



Vibration Summary Report

Third Quarter 2024



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Summary

- Results from the Envirohub vibration monitoring system for the third quarter of 2024 are reported for the Favona, Trio, Correnso, SUPA and Project Martha Underground Mines.
- Development and production blasting continued in the Martha Underground component of Project Martha. There were no blasts in Correnso. Mining in Favona and Trio has ceased.
- Compliance for Project Martha/SUPA blasting was achieved during the quarter. The maximum vibration recorded during the quarter was 5.5 mm/s at the Pensioner Flats monitor.
- During the quarter, there were two high-level blast events (>5mm/s). The Pensioner Flats monitor recorded 5.5 mm/s on 30/08/2024 and the Rex North monitor recorded 5.15 mm/s on 26/09/2024.
- Three vibration-related complaints were received during the reporting period, compared to 11 from the previous quarter.
- The total number of blasts (872) was higher than the previous quarter (752). The number of blast events was also higher than the previous quarter (155, cf. 109 in the previous quarter).

1. Introduction

This report documents vibration measurements and assessments to meet the requirements of:

- a) HDC Land Use Consent 85.050.326E (Condition 24) for the Favona Underground Mine.
- b) HDC Land Use Consent RC - 15774 (Condition 9) for the Trio Underground Mine Project.
- c) HDC Land Use Consent RC – 202.2012 (Condition 22 (f)) for the Correnso Underground Mine.
- d) HDC Land Use Consent RC – 202.2016 (Condition 14 (f)) for the Slevin Underground Mine (SUPA).
- e) HDC Land Use Consent LUC – 202.2018.557 (Condition 53) for Project Martha. (Note: RC – 202.2017 (Condition 18 (f)) for the Martha Drill Drive Project (MDDP) has been subsumed by Project Martha.)

As agreed between OceanaGold and HDC these reports summarise vibration results and general performance of the monitoring system over calendar quarters rather than the dates set out in the consents.

2. Equipment

“Envirohub™”, the vibration monitoring system, has been used for reporting purposes, providing real-time monitoring, recording and review of results on a website. Access to the website is controlled, with permissions for review provided to HDC staff and OceanaGold users. The system is currently set with trigger levels at 0.75 mm/s for all operations.

The Project Martha vibration monitoring network comprises 13 monitors (some shared with the Correnso network). Any blasts fired during the period (highlighted in red) and the monitor locations are shown in Figure 1. SUPA utilises some monitors from the Correnso network and some from the Project Martha network, with the data incorporated into a database shared with Project Martha.

