

PROJECT DETAILS

Customer:

Major Mining House

Location:

North-West Queensland

Project Duration:

September, 2019

Products Offered:

- FB200
- Services

Industry Sector:

Mining - Hard Rock

Applications:

Ore recovery optimisation
Services



VERTICAL STOPE RECOVERY QUEENSLAND.

A major mining house with an underground base metal mine, located in North-West Queensland. Mining is undertaken using sub-level open stoping with paste fill to maintain stability. Mining operations extend to over 600m underground with 3 Mt of ore per annum extracted.

CHALLENGE

Failure of a stope crown resulted in a large volume of waste rock filling the stope, prior to it being paste filled. This presented an issue as the adjacent secondary stope was yet to be extracted.

To ensure stability of the secondary stope to be mined, the mine was presented with two options:

1. Leave a 5m rib pillar of valuable ore behind or;
2. Develop a method of stabilising the broken material in the stope.

Leaving a rib pillar was an unacceptable option considering the value of the ore which would be sterilized.

The mine had prior experience successfully using Minova's FB200 grout to stabilise other failed stopes.





SOLUTION

Working with Minova, the mine was able to develop a plan which would allow the failed stope to be stabilised, creating a solid rib pillar against the secondary stope to be mined. Designed at 1 m thickness, the rib pillar's purpose was to minimise dilution of the secondary stope.

Rings of injection holes were drilled from an adjacent cuddy to intersect the vertical face of the failed stope. A pre-determined volume of FB200 grout was injected into each hole, with the stope grouted from the bottom to the crown in a sequential process.

Mobilised to site once the injection holes had been drilled, Minova worked with the mine to grout the failed stope with FB200 high yield grout.

RESULT

Minova was able to stabilise the failed rock within the stope, allowing mining of the adjacent secondary stope to occur.

A rib pillar of 1 m was designed adjacent to the stabilised stope to protect it from production blasting. During extraction, the FB200 stabilised rock remained competent, with minimal dilution observed at the toe of the stope.

The full 5 m strike of the secondary stope was able to be mined, with each additional metre of strike worth \$1m profit to the mine. Without our FB200 grout and experience, the mine would not be able to achieve this positive outcome.

ACHIEVEMENTS

- Maximised extraction of the adjacent secondary stope, with an additional 5m strike of stope recovered
- Minimal dilution at the toe of the stope observed
- 200 tonnes of FB200 injected into the failed stope material

**SECURING
PERFORMANCE
TOGETHER.**