

# A GLOBAL STRATEGIC PRODUCTS COMPANY

## COMPANY PRESENTATION

ASX: **TNG**

PAUL BURTON – MANAGING DIRECTOR & CEO  
Resources Rising Stars Investor Conference – Perth & Gold Coast  
10 November 2020

# Mount Peake Project

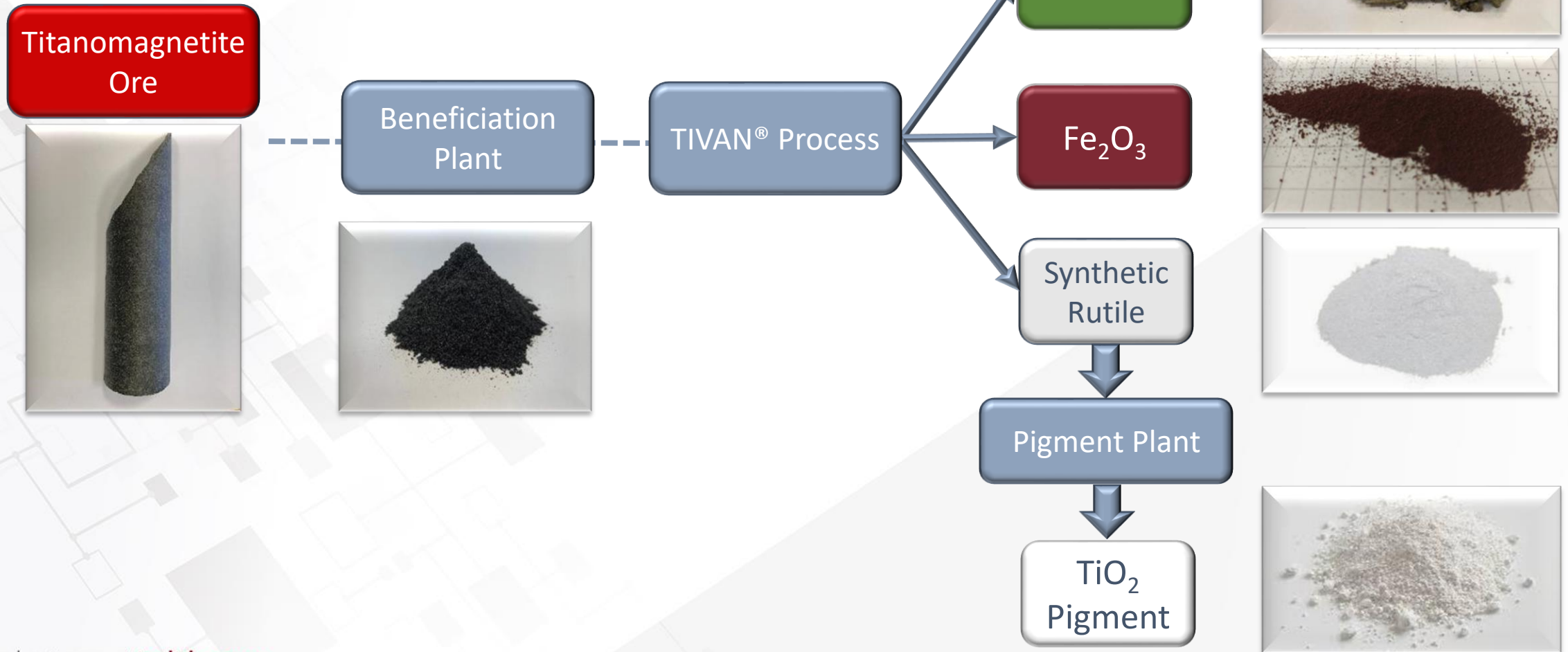
## ADVANCED WORLD-CLASS VANADIUM-TITANIUM-IRON ASSET

### SUMMARY

- One of the largest flat-lying, shallow, vanadium-titanium host deposit in Australia, discovered by TNG
- Located in the Northern Territory close to existing power and transport infrastructure
- Developing a vertically integrated business from production to market
- TIVAN<sup>®</sup> technology enables production of three high-purity products at commercial grade
- Downstream processing in Australia adds significant value
- Off-take agreements in place with global groups
- Partnerships with Tier-1 development companies
- SMS group to provide production quantity, production rate and product quality guarantee, backed by FEED
- Robust project economics

# Vertically Integrated Business Plan

FROM MINE TO MARKET



# High-Purity Products

## GROWING GLOBAL MARKETS FOR TNG PRODUCTS

### TITANIUM DIOXIDE PIGMENT



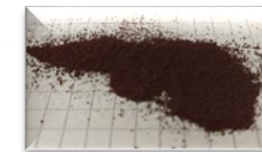
- White pigment used globally, non-toxic and environmentally friendly
- Global demand is estimated at 6.5Mtpa, estimated 8.5Mtpa by 2025
- 60% used in coatings and 25% in plastics
- A depletion of feedstock is forecast and the trend is to secure the feedstock or become integrated like Tronox (1.1Mtpa - 100% integrated), which is the key advantage for TNG

### VANADIUM PENTOXIDE



- Strengthening agent, high tensile steel
- Global demand is estimated at 170ktpa
- 20% yoy increase is forecast due to the implementation of the Chinese Rebar Standard and a vanadium powered energy supply (VRFB) (Roskill)
- Super alloys and flow batteries set to grow rapidly - VRFB are the most cost effective and have longer life cycle than Li-Ion batteries (20 yrs vs 5-8 yrs (LIB))

