

MOUNT PEAKE PROJECT: DEVELOPMENT UPDATE

Key Points

- TNG continues to advance engineering, permitting, development planning and commercial work streams for its flagship 100%-owned critical and battery minerals project, the Mount Peake Vanadium-Titanium-Iron Project (“Mount Peake Project” or “Project”), in the Northern Territory.
- Work undertaken by Clough Projects (Clough) is progressing Stage 2 of the design and value engineering for the integrated mining and processing operation at the Mount Peake mine site (“Mine Site”), together with TNG’s Project Team and SMS group.
- The value engineering and design stage is progressing on schedule and is expected to be completed by Clough by the second quarter of 2022.
- SMS is working to complete any outstanding validation testwork that had been delayed last year due the global COVID-19 restrictions.
- Hydrogen reduction testwork is currently underway as a suitable replacement for the solid reductant in the current flowsheet. This will further reduce the carbon footprint of the Mount Peake Project and put TNG in a strong position to meet the zero emissions target by 2050.
- Non-process infrastructure requirements for the integration of the Project at the Mine Site are also well advanced and potential Build Own Operate and Build Own Operate Transfer (“BOO/BOOT” proponents are being targeted).
- A program of water bore drilling is planned to commence in early April in order to confirm additional water supply for the integrated Mount Peake Project mining operation, beneficiation plant and TIVAN® processing facility.
- TNG has progressed discussions with its major contractors, including SMS and Clough, to revise and update the project execution model. This includes a detailed review of the contracting strategy for delivery of both the processing plants and NPI, early contractor involvement strategies, BOO/BOOT” planning, and the project management structure.
- The Company is advancing on a number of technical fronts in order to obtain the information required for the submission of a revised environmental impact report for the integrated Project, following consultation with the Northern Territory Environmental Protection Authority (“NT EPA”).
- **Commodity Markets:** Global demand for titanium dioxide and vanadium pentoxide continue to be strong, with market prices expected to increase during the year.

Australian resource and mineral processing technology company TNG Limited (ASX: TNG) (“TNG” or the “Company”) is pleased to provide an update on the key workstreams being undertaken for the delivery and development of its 100%-owned Mount Peake Vanadium-Titanium-Iron Project (“Mount Peake Project” or “Project”), located in the Northern Territory.

MOUNT PEAKE PROJECT OVERVIEW

The Mount Peake Project is the Company’s flagship project, comprising a world-scale critical and battery minerals deposit located 235km north-west of Alice Springs. The Project is well located close to existing key power and transport infrastructure corridors including the Alice Springs-Darwin Railway and the Stuart Highway.

Mount Peake is a shallow, flat-lying orebody with a JORC Measured, Indicated and Inferred Resource totalling 160 million tonnes grading 0.28% V₂O₅, 5.3% TiO₂ and 23% Fe. The Mount Peake Project is one of the largest undeveloped vanadium-titanium-iron projects in the world.

The Company’s strategy for the Mount Peake Project is to develop a fully-integrated single mining and processing operation to produce three high-value, high-purity products for export – vanadium pentoxide (V_2O_5), titanium dioxide pigment (TiO_2) and iron oxide (Fe_2O_3) – through the application of a world-first processing technology, known as the TIVAN® Process, which is owned exclusively by TNG. **Vanadium and titanium have been identified by the Australian Government as critical minerals required to make advanced technologies that will support the global push for decarbonisation.**

