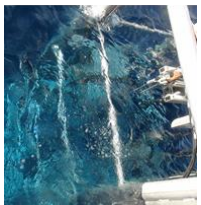


Trans-Tasman Resources Limited



*TARANAKI VTM PROJECT*  
*In the Fast Track*  
*World Class Resource Discovery*

Alan J Eggers  
26 August 2025



Trans-Tasman Resources Limited

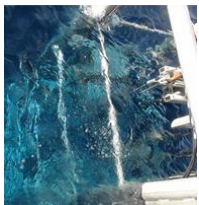


***“We’re Open for Business”***

*“Fast-track will supercharge economic growth, enabling major investments and growth in energy, transport, aquaculture, and a range of other sectors – but we can go further.”*

*“In regions like Taranaki and the West Coast there are big economic opportunities – higher incomes, support for local business and families, and more investment in local infrastructure.”*

**New Zealand’s Prime Minister Rt Hon Christopher Luxon**  
State of the Nation Speech                      23 January 2025



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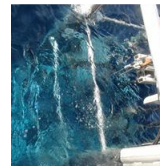
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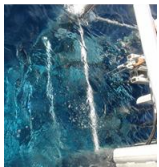
# Taranaki VTM Project



## *The Future of Mineral Exploration and Mining*

### Significant Opportunity for NZ

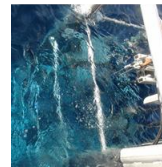
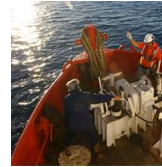
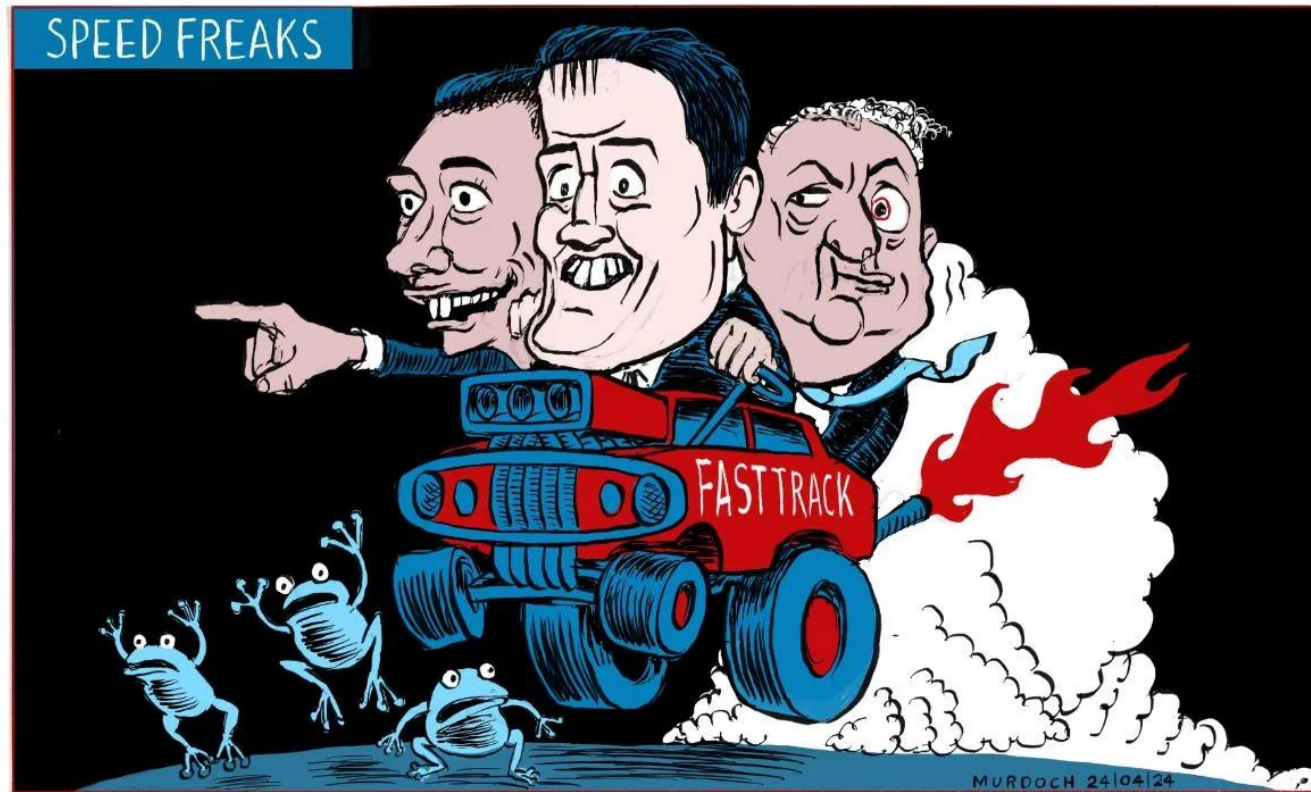
- A world class tier one resource 3.2Bt VTM
- One of NZ's largest metal discoveries
- Will be one of NZ's largest export earners
- Delivers essential and critical minerals
- Full set of environmental conditions & management plans
- Fast Track approval process underway



# Taranaki VTM Project



## *Fast Track Approvals Legislation 2024*



Fast Track legislation introduced 7 March 2024

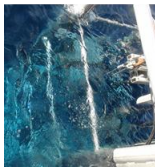
# Taranaki VTM Project



## *Fast-track Approvals Mining Projects 2024*



- ***Taranaki VTM Project listed in Schedule 2 for Fast Track consent***
- *11 mining projects will make a major contribution to the Government's objective of doubling the value of mineral exports to \$3 billion by 2035 including iron sands*
- *They will deliver measurable benefits to regional and national GDP, highly skilled and paid jobs in the regions*
- *Fast-track Approvals Act passed into law on **23 December 2024***
- *Expert Panel applications opened 7 February and **TTR applied 15 April 2025***

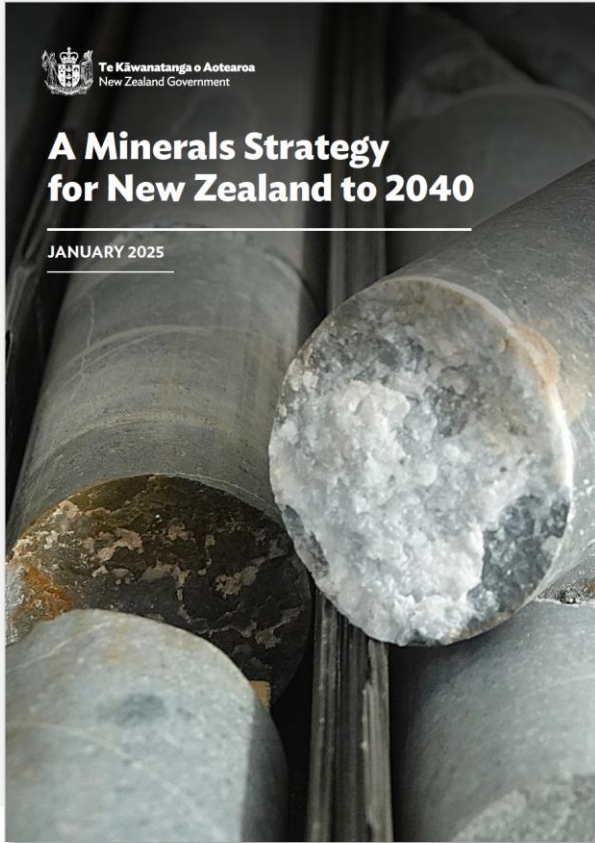


Fast-track Projects 6 October 2024

# Taranaki VTM Project











## Minerals Strategy to 2040

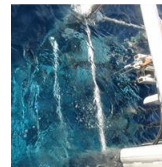
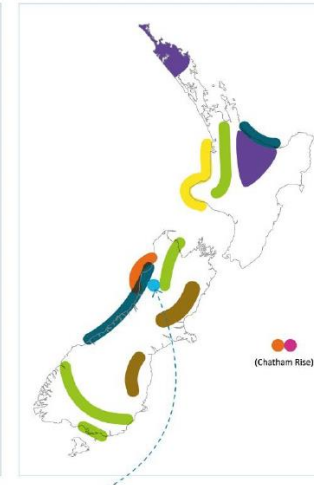


