



SURFACE CAPABILITIES



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

Blasting Services & Solutions

GENERAL SURFACE CAPABILITIES:

- Training
- Troubleshooting with instrumentation and root cause analysis
- Highwall control and stability
- Blast vibration mitigation
- Production blasting optimization
- Drill and blast audits
- Fragmentation improvement
- Overall cost reduction
- Instrumentation and root cause analysis
- Volumetrics, planning, other CAD analyses
- Explosives properties testing

SPECIALTY CAPABILITIES:

- Drill-to-Mill projects
- Market analysis and market data analytics
- Strategy development and due diligence
- Surface and underground drill and blast training
- Expert witness
- Close-proximity blasting
- Void collapse blasting
- Equipment rescue blasting
- New technology implementation
- Contract on-site engineer
- Custom projects

Available Tools & Equipment

CURRENT SOFTWARE-ASSISTED CAPABILITIES:

- 3D blast planning, visualization, and analysis
- Vibration optimization and prediction
- GIS mapping, dashboarding, and data analytics
- 3D blast modeling and fracture modeling
- Electronic shot reporting and databasing

INSTRUMENTATION:

- Vibration monitoring, including seismographs and accelerometers
- Air overpressure monitoring
- Electromagnetic pulse recording
- Drill accuracy including borehole survey equipment and terrestrial survey equipment
- High speed video
- Terrestrial and aerial scanners and photogrammetry
- Detonation velocity recorders

Past Surface Projects



Site: Bingham Canyon
Client: Rio Tinto
Location: Utah, United States
Commodity: Copper

DynoConsult reviewed Bingham Canyon's drilling and blasting operations to identify areas value could be improved. DynoConsult helped improve explosive power control, optimize trim shot design, improve blasthole stability, reduce highwall damage, and create an integrated blast design program.



Site: Bald Mountain
Client: Barrick Gold
Location: Nevada, United States
Commodity: Gold

DynoConsult was retained to help open an old pit that had been closed 15 years. The operation was concerned about highwall stability and control and improving ore recovery. The findings of the project confirmed that the recommended combined production and trim design significantly reduced the near and far field effects of blasting on highwall stability. Vibration effects were reduced on the order of 26% to 36% depending on the distance from the blast. The recommended design also reduced the extent of back break.



Site: Empire Mine
Client: Cliff Resources
Location: Michigan, United States
Commodity: Iron Ore

DynoConsult reviewed the blasting practices at the Empire Mine in order to identify opportunities for operational improvements. DynoConsult evaluated general blasting practices, determined the effect of these practices on downstream processes and to compared current procedures to established best practices. Some improvements included reduced explosive costs, a 9% increase in loader productivity and a 44% reduction in crusher delays.

The Experts



Nathan Rouse
Principle Consultant

Dr. Rouse has over 10 years of global experience in the mining and blasting industry with expertise in blast instrumentation and root cause analysis, optimization and auditing in surface and underground mines, vibration control, training, and expert witness work.



Tristan Worsley
Principle Consultant

Mr. Worsley has over 10 years of experience in performing explosives and surface and underground mining engineering work. His expertise includes drill and blast optimization, specialty blasting and equipment rescue, proximity blasting, training, and post-blast investigations.



Scott Giltner
Principle Consultant

Dr. Giltner has worked in several countries including South Africa, Zimbabwe, Russia, Peru, Australia, Dominican Republic, and Canada. His specialty area is blast optimization and instrumentation used for blast monitoring and quantifying blasting results in the quarrying, mining and construction industries.



Mikael von Hertzen
Principle Consultant

Mr. von Hertzen has over 25 years of global experience in the mining , mining equipment and explosives fields and has worked and lived in several countries including, UK, Russia, Australia, Nordic area and Turkey. His main focus has been on Business Development, Strategy and Consulting.