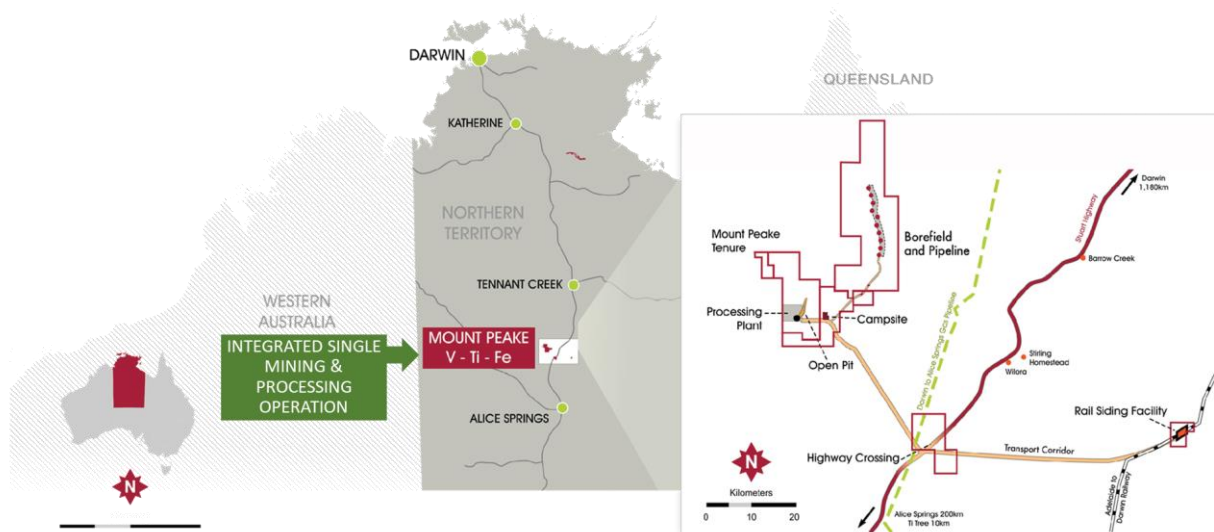


Figure 1. Mount Peake Project Location Plan in the Northern Territory.

Forecast Production of
6,000 tonnes
per annum
of
vanadium pentoxide

Forecast Production of
100,000 tonnes
per annum
of
titanium dioxide

Forecast Production of
500,000 tonnes
per annum
of
ferric oxide

The Mount Peake Project has been awarded Major Project Status from both the Australian Federal Government and the Northern Territory Government due to the significant economic and social benefits it is expected to deliver to the Northern Territory and Australia, including:

<p>EMPLOYMENT</p>	<p>1,600 CONSTRUCTION employees in each year of construction</p>	<p>1,000 OPERATION employees in steady state</p>
--------------------------	-------------------------------------------------------------------------------------	-----------------------------------------------------------------

- Up-skilling of the local workforce and opportunities for Indigenous engagement.
- Positive flow-on effects of project construction and operational personnel using the services and/or facilities of local businesses.
- Underpinning the potential development of new NT Government infrastructure (e.g., utilities).
- Improvement in trade balances and the generation of various taxes, levies and royalties from development and operations.
- The establishment of a new high-tech, value-adding processing industry for titanomagnetite ore of the world-first commercialisation of the TIVAN® Process; and
- The potential establishment of green hydrogen production and Vanadium Redox Flow Battery (VRFB) businesses.

TNG has life-of-mine binding off-take agreements in place for 100% of all products proposed to be produced from the Mount Peake Project with strong off-take counterparties with a multi-national presence.

PROJECT DEVELOPMENT

Engineering and Design

Australian engineering and construction company, Clough Projects Australia Pty Ltd (“Clough”), is advancing the Stage 2 design and value engineering works for the integrated Mount Peake Project, which comprises a Beneficiation Plant, TIVAN® processing facility (including a Pigment Plant) (“TPF”) and plant utilities located within the Mining Lease footprint of Mount Peake mine site (“Mine Site”).

This phase of works follows the completion of an integrated layout by Clough, which was based on the deliverables prepared under the Front-End Engineering and Design (“FEED”) study completed by SMS group (“SMS”).

