

## March 2016 Quarterly Activities Report

### *Second binding life-of-mine off-take agreement signed for Mount Peake as more global commodity, engineering and services groups line up to join development consortium*

#### HIGHLIGHTS

##### **MOUNT PEAKE VANADIUM-TITANIUM-IRON PROJECT (NT)**

- Binding Term Sheet for Life-of-Mine off-take signed with major global commodity trader Gunvor (Singapore) for a minimum of 60% of all iron products produced from Mount Peake:
  - *TNG's iron products will be purchased on an FOB basis, marketed and distributed on a global basis for a fixed commission subject to the execution of binding sale and purchase agreement based on these terms at any time but not later than six months prior to the start of production;*
  - *The agreement with Gunvor represents the second binding life-of-mine off-take deal to be secured for Mount Peake, and opens the door to further potential financing and development.*
- One of world's biggest metallurgical engineering and construction companies, SMS group, has also thrown its weight behind the Mount Peake development after signing a binding Heads of Agreement with TNG including:
  - *Engineering, design and tendering for construction for the TIVAN® downstream refinery; and*
  - *Provision of assistance for funding the construction of the TIVAN refinery through Export Credit Agencies or other structured finance.*
- Multi-pronged Memorandum of Understanding (MOU) signed with leading global services provider Downer EDI, paving the way to secure Downer's involvement as a key development partner at Mount Peake:
  - *Key components of the MOU include potential EPCM of the processing plant at the mine site; construction of the refinery in Darwin and of the mine site and associated infrastructure; drilling, blasting, loading and haulage of ore and waste; operation and maintenance of the processing plant; and building, owning and operating non-process infrastructure.*
- Mount Peake Mine Environmental Impact Statement released for public comment.
- Subject to all approvals, permitting and financing being secured, construction of Mount Peake may commence in 2016 with first production scheduled for early 2018.

##### **CORPORATE**

- Cash reserves of \$4.9M at Quarter-end, providing a strong foundation for ongoing pre-development activities.

##### **SUMMARY**

The March 2016 Quarter has been another active and productive period for TNG, with a series of key agreements secured with global commodities traders, engineering groups and construction companies in relation to off-take, financing and development of the Company's flagship Mount Peake Vanadium-Titanium-Iron Project in the Northern Territory.

Foremost of these was a life-of-mine off-take agreement with global commodities trader Gunvor (Singapore), which covers a minimum of 60% of all iron products produced from Mount Peake. The agreement with Gunvor represents the second binding off-take agreement in now in place at Mount Peake, following the September 2015 agreement with major Korean ferro-vanadium group, WOJIN, covering a minimum of 60% of all Mount Peake vanadium products.

In addition, TNG secured a binding Heads of Agreement with global engineering giant, SMS group, for the implantation of the TIVAN® downstream refinery, under which SMS will provide detailed engineering, design and final costing for tender for the refinery; as well as assistance with arranging funding for the refinery's construction.

Also during the Quarter, the Company signed a multi-pronged Memorandum of Understanding with leading global services provider Downer EDI, paving the way to secure Downer's involvement as a key development partner at Mount Peake.

Key components of the MOU include potential EPCM of the processing plant at the mine site; construction of the refinery at the Port of Darwin; construction of the mine-site and associated infrastructure, drilling, blasting, loading and haulage of ore and waste; operation and maintenance of the processing plant; and building, owning and operating non-process infrastructure.

Together, the agreements secured during the March 2016 Quarter give TNG confidence in its ability to place Mount Peake's products in global commodity markets, securing the project's revenue and profitability forecast and creating a strong foundation for its financing and development. The new agreements build further on the Tier-1 group of commodity houses, engineering groups and off-take and potential funding partners established by TNG over the past three years.

The environmental approval process was also advanced during the Quarter, with the Mount Peake Mine Environmental Impact Statement (EIS) released for public comment.

## 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% V<sub>2</sub>O<sub>5</sub>, 5.3% TiO<sub>2</sub> 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.*

#### Binding Life-Of-Mine Off-Take Terms with Gunvor (Singapore) for Mount Peake Iron Products

Following the signing of a Heads of Agreement in 2014 (*refer ASX release 23 June 2014, 28 November 2014*), TNG signed a binding term sheet during the Quarter with global commodities trader Gunvor (Singapore) for the life-of-mine off-take of iron products from the Mount Peake Project. TNG intends to produce approximately 637,000tpa of pig iron per annum from the iron-oxide produced from its TIVAN<sup>®</sup> refinery (*refer ASX Announcement – 31 July 2015*).

The binding term sheet encompasses key terms for the sale and purchase off-take of a minimum of 60 per cent of the iron products to be produced from Mount Peake, including the purchase of these products on an FOB basis and global distribution for a fixed commission. Based on these terms, TNG and Gunvor will now work towards completion of the final binding life-of-mine sale and purchase off-take agreements for the iron products from Mount Peake.

This agreement represents the second major off-take deal to be secured by TNG, following the binding life-of-mine agreement signed in September 2015 covering 60 per cent of all vanadium products produced from Mount Peake (*refer ASX release 7 September 2015*).

