

September 2016 Quarterly Activities Report

Corporate Financial Advisor appointed to assist with funding strategy; potentially significant OPEX reductions achieved; business development and marketing agreement for titanium dioxide

HIGHLIGHTS

MOUNT PEAKE VANADIUM-TITANIUM-IRON PROJECT (NT)

- Innovative re-design of the vanadium extraction circuit for the TIVAN[®] refinery by TNG's strategic partner, SMS group, delivers significant improvements in processing plant operating cost and consumption figures.
- Results show an estimated A\$50M per annum reduction in operating costs for the TIVAN[®] refinery with potential for significant reduction in capital costs and total operating costs for the overall project.
- Vanadium recovery by this method improved to 98% with the option of producing both high-purity vanadium pentoxide and ferro-vanadium, increasing the number of products to be delivered by Mount Peake.
- Opens up potential for further improvement in overall process economics identified for both CAPEX and OPEX, and offers the potential for TNG to become one of the lowest cost producers in the strategic metals sector globally.
- Successful production of commercial-grade vanadium electrolyte from Mount Peake vanadium pentoxide (V₂O₅) demonstrates viability of processing chain from mine to final product and adds a significant new dimension to TNG's growth plans, giving it the ability to enter the fast-growing Vanadium Redox Battery (VRB) alternative energy sector.
- Long-term agreement signed with leading titanium dioxide (TiO₂) and mineral sands consulting firm TiPMC Solutions LLC, under which TiPMC's experts will provide ongoing support to TNG for TiO₂ business development and marketing.
- Leading Financial advisory group, Gresham Partners, appointed as Corporate Financial Advisor to assist with the funding strategy and implementation, evaluation of debt and equity funding options and introductions to potential funders and investors.

BASE METAL PROJECTS

- Proposed EGM to approve demerger of TNG's NT base metal assets to be held on 29 November 2016.

CORPORATE

- TNG Managing Director Paul Burton presents at the 2016 Diggers & Dealers Mining Forum in Kalgoorlie.
- Shareholder approval to be re-sought for spin-off of non-core assets via Todd River Resources Limited, with a General Meeting to consider the de-merger scheduled for 29 November 2016.
- Cash reserves of \$4.7M at Quarter-end, providing a strong foundation for ongoing pre-development activities.

SUMMARY

The September Quarter saw continued strong progress for TNG on a number of fronts, with the Company continuing to advance pre-development and financing activities at its world-class Mount Peake Vanadium-Titanium-Iron Project in the Northern Territory, while also achieving a number of important breakthroughs with its proprietary TIVAN[™] Process.

One of the key outcomes for the Quarter was a review of overall operating costs for Mount Peake, conducted by TNG and its strategic partner SMS group GmbH, which confirmed that technological advances in the downstream TIVAN[®] process could deliver both improved vanadium recoveries and yields, as well as OPEX reductions.

Further refinement of the TIVAN[®] process by SMS over the past year has resulted in the introduction of a simplified and significantly more cost effective method of vanadium extraction, leading to a reduction in both operating costs and capital costs. Testwork performed by SMS has repeatedly demonstrated a substantial reduction in utility and energy consumption while maintaining product recoveries and qualities at a very high level.

The breakthrough savings were identified as a result of detailed plant engineering programs carried out by SMS over the past 12 months as part of opportunities identified in the 2015 Feasibility Study. These programs have now progressed to an advanced and further refined stage following the two agreements signed by TNG and SMS earlier this year.

Based on the energy and utility cost assumptions used in the 2015 Definitive Feasibility Study, the resulting savings are estimated to be a minimum of A\$57/tonne of concentrate processed. Using the DFS assumptions, this should result in an overall operating cost (OPEX) saving of more than A\$50 million per annum for Phase 1 of the project (at a 3Mt per annum mining rate).

SMS and TNG have also identified additional refinements which may further enhance the TIVAN® process, which the two companies are now working together to pursue. While it is not yet possible to quantify the savings generated by the TIVAN® enhancements, the Company expects them to have a significantly positive impact on the Mount Peake Project's economics.

