Breakaway Research

October 2016

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www.breakawayresearch.com

Company Information

ASX Code	**TNG**
Share Price (30 Sept 2016)	A$0.14
Ord Shares	751.8m
Options	7.0m
Market Cap undiluted	**A$105.2m**
Est. Cash (30 Sept 2016)	A$5.0m
Total Debt	A$0.0m
Enterprise Value	**A$100.2m**

Directors

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

Substantial Shareholders

WWB Investments P/L, Mr & Mrs Brown	10.56%
Aosu Inv. & Develop. Co	7.49%
Ao-Zhong Int. Min Resources	5.06%
Directors	~4.0%
SMS Investments	1.86%

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: IRESS

TNG Limited (TNG)

Technology Driving a Sustainable Future

Recommendation: Speculative BUY

Company Update

Key Points

- ***Mount Peake V-Ti-Fe Project on track for near term development***
- ***TIVAN® optimisation identifies $50Mpa operating cost savings, enhancing the low operating cost attributes of the technology***
- ***Financing plans well advanced, permitting on track and pre-development activity underway***
- ***Strong relationship with engineering and technology partner, SMS Group of Germany, underpins strategy and growth plans***
- ***Base case, risked valuation $0.50/share; increasing to $0.84/share as the Project transitions into production***

TNG continues to make excellent progress on its Mount Peake V-Ti-Fe Project, where its proprietary TIVAN® technology will be utilised to produce high quality vanadium, titanium and iron products at low operating cost.

The Project is in the final stages of permitting with a range of pre-development activities underway including engineering works, water bore drilling and mine design. Project financing is well advanced, with Gresham Advisory Partners recently appointed to assist with finalising the funding structure.

TNG has positioned itself to leverage its TIVAN® technology as a key growth driver, in partnership with global giant SMS group GmbH. They will jointly commercialise the TIVAN® technology, and its indicative high quality / low cost attributes are likely to be applicable across a broad range of deposits.

Meanwhile, the demerger of TNG's base and precious metal exploration projects has been delayed while a tax ruling is awaited.

We have a SPECULATIVE BUY recommendation for TNG - with a short term price target of $0.50/share, increasing to $0.84/share as the Project transitions into production. Near term price drivers are completing permitting and Project financing, and securing titanium offtake.

Company Overview

TNG is building a major strategic metals business, starting with its 100%-owned Mount Peake Project. This long-life operation will produce a suite of high-quality, high-purity products, including vanadium pentoxide, titanium dioxide and pig iron. A DFS was completed in 2015 demonstrating a valuable, robust project, which is being enhanced via ongoing work, paving the way for finalisation of permitting, project financing and development.

TNG'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.

The Company also holds a package of base and precious metal projects in the Northern Territory, which will be demerged in the Todd River Resources IPO.

Background

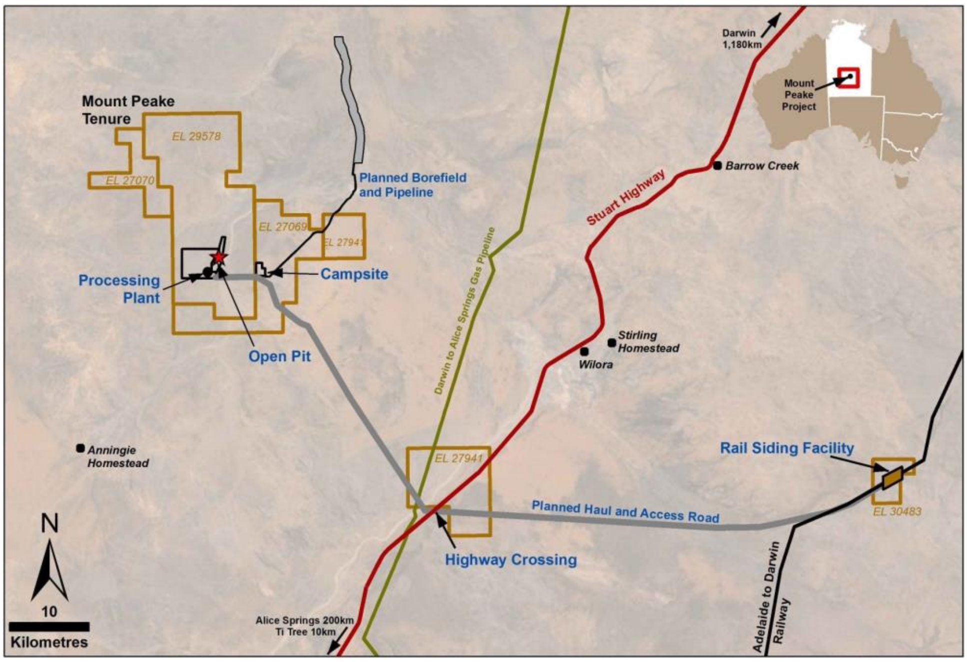
Mount Peake V-Ti-Fe Project the flagship

Proprietary TIVAN technology a key value driver

TNG Limited ("TNG" or "the Company") is an ASX listed explorer and developer that is evolving into a technology based company as it applies and enhances its proprietary TIVAN® hydrometallurgical process at its 100% owned Mount Peake V-Ti-Fe Project ("Mount Peake" or the "Project").

