

Combating Overbreak and Underbreak with MineRP in One

Eliminating dilution from a mine site can prove to be challenging and very expensive. Mining dilution affects productivity and profitability, and has both long and short term impacts on the value of your asset. Traditional reporting makes it virtually impossible to see where things went wrong.

THE CHALLENGE

Mine planners, surveyors, rock engineers, safety officers and others all deal with the negative outcomes of overbreak and underbreak.

From accurately predicting ore loss and the impact on tonnage flows to understanding the influence of deviations from the plan on safe mining practice, the effect of overbreak and underbreak cannot be overstated.

Conventionally, deviations are reported using tables and graphs that indicate the quantity of overbreak and underbreak for any given operation or area. This method critically lacks any connection to the spatial location of the problem.

Visual, spatial analysis of planned versus actual excavations in both 2D and 3D resolves this issue and provides many other opportunities for improvement.

Overbreak

Relates to the dilution of ore carrying material, which results in unnecessary costs incurred in the removal of the ore as well as issues related to grade and quality.

Underbreak

The result of physical loss of minerals caused by insufficient or incorrect shape, size and location of excavations.

MineRP in One allows miners to:

- Combine all mining technical data into a single, integrated spatial database.
- Identify and evaluate dilution issues through visualization and analysis of integrated mining data in 3D, over the web.
- Rapidly create remedial actions for automatic distribution to appropriate stakeholders.

KEY BENEFITS

Controlling overbreak and underbreak unlocks financial and operational benefits. The continuous visualization of production bookings and survey results against the mine plan allows miners to **visually highlight problem areas** and respond in the shortest time possible. Moreover, repeated issues could prompt preventative action such as design alterations, safety precautions, training suggestions and others.

Accurately managing dilution and dilution related problems saves time and money by:

- Preventing unnecessary costs incurred in the removal of ore
- Reducing post-excavation mixing and blending requirements
- Increasing accuracy of quality and quantity predictions, thereby improving downstream processes such as plant set-up parameters and related factors.

In addition to these business benefits the implementation of MineRP in One offers a variety of productivity and quality improvements to the mining specialist. These include:

- Increased collaboration between various mining disciplines through integrating specialist mining technical systems.
- Single source of reporting and analysis of integrated mining data from the centralized spatial-data store.
- Fully auditable and transparent history of interactions with the ore body, without the need to access complicated and expensive specialist mining systems.



THE SOLUTION



SpatialAnalyzer is web based, reads spatial and attribute datasets from various databases and file formats and renders this spatial data in a full 3D environment.



MineRP SpatialDash is all about making better and quicker business decisions by visually relating and analyzing mining technical information from a variety of disciplines.



SpatialDash, a browser-based application, allows users to perform in-depth analysis on spatial and relational data consolidated into one single two-dimensional, fully interactive view.

WANT TO KNOW MORE?

Visit our website at www.minerp.com to find out more about MineRP in One and other mining solutions