Also during the Quarter, the Company signed a long-term strategic agreement with a leading global titanium dioxide (TiO₂) and mineral sands consulting firm, TiPMC Solutions LLC, to progress the marketing and off-take strategies for the titanium products from Mount Peake. The Company already has binding off-take agreements already in place for the vanadium and iron product streams from the Mount Peake Project, and the agreement with TiPMC represents a significant step forward in respect to the Project's third valuable product stream, titanium dioxide.

The agreement has been executed at a time of improving market conditions for the titanium dioxide pigment industry and cements TNG's strategic plan to become a major player in the global supply chain of TiO₂, securing a long-term partnership with one of the world's leading consultancies in the sector.

With the Mount Peake Project now in the final stages of permitting and with a Tier One consortium of strategic off-take and development partners in place, during the Quarter TNG appointed leading independent advisory house Gresham Advisory Partners Limited as corporate financial advisor to assist with the final phase of funding and development.

Gresham's role includes assisting TNG in developing the appropriate funding strategy for Mount Peake; preparing financial models; identifying debt and equity funding sources; and completing all the necessary aspects of the negotiation, execution and completion of the funding of the project. The appointment of Gresham marks the beginning of an intensive phase of activity for the Company as it commences detailed financing discussions.

In light of the improvement in market conditions for the junior resource and exploration sector seen this year, the Company announced during the Quarter that it would seek re-approval for the spin-off of its extensive portfolio of base metal assets in the Northern Territory via its subsidiary, Todd River Resources, at a general meeting of shareholders. The Company originally received approval for the spin-off at a general meeting of shareholders held on 20 May 2015, however the process was deferred due to prevailing market conditions. The approval received was valid for approximately six months.

A general meeting of shareholders to approve the demerger is currently scheduled for 29 November 2016, and a Notice of Meeting has been sent to shareholders. The proposed demerger is consistent with TNG's core corporate focus, which is the development of its world-class Mount Peake Vanadium-Titanium-Iron Project in the Northern Territory.

PROJECTS

VANADIUM-TITANIUM-IRON

Mount Peake Project: TNG 100%

The Mount Peake Project is a world-scale strategic metals project located 235km north-west of Alice Springs in the Northern Territory close to existing key power and transport infrastructure including the Alice Springs-Darwin Railway and the Stuart Highway. With a JORC Measured, Indicated and Inferred Resource totalling 160Mt (118Mt Measured, 20Mt Indicated, 22Mt Inferred), grading 0.28% V₂O₅, 5.3% TiO₂ and 23% Fe, Mount Peake is one of the largest undeveloped vanadium-titanium-iron projects in the world. The area under licence covers a highly prospective, but poorly explored part of the Western Arunta geological province which offers significant exploration upside for TNG within an extensive 100%-owned ground-holding. TNG completed a Feasibility Study on the Mount Peake Project in July 2015, paving the way for project financing and development to proceed. Results of the DFS were provided in full in the Company's June 2015 Quarterly Report.

Operating Cost Savings at Mount Peake

During the Quarter, TNG, in conjunction with its strategic partner, leading global engineering group SMS group GmbH, identified potentially transformational capital and operating cost savings for the Mount Peake Project.

Further refinement of the TIVAN® process has resulted in the introduction of a simplified and significantly more cost effective method of vanadium extraction, leading to a reduction in both operating costs and capital costs. Testwork performed by SMS has repeatedly demonstrated a substantial reduction in utility and energy consumption while maintaining product recoveries and qualities at a very high level.

The breakthrough savings were identified as a result of detailed plant engineering programs carried out by SMS as part of opportunities identified in the 2015 Feasibility Study. These programs have now progressed to an advanced and further refined stage following the two agreements signed by TNG and SMS earlier this year (refer ASX releases – 2nd February 2016 and 5th May 2016).

Based on the energy and utility cost assumptions underlying the Definitive Feasibility Study (DFS) financial model completed in 2015, 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 (OPEX) saving of more than A\$50 million per annum for Phase 1 of the project (at a 3Mt per annum mining rate).