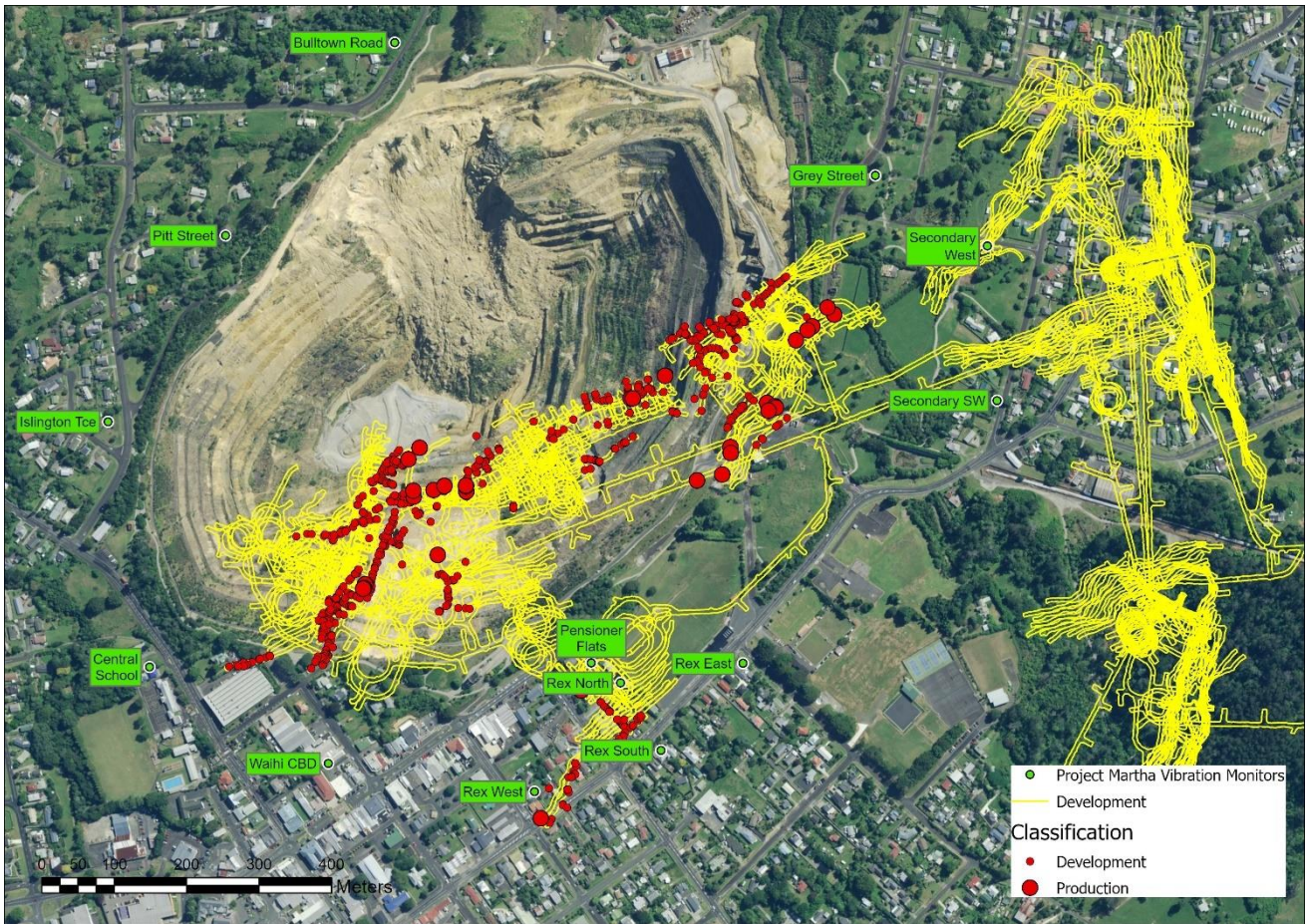


Figure 1. Vibration Monitor & Blast Locations – Project Martha / SUPA

Note: Larger icons indicate production blasts

The Trio Underground Operations have five compliance monitoring locations situated at Boyd Rd, Clarke St, the Coreshed (Barry Rd), the Scout Hall (Baker St), and near the Trio vent shaft (Trio VS). As there is currently no mining being undertaken in the Trio Project area, vibration monitors are not installed at these locations, but the infrastructure remains so monitors can be reinstalled should work in the Trio area recommence.

The Correnso Underground monitoring network comprises seven permanent vibration monitors (previously 10). Approval from HDC was obtained to discontinue monitoring at three locations within the Correnso network in 2022. Current monitor locations are shown in Figure 2.



Figure 2. Vibration Monitor Locations – Correnso

3. Calibration

Calibration of monitoring equipment, including the roving monitors, is completed on a six-monthly rotation to allow enough coverage of vibration monitoring while calibrations take place. A six-monthly calibration run was completed by the end of Q3 2024. Calibration certificates can be viewed on Envirohub; refer to the monitoring results during those periods. The calibrations were undertaken by the Saros Group Pty Ltd in Queensland and conducted in accordance with AS/NZS ISO9000-2000 and AS ISO/IEC17025-2005 quality standards.

4. Compliance Assessment

Table 1 sets out the consented compliance limits for blast magnitude (peak particle velocity - vector sum) for Correnso and Martha Underground, and the corresponding vibration results, reported as of the last day of the quarter (30 September 2024). Compliance with all limits was met throughout the quarter. There have been no blasts in Correnso during the previous six months, therefore no average or 95% calculations can be made.

Table 1. Compliance Assessment Table for Correnso and Martha Underground/SUPA Q3 2024

	Consented Compliance Limit	Q3 Results - Correnso	Q3 Results - Martha Underground
Development 95%*	5 mm/s	No blasts	2.85 mm/s
Development Average*	2 mm/s	No blasts	0.74 mm/s
Production 95%*	5 mm/s	No blasts	3.56 mm/s
Production Average*	3 mm/s	No blasts	1.30 mm/s
Maintenance/Safety	1 mm/s	No blasts	No blasts

* Six month rolling limit; data is presented as at the end of the quarter

4.1 Martha Underground/SUPA

155 blast events occurred in Martha Underground during the reporting period (cf. 109 in the previous quarter), with 65 events triggering compliance monitors.

