

MODEL DRILLHOLE HARDNESS TO ENHANCE BLAST DESIGN

Maptek BlastLogic™ streamlines daily workflow for managing drill and blast, leading to improved performance and ore recovery. This typical scenario can become a reality for your operation!

Advances in drill rig guidance and management systems allow mines to profile hardness and downhole penetration rates and use this data to improve their blast design.

For example, identifying a band of hard rock across specific regions of a shot means an engineer can customise hole-by-hole explosive load design to achieve optimal fragmentation.

Harnessing the value of this relies on the interdependency of mine planning, drill management and the load design systems used by drill & blast.

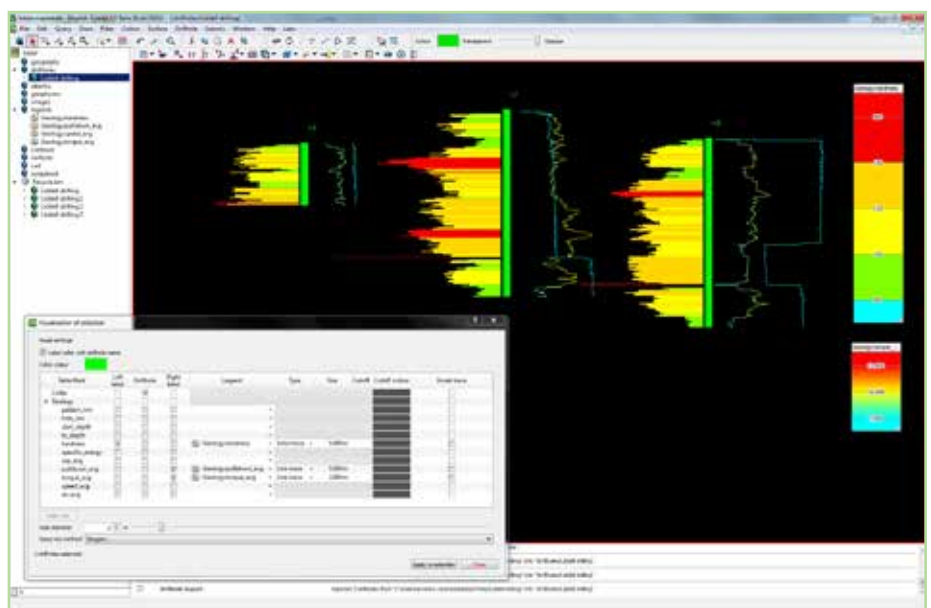
Maptek Vulcan™ and BlastLogic™ software can be used with site drill navigation systems to provide a straightforward solution for routine mine operations.

The drill design is performed in Vulcan, and passed to drill navigation which in turn delivers back the hardness data. Vulcan displays the hardness profile of each hole by colour.

A hardness horizon can then be tracked to form a surface model. In a coal mine, the roof and floor of seams are modelled.

BlastLogic is used to validate and update the correct spatial location and dimensions of each drillhole, coordinate the QA process and prepare the load design all at a click of a button.

VULCAN TO BLASTLOGIC WORKFLOW IS SEAMLESS, WITH COMMON DATASETS ALLOWING CLICK-DROP FUNCTIONALITY.



BlastLogic also supports an automated interface with the major drill navigation systems; as-drilled data can be accessed and viewed immediately.

BlastLogic charge design functionality will soon support deck loading off a surface. This solution will meet the needs of coal mines relying on through-seam blasting, as well as hard rock mines wanting to discriminate on the hole-by-hole load design, given degrees of hardness within the shot.

This helps minimise waste as the optimal amount of explosive charge can be applied per hole. It also maintains toe and wall control and eliminates the expensive overhead of handling oversize rock.

Another high-value deliverable is the facilitation of accurate placement of charge, which historically has been difficult to track and measure.

BlastLogic supports the visualisation and use of .dxf files for operations with third-party mine planning and geological modelling systems.

Another solution involves bundling the new Maptek exploration modelling software, Eureka™ with BlastLogic. The same effortless workflow creates drillhole hardness profiles and surfaces that can be used in BlastLogic to enhance a blast design.

This is one example of how Maptek can help mines better manage the optimum recovery of ore and coal so as to achieve quantum savings.

Introducing BlastLogic into the existing mine systems mix makes for a new industry standard in drill and blast management.