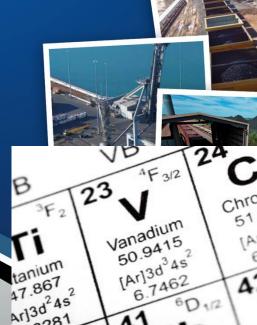
# TNG LIMITED

# ANNUAL GENERAL MEETING 2014

# **Shareholder Update**

Paul Burton, Managing Director



## Disclaimer

#### **Forward-Looking Statements**

This presentation has been prepared by TNG Ltd. This document contains background information about TNG Ltd current at the date of this presentation. The presentation is in summary form and does not purport to be all inclusive or complete. Recipients should conduct their own investigations and perform their own analysis in order to satisfy themselves as to the accuracy and completeness of the information, statements and opinions contained in this presentation.

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#### **Competent Person's Statement**

#### **JORC 2004**

The information in this report that relates to Exploration Results and Exploration Targets is based on information compiled by Paul Burton who is a Member of The Australasian Institute of Mining and Metallurgy and a Director of TNG Limited. Paul Burton 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'. Paul Burton 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 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 she 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 Financial Analysis 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 Processional (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.

#### **JORC 2012**

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 Exploration Results and Exploration Targets for Mount Peake and Mt Hardy projects are 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.

# A Transformational Year for TNG

- Significant progress on world-class Vanadium-Titanium-Iron Project
- Significant progress on TIVAN<sup>®</sup> development
- Potential offshore location advanced; progressed to site selection
- Huge upside to resource potential confirmed
- Appointment of new Executive staff ; establishment of Shanghai regional office
- World class partners engaged for offtake, funding support and development
- Potential for Stage 1 Magnetite production to produce an early cash flow
- Mineral-asset rich project portfolio in NT expanded; Graphite, Iron, Base-metals
- Demerger of base-metal assets underway new NT Company "Todd River Resources"
- Final judgment to 12 year legacy Davis Samuel Matter
- Solid cash position at year-end; market capitalization increased 190%



# Mount Peake: Flagship Project

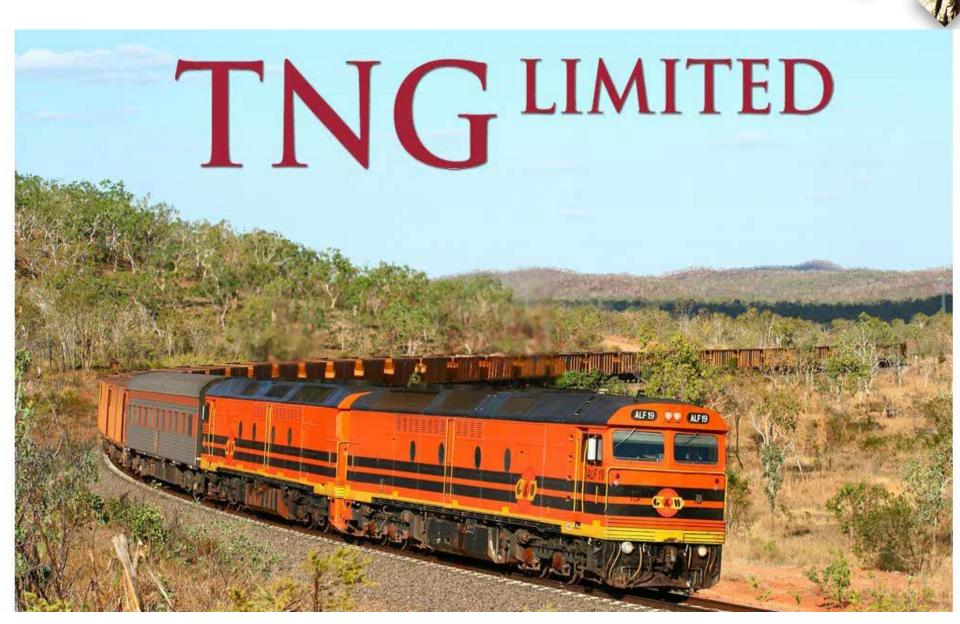
- Substantial Progress Achieved on Definitive Feasibility Study:
- EIS, Metallurgical advances, Resource/Geotech, Logistics, Mining License,
- Traditional Owner Agreement, Offtake, Site-location studies, Product market studies

