

18 November 2019

ANNUAL GENERAL MEETING CHAIRMAN'S ADDRESS & MANAGING DIRECTOR'S PRESENTATION

TNG Limited (ASX: TNG) ("TNG" or the "Company") provides the attached Chairman's Address and Managing Director's presentation to be made at the Company's 2019 Annual General Meeting to be held today, 18 November 2019, at 11:00am (AWST).

On behalf of TNG Limited

Jason Giltay

Company Secretary

Inquiries:

Jason Giltay Company Secretary

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Chairman's Address, 2019 Annual General Meeting

The last 12 months has been another significant period of work and development for TNG and advancement of the Mount Peake Project.

I would like to take this opportunity to thank Paul Burton, the management team, staff and my fellow directors for their hard work and commitment during an extremely busy and successful year for TNG.

TNG has achieved a number of significant highlights over the past 12 months since the last AGM which have furthered the Mount Peake Project including:

- The SMS group making great inroads into the Front End Engineering and Design study; this study covers both the mine site Beneficiation Plant and the Darwin Processing Facility plants;
- The completion of an optimised delivery strategy more suitable to project financing being considered by KfW IPEX;
- The submission of the Environmental Impact Statement for the Darwin Processing plant site;
- Completion of all permitting for the Mount Peake mine and concentrator site;
- Submission of the Mining Management Plan for the Mount Peake mine site;
- Successfully addressing the issues raised by shareholders at the 2018 AGM in relation to the appointment of an independent Chair and the first strike on the remuneration report;
- The completion of a highly successful capital raising and rights issue which has resulted in the introduction of new global institutional investors to the Company's register;
- The Company is in a strong financial position following successful capital raisings with cash of over \$20 million that was recently supplemented with \$2.18 million as a refunded tax offset for research and development;
- The recruitment of a number of highly experienced industry professionals as we build up a solid, experienced team for delivery of the project and prepare operational readiness;
- Submission to NAIF for consideration of funding; and
- Land acquisition proposal submitted to the NT Government.

We remain fully focused on advancing our world class Mount Peake Project to reward your support in 2020.

John Elkington Chairman



ANNUAL GENERAL MEETING 2019 Company Presentation

PAUL BURTON – MANAGING DIRECTOR & CEO

ASX: TNG

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Mount Peake: Key Milestones Achieved



LAST 12 MONTHS

- kfW IPEX-Bank GmbH mandated
- Access Authorities granted following execution of the Native Title Agreement and grant of the Mount Peake Mineral Leases
- Appointment of **Mr John Elkington** as TNG Independent Chairman
- > Submission of the **Mining Management Plan** for the Mount Peake mine site
- > Submission of the **Environmental Impact Statement** for the Darwin TIVAN® Processing Facility
- Execution of a binding life-of-mine off-take and marketing agreement with **DKSH** for the titanium dioxide pigment
- > Engagement of the industry-leading German technology provider **Ti-Cons** for the supply of a technology package for a TiO₂ pigment plant
- Execution of a Binding of Heads of Agreement with **Genesee & Wyoming Australia** for rail haulage services
- > Optimisation of the Mount Peake delivery strategy and financial review of revised mine schedule
- Extension of the Company's intellectual property protection with the granting of TIVAN® related patent in Vietnam and Europe
- Completion of a \$15 million capital raising and rights issue, resulting in the introduction of new global institutional investors
- Strengthening of the mining, processing and project development team with the appointment of highly accomplished industry professionals
- Significant progress on the FEED (front-end engineering and design) for the Mount Peake Project by SMS group

Simple Concept : One Mine

TNG

THREE HIGH VALUE, HIGH PURITY PRODUCTS

Today, our advancing and fast developing world relies on modern materials

- > Titanium Dioxide Pigments
- Vanadium Pentoxide
- > Iron Oxide



Mount Peake Products

TNG

PRODUCT SUMMARY

1. Titanium Dioxide Pigment (TiO ₂)		
World demand	6,700,000tpa	
TNG's average production	100,000tpa (1.5% of world demand)	
Main usage	Paint, plastics, paper and inks	



2. Vanadium Pentoxide (V ₂ O ₅)	
World demand	160,000tpa (equivalent of 90,000tpa V units)
TNG's average production	6,000tpa (3.8% of world demand)
Main usage	Steel, superalloys, chemicals, catalysts and energy storage (VRB)



