

# **PTM** **PULSE** TerraMetrix **RS**

Health, Production and Payload Management Solutions for Rope Shovels



# The Problem

High production shovel operations demand efficient and accurate truck loading.

Poor operator utilization of a shovel has a direct impact on mine production. Truck overloads result in higher maintenance costs, premature tire failure and rejected truck loads. Excess fatigue damage to shovel structures causes an increase in maintenance costs and downtime. These effects result in significant production losses over time.



BMT WBM provides the mining industry with a high level forensic analysis capability. Our substantial on site experience provides for superior maintenance and product support of the Pulse TerraMetrix system.

# The Solution

The PULSE TerraMetrix System for Rope Shovels provides payload, machine health, and production management solutions to optimize shovel productivity.

The PULSE TerraMetrix Management System for Rope Shovels provides mine personnel with the insight needed to maximize operator effectiveness and increase productivity while lowering costs. A suite of sensors gathers real-time data from machine operation which is transferred to a central database and compiled into clear and concise reports.

Accurate pass loads, timing and usage statistics, GPS positioning, material digability and continuous structural health monitoring with event logging can all be used to calculate key performance indicators and assist with mine planning. The on-board systems display a dashboard view showing current fleet status at a glance. The central fleet server can easily be integrated with existing data management systems and automatically distributed reports can be tailored to suit the needs of recipients.



A simple and intuitive operator interface provides pertinent real-time information with no user input required.

# Benefits of PTM Shovel Management

The PULSE TerraMetrix System offers significant benefits to mine production including:

- Accurate real-time indication of dipper and truck payload empowers operators to optimize truck loads and consistently achieve targets with fewer overloads.
- Continuous measurement of wear to structural members and identification of extreme events allows the mine to regulate maintenance intervals and maximize shovel availability.
- Discreet, time stamped classification of shovel states provides a basis for measuring operator efficiency.
- Automated statistical analysis of these metrics with periodic reporting gives management tools to improve operator performance and mine planning.
- Payload information and structural health can be used as an indication of operator effectiveness and digging conditions.
- Optional system enhancements such as operator feedback to prevent dipper stall and condition monitoring of rotating equipment for predictive maintenance.



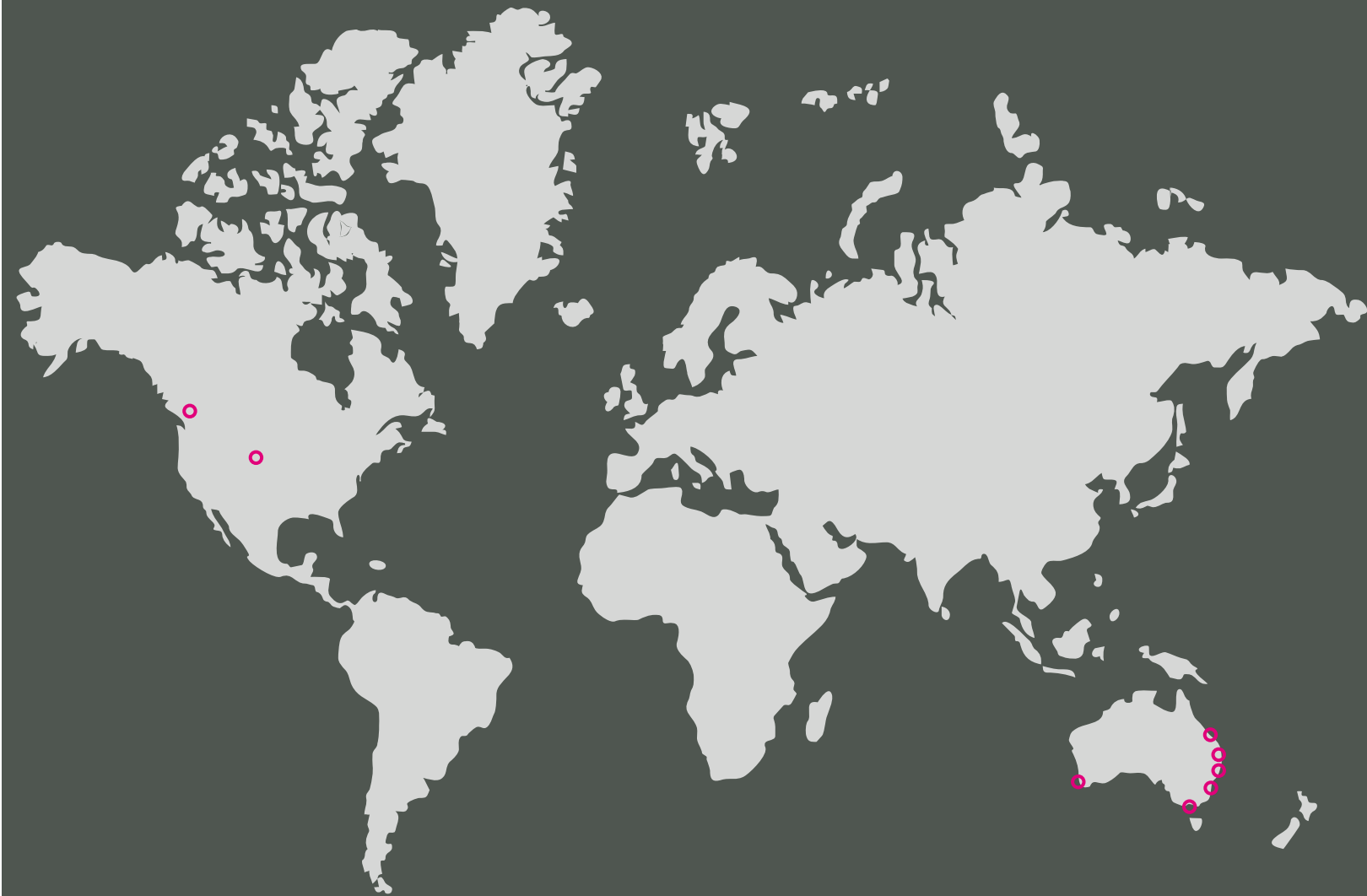
Maintenance, training and production staff can easily access relevant data to identify where production shortfalls arise and where further operator training is required.



Rugged, modular design facilitates maintenance and future upgrades. A modular system design allows for rapid interchange of hardware when required.



Advanced loadcell based sensor technology provides consistent payload monitoring, allowing differential weighing and carryback measurement.



BMT WBM has a proven record in addressing today's engineering and environmental issues.

We aim to continue to enhance our services, capabilities and areas of application to meet the community's future development and environmental protection needs.

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