### IRON OXIDE



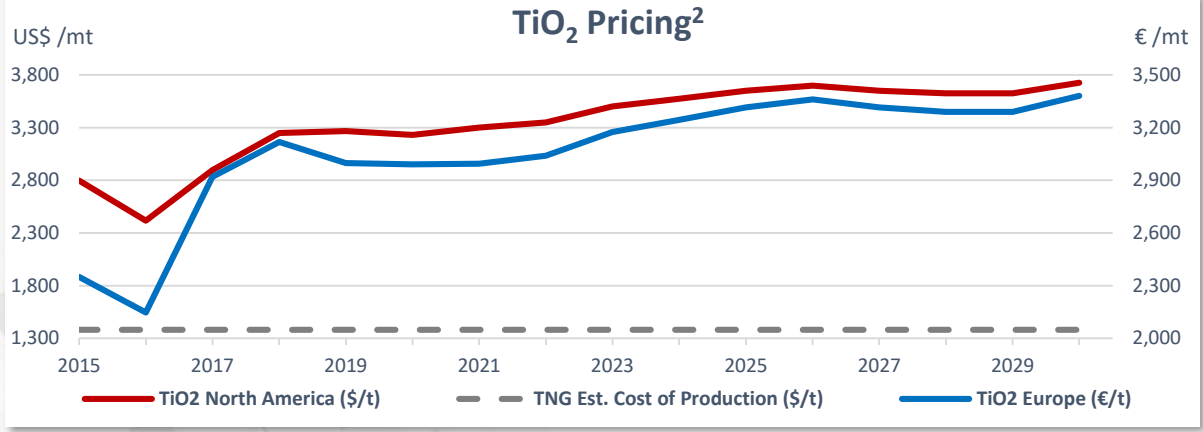
- High purity hematite is used for steel production
- Global demand for hematite is estimated at 2Btpa
- Global seaborne demand for iron oxide fines is 104Mtpa
- Growing market for fines, and increasing interest from iron makers who are considering hydrogen based fluidised bed direct reduction for producing green steel

# Product Pricing – Forecasts by Roskill<sup>1</sup>



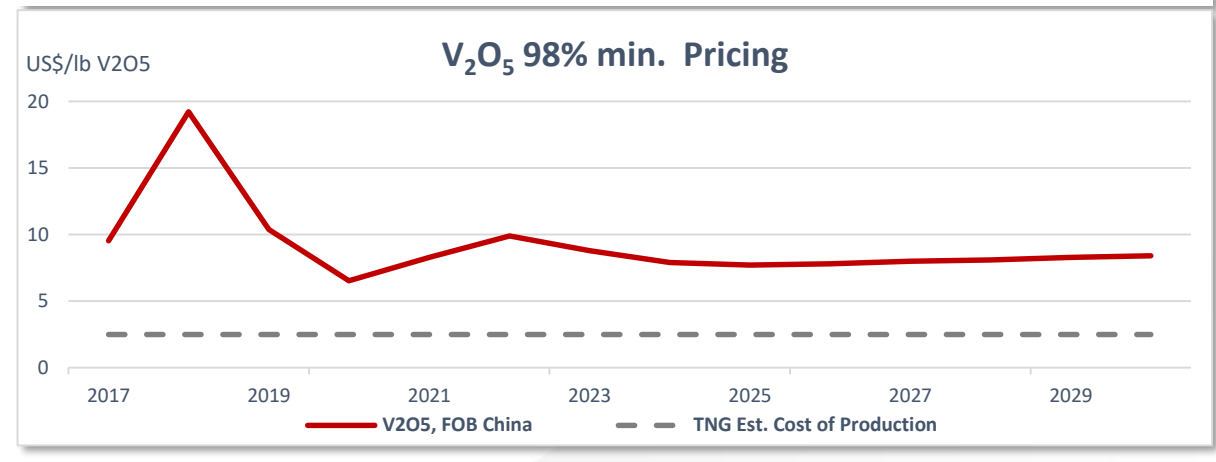
## TITANIUM DIOXIDE PIGMENT - TiO<sub>2</sub>

Expected 3% to 5% premium on market price as TNG product will be a high durable pigment



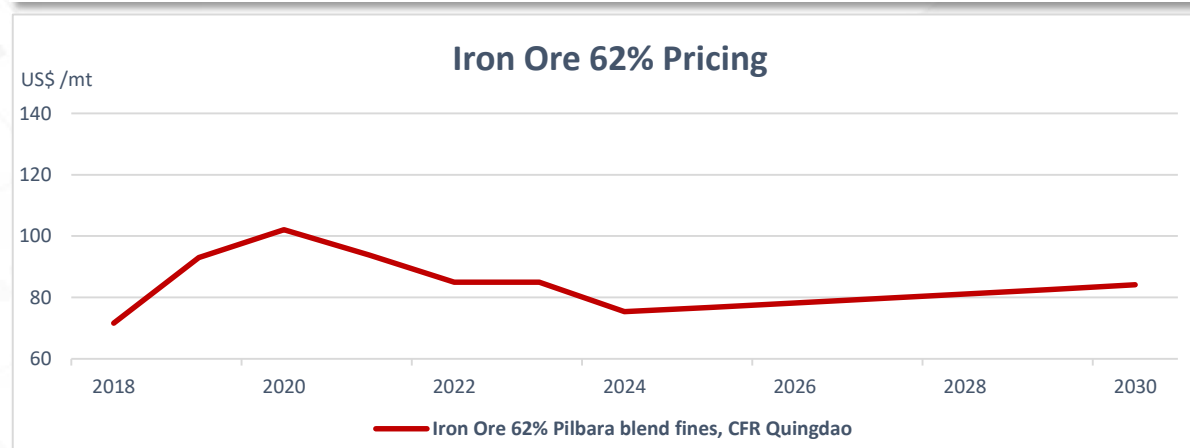
## VANADIUM PENTOXIDE - V<sub>2</sub>O<sub>5</sub>

Expected USD2.0/lb<sup>3</sup> V<sub>2</sub>O<sub>5</sub> premium on market price for TNG product at 99.6%



## IRON OXIDE - Fe<sub>2</sub>O<sub>3</sub>

Expected USD5.90/t<sup>3</sup> premium on market price for TNG product above 64.4%



Notes:

- 1 Information provided and owned by Roskil. Information not to be reproduced.
- 2 Average prices from ICIS and Fastmarkets
- 3 Roskill – September 2020
- COVID-19 has increased pressure on commodity prices and uncertainty in outlook.