Located in the Northern Territory

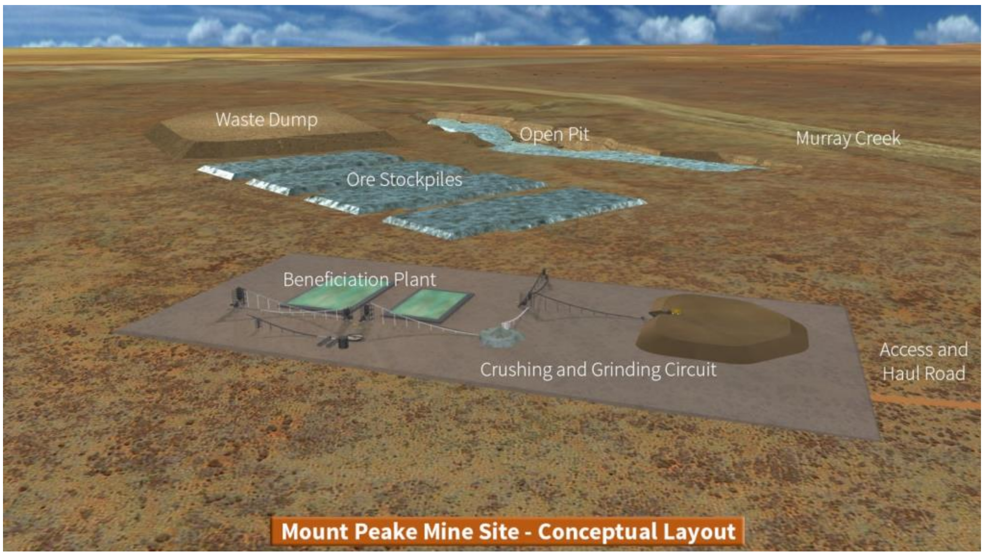
Mount Peake is located 235km north of Alice Springs in the Northern Territory ("NT") of Australia and is in close proximity to important infrastructure, including the Alice Springs–Darwin railway, the Stuart Highway and an LPG pipeline.



Source: TNG

Large resource, with further upside

The Project currently has resources of 160Mt grading 0.28% V_2O_5, 5.3% TiO_2 and 23% Fe, with significant upside. Within the existing resource TNG has defined a Probable Reserve of 41.1Mt grading 0.42% V_2O_5, 7.99% TiO_2 and 28% Fe which can support a globally significant scale operation with a 17-year mine life.



Source: TNG

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Robust, positive DFS

Two stage development

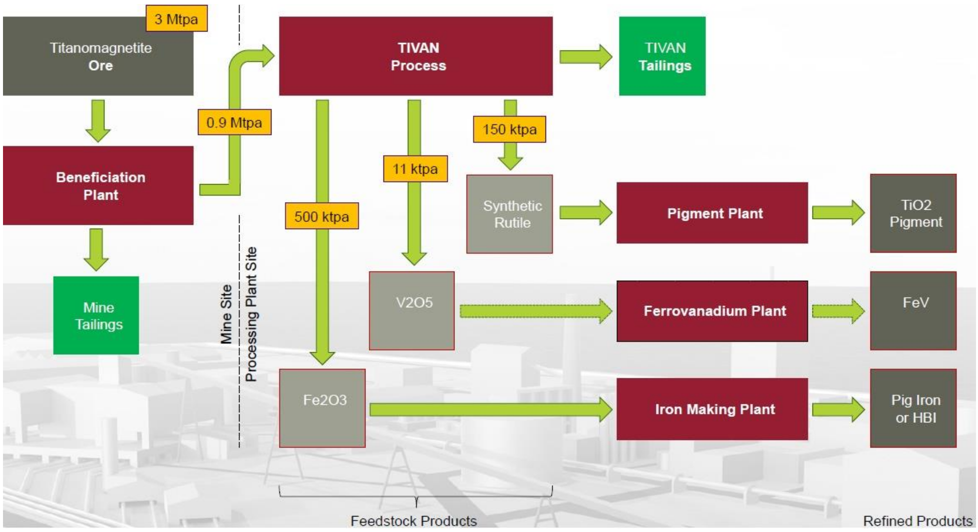
Refinery near Darwin

In July 2015 TNG completed a positive and robust Definitive Feasibility Study ("DFS") for Mount Peake, based on a two stage development – with Snowden Mining Group as study leaders and technical contributions from leading industry consultants, including SMS Group, CSIRO, METS, ALS Ammtec, GHD, Como Engineers and McMahon Services.

