



**Breakaway
Research**

April 2015

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Company Information

ASX Code	TNG
Share Price (16 April 2015)	A\$0.185
Ord Shares	624.9m
Options	70.3m
Market Cap	A\$128.6m
Cash (31 Dec 2014)	A\$7.2m
Total Debt	A\$0m
Enterprise Value	A\$121.4m

Directors

Acting Chairman	Michael Evans
Managing Director	Paul Burton
Non-Executive Director	Rex Turkington
Non-Executive Director	Zhigang Wang
Non-Executive Director	Jianrong Xu
Non-Executive Director	Stuart Crow

Substantial Shareholders

WWB Investments P/L, Mr & Mrs Brown	10.37%
Ao-Zhong Int. Min Resources	9.99%
Aosu Inv. & Develop. Co	9.03%
Mr Paul Burton	1.92%
JP Morgan Nom's	1.28%
Top 20	42%

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)

Substantial Progress

Recommendation: Maintain Speculative BUY

Company Update

Key Points

- **Flagship Mount Peake V-Ti-Fe Project DFS progressing to schedule – expected delivery mid-2015**
- **Binding term sheets on vanadium offtake and ferro-vanadium (“FeV”) technology transfer signed with WOOJIN IND. CO. Ltd (“WOOJIN”)**
- **SMS Siemag contracted to oversee TIVAN® Pilot Plant testwork**
- **Aquifer discovered within 20km of Mount Peake – potential for life of mine water supply**
- **Encouraging exploration results at McArthur River – confirms the attractiveness of the proposed “Todd River Resources” spin-out**
- **We maintain our base case indicative valuation of \$0.365/share, largely contingent on successfully attracting an equity partner to fund and develop Mount Peake**

TNG has continued to make good progress on the DFS and commercialisation of its Mount Peake V-Ti-Fe Project in the Northern Territory of Australia. Key recent advancements include the signing of binding offtake and technology transfer term sheets with WOOJIN, a major player in the global vanadium field, and a potential financing and development partner.

The final technical elements of the DFS are also underway, with completion expected mid-2015. The key will be the TIVAN® Pilot Plant testwork, to be overseen by SMS Siemag, a leading global metallurgical engineering group.

More encouraging exploration results at McArthur River have boosted the potential of this project, with this set to be a key element of the proposed spin out of non-core assets into Todd River Resources.

We maintain our SPECULATIVE BUY recommendation for TNG, with price drivers including TIVAN® pilot plant success, returning a positive DFS and securing project offtake, finance and development agreements.

Company Overview

TNG is concentrating activities on the DFS for its flagship Mount Peake V-Ti-Fe project, located north of Alice Springs in the Northern Territory. The project has the potential to be a major global supplier of premium grade vanadium, as well as high purity iron and titanium products.

The TIVAN® hydrometallurgical process is being developed by TNG and partners to be a low cost method of leaching titano-magnetite concentrates to extract all valuable components, including vanadium, iron and titanium.

The Company also holds a number of other base and precious metals projects in the Northern Territory, which it plans to spin out, via IPO, into Todd River Resources.



Company Update

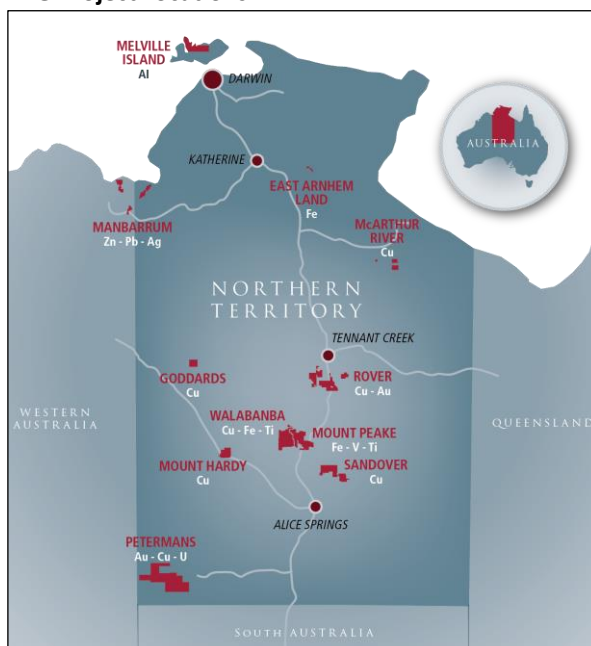
Background

TNG Limited (“TNG” or “the Company”), in which Breakaway initiated coverage in October 2012, is an ASX listed explorer and developer.

