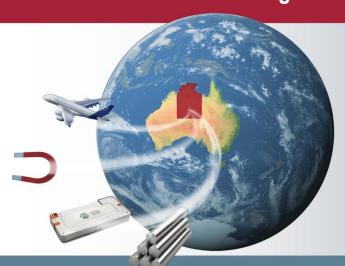
## TNGLIMITED



# Mount Peake A world class strategic metals project





Vanadium and Titanium outlook
April 2016

Paul Vollant GM Business Development

#### **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.

This presentation is for information purposes only. Neither this presentation nor the information contained in it constitutes an offer, invitation, solicitation or recommendation in relation to the purchase or sale of TNG Ltd shares in any jurisdiction. This presentation may not be distributed in any jurisdiction except in accordance with the legal requirements applicable in such jurisdiction. Recipients should inform themselves of the restrictions that apply in their own jurisdiction. A failure to do so may result in a violation of securities laws in such jurisdiction.

This presentation does not constitute investment advice and has been prepared without taking into account the recipient's investment objectives, financial circumstances or particular needs and the opinions and recommendations in this presentation are not intended to represent recommendations of particular investments to particular persons. Recipients should seek professional advice when deciding if an investment is appropriate. All securities transactions involve risks, which include (among others) the risk of adverse or unanticipated market, financial or political developments. To the fullest extent permitted by law, TNG Ltd, its officers, employees, agents and advisers do not make any representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of any information, statements, opinions, estimates, forecasts or other representations contained in this presentation. No responsibility for any errors or omissions from this presentation arising out of negligence or otherwise is accepted. This presentation may include forward looking statements. Forward looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of TNG Ltd. Actual values, results or events may be materially different to those expressed or implied in this presentation.

#### **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.tnqltd.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.

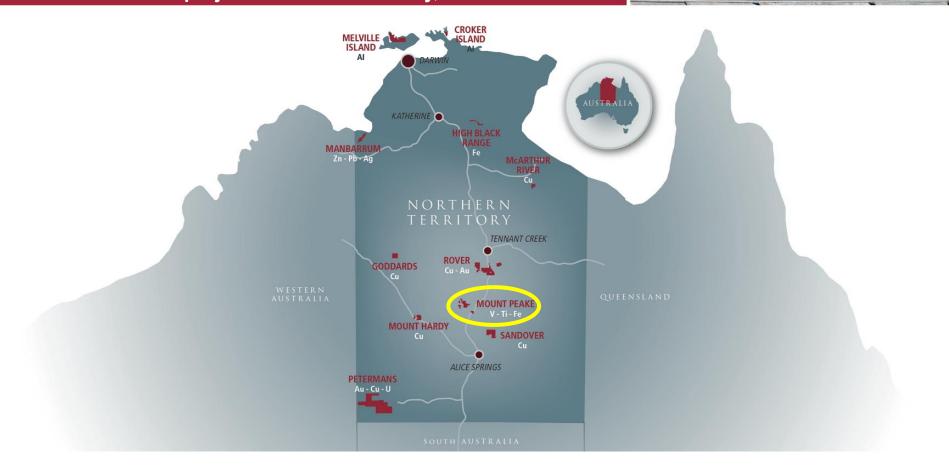
The information in this report that relates to the Mount Peake Ore Reserve estimates is extracted from an ASX Announcement dated 31 July 2015, (see ASX Announcement – 31 July 2015, "Mount Peake Feasibility Study Confirms a World-Class Project", www.tngltd.com.au and www.asc.com.au) and was completed 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 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.

#### **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.

## Mount Peake project - Northern Territory, Australia



## **Mount Peake Definitive Feasibility Study – July 2015**

Key Consultants	
Feasibility Study leaders	Snowden Mining Group
Advisors: Feasibility; metallurgical; plant design	SMS Siemag
Metallurgical testwork and flowsheet design:	CSIRO (Perth), METS, ALS Ammtec, BureauVeritas, Outotec
Environmental, hydrology and Environmental Impact Statement:	GHD
Engineering, mine plant design:	Como Engineers
Mine and Infrastructure:	McMahon Services

















## **Feasibility Study Results- Key Metrics**

Refer ASX announcement 31 July 2015.

Technically and Financially Robust project	
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
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

#### **Mount Peake Products**

## **Diversified revenue stream**

- High purity Vanadium Pentoxide (V2O5)
- High Purity Titanium Dioxide feed and pigment (TiO2)
- High purity Iron Oxide and Pig Iron

Binding Life of Mine Offtake Agreements in place or under negotiation for all products

#### Vanadium

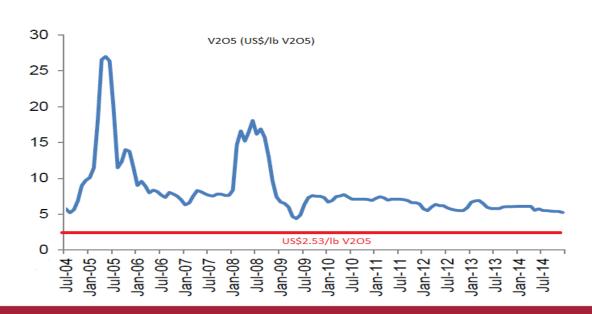
#### **Vanadium Pentoxide (V2O5)**

World's demand: 100,000tpa

TNG's nameplate production: 17,560tpa (17.5% of world's demand)