Find out more at [tngltd.com.au](http://tngltd.com.au)



# PROJECT UPDATE

## CLOSE PROXIMITY TO ALL KEY INFRASTRUCTURE



TIVAN<sup>®</sup> PROCESSING FACILITY



DARWIN

KATHERINE

NORTHERN TERRITORY

TENNANT CREEK

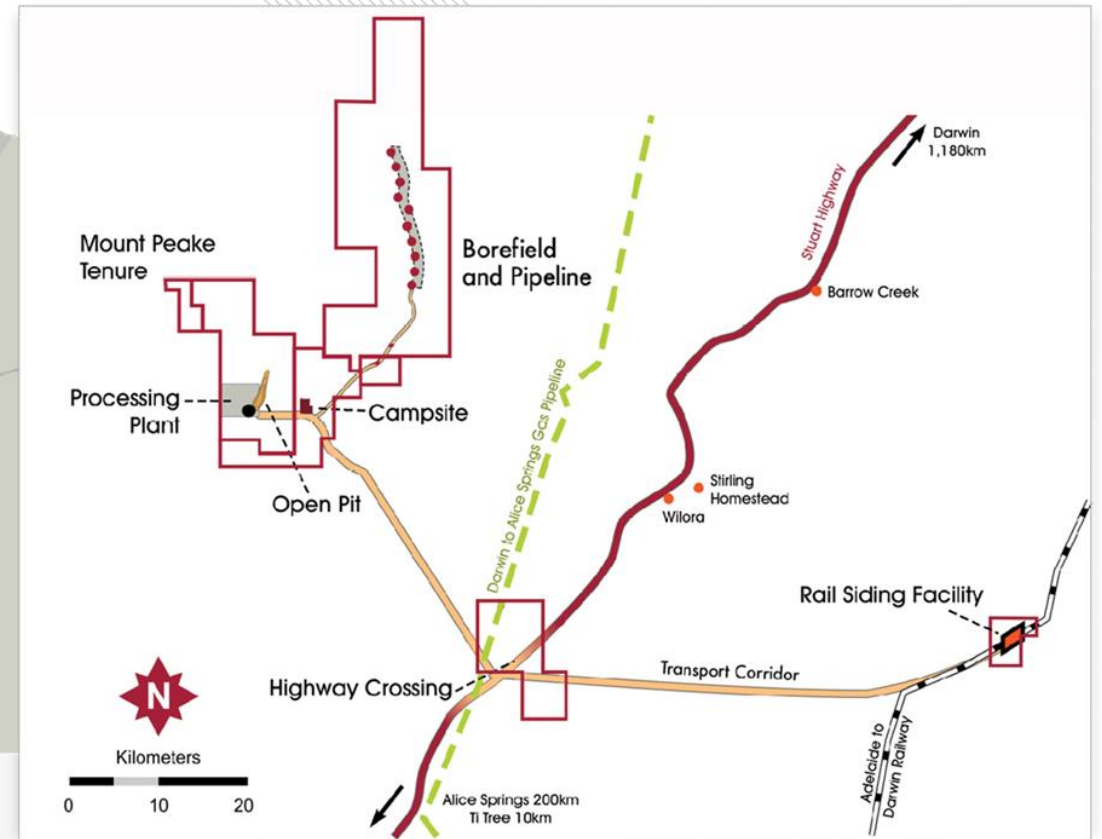
WESTERN AUSTRALIA  
MINE & BENEFICIATION



MOUNT PEAKE  
V - Ti - Fe

ALICE SPRINGS

QUEENSLAND



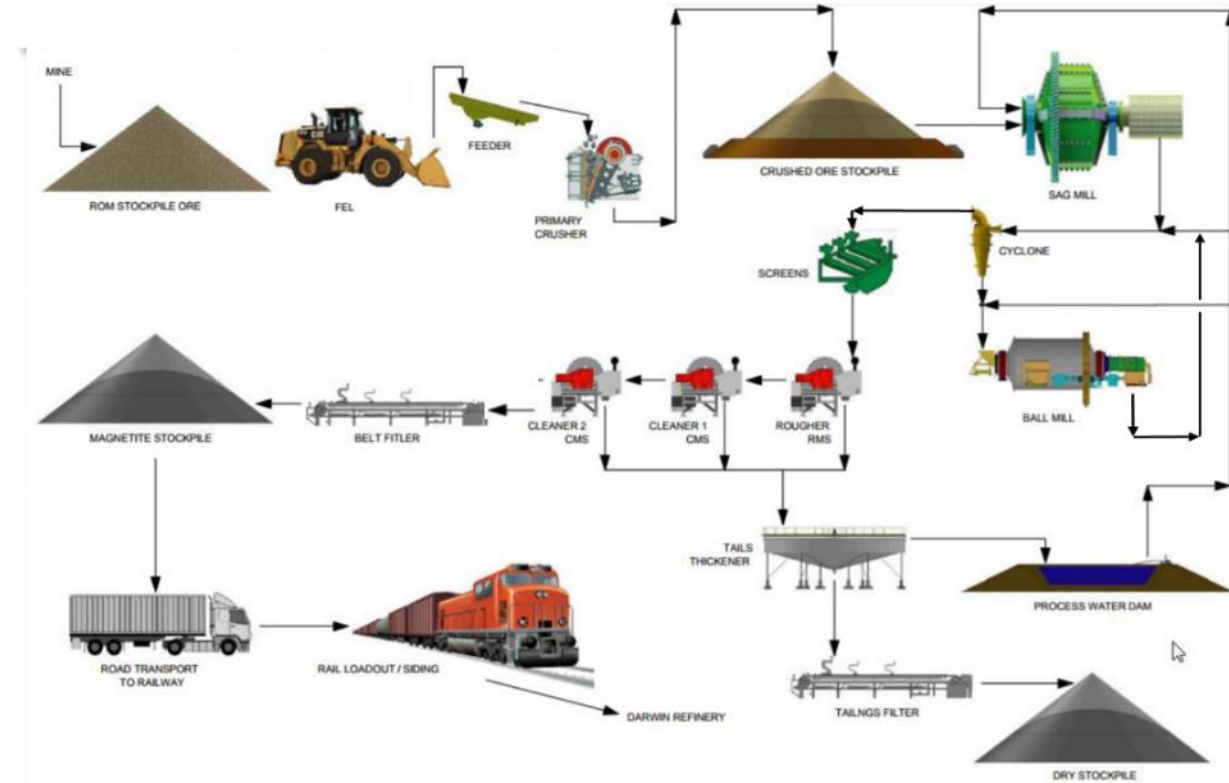
# Mount Peake Mine Site

- Layout and design advanced ✓
- Borefield layout progressed ✓
- Power source progressed ✓
- IWL advanced ✓
- Geotechnical work progressed ✓
- Haul road layout progressed ✓
- EIS completed ✓
- ILUA completed ✓



