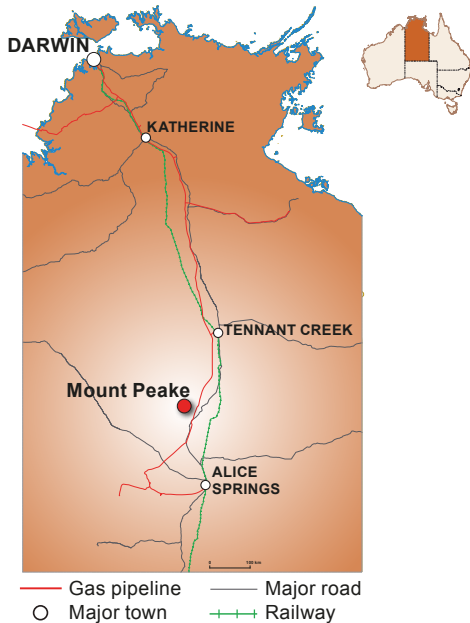


# Mount Peake Project

**V Ti Fe**


## TNG LIMITED

### Company overview

TNG is a publicly listed Australian resources company focused on the evaluation and development of its Mount Peake Vanadium-Titanium-Iron project in the Northern Territory.

**ASX:** TNG

**Market capitalisation:**

A\$101.16 million at 20 February 2019

**Number of shares:**

963.4 million at 20 February 2019

**Website:** [www.tngltd.com.au](http://www.tngltd.com.au)

**Resource:** Vanadium, titanium, iron

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For more information on this project or others available in the Northern Territory, visit [www.resourcingtheterritory.nt.gov.au](http://www.resourcingtheterritory.nt.gov.au)

### Project overview

The Mount Peake project, an emerging global-scale strategic metals project, is located 235 km northwest of Alice Springs in the Northern Territory close to existing key power and transport infrastructure including the Alice Springs to Darwin Railway and the Stuart Highway. With Measured, Indicated and Inferred Resources totalling 160 Mt, grading 0.28% V<sub>2</sub>O<sub>5</sub>, 5.3% TiO<sub>2</sub> and 23% Fe, Mount Peake is considered to be one of the world's largest new vanadium-titanium-iron projects.

The November 2017 updated Feasibility Study outlined a very robust project offering a 44% IRR and a 3-year payback, based on total production of 265,000 t V<sub>2</sub>O<sub>5</sub>, 3.5 Mt TiO<sub>2</sub> (pigment), and 10.6 Mt pig iron. A 3 Mtpa (stage 1) open-pit mining operation would expand to 6 Mtpa after 4 years of production. The company has secured binding life-of-mine offtake agreement for its iron and vanadium products, underpinning part of the project's NPV10% forecast of \$3.8 billion over its initial 15-year mine life.

Testwork and optimisation of the company's 100% owned TIVAN<sup>®</sup> technology indicates that it will be able to produce vanadium pentoxide at minimum 99.5% purity, which is currently among the highest globally. It has also successfully produced high-purity vanadium electrolyte, potentially allowing full vertical integration of its production pipeline as well as the ability to enter the Vanadium Redox Battery (VRB) alternative energy sector.

The TIVAN<sup>®</sup> process can also produce high quality titanium dioxide concentrate of up to 65% purity, providing an ideal specification for refining to pigment grade.

TNG is also considering a two-stage development option with a low capital cost start-up development producing magnetite concentrate which has the potential to generate early cash flow.

The company is well advanced with the environmental approvals process for the mine site, and for a separate TIVAN<sup>®</sup> process plant to be located close to export facilities at the Port of Darwin. TNG is also hoping to complete a mining agreement with Traditional Owners in the near future. Once final environmental approvals and Traditional Owner mining agreements are in place, the company will be in a position to secure a Mining Lease from the Northern Territory Government.

### Geology and exploration activity to date

Mineralisation at Mount Peake is a tabular vanadium-rich magnetite deposit within a large gabbro intrusion. The deposit was first identified in 2008 through resampling of historic drillcore. Drilling between 2009 and 2012 has led to the definition of measured, indicated and inferred category mineral resources totalling 160 Mt @ 0.28% V<sub>2</sub>O<sub>5</sub>, 22.3% Fe, 5.3% TiO<sub>2</sub>. A Maiden Probable Ore Reserve of 41.1 Mt (50% of mine life) at V<sub>2</sub>O<sub>5</sub> 0.45%, TiO<sub>2</sub> 7.99%, Fe 28.0% at a cut off grade of 15% Fe was announced on 31 July 2015. This announcement converted 65% of the Measured Resource with a 50% increase in V<sub>2</sub>O<sub>5</sub> grade.