In the DFS, the first stage mines 3Mtpa of ore at Mount Peake and beneficiates it onsite to produce concentrate – with up to 0.9mtpa of concentrate then shipped to a TIVAN® plant located near Darwin port for refining and downstream processing into vanadium, titanium and iron products. The estimated capital requirements for Stage 1 in the DFS were A$970m.

Stage 1 mines 3Mtpa, producing 0.9Mtpa of concentrate

The Stage 1 flow sheet is illustrated below:



Source: TNG

Stage 2 doubles production, with funding from operational cash flow

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

Processing uses proprietary TIVAN® process

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, but proven components

TIVAN® is a new process; albeit it comprises components that are all 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 any "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.

The 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.

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Partnering with SMS on broad technology opportunities

Accordingly, once the Mount Peake operation achieves commercialization it is likely to open opportunities for TNG (in 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 recent enhancements). Within the same flow-sheet, hematite and titanium dioxide are separated and recovered as saleable by-products in addition to vanadium pentoxide.

Reduced environmental footprint

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

The process has been developed jointly by TNG and its consultants - METS Engineering ("METS"), CSIRO and SMS. Pilot scale testwork completed in June 2015 in conjunction with SMS returned excellent results, confirming the viability of the proprietary processing route, with this incorporated into the DFS.

A$50Mpa cost savings from optimisation work

Subsequent to completion of the DFS, TNG and SMS have continued to optimise and refine the TIVAN® process, resulting in a simplified and significantly more cost effective method of vanadium extraction. In turn this has led to a reduction in both operating costs (around A$50Mpa) and capital costs (not yet specified). These savings significantly enhance the already attractive DFS financial returns (discussed later in this report), but have not yet been incorporated into a formal revision of the DFS.

Overall, the 2015 DFS estimated very strong results, including an NPV_8 of A$4.9 million and an IRR of 41%. The key outputs from the DFS are outlined in the following table:

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 (including all infrastructure)	A$970 million (Stage 2 expected to be covered from revenue)
Total operating costs (including 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

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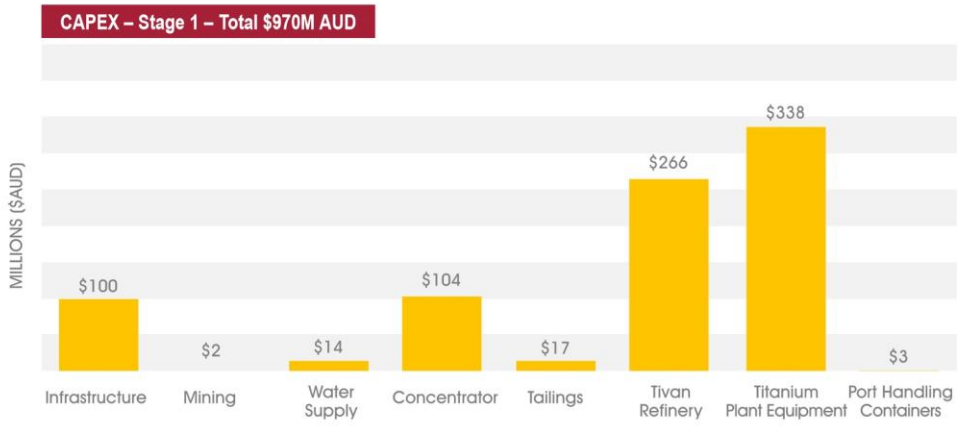
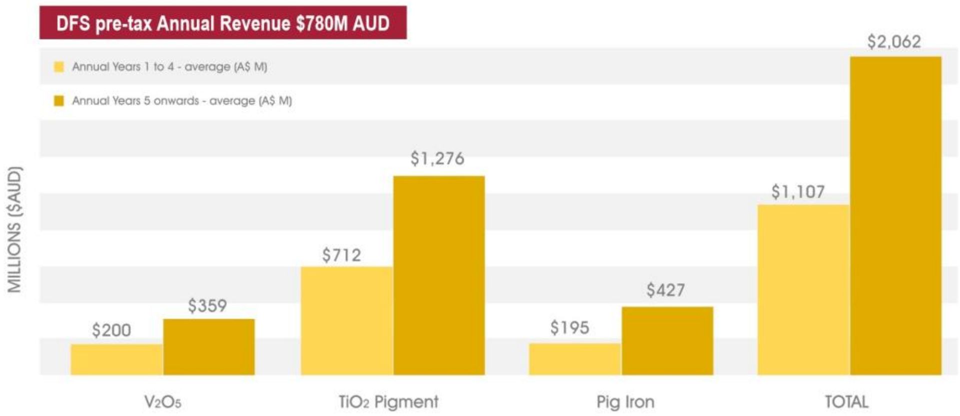
A breakdown of the Stage 1 DFS capex by major plant areas is illustrated in the following chart:



Source: TNG

Forecast annual revenue in the DFS, broken down by product for each stage, is illustrated in the following chart. It is important to note that commodity prices are below the forecast levels used in the DFS, albeit prices are moving higher after reaching a cyclical low point in late 2015 / early 2016:



Source: TNG

Recent External Influences

Following the completion of the DFS a number of external forces (positive and negative) have impacted the Project's value, with the most significant factors being:

$50Mpa cost savings identified

- Optimisation of the TIVAN® hydrometallurgical process has generated operating cost savings in the order of $50Mpa

Downward industry cost pressure

- Industry capex and operating costs have generally experienced downward pressure (often in the order of 10-30%)
- Commodity prices initially fell significantly below the levels assumed in the DFS, although more recently have displayed signs of improvement

Overall, these factors are expected to have a significant net positive impact on the economics of the Project.