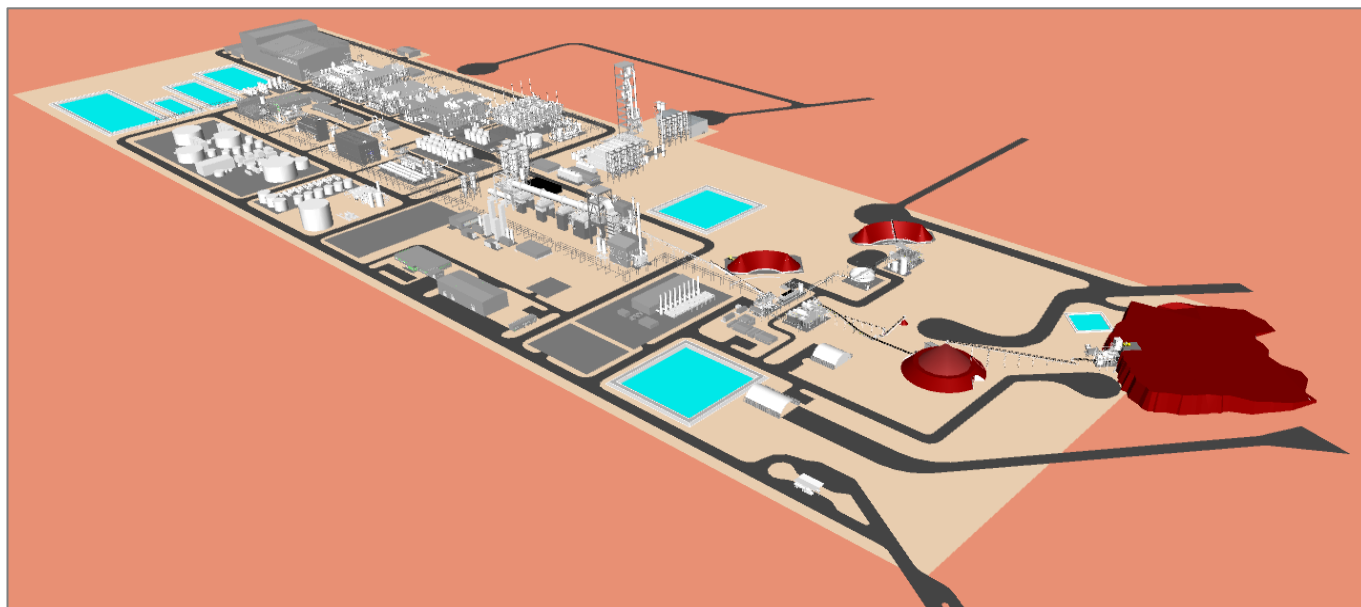


Figure 2: TNG’s new Mount Peake Project integrated operation layout (south-east view)

Clough has assembled a team of specialists for the Mount Peake Project encompassing Process, Mechanical, Electrical, Procurement, and schedule planning in order to rapidly complete the following scope of work:

- update overall Beneficiation Plant and TPF layout;
- update power usage and demand;
- update water usage and demand;
- update the mechanical equipment list;
- develop single line diagrams;
- update the major electrical equipment list for transformers and sub-stations;
- source pricing for major mechanical and electrical equipment;
- develop a project implementation schedule;
- prepare an updated Navisworks 3D model;
- prepare updated drawings detailing the Mine Site, access road, accommodation village and key infrastructure;
- extract mechanical general arrangement and elevation drawings for the integrated Project; and
- update the water balance for the integrated Project.

This work is expected to be completed by May 2022.

Validation Testwork

Validation testwork that had been delayed due to the global COVID-19 restrictions affecting workforce availability of SMS staff and the procurement of materials to undertake the testwork is underway.

The validation testwork is being carried out in Australia and Austria, with completion expected to occur in the coming months.

Hydrogen Reductant

TNG has assessed opportunities within the Project and the processing flowsheet to reduce the overall net carbon footprint. This includes an ongoing technical and commercial assessment of the use of hydrogen reductant in the current flowsheet. Hydrogen reduction testwork is underway, running in parallel to the current engineering and design work as a potential optimisation initiative.

Non-Process Infrastructure (“NPI”)

The new integrated mining and processing operation at the Mount Peake mine site has provided the opportunity for consolidation of a number of infrastructure items including power generation, gas supply and communications installations.

The NPI will require upgrading in a number of areas to support a larger operation, including tendering for village accommodation, camp catering and borefield (water supply).

The Company’s Project Team is exploring Build Own Operate and Build Own Operate Transfer (“BOO/BOOT”) arrangements, having previously engaged, tendered and shortlisted several proponents and reviewing the NPI for the Project including updated design and tendering processes as required. The key NPI work streams include:

Item	Current Status	Details
Village Accommodation	Value Engineering	An expanded village will be required to support the combined mining and processing workforce at the Mine Site. The rationalisation and combination of the TIVAN® Processing Facility and Beneficiation Plant will deliver operational synergies which are expected to result in a reduced overall workforce for the Project.
Haul Road	Value Engineering	Haul road will also now be the main access road. Upgraded design requirements under review.
Borefield	Drilling and Water Extraction Licence	Refer to <i>Water Bore Drilling Program</i> section of this announcement.
Camp Catering	Value Engineering	An expanded village will be required to support the combined mining and processing workforce, which will require increased catering services at the Mine Site. The rationalisation and combination of the TIVAN® Processing Facility and Beneficiation Plant will deliver operational synergies which are expected to result in a reduced overall workforce for the Project.
Communications	Costs received	This proposal requires no capital investment by TNG and is a turnkey package. Additional communication requirements are being evaluated as a result of the combined mining and processing workforce at the Mine Site.
Materials Handling Logistics	Value Engineering	Downstream processing and production of the three end products will now occur at the Mine Site. Materials handling logistics to and from the Mount Peake Mine Site are being evaluated, capitalising on previously completed logistics studies for transport between the Mine Site and Darwin.