Mount Peake mine site layout (Como Engineers)

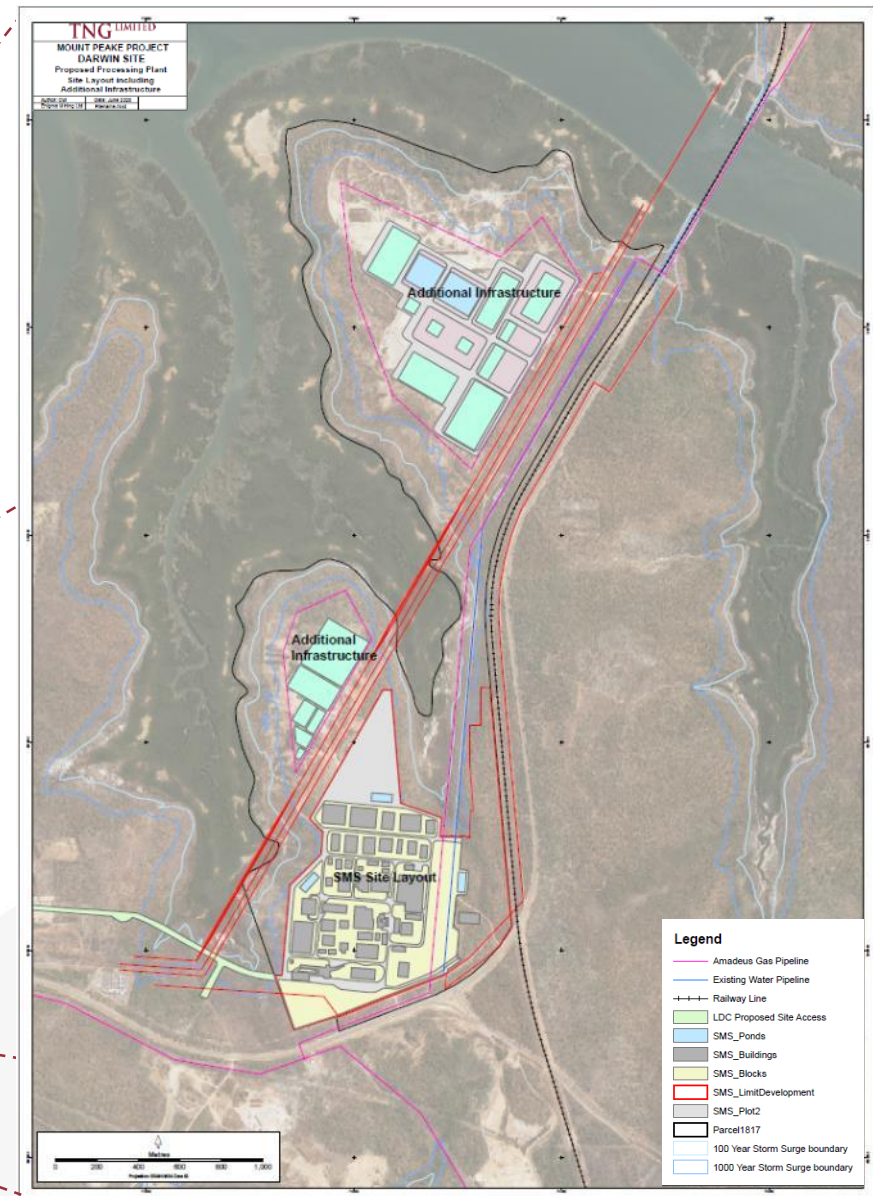
## BENEFICIATION PLANT FLOWSHEET





# TIVAN<sup>®</sup> Processing Facility

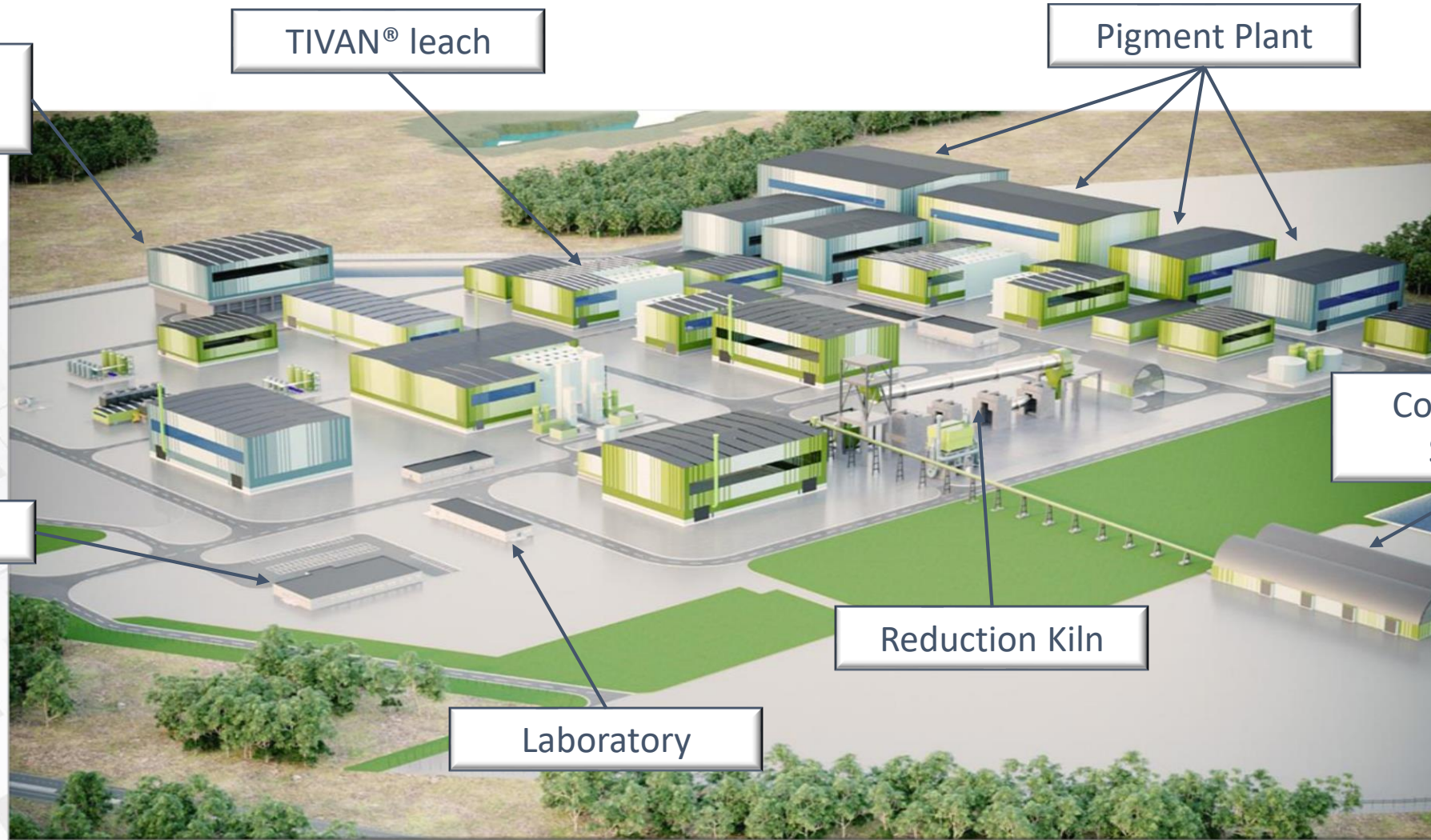
LOCATED 10KM FROM DARWIN PORT





# TIVAN<sup>®</sup> Processing Facility

SMS DESIGN



Darwin TIVAN<sup>®</sup> Processing Facility 3D model being developed by SMS group (may be subject to change)

