TOMINGLEY
GOLD OPERATIONS PTY LTD
(A wholly owned subsidiary of Alkane Resources Ltd)
ABN 53 149 040 371

Tomingley Gold Project

Alluvium Sampling and Testing Program

State Significant Development
MP 09_0155





Prepared by:
RWCorkery&co

June 2023

ACKNOWLEDGEMENT

R.W. Corkery & Co. acknowledge and pay our respects to the Traditional Custodians of the lands comprising NSW and Australia on which our projects are located. We appreciate the knowledge, advice and involvement of the Elders and extended Aboriginal community that contribute to our Projects and extend our respect to all Aboriginal and Torres Strait Islander peoples.

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for the

Tomingley Gold Project – Wyoming 1 Northern Ramp

State Significant Development MP 09_0155

Prepared for:

Tomingley Gold Operations Pty Ltd
ABN: 53 149 040 371

Telephone: (08) 9227 5677
Email: info@alkane.com.au

Tomingley West Road
TOMINGLEY NSW 2869
PO BOX 59
PEAK HILL NSW 2869

Prepared by:

R.W. Corkery & Co. Pty. Limited
Geological & Environmental Consultants
ABN: 31 002 033 712

Telephone: (02) 9985 8511
Email: admin@rwcorkery.com
Postal: PO Box 1796
CHATSWOOD NSW 2057

Sydney | Orange | Brisbane | Townsville

Sydney
Suite 12.01, 1-5 Railway Street
CHATSWOOD NSW 2067

Orange
62 Hill Street
ORANGE NSW 2800

Ref No. 616/59 June 2023

RWCorkery&co

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1. INTRODUCTION AND BACKGROUND

This *Alluvium Sampling and Testing Program* (the Program) has been prepared in satisfaction of Condition 1 of the approval for the *Geotechnical Stability and Erosion Trial Plan* (GSET Plan) for the Wyoming 1 Northern Ramp. This document should be read in conjunction with the GSET Plan.

The requirements for the Program are as follows.

> "The Applicant must undertake a data collection program to understand the material strength parameters and characteristics of the alluvium within the trial plan area. The program must include:
>
> a) sampling of material across the extent of each trial area, following excavation of the trial area slopes and prior to the commencement of the trial;
>
> b) detail of the form of samples (ie cores, bulk excavator etc.); and
>
> c) analysis and characterisation of the nature and strength of the material samples.
>
> Within two weeks of this approval, the Applicant must submit a proposed approach and schedule to undertake this program, to the satisfaction of the Secretary."

The purpose of the Program is to collect and analyse a range of samples to determine the physical characteristics and strength parameters of the alluvial material within the Northern Ramp. The Program has been designed in a manner that is compatible with the original geotechnical study undertaken for the Wyoming 1 Open Cut by Mining One Consultants dated May 2012 (Mining One, 2010). That study was undertaken prior to the commencement of mining operations and included the following.

- Drilling and geotechnical logging of 10 diamond holes within the Wyoming 1 Open Cut (**Figure 1**).
- Collection of 24 samples of alluvium and saprolite from depths between 5m and 54m below surface.
- Analysis of those samples using the methods described in Section 2.2. Only 9 of the 24 alluvial and saprolite samples were subjected to consolidated undrained triaxial tests, presumably due to diamond drilling of unconsolidated materials producing samples that are unsuitable for triaxial testing.

This document has been collated by RW Corkery & Co Pty Limited (RWC) based on information and advice provided by the following.

- Dr Tony Meyers (Principal Rock Mechanics Engineer) with Rocktest.
- Craig Green, Geotechnical Manager, Macquarie Geotech.

