Controlled Blast Design
In Wet or Dry Conditions

Project Summary

EFFICIENCY DRIVES UP PRODUCTIVITY
Dyno Nobel’s Z-Bar™ product has been designed as a contour charge for firing both lifter and perimeter blastholes. Prior to commercial release, Z-Bar was rigorously tested at both the Byrnecut Jundee and Placer Dome Bullant sites.

At each site, a side-by-side method was used to test the performance of the Z-Bar against the existing products. Z-Bar Edge and Lifter were easier to handle and quicker to load than traditional products used.

These trials achieved the project’s goals for handling and blast performance results.

Background

ACCURATE BLASTING RESULTS
The development of the Z-Bar product was driven by the need for a quick loading tubed explosive that could produce optimum blast results without misfires in both wet and dry conditions.

Flexibility and ease of use for operators were key considerations during the product development phase. Z-Bar consistently resulted in clean half barrels on backs and excellent advance rates with minimum butts.

Other considerations included:
- Ease of handling and storage
- Easy access to case and deployment
- Priming with a NONEL® detonator
- Rigidity of the tubes
- Acceptable testing of spider in blasthole
- Decrease in charge time through single cartridge charging of lifters.

Blast results were measured against the existing product being used – specifically for half barrels, lengths of butt in the face and misfires discovered in the muck-pile.

Project Goals

SIDE BY SIDE COMPARISON
The scope of the initial trial was to charge faces in straight drives, using Z-Bar products in one side of the face and conventional decoupled products in the other side.
EASY TO USE IN ANY CONDITIONS

The Z-Bar Lifter and Edge are contour rigid tube explosives designed to deliver precision floor blasting and perimeter blasting in both wet and dry underground developments.

A continuous high strength packaged product; the Z-Bar Edge is produced for use as a decoupled perimeter charge and Z-Bar Lifter is used as a single cartridge lifter charge. It is detonator sensitive and has a 10 g/m detonating cord that runs internally through the entire length of the product.

Both Z-Bar Lifter and Z-Bar Edge have been specifically developed to provide an easy-to-use and effective system for controlled floor and perimeter blasting in underground development rounds.

SMOOTH AND CONSISTENT PERFORMANCE

Dyno Nobel’s Z-Bar product offers new levels of control and efficiency. The lateral decoupling of the Z-Bar Edge cartridge is responsible for the smooth and consistent perimeter results.

High velocity detonation of the internally traced 10 g/m detonating cord achieves a clean wall split to the drilled design.

Z-Bar has been developed as a contour charge in the form of continuous ridged tube with ‘Z’ shape concertinas to improve handling and deployment. Z-Bar is pre-cut to standard drill lengths significantly reducing charge times.

The continuous plastic tubes are water-resistant allowing charging in wet or dry conditions. Rip tab features on easy to manage cartons provide fast access to the product creating safer, more efficient and cost-effective production.

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