Power & Gas	Tendered and shortlisted	Independent power providers previously tendered for two separate Build-Own-Operate contracts for the provision of power supply by way of gas fired power stations – for each of the Mine Site and Darwin Site. The Project Team is progressing with rationalised power supply at the Mine Site, with a single power station requirement.
-------------	--------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Water Bore Drilling Program

In April 2021, TNG’s hydrogeological consultants submitted a water extraction licence application (“WELA”) for water supply for the mine site and Beneficiation Plant requirements. This approval is expected imminently.

With the expanded operation, additional water supply will also be required and new program of water bore drilling (“Program”) is planned to commence in early April 2022 to establish the availability of additional water supply for the integrated operation. The Program was originally scheduled to start in early March 2022, however it has been delayed due to recent flooding of the areas to be drilled, which has restricted access.

The program, which will be supported by bore pump testing and aquifer modelling and reporting will allow an additional WELA to be submitted. This information will also allow pipeline and water distribution design works and infrastructure to be updated, as well as support and inform the environmental assessment report which is currently in progress.

PROJECT EXECUTION MODEL

The Company has progressed the project execution model to support the delivery of an integrated and mining and processing operation at the Mine Site.

TNG is assessing revised proposals from SMS and Clough for the delivery of the Mount Peake Project, while retaining production and product quality guarantees for the downstream processing operation.

The process to update the project execution schedule includes a detailed review of the contracting strategy for delivery of both the processing plants and NPI, early contractor involvement strategies, Build Own Operate and Build Own Operate Transfer (“BOO/BOOT”) planning, and project management structure.

The Company expects to finalise a revised project execution model in the coming months.

PERMITTING AND APPROVALS

Environmental

The Northern Territory Environmental Protection Authority (“NT EPA”) Referral document for the Mount Peake Processing Project under the *Environment Protection Act 2019* indicates that various technical studies require updating as part of the integrated Mount Peake Project, including the following areas:

- Biological Surveys
- Groundwater and Surface Water Assessments
- Air Quality Assessment
- Greenhouse Gas Assessment and Management Plan
- Noise Impact Assessment
- Waste Characterisation and Landform Design
- Traffic Impact Assessment
- Stakeholder Engagement Strategy
- Mine Closure Plan

Scopes of work for the technical studies were developed following consultation with the NT EPA and work has been progressing on these studies with relevant information from the previous Environmental Impact Statement documents for the Mine Site and the Darwin site being utilised to support the updates, where applicable.

The Company expects to complete this work by second quarter of 2022 and submit a revised environmental impact report to the NT EPA for approval by the September 2022 quarter.

Mount Peake Mining Management Plan (“MMP”)

The Company continues to liaise with the Department of Industry, Tourism and Trade (DITT) on any further requirements for the MMP already submitted following the consolidation of the Project.

Central Land Council and “Indigenous Land Use Agreement” (ILUA)

The Company continues to liaise with the CLC on any additions required to the existing ILUA the Company has in relation to the Traditional Owners. TNG commenced these discussions in September 2021 requesting a meeting with the Traditional Owners.

PRODUCT PRICING DEVELOPMENT¹

Titanium Dioxide Pigment – TiO₂

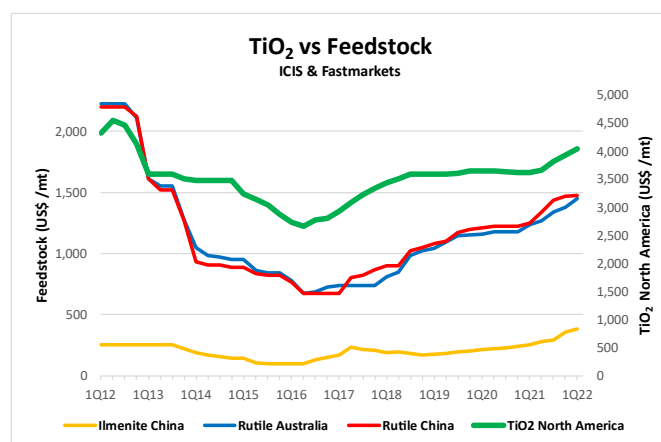
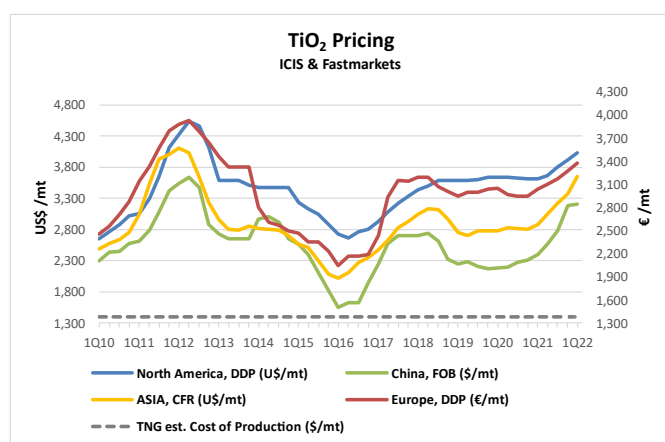
Titanium dioxide pigment demand remains strong. The utilisation of existing plant capacity is very high (above 95%) and the current inventories are very low (below 30 days).

