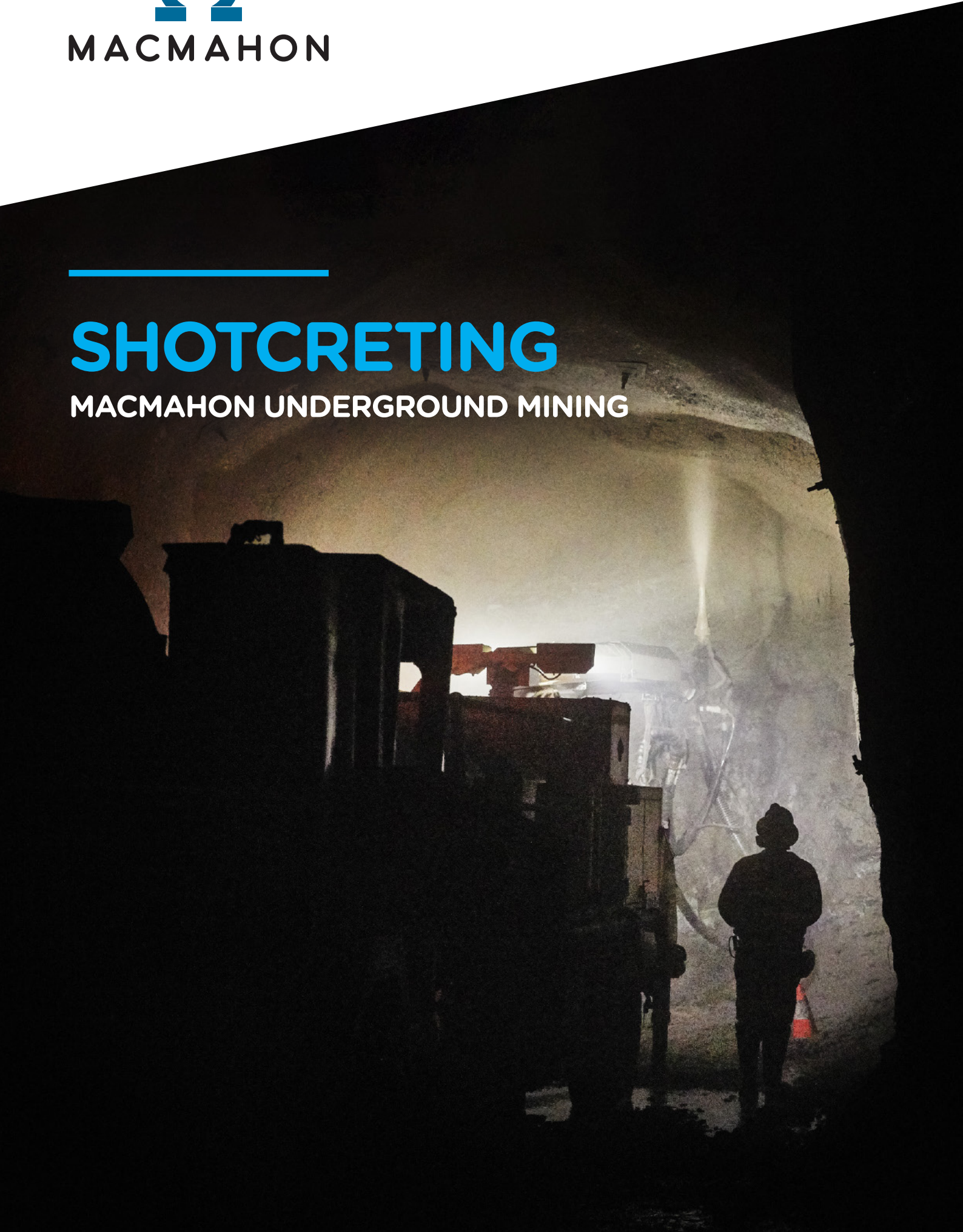




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# SHOTCRETING

MACMAHON UNDERGROUND MINING





**WITH  
MORE THAN  
20 YEARS'  
EXPERIENCE  
MACMAHON HAS  
EXPANDED ITS  
CAPABILITIES TO  
OFFER OUR CLIENTS  
A COMPLETE SUITE  
OF UNDERGROUND  
SERVICES.**



**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.

**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:**

**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 provided 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.

**NIFTY COPPER MINE (WA)**

**Metals X**

Macmahon provided full mine service including batch plant operation. Spraying 1,100m<sup>3</sup> plus per month..

**OLYMPIC DAM MINE (SA)**

**BHP**

Macmahon provided 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.

**SAVANNAH NICKEL MINE (WA)**

**Panoramic Resources**

Macmahon provided 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.

**TANAMI MINE (NT)**

**Newmont**

The provision of additional manned spray rigs and agitators to support mine operations and project work.

**TUJUH BUKIT (INDONESIA)**

**PT Merdeka**

Macmahon provided in-cycle shotcrete of the exploration decline, including the spraying of rib support.