- Growth will be underpinned by scaling up our existing exports and by realising new mineral opportunities
- Aim to double NZ's minerals exports to \$3 billion by 2035

### New mineral opportunities

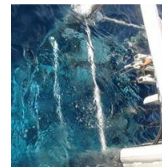
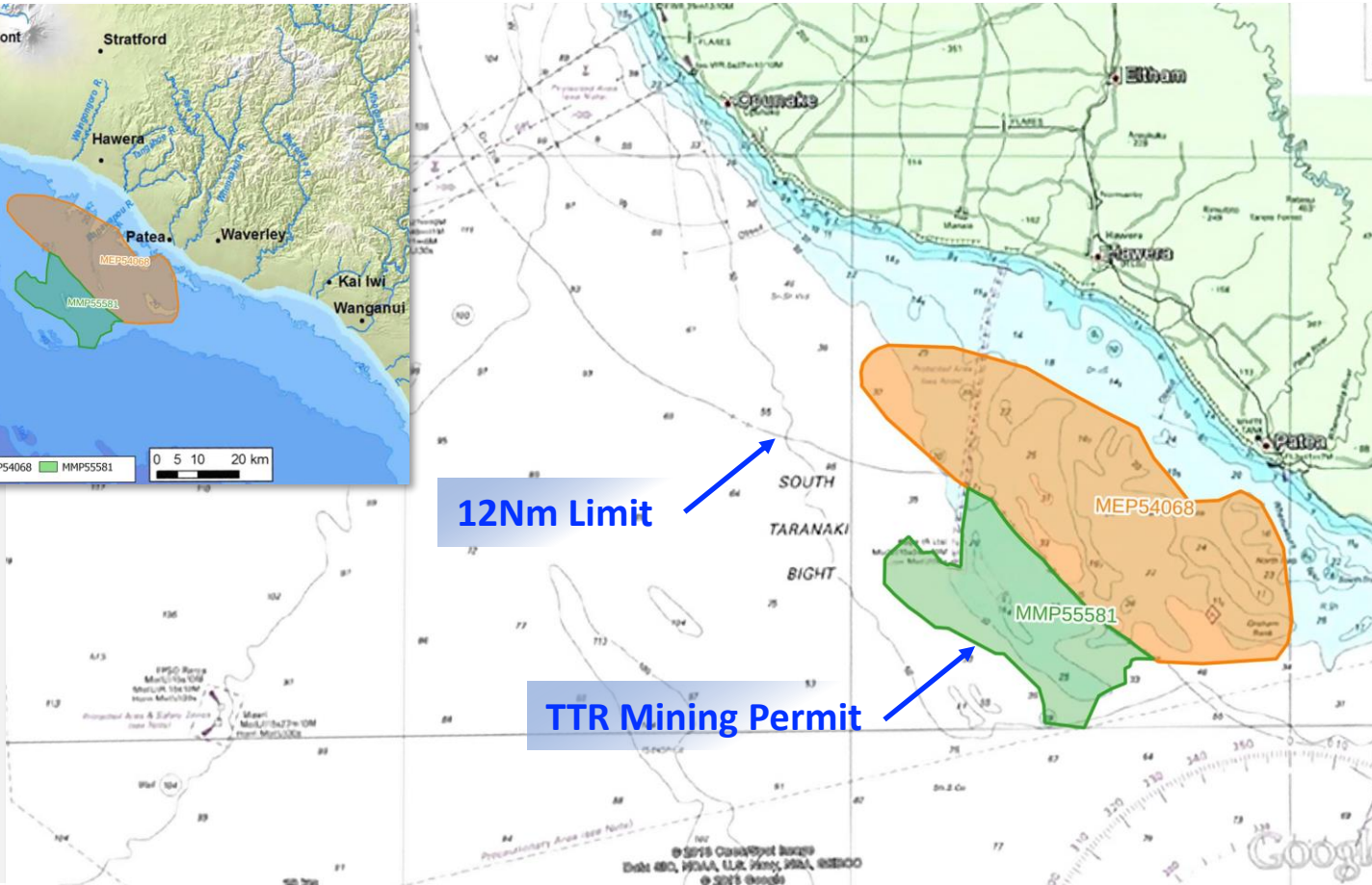
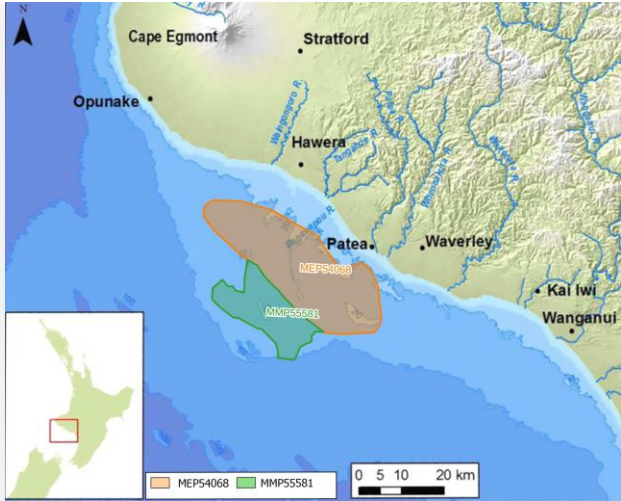
Based on permit data, private mineral exploration, and inferred from the geology of the area

 <b>Heavy minerals sands</b> Titanium, garnet, zircon and REEs are used in metal alloys, abrasives, in electronics, computers and batteries.	 <b>Vanadium and titanium</b> Used in iron and steel, superalloys, pigments, carbides and chemical catalysts and redox flow batteries.
 <b>Antimony</b> Used in semi-conductors, micro-capacitors, and as flame and heat retardants important in EVs and energy storage.	 <b>Phosphate</b> Used in fertiliser.
 <b>Lithium</b> Used in lithium-ion batteries for electric vehicles, mobile phones and laptops.	 <b>Potash</b> Used in fertiliser.
 <b>Rare earth elements</b> Used as critical components of electronics, computers and batteries.	 <b>Hydrogen</b> Used in industrial processes including as a feedstock and fuel source, and in fuel cells.