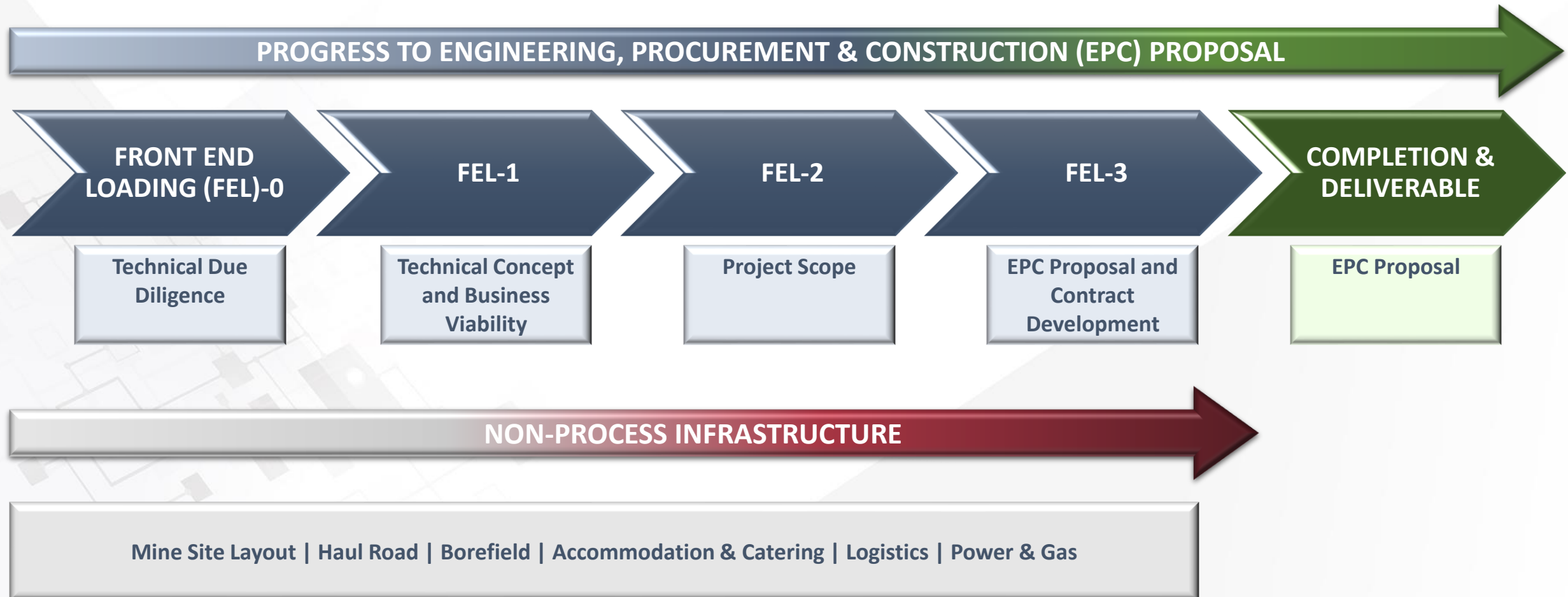
# Progress in the Past 12 Months

## INTERRUPTED DUE TO COVID-19, BUT SIGNIFICANT MILESTONES COMPLETED

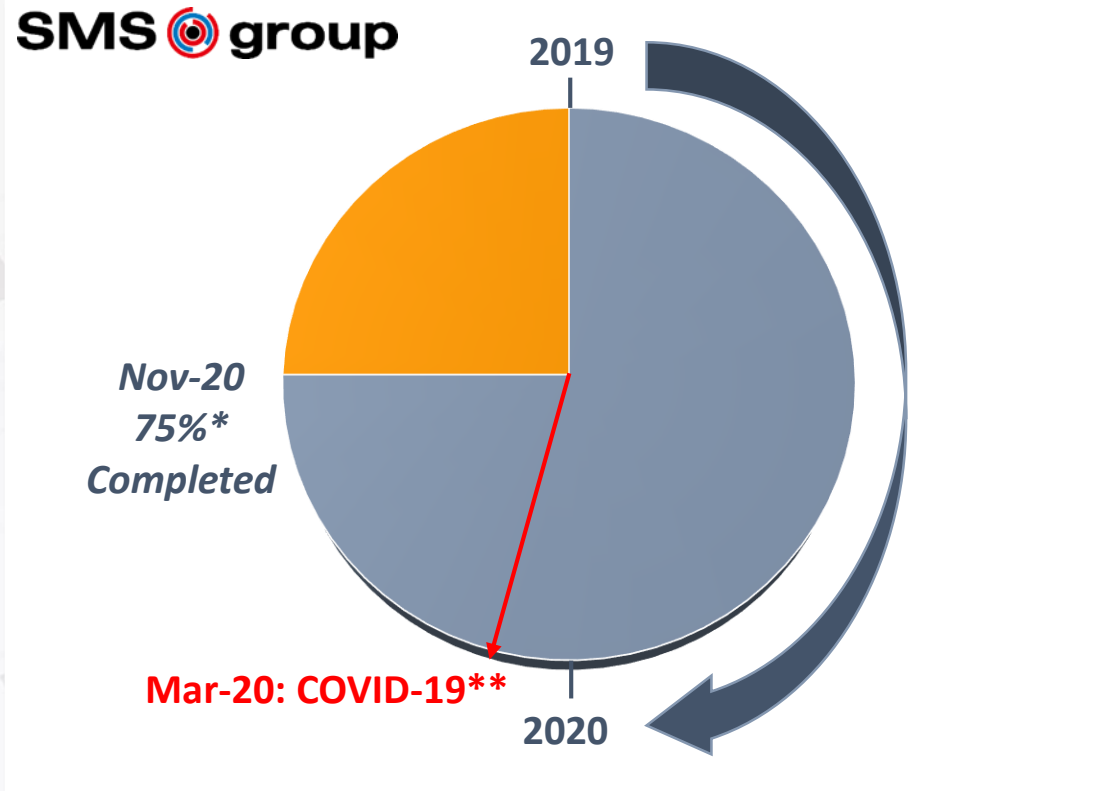
- SMS group progressing Front-End Engineering & Design (FEED) with Como and Ti-Cons
  - LOM Off-take Agreement with Vimson Group for 100% of Hematite product
  - LOM Off-take and Marketing Agreement with GUNVOR (Singapore) for the remaining 40% Vanadium Pentoxide
  - KfW IPEX-Bank GmbH mandated
  - KPMG Corporate Finance appointed
  - NAIF application submitted
  - New Facilitation Agreement executed with the NT Government
- Mining Management Plan submitted