3. Iron Oxide Fines (Fe ₂ O ₃)	
World demand	1.16 billion tpa (seaborne market)
TNG's average production	500,000tpa (0.04% of world demand)
Main usage	Steelmaking



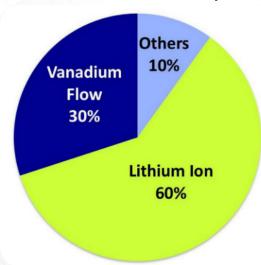
Vanadium Redox Flow Batteries - VRFB



THE FUTURE OF ENERGY STORAGE

Substantial Storage Market

Dominated by V-Flow and Li-Ion US\$50-100 Billion by 2025*



TNG has successfully produced high purity, commercial-grade, Vanadium Electrolyte



^{*} Source: Wattjoule

Processing Technology TIVAN®





CONVENTIONAL PROCESS = 1 PRODUCT

Titanomagnetite

Pyrometallurgical
Process

V₂O₅ Flake
or FeV

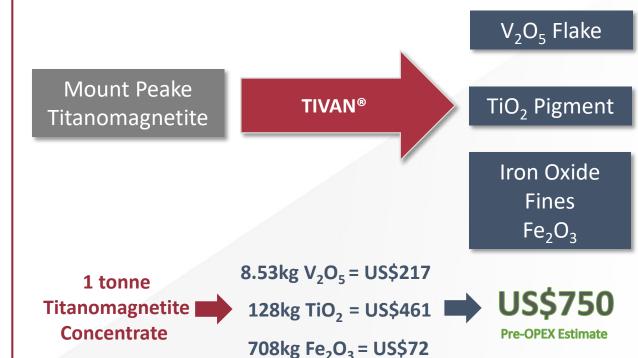
1 tonne

Titanomagnetite 6.93kg V₂O₅ = US\$176

Concentrate

US\$176
Pre-OPEX Estimate

TIVAN® PROCESS = 3 PRODUCTS



Notes

FS Project Economics

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A SINGLE-STAGE 2 MTPA DEVELOPMENT

Operational Metrics	
Mine life	37 years
Ore feed	2 Mtpa
Operating cost per tonne processed	A\$210
Magnetite concentrate produced	700,000 tpa
V ₂ O ₅ produced	6,000 tpa
Titanium pigment produced	100,000 tpa
Fe ₂ O ₃ produced	500,000 tpa

Financial Metrics	
Pre-tax NPV _{8%}	A\$2.8 billion
IRR pre-tax	33%
Payback period	2.8 years
Pre-tax net annual operating cash flow	A\$359 million
Pre-production CAPEX	A\$824 million

Notes

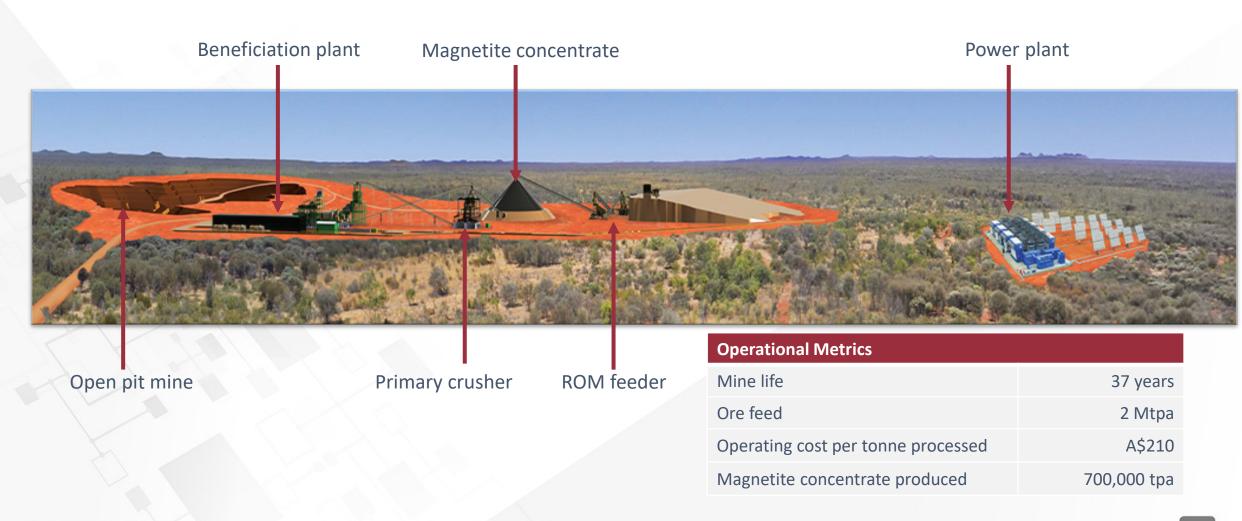
Updated FEED Model assumptions include long-term A\$:US\$ exchange rate of 0.70; updated long-term price assumptions of US\$25,400/tonne for V_2O_5 (US\$11.50/lb), US\$3,600.00/t TiO₂ pigment and US\$102.00/tonne for high grade Fe_2O_3 . Includes lease repayments

