Asanko’s Nkran gold mine achieves 100% reconciliation through blast movement monitoring

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Ore Grade</th>
<th>Geology</th>
<th>Powder Factor</th>
<th>Flitches</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold</td>
<td>High*</td>
<td>Structural</td>
<td>0.6 kg/m³</td>
<td>2</td>
<td>West Africa</td>
</tr>
</tbody>
</table>

Asanko Gold’s Nkran mine, located in Ghana, is an open pit operation located in the Kumasi Basin.

- Mineralisation is shear-hosted in a sedimentary basin with Granitic intrusions
- Blasts are fired in six-metre (20 ft) benches and mined in two flitches (3 m)
- A proven reserve of 4.4 Mt at 1.85 g/t gold, the site contains high grade ores (up to 2.0 g/t)

### Challenges

Ore loss and dilution negatively impacted mill feed ore grade and ounces

- Ounces produced vs reserve model reconciliation was 18% below target
- Mill feed ore grade was 10% below reserve model expectation
- Blast movement, causing ore loss and dilution, was considered to be contributing factor

### Solution

BMM System accurately translated post-blast dig lines

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

Accounting for blast movement added US$237,000 of value—in one blast

### Results

100% reconciliation for ore grade and ounces produced

Nkran mine has achieved significant reserve model reconciliation improvements:

- Mill feed ore grade reconciliation variance of 102% (vs 88% over the previous period)
- Ounces produced variance of 100% (vs 96%)

Following is an example blast from Nkran that quantifies blast movement and additional value.

- Measured horizontal blast movement ranged from 1.5 to 11.6 m (5 to 38 ft) and vertical movement was up to 9.8 m (32 ft)

In this blast, the mine site added US$237,000 of value.

- Maximized ore yield—recovered 2,800 ** tonnes of additional ore at a value of US$137,000***
- Reduced dilution—diverted 5,500 tonnes of waste from the mill, avoiding US$100,000**** of milling costs

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*Average grade of ore polygons; **Numbers are rounded; ***Calculated at a gold price of US$1,250/oz.; ****Calculated from mill processing costs of US$18 per tonne