

# Dedication Runs Deep

**IWT and Knight Hawk  
Coal partnership  
focuses on productivity,  
asset management,  
and safety.**



In 1998, family-owned Knight Hawk Coal, LLC. was created with the initial focus of surface mining exclusively. In 2006, Knight Hawk opened its first underground mine and began a partnership with Arch Coal. Arch Coal currently holds a 49% interest in the company. Today, Knight Hawk operates a mix of five surface, one underground, and two carbon recovery operations. The operations have grown from a crew of 17 to about 400 and nearly as many contractors. Knight Hawk produces more than five million tons of coal annually.

Despite growth, the company remains family-owned, rooted in the community, and focused on safety and productivity. In 2019, Knight Hawk purchased a Communications and Tracking system from Innovative Wireless Technologies (IWT).



**In an emergency situation, every second counts. *SENTINEL*<sup>™</sup> gave us a system that allowed everyone to communicate efficiently. When we were evaluating C&T systems, it was clear to us that voice was superior to text. It has absolutely proven itself.**

— TOM HASENSTAB,  
Knight Hawk Mine  
Superintendent

The challenge was to provide voice communication to each of the five units. Knight Hawk has miles of infrastructure underground, and efficient operations require information flowing to every aspect of the operation from the surface to the underground, as well as along the four-mile-long overland conveyor.

After a thorough vetting process, Knight Hawk's procurement team chose IWT because of its functionality, performance, support, and total cost of ownership. Knight Hawk liked that the battery RF system had little wiring involved and could be moved efficiently. The simplicity of the system was also appealing because it enhanced the safety and productivity of operations.

In partnership with Knight Hawk, IWT designed a system that allowed full real-time, two-way communication between surface and underground operations. Installation finished ahead of schedule.

The *SENTINEL* system has improved Knight Hawk's efficiency and profitability in a number of ways. In the event of equipment failure or breakdown, maintenance arrives with the right equipment, reducing downtime. Incremental improvements in communication between operators have added up to significant improvements in production. Asset tracking allows for precise and immediate location of equipment.



*SENTINEL* provides tools to allow supervisors the ability to more quickly reply to an inspector's question. The improved communication adds up to significant time savings and real tonnage.

While production has to be a focus of every operator, safety is a cornerstone of Knight Hawk's success. A recent mine injury underscored the value of the *SENTINEL* system. The Knight Hawk team's fast action saved a miner's life, and the ability to communicate in real-time gave the team an important tool in a critical situation.

The IWT system was critical in assisting not just where the incident occurred, but in other areas as the facility responded to the emergency. For example, it could be communicated and confirmed that roads were clear. Information could be shared with the paramedics while they were in route. The paramedics could communicate with the surface and be sure that emergency transport vehicles were positioned properly. In this situation, the paramedics had to call in a helicopter and the *SENTINEL* system helped them make sure that the transport was as efficient as possible. From the time of the incident until the miner was on the helicopter, only 25 to 30 minutes elapsed.

Knight Hawk is unique because the company promotes personal accountability and the freedom and trust for people to make decisions that will benefit the company. The goal is to give as much responsibility to someone shoveling the belt as an executive, and the IWT system enables that to happen.

IWT continues to work with Knight Hawk to fine-tune the network and enhance its features.



**We work in one of the most hazardous environments of any industry. We acknowledge that. But it doesn't give us an excuse not to have the best tools available to protect our people. It's important our industry understands how big an advantage voice presents in emergency situations.**

— BRIAN WALLACE,  
Underground Maintenance  
Superintendent



# The Mining Industry's Most Advanced Communications and Tracking Equipment

Rugged, push-to-talk radios provide crystal-clear voice, text, and tracking — all in one device. The industry's most advanced and accurate tracking can also be achieved with small, battery-powered *SENTINEL* Tracking Beacons or with *SENTINEL* Tracking Tags depending on individual mine scenarios — use one type of device, or all three! Each device has emergency alert capabilities and reports back to dispatch to provide real-time, continuous tracking.



## ***SENTINEL*: IWT Communications & Tracking Solutions**

IWT communications and tracking systems are designed for underground applications. Engineered to be highly reliable and extremely durable, the networks require little maintenance and make work safer and easier. *SENTINEL* significantly outperforms Wi-Fi, leaky feeder, and text-based systems. The reusability, expandability, stronger signal, and low maintenance provide an overall lower cost-of-ownership, making IWT systems the best engineered choice in comms and tracking.



**IWT's *SENTINEL* system delivers the features and benefits that matter most to mine safety and operations:**

### **FEATURES**

- Scalable with software: tracking, text & tracking, voice/text & tracking
- Crystal clear voice; choose from two handset models
- Handsets & tags enable continuous tracking of people and assets
- Battery or line-powered wireless infrastructure
- Up to 2,000 feet or more between infrastructure devices means less infrastructure is required
- MSHA and ATEX approved - Intrinsically Safe

### **BENEFITS**

- Low installation and maintenance costs
- Reusability
- No cabling in the working sections
- Fastest section moves
- Remote troubleshooting
- Easy maintainability
- Seamless integration with other IWT products and services, allowing users to add to the system as needs change



### **DEPLOYMENT SCENARIOS**

*SENTINEL* provides wireless voice, text, tracking, atmospheric monitoring, performance metrics, and much more.

- Coal Mining, including Longwall Moves
- Hard Rock Mining
- Metal, Non-Metal Mining
- Tunnels
- Mine Rescue