Flagship project is the Mt Peake V-Ti-Fe Project in the NT

The flagship project is the 100% owned Mount Peake V-Ti-Fe Project, located 235km north of Alice Springs in the Northern Territory (“NT”) of Australia, which has resources of 160Mt grading 0.28% V₂O₅, 5.3% TiO₂ and 23% Fe (with significant upside), and the potential to become a major, low-cost global vanadium producer.

TNG Project Locations



Source: TNG

Positive PFS in 2012, reviewed in 2013

A positive Pre-Feasibility Study (“PFS”) was completed in mid-2012, reviewed in early 2013, and TNG is now working steadily on the Definitive Feasibility Study (“DFS”) due for completion in mid-2015.

Key is the TIVAN® hydrometallurgical process

The key to the success of Mount Peake is the TIVAN® process, an innovative hydrometallurgical process that produces three products – premium (>96%) battery grade vanadium pentoxide (V₂O₅), titanium dioxide concentrate (TiO₂) and high purity iron oxide powder (Fe₂O₃).

The process is being developed by TNG and partners

The process is being developed jointly by TNG and METS Engineering (“METS”) of Perth, along with the CSIRO. The technology is owned 100% by TNG, and is currently being optimised for pilot-scale leach testwork, expected to commence by the end of April, 2015, with results expected in May and to be incorporated into the DFS.

Plan to build the TIVAN® in Malaysia

It is proposed to build the processing plant in Malaysia, with concentrates produced at Mount Peake.

Proposed spin-out of the portfolio of base metals projects

The Company also has a portfolio of attractive base metal projects located in the NT which it plans to spin out into the proposed Todd River Resources IPO.

Considerable progress since our February 2015 note

Recent Events

TNG has achieved a number of major milestones in the short period subsequent to our February 2015 updated note. Events (in chronological order as announced to the market) include:



This includes progress on both technical and corporate aspects

- Encouraging copper exploration results from McArthur River Project (Feb 16)
- Award of EIS completion contract to GHD (Feb 17)
- Binding vanadium offtake term sheet signed with WOOJIN IND. CO. Ltd for a minimum of 60% of vanadium product offtake (March 10)
- Binding technology transfer agreement signed with WOOJIN for the transfer of WOOJIN's proprietary FeV production technology to allow TNG to convert high purity V₂O₅ to FeV at the proposed TIVAN[®] plant (March 19)
- Discovery of potential water supply close to Mount Peake (April 13)
- Appointment of SMS Siemag to oversee finalisation of engineering and TIVAN[®] Pilot Plant test work (April 14)

In addition the Company has continued to advance the TIVAN[®] Pilot Plant construction work at CSIRO's Perth facilities, with the leach testing due to commence by the end of April.

Agreements with WOOJIN

Two binding term sheets have been signed with WOOJIN, a major player in the global vanadium market. This is a major step towards securing offtake agreements for 60% of the refined V₂O₅ from the proposed operation and allowing WOOJIN's FeV production technology to be used at the proposed TIVAN[®] plant.

Key agreements include the signing of Binding Term Sheets with WOOJIN, for offtake, financing and technology transfer

The key terms of the offtake agreement include:

- WOOJIN to purchase a minimum of 60% of refined V₂O₅ from TNG's TIVAN[®] plant
- Terms of any potential project financing
- Off-take to be negotiated on an arm's length basis, at a price calculated on a pre-determined formula based on *Metal Bulletin's* minimum 98% V₂O₅, CIF Europe quotation

Final binding agreements expected within 3 months

The Company expects that a final binding offtake agreement incorporating these items will be completed within three months, a vital step in securing financing for Mount Peake, in that it underpins a large part of the forecast revenue streams.

The second agreement sets the framework for setting up a Conversion Joint Venture between the parties to allow TNG to use WOOJIN's proprietary V₂O₅ to FeV conversion process at the proposed TIVAN[®] plant.

This process, developed in 1990, is currently used at WOOJIN's Gimpo plant, and according to the TNG release of March 19, 2015 allows "WOOJIN to achieve the highest vanadium recovery in the world for FeV production at a low conversion cost".

The agreement also provides for a Marketing Joint Venture to be formed, for the sale and distribution of FeV produced under the Conversion Joint Venture.

Appointment of SMS Siemag

SMS Siemag contracted to oversee the TIVAN[®] engineering and pilot plant testwork

TNG has contracted SMS Siemag, a major private European based global metallurgical engineering firm to oversee the final engineering and pilot plant testwork for the proprietary TIVAN[®] hydrometallurgical process.

