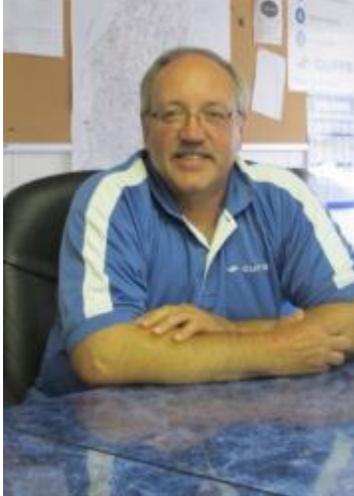


Having a blast at United Taconite

By Jean Cole
HTF Editor



EVELETH – The “blasting guy” at United Taconite (UTAC) in Eveleth gave me a little primer in mine explosives. Mike Indihar, Drilling and Blasting Mine Engineer, has been blasting rock for years.

It’s a very technical and dangerous job, and he tried to simplify it for this layman. With UTAC in such close proximity to the communities that surround it, extra precautions are necessary.

A few of the main things to be considered: 1. Geology - understanding the qualities of the rock you’re blasting, which determines the spacing between holes, the amount of explosives used, and the timing of the sequence. 2. Seismology – there are 130 seismographs in place in the communities of Eveleth, Virginia, Midway, Ann’s Acres and Ridgewood. 3. GPS marking of the drill holes.

At UTAC, the holes are drilled 40-50 feet deep. “We used to use 16” drill bits that used 3500 pounds of explosive, but now with new technology we can use 12” bits with only 1600 pounds of explosive,” said Indihar. “The blasts are more efficient and less explosive.”



The mining company has three large drills, which cost about \$4 million each. A drill bit, which costs just under \$5000, lasts for 2500 feet of drilling. They drill 350 feet per 8 hour shift.

The explosives they use feature a “new gas emulsion, it’s thick and viscous,” said Indihar. “It shoots nice and clean.” Each hole has an electronic blasting cap with incredibly accurate timing.

Generally, when they prepare a blast, they drill 350-550 holes per pattern and there are 23 to 35 feet between holes. The explosions are timed 25 milliseconds apart between holes and 142 milliseconds between rows.



A blast may sometimes require the closing of Hwy. 53 for a short time. On those occasions, several steps must be taken beforehand. The State Highway Patrol has to be notified and able to be on hand. The Midway dispatcher and Virginia Fire Department are notified. Taconite Aviation is scheduled so they

can fly around to make sure there are no people anywhere in the blast circle. Fifteen minutes before blast time, area trails are closed with guards in place. Five minutes before the blast, they close the highway. The plane must confirm there is no one in the area. Then the blast can take place.

They verify that no fly rock has landed on the highway, and it is reopened.

“Blasting used to be more of an art,” said Indihar. “But now, it’s very scientific and measurable. We’re so close to our community that it must be safe and consistent.”



He said they do sometimes get complaints, which they always respond to and take seriously. “We try to be a good neighbor,” he said.

Three, two, one, FIRE!



Mine blast at UTAC in Eveleth

Photos submitted