

OCEANAGOLD (NEW ZEALAND)
LIMITED

MACRAES PHASE FOUR (MP4)

GROUNDWATER

Evidence of Dr Theodora Avaniadou
Regarding Technical Assessment of
Groundwater Effects and Proposed
Conditions

INTRODUCTION

1. My name is Dr Theodora Avaniidou
2. My role in relation to Macraes Phase 4 (“**MP4**”) has been to provide expert advice in relation to Groundwater. I oversaw the groundwater related sections of Macraes Phase 4 FTA Surface and Groundwater Assessment Report (“**the Report**”) which is provided within *Part B – Technical Reports* of the application.
3. This evidence has been prepared to accompany the Report and the application by Oceana Gold (New Zealand) Limited (“**OGNZL**”) for approvals required for MP4 under the Fast-track Approvals Act 2024 (“**FTAA**”).
4. Section 4.1(h) of the FTAA Panel Conveners’ Practice and Procedure note (July 2025) says all technical experts authoring reports should include a statement regarding compliance with the Code of Conduct for Expert Witnesses. This evidence has been prepared to fulfil this requirement, and if a hearing is not held, this evidence confirms that, relative to my area of expertise the Report provides an appropriate description of the relevant environment, the proposed activities comprising the effects of the MP4 on that environment, and the way those effects are proposed to be managed.
5. My findings are set out in full in the Macraes Phase 4 FTA Surface and Groundwater Assessment Report included within *Part B – Technical Reports* of the application.
6. While this application is not being considered by the Environment Court, I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court of New Zealand Practice Note 2023 and that I have complied with it when preparing the Report. Other than when I state I am relying on the advice of another person, the Report is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

QUALIFICATIONS AND EXPERIENCE

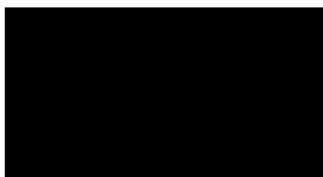
7. I hold a Bachelor of Science and Master of Science in Civil and Environmental Engineering (1997) from the Aristotle University of Thessaloniki, Greece and a Master of Science (2000) and Doctor of Philosophy in Groundwater Hydrology (2003) from the University of South Carolina, USA.
8. I am currently employed as a Technical Director in GHD’s Environmental Group based in Christchurch and have held that position since 2020. Additionally, from 2022 I hold the role of Hydrogeology Service Line Leader for Asia Pacific.

9. My previous work experience includes the roles of Senior and Associate Hydrogeologist at Beca Ltd between 2012 and 2020. have worked on hydrogeology-related projects in New Zealand for 14 years. Before moving to New Zealand, I was Team Leader of the Surface and Groundwater Hydrology Design Team in a multidisciplinary consultancy in Greece for eight years. Across these roles, I have prepared and presented expert evidence at numerous resource consent and planning hearings, including at council and Environment Court level.
10. I have been involved with the following projects which are of particular relevance to the consent application:
 - a. Macraes Gold various Projects (Round Hill Open Pit Pre-feasibility study, TTTSF570 Crest raise, Frasers Co-disposal, Macraes Phase IV) - Technical expert on groundwater: Guided the analysis of hydrogeological data and groundwater flow and contaminant transport modelling to assess the effects from open pit and underground workings mining extensions and the increase of storage of tailings and waste rock stacks.
 - b. Cypress Coal Mine, Buller New Zealand - Technical expert on groundwater: Guided the analysis of hydrogeological data and groundwater flow modelling to assess the effects from open pit mining extensions and the increase of storage of tailings and waste rock stacks.
 - c. Water NZ Battery Project, Lake Onslow New Zealand – Lead Hydrogeologist: Guided the hydrogeological testing and analysis of hydrogeological data to inform the design and potential geotechnical risks as well as Lake Onslow’s groundwater seepage assessment.
11. In providing this evidence, I have considered the following matters as relevant to that topic:
 - (a) The project description provided by OGNZL as set out in Section 6 of the Substantive Application prepared by Mitchell Daysh Limited;
 - (b) The description of the existing environment as set out in Section 4 of the Substantive Application, the effects of MP4 on that environment and their significance, and the proposals to manage those effects as all set out in the assessment of effects in Section 9 of the Substantive Application;
 - (c) The technical assessments of:
 - a. MP4 FTA - Hydrochemical Pit Lake Modelling Report prepared by MWM, (2026)
 - b. MP4 FTA - WRS Assessment – Seepage Quality Report prepared by MWM, (2026)

- c. MP4 FTA - Frasers Tailings Storage Facility Stage 3 Technical Report by EGL, (2026)
- d. MP4 FTA - MTI and SP11A Technical Report prepared by EGL (2026)
- e. MP4 FTA – Golden Point Underground Extension – Mine Subsidence Assessment prepared by PSM (2026)
- f. MP4 FTA – Water Treatment Plant Brine Disposal prepared by WGA, (2026)
- g. MP4 FTA – Wetland Management Plan prepared by Biosearches, (2026); and
- h. MP4 FTA – Surface and Groundwater Assessment Report – (surface water assessment components), prepared by GHD (2026)

CONFIRMATION OF CONTENTS OF REPORT AND PROPOSED CONDITIONS

- 12. I confirm that in my opinion the Report contains an accurate and appropriate description of the environment, the potential effects of MP4, and the recommended actions to manage those effects within my area of expertise.
- 13. I confirm that in my opinion the contents of the Report may be relied on in making a decision on the approvals sought for MP4, and confirm that provided effects within my area of expertise are managed as proposed in the application those effects will not be unacceptable and will be managed to a standard that I consider meets good practice.
- 14. I confirm that I have reviewed the conditions that OGNZL proposes for the various approvals being sought as they relate to my area of expertise. I confirm that in my opinion those proposed conditions are appropriate.



Dr. Theodora Avaniidou

Dated this 07 day of September 2026