The price of TiO₂ has increased in all regions in the last 12 months, up 35.4% in China, 27.6% in APAC (excluding China), 11.6% in Europe and 11.5% in North America.

Persistent constraints on feedstock will continue and are expected to increase in 2022. Feedstock prices have increased in the last 12 month, with ilmenite from China up 54.5% and rutile from Australia up 18.9%.

The market price is expected to continue its momentum in 2022 and beyond due to strong paint demand in housing, the depletion of large feedstock deposits and the temporary shutdowns at some pigment plants during the year due to operational and supplier issues. Analysts expects these trends to continue at least until 2023-24.

TNG expects to achieve a 3-5% premium on the market price as its product will be a high-durable pigment.



Vanadium Pentoxide – V₂O₅

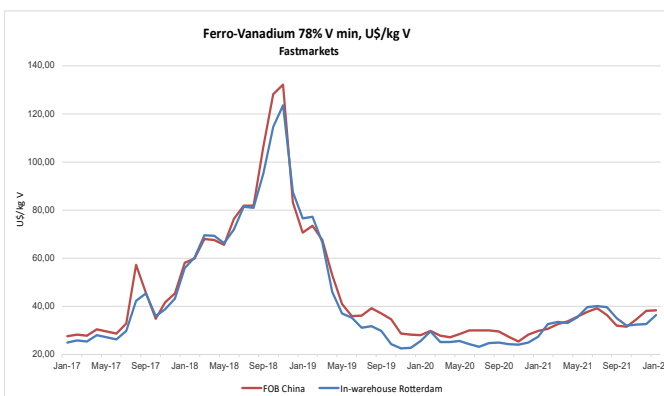
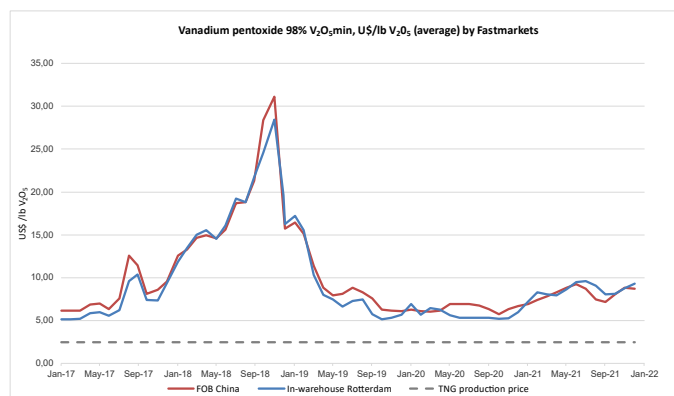
The price of vanadium pentoxide (98%), in-warehouse Rotterdam, has increased by 54.6% in the last 12 months, reaching US\$10.85/lb at the end of January 2022, while the V₂O₅ (98%), FOB China, price rose 28.9% over the same period, closing January 2022 at US\$8.86/lb.

The price of ferrovanadium (78% V), in-warehouse Rotterdam, has increased by 32.7% in the last 12 months, reaching US\$39.00/kg at the end of January 2022, while the FeV (78% V), FOB China, price rose 28.9% over the same period, closing January 2022 at US\$38.44/kg.

Roskill expects a long-term V₂O₅ price of US\$7.50 /lb and 2% CAGR growth in demand between 2021 and 2050, reaching 209kt at the end of the period.

