Before a panel appointed under the Fast-track Approvals Act 2024 **FTAA-2504-1046**

UNDER	the Fast-track Approvals Act 2024 (**Act**)
IN THE MATTER	an application for approvals for the Waihi North Project (**WNP**) – a listed project described in Schedule 2 of the Act
BY	**OCEANA GOLD (NEW ZEALAND) LIMITED Applicant**

STATEMENT OF EVIDENCE BY TIM MULLINER ON BEHALF OF OCEANA GOLD (NEW ZEALAND) LIMITED

Water Management and Hydrology

Dated 1 September 2025

Counsel acting:
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Introduction

1. My full name is Tim Mulliner. My qualifications and experience, and my role in the Waihi North Project (**WNP**), are set out in my statement of evidence dated 26 February 2025 included in Part G of the substantive application document for the WNP.

2. I have been asked by OceanaGold (New Zealand) Limited to provide a response to the specific matters contained in written comments on the WNP application from persons invited by the Panel to comment under section 53 of the Act:

   a. Wharekirauponga Flow Trigger Values.

   b. Hydrology Model Sensitivity.

3. I have prepared this statement within the limited time available to me. Consequently, it is necessarily at a high level. I am able to provide a more fulsome response to the issues covered in this statement if the Panel requires further assistance from me.

Code of conduct

4. I confirm that I have read the code of conduct for expert witnesses contained in section 9 of the Environment Court Practice Note 2023 and have complied with it in preparing this evidence. I confirm that the issues addressed in this evidence are within my area of expertise, and I have not omitted material facts known to me that might alter or detract from my evidence.

Wharekirauponga Flow Trigger Values

5. Dr Ngaire Phillips (Streamlined Environmental – Appended to Waikato Regional Council response) notes that the Respond Trigger Level is defined

(in proposed Condition UG.7) as the bottom line compliance limit the activities must be managed to achieve, and given the Respond Trigger level, is indicative of a potential departure from known trends, she questions whether this is sufficiently protective.

6. The proposed Trigger Levels are not intended to be utilised in isolation. In Christopher Simpsons evidence (paragraph 27), he details monitoring of the deep and shallow groundwater system as the first layer of defence and how this is structured to allow for an early identification of depressurisation effects within the deep aquifer system. The monitoring of the vertical hydraulic gradients is then considered the second line of defence and the surface water monitoring the third. In my opinion, this layered approach allows advance warning of any effect developing prior to surface water flows being affected.

7. The Respond Trigger Level is defined as the minimum expected flow based on the current known rainfall and flow dataset. Based on the extended synthetic rainfall dataset developed for the project, flows below the Respond Trigger Level may occur naturally under prolonged drought conditions. However, the intended purpose of the Respond Trigger Level is to act as a bottom line compliance limit against which flows are assessed with the pretext that surface water drawdown (as a result of mining activities) will potentially have a greater effect on flows below these stipulated flows.

8. Based on the proposed real time monitoring of the groundwater and surface water, the tiered approach to assessment of this data, the proposed Trigger values, and the outlined actions associated with this tiered approach, I am of the opinion that this provides sufficient protection in terms of identifying and addressing effects associated with any surface water drawdown associated with mining activities. I would expect mitigation measures (if

required) are implemented in direct response to a Respond Trigger level being reached. That is required by condition UG.7.

9. Forest and Bird at paragraph 134 of its comment document refers to a regime that addresses effects after they occur in reference to the proposed trigger / alert system and further discusses how the cessation of upstream take will address the effects of dewatering (paragraph 135).

10. During the mining and associated dewatering of the Wharekirauponga Mine, OceanaGold will collect information on dewatering rates, shallow and deep ground water levels and surface water flow data from both above and adjacent the Wharekirauponga Mine and at locations sufficiently distant from the site to be deemed control sites. It is the intent to assess this information continuously, not to wait until the surface water Trigger Levels are reached.

11. I have previously addressed the tiered approach to monitoring and how this is to be implemented to ensure any potential effects (on surface waters) are identified early (paragraphs 5 and 6 above).

12. Furthermore, Condition UG.10b of the proposed consent conditions state that if flows are less than the defined Respond Trigger Level, that the consent holder must immediately cease upstream surface water abstraction. This measure does not rely on investigations as to whether the cause of the Respond Trigger Level being reached is from mining activities, rather it takes a precautionary approach to limit any effect (if any) by preventing surface abstraction during periods of low flows.

13. It is my opinion that based on the outlined continuous data collection and delay in response time (between observed depressurisation effects and reduced surface water baseflow), relatively minor predicted baseflow loss, and precautionary approach applied to the cessation of upstream takes, that

collectively, the measures outlined (including the proposed Trigger Levels) are sufficiently robust to address the potential effects of dewatering.

14. Dr Ngaire Phillips implies that there would be at least 80 working days before any mitigation is put in place and questions what would happen in the interim.

15. This is not correct. Condition UG.7 requires monitoring, assessment of results, then if necessary, actions to be taken whenever surface water flows exceed the Respond Trigger Levels. Condition UG.27 includes reporting requirements but the report delivery timeframe does not determine the timing of responses that might be required by the requirements of condition UG.7.

Hydrology Model Sensitivity

16. Nic Coland (Q 2. Of Appendix A.03 of Coromandel Watchdog of Hauraki submission), in reference to the Wharekiruponga Hydrology report, asks for a sensitivity analysis showing how 7-day Mean Annual Low Flow (MALF) reductions change under the 10–20% low-flow uncertainty and under alternative calibrations for Edmonds/Thompsons and to demonstrate that predicted effects remain below ecological significance thresholds.

17. The range of baseflow loss predictions from the Flosolutions model are included within the hydrology model and the stochastic results presented. This ensures that base losses representing the range of calibrations applied to the 3D groundwater model are reflected in the hydrology results.

18. The hydrology modelled results are considered appropriately conservative based on:

    a. The peak baseflow loss from the Flosolutions assessment which coincides with the peak mining period is applied as the assumed baseflow loss in the hydrology model.

    b. The baseflow loss predictions from Flosolutions assume average conditions but are applied as fixed values across all climatic conditions with the hydrology model.

    c. The stochastic model aligns low flow periods (associated with dry climatic conditions) with peak baseflow loss expectations.

19. It is my opinion that the stated uncertainty of 10-20% in terms of flow estimates is likely to result in a spread of uncertainty around the stated values rather than below the estimated flows as it is implied. The calibration of the hydrology model specifically targeted low flows so estimates are considered more accurate at low flows compared to higher flows which provides some certainty around the low flow estimates provided.

20. I consider the model results do incorporate the appropriate uncertainty and conservatism to demonstrate the potential worst case effects based on the provided baseflow loss projections.

Dated: 1 September 2025

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Tim Mulliner