A Connected Orebody Knowledge Platform

**Challenge**

**Limited Orebody Knowledge, Limited Optimization Opportunities**

Deposits are continuously getting more challenging. Companies are digging deeper, grade is lower, and production costs are rising. This leaves a thin space for optimization. The further upstream a mining company goes to fix the problem, the greater their return on that investment. If a mine site had bench-scale orebody knowledge, they could squeeze every efficiency out of operations and their deposit. The pressures of competition, cost cutting, and optimizing productivity and throughput are driving a need for better and faster data analysis of a mine site’s geology.

**Solution**

**DataCloud’s MinePortal Software and RHINO Hardware**

A connected orebody knowledge platform that helps mining teams truly know the rock. They will make better, faster production decisions that impact downstream if they are able to access these insights in time to make a difference. Integrating, processing, and analyzing all sources of orebody information extracts insights that will uncover optimization opportunities across the value chain. If such geology data is not sufficient, robust, or accurate enough, an IoT enabled sensor can be easily installed on the drill to deliver unprecedented high-resolution rock mass insights.
How It Works

Holistic Orebody Knowledge Via Browser Log in

MinePortal

Our software connects to a mine’s databases such as, but not limited to, exploration drilling, geo-modeling, MWD, blast design, and the comminution process to effectively integrate orebody knowledge from the pit all the way to the processing plant. The power of cloud computing allows MinePortal to ingest and process information in near real-time while applying our proprietary geostatistical and machine learning algorithms.

RHINO

Our blasthole measurements package is easily installed on production drills to enhance geology data right from the source. Vibration signatures in the drill steel are acquired via IoT enabled sensor devices and wirelessly transmit to an edge device in the cab. Initial processing is performed on the edge device prior to compressing the IoT data and streaming it to the cloud via cellular or WiFi networks to MinePortal for remaining analysis.

Value

Increasing Production While Reducing Unit Costs

The most viable point of investment to increase the productivity of processing facilities is to build, and continually update, high-resolution, real-time orebody knowledge. Using this enhanced understanding of the rock during drill and blast operations will predict and improve grinding performance, and drive value downstream for overall improvement of efficiencies.