

# CASE STUDY

## MINE UTILIZES BLASTWEB™ TO INITIATE MINE-WIDE CENTRAL BLASTING

### BACKGROUND

#### LARGE GOLD MINE WITH DEEP ORE BODY

The Black Fox Complex is in the well-established Timmins Gold Mining Camp in North Eastern Ontario, Canada. It is positioned approximately 10 kilometres East of the town of Matheson, 85 kilometres East of the city of Timmins, adjacent to Provincial Highway 101.

The Black Fox Mine is a gold mine which had two operations running at one time, open pit and underground. Currently the site is only mining underground due to the depth of the ore body, accessing the underground workings by a portal driven at the bottom of the open pit.

### TECHNOLOGY APPLIED

#### A SAFE, CENTRALIZED BLASTING SYSTEM TO INITIATE LONG HOLE BLASTS AS WELL AS DRIFT ROUNDS WITH PYROTECHNICS

Early in 2018 the mine approached Dyno Nobel and inquired if they had a safe centralized blasting system.

Dyno Nobel presented the mine with a proposal to switch their existing electric detonator based system to the BlastWeb system with capabilities of initiating multiple Dyno Nobel electronic initiation products.

The mine was already using the DigiShot Plus electronic detonator to blast all the long hole production rounds. When the mine was shown that BlastWeb can centrally blast the long hole blasts as well and initiate drift rounds with the use of pyrotechnics they were very interested moving forward to a BlastWeb based solution.



### PROJECT GOALS

#### REDUCE OVERTIME HOURS NEEDED FOR FOR BLAST INITIATION

The mine has seen significant growth in recent years which led them to the point of upgrading the central blasting method. Before the switch to BlastWeb, the mine would have all the miners drive up to surface and tag out and have two main designated blasters return down to the portal where they have the high voltage central blast location. This central blast location was situated outside the portal which exposed the miners to all the types of adverse weather conditions.

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The most significant implication to their historical firing method was the overtime paid to the two miners and a supervisor who had to remain on site to initiate the blasts every day. Due to the system's inefficiency it would cost the mine an extra 2 hours a day having workers on overtime and initiating the blast from outside the portal away from the main shifters wicket. This overtime equates to an approximate total cost of \$100,000 per annum for the 3 workers required to stay on after regular hours twice a day (at the end of each 10-hour shift). With the switch to BlastWeb, the \$100,000 saving was effective right away as no overtime needed to be paid to workers staying behind to initiate any blasts.

## VALUE ADDED

### BLASTWEB SYSTEM SAVES TIME, IMPROVES SAFETY AND AVOIDS COSTS

The BlastWeb system was installed at the mine site, with 2 permanent Blast Control Units (BCUs) and 1 portable BCU for secondary blasting during shift for oversize rock. The method of communication between the Surface Blast Controller (SBC) and the BCUs underground is via their fiber optic based Ethernet network. Each BCU has a static IP address and unique ID which is used by the SBC to identify and communicate to each of the BCUs.

The mine has already seen the benefits of utilizing the BlastWeb initiating DriftShot Starters such as:

#### Saving Time:

- No lost time after end of shift
- Quicker clearing time for gasses
- More production time

#### Safety:

- Workers are no longer have to be exposed to outdoor elements and the safety hazards of any misfired rounds

#### Costs:

- No overtime payment required at the end of each shift:  
Cost savings of +-\$100,000 per year

The mine is extremely pleased with the BlastWeb setup and rapid, seamless deployment of the system, converting the mine with ease without any safety concerns, lost time or unforeseen costs.

The mine has also acknowledged the troubleshooting benefits and to date no misfires have been encountered compared to the original central firing system where they

