



Image Credit: Anglo American

CAPCOAL, QUEENSLAND, AUSTRALIA

THE CLIENT

Anglo American's Capcoal operates one underground mines (Grasree), two open-cut mines (Lake Lindsay and Oak Park) and additional surface operations across the original Capcoal German Creek and German Creek-East sites, in the heart of the Bowen Basin in Central Queensland, Australia. Capcoal is owned by Anglo American's Coal business (70%) in joint venture with Mitsui Coal Holdings Australia (30%), and operated and managed by Anglo American. Capcoal's operation covers 34,085 hectares (131.60 square miles) and annually produces in approximately 8.5 Mt (million tons) of prime quality hard coking coal and PCI coal.

SITUATION

Expansion of the Capcoal mines and topographical changes to the lease drove the need to update the communications systems on site. A four site voted analogue Tait system was already in place, fully functional and serving its purpose, however the age of the system was leading to higher maintenance costs.

Capcoal needed a new digital system based on open standards that would deliver seamless communications for operations across the four mines, covering both mine staff and contractors alike. As both safety and continuous-operations are the top priorities at each mine site, Capcoal required a seamless transition to the new digital system to ensure operations were not interrupted.

RESPONSE

A long standing and renowned Tait Solution Partner, Nixon Communications, were chosen to upgrade the communications for Capcoal.

Nixon Communications commissioned a five-site TaitNet P25 conventional solution which included over 500 Tait P25 digital mobile radios and an Omnitronics DX Altus dispatch console. The reliability, value and longevity of the analogue Tait system were key factors in selecting Tait equipment for the digital upgrade.

The Tait digital radio solution not only provided Capcoal with additional operational functionality, but also increased the communications coverage across the mine sites with crystal clear voice communications.

The digital technology provides crystal clear voice by filtering out background noise - it is optimised for human voice - but this functionality can also challenge the ability to send blast and emergency tones over the network. The Omnitronics DX Altus dispatch console was used to overcome this challenge, using tones that would pass



LOCATION

QUEENSLAND,
AUSTRALIA



EXPERTISE

MINING

SOLUTION OVERVIEW

- ▶ TaitNet P25 conventional radio system
- ▶ TB9100 conventional base stations
- ▶ TM9155 hand-held control head (HHCH) mobile radios and TM9155 standard mobile radios
- ▶ Omnitronics DX Altus console – from Tait Technology Partner

BUSINESS BENEFITS

- ▶ Digital upgrade with minimal interruption to operations
- ▶ Robust and reliable communications
- ▶ Mine safety, emergency and blast tones
- ▶ Flexible system to grow with the mine
- ▶ Integration with the telephone network



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through the digital system to deliver the important blast and emergency tones to every radio. The emergency or blast tones can be enacted by either the menu of the Tait mobile radio or by the dispatch operator, ensuring optimum response times and clarity of blasting notifications.

The Anglo American logo is printed on the mobile radio control heads to ensure quick and easy asset recognition and protection.

The Tait P25 equipment operates in both analogue and digital modes which allowed a phased solution roll-out, deploying the new terminals to operate on the legacy analogue system while the new P25 network was commissioned.

In addition to the fixed radio sites, 6 mobile repeater trailers were deployed to give the mine the flexibility to reconfigure and future proof the system as the mine grows and production relocates or increases.



“Due to the reliability, value and longevity of the existing Tait system, Capcoal again selected a Tait product in the P25 open standards-based solution to deliver seamless communications.”

Neil Sutherland

CQ Regional Manager

Nixon Communications