Gallery of Geology - Socorro panorama

Richard Chamberlin

New Mexico Geology (NMG) publishes peer-reviewed geoscience papers focusing on New Mexico and the surrounding region. We aslo welcome submissions to the Gallery of Geology, which presents images of geologic interest (landscape images, maps, specimen photos, etc.) accompanied by a short description.

Published quarterly since 1979, NMG transitioned to an online format in 2015, and is currently being issued twice a year. NMG papers are available for download at no charge from our website. You can also subscribe to receive email notifications when new issues are published.
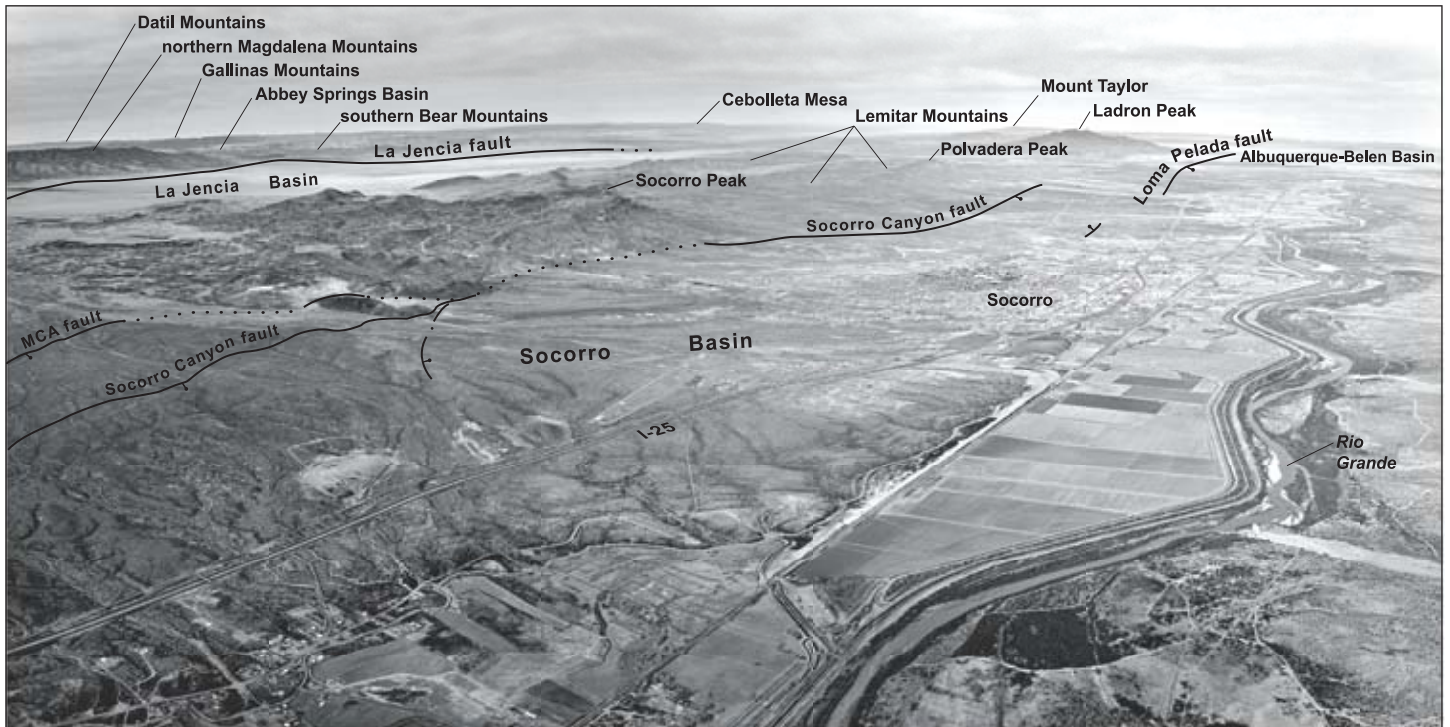
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Gallery of Geology—Socorro panorama

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This aerial-oblique photograph was taken looking northwest over the Socorro region of the Rio Grande rift. The Rio Grande generally follows the subsiding structural axis of the rift. Extensional sedimentary basins that define the rift at this latitude include the Socorro Basin, La Jencia Basin and Abbey Springs Basin. The latter has been inactive since 17 Ma. Active rift faults that bound the west flank of the subsiding basins are the Socorro Canyon fault and the La Jencia fault.

The Socorro Canyon fault splays southward into a zone of less active Quaternary faults, including the MCA fault. The Loma Pelada fault links the north end of the Socorro Basin with the southern end of the Albuquerque–Belen Basin. West-tilted mountain blocks

at Socorro Peak, Polvadera Peak (highest point in the Lemitar Mountains), and Ladron Peak form the west margin of the Socorro Basin and lie within the rift system. The northern Magdalena Mountains and the southern Bear Mountains mark the uplifted western flank of the La Jencia Basin.

Many normal faults that were active during early opening of the Rio Grande rift (ca. 30–7 Ma) are exposed in the strongly extended Lemitar Mountains. Steeply dipping (60–65°) fault blocks of the early rift have been rotated "domino-style" to dips of 30° or less and are now inactive. Landmarks on the horizon lie along the southeast margin of the Colorado Plateau; they include the Datil Mountains, Gallinas Mountains, Cebolleta Mesa, and Mount Taylor. Mount Taylor, 91 mi north-northwest of Socorro, was an active stratovolcano 2–3 million years ago.

—Richard Chamberlin
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Among the interesting papers we're expecting next year are:

- Revisions to the stratigraphic nomenclature of the Abiquiu Formation, Abiquiu and contiguous areas, north-central New Mexico

- Mississippian strata of southeastern New Mexico: distribution, structure, and hydrocarbon plays

- Evidence for Wisconsinan hydrologic and climatic change from late Pleistocene Lake Otero, Tularosa Basin, south-central New Mexico