The area under licence covers a highly prospective, but poorly explored part of the Arunta geological province that offers significant exploration upside for TNG within an extensive 1000 km<sup>2</sup> 100%-owned ground-holding.

The mineralisation is flat-lying and occurs close to the surface, with additional scope to grow the resource further. The company has also identified the potential for a graphite resource in the Mount Peake project area.



## Infrastructure

The project will comprise an open cut mining operation and ore processing plant located in the southern central Northern Territory, approximately 280 km north-northwest of Alice Springs. The site lies close to existing infrastructure including a gas pipeline and has access to a large aquifer system, capable of providing a sustainable long-term water source for mining and processing operations. The proposed mine site is only 60 km west of the sealed Stuart Highway and 80 km from the Adelaide to Darwin railway, which will transport magnetite concentrate to TNG's planned TIVAN<sup>®</sup> refinery. The refinery will be located within the Middle Arm industrial area, within 10 km of existing export infrastructure at the Port of Darwin.

## Project economics

- Since its discovery in 2008, the Mount Peake project has made consistent progress towards commercialisation. DFS results released in July 2015 and updated in November 2017, estimate a 15-year mine life with pre-tax rate of return (IRR) of 44%, based on a pre-production capital expenditure of \$853 million. The project has received Major Project status from the Northern Territory Government.
- Central to its plans to bring Mount Peake into production, TNG has the exclusive patent on the TIVAN<sup>®</sup> hydrometallurgical process, an innovative, low-cost method that produces three products – premium (>96%) battery grade vanadium pentoxide, titanium dioxide concentrate and high purity iron oxide powder.
- TNG has formed relationships with a number of high profile international investors, technology developers and marketing and distribution partners to progress Mount Peake. Technical, engineering and environmental studies are underway prior to a final investment decision.

## Project status and development timeline

- The company has completed the environmental approvals process for the mine site. Environmental approvals for the separate TIVAN<sup>®</sup> process plant to be located close to export facilities at the Port of Darwin are in progress. TNG have executed a mining agreement with Traditional Owners of the mine site, and four Mineral Leases covering the Mount Peake mine development site were granted by the Northern Territory Government in November 2018.
- TNG hopes to secure project financing, to enable the planned commencement of construction in late 2019 or 2020.

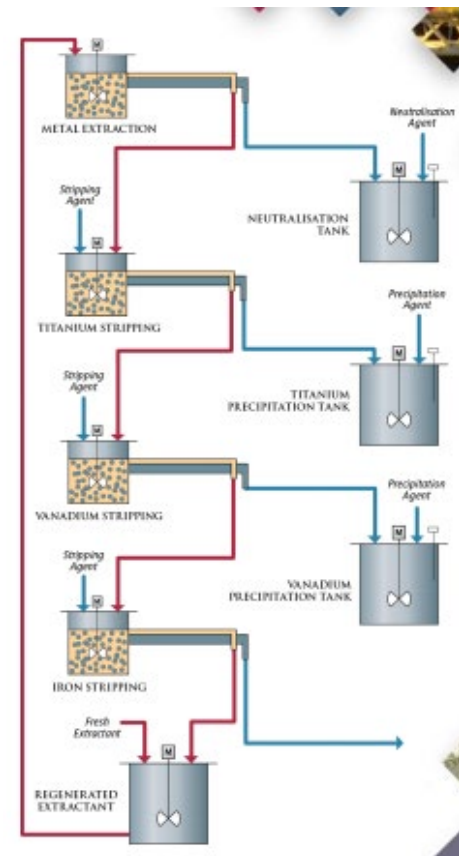
## Investment sought

TNG believes that the most suitable development path for Mount Peake is to engage a major partner, company or corporate conglomerate to provide development finance, engineering, procurement, design and construction in exchange for project equity and or off-take agreements.

## JORC Resource Estimates

The Measured, Indicated and Inferred mineral resources reported on 18 March 2013 at a 0.1% V<sub>2</sub>O<sub>5</sub> cut-off comprised:

Category	Tonnes (Mt)	V <sub>2</sub> O <sub>5</sub> %	TiO <sub>2</sub> %	Fe%	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %
Measured	120	0.29	5.5	24	8.2	33
Indicated	20	0.28	5.3	22	9.1	34
Inferred	22	0.22	4.4	19	10.0	38
<b>TOTAL</b>	<b>160</b>	<b>0.28</b>	<b>5.3</b>	<b>23</b>	<b>8.6</b>	<b>34</b>



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