SHUBARKOL KOMIR

InfiNet wireless

Shubarkol Komir, Kazakhstan

Challenge:

- Network bandwidth of at least 70 Mbps in a hostile environment and climate
- Broadband wireless video surveillance connectivity with remote facilities and mining sites
- Highly reliable platform between the production sites and the control center
- Proven outdoor technology which can operate seamlessly even in harsh climate conditions, with wide temperature fluctuations

Solutions used:

- InfiLINK 2x2
- InfiMAN 2X2
- InfiLINK XG
- InfiMONITOR monitoring system

Benefits:

- Cutting-edge management system to ensure real-time transfer of information from mining sites to the control center
- High performance links, delivering a large volume of high resolution video streams from anywhere in the sites
- High reliability and throughput even in NLOS conditions, across challenging terrain and any weather conditions
- Cost-effective solutions, with proven scalability to meet future requirements and applications
- Ease of integration with existing systems, able to accommodate new changes in mining production processes

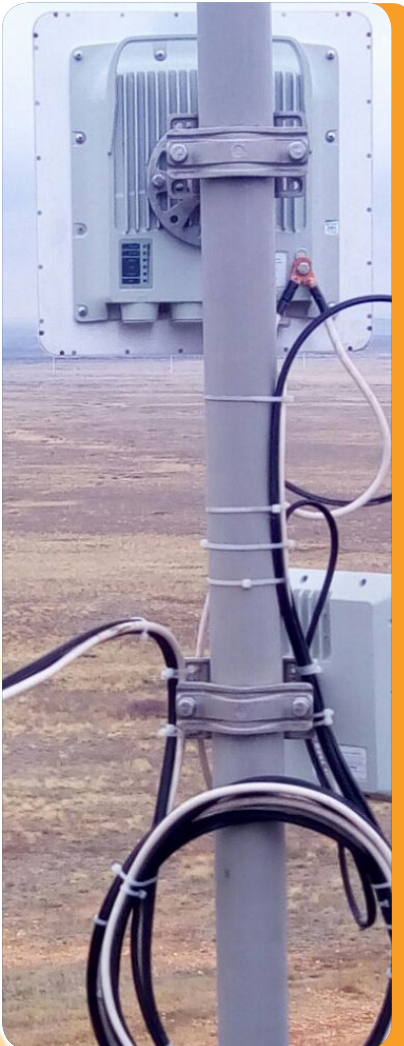## Mission Critical Technology for Kazakhstan's top coal producer

InfiNet deploys a wireless infrastructure to connect 35 remote facilities at 2 major open pit mines for the largest coal producer in Kazakhstan.

Established in 1983, **Shubarkol Komir JSC** is one of Kazakhstan's largest thermal coal producers. A member of the Eurasian Group (ERG), Shubarkol Komir produces over nine million tons of coal per year, supplying around 25% of the domestic fuel needs in Kazakhstan. The company operates mainly in the territories of Centralny and Zapadny open pit coal mines, undertaking coal conversion and quarry mining of building stone, servicing access roads, managing rail transportation and producing and selling water.

As par of a recent strategic review, Shubarkol Komir executives decided to introduce automated production accounting and provide better security and asset management through the deployment of a new video surveillance system across the entire Centralny and Zapadny locations. The legacy IT infrastructure, which was previosuly built based on low-cost wireless solutions, was found to be unreliable and not flexible enough to meet the company's evolving needs. It was simply unable to provide the necessary bandwidth, reliability, functionality and packet performance to support the company's growth. With the main objective of improving data transfers across all its sites and providing dynamic CCTV coverage, Shubarkol Komir decided to deploy a more reliable platform, using the most modern broadband wireless solutions such as InfiNet's.

Shubarkol Kamir approached **Informsvyaz Kazakhstan**, InfiNet's local partner in the region, to design, supply, deploy and commission a future-proofed infrastructure, one which would provide high capacity and which wouls operate seamlessly in the company's challenging environment and climate conditions. The final solution was deployed using the frequency ranges of 5 and 6 GHz, providing the company with much higher reliability than previously experienced, with multiple links operating in both Line-of-Sight (LOS) and Non-Line-Of-Sight (NLOS) conditions.

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Satisfying the customer's requests, InfiNet's record-breaking Point-to-Point solution, the InfiLINK 2x2, was selected to provide data transfer rates of up to 70 Mbps between remote locations. For NLOS conditions across the challenging terrain, the InfiMAN 2x2 Point-to-Multipoint platform were deployed to connect the remote facilities to strategically located base stations. With capacities of up to 35 Mbps and fully functional throughout the -55 to +60 °C temperature range, the solution ensured that all links were fully integrated and stable throughout the mines, with more room to grow in the future as requirements change.

Shubarkol Komir today has a wireless communications network which guarantees un-interrupted operation of two major open mines spread across 35 multipurpose facilities, including convoys, chemical laboratories, motive-power depots, loading points, operator workplaces, gas stations, administrative buildings, warehouses, etc. The added benefit from using InfNet's wireess solutions is the seamless integration of all video streams generated from remote cameras, as well as other applications such as VoIP services, internet access and a corporate information network.

InfiNet's network also provided a data transmission solution for the automated accounting of technological processes: operators at the control centre can now remotely receive information about coal composition and other parameters from the locations of direct production of the mineral, significantly improving the productivity of the entire mining operation.

InfiNet's high-quality wireless technology have ensured the now flawless operation of Shubarkol Komir's network, eliminating the risks often associated with interferences when operating in a unlicensed frequency spectrum, and ultimately protecting the company's valuable assets, whether deolyed centrally or in remote locations.

"Mining enterprises consider the connectivity to remote sites to be critical for ensuring the flawless operation and productivity of their pits, including the most remote ones. We are always ready to implement the latest technologies to improve our productivity and gain access to real time information from our facilities wherever they are located. Because of where we physically operate, deploying a fiber-optic network or even satellite platform is often too expensive and prone to failures due to the harsh climatric conditions we face every day of the year. As a direct result of selecting InfiNet's wireless solutions, coupled with a brand new video surveillance system in all our quarries, we have significantly increased the volume and quality of the data collected from all our sites, making it much easier for our management teams to respond dynamicllay and improve the company's overall productivity. This new platform has also positively affected the organisation of our business processes," said **Argyn Agzamov,** deputy CIO at EurasiaTeleCom LLP ("Eurasian Group", ERG).