

REMNANT MINING IN THE MARTHA UNDERGROUND

Gold was first discovered at Pukewa (Martha Hill) in 1878. Between then, and the closure of the original Martha Mine in 1952, extensive surface and underground mining was undertaken at the site. The original mine extended to a depth of about 620m.

Today, these extensive historical underground workings have implications for the design and mining methods used for modern underground mining. Due to the development of better mining technology, equipment, and methods over the 145 years since that first discovery, areas near 'remnant mining' which did not originally contain enough gold to be viable to mine, now are.

Of course, the interaction between historical and modern workings is a process that must be closely managed, and so we operate to an Underground Void Management Plan as part of our consent conditions. The objective of the Void Management Plan is to confirm the location and shape of old unfilled and filled mined voids, and to identify the risks and controls required to ensure ground surface stability. This approach ensures we can operate in a manner that is safe for both our employees and contractors and the areas above our operations when interacting with historical workings.

A three-dimensional digital model of the historical workings, including stopes, drives, shafts, and other incidental historical mine workings is maintained by our survey department, and forms the basis for our ongoing planning and activities.

When encountering a void as part of our operations, several methods are used to first assess and understand the new working environment. These will typically include Probe Drilling to confirm the specific location of historic voids, and then a Cavity Auto-scanning Laser System (C-ALS) is employed to produce a three-dimensional image of the void. The C-ALS also contains a camera to gain further information on the area. Ongoing visual monitoring of work areas is completed by senior mining personnel and several types of 'displacement instrumentation' are routinely used throughout our operations to monitor for and provide early indications of any ground movements. Preventative

and mitigation actions for protecting the upper aquifer above our operations are also in place to ensure that there are no surface effects caused by de-watering.

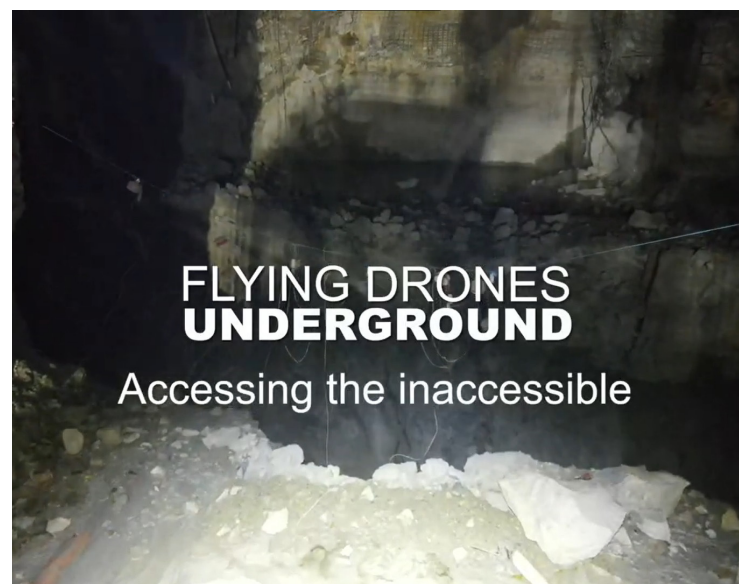
More recently, drones have been used in the Martha Underground for inspection purposes. This allows staff to remotely assess ground conditions, estimate sizes and measure volumes, as well as assisting with the surveying and mapping of the area.

All stoping voids created by modern mining are backfilled following the extraction of the Ore. Selected historical voids near current works are also backfilled as required to maintain local and regional stability. The modern mining methods used at the Waihi operation do not leave voids, and therefore any significant collapse of newly created voids leading to surface instability is not considered to be conceivable.

This is a condensed version of the key methods which allow us to safely operate and interact with the historic voids around the Martha area.

More information can be found online: www.waihigold.co.nz/operations/martha-underground-mine

View 'FLYING DRONES UNDERGROUND' at <https://bit.ly/48W0G18> or scan the QR code.



CORRENZO NORTH

CORRENZO SOUTH

NOVEMBER 2023

TRIO

GLADSTONE RD

MATAURAU RD

BARRY RD

DOBSON ST

ROYCROFT ST

KENNY ST

SUPA (DAYBREAK)

MARTHA SOUTH

MARTHA NORTH

Mine Development Plan

Published at the start of each month as required by the Correnso Underground Conditions of Consent, the Slevin Underground Conditions of Consent, and the Project Martha Conditions of Consent.

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Key:



-  Existing Mining
-  Planned Mining
-  Backfill
-  Backfill of historic voids
-  Stopes

This information valid November 2023.