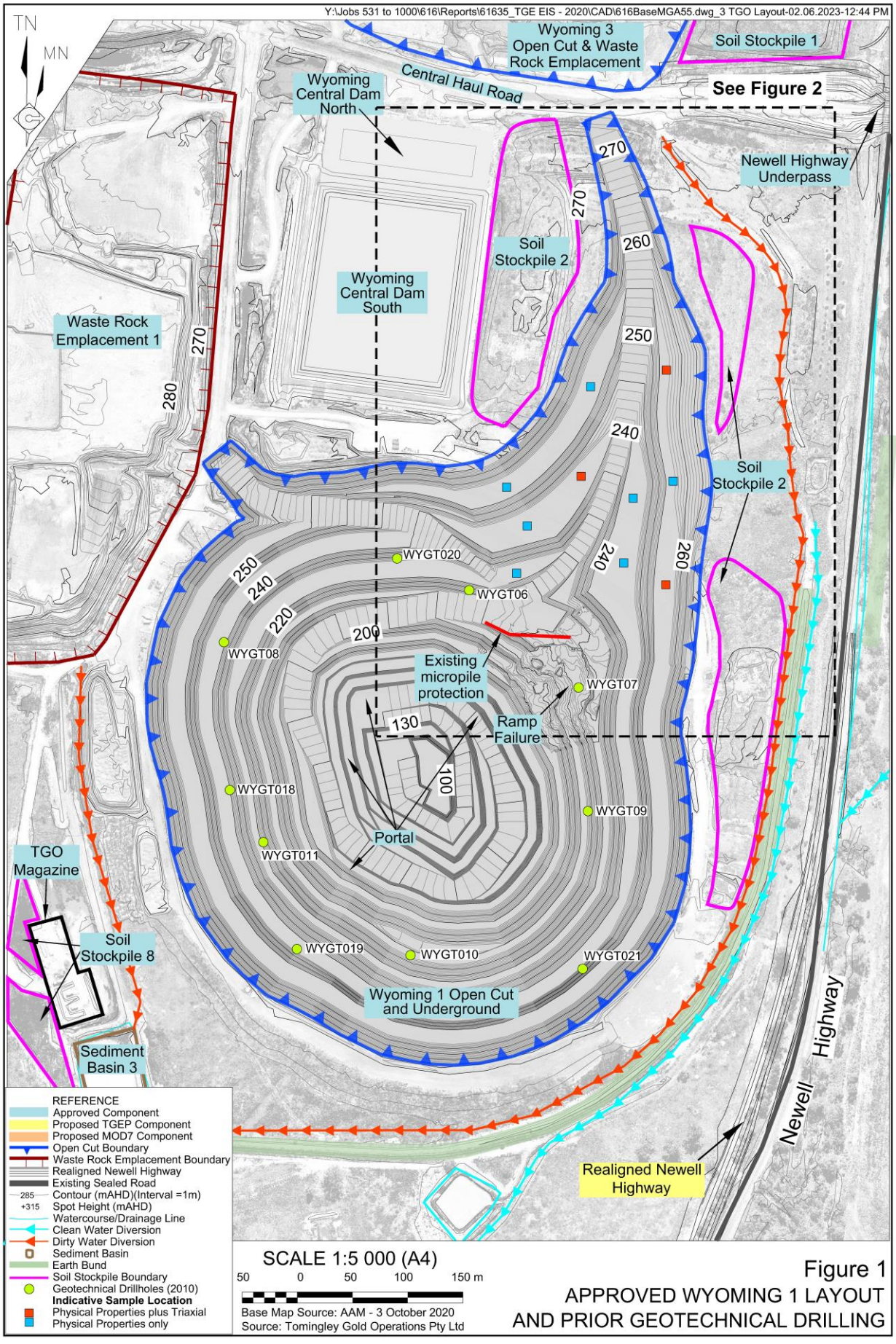

Figure 1
APPROVED WYOMING 1 LAYOUT
AND PRIOR GEOTECHNICAL DRILLING

2. SAMPLING AND TESTING PROGRAM

2.1 SAMPLE LOCATIONS

Figure 2 presents the proposed sample locations. In summary, ten indicative sample locations have been selected, with the final sample locations to be determined at the time that the samples are collected. The locations have been selected to ensure the following.

- Wide spatial distribution of samples, including vertically and horizontally, to ensure collection of representative samples and to capture variability within the alluvium.
- Collection of samples from berms to ensure separation of sampling teams from mobile plant operating within the confirmed area of the Northern Ramp.

2.2 SAMPLE TESTING METHODS

Sample testing methods include the following.

- Moisture Content.
- Particle Size Distribution with hydrometer.
- Emerson Crumb.
- Atterberg Limits.
- Consolidated Undrained Triaxial or Direct Shear (depending on sample characteristics).

These tests have been selected to provide detailed information in relation to the physical characteristics of the alluvium. Each of the identified tests would be undertaken at each sample location, with the exception of the Triaxial or Direct Shear tests which would be undertaken at a subset of the sample locations.

2.3 SAMPLE COLLECTION

Sampling would be undertaken by a NATA-accredited geotechnical laboratory in accordance with the requirements of the relevant Australian Standard or internal sampling procedure. The cylindrical samples for the Triaxial or Direct Shear tests would be collected using a thin-walled cylindrical Shelby tube sampler or similar.

2.4 TIMING

Timing of sample collection will depend on the availability of the geotechnical technician, however, the samples should be collected as soon as practicable after the material is exposed and it is safe for sampling personnel to access the sampling location.