  - Environmental Impact Statement (DPF) submitted
  - Authority Certificate for mining issued by AAPA
  - Non-Process Infrastructure (NPI) work streams completed
  - TNG & SMS group to develop low carbon hydrogen production technology to minimise TIVAN's carbon footprint

# Current Project Status: Focus on FEED and NPI works

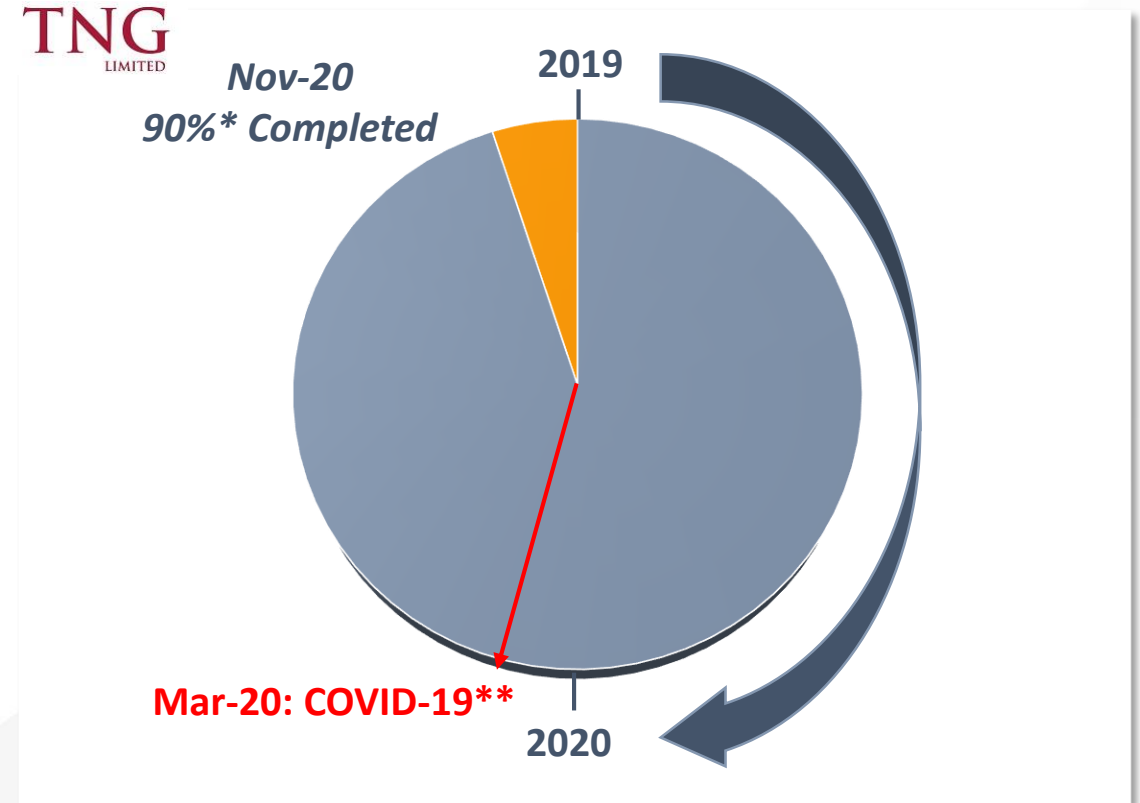
- FEED being undertaken by SMS Group
- NPI being undertaken in house by TNG



## FRONT-END ENGINEERING AND DESIGN



## NON-PROCESS INFRASTRUCTURE WORKS



\* Estimate only Based on information available at the date of this presentation

\*\* COVID-19 has affected progress and increased uncertainty in the markets.



