BEFORE THE ENVIRONMENTAL PROTECTION AUTHORITY
AT WELLINGTON

IN THE MATTER	of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012
AND	
IN THE MATTER	of a decision-making committee appointed to reconsider a marine consent application by Trans Tasman Resources Limited to undertake iron ore extraction and processing operations offshore in the South Taranaki Bight

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EXPERT EVIDENCE OF MATTHEW BROWN ON BEHALF OF TRANS TASMAN RESOURCES LIMITED

13 OCTOBER 2025

[redacted] ATKINS | HOLM | MAJUREY

Mike Holm
PO Box 1585
Shortland Street
AUCKLAND 1140

Solicitor on the record Mike Holm
Counsel Morgan Slyfield [redacted]

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INTRODUCTION

Qualifications and experience

1. My name is Matthew Brown. I am General Manager of Siecap NZ Ltd, where I have been employed since 2021. I was awarded a Bachelor of Science (Geology) by the University of Auckland in 1996, a Master of Science (Geology) by the University of Auckland in 1998, and a PGDip Business by the University of Auckland in 2001.

2. I have 27 years of professional experience in the minerals and mining sector in both private and public sector, within NZ, Australia and Papua New Guinea. I specifically have experience as a geologist relating to alluvial and mineral sand deposits, within New Zealand and Papua New Guinea, for 16 years. My roles have entailed exploration, metallurgy, resource estimation, technical and feasibility studies.

3. I am a member of the Australasian Mining and Metallurgical Institute and under AusIMM guidelines and JORC[1] (Joint Ore Reserves Committee) 2012, I am considered as a Competent Person to report mineral sand resources and undertake technical reports. I also have an AusIMM Associate Certificate for the VALMIN[2] Code reporting.

4. Siecap NZ's involvement in the project stems from our long-standing professional relationship with Trans-Tasman Resources Limited (**TTR**), established through our prior senior

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[1] The JORC Code (2012 Edition) is the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. It provides minimum standards, recommendations, and guidelines for public reporting by companies listed on the ASX or other exchanges that adopt it (like NZX or AIM)

[2] VALMIN is for the Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports.

roles within the organisation. Drawing on this history and detailed understanding of the project's technical, operational, and regulatory background, we have continued to support TTR in a professional capacity. Our ongoing engagement is delivered through Siecap NZ as an independent advisory and engineering services firm, providing specialist input consistent with our obligations, qualifications and certifications as registered and chartered professionals within the mining, engineering, and environmental sectors.

5. I was employed by TTR from 2011 to 2017 in the capacity of General Manager Geology.

6. I previously gave evidence for TTR before a Decision-making Committee (**DMC**) in 2014 and 2017.

7. I also assisted in the preparation of the original TTR's application, which are listed here:

   (a) EEZ000004_05 Statement of Evidence (2014)

   (b) EEZ000004_April Memorandum to the EPA on Mineral Resource Model (2014)

   (c) EEZ000004-April-TTR-Appendix-C-Responses-from-TTR-Questions-from-the-DMC-to-the-Applicant. (2014)

   (d) EEZ000011/Evidence/Matthew-Brown-Geotechnical. (2016)

8. I also co-authored the Siecap Taranaki VTM Project Prefeasibility Study Offshore Iron Sands Project[3] (Prefeasibility

[3] Attachment 3a - Siecap Taranaki VTM Project Pre-Feasibility Study Offshore Iron Sands Project 25 March 2025_Part1 FINAL

Study) which forms part of the current TTR application under the Fast-Track Approval Act 2024.

Scope of evidence

9. This evidence is provided to assist the decision-maker by addressing technical and operational matters raised in submissions.

10. My evidence responds point-by-point to submitter comments and queries on technical and operational issues. In particular, it covers geology, geochemical, mining schedule, product quality, environmental controls, monitoring and compliance, and risk management and mitigation.

11. I have also contributed to the response tables relevant to my areas of knowledge and experience that are being submitted together with this statement of evidence as part of TTR's responses to comments.

Code of conduct

12. I confirm that I have read the Code of Conduct for Expert Witnesses as contained in the Environment Court Practice Note dated 1 January 2023. I agree to comply with this Code. This evidence is within my area of expertise, except where I state that I am relying upon the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

RESPONSE TO SUBMITTER COMMENTS

J Cooper KASM – Response to Global Iron Ore demand and prices

13. Trans-Tasman Resources' offshore titanomagnetite ironsand project is strategically positioned to serve the evolving steel sector. While global supply remains dominated by high-grade

hematite producers in Australia and Brazil, these reserves are progressively declining in grade[4].

14. At the same time, the steel industry is undergoing a structural transformation. The global transition from traditional blast furnace-basic oxygen furnace (**BF-BOF**) production to hydrogen-based direct reduced iron (**H-DRI**) processes is being driven by decarbonisation imperatives and emissions reduction targets. This shift is creating a growing market for feedstocks suitable for hydrogen reduction.

15. TTR's titanomagnetite iron sand aligns strongly with these emerging requirements. Research undertaken by the Robinson Research Institute[5] has demonstrated that New Zealand's titanomagnetite can be effectively reduced using hydrogen, confirming its potential as a sustainable feedstock for green steelmaking.

16. The TTR Discounted Cash Flow (**DCF**) model has 62% Fe Fines at a benchmark iron ore price of US$90, while they currently are around US$104 per tonne (October 2025) they are forecast to be approximately US$96 per tonne by Q3 2026[6]. Longer term prices are harder to predict, and the like of S&P and Trading Economics forecast 12 months ahead, as there are numerous factors that are accounted for to model pricing of iron ore.

17. Feedstocks compatible with low-emission processes are expected to attract competitive pricing. This positions TTR's New Zealand-sourced titanomagnetite as a future-facing

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[4] https://capital.com/en-int/analysis/iron-ore-price-forecast

[5] NZ's hydrogen steel-making pioneers ready for private capital push | BusinessDesk-Robinson Research Institute Brochure

[6] https://tradingeconomics.com/commodity/iron-ore

resource that can meet the needs of an industry transitioning toward decarbonised steel production.

RESPONSE TO SUBMITTER COMMENTS

Whanganui District Council – Part 2 Financial Model - Sanofex Report

18. Sanofex's comments that Siecap and TTR are not independent compromises the validity of the TTR Pre-Feasibility Study.

19. A Pre-Feasibility Study (**PFS**) is an intermediate level of detail technical and economic evaluation of a mineral project that determines the preferred development option and assesses whether the project is likely to be economically viable. These studies are guided by the JORC Code (2012) and the AusIMM Guidelines for Public Reporting of Technical Assessments and Valuations (VALMIN Code, 2015).

20. To undertake a PFS, the work must be led and signed off by appropriately qualified Competent Persons, who are Members or Fellows of the Australasian Institute of Mining and Metallurgy (**AusIMM**) or another Recognised Professional Organisation (**RPO**), with a minimum of five years of relevant experience in the style of mineralisation, type of deposit, and activity under consideration. Independence is not required, however, experience, qualifications, competency and adherence to industry standards is paramount.

21. A PFS typically defines the project's preferred mining, processing, and infrastructure options; provides preliminary designs; identifies and quantifies project risks; and includes financial analysis based on capital and operating cost estimates with an expected accuracy range of ±15–25%. The engineering definition is normally 10–25% complete, and the outcomes should demonstrate that the project is technically

achievable and economically viable under realistic assumptions.

Matthew Brown

13 October 2025