ALL prices and outcomes are indicative only while FEED is progressing and is an interim study, not final.

Mount Peake Beneficiation

TNG

DEFINITIVE FEASIBILITY STUDY LAYOUT



Logistics Mapping

OPTIMISED RAIL HAULAGE STRATEGY



Mine Fleet transport the Ore to the ROM Pad



Magnetite Concentrate is railed to Darwin using existing rail infrastructure

Three high qualityhigh purity products are produced

Three products are shipped to customers via **Darwin East Arm Wharf**



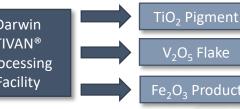
























Find out more at tngltd.com.au

Downstream Processing in Darwin, NT

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EXCELLENT FACILITIES

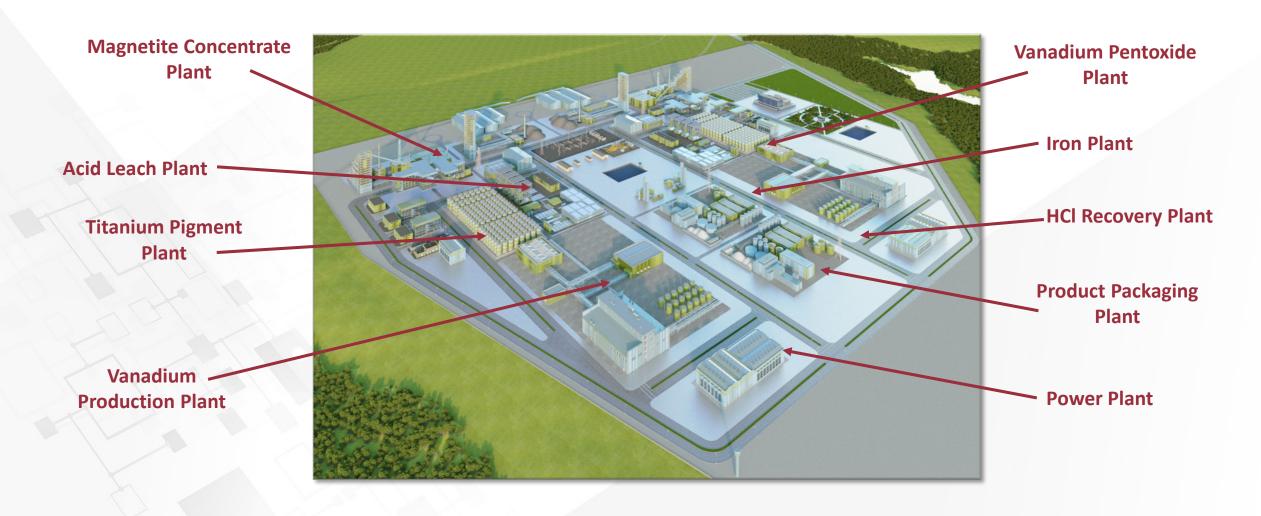
- ► Middle Arm Peninsula of Darwin Harbour
- Close to railway line from Mount Peake
- ➤ Power generation and grid network capacity
- Gas supply available
- Concentrate storage & transport logistics
- Raw water supply and Infrastructure
- ► Port capacity and configuration
- ➤ Supportive NT government



Processing Technology TIVAN®

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GERMAN TECHNOLOGY



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Titanium Dioxide Pigment - TiO₂