## MOUNT PEAKE MINE SITE

- Environmental approval received (State & Federal) ✓
- Native Title Agreement executed with Traditional Owners ✓
- Mineral Leases granted ✓
- Mining Management Plan ✓

## DARWIN TIVAN® PROCESSING FACILITY

- Draft Environmental Impact Statement (EIS) ✓
- EIS Supplement **UNDERWAY**
- Land acquisition negotiations **UNDERWAY**
- Regulatory entities for processing plant environmental and operational approvals **UNDERWAY**



# Offtake Status

<b>COMPANY</b>	<b>DKSH</b>	<b>WOJIN</b>	<b>GUNVOR</b>	<b>vimson</b> Shivanand Salgaocar Group
<b>NATIONALITY</b>	Switzerland	Korea	Switzerland	India
<b>REVENUE ESTIMATES</b>	~USD 6bn	NA	~USD 90bn	NA
<b>ABOUT</b>	Market expansions service provider	Woojin is the second largest V <sub>2</sub> O <sub>5</sub> exporter in Asia	Global commodity trader	Private Indian mining conglomerate
<b>PRODUCT</b>	<b>Titanium Dioxide Pigment (TiO<sub>2</sub>)</b>	<b>Vanadium Pentoxide (V<sub>2</sub>O<sub>5</sub>)</b>	<b>Vanadium Pentoxide (V<sub>2</sub>O<sub>5</sub>)</b>	<b>Iron Oxide (Fe<sub>2</sub>O<sub>3</sub>)</b>
<b>% Of TNG production</b>	75% - 100%	60%	40%	100%
<b>DURATION</b>	Life of Mine	Life of Mine	Life of Mine	Life of Mine
<b>TERMS</b>	FOB basis, to be distributed globally excluding Iberian Peninsula and European Nordics; “Take or Pay” basis, with exclusive rights to TNG products	Guaranteed price minimum above production cost estimates; “Take or Pay” basis, with exclusive rights to TNG products	FOB basis and marketed and distributed on a global basis for a fixed discount	FOB basis for global marketing and distribution on “Take or Pay” basis for a fixed commission, with exclusive rights to TNG products
<b>STATUS</b>	Binding LOM Agreement signed	Binding LOM Agreement signed	Binding LOM Agreement signed	Binding LOM Agreement signed



**KfW** IPEX-Bank

- KfW IPEX-Bank mandated as TNG's exclusive senior debt advisor and arranger
- KfW IPEX-Bank to raise up to US\$600m (AU\$850m)
- Specialised solution provider in export and project financing
- Proven track record for complex project financings worldwide
- Extensive expertise in Metals & Mining

Note: Subject to FEED completion

Find out more at [tngltd.com.au](http://tngltd.com.au)



**KPMG**

- KPMG Corporate Finance appointed as global financial advisor for the Mount Peake Project
- KPMG CF team to assist TNG to optimise and execute the debt and equity components for the total project financing requirements
- Dedicated mining corporate finance team that assists with global-scale projects like Mount Peake
- Recent experience working on other large project financing deals with KfW, NAIF and export credit agencies



# Looking Ahead

- Completion of FEED
- Permitting for TIVAN<sup>®</sup> processing site
- EPC proposal from SMS group
- TNG Board FID
- Finance
- Appointment of EPC contractor
- Establish full Project Development Team
- Commencement of development





## 1. GREEN ENERGY STRATEGY

- TNG Energy Pty Ltd: 100%-owned Subsidiary Of TNG Limited
- TNG Energy will focus on alternative low carbon technology for direct application to Mount Peake and also available for licencing
- Partnership with SMS group for Hydrogen Production Technology
- Vanadium redox flow battery for Future Energy Storage



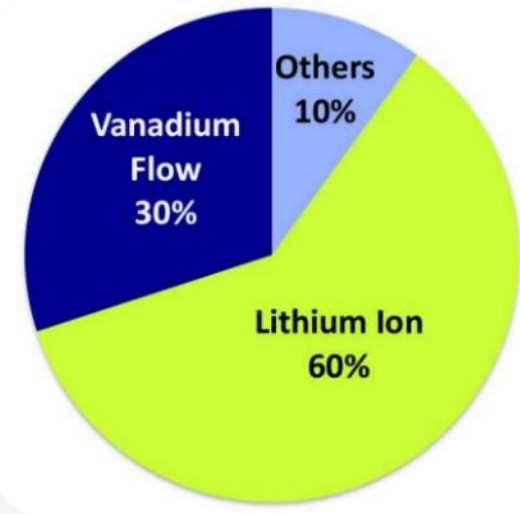
# Vanadium Redox Flow Batteries – VRFB

- VRFB business unit being established as part of the vertical integration strategy for the Mount Peake Project
- VRFBs utilise high-purity vanadium electrolyte to store energy and support renewable power generation from sources including solar and wind
- TNG has previously produced high-purity vanadium electrolyte from vanadium pentoxide produced in pilot scale testwork for Mount Peake
- TNG Energy's aim is to become a supplier of VRFBs



## Predicted Storage Market

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



\* Source: Wattjoule

# Hydrogen Production Technology

## LOW CARBON TECHNOLOGY TO BE APPLIED TO THE TIVAN<sup>®</sup> PROCESS

- TNG & SMS entered into a partner development agreement to develop a low CO<sub>2</sub> technology
- Production of green hydrogen from various renewable, secondary or fossil hydrocarbon sources by means of plasma pyrolysis, utilising green electrical energy
- SMS to coordinate all development activities with a focus on the application to TNG's TIVAN<sup>®</sup> processing plant
- Substantial quantities of CO<sub>2</sub>-emissions could be eliminated as a result of the introduction of green hydrogen as the reduction agent in the TIVAN<sup>®</sup> Process
- Under this agreement TNG will receive a royalty on all equipment that SMS sells globally