## Operational Areas underway:

- 15 Tonne bulk sample fully optimized and processed for Pilot Plant
- Groundwater
- CSIRO engaged and providing significant advances
- GHD completing environmental
- METS providing engineering advice
- Offshore location explored; Malaysian government engaged; land sites proposed
- Darwin Ports and Rail operators engaged

## Expenditure to date: \$ 5.4M

## Mount Peake: Development Plan



## **Driving Development in 2014:**

Landmark Agreements with:

HYUNDAI STEEL POSCO E&C WOOJIN METALS GUNVOR (Singapore) GLOBAL PACIFIC SINOMETAL







## Vanadium in the News

19 November 2014

12 November 2014

6 October 2014

3 October 2014

4 September 2014

4 July 2014

13 June 2014

6 June 2014

5 May 2014

Vanadium market could see increased demand

Metal Bulletin - Future looks bright for FeV thanks to US auto demand

A Change in the fortune of Vanadium-redox batteries

Vanadium prices forecasted to rise with Chinese construction

Vanadium operated CellCube used as energy storage solution in NYC

AFR Article - Resources for batteries tipped to surge

<u>Metal Bulletin - TNG signs letter of intent for vanadium offtake with</u> Woojin

TNG on the march as Vanadium market heats up

A Giant Leap for Energy Storage

To view complete articles go to: http://www.tngltd.com.au/investor centre/media articles.phtml







# **Corporate Overview**

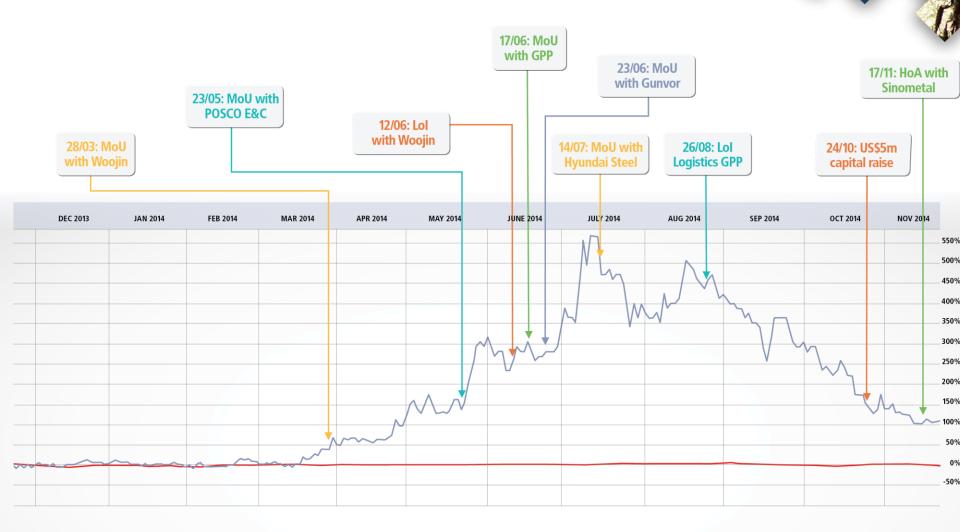
Major Shareholders	
WWB Investments Pty Ltd	10.62%
Ao-Zhong International Mineral Resources	10.22%
Aosu Investment & Development Co	9.24%
(Directors along with their related companies hold approximately 13% of issued capital)	
Board of Directors	

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

Key Corporate and Financial Data	
ASX code:	TNG
Market capitalization (at 9c):	\$54M
Shares on issue:	609M
Cash: (End November)	\$8.1M
Auditors: KPMG	
Lawyers: Clifford Chance	

Exercise of options : 31 July 2015		
ASX code:	TNGO	
Options on issue (approx):	60M	
Cash on exercise (approx):	\$4.9M	

