

Maximising profits with fragmentation analysis

Challenge

Variability in blast fragmentation significantly affects downstream processes such as mining, crushing and milling. This case study focuses on two mines that recognised the need to invest in their drill and blast operations to improve their rock fragmentation. The mines identified these key objectives:

- Optimise resources, technologies and processes.
- Evaluate blast design to improve fragmentation from pit to plant.
- Improve the shape of the muckpile.
- Improve SAG milling energy efficiency.
- Increase equipment utilisation efficiency.
- Increase SAG mill throughput.

Solution

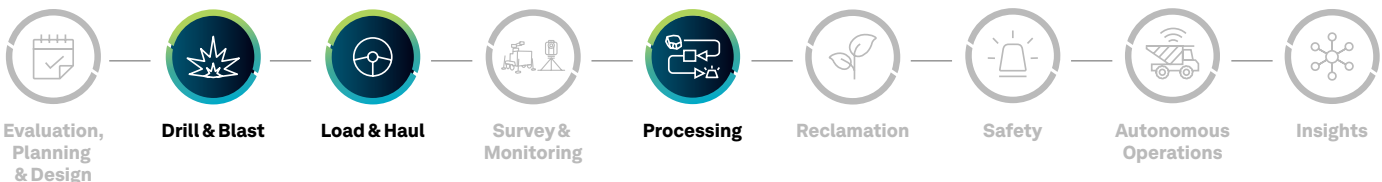
The operations implemented the ShovelCam, TruckCam and ConveyorCam of Hexagon Split to measure the rock fragmentation from post-blast product to the SAG mill feed. Blast designs were adjusted to measure the changes in rock fragmentation, equipment efficiency, mill efficiency and throughput. The implementation led to the following improvements:

- 50% increase in material less than 1 inch (25.4 mm)
- 20% increase in mining equipment productivity
- 13% reduction in SAG mill-specific energy consumption
- 12% increase in SAG mill throughput
- US\$7.5 million per month increase in revenue

Integrated life-of-mine solutions

Having one technology partner for the life of your mine is a superpower in the face of modern mining challenges. Our integrated, data-driven solutions help eliminate the need for disparate products across workflows within mine planning, fleet management, monitoring, safety and beyond. With Hexagon, you gain a trusted partner backed by over 50 years of expertise who remains focussed on an autonomous future both above and underground.

This offering includes solutions to support:



Connect with us

hexagon.com/mining | info.min@hexagon.com