

# Orica's Mini Sparge system improves operator safety

Xstrata Mount Isa Mines, North Queensland

## WHO WAS THE CLIENT?

Xstrata Mount Isa Mines form one of the largest underground mining operations in the world. The mines, based in North Queensland, produce copper, zinc, lead and silver. Established in 1924, 5,700 employees and contractors today work across Xstrata Mount Isa's twin mining and processing streams.

## WHAT WERE THE CHALLENGES?

Xstrata wanted to improve the safety of its solid cyanide sparging system. A real challenge came during the summer months. At this time, the ambient temperatures at the mines can reach 45°C, yet during the sparging process, operators would have to wear a protective suit for up to five hours at a time. This practice increased the likelihood of heat stroke and stress related injuries.

Xstrata's key requirements were to:

- Limit operator exposure to dissolved cyanide.
- Reduce the amount of protection needed to be worn in hot conditions.
- Eliminate the possibility of heat stroke and stress related injuries.
- Offer a more comfortable working environment for staff.



Orica's mini sparge system on-site at Xstrata Mount Isa.

## HOW DID ORICA HELP?

Orica designed, built and installed a completely new mini sparge system, which was fully automated. The operators at the mine are now able to control the entire sparge process from an air-conditioned control hut. They are able to monitor operations without risk of being sprayed by cyanide if there is a system failure. If a leak ever occurs, the process can be shut down remotely. New level measuring instruments have also been installed to improve the accuracy of the level readings and ensure the tanks do not overflow.

## WHAT WERE THE KEY OUTCOMES?

Improved health and safety processes.

Reduced risk of coming into contact with cyanide.

Enhanced levels of operator comfort.

Complete dissolution.

Environmentally friendly.

“It has been a big improvement in technology and safety for all. The operators are now separated from the product, in air-conditioned comfort, for the duration of the delivery – which can take up to five hours. Orica worked with us to finally achieve the outcome we have today.”

Alan Pritchard (Site Supervisor, Xstrata, Mount Isa)



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## ADVANTAGES OF INSTALLING ORICA MINI SPARGE

Mini sparge is unique to Orica, allowing operators to do their job safely and efficiently in a comfortable working environment. This innovative technology allows for improved

dissolving processes and better dissolution. Orica's Customer Engineering Team work closely with your site personnel to ensure a smooth transition from your current practices to a solution that meets your business and SH&E requirements.

- Improved SH&E
- Process Improvement
- New Technology
- Better Dissolution



Orica's mini sparge system and control hut .