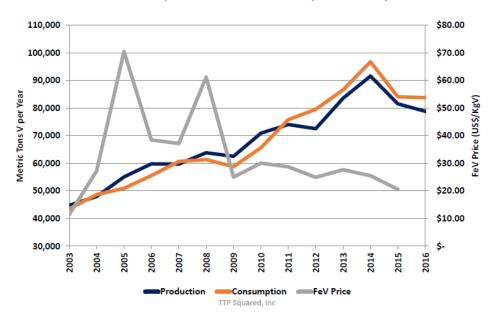
Main usage: Steel, non-ferrous alloys, chemicals, catalysts and energy storage (VRB)

Cost of production approx. US\$2.5/lb V205 (red line below)

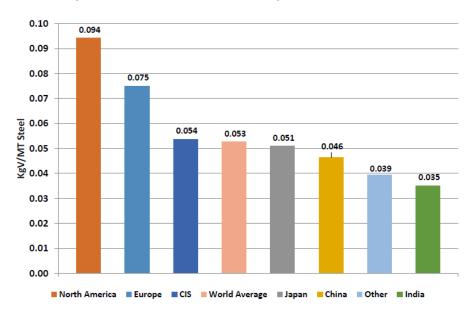


#### **Vanadium – Market overview**

#### Vanadium production, consumption and price



#### **Specific Vanadium Consumption Rates 2015**



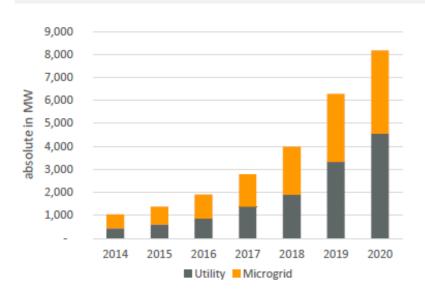
"Roskill expects demand to increase to about 131,000tpa of vanadium by 2025, a CAGR of 3.1% from 2014."

Source: TTP Squared, Inc and Roskill

## Vanadium Redox Flow Batteries (VRB)

#### Market Forecast - Development of Power on the Energy Storage Market

- Industry CAGR 2015-2020: 30.8%
- Stronger growth in utility scale from 2018 onwards
- US\$6 billions market opportunity in 2020





Sources: Gildemeister, Pike Research, Navigant Research, Lux Research, Roland Berger, IHS, SNL Power

#### **Titanium**

#### **Titanium dioxide pigment (TiO2)**

World's demand: 6,600,000tpa

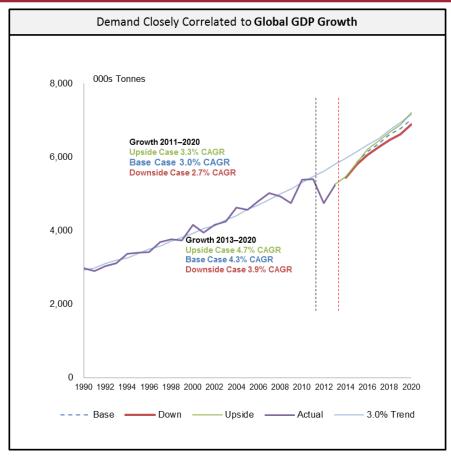
TNG's nameplate production: 236,000tpa (3.5% of world's demand)

Main usage: Paint, plastics, paper and inks

Cost of production approx US\$1,380/t (red line below)

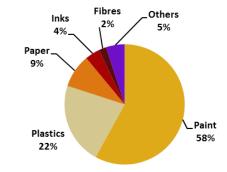


## TiO2 – Market overview



Source: Global Insight GDP data, IBMA TiO<sub>2</sub> demand data, Millennium Chemicals, Ti-Insights

#### **Titanium Pigment Consumption by End-use Sector**



Source: Kenmare Estimates

Source: TiPMC Solutions

## Pig iron

#### Pig Iron

World's demand: 1.2 billion tpa

TNG's nameplate production: 637,000tpa (0.05% of world's demand)

Main usage: Steel making

Cost of production approx US\$137/t (red line below)



### **Summary**

#### TNG is building a world class strategic metals project

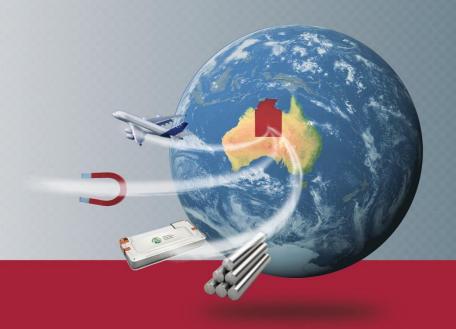
- Large Resource with Key Infrastructure in place
- Diversified revenue with 3 products stream
- Outlook for Vanadium and Titanium are extremely robust
- Offtake agreements in place and under negotiation for all products
- Tier 1 engineering partners engaged



# TNG LIMITED

**ASX: TNG** 

www.tngltd.com.au



## **THANK YOU**

**Paul Vollant – General Manager Business Development**