

Welcome to Earth Matters – field notes on the geology of New Mexico’s Enchanting Landscapes. Celebrating Earth Science Week, I am Talon Newton.

El Morro National Monument is located in Cibola County in western New Mexico and features the cliffs of El Morro. The sand that makes of these rock walls was deposited as sand dunes over 150 million years ago. Geologic process that took place over millions of years resulted in the formation of what is now called Inscription Rock, which is one of the primary features within the monument. Inscription Rock is a 70 meter high sandstone monolith with a small perennial pool located at the base of the cliff that accumulates snow melt and rain that runs off the top.

The Zuni Sandstone cliffs within the monument documents a long history human activity with the Atsinna Pueblo ruins on the cliff top and over 2,000 carvings at the base of these cliffs. In the late 1200s, the ancestral Puebloans were inspired by the beauty of these cliffs and the precious water source that they provided. They built their home on the cliff top and decorated the sandstone walls with hundreds of petroglyphs. Over 200 years after the Atsinna Pueblo was abandoned, Don Juan Onate took a break from his journey at “El Estanque de Penol,” which is Spanish for “the pool at the great rock.” Inspired by the beautiful Puebloan petroglyphs, he signed his name to the sandstone walls. His name is the first of thousands of Spanish inscriptions that document New Mexico’s Spanish history over the next 200 years. American emigrants traveling west continued the tradition of inscribing their names to the El Morro Cliffs, so that their story would also be told.

While no inscriptions have been added to the cliffs since 1906, these carvings in the sandstone cliffs at El Morro National Monument continue to inspire thousands of visitors each year who travel long distances to view this unique artwork. Historians and scientists are also inspired by the natural beauty of the cliffs and the art that records hundreds of years of American history, as they look for creative and innovative methods to preserve the inscriptions that are gradually deteriorating due to natural erosional processes.

Celebrating Earth Science Week, I’m Talon Newton, hydrogeologist with the Bureau of Geology at New Mexico Tech.