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 (V₂O₅) or ferro-vanadium (FeV), therefore increasing the number of potential products from Mount Peake's planned production.

Additional benefits

This new method – combined with parallel refinements in other areas of the processing plant stemming from the ongoing engineering activities – results in significantly improved recovery of vanadium of up to 98% compared to the expected 90% used in the DFS, providing further upside to TNG in the overall amount of vanadium production and a corresponding expected increase in project revenue. As the redesigned vanadium extraction circuit requires less complex equipment, a comparable reduction in plant CAPEX could also be expected.

Further refinements

Locking these improvements into the design of the overall process flowsheet has also opened up the potential for further refinements, which SMS and TNG have agreed to pursue. One of these key areas is the potential, subject to current and proposed confirmatory work, 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, providing the potential for additional savings in capital expenditure while potentially producing highest purity pigment.

As a result of the outstanding success of this work, TNG and SMS have agreed to undertake further optimisation of the titanium dioxide feedstock characteristics. Related testwork will be carried out in Perth and Vienna.

TNG expects these enhancements to have a further material effect on the economics of the Mount Peake Project. After all improvements have been locked into the process flowsheet, a revised Financial Model may be prepared by Snowden incorporating the revised OPEX and CAPEX and production figures and the results will be reported.

Strategic Agreement with TiPMC Solutions LLC to Progress Marketing and Off-take for Titanium Products

TNG has signed a long-term strategic agreement with leading global titanium dioxide (TiO₂) and mineral sands consulting firm, TiPMC Solutions LLC, to progress the marketing and off-take strategies for the titanium products from Mount Peake.

The agreement will cover key aspects of TNG's business development and sales for the titanium dioxide, and will also give the Company access to industry-leading experts in the TiO₂ field who will assist TNG in finalising the Company's marketing strategy for titanium pigment.

As outlined in the 2015 Definitive Feasibility Study (DFS), a significant proportion of the Mount Peake Project's projected returns come from the TiO₂ products, and this agreement with TiPMC will assist TNG to select the best way forward for this anticipated future production.

The agreement has been executed at a time of improving market conditions for the titanium dioxide pigment industry and cements TNG's strategic plan to become a major player in the global supply chain of TiO₂, securing a long-term partnership with one of the world's leading consultancies in the sector.

In the first half of 2016, the TiO₂ pigment industry experienced its strongest uptick in price and overall health since 2012 due to:

- 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.

Gresham Partners Appointed Corporate Advisor for Funding Mount Peake Project

TNG has appointed leading independent advisory house Gresham Advisory Partners Limited as corporate advisor to assist with the funding and development of the Mount Peake Project.

Gresham's role includes assisting TNG in:

- 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.

Gresham is a leading independent Australian investment and advisory house with offices in Sydney, Melbourne and Perth.

Production of Commercial-Grade Vanadium Electrolyte

Subsequent to Quarter-end, TNG announced that it had successfully produced high-purity vanadium electrolyte for the first time using vanadium pentoxide from Mount Peake, demonstrating the viability of the processing chain from the mine to the final product and adding a significant new dimension to its growth plans.

The electrolyte was produced as part of the company's continuing strategy to maximise value from the Mount Peake project and was carried out under TNG's instruction at the SMS group (SMS) laboratories in Vienna, where the final engineering design of the Company's 100%-owned TIVAN™ technology is being undertaken.

The vanadium electrolyte (VE) is produced by dissolving and mixing vanadium pentoxide (V₂O₅). Vanadium Redox Batteries (VRB's) require a high-purity VE, which therefore benefits from starting with a high purity V₂O₅ product. TNG's testwork and optimisation work indicates it will be able to produce V₂O₅ at minimum 99.5% purity, which is currently among the highest globally.

The technology process to produce the high purity VE was carried out at SMS' Vienna laboratories under a confidentiality agreement and instruction from TNG, using V₂O₅ product from TNG's vanadium deposit, delivered during the Pilot Plant trials.

