

Clean Face and Higher Frequencies



Project Summary

QUARRY IS MOVING TOWARDS NEIGHBORS WHO ARE SENSITIVE TO BLASTING

This Northeast aggregate quarry produces roughly 500k/tons of product per year. The quarry is moving towards an area which is closer to neighbors who are sensitive to blasting. Vibrations are well within legal limits, but the neighbors consistently complain when blasts occur.

The quarry currently use a NONEL® initiation system. Due to inherent timing scatter with NONEL the use of wave cancellation technology is not an option.

In addition, the faces left after blasts are commonly left ragged and uneven, making shot layout for future blasts a challenge.

Technology Applied

DYNO 42 SOFTWARE AND SHA USED

The DynoConsult® representative conducted a signature hole analysis to determine the appropriate timing using DYNO 42™ software. Following the analysis, a shot was executed using electronic detonators and the most appropriate timing recommended by DYNO 42.

Results

BETTER FREQUENCIES AND CLEAN WALL

There was a slight improvement on vibration at the nearest home, but a significant improvement on obtaining higher frequencies. The typical seismograph results had been in the .3ppv @ under 20hz range. After the new timing was applied, the reading was .249ppv @ 52hz. The blast also left a very clean straight final wall.

Next Steps

CONTINUED USE OF ELECTRONIC DETS

The customer is going to continue the use of electronic detonators along with timing identified through signature hole analysis.



Disclaimer This case study is provided for informational purposes only. No representation or warranty is made or intended by DYNO NOBEL INC. / DYNO NOBEL ASIA PACIFIC PTY LIMITED or its affiliates as to the applicability of any procedures to any particular situation or circumstance or as to the completeness or accuracy of any information contained herein. User assumes sole responsibility for all results and consequences.