With turnover of US\$64 billion in 2015, Gunvor has the ability to provide TNG with customer feedback on the technical acceptability of TNG's iron products, customer relationship management and support, and assistance in optimisation and coordination of customer's shipping programs. Founded in 2000, the Gunvor Group has grown from being a European niche player in oil trading to one of the world's largest independent commodity trading companies by turnover, providing integrated trading products and logistics services for participants in the worldwide resources markets.

The binding term sheet is governed by England and Wales' law and requires the parties to obtain any relevant approvals, including regulatory and Governmental approvals for implementation when production commences – which is assumed to be in 2018, subject to finance and all regulatory approvals. It is subject to the execution of binding sale and purchase agreements to be completed at any time but not later than six months prior to the start of production.

## Binding Agreement with SMS Group for TIVAN® Refinery Design and Construction Finance Package

During the Quarter, TNG signed a Binding Heads of Agreement (HoA) with one of world's largest metallurgical engineering and construction companies, SMS group ("SMS"), for the implementation of the TIVAN® downstream refinery which forms part of the Mount Peake Project.

The HoA marks a new stage in the collaboration and cooperation between the two companies. SMS has been involved with TNG's Mount Peake Project since 2011, and played an integral role in the completion of the Definitive Feasibility Study (DFS) delivered in July 2015.

Under the HoA, SMS will:

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

SMS Group GmbH is of the leading global system suppliers of plants, machines and services along the entire metallurgical value chain, with a global workforce of approximately 14,000 employees. It has assisted with many aspects of the Mount Peake DFS including metallurgical testwork, flowsheet verification, financial modelling and with the final compilation of the DFS report.

## MOU with Downer for Mount Peake Development and Construction

TNG has signed a wide ranging non-binding Memorandum of Understanding with global engineering and services provider Downer EDI Limited (ASX: DOW) to participate in the development, construction and operation of the Mount Peake Project.

Under the terms of the MOU, TNG and Downer will work together in a number of areas to identify opportunities and secure Downer's involvement as a key development partner involved in the construction and operation of the Mount Peake Project. These include:

- Engineering, Procurement and Construction (EPC) of the Mount Peake processing plant at the mine site;
- Drilling, blasting, loading and haulage of minerals and waste materials at the mine site for the life-of-mine;
- Operation and maintenance of the processing plant at the mine site;
- Building, owning and operating all non-process infrastructure at the mine site; and
- Interfacing project infrastructure with existing rail facilities and the design, manufacture and maintenance of rolling stock and locomotives for use by the project.

Leveraging off the capabilities within the various Downer Group companies, Downer Mining has agreed to undertake preliminary analysis on the potential to be engaged to provide some of these activities and services.

Downer is a leading provider of services to customers in markets including mining, minerals and metals processing, transport services, technology and communication services, utilities services, engineering, construction and maintenance (EC&M) and rail. Downer is listed on the Australian Securities Exchange (ASX: DOW) and employs around 20,000 people worldwide, operating primarily in Australia and New Zealand as well as the Asia-Pacific, South America and Southern Africa.

## Environmental Impact Statement

On 11 February 2016, the Environmental Impact Statement (EIS) for the mine and processing facility for the Mount Peake Project was made available for Public Comment, representing a significant milestone in the overall project's environmental approval process.

The Mount Peake Project comprises a mine and processing facility to be located at Mount Peake, approximately 235km north-northwest of Alice Springs and 50km north-west of Ti Tree, and the Darwin TIVAN® Refinery, to be located at the Middle Arm Industrial Precinct some 16km to the south-east of Darwin.

Environmental approvals for the mine and refinery are being progressed separately, reflecting both their geographical separation (1,400 km) and the fact that significantly different environmental and social issues need to be addressed at the two locations.

The mine and refinery were referred to separately by the Northern Territory Environment Protection Authority (NT EPA), which determined that both required assessment under the Northern Territory *Environmental Assessment Act 1982* (EA Act) at the level of Environmental Impact Statement (EIS).

The mine and refinery were also separately referred to by the Commonwealth Department of the Environment under the *Environment Protection and Biodiversity Conservation Act 1999*. Both were determined to be controlled actions with assessment by accredited assessment under the EA Act.

The Mount Peake mine site and processing facility includes a proposed open-cut mining operation, waste rock dump, ore processing plant, tailings storage facility, water dams, gas-fired power station, accommodation village, site access roads, Stuart Highway underpass, rail load-out facility and borefield.

The EIS identifies and assesses the potential environmental and social impacts of the project and provides management and control measures to reduce potential risks or impacts to as low as reasonably practicable and to an acceptable level, in accordance with legislative requirements, industry standards and TNG's environment, community, and health and safety policies.