SMS ranks the applied chemical processing method used as best-in-class, not only in terms of CAPEX and OPEX but also in terms of scalability and operational flexibility, demonstrating that the commercial production of this high-value material is a viable option for the TNG.

TNG considers the ability to produce commercial grade vanadium electrolyte from its own vanadium pentoxide as a very positive development, allowing full vertical integration of its production pipeline as well as the ability to enter the fast-growing Vanadium Redox Battery (VRB) alternative energy sector. When combined with its existing capability to produce Ferro-Vanadium from the technology provided by its off-taker partner WOOJIN, TNG is now well placed to supply every vanadium market.

TNG estimates the current global market size for Vanadium Redox Batteries to be an annually sold storage capacity of 300 to 400MWh, with the market growing at a high double digits' number every year. The largest single VRB installations rank at capacities of approximately 60MWh. The storage of 1MWh requires approximately 80 cubic meters of electrolyte, which contains the equivalent of approximately 15 tonnes of V₂O₅.

TNG is in discussions with a number of potential Vanadium Redox Battery producers and will update the market on the progress of these discussions and the potential development of a VE plant in the near future.

TNG and SMS will now evaluate the feasibility of the construction of a VE production facility integrated with the TIVAN™ plant. This would allow TNG entry into the local growing Australian and nearby SE-Asian VRB sector as a regional electrolyte supplier.

Other prospects at Mount Peake

The Company has identified significant other mineralisation potential in the Mount Peake area.

Graphite

The graphite potential of the Mount Peake Project is also continuing to emerge. This work is still at an early stage, however the graphite prospectivity at Mount Peake represents an exciting emerging opportunity for TNG, which will be further tested during 2016.

OTHER PROJECTS

TNG has numerous projects outside of Mount Peake, all of which offer outstanding prospectivity. TNG has announced plans to de-merge these projects into a new listed entity, to be named Todd River Resources (*see ASX Announcement dated 25 July 2016*). The proposed spin-off would see TNG emerge with a 10.8 per cent cornerstone stake in the new company, with TNG shareholders to hold 43 per cent of the shares via an in-specie distribution.

This proposed demerger requires approval from TNG shareholders. A general meeting to vote on the de-merger is scheduled for 29 November 2016, with a Notice of Meeting to be sent to shareholders in due course (see Corporate Section below).

CORPORATE

De-merger of Base Metals Assets

During the Quarter, TNG advised that it would convene a shareholder meeting to re-approve the demerger of its non-core portfolio of zinc, copper and base metal assets in the Northern Territory.

The Company originally received approval for the spin-off at a general meeting of shareholders held on 20 May 2015, however the process was deferred due to prevailing market conditions. The approval received was valid for approximately six months.

In light of the improvement in market conditions for the junior resource and exploration sector seen this year, the Company decided to seek re-approval for the spin-off via its subsidiary, Todd River Resources, at a general meeting of shareholders.

It is intended that Todd River Resources will undertake an Initial Public Offer and seek an ASX listing in conjunction with the spin-off. Upon completion of the demerger, Todd River Resources will have one of the largest base metal exploration footprints in the Northern Territory, with ownership of a number of advanced assets including the large Manbarrum Zinc Project.

TNG had intended to convene this shareholder meeting for 20 September 2016.

However, in the Notice of Meeting the Company advised that it had sought a Class Ruling from the Australian Taxation Office in respect of the de-merger proposal, and in particular to rule that there will be no unexpected adverse tax outcomes for shareholders from the proposed in-specie distribution.

The Company received notification that a draft copy of the Class Ruling would not be received by the proposed date of the EGM, and may now take until November to be issued.

It is the Directors' view that, until such time as the draft Class Ruling has been issued in satisfactory form, it is in the best interests of TNG Shareholders to postpone the General Meeting to a later date. Accordingly, the Company advised that the General Meeting will be postponed until 2.00pm (WST) on 29 November 2016.



