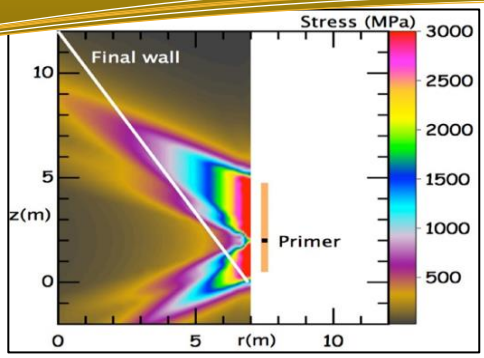
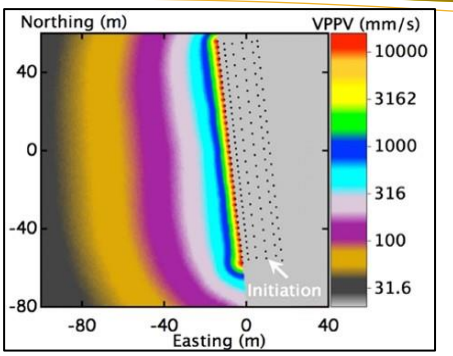
BLASTING GEOMECHANICS PTY LTD

SERVICE INFORMATION SHEET

BLASTING GEOMECHANICS

Number: BGTSSIS_1 **Date: July 2022**





Advanced Wall Control Blasting Short Course

Blasting Geomechanics Pty Ltd (BGPL) offers a two (or three) day Advanced Wall Control Blasting Short Course. This course is available to the public and is continually updated to include current measurement and modelling work performed by BGPL. This short course is also available as an in-house training event and been run in Australia, Russia, Mongolia, Ghana, Finland and USA.

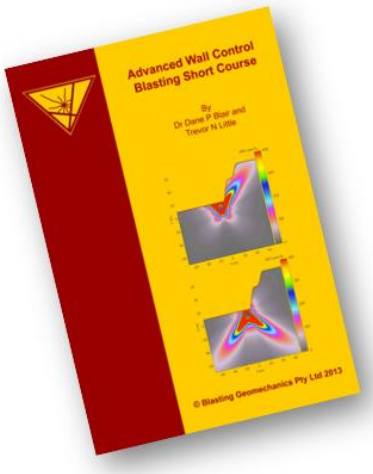
Topics covered:

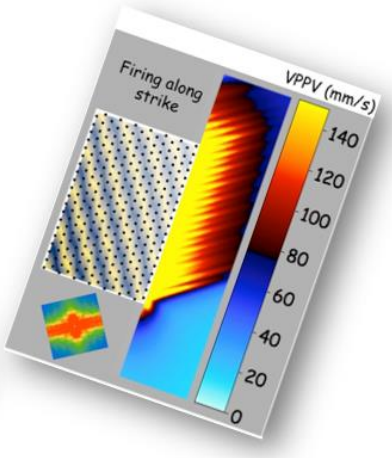
Topic 1 Course introduction and context - Objectives, blasting, risks and opportunities
Topic 2 Slope engineering – Design process, failures and controls, monitoring
Topic 3 Techniques for wall control blasting – Terminology, WCB techniques, and selection
Topic 4 Blast damage: causes and mechanisms – Insights to causes and mechanisms
Topic 5 Physical nature of rock damage due to blasting – Explosive-rock interaction
Topic 6 Measurement for wall control –blast vibration, VoD, gas pressure, prism / radars
Topic 7 Modelling for wall control – Blastholes near wall, wave superposition, vibration screening
Topic 8 Controlling the wall response – Balance charge weight/ distance, presplit, delay sequence
Topic 9 Blast design and management – Design and management framework, damage–design link
Topic 10 Practical take-away messages – The course can be summarised by 11 critical messages

Course highlight: The aim is to debunk some blasting myths and hence provide additional flexibility to blast designers. For example, sound evidence is given to show that it is not necessary to free face a blast for wall control. We also show that dedicated Trim Blasts are not essential for the control of wall damage, and it is concluded that a carefully Modified Production Blast can be fired directly onto final walls. The diagrams on right (upper and lower) show vibration predictions from a Monte Carlo Waveform Model. The cover page on the lower left illustrates the peak vibration maps for top and bottom priming for holes close to walls. The upper left map shows a stress radiation pattern.

Who should attend: Advanced Shotfirers, Drill and Blast Engineers / Superintendents, Blast Designers, Geotechnical Engineers/ Geologists, and Mine Planning Engineers (with previous blast experience).

Course leaders: Dr Dane P Blair (Senior Principal Consultant) & Trevor N Little (Principal Consultant)





Other training offerings

Other training courses available in-house on-demand are:

- Advanced blasting emissions (Includes RIIBLA402E)
- Advanced vibration
- Advanced airblast and noise
- Explosive legislation awareness
- Blasting geology
- Design blasts (RIIBLA403)
- Establish and maintain explosives safety and security management systems (RIIBLA602E)

Note: TNL Consultants is the RTO for the RII units

BGPL Services

Technical consulting
Training & seminars
Management support

BLASTING GEOMECHANICS PTY LTD
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