Potential impacts have been assessed for water resources (groundwater and surface water), biodiversity (flora, vegetation and fauna), air and greenhouse gasses, noise and vibration, Aboriginal and historic heritage, socio-economics, human health and safety, waste management and rehabilitation and closure. The EIS can be accessed through the TNG website:

[http://www.tngltd.com.au/sustainable\\_development/environmental\\_impact\\_assessment.phtml](http://www.tngltd.com.au/sustainable_development/environmental_impact_assessment.phtml)

The EIS was prepared by GHD, one of the world's leading environmental and resources consulting groups. TNG engaged GHD to complete all environmental permitting requirements for the integrated Mount Peake mine and refining operation (see *ASX Announcements – 17 February 2015 and 2 November 2015*). GHD has been closely involved with TNG at Mount Peake since the Pre-Feasibility Study for the project was completed in 2012.

An EIS for the Darwin Refinery is currently being prepared. Specialist studies are being undertaken to identify and assess potential environmental and social impacts and to identify management and mitigation measures where necessary. As part of this work, consultation will be undertaken with local communities and government agencies. The Refinery EIS is scheduled to be completed in late 2016, allowing overall environmental approval to be secured by early 2017.

The completion of the mine site EIS and commencement of the public exhibition period marks a major milestone for the planned integrated Mount Peake mine and refinery, and follows the completion of a number of other important elements of the project, including:

- The Feasibility Study and Financial Assessment of the Mount Peake Project (see *ASX Announcement – 31 July 2015*);
- Continuing successful progress in securing product off-take agreements (see *ASX Announcement – 7 September 2015*);
- The submission of the Notice of Intent for the Refinery (see *ASX Announcement – 2 November 2015*); and
- The recent signing of a binding agreement with global engineering firm SMS Group GmbH for the design and implementation of the TIVAN® refinery (see *ASX Announcement – 2 February 2106*).

The approvals process will continue through the next several months, as dictated by NT EPA processes, with the Mount Peake Mine approval broadly expected to occur before July 2016, followed by the Darwin Refinery approval.

## TIVAN® Process

### *TIVAN® pilot plant testwork completed with exceptional results*

As outlined in the June 2015 Quarterly Report, the pilot metallurgical testwork program for the TIVAN® downstream refinery of the Mount Peake Project has been successfully completed, delivering excellent results which have either met or exceeded expectations in all areas.

The TIVAN® testwork program was carried out at the world-class Commonwealth Scientific and Industrial Research Organisation (CSIRO) hydrometallurgical research facilities in Perth, with the appointed team of CSIRO experts providing significant input and improvements to the process before and during the trial.

The program confirmed the ability to achieve commercial vanadium recoveries of >93% and produce high-purity vanadium pentoxide (V<sub>2</sub>O<sub>5</sub>) of >99% purity, with high-purity iron oxide and titanium dioxide also recovered as valuable by-products. The programme also outlined several areas of future potential improvements which are being reviewed prior to final design.

## 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 16 April 2015*). The proposed spin-off would see TNG emerge with a 20 per cent cornerstone stake in the new company, with TNG shareholders to hold 80 per cent of the shares via an in-specie distribution.

This proposed demerger was placed on hold during the December 2015 Quarter in light of poor market conditions, and no work was conducted on these projects during the Quarter.

## CORPORATE

### Cash

TNG had total cash reserves of \$4.9 million at Quarter-end.

### Todd River Resources

The company remains committed to demerging the non-core assets and is reviewing all potential listing avenues.

Paul Burton

**Managing Director**

13 April 2016

## Tenement Schedule

The Group holds an interest in the following tenements or tenement applications at 31 March 2016:

Project	Tenements	Equity
	EL27069, EL27070, EL27941, EL29578, EL 30483, 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, EL 28694	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%
Anbali Creek	ELA31253	100%
Walabanba Hills	EL26848, EL27115	100% (Farm in agreement)
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)
Cause 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 Exploration Results is based on, and fairly represents, information and supporting documentation compiled by Exploration Manager Mr Kim Grey B.Sc. and M. Econ. Geol. Mr Grey is 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.

The information in this report that relates to Mineral Resources included in the 2012 PFS and is based is based on information compiled by Lynn Olssen who is a Member of The Australasian Institute of Mining and Metallurgy and a full time employee of Snowden Mining Industry Consultants Pty Ltd. Lynn Olssen 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 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Lynn Olssen consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to 2013 Mineral Resource Upgrade for the Mount Peake project is based on and fairly represents, information and supporting documentation compiled by Lynn Olssen who is a Member of The Australasian Institute of Mining and Metallurgy and a full time employee of Snowden Mining Industry Consultants Pty Ltd. Lynn Olssen has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which she 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'. Lynn Olssen consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Financial Analysis on Mount Peake is based on information compiled by Jeremy Peters who is a Member of The Australasian Institute of Mining and Metallurgy and a full time employee of Snowden Mining Industry Consultants Pty Ltd. Jeremy Peters 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 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Jeremy Peters consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Mr Damian Connelly, FAAusIMM, Chartered Professional (MET), tMMICA, MSME, MSAIMM was responsible for the preparation of the metallurgical test work results reported herein. Mr Connelly has sufficient experience to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of the Exploration Results, Mineral Resources and Ore Reserves. Mr Connelly consents to the inclusion in the report of the matters based on his information in the form and context in which is appears.