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Project Enhancement

Subsequent to the completion of the DFS, TNG has focussed on flow sheet optimisation activities, regulatory approval processes and financing – with good progress having been achieved in each area.

Process enhancement continues

In terms of flow sheet optimisation, testwork performed by SMS during 2016 has consistently demonstrated a substantial reduction in utility and energy consumption, while maintaining product recoveries and qualities at a very high level.

The savings were identified as a result of detailed plant engineering programs carried out by SMS over the past year, which evaluated opportunities previously identified in the DFS.

Savings of A$57/t concentrate achieved

Based on the energy and utility cost assumptions in the DFS financial model, the resulting savings are estimated to be a minimum of A$57/tonne of concentrate processed, compared to the DFS figures. On the basis of the DFS assumptions, this should result in an overall operating cost saving of more than A$50 million per annum for Stage 1 of the project (i.e. at the 3Mtpa mining rate), and twice that during Stage 2.

Increased product flexibility

In the optimised process now being adopted, SMS has introduced an oxidative precipitation step following the production of magnetite concentrate and the TIVAN® leach phase. This replaces the solvent extraction circuits and precipitates a vanadium compound by atmospheric oxidation, from which TNG has the option to produce both very high-purity vanadium pentoxide (V_20_5) or ferro-vanadium (FeV), therefore increasing the number of potential products from Mount Peake's planned production.

Increased vanadium recovery

The new method, combined with parallel refinements in other areas of the processing plant, results in significantly improved recovery of vanadium to up to 98%. This compares to the estimated 90% assumed in the DFS and provides further upside to TNG via increased vanadium production and revenue. The redesigned vanadium extraction circuit also requires less complex equipment, providing an expected reduction in plant capex.

The redesign of the overall process flowsheet also creates the opportunity to assess further potential refinements. A key opportunity is to produce a feedstock which is tailored for an industry standard fluidised bed chlorinator, allowing TNG to use an existing industry standard pigment plant design for its titanium dioxide pigment production. This could generate additional capex savings while producing the highest purity pigment. TNG and SMS will undertake further optimisation of the titanium dioxide feedstock characteristics, with testwork planned to be carried out in Perth and Vienna over the next three months.

Project economics enhanced

Overall, TNG expects the enhancements to have a material positive effect on the economics of the Mount Peake Project, including a significant reduction in operating costs for all products, further de-risking of the process and an expansion of the range of products able to be delivered. Once the refined process flowsheet is finalised, a revised financial model will be prepared. In addition, it will enhance the ability to finalise a suitable project financing package.

Approvals Processes

Approvals on-track

Statutory approvals for the Project are being steadily advanced in parallel with the technical and financial aspects of the Project, including submission and assessment of the Supplemental EIS, submission of the Mining Lease Application and execution of Native Title Agreements.

All approvals processes are expected to be completed in the coming months, leaving TNG on track for a final investment decision during 2017, once Project Financing is in place.

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Financing

Gresham assisting finalisation of the finance structure

On the 20th September TNG announced the appointment of Gresham Advisory Partners as corporate advisor to assist in structuring a final funding package for development of Mount Peake. This will focus on optimisation of the debt / equity mix to ensure the best possible outcome for shareholders. As part of the funding process TNG has already assembled a consortium of strategic off-take and potential funding partners, with many having already completed the necessary due diligence assessment phase.

Potential debt providers identified

The heavy lifting on the debt side of the equation is likely to come from German Export Credit Agencies introduced by SMS Group, with additional components of syndicated bank debt, equipment financiers and local infrastructure funding.

The equity side of the equation is more opaque, and will inevitably require significant involvement of international institutional investors, as well as strategic partners such as proposed EPCM provider Downer Group.

Gresham's role includes:

Optimising the finance mix

- developing the appropriate funding strategy for Mount Peake with a view to optimising the funding mix and maximising value to TNG's shareholders;
- preparing financial models in order to develop 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.

Offtake Progress

TiPMC assisting with TiO_2 marketing

Off-take agreements have been in place for some time covering around 60% of forecast vanadium production and all of the forecast production of iron products. In addition, TNG has signed a long-term strategic agreement with USA-based titanium dioxide and mineral sands consulting firm, TiPMC Solutions LLC, to progress the marketing and off-take strategies for its titanium products. Agreements to date include:

Vanadium and iron offtake agreements in place

- A binding life-of-mine off-take Agreement and Technology Transfer agreement with Korean group WOOJIN Metals. WOOJIN'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.
- An agreement with TiPMC covering ongoing expert support for establishing the best options for TNG's titanium pigment product to enter the TiO_2 market and address long term off-take agreements with either existing pigment producers or end-users (such as the paint industry).

