NEWMONT GOLDCORP BODDINGTON GOLD MINE
WESTERN AUSTRALIA

Newmont Goldcorp Boddington is a large, open-pit gold and copper mine located 75 miles (120 km) from Western Australia's state capital, Perth. Since starting production in 2009, Boddington has become one of Australia's largest producing gold mines.

More than 2000 employees and contractors operate 24 hours a day, seven days a week. With over 1000 radios on the LMR network there are many different operational teams and calls to manage; 23 talk groups make wide area calls across all radio sites.

SITUATION

Newmont Goldcorp Boddington operated a P25 Phase 1 FDMA trunked network, which was approaching end of life, and growth of the mine demanded more capacity. A move to TDMA technology would double the capacity of existing frequency licenses with the same amount of infrastructure. Two options were considered; compared to P25 Phase 2, DMR Tier 3 proved to be a much more cost-effective platform to provide the mission-critical capacity that Newmont Goldcorp required.

RESPONSE

Three Tait DMR Tier 3 radio sites cover the operational part of the mine, each with nine traffic channels. An additional five-channel site covers the accommodation area.

A standard DMR message trunking format was initially implemented; however there were significant differences to the user experience between the two systems. Tait worked closely with the implementation partner to customize the system to better align the new DMR technology with the old system, safeguarding the initial user experience.

Tait implemented DMR transmission trunking in the network core, in addition to optimizing the radio terminal operation. This new format is more appropriate for the nature of operations at the mine site. A staged and carefully managed upgrade program was delivered over several days, including complete radio fleet re-programming on the live operational site. The program was planned and implemented specifically to gain user confidence and acceptance.

BUSINESS BENEFITS

▸ Productive, safe operation of the mine.

▸ System capacity to manage peak periods, additional contractors, growth of the fleet, and data services.

▸ Improved worker safety through GPS location data.

▸ Cost-effective and spectrally-efficient equipment.

▸ Flexible talk group management.

▸ Consistency of operation and user interface for end users.

▸ Upgrades and configurations changes seamlessly made in field.

▸ Minimized downtime and interruption.

▸ Proactive management of system capacity.

▸ Radios work effectively within a fixed cost structure.

"The two way network is a critical system in both mining and processing operational areas. If at any stage the radio network goes down, it can shut down production in these areas."

Luke Hamson, Fleet Management Systems, Newmont Goldcorp Boddington

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OUTCOMES

The Tait DMR Tier 3 network at Newmont Goldcorp Boddington now has ample capacity to accommodate for large fluctuations in usage, such at the start of each shift, or when contractors come onto the site - sometimes up to 1000 at a time.

▸ Tait services experts tailored the system elements and optimized network performance to suit Newmont Goldcorp's operational requirements.

▸ Tait Managed Services provide 24/7 system monitoring, support, and proactive response to minimize any interruptions to mining operations.

▸ The Tait Managed Services team provides monthly performance analysis and recommendations to improve system operation and proactively manage system capacity. Extrapolation of channel usage informs recommendations on upcoming traffic channel capacity requirements for a variety of scenarios.

▸ To keep the radios working effectively within a fixed cost structure, Tait Service Advantage provides access to software updates and extended warranty for terminals.

> "We're very impressed with the dedication and diligence of the Tait Engineers that came to optimize the network on site. We continue to work with Tait Managed Services who provide prompt responses and support."

Luke Hamson, Fleet Management Systems, Newmont Goldcorp Boddington

Tait EnableFleet provides centralized control and visibility of radio fleet programming, saving time and offering peace of mind. Over-the-air software configuration and firmware updates allow Newmont Goldcorp to easily and actively manage the fleet of radios and how they operate, as well as apply new features. Minimizing the need for technicians to locate and travel to radios around the mine site for physical upgrades saves significant costs and time. It also avoids diverting mine vehicles away from the operation.

The solution implemented by Tait is high capacity, well supported, and exceeds the requirements of the customer.

SOLUTION OVERVIEW

▸ Tait DMR Tier 3 transmission trunked digital network, 32 voice channels over four sites, with 23 talk groups.

▸ 600 TM9300 mobiles, 400 TP9300 portables.

▸ Tait EnableFleet configuration management system.

▸ Over-the-air-programming via the radio network.

▸ Tait Managed Services 24/7 system monitoring, support, and proactive management.

▸ Tait Service Advantage terminals support package.

> "We've seen a huge improvement since we've been working with Tait products and services."

Luke Hamson
Fleet Management Systems,
Newmont Goldcorp Boddington

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