Of the 872 individual blasts during the period:

- 835 were development blasts
- 37 were production blasts

The peak vibration levels for Martha Underground Operations (both production and development) during the quarter are shown in Figure 3 below.

Development:

- The highest six-month average¹ for development blasting at a compliance monitor was assessed as 0.74 mm/s at the Pensioner Flats monitor, below the consent limit average of 2mm/s.
- The development six month rolling 95 percentile¹ for all locations was assessed as 2.85 mm/s, below the 5mm/s limit.
- Two Martha Underground blast events recorded vibration levels above 5 mm/s during the period:
 - 5.47 mm/s was recorded at Pensioner Flats on 30/08/2024. The result was investigated and attributed to a development blast. The high level blast was reported to the Council on the 03/09/2024.
 - 5.15 mm/s was recorded at Rex North on 26/09/2024. The result was investigated and attributed to a development blast. The high level blast was reported to the Council on 01/10/2024.

Production:

- The highest six-month average¹ for production blasting at a compliance monitor was assessed as 1.30 mm/s at Rex West, below the consent limit average of 3 mm/s.
- The production six-month rolling 95 percentile¹ for all locations was assessed as 3.56 mm/s, below the 5mm/s limit.
- No Martha Underground production blast events recorded vibration levels above 5 mm/s during the quarter.
- Ten blasts were fired outside of the preferred time windows specified in the Vibration Management Plan during the quarter. No maintenance/safety blasts were required in Martha Underground during the period and there were no blasts on Sundays or public holidays.

¹ Data is presented as at the end of the quarter

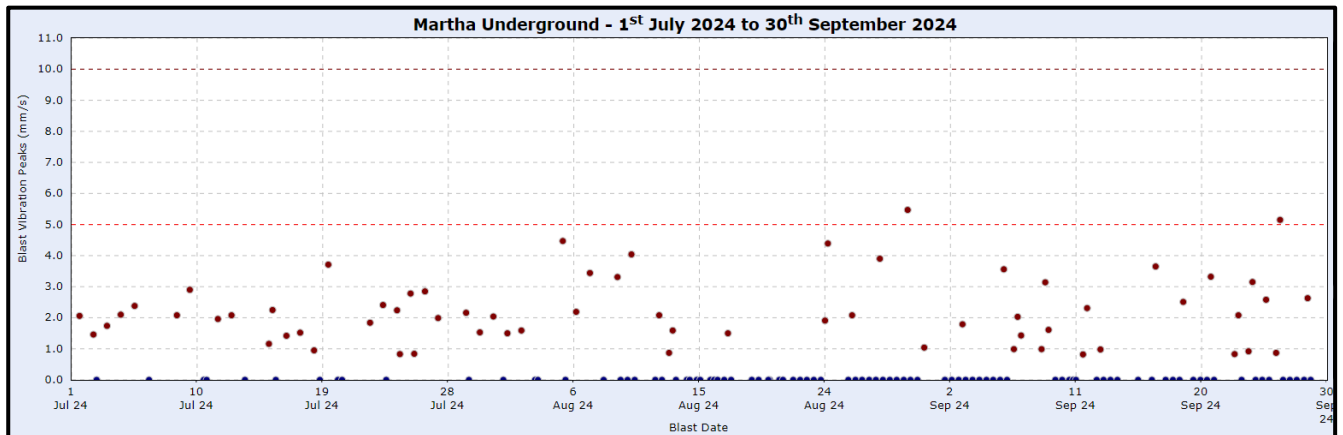


Figure 3. Maximum Peak Vibration Levels (Production and Development) – Martha Underground/SUPA Operations

4.2 Underground (Favona & Trio) Operations

Mining plans for Trio were exhausted in the first quarter of 2020, and no blasting occurred during the reporting period. Likewise, no blasting was undertaken within Favona.

4.3 Correnso

No blasts were undertaken within the Correnso Project area during quarter 3 of 2024.

5. Blasting

The 155 blast events during this period is an increase in blast events compared to the previous quarter (Table 2).

Table 2. Quarterly Blast Events

Operation	4 th Quarter 2023	1 st Quarter 2024	2 nd Quarter 2024	3 rd Quarter 2024
Martha Underground/SUPA	159	186	109	155
Underground (Trio)	0	0	0	0
Correnso	0	0	0	0
Total	159	186	109	155

**Some blasts have in the past occurred simultaneously with blasting in other operational areas and do not contribute to the total number of blast events. Trio and Correnso events would only contribute to the total when they are independent of Martha Underground.*

Multiple blasts are often fired during the one blast event. There were 872 sub-blasts initiated within the 155 blast events during the reporting period (Figure 4).