Potential to disrupt the TiO_2 market

It is worth noting that production of high quality feedstock from Mount Peake has potential to be disruptive to incumbent pigment producers in the mineral sands industry, creating incentive for dealing directly with end-users (predominantly paint producers).

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SMS Agreements

SMS Group a critical partner

The Company has two agreements with SMS covering development, licencing and financing of the proposed Darwin TIVAN® refinery and the related technology. The first of these, a binding HoA, was announced in February and covers the following development and financing facets:

Driving near term refinery design and construction…

- Undertake full technological due diligence of all relevant aspects of the Mount Peake DFS relating to the TIVAN® refinery;
- Provide detailed engineering, design and final costings for the tender for construction of the refinery; and
- Provide assistance for arranging the funding the construction of the TIVAN® refinery which includes the Export Credit Agencies ("ECA") or other structured finance.

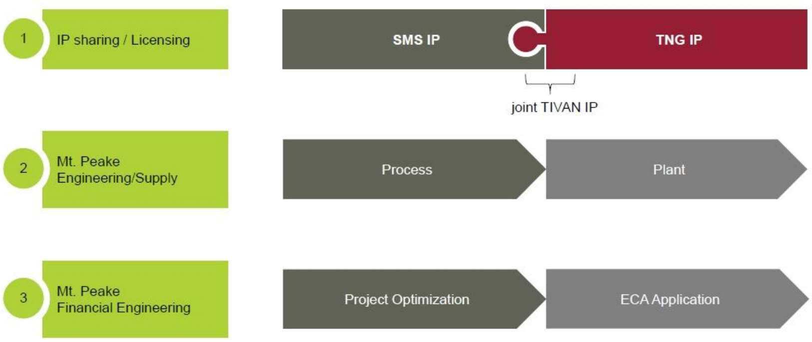
The second agreement, an MoU announced in May, covers the joint commercial exploitation of the TIVAN® technology, with key points listed below:

…and partnering on long term commercial exploitation of the technology

- SMS group to grant TNG the right to use its TIVAN® IP in TNG's wholly or majority owned refineries for the processing of titanoferrous ores on the condition that those refineries are supplied by SMS;
- In the event that TNG elects to procure such a refinery from another vendor, SMS shall grant TNG a license to use its TIVAN® IP against payment of an adequate royalty (to be discussed) in each case;
- TNG shall grant SMS as an equipment supplier and plant builder, as well as its respective customers, the right to use TNG's TIVAN® IP against payment of an adequate royalty (to be discussed) in each case; and
- Any future inventions and or any other IP by the Parties applicable to the processing of titanoferrous ores based on a hydrochloric acid or ferric chloride leach shall be disclosed to each other and licensed under the conditions outlined above.

The MOU builds on the binding Heads of Agreement signed earlier, and allows for the pooling of both parties' IP in relation to the TIVAN® process - SMS has developed significant IP in TNG's 100% owned TIVAN® technology through its work on the development of the process with TNG.

The following diagram illustrates how SMS is supporting TNG in order to successfully develop the Mount Peake Project, as well as collaborating on longer term technology opportunities through the TIVAN® IP.



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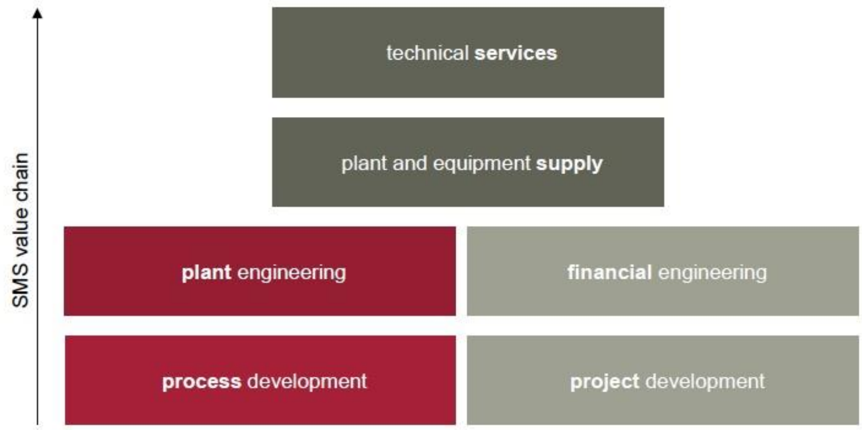
SMS Background

SMS is a globally significant metallurgical group

SMS group is a 150 year old, family owned German engineering company. It is a leading global supplier of metallurgical plants, has around 13,000 employees and has an annual turnover of around A$5 billion. It is also a leading user of ECA financing.

