OCEANAGOLD (NEW ZEALAND) LIMITED

# WAIHI NORTH PROJECT

## GEOCHEMICAL ASSESSMENT

Evidence of Ian Robert Jenkins Regarding Technical Assessment of Geochemistry of Tailings and Overburden Effects and Proposed Conditions

21 February 2025

## INTRODUCTION

My name is Ian Robert Jenkins.

My role in relation to the Waihi North Project ("**WNP**") has been to provide expert advice in relation to geochemistry of tailings and rock associated with the WNP. I oversaw the preparation of the Geochemistry of Tailings and Overburden, Treatment and Mitigation which is provided within *Part H – Supporting Technical Assessments* of the application.

This evidence has been prepared to accompany the application by Oceana Gold (New Zealand) Limited ("**OGNZL**") for approvals required for the WNP under the Fast-track Approvals Act 2024 ("**FTAA**"). It has been prepared on the understanding that the process for determining applications under the FTAA does not require a hearing to be held, and accordingly, the purpose of this evidence is to confirm that, relative to my area of expertise the Geochemistry of Tailings and Overburden, Treatment and Mitigation provides an appropriate description of the relevant environment, the proposed activities comprising the effects of the WNP on that environment, and the way those effects are proposed to be managed.

My findings are set out in full in the Geochemistry of Tailings and Overburden, Treatment and Mitigation included within *Part H – Supporting Technical Assessments* of the application.

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 this evidence. Other than when I state I am relying on the advice of another person, this evidence 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

I hold a Bachelor of Science degree in Geology and a Master of Science (Honours) degree in Geology and Environmental Science from the University of Auckland. For the seven years from 2000 to 2006 I was a lecturer for a post-graduate course in groundwater chemistry and contaminant hydrogeology at the University of Auckland.

My Masters thesis was on the assessment and management of mine wastes from mine sites in the Coromandel region.

I am currently employed as a Technical Director at AECOM New Zealand Limited ("**AECOM**") and have held that position since 2015.

My previous work experience includes over 32 years' experience undertaking design, geochemistry and groundwater assessments for mine sites. This experience includes geology, hydrogeology, geochemistry, water quality, mine waste containment and design for mine sites throughout New Zealand.

I have provided geochemical advice on the major hard rock gold mines throughout New Zealand over the past three decades. I have also provided specialist geochemical modelling input to a number of mining projects in Australia.

In providing this evidence in relation to geochemistry, I have considered the following matters as relevant to that topic:

(a) The project description provided by OGNZL as set out in Section 2 of the Substantive Application prepared by Mitchell Daysh Limited;

(b) The description of the existing environment, the effects of the WNP on that environment and their significance, and the proposals to manage those effects all as set out in the assessment of environmental effects accompanying the application;

(c) The technical assessments of EGL on waste rock stockpiles and GHD on GOP tailings disposal; and

(d) A number of previous studies of the Waihi Mines including:-

    a. SRK, 2011. Waste Rock Oxidation in Storage 2. NEM009. SRK Consulting (Australia) Pty Ltd.

    b. ANTSO, 1994. Oxidation and Sulphate Generation Rates in the Waste Rock Dump at the Martha Hill Mine Site. ANTSO/c400 Australian Nuclear Science and Technology Organisation

    c. AECOM, 2018. Martha Pit Lake Management Strategy. Martha Pit Lake – Modelling, Mitigation and Management Assessment. 06 June 2018.

    d. AECOM, 2018a. Project Martha Geochemical Assessment. Geochemistry of Martha Phase 4 Pit, Martha Underground and Rex Orebody. 24 May 2018.

    e. EGI, 1994 Environmental Geochemistry International Pty Ltd. Waihi Gold Mining Company. Acid forming characteristics of waste rock and tailings and implications for waste disposal. Stage 1 Report. March 1994.

    f. URS, 2010 URS New Zealand Ltd. Trio Development Project - Geochemistry of Waste Rock. 08 June 2010.

g. URS, 2001 URS New Zealand Ltd. Favona Reef, Waihi. Underground Mining Consent Geochemistry. 30 November 2001.

h. URS, 2012 URS New Zealand Ltd. Correnso Underground Mine and Golden Link Project, Area - Geochemistry of Ore, Tailings and Waste Rock. 5 June 2012.

## CONFIRMATION OF CONTENTS OF REPORT AND PROPOSED CONDITIONS

I confirm that in my opinion the Geochemistry of Tailings and Overburden, Treatment and Mitigation contains an accurate and appropriate description of the environment, the actual and potential effects of the WNP, and the recommended actions to manage those effects within my area of expertise.

I confirm that in my opinion the contents of the Geochemistry of Tailings and Overburden, Treatment and Mitigation may be relied on in making a decision on the approvals sought for the WNP, 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.

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.

**Ian Robert Jenkins**
Dated this 21st day of February 2025