

Our Sophisticated Analysis

Techniques will quantify the specific rock response of your location and allow us to develop Effective Timing Solutions that will improve the overall efficiency of your blasts. ETS can help you:

- Improve Fragmentation
- Modify Annoying Blast Vibrations
- Control Over Break
- Avoid Misfires
- Enhance Explosive Performance
- Increase Cast Benefit
- Reduce Ore Dilution
- Decrease Excavator, Crusher and Mill Costs
- Improve Wall Control



970-879-0796 or 304-243-0007

jfloyd@blastdynamics.com or
dbaconsult@comcast.net

www.blastdynamics.com
www.dbaconsultinginc.com

Effective Timing Solutions

Are you using the best delay

configuration for your site?

Find out with **ETS**, an advanced

process for optimizing your blast

performance with the most

advantageous timing design,

And Lower Your Production Costs!

Timing is Everything

ETS

Time (ing) is Money!

Effective Timing Solutions

ETS



**Are You Using
Digital Detonators
Yet?**

YES NO

Developed Jointly by:

BLAST DYNAMICS, INC.
DBA CONSULTING, INC.

Effective Timing Solutions



Great! How are you using them?

Are you using Optimized Firing Times?

- The investment in the higher cost of electronics can easily be justified if the optimum firing times are implemented and programmed into them.
- Electronic detonators will result in reduced vibrations and impact mitigation.
- Rock response is site specific. Blast induced fragmentation can be improved with the proper firing times matched to your site.

Have you reviewed your blast design since using electronics?

- Pyrotechnic based blast designs typically use higher powder factors (and powder costs) than are usually necessary.
- More efficient electronic based blast designs will better utilize explosive energy and reduce the unit cost of blasting.



It's Never Too Late ...

Digital detonators will result in better and safer blasting.

Is It The Cost?

- It will always be more cost effective to break and move rock with chemical energy (Blasting) than with mechanical energy. Case study after case study has shown that digital blasting significantly lowers the downstream costs of mining far greater than the initial cost of the detonators.

Do you want to improve your blasting program?

- Since 1999, at the commercial introduction of digital detonators into our industry, there have been dozens of published case studies and research findings conclusively supporting the use of digitals.
- Every year more and more operations are converting to digital blasting with improved results.
- Digital systems are inherently safer and deliver more controlled blast events.
- The negative impacts of blasting can be more successfully mitigated using digital detonators.

John Floyd, Blast Dynamics, Inc. and Douglas Bartley, DBA Consulting, Inc. have teamed together to provide the explosives industry with the most experienced and proven track record in the effective use of electronic detonators than any other group worldwide.

Since the introduction of electronics into the industry in 1999, they are the leaders in the study, quantification and application of Digital Detonator Technology. Through the development of site specific blast timing, the Effective Timing Solution Group has successfully optimized blasting and production at numerous mining and blasting venues.

Following is a partial listing of companies whom have benefited from our services.

- Barrick Gold Mining Company
 - Goldstrike • Pierina • Alto Chicama
- Hanson Aggregates Corporation
- Northern Ohio Explosives
- Rosebud Coal Mining, Inc.
- Trapper Coal Company
- Phelps Dodge Corporation
 - Sierrita
- Quadra Mining
- Wampum Hardware Company
- PBS Coal Company
- Vulcan Materials
- Crazy Horse Foundation
- Peabody Coal Company
- Better Materials Corporation