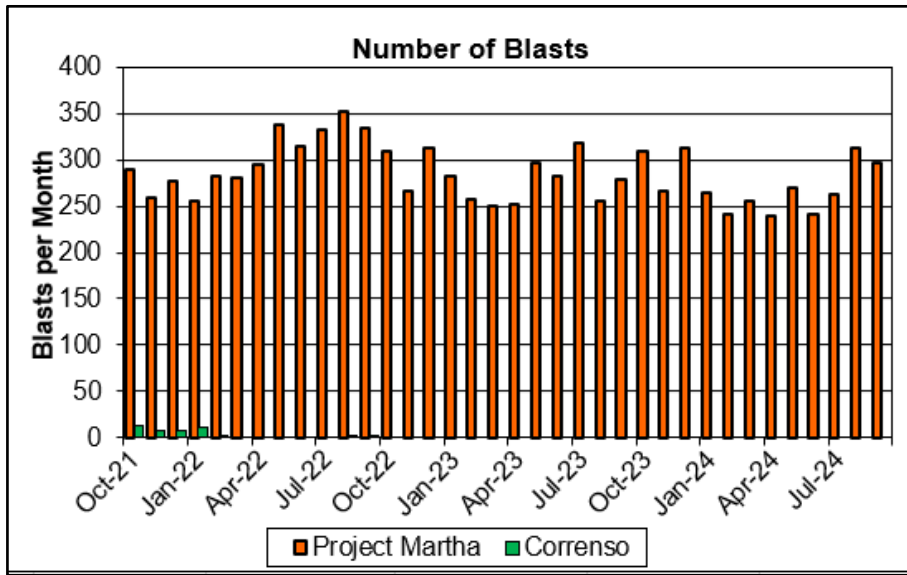


Figure 4. Number of Blasts (Project Martha and Correnso)

6. Complaints

Three complaints were received in Q3 2024, which is less than the 11 recorded in Q2 2024 (Figures 5 & 6). The three complainants all contacted OceanaGold to advise they had felt a blast.

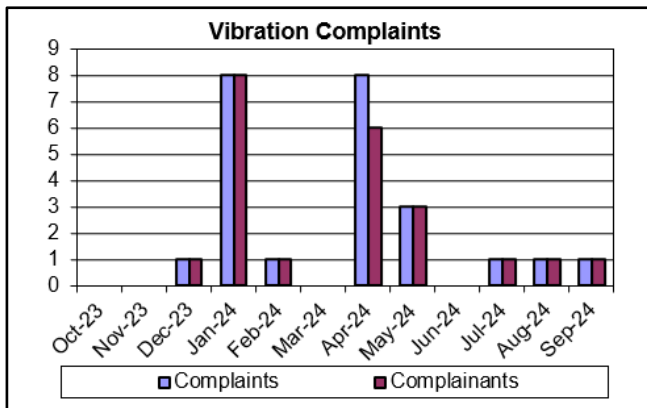


Figure 5. Number of Complaints & Complainants

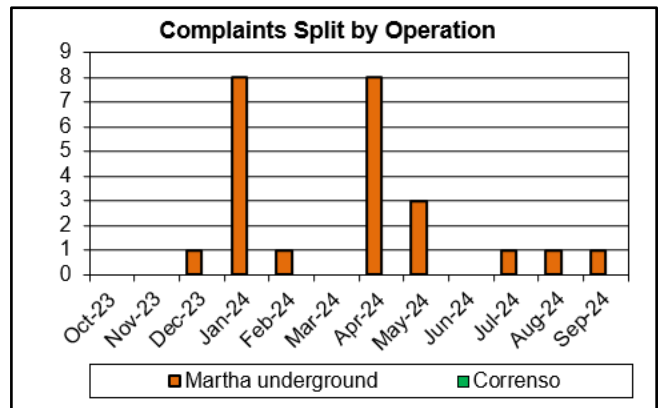


Figure 6. Complaints by Operation

7. Vibration and Complaint Management

7.1 Roving Monitoring

No roving monitoring was required or undertaken during the quarter.

7.2 Mitigation Actions

On review following the two high level blast events during the quarter, the following mitigating actions are now in place:

- Blast hole charge lengths and blast hole burdens will be reviewed to ensure that blast holes in ground that could lead to over confinement are appropriately controlled.