Broadmeadows Mine

Moranbah, Queensland

Precision compaction grouting restored structural stability and alignment of critical mining infrastructure in a challenging remote environment.

The project

Keller undertook the challenge of lifting structures at BMA Broadmeadows Mine to address tilting and stabilisation issues. Our scope included lifting the drive and take-up slab, reducing slope, and aligning Trestle T1 with adjacent structures.

The challenge

Operating in a remote location posed challenges such as grout supply issues and securing reliable suppliers, despite higher costs. Meticulous planning for logistics, safety, and equipment movement during both pre-shutdown and shutdown periods would be required to ensure safe execution of work.

The solution

Keller's solution involved deploying compaction grouting technique across multiple set locations during the shutdown, ensuring precise lifting and alignment. A comprehensive induction process for personnel, coupled with 3D models for restricted access verification, facilitated smooth operations. Continuous structure monitoring, including laser levels and live tilt sensors, ensured the safety and stability of the mine structures, while careful planning mitigated concerns about potential damage to power supply services beneath the slab. The project was executed successfully, meeting all objectives and the structures now perform to expectations.

Project facts

Owner(s)
BMA

Keller business unit(s)
Keller Australia

Main contractor(s)
Key Solutions Group

Solutions
Mine stabilisation / void filling

Markets
Industrial

Techniques
Compaction grouting