

Think ADTRAN. Think Success.

RAG American Coal Depends on ADTRAN's TRACER System for Reliable Wireless Connectivity

The Challenge

Provide reliable wireless links for voice and data for RAG American Coal's Twentymile Coal Mine. This system allows the company to remotely monitor elevators, ventilation fans, and the mine-wide monitoring system that measures the amount of oxygen, methane, and carbon monoxide in the mine.

The Solution

ADTRAN TRACER® Dual T1 radios and TSU 600™ multiplexers were used to extend voice and data connections to the coal mine for remote monitoring of critical systems such as elevators and ventilation fans. This integrated, complete voice and data solution allowed Twentymile Coal to increase the number of voice lines and still have capacity for data traffic.

The Benefit

ADTRAN's single vendor solution resulted in network simplification and easier implementation for a critical network environment.

TRACER 4000 Series Radios

ADTRAN's TRACER 4000 Series of license-free digital microwave radios are designed to deliver dual, quad, or octal T1 or DS3 capacity from a single compact platform at an economical price.

Having reliable wireless links for voice and data is important for all organizations, but for RAG American Coal's Twentymile Coal Mine, the wireless network is critical. The wireless system implemented by Twentymile Coal allows the company to remotely monitor elevators, ventilation fans, and even more importantly, the mine-wide monitoring system that measures the amount of oxygen, methane, and carbon monoxide in the mine.

"These systems ensure the safety of our employees and operations," said Rick Stillion, electrical department manager, Twentymile Coal Company. "These systems have to have uninterrupted performance. If any system goes down or reports problems, we have to be there and have it resolved within 15 minutes or we have to evacuate the mine. An evacuation means three to four hours of downtime, and that means significant losses in productivity and revenue."

Reliability Is Key

Like many wireless situations, Twentymile Coal is faced with topology challenges that make land lines extremely expensive and make the reliability of a wireless system crucial. The mine had previously installed a licensed wireless system, but was experiencing less than optimal performance. "We had an older licensed microwave radio system," noted Stillion. "It was proving to be unreliable and it limited our ability to combine voice and data."

Twentymile Coal began examining alternate solutions, due to the reliability issues they had experienced with the licensed microwave product. "There was another supplier that told us they could provide a solution. Unfortunately, after about two months of research and testing, they determined they did not have a good solution for us," he noted.

ADTRAN's Solution

After this disappointing experience, Twentymile Coal contacted Pulse, Inc., an ADTRAN Wireless Premier Reseller, who recommended the TRACER

"I have been very impressed with the TRACER system. In addition to reliability, the flexibility and increased voice capacity of the ADTRAN solution will allow us to eliminate our land-based voice lines, which will result in long-term monthly cost savings."

*Rick Stillion
Manager,
Twentymile Coal Company*

Series of wireless products from ADTRAN. A team of Pulse engineers developed a solution for Twentymile Coal using dual T1 TRACER radios with ADTRAN TSU 600 multiplexers to expand voice and data connections. This integrated, complete voice and data solution allowed Twentymile Coal to increase their voice lines and still have capacity for data traffic. In addition, ADTRAN offered a single vendor solution for a complete end-to-end system resulting in network simplification and easier implementation.

"Since the ADTRAN solution is based upon license-free technology, we had the system up and running quickly," Stillion said. "There were no licensing fees or delays. It has been in operation for almost a year and we have not had a single interruption."



TRACER 4102/4202 Series
2 x T1 2.4/5.8GHz Radios



TRACER 4106/4206 Series
4 x T1 2.4/5.8GHz Radios



TRACER 4108/4208
8 x T1 2.4/5.8GHz Radios



TRACER 4205
DS3 Radio