PROCESSING ROUTES

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- Older sulphate route uses H₂SO₄
- Typical sulphate feed is Ilmenite TiO₂ 52%, FeO 47%
- Iron waste causing environmental issues
- More modern chloride route uses Cl₂
- > Typical chloride feed is rutile TiO₂ 90%, FeO 10%
- FeO 2.3% MAJOR ADVANTAGE



Vanadium Redox Flow Batteries - VRFB

TNG

THE FUTURE OF ENERGY STORAGE

Advantages of VRFB compared to Li-Ion batteries

- Better for large scale storage and for longduration applications (>6 h)
- More cost effective
- ➤ Longer life cycle 20 yrs vs 5-8 yrs (LIB)
- Lower degradation
- Simpler maintenance, safer



Source: Wattjoule

Iron Oxide - Fe₂O₃

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TNG PRODUCTION AND OFFTAKE

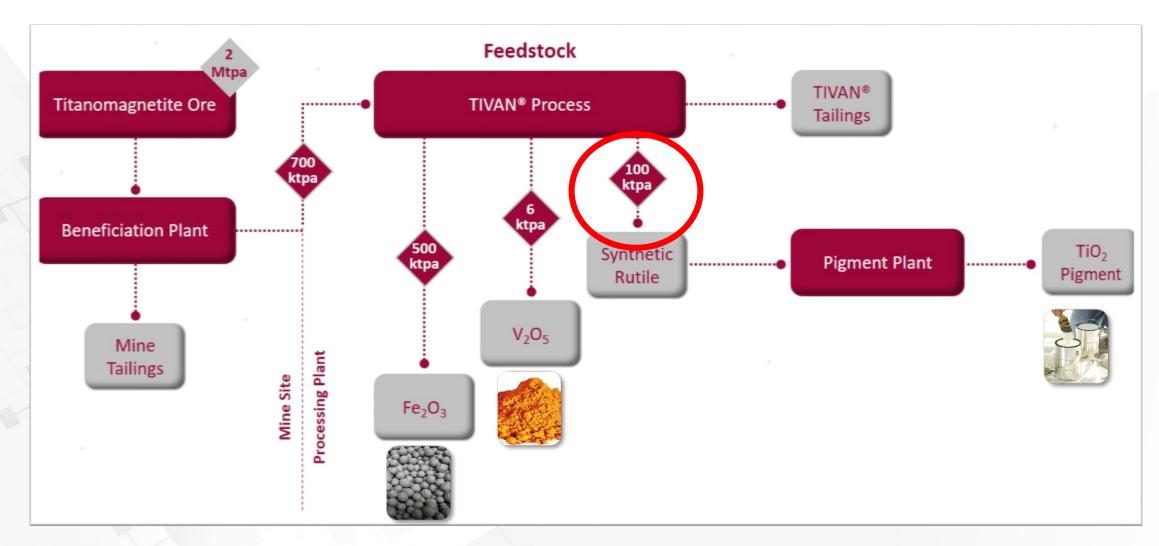
- TNG production of 500,000 tpa iron oxide fines
- > 0.04% of current seaborne demand for iron oxide fines
- Fe content over 64.4%, strong premium over the benchmark 62% grade
- Malaysia and Indonesia easily absorb TNG's production
- Reduce logistical costs
- Negotiations are underway with potential off-take partners



Vertical Integration Plan

TNG

FROM PRODUCTION TO MARKET

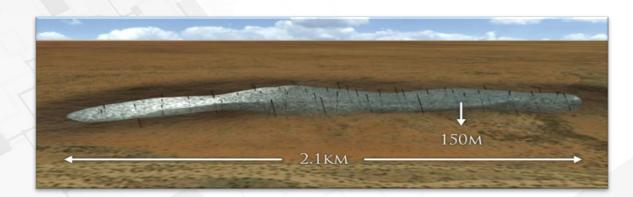


Mount Peake Deposit

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LARGEST VANADIUM DEPOSIT IN AUSTRALIA

- ➤ Typical titano-magnetite composition
- Flat ore body with low strip ratio (0.9 to 1)
- Two high grade vanadium pits
- Mining via a conventional open pit operation
- >37 year mine life

