

## Cadia partners in rock breaking trial putting safety first

A 'safety driven initiative' has been successfully trialled at Newcrest Mining's Cadia Valley Operations site using remote drilling, loading and wireless blasting to remove the exposure of workers to major hazards associated with draw points at Cadia East.

The 30-day trial provided the opportunity to trial new technology from MacLean Engineering's secondary break drill and blast system (Automated Explosive Charger) and Orica's Wireless Blasting System (WebGen 100) in an isolated area.

Secondary break activities are utilised when oversized rocks require removal from the draw point as they are blocking the flow of material into a draw point or are deemed too large to pass through the jaws of the underground primary crusher.

Many oversized rocks can be dealt with by preparation loaders or rock breakers, however a number of rocks require explosives where workers need to access the area to perform the wiring up of each respective conventional explosive being used.

MacLean's secondary break drill and blast system removes workers from secondary break activities through the development of a prototype 'bolt on' piece of equipment which is attached to existing secondary break drill rigs.

This Auto Explosive Loader (AEL) can drill a hole in a rock and push the wireless explosive inside the hole, without the operator leaving the cab of the drill rig.

The operator can then remove the drill rig, leave the area and remotely detonate the explosive, using a wireless device manufactured by Orica.

Cadia Acting General Manager, Aaron Brannigan, said the trial was successful and Cadia was able to meet the key objective of trialling machinery that eliminates human interactions on foot while working near an active draw point.

"The trial has demonstrated the opportunity for significant safety benefits, through eliminating human exposure to the major hazards associated with secondary break activities," Aaron said.

"The partnership with MacLean and Orica has been mutually beneficial as it has enabled specialist contracting partners to bring together their devices to streamline an entire process in an underground mining environment."

MacLean Vice President of Product Management, Patrick Marshall, said finding safe and efficient ways to introduce remote or autonomous fleet operations is a key area of technology development at MacLean and partnerships with customers and other manufacturers are a critical part of the success of this product development and commissioning process.

"The combination of the MacLean Water Cannon mining vehicles, already in operation at Cadia East, along with the MacLean secondary break unit, provides the operation with a comprehensive Ore Flow Suite solution to release trapped reserves and keep operators out of harm's way," Patrick said.

Orica Territory Manager Dennis Druve said that partnering with Cadia and MacLean Engineering on this successful trial has been energising, especially with their new wireless technology WebGen™, eliminating major hazards for people working underground.

“The entire team at Orica very much look forward to the continued technology advancements we will make with WebGen™ through our partnership and the doors it will open to the wider mining community in the future,” Dennis said.

The next step will be a more comprehensive trial in a real-life production environment to further assess the safety aspects and productivity of the secondary break system.

### **For further information please contact**

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*Cadia's Secondary Break trial using MacLean's Auto Explosive Loader enabled with Orica's WebGen™ wireless technology.*



*The Auto Explosive Loader drilling a rock and pushing wireless explosives into the hole.*