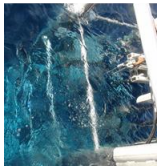
MBIE 31 January 2025

# TTR Mining Permit 55581

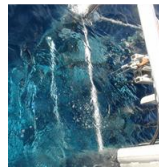
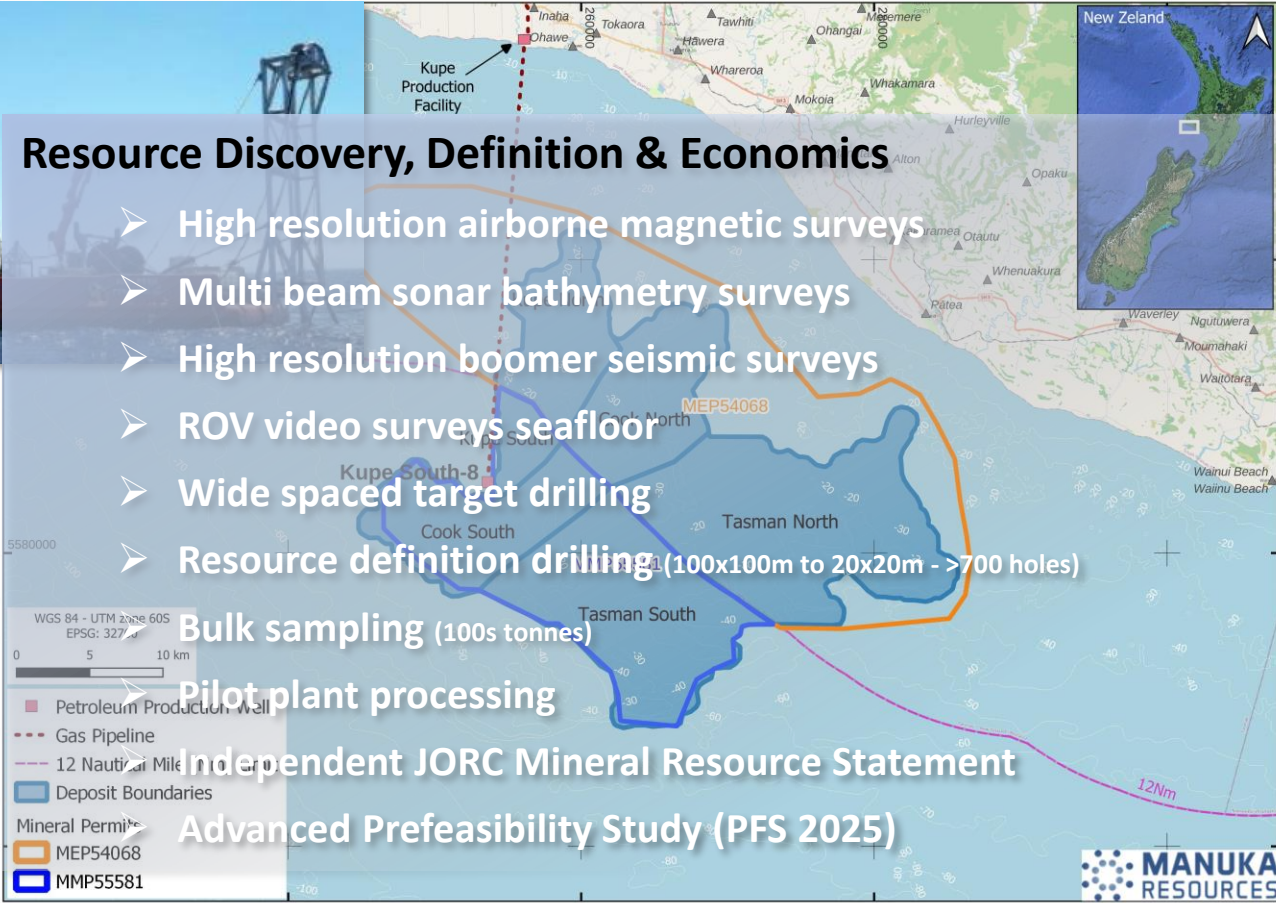


MMP55581 243km<sup>2</sup> which is around 0.20% the area of STB and 0.002% of EEZ  
MEP54068 635km<sup>2</sup>

# Taranaki VTM Project



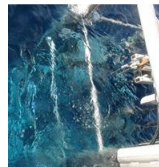
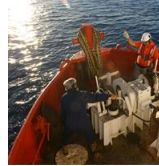
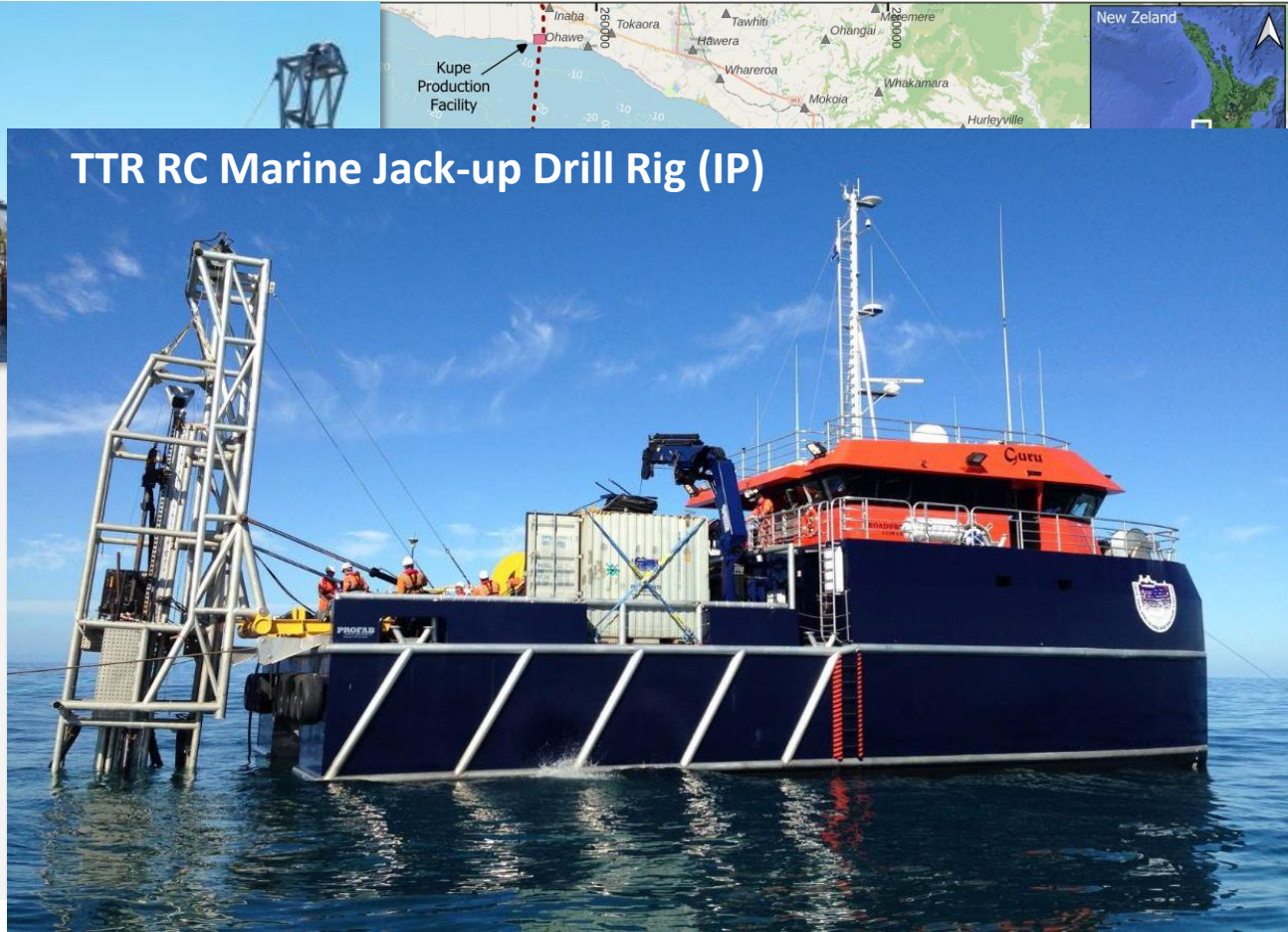
# TTR Exploration & Resource



**MMP55581 243km<sup>2</sup>** which is around **0.20%** the area of **STB** and **0.002%** of **EEZ**  
**MEP54068 635km<sup>2</sup>**

**22km to 36km offshore**

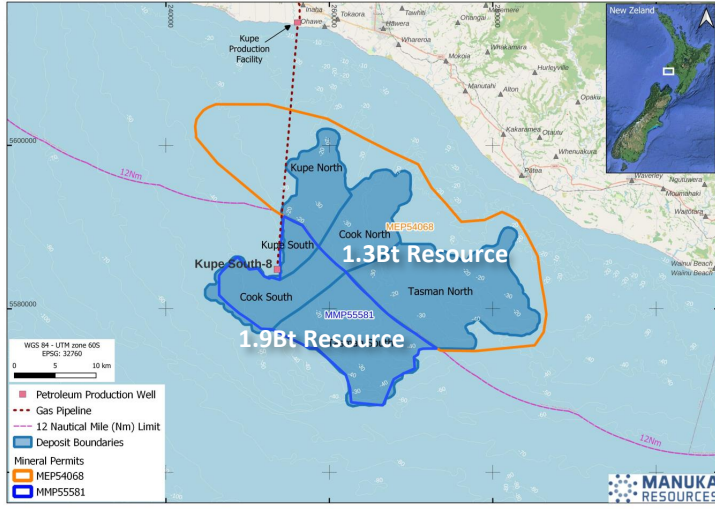
# TTR Exploration & Resource



MMP55581 243km<sup>2</sup> which is around 0.20% the area of STB and 0.002% of EEZ  
MEP54068 635km<sup>2</sup>

