

# Shotcreting

Macmahon Underground Mining



**Macmahon offers a professional shotcreting service to the Australian construction and underground mining industry. With a strong focus on quality assurance, maintenance, training and retention of specialist staff, Macmahon has developed a reputation for setting a new benchmark in safety, quality and productivity.**

Macmahon is experienced in all aspects of shotcrete application from slope stabilisation and portal development, through to in-cycle spraying of underground development headings, barricade construction, mining through backfill and difficult ground conditions and rehabilitation work.

Macmahon is also experienced in civil shotcrete application, most notably gained through the Brisbane North – South tunnel project.

An in-house geotechnical engineer coordinates and monitors Macmahon's quality assurance and quality control programs, as well as assessing new products, equipment and techniques. Macmahon coordinates shotcrete test work for the client through external NATA laboratories, providing transparency and peace of mind for a safe and sustainable project.

**Macmahon's shotcrete services include:**

- Application of shotcrete or fibrecrete to in-cycle headings and rehabilitation sites
- Construction of shotcrete vent walls, fill walls and blast barricades
- Remote shaft lining
- Underground transport of concrete using transmixers
- Batching of concrete and shotcrete products
- Facilitation of quality control testing required by the client

**Past and present contracts include:**

**Olympic Dam Mine (SA) – BHP Billiton**

Macmahon provides all shotcrete application services at the Olympic Dam operation. Macmahon also coordinates the quality assurance program, providing timely feedback and in-depth results analysis. Macmahon has sprayed in excess of 175,000m<sup>3</sup> at this operation.

**Argyle Diamond Mine (WA) – Rio Tinto**

Macmahon has provided shotcrete application services to the underground block cave project since November 2006. The development of the infrastructure for the block cave has required tight quality control of shotcrete application, with an emphasis on thickness optimisation. Macmahon and Rio Tinto have collaborated on several initiatives to achieve these goals over the life of the project.

**Broken Hill Operations (NSW) – Perilya**

Macmahon provides all shotcrete application services at Perilya's Broken Hill base metals (zinc, lead, silver) mine. Macmahon also provides all concrete transport services and will soon commence batching activities. This project presents a range of challenging ground conditions associated with historic and remnant mining activities.

**Savannah Nickel Mine (WA) Panoramic Resources**

Macmahon provides the shotcrete services to Panoramic's nickel operation at Savannah. In-cycle shotcreting has had significant impact on the development rate of advancement at the project.