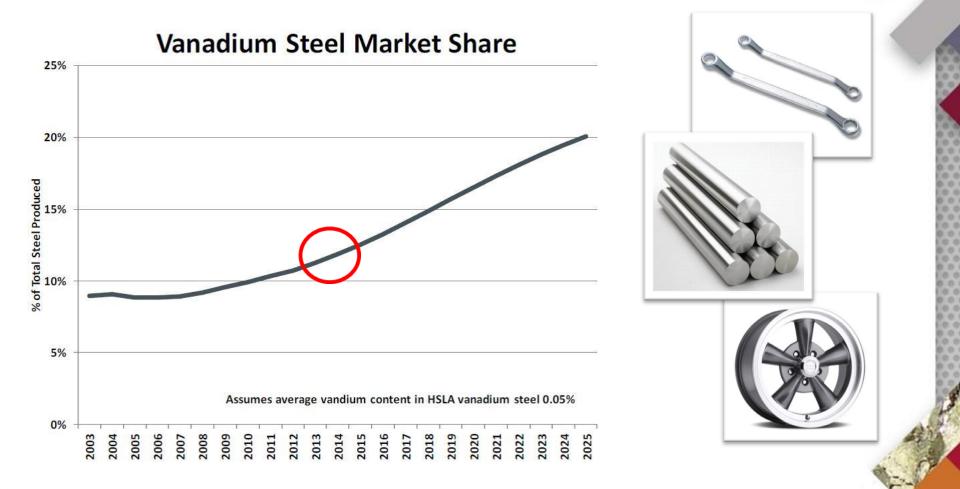
## TNG: A Year of Growth and Achievment



	Cash	Share Price	Market Cap
November 2013	\$6.0 million	\$0.04	\$19 million
November 2014	\$8.1 million	\$0.09	\$55 million

## Fundamentals of Vanadium demand

6% increase forecast in Vanadium for Steel, year on year



Source: Roskill

## Vanadium Supply:

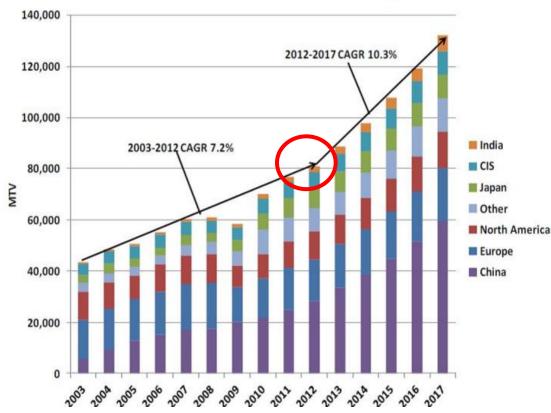
Forecast to increase by 30% in 2017 to >120,000 tonnes

# Global Vanadium consumption 90,000 tonnes (source: Roskill)

## Current producers:

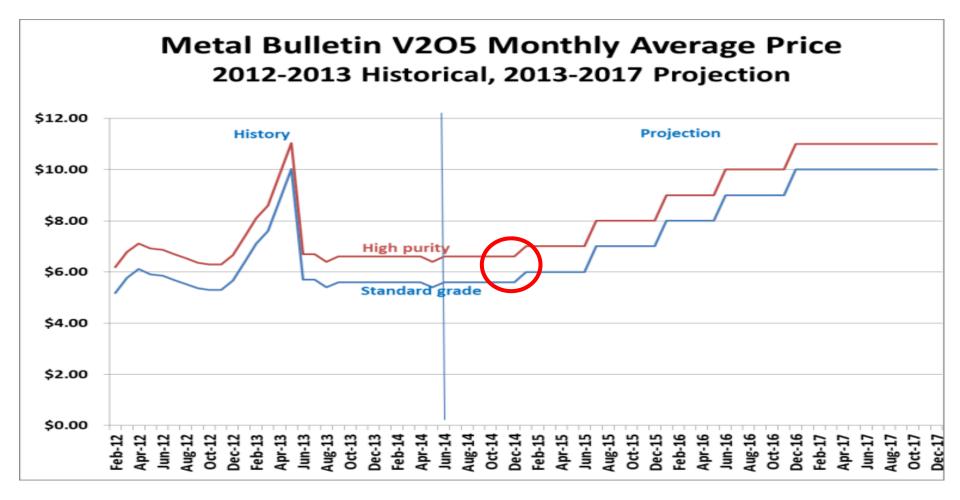
China – 15% export tarrif on V205 S Africa – depleting resources Russia – country Risk S America – Largo Resources

## **Global Vanadium Consumption**



Current Price of  $V_2O_5$  approx. US\$6/lb  $V_2O_5$  (approx. USD \$14,000 / Tonne)