22km to 36km offshore

# TTR JORC Resource Estimates



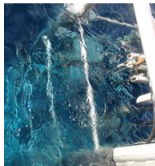
**3.2Bt Indicated and Inferred Mineral Resource**

**10.17%Fe<sub>2</sub>O<sub>3</sub>, 0.05%V<sub>2</sub>O<sub>5</sub> & 1.03%TiO<sub>2</sub>**  
**1.6Mt of contained V<sub>2</sub>O<sub>5</sub>**

**TTR Mine Plan 1,000Mt**  
**20 years at 5Mtpa Concentrate**  
**57%Fe<sup>1</sup>, 0.5%V<sub>2</sub>O<sub>5</sub> & 8.4%TiO<sub>2</sub>**

Taranaki VTM Resource Estimates Summary									
MEP54068 Inside 12Nm (RMA)	Indicated and Inferred Mineral Resources					DTR Concentrate			
	Cut-Off Grade	Mt	Fe <sub>2</sub> O <sub>3</sub> %	TiO <sub>2</sub> %	V <sub>2</sub> O <sub>5</sub> %	Mt	Fe%	TiO <sub>2</sub> %	V <sub>2</sub> O <sub>5</sub> %
Cook North Block	3.5% DTR*	274	11.90	1.19	0.06	21	57.19	8.12	0.52
Kupe North Block	3.5% DTR*	417	11.48	1.21	0.06	31	57.07	8.35	0.51
Tasman North Block	7.5% Fe <sub>2</sub> O <sub>3</sub>	585	9.02	0.88	0.04				
<b>Total VTM Resource (RMA)</b>		<b>1,275</b>	<b>10.44</b>	<b>1.05</b>	<b>0.05</b>				
MMP55581 Outside 12Nm (EEZ)									
Cook South Block	3.5% DTR*	914	10.95	1.12	0.05	63	55.84	8.45	0.50
Kupe South Block	3.5% DTR*	272	9.76	0.98	0.05	16	56.33	8.43	0.50
Tasman South Block	7.5% Fe <sub>2</sub> O <sub>3</sub>	695	8.81	0.89	0.04				
<b>Total VTM Resource (EEZ)</b>		<b>1,881</b>	<b>9.99</b>	<b>1.01</b>	<b>0.05</b>				
<b>Taranaki VTM Resource Total</b>		<b>3,157</b>	<b>10.17</b>	<b>1.03</b>	<b>0.05</b>				

- VTM Vanadiferous titanomagnetite  $Fe_{2.74}Ti_{0.24}V_{0.02}O_4$
- Davis Tube Recovery (DTR) Estimate is based on analytical DTR and calculated DTR values
- JORC (2012) reported 1 March 2023
- 1: 57%Fe = 81%Fe<sub>2</sub>O<sub>3</sub>



# Taranaki VTM Project



## *Exclusive Economic Zone & Continental Shelf (Environmental Effects) Act*

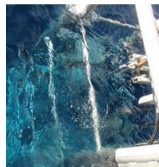
*The EEZ Act incorporates comprehensive environmental safeguards and international guidelines that seek to balance economic development with environmental protection*

*The EEZ Act **does not preclude material harm & permits mineral recovery** where the impact on the environment can be remedied, mitigated or if other interests including economic benefit and the efficient use and development of natural resources are justified*

*Plus: the Precautionary Principle<sup>1</sup>*

*“insufficient information: Don’t know = Don’t do”*

*TTR provided extensive marine research and best available expert information*



- 1: The precautionary principle **reverses the burden of proof—**  
**the individual or entity proposing the activity must** prove the activity is not harmful

# Taranaki VTM Project



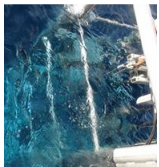
## *Fast Track Approvals Act 2024*

*The FTA Act passed on 23 December 2024 is a one stop shop to:*

*“Facilitate the delivery of infrastructure and development projects with significant regional or national benefits.”*

*The elevation of FTA Act’s purpose over RMA, and EEZ Act, when considering the application for approval:*

- limiting the ability to decline applications to only when the adverse impacts are sufficiently significant to be out of proportion to the project's regional or national benefits; and*
- the Act's 'one stop shop' approach to obtaining key statutory approvals*
- TTR 2025 FTA application - Metallurgical Report, PFS, NZIER EIA, updated Marine Science and wide Consultation*



# Taranaki VTM Project

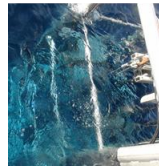


## Fast-track Approvals Act 2024 Process



### TTR's FTA Application process:

- Substantive application lodged* **15 April 2025**
- Notified application complete* **15 May 2025**
- Panel convener gets advice & reports*
- Panel convener conference* **7 July 2025**
- Expert panel appointed (5)* **12 August 2025**
- Expert panel commences assessment* **25 August 2025**
- Invited comments Hearing? 100 days* **29 September 2025**
- Draft decision to TTR & Minister* **4 March 2026**
- Decision published* **18 March 2026**
- Appeal notice period* **17 April 2026**



<https://www.fasttrack.govt.nz/projects/taranaki-vtm>

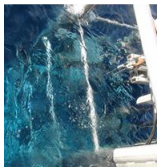
# Taranaki VTM Project



## *Environmental Advantages*

- *Harvesting minerals top 5m average (1m to 11m deep)*
- *Simple magnetic separation of VTM*
- *No chemical additives in processing or tailings*
- *No permanent seabed installations or fixtures*
- *Natural processes delivers rapid rehabilitation of mined areas*
- *Recolonised in weeks & full recovery <2 years*
- *No impact on fish, whales or dolphins*
- *No legacy issues with continuous rehabilitation part of recovery process*

✓ **TTR iron sands lowest carbon intensity 62kgCO<sub>2</sub>/t versus 120-250kgCO<sub>2</sub>/t for competitors world wide**



## Environmental Consents



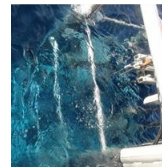
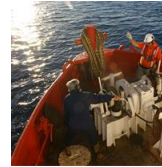
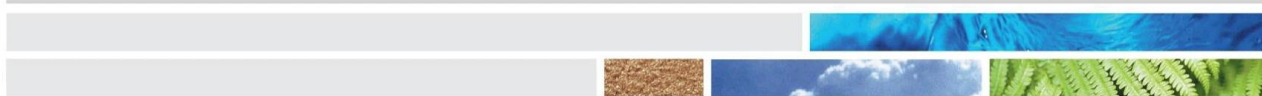
Environmental  
Protection Authority  
*Te Mana Rauhi Taiao*

Application Ref: EEZ000011  
August 2017

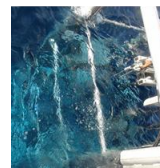
### DECISION ON MARINE CONSENTS AND MARINE DISCHARGE CONSENTS APPLICATION

Environmental consents were granted subject to:

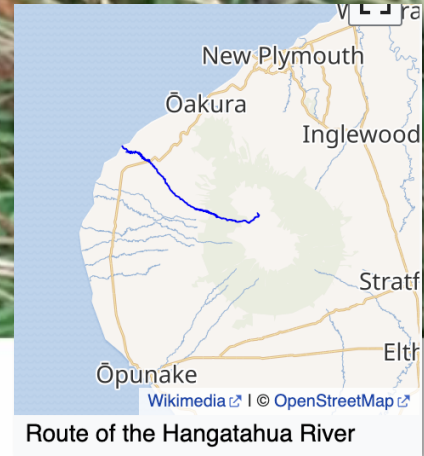
- 109 comprehensive conditions to operate (Updated 2025);
- Detailed set of management & operations plans; and
- 30+ year marine effects monitoring program



# Taranaki VTM Project



# Taranaki VTM Project



**Adrian Cleary Photography**

July 4 at 5:29 PM · 🌐

A little bit of rain coming down the Hangatahua/Stony...

