

Increase performance and production

Maptek™ BlastLogic™ drill and blast management system harnesses under-used information to enhance dig rates and improve blast performance.

Drill and blast is fundamental to the cost effectiveness of a mining operation, given its inter-relationship with downstream processes.

Digging rates, toe and wall control, and loss or dilution provide a good measure of blast performance. Aside from operator ability, material digability is the fundamental factor affecting production of excavators and shovels.

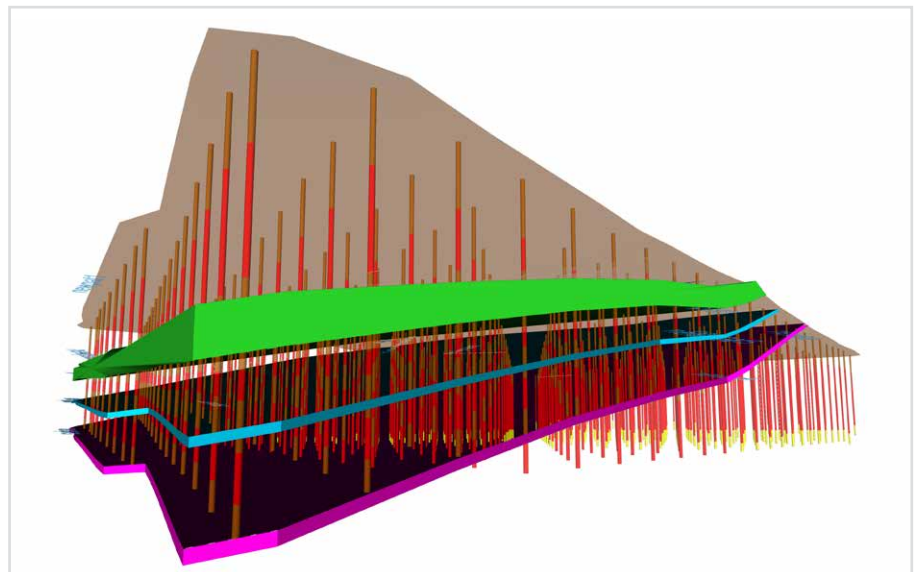
A shovel productivity gain of more than 9% has been attributed to consistently easy digability, of which drill and blast is the key enabler.

Geology and structure aligned with targeted blast objectives determine the drill and blast design. Many sites already implement quality checks on drilling and charge placement. However, efficient use of this data is restricted as it is often manually compiled into spreadsheets or tabular QA systems.

Maptek™ BlastLogic™ drill and blast decision support system assists engineers to harness existing under-utilised information to enhance dig rates.

Identifying areas of a pattern that can lead to toe or oversize due to poor execution of drilling is difficult. Ambiguity associated with the actual placement of charge can result in sub-optimal dig rates.

BlastLogic focuses on getting the fundamentals of drill and blast right every time. This leads to improvement on bench performance in critical areas like pattern preparation, hole depth variation, charging and stemming compliance.



Blast damage is another factor that can lead to significant performance loss. The extent of insitu coal loss can vary from 5-20%, attributed to the damage of the top seam and loss of coal during mining, or the burial of coal beneath overburden.

A lack of adherence to the blast plan in the field is cited as a key factor in coal loss. Operations require a standardised, replicable approach to overburden blasting and excavation to protect the coal seam. This is the essence of the BlastLogic solution.

Drill and blast inaccuracies can have other costly downstream effects. Blast oversize affects load and haul productivity, safety and crusher performance. The additional higher cost and effort in secondary blasting and rehandling of material must be considered.

The overall cost of blast performance is kept to a minimum by achieving the right result the first time.

Balancing blast effort and cost factors can provide an insight into the critical processes that underpin a mining operation. The value in BlastLogic is that key drill and blast information is immediately available in a usable format so it can be acted on.

This provides a platform for more logical planning and execution of blasting activities.