SMS's integrated range of services are captured in the following diagram:



Source: TNG

Commodity Prices

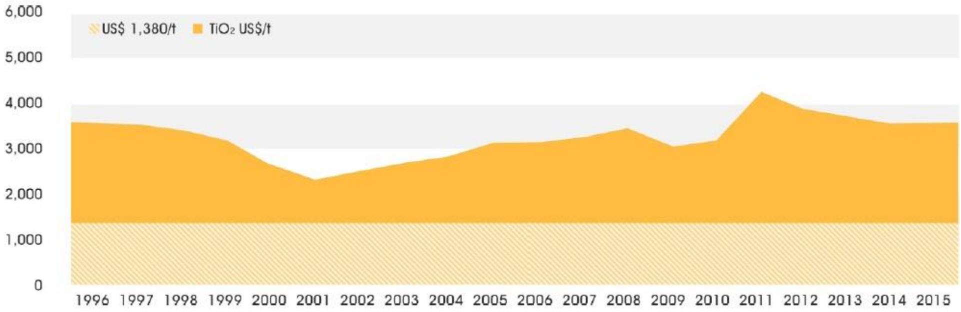
The current commodity price cycle appears to have reached a low point around late 2015 / early 2016. Since then there has been a general improvement in the price performance and outlook for many commodities, including for vanadium and titanium.

Titanium market in recovery mode

During the first half of 2016, the TiO_2 pigment industry has experienced strong price rises, largely due to demand improvements including:

- Improving architectural coatings markets in North America, where the American Coatings Institute has recently forecast growth in the 5% range;
- Pigment growth in India with consumption on track to exceed 250kt, representing nearly 10% growth in a very fast growing market;
- Strengthening economies in ASEAN, in countries like Malaysia, Indonesia, and the Philippines;
- Increasing demand in Northern and Eastern Europe, particularly Germany; and
- Strengthening master-batch markets, particularly in Germany and Benelux.

The trend for TiO_2 pricing over the past decade, relative to the Mount Peake DFS cost estimate, is illustrated in the following chart:



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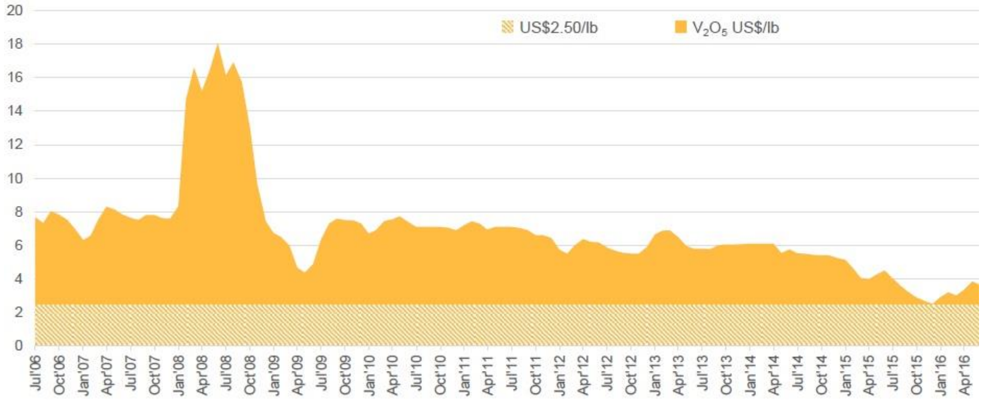
Vanadium demand growth underpinned by energy sector

Vanadium is a strategic metal which is used as an alloy in steel, as well as being in strong demand for use in energy storage - with vanadium redox batteries used to store electricity generated by solar and wind power, and lithium-vanadium ion batteries used to power hybrid cars. Strong compound growth rates in the energy sector are expected to underpin demand for vanadium on a medium-long term basis.

The trend for V_2O_5 pricing over the past two decades, relative to the DFS cost estimate, is illustrated in the following chart:



Source: TNG

Iron market well supplied

The iron ore market remains well supplied in the foreseeable future, providing a more subdued pricing outlook compared to titanium and vanadium.

The trend for pig iron pricing over the past two decades, relative to the DFS cost estimate, is illustrated in the following chart:

Source: TNG

Demerger of Non-Core Assets

Strong portfolio of base metal prospects

TNG has a strong portfolio of exploration projects in the NT. However, the Company's core focus is now on implementing the TIVAN® technology, which is likely to move it into the expanding technology sector, and development of Mount Peake. Accordingly, these 'non-core' assets are being spun out in a new company, Todd River Resources – with in specie distribution of shares and entitlements proposed for existing TNG shareholders.

Spin out plans well advanced

TNG prepared a prospectus and scheduled a Shareholder Meeting to consider its de-merger plans for 20 September. However, a critical caveat was gaining a Class Ruling from the Australian Taxation Office in respect of the de-merger proposal, and in particular to rule that the in-specie distribution would have no unexpected adverse tax outcomes for shareholders.