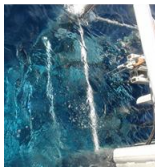
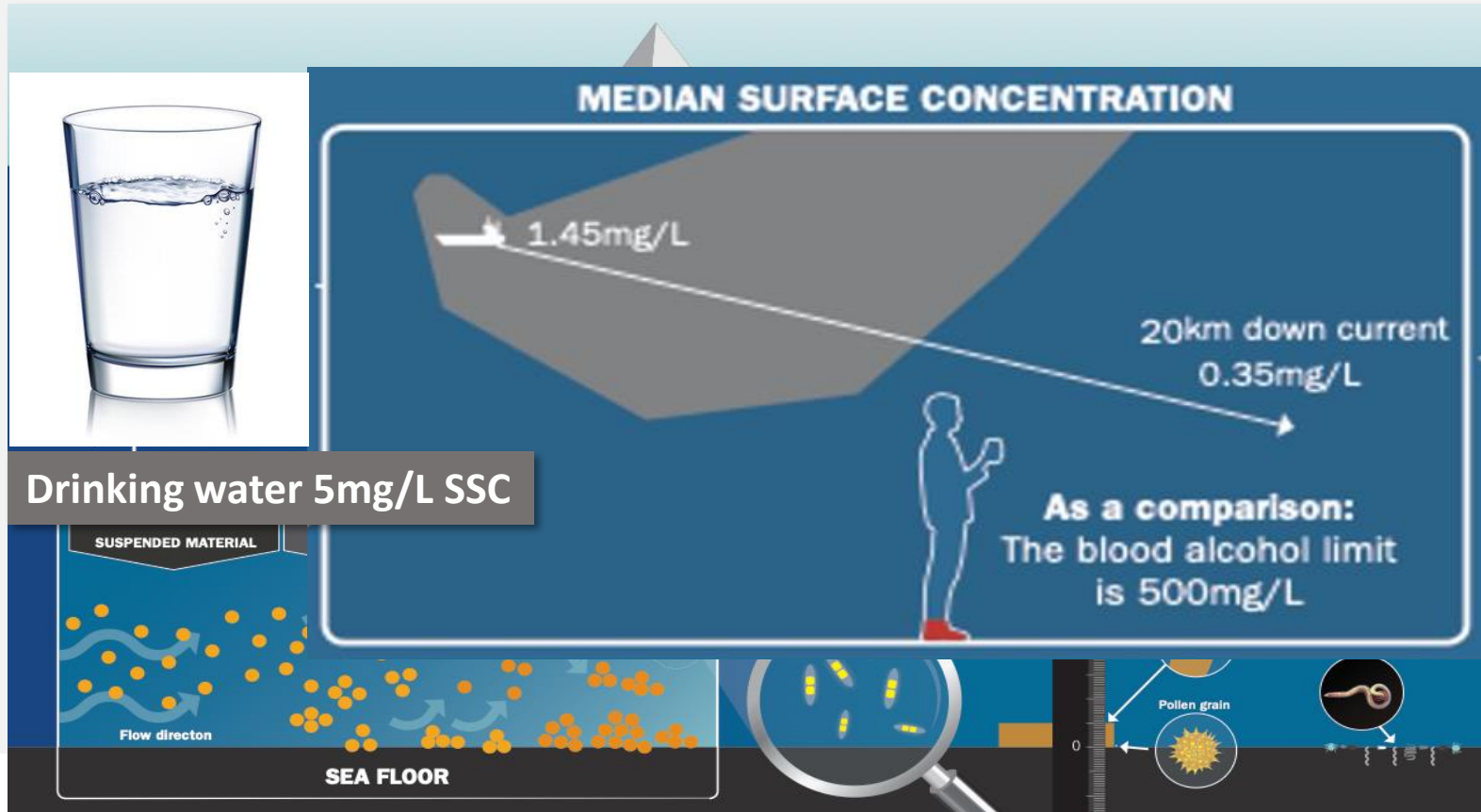
Even at home, half a km or so away from the spot I'm standing at, you can not only hear, but feel the boulders smashing their way down the awa - a constant rumble, vibrating and droning in the background. Quite surreal.

[#river](#) [#storm](#) [#flood](#) [#swollenriver](#) [#hangatahua](#) [#stony](#) [#taranaki](#) [#moungataranaki](#)

# TTR Marine Consents STB



## The Plume

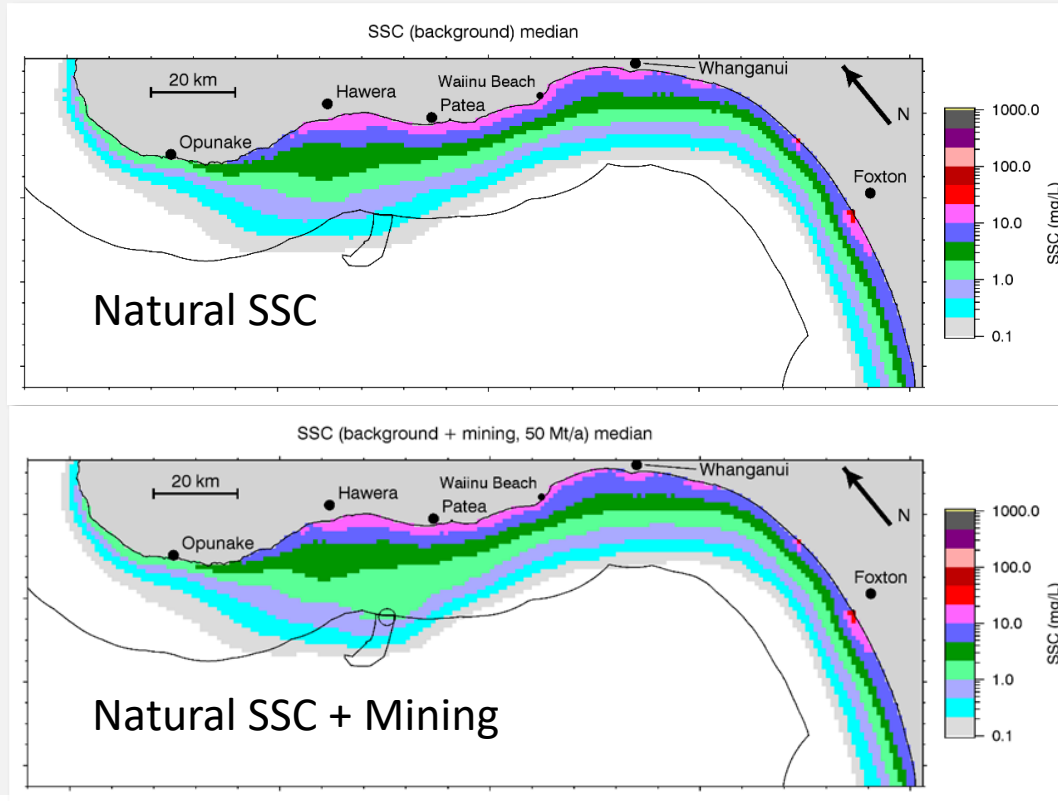


The operation, for around 260 days a year for 20 years, will **occasionally** add 0.5 – 1.5mg/L of suspended sediment, less than NZ drinking water standards, to a small and migrating plume. Never reaches shore

# TTR Marine Consents STB

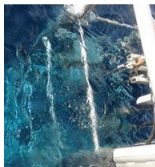


## Suspended Sediment in STB Ocean



Plume Modelling (Existing TSS average)