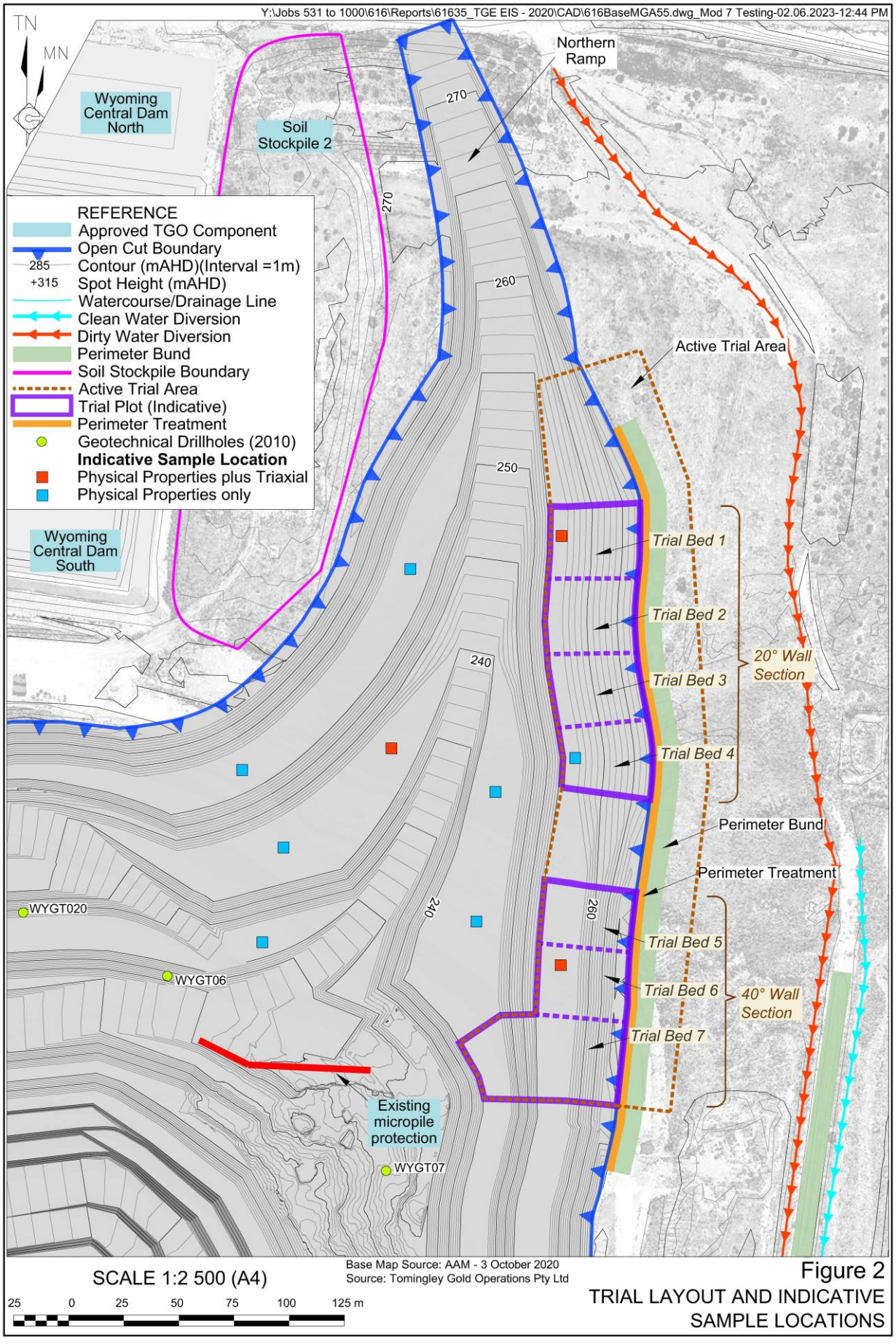

Figure 2
TRIAL LAYOUT AND INDICATIVE SAMPLE LOCATIONS

3. ANALYSIS, REPORTING AND USE OF RESULTS

Analysis of samples will be undertaken by a NATA accredited laboratory.

The results of the sample analysis will be presented in a letter report prepared by the laboratory, including presentation of certificates of analysis and a brief discussion of the results and implications for management alluvium within the Northern Ramp and the GSET Trial Area

The resulting report will be retained within TGO's filing system and will be provided to internal and external geotechnical engineers as required. The report will also be provided to the DEP and Resources Regulator on receipt and appended to the *GSET Trial Evaluation Report*.