## GET ESSENTIAL UNDERGROUND INFORMATION ON PEOPLE AND MACHINES — IN REAL TIME

Traditionally, sites have used pencil and paper to keep track of where people and machines are located underground. Even if they have used Production Recording technology to get data on the load / haul cycle, they have lacked access to the same information for auxiliary machines.

Cat<sup>®</sup> MineStar<sup>™</sup> Equipment and Personnel Tracking helps solve this challenge, providing positioning capability that allows underground operations to track people and machines.

## **Equipment and Personnel Tracking**

Thanks to our proprietary high-precision underground positioning technology, mines can accurately track personnel and assets to sub-meter accuracy, in real time. Enabled by our tracking infrastructure, it provides site controllers with a view of all miners and the locations of light and heavy vehicles via the mine network.

The solution gives supervisors insights into what the fleet is doing, who is operating which machine, and how they are utilizing their time. It allows sites to reduce dependency on paper administration and replace it with accurate digital recording so they can better understand utilization and make decisions about equipment investments and effectiveness.

Equipment Tracking delivers high-accuracy data recording, consistently providing a detailed level of information on all assets, including data on locations and movements, velocity, payload, cycle times and fuel level, as well as service meter units (SMUs) and time utilization. Supervisors can view scheduled and unscheduled downtime and operational stoppages.

- Provides locations of light and heavy vehicles via a Wi-Fi device.
- Enables simple visualization of underground personnel in real time, providing controllers a zonal view as well as a high-precision perspective of proximity detection.
- Provides operators continuous awareness of their surroundings to sub-meter accuracy, along with the location and status of all personnel and assets.

## Equipment and Personnel Tracking + Production Recording

When Equipment and Personnel Tracking is paired with MineStar Production Recording, it delivers an accurate and automated realtime solution that measures and reports on almost every aspect of the load-haul-dump cycle without requiring any operator input. The result is a boost in productivity and a reduction in the overall operating costs of managed assets: mine, material and machine.

- Visualizes bottlenecks in real time so they can be actively prevented to increase productivity.
- Collects data on material grade, location, delays and proficiency of operators, helping miners enhance data management and streamline operations.
- Helps miners better understand machine usage and overall efficiency of operations.
- Provides flexibility to change assignments and KPIs in real time.
- Allows site managers to review operations and manage areas of critical importance and eliminate paper management of shift.

"The ability to be able to see where everything is within a meter basically — that allows a GPS type tracking capability underground."

— Grant Cunningham, Operations Engagement Architect, Newmont Tanami Operations



For more information, go to *cat.com/minestar* or contact your local dealer.

