

**HUNTING THE BLUES: AQUAMARINES ON MT. ANTERO;
WITH A COMMENTARY BY ZEBULON M. PIKE**

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18th December 1806, Thursday—marched and crossed the mountain which lay south-west of us...on entering a gap in the next mountain [current Trout Creek Pass on US 24/285 east of Buena Vista] came past an excellent spring which formed a fine creek [Trout Creek], which we followed through narrows in the mountains for about six miles [Pike would have then seen the high mountains of the Sawatch Range](from the Journals of Zebulon Pike).

Mt. Antero/Mt. White is one of the more spectacular mineral collecting sites in Colorado, and in fact, in the entire U.S. Collectors, both amateurs and professionals, have been chasing beryllium minerals, but especially aquamarines, for decades. In doing so, they had to appreciate the magnificent scenery associated with the mountain (Fig. 1).

In August 08 I made my twice yearly trip to the collecting sites and in doing so decided to read the Journals of Zebulon Pike both as a prelude to understanding early explorers and as a guide to the Arkansas River Valley.

The route most collectors use to reach the high country from Buena Vista is to travel west on CC 162 to the Baldwin Gulch Road (9420'), the major trailhead for west Mt. Antero (the hiking purists take this route for about 7 miles to the Antero parking area and then bushwhack up to the summit to an elevation of 14269'). However, I chose not to hike but to travel in a 4-wheel drive vehicle to the parking area at the 13,700' level on the southwest flank of Mt. Antero. At this elevation virtually no person (I encountered collectors from Colorado Springs, Pueblo, Grand Junction, and Denver) could be seen bounding across the rocks at a high speed; oxygen is scarce. For the rest of the day, until the weather moved in, the collectors hunted for aquamarines, phenakites, common beryl, fluorites, and smoky quartz, in both original pockets and as float. Most of the success came from isolated specimens occurring as float (Fig. 2).

18th December 1806, Thursday—The doctor and myself went on to make discoveries and in about four miles march struck (what we supposed to be Red river) which here was about 25 yards wide, ran with great rapidity and was full of rocks [this was actually the Arkansas River near current Buena Vista where Pike would have had a great view of Mt. Antero] (from the journals of Zebulon Pike).

The Baldwin Creek Road is often a challenge, even in the best of weather. On this particular day a weather system moved in rather rapidly and caught many collectors far from the campground or their vehicle.

I am an early riser when a trip to the high mountains is imminent and was on the mountain shortly after sunrise. My initial location for prospecting was on the east side of the rock pile near the parking area. I immediately located a terminated smoky quartz

crystal. After moving on to the main prospecting localities, I was able to locate a significant number of aquamarine crystal fragments occurring as float. This was a pleasant surprise to me as last year my take of crystals was rather small; one to be exact! After gathering the loose crystals I moved south over to Mt. White where decent crystals of common beryl, a small phenakite, and tiny, but terminated, quartz crystals were located. Never one to turn down getting on top of a mountain, I took a stroll to the summit of Mt. White (13667') and then walked across the valley for a more strenuous hike up "North Carbonate" Mountain (Fig. 3, 13870'). As the clouds begin to roll in I decided that prospecting was completed for the day and headed down the mountain before the hail and heavy rain arrived.

21st December 1806, Sunday—The doctor and Baroney marched [down the Arkansas River toward Salida]...Myself and the two men who accompanied me (Mountjoy and Miller) ascended 12 miles and camped on the north side [between Fisher and Riverside with the peaks of the Sawatch range in full view] (from the journals of Zebulon Pike).

Mt. Antero (named after the Ute Chief Antero) and Mt. White (no reference in GNIS) are located in the Sawatch Range south of Buena Vista and east of Nathrop, Colorado and provide for a stunning view from the Arkansas River Valley. The Valley is at an approximate elevation of ~7600' while Mt. Antero reaches 14269', a topographic relief of 6669'. The Sawatch Range is a large Laramide (refers to a crustal shortening, compressional, mountain building event in the late Cretaceous and early Tertiary, ~72-~50 my) anticlinal structure that at one time included the southern part of the Mosquito Range east across the Arkansas River. During the late Tertiary, a crustal extension event (stretching) culminated in a series of block faulted mountains and basins in central Colorado. The major topographic and structural feature in Colorado is the Rio Grande Rift Zone that trends from near El Paso, TX to near Kremmling, Colorado. The Rio Grande River in New Mexico and Colorado, and the Upper Arkansas and Blue rivers in Colorado all flow in grabens created in the fault system. A graben is a down-dropped valley created by parallel faults on either side of the valley. The rift system near Mt. Antero effectively split the Sawatch Anticline into two segments, the Sawatch and the Mosquito, separated by the Arkansas River. This, and later, faulting helped create the spectacular topographic relief between the river valley and the mountain—Antero, and other mountains, simply seem to rise straight up out of the valley.

