Proven payload performance
The Problem
Poor utilization of a bucket 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 bucket structures causes an increase in maintenance costs and downtime. These effects result in significant production losses over time.

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.

The Solution
The PULSE TerraMetrix System for Hydraulic machines provides payload, machine health, and production management solutions to optimize productivity and provide mine personnel with the insights needed to maximize operator effectiveness and increase productivity while lowering costs.

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

Key Features
- Accurate pass loads, timing and usage statistics, High-Precision GPS, material digestibility, 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.

Benefits of PTM Excavator Management
The PULSE TerraMetrix System offers significant benefits to mine production, including:

- Accurate real-time indication of bucket and truck payload empowers operators to optimize truck loads and consistently achieve targets with fewer overloads.
- Continuous measurement of structural members and identification of extreme events allows the mine to regulate maintenance intervals and maximize hydraulic excavator availability.
- Discrete, time stamped classification of bucket 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 bucket stall and condition monitoring of rotating equipment for predictive maintenance.

Accurate Scale model design has allowed BMT’s PULSE TerraMetrix team to develop a system that is tested to be accurate, robust, and reading for mining environments.

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

PULSETerraMetrix

Health Monitoring
- Pulse: Monitor the structural health of the bucket with configurable alarming coupled to a smart camera for targeted video recording of events to compliment operator training intervention.

Machine Positioning and Mining to Plan
- Terra: Coupled with HRGPS and direct real-time Lidar-based measurement of bank cross sections, superior mine plan compliance can be achieved.

Payload Optimisation Matrix
- High fidelity payload measurement system supports dipper carryback compensation whilst maintaining unrivaled payload accuracy in all operating conditions.
BMT 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.

Want to learn more about how we can support you?

Greg Heiges (Denver)
Business Development Manager
E: greg.heiges@bmtglobal.com

Charles Constancon (Vancouver)
Director, Critical Infrastructure Americas
E: charles.constancon@bmtglobal.com

Chris Batten (Perth)
Regional Director of Business Development
E: chris.batten@bmtglobal.com

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Perth
Level 4, 20 Parkland Rd
Osborne Park, WA 6017
Tel: +61 (0) 8 6163 4900

Vancouver
401 - 611 Alexander Street
Suite 412
Vancouver V6A 1E1
Tel: +1 604 683 5777

Brisbane
Level 8, 200 Creek Street
Brisbane, Queensland 4000
Tel: +61 (0) 7 3831 6744

Denver
Suite 120, 8200 S. Akron
Street, Centennial
Denver CO 80112
Tel: +1 303 792 9814