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Timing delayed until 2017 while a tax ruling is awaited

Unfortunately, the ATO was unable to issue a Class Ruling ahead of the planned meeting – and possibly won't issue one before November. As a consequence TNG has postponed the meeting until 29 November. A flow on affect is the deferral of the planned IPO until 2017.

In-specie Distribution

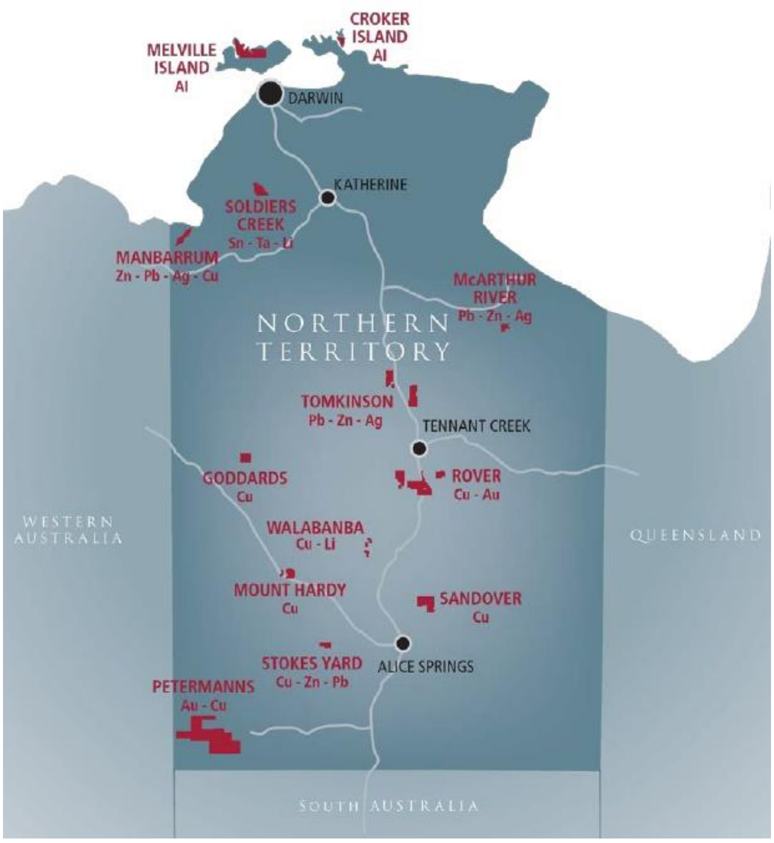
Under the proposal, to be considered by shareholders at a future meeting, TNG will distribute 28M Todd River shares to its existing shareholders and retain 7M. At the same time it will raise up to $6M at the IPO price of 20cps (possibly with an attaching option for every two shares issued). Assuming the full $6M is raised, the initial capital structure should be as follows:

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

Todd River Resources has built a large portfolio of tenements, covering base and precious metal exploration prospects, covering both advanced to grassroots exploration opportunities, as outlined in the following plan:

A large portfolio throughout the NT



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Some of the more notable assets are:

- Manbarrum - covers 50km strike length of the SE margin of the Bonaparte Basin, which is prospective Mississippi Valley Type mineralisation. Over 45Mt of low grade Zn-Pb-Ag resources have been delineated at two deposits, with potential for expansion. Drill testing is proposed at the Browns IP target and several early stage targets have been identified.
- Mount Hardy – is within the historic Mount Hardy Copper Field. Numerous targets generated from geophysical surveys, with several encouraging copper and gold intersections from drilling. Numerous targets yet to be drill tested.
- McArthur River - The project lies within the geological domain of the McArthur Basin and in the southwestern portion of the prospective Batten Fault Zone which also hosts the McArthur Zinc Mine, and has been partially explored for a variety of commodities including gold, copper, lead, zinc and diamonds.
- Walabanba – adjacent to Mount Peake, TNG has identified high priority geological-geophysical targets for immediate drill testing. The area also has a number of existing tin prospects which form part of the historic Anningie Tin Field.

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Valuation

Likely financing structure becoming clearer…

There is improving clarity and certainty on the potential financing structure for Stage 1 development of the Mount Peake Project; with the due diligence process for the debt component completed by many of the likely providers including the critical German Export Credit Agencies / SMS Group. At the same time, the ongoing process optimisation work being undertaken by TNG / SMS Group has already identified $50M of annual operating cost savings when operating at the Stage 1 rate processing 900,000tpa of concentrate. This savings potential rises to $100Mpa when production is doubled in Stage 2.

…enabling more rigorous valuation assessment

Accordingly, we have significantly refined our valuation methodology and estimate for Mount Peake relative to earlier estimates that simply assessed the Project on an ungeared, pre-tax 100% ownership basis. In addition, we have continued to apply current and / or conservative commodity prices.

