

## E. E. Smith Mine Trip Report

*by Bob Wilken*

The E. E. Smith Mine is located on Hutchins Hill in Alexandria, NH. Anna and I first collected here approximately ten years ago when we were making the long weekend trek up from Connecticut to collect. Our interest was piqued by the list of interesting minerals in Phillip Morrill's New Hampshire Mines and Mineral Localities. The mention of triphylite, among other phosphate secondaries, was enough to catch our eye. On that first trip I came home with one very small piece of phosphate rock that when broken revealed a small vug with many tiny microcrystals. This was the first time I had actually ever found phosphate crystals. At the time I had no idea what they were. Somewhere along the line I lost this little piece, and now it only resides in my memory.

We have made approximately five other attempts to collect at E. E. Smith since then. I say "attempts" because on two occasions when the flora has been in full leaf, the mine has disappeared like Brigadoon in the fog. The hike to the mine is done in two segments: one on a snowmobile trail with a medium but steady grade; the second, on the eroded and overgrown, old remnants of an extremely steep mine road. My pedometer registered approximately .6 of a mile for the first leg and just short of .16 for the second leg. The most difficult part has been to discern where this old mine road intersects the snowmobile trail. If you go up the hill too soon you can (as we have) wander for an hour or two on rough, steep terrain and never find the mine. I think we now have it down pat.

E. E. Smith actually consists of two mines, the upper and the lower. Although Morrill indicates the lower to be a lithia pegmatite, the former has been the one of most interest to us and is, as mentioned, high up above the snowmobile trail. There are several prospects at varying elevations on the hillside associated with this mine. The lower mine is in relatively flat terrain steeply below the same snowmobile trail.



*Water pit at entrance to the upper mine  
Photo: Bob Wilken*

Pegmatite Investigations, 1942-1945 contains the only detailed descriptive geologic information known to me concerning this mine. And, although we know the mines covered in the report were in operation during the mid forties, there is little if any information that would inform us of the last date of production. E.E. Smith was mined only for its muscovite mica. (I have often asked myself why feldspar was not recovered from this mine and others in the region. Apparently it was due to the lack of easy access to rail lines from these hinterland towns.)

Pegmatite Investigations describes the mine this way: “The main working at the upper mine is an open cut 105 feet long, 14 to 35 feet wide, and 12 to 35 feet deep. Near the entrance to the cut, a pit—now flooded—leads into a high narrow stope.” Of interest to us is the description of one zone of the pegmatite: “Plagioclase-muscovite-quartz-beryl middle intermediate zone, 1-3 feet thick.... In the north end of the cut there are crystals of triphylite up to 1.2 feet by 3 feet in cross section.... Traces of autunite are associated with columbite-tantalite, and triphylite is partly altered to vivianite and other unidentified alteration products.”



*Mine shed remnants. Photo: Bob Wilken*

On a cool, sunny, clear day in autumn there could be no nicer place to collect than E.E.Smith. Views toward Newfound Lake with foliage in color are an absolute delight! Also of interest is the abundant variety of mining “memorabilia” evident at the site. A tumble-down shed that no doubt served as a place to eat and sleep still gives evidence of the inner spring of a mattress and the rusty remains of a kerosene stove. We have discovered old rubber compressor hose, drill heads, ore car track and a couple of hoppers of varying types. The real prize is an old Ingersoll Rand compressor now pushed down over a slope on its side with tires rotted away.

What about the minerals? Well, there is NO bonanza of microminerals awaiting the collector atop Hutchins Hill. In spite of the promising aforementioned description, it has become apparent that it is very difficult to find the remnants or shards of the large triphylite crystals scattered across and down the mountainside dumps. And, sad to say, the crystals described as being in situ are no longer there! Except for apatite the phosphate secondaries are difficult to find and tiny, tiny when you do....at least so far. The following is a list of what Anna and I recently found on a single trip.

**Apatite:** gemmy, aqua to colorless, doubly terminated tabular crystals found in very vuggy albite. They display a truncated pyramidal termination which one might say appears “domed”. These are the classic apatites that have been found over the years at E. E. Smith. They can be stunning.

**Arsenopyrite:** Silvery-white, deteriorating sulphide masses in pegmatite

**Autunite:** crusty layers pressed between fractures in quartz and micaceous xls that often blow away with a blast of canned air.

**Beryl:** two side-by-side intergrown, flattened and distorted, “muddy” aquas roughly 2” wide by 4 ½” long in matrix. Also, another loose, flattened, “gray” aqua 1” x 2” long. Also, one rounded ¾” x 1” long golden beryl in graphic pegmatite.

**Columbite-tantalite:** one embedded, broken-across xl and one distorted, squeezed xl.

**Garnet:** rounded, highly fractured in pegmatite

**Pyrite:** small, embedded masses in pegmatite.

**Strunzite ? Moraesite?:** white matted, fibrous tufts associated with the Autunite mentioned above.

**Tourmaline:** brown masses of needle-like schorl

**Triphylite:** A ¼” thick segment of a triphylite xl in quartz matrix  
(the following secondaries were found in narrow seams in the triphylite)

**Ludlamite** (?) pale green massive material

**Vivianite:** Very small, more black than blue in color, found in a seam of the above  
triphylite xl once broken down.

**Whitmoreite:** Reddish-brown, smooth, dimpled spheres of sub-micro size.

Unknown (?): extremely small, lustrous, dark brown xls

If anyone is interested in making a trip here I will happily fill you in on updated landmarks. Access to the mine and snowmobile trail is generally permitted, but the drive in to the starting point is over private, developed land. There is a caretaker who keeps an eye on comings and goings.