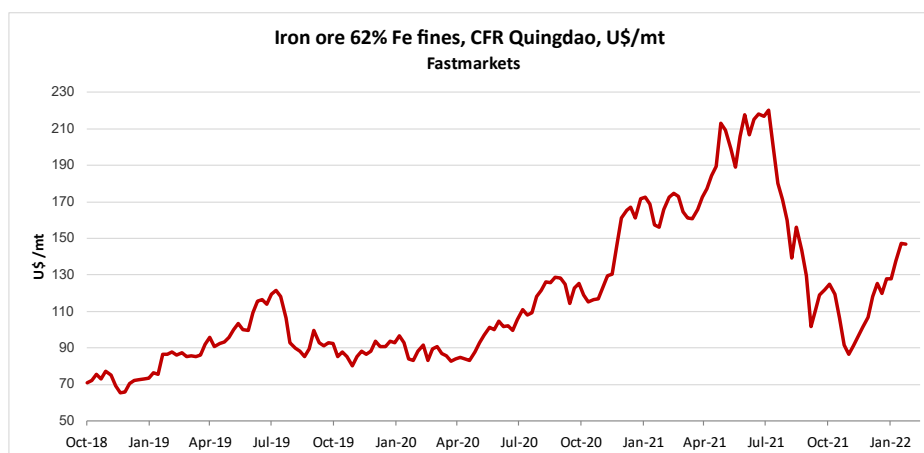
¹ Pricing source: ICIS and Fastmarkets

TNG expects to achieve a US\$2.0/lb V₂O₅ premium on the market price for its product at 99.6% purity (Roskill – September 2020).



Iron Ore Fines

The average price for iron ore fines (62%) reached US\$147/tonne at the end of January 2022. Prices are expected to stabilise above historical levels of US\$80-100/mt in 2022. TNG expects to achieve a US\$5.90 /mt premium on the market price for its product at 64.4% (Roskill – September 2020).



2022 MOUNT PEAKE PROJECT ACTIVITIES – INDICATIVE TARGETED TIMING

Activity	Indicative targeted timing
Completion of value engineering and design by Clough	Jun 22 Quarter
Delivery of an updated capital cost estimate for the integrated Mount Peake Project	Jun 22 Quarter
Completion of borefield drilling program and application for water extraction licence	Jun 22 Quarter
Completion of review of NPI items for tendering process	Jun 22 Quarter
Submission of the revised environmental impact report to the NT EPA for approval	Sep 22 Quarter
Submission of the revised Mining Management Plan for approval	Sep 22 Quarter
Implementation of project financing strategy	Sep 22 Quarter
Final Investment Decision	Dec 22 Quarter

Note: The indicative targeted timings for the pre-development activities for the Mount Peake Project are estimates only which are subject to risks, uncertainties, events and assumptions outside the control of TNG Limited; including impacts and uncertainties related to the Western Australian Government’s recent announcement on maintaining the closure of the Western Australia borders indefinitely and their management of the COVID-19 pandemic, and time frames advised by the various agencies and consultants.

Authorised by:

Paul E Burton
Managing Director & CEO

14 February 2022

Inquiries:

Paul E Burton
 Managing Director & CEO + 61 (0) 8 9327 0900

Paula Raffo
 Company Secretary & IR + 61 (0) 8 9327 0900

Nicholas Read
 Read Corporate + 61 (0) 8 9388 1474

Follow TNG on  

About TNG

TNG is a Perth based resource and mineral processing technology company focussing on building a world-scale strategic metals business based on its flagship 100%-owned Mount Peake Vanadium-Titanium-Iron Project in the Northern Territory. Located 235km north of Alice Springs, Mount Peake will be a long-life project producing a suite of high-quality, high-purity strategic products for global markets including vanadium pentoxide, titanium dioxide pigment and iron ore fines. The project, which is expected to be a top-10 global producer, has received Major Project Status from the Northern Territory and Federal Governments.

TNG is also advancing a green energy strategy with the dual objective of offsetting carbon emissions from its planned future operations and generating new business opportunities in the alternative energy market to create additional shareholder value, with a focus on green hydrogen and vanadium redox flow batteries.

Forward-Looking Statements

This report has been prepared by TNG Limited. This report 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.

This report is for information purposes only. Neither this nor the information contained in it constitutes an offer, invitation, solicitation or recommendation in relation to the purchase or sale of TNG Limited shares in any jurisdiction. This report 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 announcement 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 Limited, 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 report. No responsibility for any errors or omissions from this arising out of negligence or otherwise is accepted.

This report 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 Limited. Actual values, results or events may be materially different to those expressed or implied.

Production Targets and Financial Information

Information in relation to Mount Peake 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.