

Welcome



Geology of New Mexico Landscapes: The Rocks Tell Many Tales

with Albert Shultz and Peter Barkmann

G24050205

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We are delighted to have you join us for this geologic exploration! Whether you already know something about geology or not, you can expect to learn something about what has formed our local landscapes and how geologists have deciphered these stories.

Ghost Ranch is an ideal place to look at geology. Besides its place as a beloved spiritual center, it is an immersive natural place, surrounded by the colorful cliffs of Piedra Lumbre and the Chama River basin. To the west lie the expanses of the San Juan Basin and the canyon country of the Colorado Plateau; to the east, the southern termination of the Rocky Mountains; and to the south, the great supervolcano of the Jemez Mountains. Within an hour's drive we can touch examples of all three major rock types (igneous, sedimentary, and metamorphic), and contemplate over a billion years of earth history.

We plan three days of excursions. Each day we will leave Ghost Ranch after breakfast and return for dinner. As it will be early May in New Mexico, weather and field conditions are difficult to forecast accurately, so bring clothes for a variety of conditions, from warm and sunny to chilly and windy, so layering is the word. Rain or snow is possible, but unless it gets severe, we'll plan to be out and make use of our time. There will be a couple of hikes of up to 3 miles on good trails, and short distances on uneven ground along roadsides, so you'll want to have sturdy hiking shoes or boots. We will travel by van when away from Ghost Ranch. You will get a detailed itinerary and any final instructions shortly before the start of the course.

If you want to read ahead, here are some suggestions for a geologic background:

Lee A. Woodward, 1974, Tectonics of central-northern New Mexico: NMGS 25th Conference Guidebook, p. 123-129. <https://doi.org/10.56577/FFC-25.123> (A 6-page summary of the structural setting of the area we will explore; some technical language but readably organized.)

Fraser Goff, 2009, Valles Caldera: A Geologic History. UNM Press, 114 p. (A compact, readable intro to the Jemez volcanic complex.)

L. Greer Price, editor, 2010, The Geology of Northern New Mexico's Parks, Monuments, and Public Lands; NM Bureau of Geology and Mineral Resources, 372 p. (A collection of short chapters, well illustrated, readable and authoritative; highly recommended for the personal library of anyone wanting to learn some geology while exploring public lands around here.)