

## “The Lucky Dozen” by Dave Lines



7:00 am on Saturday morning (July 16, 2022) and I was not the first to arrive --- no surprise --- Rich was already parked in front of the office of the US Silica Mine at Montpelier, Virginia. The twelve (12) of us (Tim S., Lorna and Francesca, Rich, Greta, Joe and Paula, Ralph B., Pam and Joyce, Sam, and I) had all signed up for this field trip and were supposed to arrive by or before 0730 so we could take maximum advantage of the coolest part of the day. The quarry boss had previously agreed (perhaps a bit reluctantly) to our July field trip (“It is always hotter than Hades down in the pit in July, but I’ll do it if you want”). Well, there is an old saying: “There is a silver lining in every cloud.” But I am getting ahead of myself.



Polished spheres from material found previously at US Silica

By 0725, we had everyone there who had signed up --- super! I had put a “sampler flat” on my truck tailgate of a variety of specimens that had been found there in the past in hopes that it would help others find similar ones today. I also brought along a couple of polished spheres --- one of andesine (silver flash moonstone) and one of enstatite (bronzeite) --- to show what could be made from the material we were looking for.

The Mine Boss really liked both spheres --- the silver flash moonstone looked particularly bright in the outdoor early light and the multiple internal flashes that looked like pieces of brass or copper foil inside the bronzeite were spectacular. He was particularly pleased when Ralph gave him a very nice and well-polished cabochon of the silver flash moonstone for their display cabinet.



A Safety Briefing by the mine boss followed in parking lot. Wear safety gear in the mine at all times --- safety glasses, steel toed footwear, hardhat, long pants, gloves --- and remember to set the parking brake on your vehicle each time you park it. He recounted the time when someone on a field trip left their vehicle running and in neutral and the car rolled into a pond. Not good. Stay away from the highwalls and on the outside of the safety berms. He also explained that much of the mine floor was covered with a 5-year stockpile of large boulders of “albite” (the primary material they mined, crushed and ball-milled into sand for glass production). Then we took a group picture and formed a caravan of seven vehicles following the Mine Boss down into the 40 plus acre (my guess) open pit mine.



After a long straight descent into the mine on the road that was parallel to the conveyor, we turned right at the crusher to our first collecting spot. There was plenty of excellent material on the surface --- silver and black flash andesine and bronzite --- and for those with sharp eyes --- great specimens of other minerals including rutile ( $\text{TiO}_2$ ) and ilmenite ( $\text{TiFeO}_3$ ).



6 pound chunk of "iridescent ilmenite (a titanium ore that in this case is iridescent)

Tim S., in particular, collected some really nice pieces of bronzite and some great specimens of ilmenite. Several of our group who had never collected at this mine spent some extra time with the mine boss getting pointers about what they had found and where to find more of it. He very patiently answered many questions and made us all feel most welcome. We spent about 2 hours there.

Near the end of that stop, the mine boss drove me around the mine to determine where we should go next. We saw several promising locations for collecting but the road was either too rough or too muddy for some of our vehicles. We settled for two locations that had the best access for our group. Regarding the stockpiled albite boulders, I estimate it covered 80% of the quarry floor.



Our next collecting location was on a higher bench in the mine which had rather solid "float" garnets ranging in size from peas to golf balls. A few were gemmy, but most were formed in a matrix of black rock (either very compressed biotite mica or another grainy black rock). The most gemmy garnets had formed in white feldspar (or albite). I saw one garnet that Francesca collected that was well formed in the typical dodecahedral in shape.



Large chunk of silver flash moonstone

We also found nice specimens of silver flash moonstone and a few pieces of white flash moonstone that were otherwise translucent. Some folks found more ilmenite including some that showed iridescence (rainbow colors). We also found a good bit of very solid, massive blue quartz. Some of it was in the form of relatively narrow bands of blue quartz in albite and one large very homogenous chunk which was in the quarry floor that proved too tough to easily extract with our tools within the time remaining. Rich also found a promising two-inch-thick vein of clear, lightly smoky colored quartz embedded in clay, but he decided to abandon after following it for a while without any signs of crystals.



Great yard rock full of garnets

For the last half hour, we caravanned down, across the mine and up to another upper bench that contained a collecting “odddity” of large, but very weathered, garnets. We all spread out concentrating on the areas that had been well washed by the spring rains. We saw lots --- 100’s --- of garnets, but most crumbled when squeezed or dropped. The ditches along the road edges seemed to contain the best, most solid ones. I found one the size of a lemon and gave it to Sam. At the very end, I found a very showy “yard rock” about 18” x 10” x 8” that had multiple golf ball sized solid garnets embedded in a solid black matrix. It is now a great addition to the border of this rockhound’s backyard flower bed.

As agreed before the trip started, we sounded the truck horn to leave at 11:30 am and we were all out of the mine and back at the office before noon. It had been another excellent trip. Everyone had found and collected some very good specimens, including many with outstanding lapidary potential.

Interestingly, the weather for our trip was cooler than a normal mid-July 95 degree day due to two factors --- first, a front that had gone through the previous night. And second, at about 10:00 am when we started our move to the second collecting location, a dark gray, rather ominous, cloud began to develop to the north --- the sky looked like heavy rain which was confirmed by the radar on our cell phones. We kept our eye on it. The hazy sunshine grew *less* sunny --- and *more* cloudy. In fact, it became totally overcast --- but it never rained. (Thank you, Big Guy, in the sky!) Instead, we remained “in the shade” with the temperature hovering around 75 almost to the very last at 11:30 when the sun returned. Ah-h-h --- our “silver lining” --- the shade from the clouds! Indeed --- considering the recent terribly hot weather, we were a “Lucky Dozen” rockhounds!