Better Fragmentation, Blast Consistency and Expanded Pattern with DigiShot® Detonators

Project Summary

LOOKING FOR A WAY TO DECREASE OVERALL BLASTING COSTS

This limestone mine in Northern Michigan was looking to improve their blasting and lower their overall blasting costs.

Technology Applied

DIGISHOT® ELECTRONIC DETONATORS USED TO HELP MEET GOALS

Dyno Nobel proposed a solution using DigiShot electronic detonators to decrease oversize, fines and tight digging. The solution included less holes, less powder and higher powder factors. A drone video was taken to study movement and lift of blast.

Value Added

EXCEEDING EXPECTATIONS

Although the mine management was happy with the NONEL® blasting before the trials, they were extremely impressed with the results and improvements using the DigiShot system and the expanded pattern.

Immediate results were seen by the bench loader operator including:

- Consistent digging across the muck pile
- Good transition from row to row
- No tight digging between spacing from hole to hole
- Elimination of all oversize
- Very little to no scaling needed
- Excellent high wall stability

Crusher throughput results were also seen including:

- Consistent rock size from truck to truck
- Decreased draw from the fines belt
- Increased draw from the finished product belts
- Increased tons per hour through the crusher

Next Stage

ADDITIONAL TRIAL BLASTS CONFIRMED

All future blasts at this mine will be done with DigiShot. The mine is looking into following this same formula at their other locations as well as further expansion at this location. Additional trial blasts have been confirmed at other locations.

DYNO® Dyno Nobel