

## **Drill Shop Audio Tour**

### **Chapter 9, Stop 8**

### **2:13**

The ability of the drillers underground to keep pace with their contract hinged on the men in the drill shop. It was their responsibility to keep the drill bits sharpened. The iron ore (known as Bessemer grade hematite) has a rock hardness of 6 on the Mohs scale. The banded jasper, which is also found near the iron ore formations, has a hardness of 6.5-7 on the same scale. The Mohs scale measures the hardness of rocks and minerals with the soft rocks such as sandstone having a low number and hard rocks such as diamonds having a high number. The scale goes from 1 to 10, ten being the hardest rock. So ore and jasper are hard rocks, not as high as a diamond, but definitely harder than most other rocks including gypsum, copper, and greenstone. This is why the drill bits needed to be sharpened so often.

There were actually two types of drills used in the mine. The common one was for drilling the holes in the rock, so it could be blasted. These drills used a carbide drill bit. After it became dull, it needed to be sharpened in the Drill Shop. There was a drill sharpening location underground, but that was for quick alterations to the bits. After you finish listening to this audio chapter, you can watch the short video, as it explains the sharpening process.

The other drill used in the mine was a diamond tipped core drill. This drill had an open, circular bit (it looked like a giant ring) that held small diamonds. The bit spun around and cut the rock, thus creating a core sample of the rock. The mining engineers could analyze the core samples, so they could determine where the various ore deposits laid. Core sampling is still conducted by mining companies, as it gives them a snapshot of the rock hundreds of feet beneath the surface.

As you look around on the surface you will notice all the buildings relating to the underground are all in close proximity to the No 8 shaft. This was helpful, as the workers did not need to travel far from the shaft to continue the mining operation. Behind the Drill Shop are the tracks leading to the crusher house. After ore came to the surface, it was dumped in the Larry Cars and hauled past the drill shop to the crusher house.