

# CASE STUDY

## DIFFERENTIAL ENERGY® YIELDS EXCELLENT RESULTS

### BACKGROUND

#### TRAINING AND EQUIPMENT RELIABILITY ARE A BIG CHALLENGE FOR THIS QUARRY

Quarries in this Western U.S. area have been utilizing the TITAN® XL1000 technology with end of hose gassing for several years but have never tried the capabilities of DIFFERENTIAL ENERGY loading.

Training and equipment reliability have been the biggest challenges for this distribution channel. Customers are unaware of technology because of the lack of understanding and confidence of blasters and operators.

### TECHNOLOGY APPLIED

#### TITAN DIFFERENTIAL ENERGY GASSING TECHNOLOGY MAY BE THE SOLUTION

DIFFERENTIAL ENERGY was introduced to a single customer in this market area. Training of the blaster and the operator, in conjunction with a new and more reliable operating system, has provided a basis of moving forward.

### RESULTS

#### DIFFERENTIAL ENERGY YIELDS EXCELLENT RESULTS

Initial test and shot results showed:

1. Muck profile appeared to be flatter and very suitable for the use of smaller front end loaders used to excavate material.
2. Rock distribution throughout the entire muck pile is more uniform with significant reduction in oversized material.



3. Much to their surprise, blasters have noticed:
  - A 10% reduction in powder was accomplished while achieving an equivalent or better blasting result.
  - Holes were loaded based on pounds, not bobbing the hole as in the past. This proved to be much more accurate and holes were never stemmed prior to gassing completion as they often were before.
  - Explosive column height actually grew 8 to 9 feet.

### NEXT STEPS

#### ADDITIONAL TRAINING AND SUPPORT

As confidence grows with existing technology, the site will develop target customers who could benefit from the use of DIFFERENTIAL ENERGY.

Additional training and support is planned for this customer in the near future. Most of the end customers pay this distribution company on a per ton basis so utilizing DIFFERENTIAL ENERGY has the potential to significantly improve margins for this company.