Presentation at 2016 Diggers & Dealers Mining Forum

During the Quarter, TNG's Managing Director Paul Burton presented at the 2016 Diggers & Dealers Mining Forum in Kalgoorlie, Western Australia.

Diggers & Dealers is Australia's largest resources conference, and presentation spots are only offered to selected companies.

A copy of Paul Burton's presentation can be downloaded from the ASX Announcements page of the TNG website: http://tngltd.com.au/investor_centre/asx_announcements.phtml

Cash

TNG had total cash reserves of \$4.7 million at Quarter-end.

Paul Burton
Managing Director

21 October 2016

Tenement Schedule

The Group holds an interest in the following tenements or tenement applications at 30 September 2016:

Project	Tenements	Equity
Mount Peake	EL27069, EL27070, EL27941, EL29578, EL30483, ELR29627, MLA28341, MLA29855, MLA29856, MLA30686	100%
McArthur River	EL27711, EL28503, EL30085	100%
Melville Island	ELA28617	100% (Farm in agreement)
Croker Island	ELA29164	100%
Black Range	EL30207, EL30208	100%
Mount Hardy	EL27892, EL29219, EL28694	100%
Manbarrum JV	A24518, A26581, EL24395, EL25646, MLA27357	100%
Sandover	ELA29252, ELA29253	100%
Tomkinson	EL30348, EL30359, ELA31265	100%
Soldiers Creek	ELA31209	100%
Stokes Yard	EL30131	100%
Walabanba Hills	EL26848, EL27115	100%
Warramunga/Rover JV	EL25581, ELA25582, ELA25587, MLC647	100% (Farm in agreement)
Peterman Ranges	ELA26383, ELA25564, ELA26384, ELA25562, ELA26382	100% (Farm in agreement)
Goddard's	ELA24260	100% (Farm in agreement)
Cawse Extended	M24/547, M24/548, M24/549, M24/550	20% free carried to production, or can be converted to a 2% net smelter return on ore mined. Unicorn Pit is now excised and a wet tonne royalty applies.
Kintore East	P16/2370, P16/2371, P16/2372, P16/2373, P16/2374	2% gold return interest on production.

Competent Person's Statements

The information in this report that relates to the Mount Peake Mineral Resource estimates is extracted from an ASX Announcement dated 26 March 2013, (see ASX Announcement –26 March 2013, “Additional Information on the Mount Peake Resource”, www.tngltd.com.au and www.asx.com.au), and was completed in accordance with the guidelines of the JORC Code (2012). Initial mining and financial assessment work, based on the Mineral Resource, followed (see ASX Announcement –15 July 2013, “TNG Considers Two-Stage Development Option for Mount Peake Project, NT ”, www.tngltd.com.au and www.asx.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are represented have not been materially modified from the original market announcement.

The information in this report that relates to the Mount Peake Ore Reserve estimates is extracted from an ASX Announcement dated 31 July 2015, (see ASX Announcement –31 July 2015, “Mount Peake Feasibility Study Confirms a World-Class Project”, www.tngltd.com.au and www.asc.com.au) and was completed in accordance with the guidelines of the JORC Code (2012). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the Ore Reserve estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms



that the form and context in which the Competent Person's findings are represented have not been materially modified from the original market announcement.

The information in this report that relates to Exploration Results for Mount Peake project is based on information compiled by Exploration Manager Mr Kim Grey B.Sc. and M. Econ. Geol. Mr Grey is also a member of the Australian Institute of Geoscientists and a full time employee of TNG Limited. Mr Grey has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Grey consents to the inclusion in the report of the matters based on his information in the form and context in which it appear.

Production Targets and Financial Information

Information in relation to the Mount Peake Definitive Feasibility, including production targets and financial information, included in this report is extracted from an ASX Announcement dated 31 July 2015, (see ASX Announcement –31 July 2015, "Mount Peake Feasibility Study Confirms a World-Class Project", www.tngltd.com.au and www.asx.com.au). The Company confirms that all material assumptions underpinning the production target and financial information set out in the announcement released on 31 July 2015 continue to apply and have not materially changed.