SMS Siemag is a major global metallurgical engineering firm

SMS Siemag, which has experience in acid-based mineral extraction and acid regeneration, has been working with the Company on the development of the process for a few years now, and their brief will include guiding TNG's metallurgical consultants, METS and the CSIRO through the final engineering and testing activities, and will provide an independent review of the technical feasibility of TIVAN[®] following completion of the



pilot plant run.

The parties are also currently in discussions regarding the engineering, plant and equipment design and plant supply for the first TIVAN® refinery should the project progress.

As we have stated the TIVAN® process is vital for the success of Mount Peake, with the upcoming pilot scale testwork a critical part in demonstrating the viability/commerciality or otherwise of the innovative processing route.

Award of EIS contract to GHD

TNG is planning to submit the completed EIS to the Northern Territory Environmental Protection Agency by the end of Q2, 2015, around the same time that it is expected that the DFS is due for completion. This follows on from the submittal of a Notice of Intent in mid-2013, and the subsequent receipt of the Terms of Reference in 2014.

GHD contracted to complete and deliver the project EIS

Since the initial receipt of the terms of reference the potential for separate mine and processing plant sites has been developed, with the result of a simplified mine site and change in EIS conditions. The completion and approval of the EIS is a key factor for the project to proceed.

GHD, a leading global professional services company, has been involved with aspects of the ongoing EIS since early 2013, have now been engaged to take the process to completion, with this including, amongst others, stakeholder engagement and consultation and liaising with the relevant government agencies.

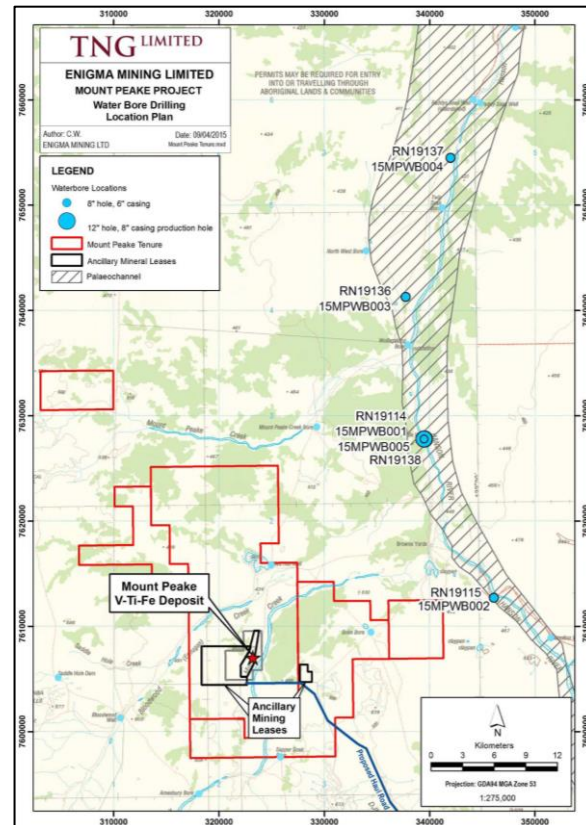
Successful Water Drilling

A key development addressing a critical element of the project has been the discovery of an aquifer within the Hansen Palaeochannel, located approximately 20km from Mount Peake.

Water drilling has identified an aquifer with the potential to supply all water requirements

This is located within 20km of Mount Peake

Hansen Palaeochannel location



Source: TNG



The Company's view, following preliminary pump testing, is that this aquifer has the potential to provide a sustainable long term source of water to supply all aspects of the planned operation over the planned 20+ year life. Clean, potable water was encountered over intervals of between 20m and 36m, with a maximum depth of 60m, and should ongoing testing prove positive this will significantly de-risk this element of the project.