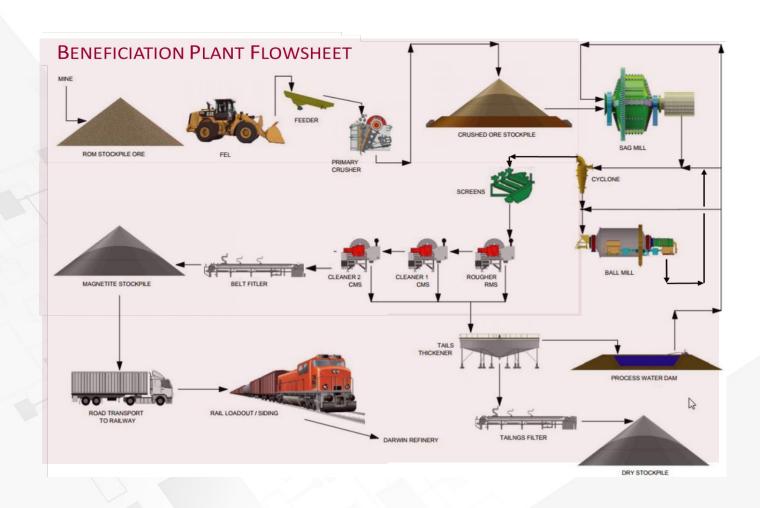




Mount Peake Beneficiation

DEFINITIVE FEASIBILITY STUDY DESIGN





- 1. Open pit mining & primary crushing
- 2. SAG & ball milling
- 3. Screening and magnetic separation
- 4. Tailings management
- 5. Titano-magnetite to Darwin

Processing Technology TIVAN®

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- Extraction of V, Ti and Fe from titano-magnetite
- ➤SMS Group (Germany) has developed TIVAN® technology with TNG
- SMS will be the EPC contractor
- Fixed price, turn key delivery
- Throughput, process, product guarantee

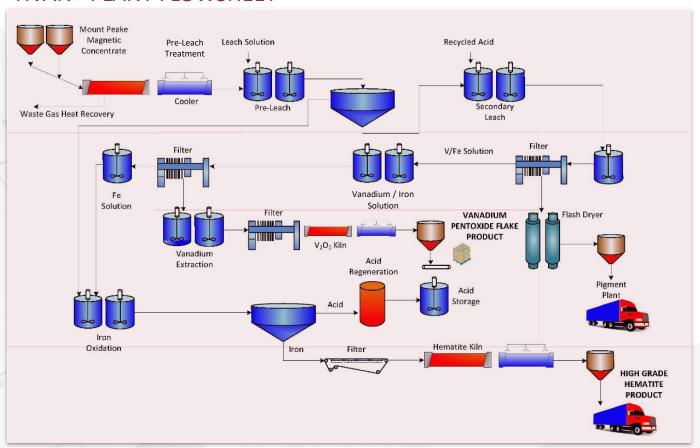


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TIVAN® PLANT FLOWSHEET



- 1. Pre-leach treatment
- 2. Acid leach
- 3. Non soluble Ti is filtered & dried
- 4. Filtration of vanadium
- 5. Vanadium pentoxide production
- 6. Iron removal and Fe production
- 7. Acid re-generation and recovery

Updated optimised process plant flowsheet for TIVAN® products

Find out more at **tngltd.com.au**

Pigment Processing Technology Ti-Cons GmbH



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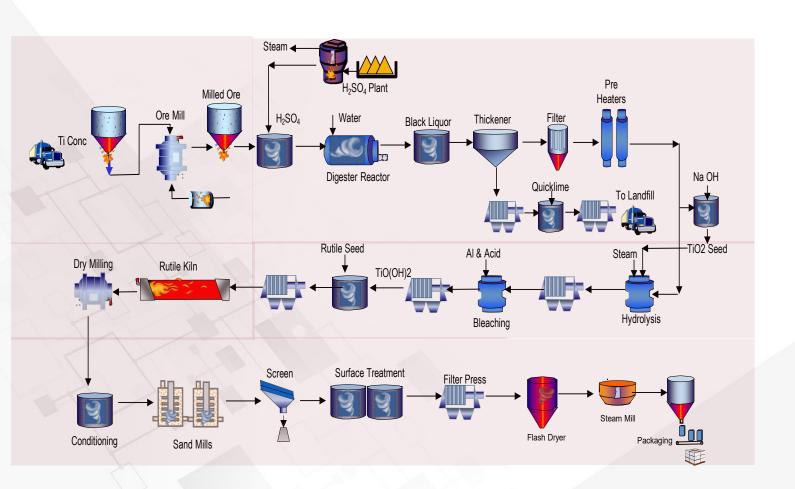
- ➤ Technology provider
- Technology package for titanium pigment production
- Built sulphate plants in Henan, Yunan
- Contracted by SMS Group
- >SMS will be the EPC contractor
- Fixed price, turn key delivery
- Throughput, process, product guarantee