22nd December 1806 Monday—Marched up 13 miles, to a large point of the mountain from whence we had a view at least 35 miles to where the river entered the mountains [near Twin Lakes with a view up river to Tennessee Pass] (from the journals of Zebulon Pike).

The geology of Mt. Antero/Mt. White has been described in numerous publications, the most comprehensive being Mark Jacobson's book entitled *Antero Aquamarines* (1993). In general, Mt. Antero/Mt. White is underlain by a rock unit termed the Mt. Antero Granite. McIntosh and Chapin have assigned a date of 29.6 million years to the granite, or mid-Oligocene in age. Sharp (1976) described the granite as *chiefly pinkish-orange, medium grained;... youngest of the plutons (intrusive igneous rocks) in the vicinity of Mt.*

(crystal lined cavities often containing unusual minerals) *are common and are often filled with...beryl* (including aquamarine), *phenakite, and smoky quartz*. It is from these miarolitic cavities, or “pockets”, that come the fantastic “matrix” crystals such as the specimen Steve Brancato collected from Diane’s Pocket in 2004. The specimen, now at the Denver Museum of Nature and Science, measures an astonishing 37” x 25”.

23^d December 1806 Tuesday—Marched early...until sometime in the night...our clothing was frozen stiff, and we ourselves were considerably benumbed [Pike camped again near Riverside] (from the journals of Zebulon Pike).

Most gem seekers who make their way to Mt. Antero/Mt. White are often hunting for the beryllium minerals beryl var. aquamarine (Beryllium aluminum silicate) and phenakite (Beryllium silicate), or fluorite (Calcium fluoride), topaz (Aluminum silicate) or one of the quartz varieties (Silicon dioxide)---smoky or crystal. Voynick (2002) gives a good history of the gem mining beginning with Nelson Wannamaker in 1881. Modreski and Murphy (2002) reported an 18.95 carat, faceted aquamarine and a 15.55 carat, faceted amber topaz while Voynick (2002) noted a 50-pound smoky quartz. The area also is the major U.S. producer of phenakite. Today, many of the rock and mineral shops in neighboring towns display/sell beautiful specimens of faceted aquamarines (for example: Buena Vista Gem Works or The Rock Doc).

Besides the minerals listed above, Jacobson (1993) noted the occurrence of these minerals at Mt. Antero/Mt. White: Albite, Amethyst, Apatite, Bazzite, Bertrandite, Biotite, Bismuthinite, Bismutite, Brannerite, Calcite, Chrysocolla, Gadolinite, Spessartine garnet, Goethite, Helvite, Hematite, Ilmenorutile, Magnetite, Microcline, Muscovite, Orthoclase, Pyrite, Sulfur, Titanite, Triplite, and Zircon.

24th December 1806 Wednesday—About 11 o’clock met doctor Robison...The doctor and myself pursued the trace [of the rest of the party] and found them encamped on the river bottom [after marching through Brown’s Canyon south of Buena Vista and camped about 8 miles north of Salida with a great view of the 14ers]. We found ourselves together on Christmas Eve (from the journals of Zebulon Pike).

In the world of gems, the collecting fields of Mt. Antero are known worldwide. LGGMC members are fortunate that one can drive to the localities within a half a day and have a very good chance of finding decent crystals, even specimens capable of being faceted. So, if you are in good physical shape and can handle high elevations, and have access to a high clearance 4-wheel drive vehicle, consider a summer or early fall trip to a beautiful and fantastic location.

25th December 1806 Thursday—It being stormy weather and having meat to dry; I concluded to lie by this day (from the journals of Zebulon Pike).

As I travel the Arkansas River Valley near Buena Vista and glance west at the 14ers, I constantly wonder what Zebulon Montgomery Pike thought of these mountains back in that Christmas season of 1806.



Fig. 1. Mt. Antero, 14269', as viewed from "North Carbonate" Peak. Major collecting area is on lower peak in the middle.



Fig. 2. Phenakites and aquamarines collected on Mt. Antero (photo courtesy of Amanda Adkins).



Fig. 3. “North Carbonate” Peak at 13870’ as viewed from the Mt. Antero switchback.

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