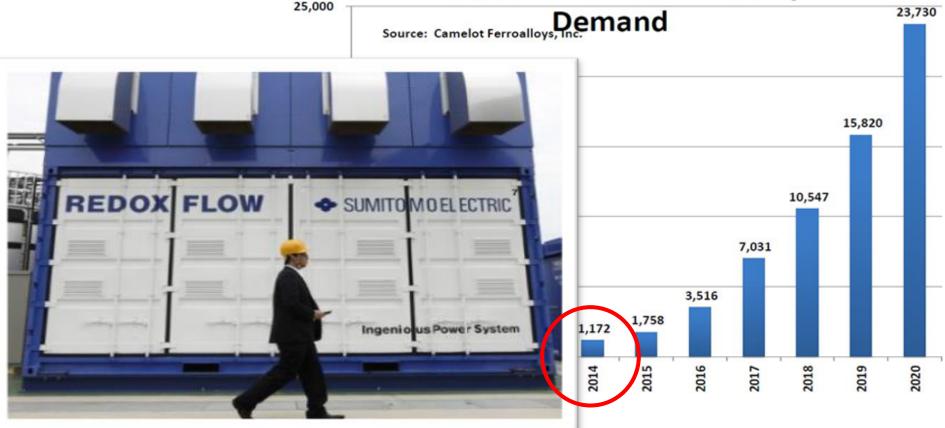
Forecast to double by 2017 to US\$ > 25-30,000 / Tonne



Increasing use in batteries and high technology metals

Batteries and storage cells could add exponential demand and growth!





## TNG:

To be the worlds lowest cost and highest grade producer of vanadium pentoxide

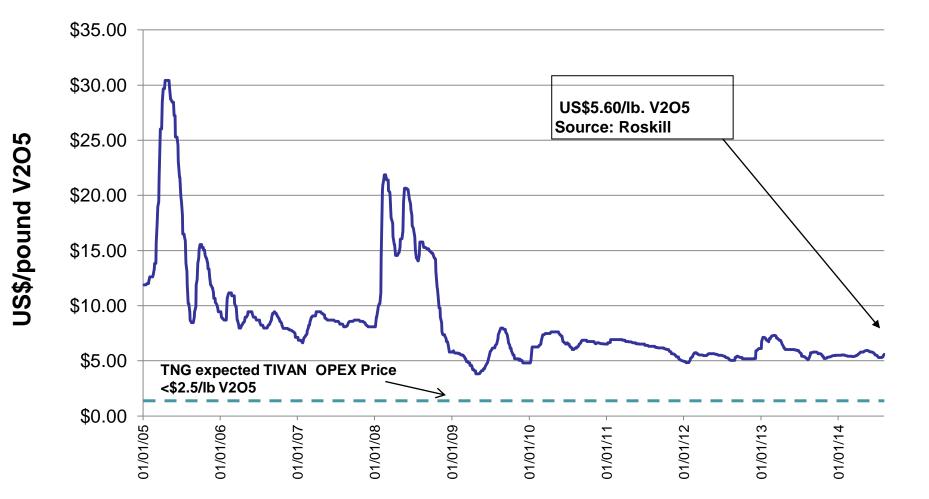
- TIVAN expected to produce 1 tonne of high purity V<sub>2</sub>0<sub>5</sub> for approximately \$5000 USD Equivalent to <\$2.5USD / IIb</p>
- V2O5 with over 99% purity is the key raw material to Vanadium Redox Flow Batteries (VRB).
- Combining VRB energy storage with renewable energy is the goal





## TIVAN's Operating Cost

HISTORICAL V205 PRICE AND TNG'S FORECAST PRODUCTION COST



## Mount Project: Key Metrics Remain positive

Mine life:	20 years
Total revenue (LOM):	A\$13.6 billion
NPV:	A\$2.6 billion
Net annual cash flow:	A\$339M
IRR Pre-tax:	38%
CAPEX :	\$ 560M AUD

## Exchange rate: USD\$1:AUD\$1

Metal Purity	
V <sub>2</sub> O <sub>5</sub>	99%
TiO <sub>2</sub>	55%
Fe <sub>2</sub> O <sub>3</sub>	99.9%
Total Metal Productio	Tonnes

Productio	
V <sub>2</sub> O <sub>5</sub>	236,000
TiO <sub>2</sub>	5,822,000
Fe <sub>2</sub> O <sub>3</sub>	17,400,000

### Annual Production (at 5Mt / annum )

11,000T V<sub>2</sub>0<sub>5</sub> 290,000T TiO<sub>2</sub>

900,000T Fe<sub>2</sub>0<sub>3</sub>.

