

**U.S. Silica Mine, Montpelier, Virginia August 10, 2019 Trip Report** by Dave Lines, Photos by Rich Simcsak, Mark Davis and Thomas Hale

Over 100 pictures from this trip can be seen online thanks to Thomas Hale of the Virginia Mineral Project

<https://drive.google.com/drive/folders/12I4NFteuif93ia3SxM-iU5UI3yZLB98b>



It is a rare day in August when it is cool and cloudy, yet that was exactly the weather we enjoyed during the Field Trip set up by the Richmond Gem and Mineral Society (RGMS) to the US Silica Mine near Montpelier in Hanover County, Virginia.

About 22 members participated including at least four (4) --- Rich, Tim S., Lorna S. and Dave --- who were members of both RGMS and the Southern Maryland Rock and Mineral Club. We met at 8:00 a.m. at the Office where we all signed waivers and were shown a safety presentation on a wall mounted large HD screen. Although without a sound track, the pictures quickly reviewed the safety requirements for the mine and familiarized everyone with the layout of the facilities. Full personal safety gear (hardhat, steel toed footwear and safety glasses) was required at all times with vehicle wheel chocks (as well as engaging the vehicle emergency parking brakes) placed around one wheel at each stop.



The Mine Safety Manager, who was our Host for the trip, asked that we carpool in higher clearance vehicles to allow us to proceed across rougher areas and to reduce the total number of vehicles. Forming a caravan, we followed the Safety Manager as he led us into the open pit mine.

Since it had been just over five (5) years since we had been in this mine, I was very interested in any changes that had taken place. The area on the left side (as we entered the mine) had been deepened and widened considerably while the area on the right side had been “cleaned up” significantly by removing the various piles of waste rock and widening the lower level.

Our first stop was on the right side of the mine at the traditional location (beyond the rock crusher at the foot of the long conveyer) to find gray and/or silver flash moonstone (andesine) as well as bronzeite (enstatite). Gray and silver flash moonstone is an exceptional lapidary material that, when polished, has a very strong schiller of silver or gray or even black. Bronzeite when polished has a more subtle internal copper colored flash that looks like bits of “copper colored foil” down inside.

We were not disappointed. All the rock in this area was well washed off from years of rain and easy to identify. Excellent gray flash moonstone was everywhere on and in the surface of the mine floor. We just had to use a rock hammer to pull it out and put it in a bucket. It was great. Abundant and of excellent quality.

And along the edges of the berm, the pieces were even larger. Eventually Tom Leary, who has a knack for prospecting, found an area where there was a great deal of bronzeite. He also found a significant amount of massive rutile (titanium dioxide  $TiO_2$ ) that was reddish colored and very heavy. Additionally, he found some massive ilmenite ( $FeTiO_3$ ) that was black, heavy and had a metallic luster. At about 9:30 am, we (led by Pete McCrery) moved to a new location near the road above where we had just been.

It turned out that Pete was searching for bronzeite but could find none. When I mentioned that we had found a good deal of it where we just had been, Pete wanted to return there. After about 30 minutes here, we headed to another area of the quarry where our Host (the Safety Manager) said there were garnets. He led us to the far left side of the quarry on the second level down from the top. Sure enough, we found almandine garnets embedded in what I think is black, crumbly, biotite mica. The garnet crystals were not very pretty, but they ranged from marble sized to as large as tennis balls.

Pamm Bryant said they could be polished. Everyone picked up a few. A few folks found some white flash moonstone in this general area, although the pieces were very small. Then it was decided to return to the gray flash moonstone/bronzeite area since there was plenty of material left and some people had not collected any bronzeite yet.

We arrived back at the gray flash moonstone area at about 10:30 am and stayed about an hour. Pete was able to find some very nice pieces of bronzeite. Several people found another area that contained both excellent quality bronzeite and gray flash moonstone. Some of the collected specimens that I saw had half inch wide bands of reddish colored rutile through the gray flash moonstone --- it was very striking material. Rich and I collected a large amount of gray flash moonstone as well as a good bit of bronzeite. In fact, we found some of the largest sized bronzeite that I have ever seen here --- large enough to make some bronzeite spheres.

[An interesting side note: I met a young man, Thomas Hale, who was working on something he named the "Virginia Mineral Project". Basically, as I understand, he was going to re-do and update the Virginia DMME (Department of Mines, Minerals and Energy) list of minerals. Additionally, he wants to record the stories of where and how the minerals were found as well as how they were used. He plans to work with all the local Virginia rock and mineral clubs. He intends to photograph Virginia mineral specimens from both private and public collections with the goal of publishing a book which will include the stories of how they were collected. By so doing, he is working toward his Masters and PhD degrees. This is an immense project. He is currently working out in Blacksburg and expressed interest in going on some of our field trips for his research. You may contact Mr. Thomas Hale at "virginiamineralproject@gmail.com" for volunteer opportunities.]

At about 11:30 a.m., we took a field trip group photo (of those still remaining) and then headed back to the Office. People were very happy with their finds. Everyone expressed that they had had a productive morning and thanked the Quarry Rep for taking his time to host us. This was an excellent field trip and a great reason to consider joining one or more other rock clubs in our region. You will be glad you did.

