Gene's Rock Stories

von Gene Mueller, The Gem Shop, Cedarburg, Wisconsin, USA

Teil 1: Morrisonite Jasper
Story 9: Abrasive Rock

After I finished the road down to the south end of the Christine Marie claim, I had to decide how to proceed with the mining of the Jasper. It had previously only been mined by hand and there were numerous small hand digs or depressions in the hillside. The small hand digs appeared to be random and did not seem to show any concentration clues as to the distribution of the Jasper.

There was one hole that was slightly larger than most, with an old boot in it (I don't know how anyone could have gotten out of this area without one of their boots). I decided to work towards this area. From our road to the base of the cliffs is 75 yards or more, and the distance is all rock slopes. The surface of the slopes is an unusual mix of very large and small rocks. One in particular was an estimated 10 tons and kind of stood up on its end like someone put it there. If I was going to mine the 'old boot dig' it would probably have to go.

This picture shows the southern half of the Christine Marie claim on the left and most of the Amy Ellen claim.
Gene Mueller photo.

The jasper on the Christine Marie claim is in a steep rock slope about halfway down the canyon from the rim above. The host rock is labeled a welded tuff, and extends from the slope of the hill up past the cliff above to the pinnacle on the Amy Ellen claim; a distance of around 200 yards. The jasper formed within cracks in the tuff before it was in its present position. The entire hillside is a mixture of very large rocks (2-10 tons) and millions of small ones (1/2-5 pounds).

This rock is very abrasive. Because of this abrasiveness the rocks do not fall easily but instead cling to each other, even if they are not otherwise physically connected. This quality contributes to the steepness of the area by not allowing rocks to erode downhill as fast as other types of deposits. To illustrate this, it is possible to take two flat pieces of this welded tuff, place one on top of the other and tilt the pair of rocks almost 80 degrees before the top rock will fall off. Try this with most other rocks and the top rock will start to slide off with a tilt of only a little over 45 degrees.

The jasper in this deposit is scarce, but very good. A lot of rock must be carefully moved to collect a small amount of jasper. The abrasiveness of the rock takes a toll on your gear, as well. There were many days where a new pair of gloves in the morning would have one or two holes in the fingers by late afternoon. Using duct tape on your fingers was a common practice we used to get more use out of a pair of gloves, or a little less wear on your fingers. I learned to buy a new pair of boots before I came out to the mine because a pair of boots lasts about a month working in this rock. I always use steel toed boots to protect my feet. After a month of mining Morrisonite, the leather would be worn off the toes of the boots revealing the scratched, shiny metal underneath.

One very good thing about working in this rock was that it always warned you when it was about to fall. Unlike other rock slopes which can give way with no warning, this rock will talk to you before it falls. The abrasiveness of the rock holds the pieces together until gravity becomes too much, and then you will start to hear small sounds. At first, soft sounding “ticks” and small creaks can be heard once in a while, and then more frequently. Through experience, you come to understand when to get out of the hole you are working in. You can crawl out and either wait for the rock to cave in on its own or start the rockslide yourself, thus making it safe to work again.

To be continued …

These pictures show two separate rocks; with one placed on top of the other, then tilted almost 80° from vertical without the top one falling off.

Gene Mueller / The Gem Shop collection and photo.