



Underground **Capabilities**

Blasting Services & Solutions



DYNO[®]
Dyno Nobel

Groundbreaking Performance[™]



DynoConsult field engineers use the full suite of Dyno Nobel products and software services to enhance detonation practices and combat inefficiencies in underground operations. DynoConsult is committed to optimizing every blasting process with experience, knowledge and insight to drive world-class blasting results. DynoConsult capabilities in underground applications include:

Training:

- Vibration mitigation
- Blasting basics
- Perimeter control
- Advanced troubleshooting
- Decreasing overall costs with blasting

Trouble shooting:

- Use of instrumentation to pinpoint problems
- Use of instrumentation to prove results
- Increase round advancement
- Decrease back break
- Obtain desired fragmentation
- Eliminate stope hang ups

Safety:

- Site safety audits
- Perimeter control to mitigate roof falls
- Training

Vibration Reduction:

- Infrastructure
- Ground control/roof falls
- Signature hole analysis
- Linear regression analysis

Overall Cost Reduction:

- Rapid Operations Diagnostic
- Mine to mill study
- Use of instrumentation to track results
- Produces the drill and blast design that gives the operation the lowest cost to mine

Instrumentation:

- UG drone for volumetric
- Velocity of Detonation recorder for explosive performance
- Electro Magnetic Pulse recorder for misfire detection
- Geophones for troubleshooting
- Accelerometers for troubleshooting
- Borehole deviation survey for as drilled blast design
- Photo fragmentation analysis
- Borehole camera
- Explosives properties testing

Specialty Projects:

- Pillar extraction
- Void collapse blasting
- Equipment rescue