**SMS**  **group**

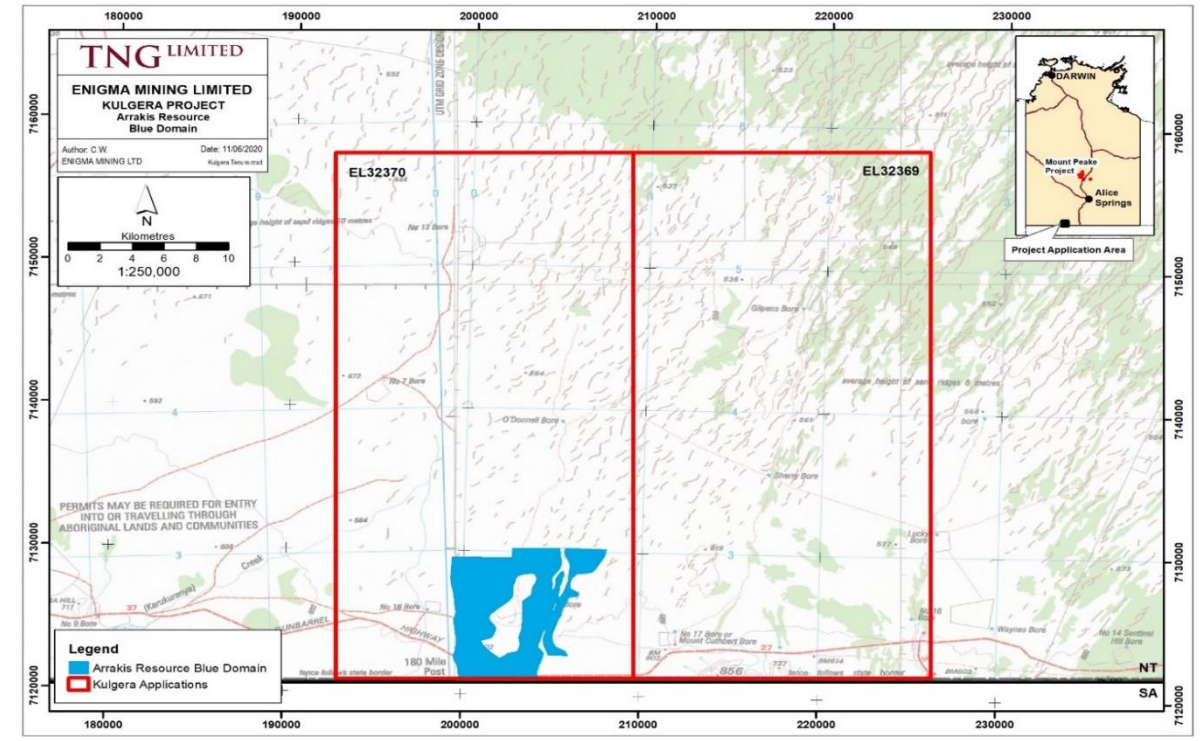


# Other Developments cont...

## 2. RESOURCE STRATEGY

- Kulgera Project: strategic vanadium and titanium mineral sands resource 100%-owned by TNG
- Exploration licence covering 1,231km<sup>2</sup> of vanadium and titanium mineral sands
- Located along the South Australian border in the NT
- 346Mt Mineral Resources, increasing TNG's total Resource Inventory
- TNG to conduct concentrate flowsheet refinement and TIVAN<sup>®</sup> testwork to determine the economics of extraction which could add to the Mount Peake project

Mineral Resource	Tonnes (Mt)	HM %	Slimes %	Over Size %
Measured	-	-	-	
Indicated	210.7	6.5	10.4	8.8
Inferred	135.2	6.0	11.6	10.6
<b>Total</b>	<b>346.0</b>	<b>6.3</b>	<b>10.9</b>	<b>9.5</b>



Kulgera Project location plan, southern NT



**TNG**  
LIMITED

**THANK YOU**





# A GLOBAL STRATEGIC METALS COMPANY

ASX: **TNG**

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# Corporate Snapshot



## BOARD OF DIRECTORS

<b>JOHN ELKINGTON</b>	Non-Executive Chairman Experienced Chairman; Mining Professional, development experience
<b>PAUL BURTON</b>	Managing Director and CEO Experienced Director and Mining Executive; Project Developer, Geologist
<b>GREG DURACK</b>	Non-Executive Director Mining Executive; Project Development, Delivery & Operations
<b>SIMON MORTEN</b>	Non-Executive Director Titanium Industry Expert; Pigment Manufacture and Processing

## TOP SHAREHOLDERS

<b>DEUTSCHE BALATON &amp; ASSOCIATES*</b> German Investment Fund	12.28%
<b>VIMSON GROUP</b> Indian Iron Ore Mining Conglomerate	9.84%
<b>WWB INVESTMENTS P/L</b> Private Investor	7.47%
<b>AOSU INVESTMENT &amp; DEVELOPMENT CO</b> Chinese Private Company	5.38%
<b>SMS INVESTMENTS SA</b> Mount Peake Development Partner	1.31%

## CORPORATE DATA

ASX code	TNG
Cash as at 30 Sep 20**	A\$3.7 million
Shares on issue	1.12 billion
Market capitalisation (at 11c)	A\$123.9 million

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

\*\* The Company is currently undertaking a \$12.5 million Entitlement Issue Offer (see ASX Announcement dated 2 October 2020).

## FORWARD LOOKING STATEMENTS

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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](http://www.tngltd.com.au) and [www.asx.com.au](http://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](http://www.tngltd.com.au) and [www.asx.com.au](http://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](http://www.tngltd.com.au) and [www.asc.com.au](http://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 related to the Kulgera Project Mineral Resource estimates is extracted from an ASX Announcement entitled "TNG expands tenure with existing JORC resource" created on 8 July 2020 in accordance with the JORC Code (2012) and is available to view on [www.tngltd.com.au](http://www.tngltd.com.au) and [www.asx.com.au](http://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.

## 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](http://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.