Supporting data in Appendix. Refer ASX announcements 12/7/2012;13/02/2013 Source: Refer ASX announcements 09/092013 ;19/09/13

## Adding Value at Mount Peake

## Graphite

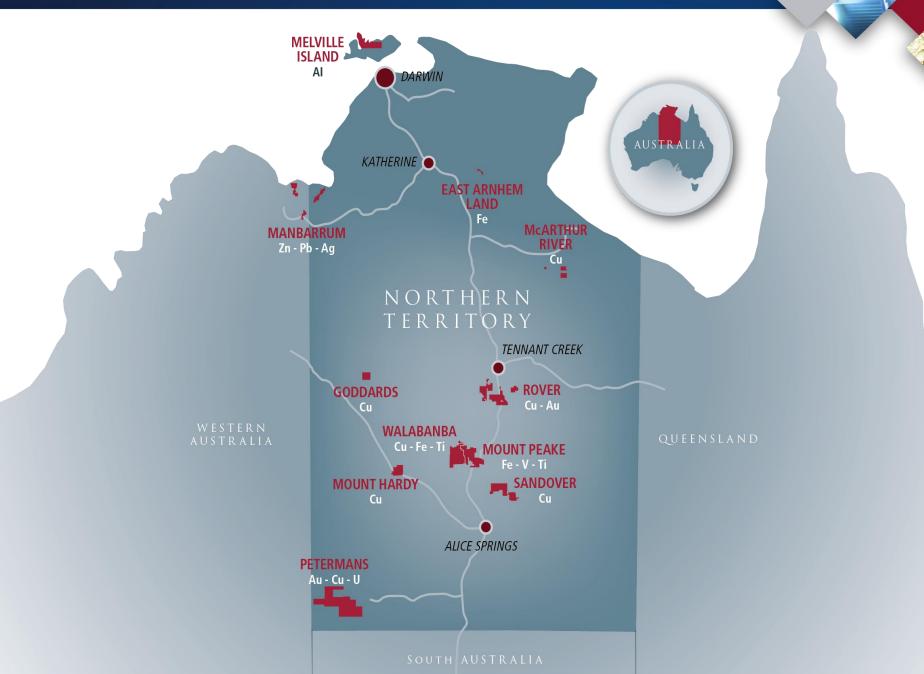
- 5km from Mount Peake resource
- 40m intercept of continuous graphite mineralisation
- Potential for an extensive resource of graphite mineralisation
- Very large coincident EM target 1km x 0.5km
- Analytical and Met test work results awaited

(Refer ASX release 21 July 2014, 21 October 2010 20 August 2014, 17 September 2014)