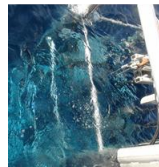
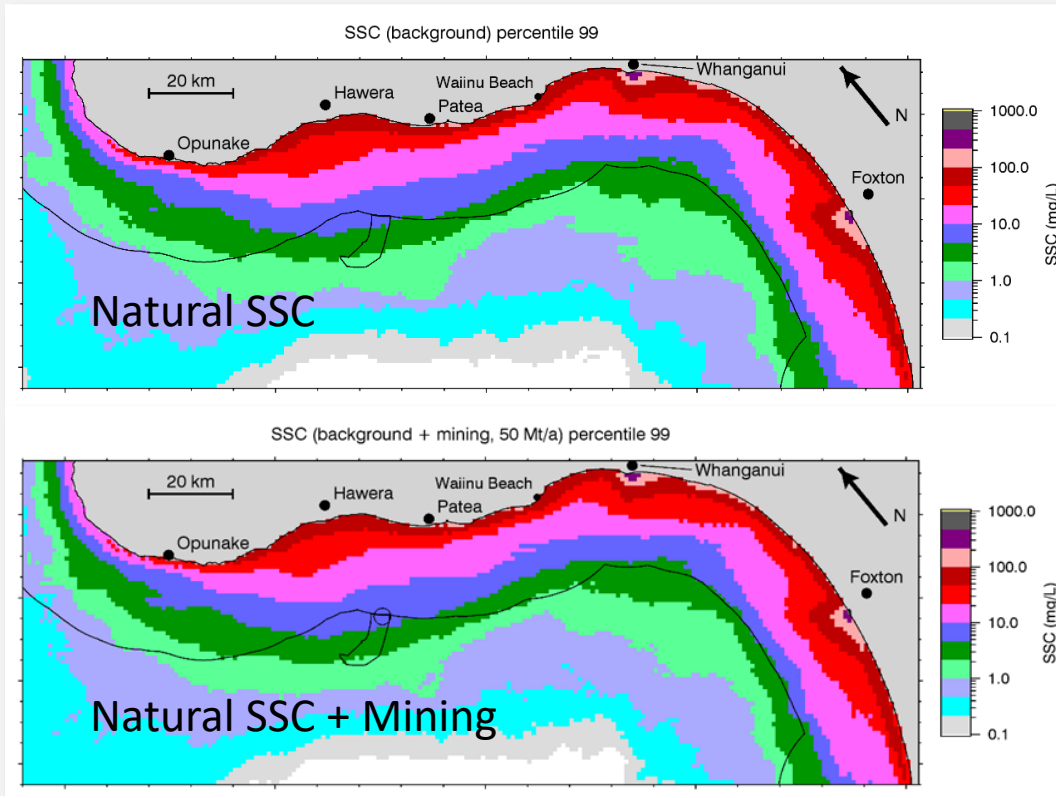
STB has high turbidity of 10mg/L to >1,000mg/L TSS in water column



# TTR Marine Consents STB



## Suspended Sediment in STB Ocean



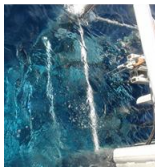
Plume Modelling (Worst case storm, wave, swell & tidal currents – **no operations**)

STB has high turbidity of 10mg/L to >1,000mg/L TSS in water column

## Blue Whale Sightings

Table 3.5: Number of marine mammal sightings in the area of the proposed consent area, and in the 5km and 10km buffer area around it from the DOC Marine Mammal Database to April 2023<sup>56</sup>

Species	Within the project area	Within 5km buffer of the project area	Within 10km buffer of the project area
Blue whale	0	0	1
Minke whale	0	1	0
Common dolphin	1	4	4
Hector's or Maui dolphins	0	0	1
Orca	0	1	0
<b>TOTAL</b>	<b>1</b>	<b>6</b>	<b>6</b>

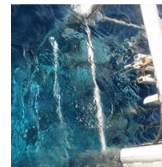
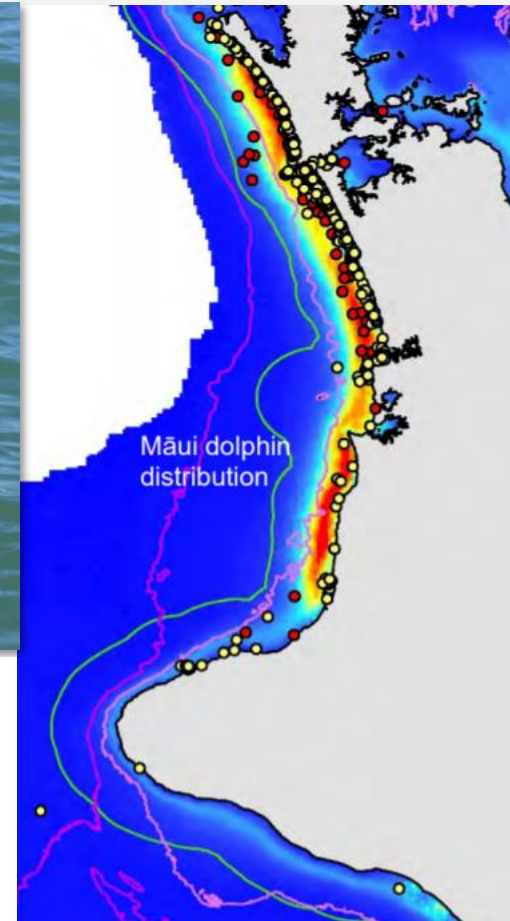


## *Māui Dolphin Sightings*



Population estimate for critically endangered Māui dolphins has fallen by 14 percent in the past five years

