yet factored in

Our updated estimate of the value of Mount Peake is presented in the sensitivity table below, which provides a range of commodity price scenarios for the two main revenue streams - V₂O₅ and TiO₂. While we have continued to use a constant pig iron price of US\$220/tonne we note this is now significantly below spot pricing, which has been as high as US\$350/t in recent weeks.

Mount Peake – Geared (70% debt), taxed DCF Valuation

Un-risked Mount Peake Value – 100% Project Basis				
TiO ₂ \ V ₂ O ₅	US\$10,000/t	US\$12,000/t	US\$14,000/t	US\$16,000/t
US\$2,000/t	A\$634m	A\$873m	A\$1,112m	A\$1,351m
US\$3,000/t	A\$2,061m	A\$2,299m	A\$2,538m	A\$2,777m
US\$4,000/t	A\$3,487m	A\$3,725m	A\$3,964m	A\$4,203m
US\$5,000/t	A\$4,913m	A\$5,152m	A\$5,390m	A\$5,629m

Source: Breakaway Analysis

TNG's 2015 DFS for the Mount Peake Project generated a value of A\$4.9 billion, although the study assumed higher commodity prices than current spot levels (based on comprehensive forecasting for the first eight years of the proposed project life at that time).

Our modelling uses more conservative forecast prices for V₂O₅ and TiO₂ than the DFS, and these are currently broadly in line with spot pricing and also generate very strong free cash flow and healthy investor returns.

In order to translate this into the impact for TNG shareholders, we have made a judgement on the size of the equity component of the Project Funding package – and equally importantly the pricing for that new equity.

With capital intensive projects such as Mount Peake, it can be challenging for small-medium size resource companies to raise large amounts of equity without creating excessive shareholder dilution. TNG has a current market capitalisation of around \$120M and will probably need to raise 2.5 to 3 times this amount to support Stage 1 funding.

Our base case estimate assumes a 30% equity funding component with new equity averaging 16cps (i.e. close to the current share price level). This would see the number of TNG shares on issue rise from 803.5 million, to around 2,679 million.

In addition, we have applied a 60% risk factor - consistent with projects at a comparable phase of assessment / development, and largely reflecting the stage of advancement of Project funding.

The outcomes at various commodity prices are outlined in the following sensitivity table:

TNG – Geared (70%:30%), taxed, 8% Real DCF Valuation

Per Share Value - Mount Peake Risked at 60%				
TiO ₂ \ V ₂ O ₅	US\$10,000/t	US\$12,000/t	US\$14,000/t	US\$16,000/t
US\$2,000/t	A\$0.14	A\$0.20	A\$0.25	A\$0.30
US\$3,000/t	A\$0.46	A\$0.52	A\$0.57	A\$0.62
US\$4,000/t	A\$0.78	A\$0.83	A\$0.89	A\$0.94
US\$5,000/t	A\$1.10	A\$1.15	A\$1.21	A\$1.26

Source: Breakaway Analysis

Short term target \$0.52/share



Target \$0.86/share when commercial production achieved

We highlight our base case pricing scenario (60% risked, 70% geared and equity raised at 16cps), which equates to a short term price target of \$0.52/share. As the Project is de-risked and commercial production is achieved, our medium term share price target increases to \$0.86/share.

In addition, we are yet to apply likely lower, but yet to be quantified, capex requirements in our valuation which will further boost the target - there is good potential for meaningful reductions based on the current construction environment and on the back of a simplified refining process.

Significant upside if new capital is raised at higher prices

The amount of value 'retained' by TNG shareholders during the funding process remains highly sensitive to the pricing level of new equity. For example, if TNG can raise equity at 30cps (versus our base case of 16cps), then the highlighted risked valuation of \$0.52/share in the table above increases to \$0.76/share. On the same basis, the de-risked valuation of \$0.86/share would increase to \$1.27/share.