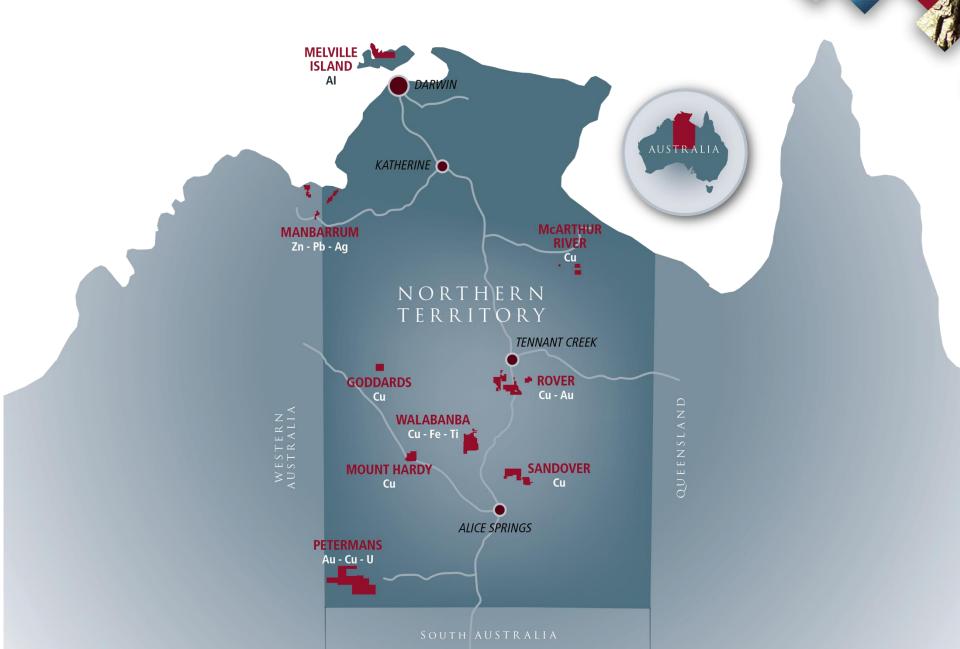




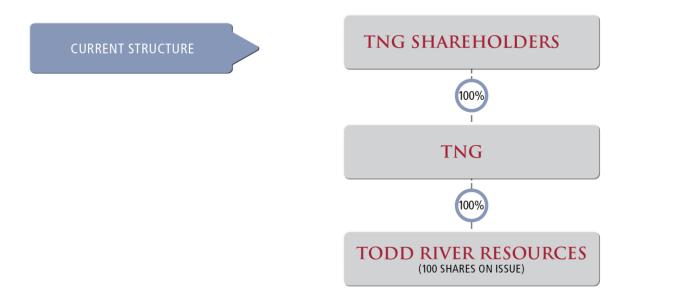
## YOUR PROJECTS in the NT

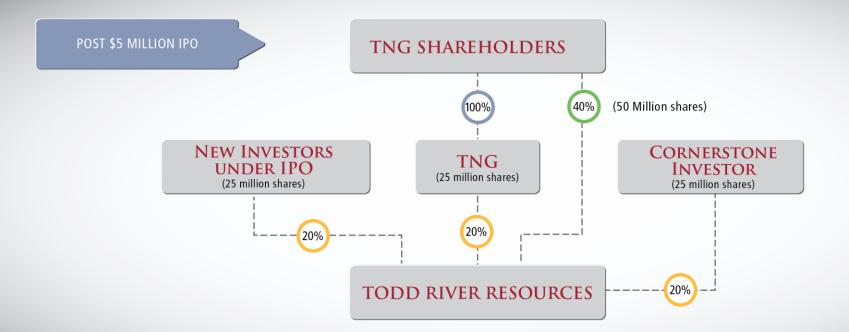


## **Projects for Demerger**



## **Proposed Structure of TODD RIVER**





Complete DFS

- Complete commercialization of TIVAN®
- Progress to Binding agreements for

OFFTAKE, EPCM, POWER SUPPLY, LOGISTICS, MINING

- Complete TIVAN® site selection
- Appointment of Executive staff for Development and Mining
- IPO "Todd River Resources"

Launch development of world-class Mount Peake Project, demerge NT base metal assets, build quality long-term strategic metals business







# TNG LIMITED

ASX: TNG

# **THANK YOU**

**Paul Burton – Managing Director** 

## Appendix – Supporting Data

#### Mineral Resources and Exploration Targets:

The Pre-Feasibility Study (PFS) is based on the updated Indicated and Inferred Resource for Mount Peake published on 12 October 2011 of 160Mt @ 0.3% V2O5, 5% TiO2 and 23% Fe (Indicated 110Mt @ 0.29% V2O5, 5.3% TiO2 and 23% Fe; Inferred 48Mt @ 0.24% V2O5, 4.5% TiO2 and 21% Fe). The Pre-Feasibility assumptions the financial model is based on mining 75.9 Mt of the 160 Mt Mineral Resource Of this amount 20.4% is from the Inferred Mineral Resource category. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

In addition to this resource, TNG has published an Exploration Target of 500-700Mt grading 0.2-0.4% V2O5 and 25-35% Fe. The potential quantity and grade is conceptual in nature, there has been insufficient exploration to define a Mineral Resource and that it is uncertain if further exploration will result in the determination of a Mineral Resource.

### **Pre-Feasibility Study:**

Reference to the PFS is to the ASX announcement 9 July 2012, which was prepared based on the Company's presently delineated mineral resource estimate. Any investment decision should be considered based on this information. Full details of the Mount Peake Pre-Feasibility Study are available in the Company's ASX Announcements 9 July 2012 and 19 September 2013. Mining is based on the PFS financial analysis which includes 20.4% of Inferred Resource material (there is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised).

### Key assumptions of 2012 PFS include:

- Operating costs and pit slope angles related to mining estimated to a Pre-Feasibility Study level (±25%)
- V<sub>2</sub>O<sub>5</sub> price of US\$20,305/tonne (> 90% grade)
- TiO<sub>2</sub> price of US\$400/tonne (> 55% grade)
- Fe<sub>2</sub>O<sub>3</sub> price of US\$200/tonne (> 69% grade)
- Royalty rate of 2.5% per tonne of plant feed
- Discount rate of 8%
- AUD\$/US\$ exchange rate of 1 US\$ = 1AUD\$

### **Nett Annual Cash Flow:**

Is defined as the average discounted cash flow per annum after all CAPEX (pre-strip CAPEX, initial CAPEX, and expansion CAPEX) has been deducted, but ignores cost or source of capital, hedging, tax, depreciation, rehabilitation and salvage.