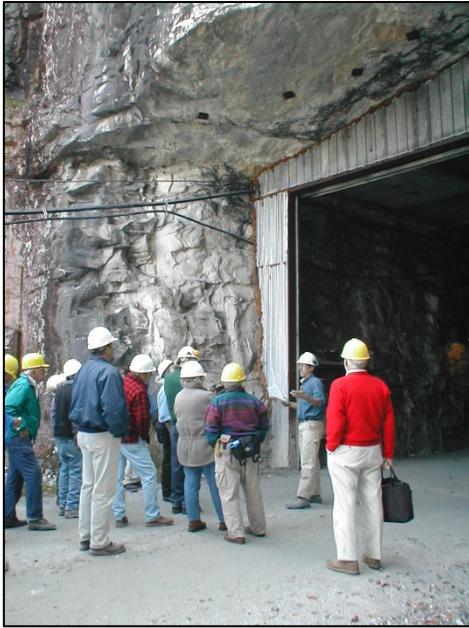


## Operating Mines/Quarries in the Vermont Valley



**Date:** Sunday, September 15, 2019; 9:00 am – 5:00 pm

**Cost:** \$99

Registration for this trip includes box lunch, water, snacks, and transportation

**Leader:** Lance Mead, CPG

Since graduating as a geology major from the University of Vermont (1962), Lance has been associated with various geological issues related to the extractive mineral industries in Vermont. He joined the then Vermont Marble Company's quarry department when the dimension stone sector was supplying finished marble to major buildings in the U.S. This also was the time that inert mineral fillers were being developed for expanded

usage in paint and plastics, and the Vermont Marble subsidiary, White Pigment Corp, was developing into being a leading supplier of calcium carbonate. Lance went from field geology, mine/operational geologist and manager of geological services to quarry and mine management positions.

**Description:** Mining and quarrying activities have been an “**economic engine**” since the mid-18<sup>th</sup> century in the Green Mountain State. Copper and iron minerals were mined and beneficiated for local consumption and some export during the 19<sup>th</sup> century. Processed kaolin, talc and asbestos minerals were beneficiated and rail shipped throughout the northeast and beyond. Marble, granite and slate production boomed during the 20<sup>th</sup> century. This field trip will travel down the Champlain Valley to the Vermont valley where the Columbian unit of the Shelburne formation had been folded into varying thickness on the east limb of the Middlebury Synclinorium. This marble still is a leading source of world famous dimension stone from the Danby Quarry ([www.vermontquarries.com](http://www.vermontquarries.com)), and a high purity calcium carbonate in the Middlebury open pit quarry of Omya Inc. ([www.omya-na.com](http://www.omya-na.com)). Traveling south down US Rt #7 will provide glimpses of many interesting geological features. The Barber Hill intrusive of syenite on the West, Mt Philo hill and Snake Mt escarpments are remnants of Logan's Line over thrust and the Adirondacks to the west with the Green Mountains to the east give a sense of the overall geological boundaries to the synclinorium that is the ultimate destinations of the field trip. The open pit OMYA quarry in Middlebury and the underground mine/quarry of Vermont Quarries will give ample evidence of the folded structures at both locations. These operations have had to adjust to on-going hydrogeological and environmental issues that will be of interest to many of the attendees.

Be sure to bring hard hats, safety glasses, adequate shoes, and sample collection bags!