The latest survey by the DoC showed there were just 54 remaining



# TTR Marine Consents STB



## Commercial Shipping (>7,000pa)

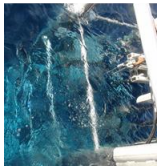
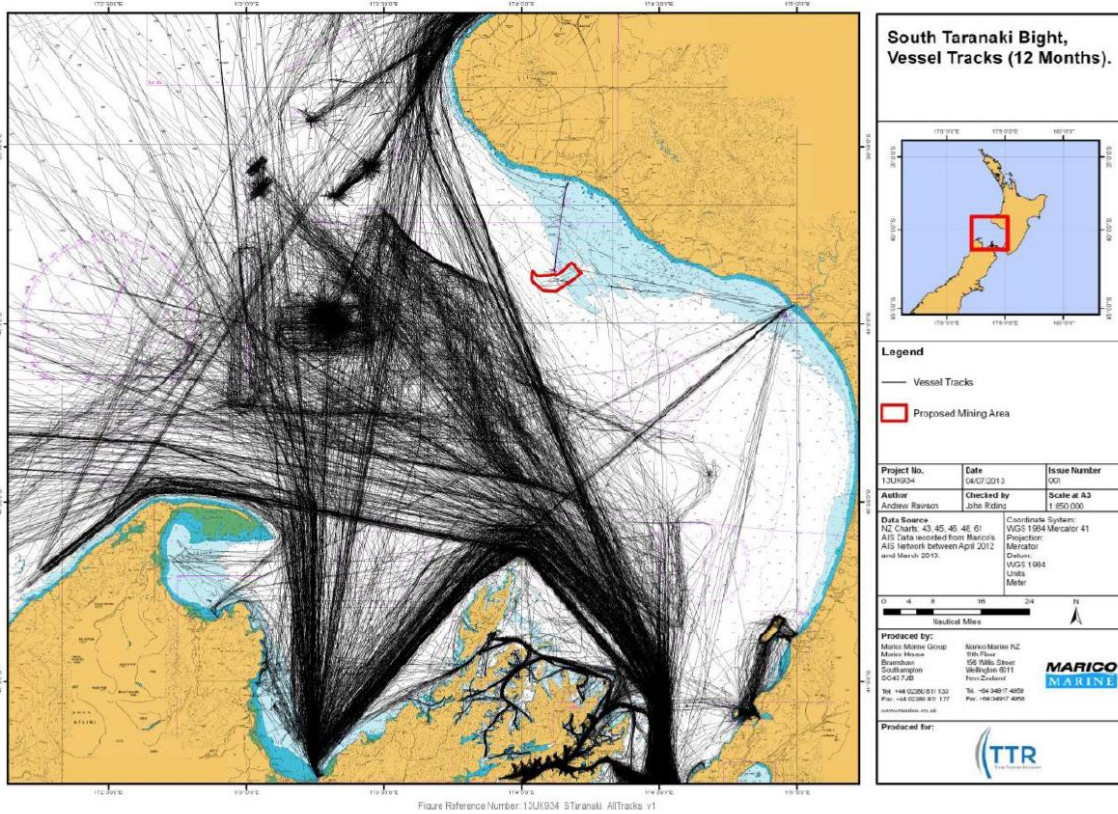
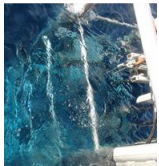
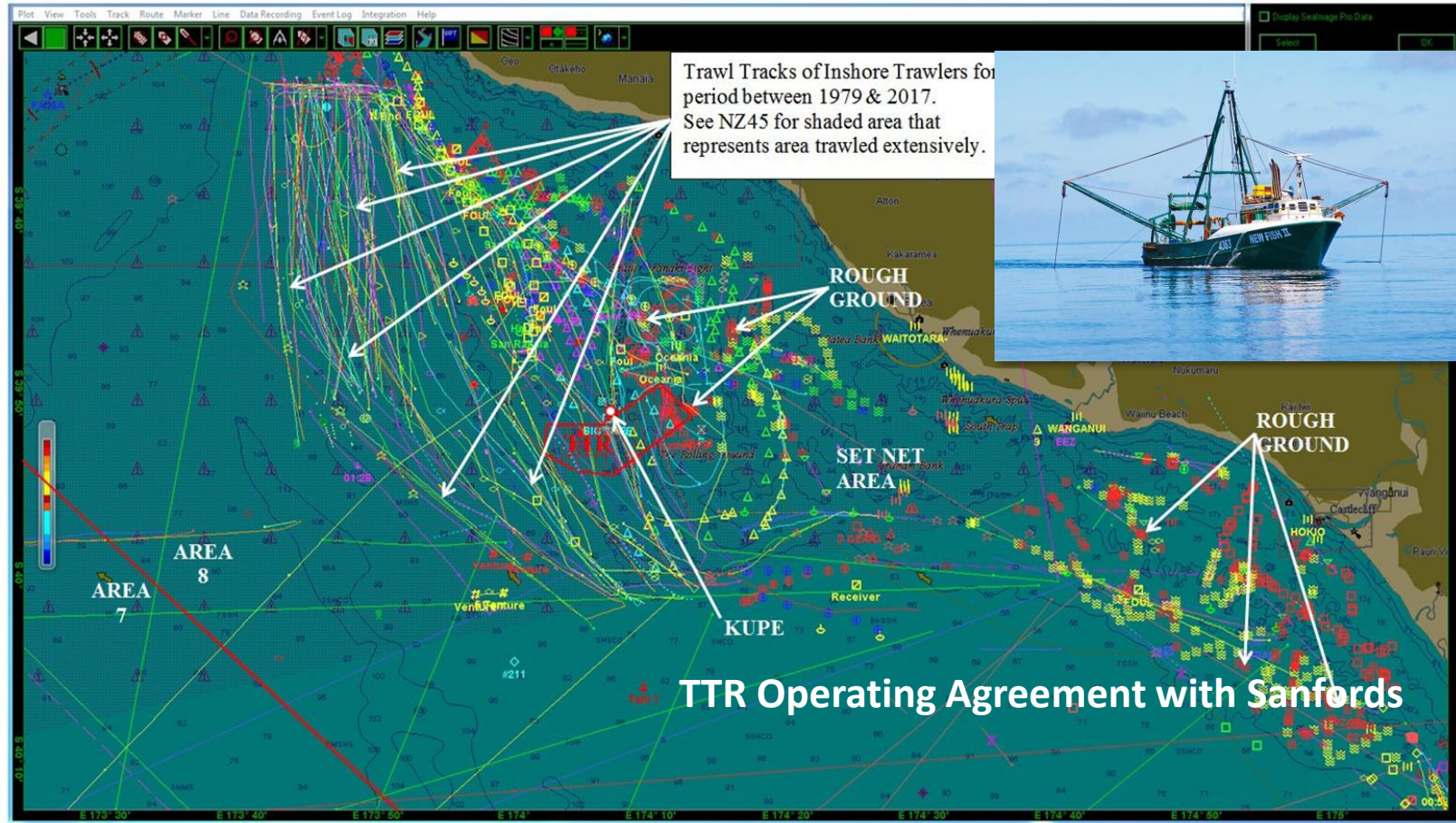


Figure 3.14: Marine Traffic through the STB over 12 months

# TTR Marine Consents STB



## Commercial Fisheries & Trawling



## *Independent Experts & Evidence*

*Dr Alison MacDiarmid NIWA Regional Manager*

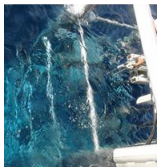
*March 2024:*

*“The proposed mining area in the STB is one of the best studied shallow exposed shelf marine environments in New Zealand*

*There’s a wealth of studies generated by the applicant [TTR] that add to a body of existing information*

*Effects so small and perhaps impossible to measure*

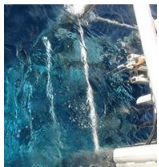
*Granting consent, subject to the proposed conditions, will avoid material harm, and will favour caution and environmental protection in relation to the effects of proposed mining operations”*



# TTR Project Economics



## Iron Ore Price 2015 to 2025



# TTR Project Production



## Annual VTM Concentrate Exported

**Bulk shipping 250,000t Capesize vessels**

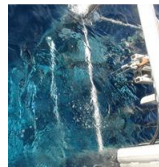
- Iron ore (57%Fe) **5Mt**
- Vanadium pentoxide **18,000t V<sub>2</sub>O<sub>5</sub>**
- Titanium dioxide **325,000t TiO<sub>2</sub>**

**57%Fe 11lbs V<sub>2</sub>O<sub>5</sub> 8.5% TiO<sub>2</sub>  
(10,000t V 77% recovery)**

**Global vanadium production (v)<sup>1</sup>**

- China **39,200t**
- Russia **11,760t**
- **New Zealand 10,000t?**
- South Africa **4,480t**
- Brazil **2,800t**

**60,000t Vanadium metal global production 2024**

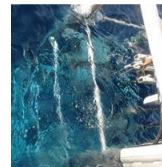
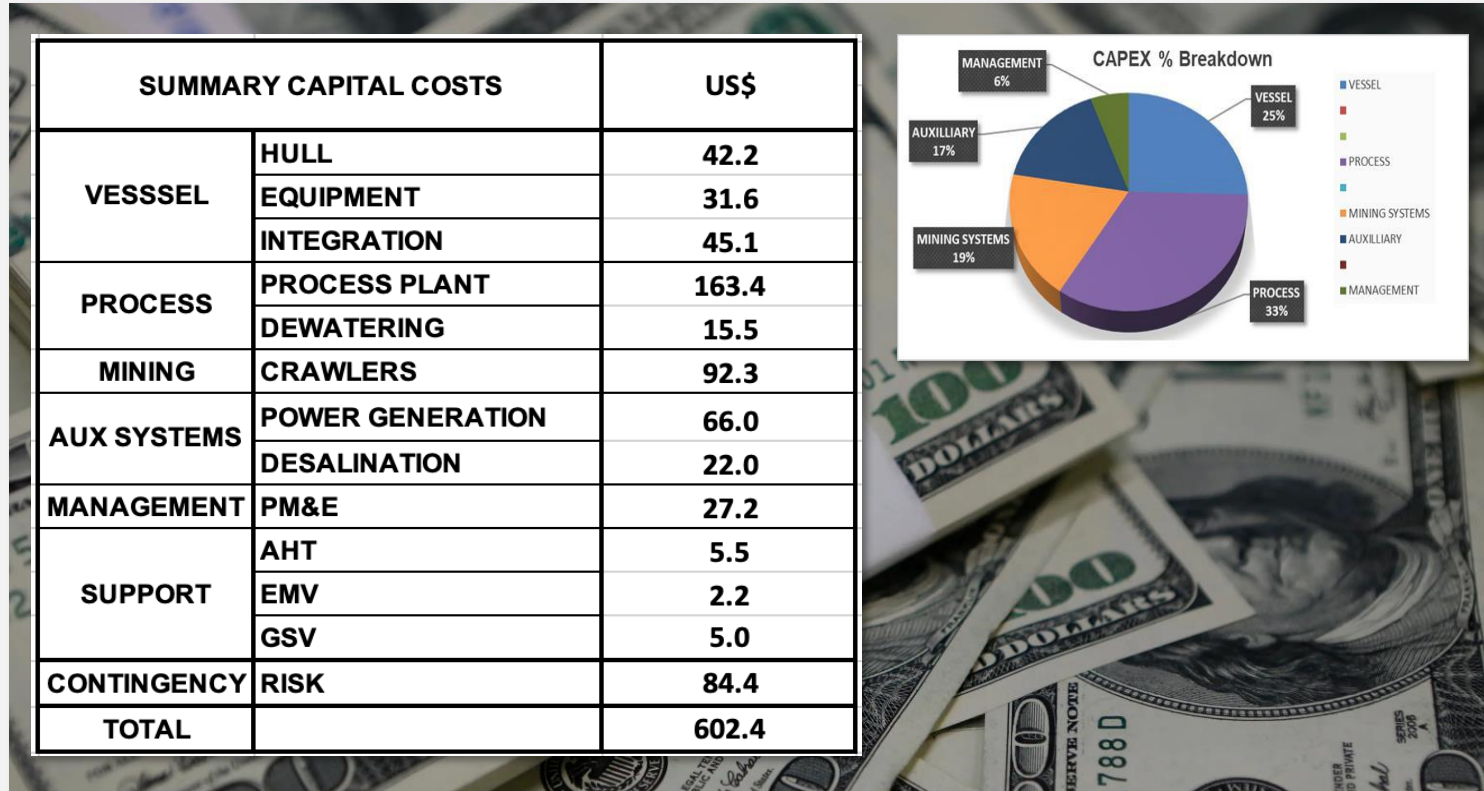


