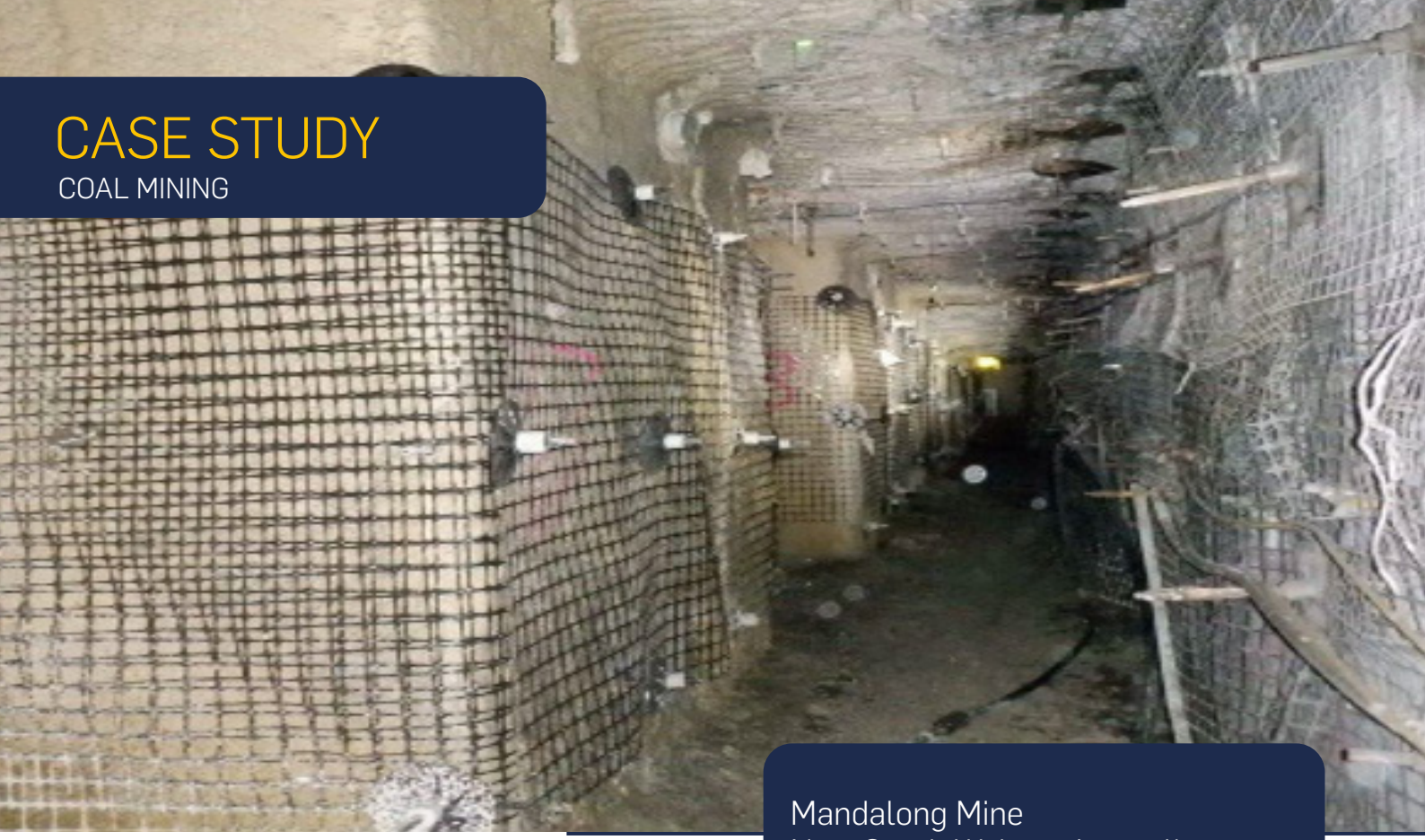
CASE STUDY

COAL MINING



Mandalong Mine
New South Wales - Australia

OVERVIEW >>>>

Mandalong Mine was an existing underground coal mine operation located near Morisset in the Lake Macquarie Local Government Area (LGA), approximately 130 kilometres north of Sydney and 35 kilometres southwest of Newcastle. The mine supplied thermal coal to both domestic and export markets, producing up to 5 Mtpa.

Mandalong utilised a combination of longwall and continuous mining methods to extract coal from the West Wallarah Seam.

Minova was approached by Mandalong Mine to develop a pre-driven recovery roadway pillar system to improve the safety and efficiency of longwall recovery and change-out for LW28.

Customer: Centennial - Mandalong

Project Duration: 10/2020 – 01/2021

Products Offered:
Sprayplast
FB200R
Pillar formwork systems

Applications:
Cavity and Void Filling
Pre-Driven Roadway Pillars

Due to the geotechnical conditions and orientation of the longwall blocks, the mine sought to trial a new approach that would allow them to produce coal from the next longwall quicker.

SOLUTION >>>>

Working with the team at Mandalong, Minova assisted with the design, implementation and QA/QC of pre-driven recovery roadway grout pillars. Based on a nominal strength of our high-volume grout, FB200, pillar dimensions were calculated to support the roof and fender on holing into the supported roadway.

Minova actively supported Mandalong through the construction and filling process to ensure each pillar was built to specifications. We were also present to ensure the pillars were filled with grout of the appropriate strength for the project.

Upon construction and curing of the grout pillars, Mandalong were able to cut with the longwall shearer into the pre-supported roadway. Using Minova's pillar system, the mine reduced the bolt-up and recovery cycle from 13 days to 5.6 days, a 57% improvement, equating to approximately 150,000 tonnes of additional coal that could be mined.

Testimonies from site personnel stated that shield recovery was easier and that the roadway and associated goaf behaved better with the additional roadway support. It was also stated that this method of longwall recovery was the safest operators had felt during the change-out process, further highlighting the benefits of using Minova's PDRR Pillars for longwall recovery.

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CONTACT OUR TEAM