ROCKMASS RESPONSE TO MINING

global MINE DESIGN

Global Mine Design Ltd (GMD) specialises in data driven decision-making. Using rockmass response data, our goal is continually optimise your operational mining strategy by determining how ground conditions will evolve during extraction. Our data analysis techniques produce design solutions that maximise production efficiency.

OPERATIONAL MINING

The regular occurrence of groundfalls, excavation damage around mining infrastructure, and stope overbreak issues often indicate that an orebody is not being mined to an optimised design. These conditions, if left to develop without restraint, can significantly impact safety, production, and the serviceability of mine infrastructure.

GMD works with clients to understand the reaction of ground conditions to the mine plan, including extraction rates and methods. We integrate seismic monitoring data and numerical models to create virtual simulations of existing and proposed mining block development. Whether on the scale of an individual mining block, or the whole mine, our data analysis techniques allow large volumes of data to be targeted as a key part of your long-term mine design optimisation strategy.

Our philosophy places this information back into the mine plan to produce optimised design solutions that save cost and time, and ensure that your critical infrastructure remains serviceable over its expected life.

GOOD ENGINEERING IS ABOUT HAVING OPTIONS.

GMD champions data-driven decision-making: understanding rockmass response is the start of true economic mine design.

Observations from site visits form the basis of a comprehensive ground monitoring strategy and GMD personnel are field-trained to observe changes in rockmass quality over time. Wherever possible we compliment our traditional data collection programs by capturing the study area using the latest photogrammetry and laser scanning technology.

GMD designed ground support systems always include provision for excavation monitoring equipment able to record physical data such as displacement and force, in proximity to excavation limits. This information can be used in conjunction with numerical modelling to create safe working protocols.

Whatever the need, whether it is advice on how to design and implement monitoring systems, training on how to maximise the benefit of an existing system, or the interpretation of data to ease the workload of an existing department, GMD can provide a cost effective solution.

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