CASE STUDY

Eastern Europe gold mine generates $294,000 additional value in one blast

Commodity	Ore Grades	Geology	Powder Factor	Location
Gold	1.0 g/t**	Structured	0.84 kg/m^3	Eastern Europe

This operation is one of the top producing open-pit gold mines in Eastern Europe.

- The mineralisation is structural
- Ore shots are blasted in 7.5 m benches, which are then mined in a single pass

Challenges

Substantial movement of ore was not monitored or accounted for

- Misclassification of ore (i.e. high grade ore is stockpiled as low grade or low grade ore is sent to the mill as high grade)
- Ore loss, with gold being sent to the waste pile
- Dilution, with tonnes of waste being treated as ore

Solution

BMM System accurately translates post-blast dig lines

- Blast movement monitors (BMMs) are installed in monitoring holes throughout the shot
- Installation and detection as per site standard operating procedures
- BMM Explorer software calculates new dig lines, and areas of ore loss and dilution that would have occurred without monitoring

Results

Less dilution, less misclassification and more ore US$294,000 profit from one blast

Significant movement occurs within all blasts. Variation of ±50% from the mean horizontal movement is common, and occurs at this mine. In this blast:

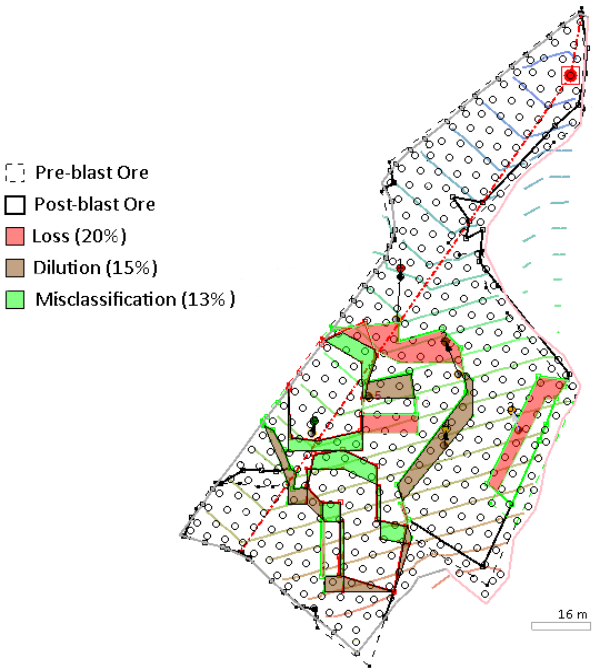
- Measured horizontal movement ranged from 3.5 m to 15 m (11 to 48 ft) and vertical movement of up to 2.4 m (8 ft)

As a result of accurately accounting for blast movement, this mine:

- Reduced dilution—7,200* tonnes of waste was diverted from the mill, avoiding 15% dilution
- Prevented misclassification—6,200 tonnes (13%) of ore would have been misclassified
- Maximised ore yield—**235 oz. of gold**—additional value of **US$294,000**** (avoided 20% ore loss)

* Numbers are rounded
** Average grade of ore polygons
*** Calculated at a gold price of US$1,250/oz.

Accounting for blast movement added US$294,000 profit—from one blast



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