*<sup>1</sup> US Geological Survey, Mineral Commodity Summaries, January 2025: V vanadium metal  
Project Economics based on 57% Fe iron ore concentrate and 77% recoverable vanadium*

# TTR Project Economics



## Project CAPEX February 2025<sup>1</sup>



<sup>1</sup> Taranaki VTM Project PFS February 2025 (Manuka ASX Release 2 March 2025)  
Based on proposed IMV 5Mt annual VTM concentrate production

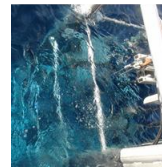
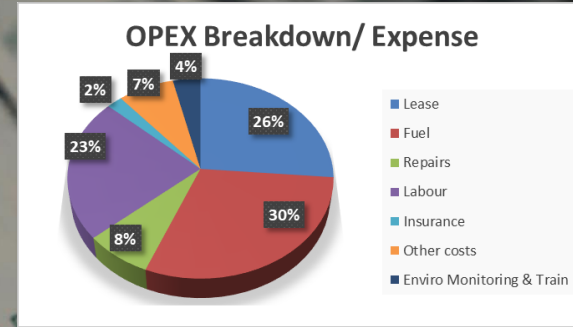
# TTR Project Economics



## Project OPEX February 2025<sup>1&2</sup>

Summary OPEX Costs	US\$/te Concentrate
8000 tph Seabed Crawler	US\$ 1.29
Integrated Mining Vessel	US\$ 15.34
Floating Storage and Offloading Vessel	US\$ 7.72
Ancillaries (AHT)	US\$ 1.85
Environmental Monitoring Vessel	US\$ 1.00
<b>Total</b>	<b>US\$ 27.20</b>

Summary OPEX Costs	US\$/te Concentrate
Leasing Costs (FSO)	US\$ 7.00
Fuel	US\$ 8.12
Repairs & Maintenance	US\$ 2.04
Labour	US\$ 6.27
Insurance	US\$ 0.57
Other Costs (Misc.)	US\$ 2.20
Environ Monitoring & Training	US\$ 1.00
<b>Total</b>	<b>US\$ 27.20</b>




- 1 Taranaki VTM Project PFS February 2025 (Manuka ASX Release 2 March 2025)  
Based on proposed IMV 5Mt annual VTM concentrate production**
- 2 Lower quartile costs global iron ore producers**

# TTR Project 2025 PFS



## Project CAPEX, OPEX & Concentrate Metal Value<sup>1&2</sup>



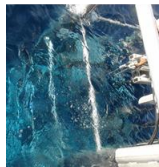
- **Total CAPEX US\$600m (NZ\$1B)**
- **Total OPEX US\$27.00t**

TTR metal in concentrate value tonne

- **Iron ore (57%Fe) US\$78.00t** (13.7% discount US\$90t)
- **Vanadium US\$23.00t** (77% recoveries 50% cost)
- **Concentrate US\$101.00t**

- Plus potential metal credits
- Titanium: US\$155.00t

**NPV US\$1.26B (NZ\$2.20B)**  
**EBITDA US\$315m (NZ\$550m) pa**  
**IRR 39%**  
**Capital Payback 18 Months**



1 *Taranaki VTM Project PFS February 2025 (Manuka ASX Release 2 March 2025)*  
Based on proposed IMV 5Mt annual VTM concentrate production  
2 *Lower quartile costs global iron ore producers*

# Taranaki VTM Project



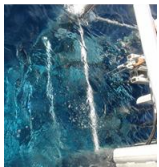
## *Economic Benefits*

**20 year life of mine with 60 years reported resource**

**Taranaki benefits<sup>1</sup>**

- **New Plymouth HO & Hawera training & logistics base**
- **305 jobs** Directly employs 270 operational staff + 35 admin HO support
- **1,125 jobs** Taranaki based jobs (logistics, services, supplies, maritime ops)
- **\$250m** Annual Taranaki region operating spend
- **Port Taranaki & Whanganui** upgrades
- **TTR Charitable Trust Grants** for social and cultural activities
- **GDP boost by \$222m**

**1** *New Zealand Institute of Economic Research Report 12 March 2025*  
*Based on proposed IMV 5Mt annual VTM concentrate production*



# Taranaki VTM Project



## *Economic Benefits*

**20 year life of mine with 60 years reported resource**

### **National benefits**

- **1,320 jobs Nation wide indirect**
  - **\$55m pa Royalty revenues (Royalties for Regions?)**
  - **\$136m pa Corporate taxes**
  - **US\$495m pa Foreign exchange earnings (NZ\$855m pa)**
  - **US\$600m Capex investment (NZ\$1B) leading edge technology**
- **No public or government infrastructure required**
- **Promotes the sustainable management of natural resources in EEZ**

#### Industry statistics (for the year to June 2023)



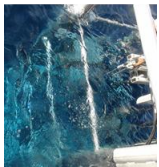
**\$1.46 billion**  
in mineral exports



**5,290 people**  
employed in the sector



**\$21.6 million**  
in royalties



Corporate tax is equivalent to approx 1% of NZ's corporate tax

# Taranaki VTM Project



*Approvals process taken over 12 years & >\$88 million*

## The approvals process

- EPA DMC hearing process three times
- Three court challenges, including Supreme Court, focused on:
  - Legal definitions & purpose of the EEZ Act legislation
  - DMC panel grants process & decision write up
  - Certainty of information principles
  - Treaty & application of tikanga principles
- Court challenges *not* about project, environmental impact, protection or conditions
- Challenges also include 2020 Dolphin Reserves, 2023 Parliamentary Inquiry into Seabed Mining, Te Pāti Māori Bill to ban seabed mining, 2025 Waitangi Tribunal, ASIC & ASX complaints, Energy Minister seeks advice to restrict seabed mining (OWE).....

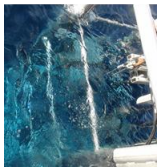
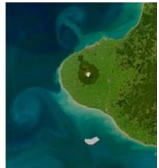


Attorney General, Crown Law & EPA Submissions Support TTR Case

# Taranaki VTM Project



*Long term environmentally sustainable mineral recovery*



## Taranaki VTM Project ready for immediate start

- *2025 PFS & EIA completed & BFS ready to go*
- *FTA Approvals application 15 April & Panel starts 25 August 2025*
- *7 month hearing with wide participation invited*
- *Operating conditions and management plans lodged*
- *17 April 2026 Green light required!*

*Seabed mineral recovery is part of the solution, and the future*

Trans-Tasman Resources Limited



***“Are We Open for Business” ?***