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

Updated key financial 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 15cps
- DFS operating cost estimates updated to incorporate the $50Mpa of savings during Stage 1, and doubling during Stage 2
- TIVAN® process vanadium recovery increased from 90% to 98%
- Base case prices - TiO_2 US$3,000t and V_2O_5 US$12,000/t
- 8% real discount rate

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 - V_2O_5 and TiO_2. We have used a constant pig iron price of US$220/tonne. At current spot commodity pricing levels this generates a Project value in the order of A$2 billion – a dramatic ~36% increase in the Project's value at spot pricing since our May 2016 assessment.

Cost savings and recovering commodity prices are driving higher valuations – reversing the impact of lower prices immediately following the DFS

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

Un-risked Mount Peake Value – 100% Project Basis				
TiO_2 \ V_2O_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

The 2015 DFS used higher prices than current spot levels and these were based on comprehensive forecasting for the first eight years of the proposed project life at that time. However, our modelling using more conservative forecast prices still indicates a project that generates very strong free cash flow and healthy investor returns.

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

With capital intensive projects such as Mount Peake, it is always challenging for an emerging resource company to raise large amounts of equity without creating excessive

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shareholder dilution. In this case, TNG has a current market capitalisation of around $100M and will probably need to raise at least three times this amount to support Stage 1 funding.

In our base case estimate we are assuming a 30% equity funding component with new equity averaging 15cps (i.e. close to the current share price level). This would see the number of TNG shares on issue rise from 751.8 million, to around 2,752 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 funding.

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

Short term target $0.50/share

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

Per Share Value - Mount Peake Risked at 60%				
TiO_2 \ V_2O_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$0.19	A$0.24	A$0.29
US$3,000/t	A$0.45	A$0.50	A$0.55	A$0.61
US$4,000/t	A$0.76	A$0.81	A$0.86	A$0.92
US$5,000/t	A$1.07	A$1.12	A$1.18	A$1.23

Source: Breakaway Analysis

We have highlighted our base case pricing scenario (60% risked, 70% geared and equity raised at 15cps), which equates to a short term price target of $0.50/share. As the Project is de-risked and transitions into production our medium term share price target increases to $0.84/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 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 15cps), then the highlighted risked valuation of $0.50/share in the table above increases to $0.79/share. On the same basis, the de-risked valuation of $0.84/share would increase to $1.31/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 September 30, 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	$0.5013
Todd River Resources	$7 million	Prospectus	100%	$7 million	$0.0025
Cash	$5 million	Sept 30, 2016	100%	$5 million	$0.0018
Total	**$2,311 million**			**$1.39 billion**	**$0.50**

Source: Breakaway Analysis

We note that the base case valuation of $0.50 per share is substantially above the current share price of around $0.14, and there is further material upside as the Mount Peake Project is de-risked during the financing and development phases, as well as in response to any appreciation in commodity prices.

Technology licencing 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, which represents a planned growth path for TNG – however, it is too early to quantify this opportunity.

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Breakaway's View

TNG continues to make excellent progress on the development of Mount Peake. The TIVAN® processing enhancements identified since our May report, and associated significant operating cost savings, have further enhanced the value and robustness of the Project – and with many commodity prices appearing to have passed the low point in the current cycle the Project continues to be steadily de-risked.

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

With the permitting and technical aspects of the Project appearing to be well under control, the interlinked offtake and financing components are the critical path items than now need to be completed before a final investment decision can be made.

Significant portions of the vanadium and iron offtake are already locked in and processes and relationships are in place to deal with establishing the critical TiO_2 offtake component.

Stage 1 funding remains a significant challenge for TNG, given the scale of the capital required relative to its current market capitalisation. However, the strengthening relationship with SMS Group (and their connections with German Export Credit Agencies) will underpin this financing effort – debt funding for the Darwin refinery potentially falls under the purview of German ECA debt insurance cover and, should TNG qualify, provides access to financing on favourable terms with European Union financiers. The appointment of Gresham Advisory Partners to assist with finalising the funding structure should also help optimise shareholder outcomes.

The TIVAN® process being developed for the Mount Peake Project represents a world's first for the processing of vanadiferous-titaniferous-magnetitic ore bodies by a hydro-metallurgical route. TIVAN® results in increased recovery of metals at lower costs compared to incumbent producers. If demonstrated on a sustainable commercial basis, these attributes should result in the process becoming the future standard process adopted for the commercially viable, environmentally friendly treatment and utilization of ores from similar deposits.

Strategic plans to licence the TIVAN® technology are a potential driver of longer term earnings growth and shareholder value. While the sustainable revenue potential of this opportunity is significant, it is too early to quantify at this time and has not been incorporated in our share price targets.

Given all of the above, we maintain our rating for **TNG Limited** as a **Speculative Buy**, with a **short term price target of $0.50/share** using our risk assessed, base case valuation – with a **medium term price target of $0.84/share** as Mount Peake moves into production (all other factors being equal).

Key share price movers for TNG in the near term will be advancing offtake agreements for the titanium products, any material developments / progress in the financing process and commodity price movements.

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Analyst Verification

I, Grant Craighead, as the Research Analyst, hereby certify that the views expressed in this research accurately reflect my 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.

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