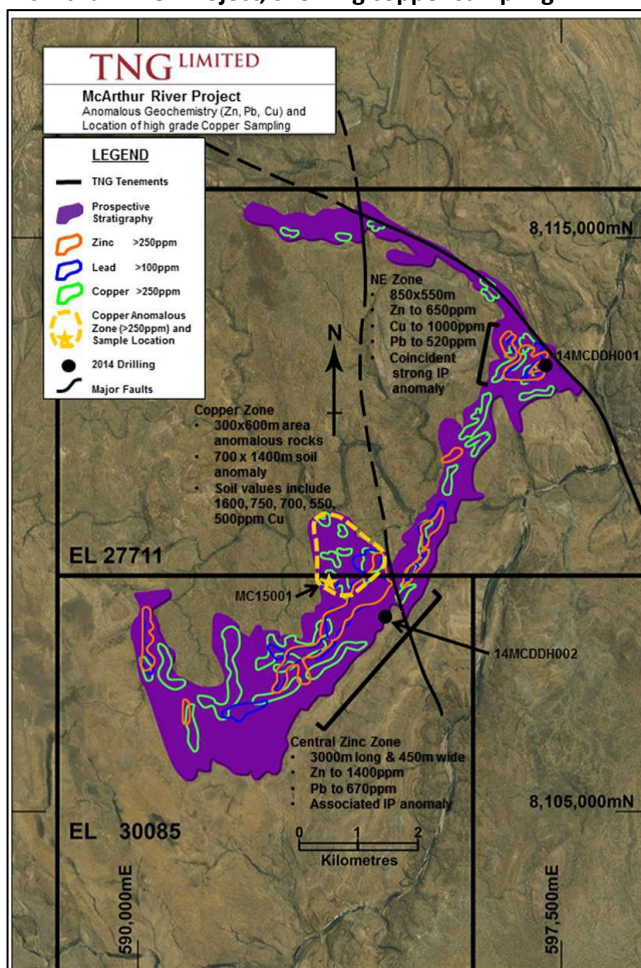
Assessment of the aquifer is ongoing, with work including costing, permitting and borefield design, with results to be incorporated into the DFS. This is being undertaken by GHD, with this work also including obtaining permitting from the Mines and Water Resources Departments.

McArthur River Exploration Results

Copper prospect identified at the McArthur River Project, with rock chips up to 48% Cu

Ongoing exploration work at the McArthur River Project has outlined a copper prospect, including rock chips up to 48% copper in an area of elevated copper soil geochemistry. This is near hole 14MCDDH002, which intersected anomalous zinc and copper in the target Wollgorang Formation.

McArthur River Project, showing copper sampling



Source: TNG

It is too early to make any firm conclusions on the potential style of mineralisation; however the high grade sample was in brecciated dolomitic sediments. The McArthur Basin, and particular the Wollgorang Formation is known to host breccia copper mineralisation, including Redbank Copper Limited's Redbank project near the NT/Qld border. In addition, previous explorers have considered the region prospective for Zambian Copper Belt style copper mineralisation.

The Company is currently designing a ground based exploration programme to follow up the copper anomalism, which could potentially commence early in the 2015 field season.



Breakaway's View

Even in the short period since our last note, TNG has continued to make excellent progress on the Mount Peake Project, with the pieces coming into place to allow the DFS to be completed by mid-2015.

Given that vanadium is the key forecast revenue earner for Mount Peake, the recently signed agreements with WOOJIN are particularly significant. We have seen the negotiations with WOOJIN steadily progress from letters of intent through to the binding term sheets, with the next step being the final binding agreements.

A binding vanadium offtake agreement will be a critical part of securing finance, in that it will underpin a large part of the forecast revenue. With the Company also progressing negotiations for the iron and titanium product offtake, we can see the potential for a large part of the production being secured.

On the production side, the potential installation of a FeV circuit is also a strategic move – it will allow TNG to diversify its vanadium product stream (and mitigate risks inherent in producing just a single product in a relatively small market), and improve revenues by virtue of including the higher value FeV in its output.

One of the key risks in the project is securing finance; actions by the Company in the signing of agreements with a number of potential partners in all three of the main product lines has now gone a significant way to mitigating this risk – negotiation include looking at various means of project financing in addition to securing offtake.

As we have stated previously, results from the upcoming final TIVAN[®] pilot scale work will be key – this will need to work for the project to be viable. Given that the individual processes within the overall flow sheet are well proven, and that bench scale and previous pilot testwork was successful, we are confident that there is a high probability of success in the upcoming work, and that the process will be successfully commercialised. Having SMS Siemag on board also gives us confidence in the viability of the process.

Also on the technical side, the discovery of the Hansen Aquifer is a major coup. Water is a vital component for any mining project, and should the upcoming testwork show that this aquifer can meet the LOM demands, a key of part of the development is de-risked. A key aspect also is the proximity to the project, which will reduce capital and operating cost for water supply.

We maintain our rating of TNG Limited as a **Speculative Buy, with an unchanged base case target price of \$0.365/share**. As mentioned in our previous note this is contingent on funding, and TNG retaining a 40% free carried interest. We see potential short to medium term price appreciation with success in the TIVAN[®] pilot plant, as well as, upon the delivery of the DFS, finalising agreements with the potential partners (the key to driving value). We would see this base case increase with ongoing project de-risking.

Exploration results from the other projects, particularly McArthur River, have proven very encouraging and, dependent upon market conditions, make the proposed Todd River Resources IPO a very attractive investment proposition.

*We maintain our
Speculative Buy rating
with an unchanged price
target of \$0.365/share*



Analyst Verification

We, Grant Craighead and Mark Gordon, 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.

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