

## *2010 Earth Science Week KUNM radio broadcast*

### **Rail Runner Rocks**

Doug Bland

Welcome to Earth Matters – field notes on the geology of New Mexico’s Enchanting Landscapes. Celebrating Earth Science Week, I’m Doug Bland.

The kid comes out in all of us when we ride the train, and New Mexico’s got a new one, the Rail Runner! Geologically speaking, there’s a lot to see from Bernalillo to Santa Fe.

Three minutes after you leave the 550 station in Bernalillo headed north, on your left you can see nearly horizontal layers of black basalt that oozed out of nearby volcanoes about two and a half million years ago. Look for a vertical plug, which is the exposed neck of one of these volcanoes. To the right the skyline is dominated by the towering Sandia Mountains. You’re seeing uplifted granite that’s one and a half billion years old, with a 300 million year-old limestone cap formed when this area was a shallow subtropical sea.

Twenty five minutes later the train begins to climb the hill called La Bajada. A white gypsum mine is visible in the distance to the right. These gypsum deposits are the remains of an ancient salt lake. Adjacent to the train, look for bright red, yellow, white, orange, purple, green, and black sedimentary rock layers of Mesozoic age, when dinosaurs roamed New Mexico. Half way up the grade are the Cerrillos Hills, riddled with turquoise mines. Native Americans began collecting here almost a thousand years ago.

Leaving the highway 599 stop, to the left you can see the Jemez Mountains and the giant Valles caldera in the distance. They were formed by a series of immense eruptions over one million years ago. Future eruptions are likely.

Arriving in Santa Fe, the Sangre de Cristo Mountains loom to the east. Like the Sandias, these are ancient igneous and metamorphic rocks formed when magma cooled and solidified deep inside the Earth.

Celebrating Earth Science Week, I’m Doug Bland of the Bureau of Geology at New Mexico Tech.