Pigment Processing Technology Ti-Cons GmbH



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- 1. Preparation of Ti feedstock
- 2. Sulphation of Ti feedstock
- 3. Hydrolysis to Ti Hydroxide
- 4. Calcination to Rutile
- 5. Milling and surface treatment
- 6. Micronising and packaging

Pigment Processing Technology Ti-Cons GmbH



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	Sulphate	Chloride	TNG
Raw material cost (\$/ton of TiO ₂ feed)	Low Ilmenite	High Rutile	Very Low Tivan
TiO ₂ final product	Medium purity	High purity	High purity
Capital expenditure	High	Medium	High
Operational costs	Medium	High	Medium
Environmental	High	Medium	Low
Flexibility in processing raw material	Limited (Fe, Cr)	Limited (CaO, MgO, size)	Tivan feedstock
Process Condition	Medium temp. (140-180 °C)	Very High temp. (800-1,400 °C)	Medium temp. (140-180°C)
TiO ₂ Pigment production	Rutile/Anatase	Rutile	Rutile/Anatase

Find out more at **tngltd.com.au**

Project Funding Partnerships

GERMAN BANK MANDATED



- ➤ Debt funding mandate awarded
- >KfW IPEX-BANK to raise up to US\$600m (AU\$850m)
- Export credit finance
- ➤ Specialist Financier
- Extensive expertise in Metals & Mining



Corporate Snapshot

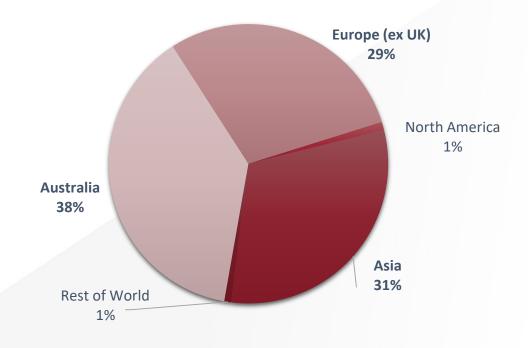


TOP SHAREHOLDERS	
DEUTSCHE BALATON & ASSOCIATES* German Investment Fund	12.28%
VIMSON GROUP Indian iron ore mining conglomerate	9.84%
WWB INVESTMENTS P/L Private investor	7.47%
AOSU INVESTMENT & DEVELOPMENT CO Chinese Private Company	5.38%
SMS INVESTMENTS SA Mount Peake development partner	1.31%

CORPORATE	DATA
ASX code	TNG
Cash as at 30 Sep 19	\$20.8 million
Shares on issue	1.12 billion
Market capitalisation (at 9c)	\$101.2 million

TOP 50 SHAREHOLDERS BY LOCATION

Top 50 = 51% of TNG Total Issued Capital



^{*} It includes DELPHI, the major shareholder of Deutsche Balaton, and Sparta AG, a subsidiary of Deutsche Balaton.

Mount Peake: The Path Ahead

EXPECTED NEXT STEPS



- ➤ Full permitting for the Darwin TIVAN® Processing Facility
- > Appointment of equity advisors
- Completion of final mine design and FEED for all process plants, leading to EPC tender process
- > Equipment tender process
- > Appointment of EPC contractor
- Establish full Project Development team
- > TNG Board FID
- Commencement of 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.
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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 Results", 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.

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 11 September 2019 called "Optimised Delivery Strategy for Mount Peake" available on the Company's website on www.tngltd.com.au. The Company confirms that all material assumptions underpinning the production target and financial information set out in the announcement released on 11 September 2019 continue to apply and have not materially changed.

Find out more at **tngltd.com.au**



BUILDING A GLOBAL STRATEGIC METALS COMPANY

PAUL BURTON – MANAGING DIRECTOR & CEO

ASX: TNG

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