The Situation

Mt Keith is a world class mining operation using state-of-the-art measurement systems and mining equipment. WMC, ROCHE MINING and Orica work together to improve efficiency through a Continuous Improvement Process. The Drill and Blast Review forms Stage One in this process.

Mining Issues

As with many mines in Australia, movement of staff through the Drill and Blast Engineers/Supervisor role often results in lost knowledge. A database was required to allow easy review of previous blast designs and support for blast design optimisation. A Streamlining and Clarification of processes would facilitate the simple approval of schedules and designs by WMC.

Technical Solutions

Orica Mining Services used Process Mapping to capture and clarify the drill and blast processes and practices on site in the following six areas:

- Planning
- Daily Plans
- Blast Design
- On Bench Tasks
- Weekly Plans
- Post Bench Tasks

The Drill, Blast and Survey (DBS) team with representatives from ROCHE MINING and Orica was formed to document the drill and blast practices including areas for improvement in the Drill and Blast Review. Seven Review Investigations (RI) were conducted, all drawing from the large amount of knowledge and experience on site. Orica provided additional resources and expertise to enable the project to be completed in a timely fashion.

The Process Maps were revised and further value added through superimposing processes, practices, document titles and database variables. A schematic showing the layout and a small portion of the process map is provided.

The Result

The Process Map was completed and changes incorporated into procedures and large wall charts were made for easy reference during planning meetings. The Drill and Blast Review Report was completed and presented by the DBS team to Mt Keith mining personnel and management. The review is a dynamic document being continuously updated when innovations or changes in practices occur.

Through capturing, clarifying and improving mine systems, the stage has been set for the implementation of key projects. The first of these projects was the application of Orica’s Blastrak™ system for accurate recording and integration of blast data into the Mine Planning process.

Operations View Point

"Since the DBS team started work on the Continuous Improvement Program the drill and blast processes have been streamlined. This has led to a far more efficient operation with savings in time and costs. Orica has been a vital part of the DBS team and we are looking forward to the future projects. These projects will see the operations at Mt Keith reach the forefront in mining technology."

Trevor Garbutt, ROCHE MINING
Mining Superintendent Mt Keith
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