Overall, our current Company valuation is summarised in the table below, which comprises a 'base case' risked DCF valuation for Mount Peake, an estimate for the other exploration assets and estimated cash as at December 31, 2016.

Base Case TNG Valuation – AUD

Project	Un-risked Value	Method	Risk Factor	Risked Value	Value/Share
Mount Peake	\$2,299 million	DCF, 8% real DR	60%	\$1.38 billion	\$0.5151
Todd River Resources	\$7 million	Prospectus	100%	\$7 million	\$0.0026
Cash	\$10.5 million	Dec 31, 2016	100%	\$10.5 million	\$0.0039
Total	\$2,316 million			\$1.40 billion	\$0.52

Source: Breakaway Analysis

We note that the base case valuation of \$0.52 per share is substantially above the current share price of around \$0.15, and there is further material upside as the Mount Peake Project is de-risked during the financing, development and commissioning phases, as well as in response to any further appreciation in commodity prices.

Value adding opportunities not yet included in valuations

Additional upside is provided via the potential for future revenue streams resulting from the licencing of TIVAN® to other projects and via development of vertically integrated opportunities such as the current collaboration with Sumitomo Electric Industries on the promotion, development and growth of Australia's Vanadium Redox Flow Battery market – however, it is too early to quantify these opportunities in financial terms.



Breakaway's View

TNG continues to make excellent progress in its aspiration to become a significant strategic metals company. Assessment and permitting for its flagship Mount Peake Project is now well advanced, key partners are being locked-in and a transition to the development and construction phase is anticipated in the second half of 2017.

Significantly, TNG has continued to improve the value and robustness of the Mount Peake Project during the past year – including identifying flow sheet enhancements that are driving reductions in operating and capital costs. In addition, important partnerships have been established that lock-in TNG's offtake plans – which in turn is a critical step supporting an acceptable Project financing package.

Importantly, the strong progress being achieved on the technical and sales & marketing aspects of the Project is coinciding with a recovery and resurgence in commodity prices. Key commodity markets now appear to be well balanced and prices are recovering towards long term mean levels, having passed the low point in the current cycle in early 2016.

Stage 1 funding remains an important hurdle for TNG. In this regard, the relationship with SMS Group (and their connections with German Export Credit Agencies) is significant with debt funding for the Darwin refinery likely to qualify for German ECA debt insurance cover, providing access to financing on favourable terms with European Union financiers.

It is also worth reiterating that while technical risks are always an issue for 'new processes', it is mitigated in the case of TIVAN[®] because the process comprises components that are all commercially applied elsewhere i.e. essentially it represents an innovative reconfiguration of otherwise proven components.

The TIVAN[®] process being developed for the Mount Peake Project represents a world's first for the processing of vanadiferous-titaniferous-magnetitic ore by a hydro-metallurgical route – with TIVAN[®] resulting in increased recovery of metals at lower costs compared to incumbent producers. These attributes provide the potential for the process to become the standard for the commercially viable, environmentally friendly treatment and utilization of ores from similar deposits.

Given all of the above, we maintain our rating for **TNG Limited** as a **Speculative Buy**, with a **short term price target of \$0.52/share** using our risk assessed, base case valuation – and a **medium term price target of \$0.86/share** as Mount Peake moves into production (all other factors being equal).

Key share price movers for TNG in the near term will be granting of the ML, Federal approval of the EIS, material progress in the financing process and commodity price movements.



Analyst Verification

We, Stephen Bartrop and Grant Craighead, as the Research Analysts, hereby certify that the views expressed in this research accurately reflect our personal views about the subject securities or issuers and no part of analyst compensation is directly or indirectly related to the inclusion of specific recommendations or views in this research.

Disclosure

Breakaway Investment Group (AFSL 290093) may receive corporate advisory fees, consultancy fees and commissions on sale and purchase of the shares of TNG Limited and may hold direct and indirect shares in the company. It has also received a commission on the preparation of this research note.

Disclaimer

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