

# Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the [interactive fault map](#).

## unnamed faults near Loma Barbon (Class A) No. 2045

Last Review Date: 2016-06-26

### Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

*citation for this record:* Personius, S.F., and Jochems, A.P., compilers, 2016, Fault number 2045, unnamed faults near Loma Barbon, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, <https://earthquakes.usgs.gov/hazards/qfaults>, accessed 12/14/2020 02:22 PM.

<b>Synopsis</b>	These unnamed normal faults are exposed in several places in upper Santa Fe Group sediment (sand and gravel). They do not appear to offset younger Quaternary deposits.
<b>Name comments</b>	Several north-trending, down-to-the-east and down-to-the-west faults that offset upper Santa Fe Group sediment are present near Loma Barbon. Kelley (1977 #1106) mapped one of these structures as the southern end of one strand of the Santa Ana section of the San Felipe fault [2030a], but more recent mapping in the area (Manley, 1978 #1404; Personius and others, 2000

	#1413) indicates that these faults are separate structures.
<b>County(s) and State(s)</b>	SANDOVAL COUNTY, NEW MEXICO
<b>Physiographic province(s)</b>	BASIN AND RANGE
<b>Reliability of location</b>	Good Compiled at 1:24,000 scale.  <i>Comments:</i> Fault traces from Manley (1978 #1404) and Personius and others (2000 #1413).
<b>Geologic setting</b>	These structures are intrabasin faults near the northern margin of the Albuquerque basin in the Rio Grande rift.
<b>Length (km)</b>	11 km.
<b>Average strike</b>	N2°W
<b>Sense of movement</b>	Normal
<b>Dip Direction</b>	W; E  <i>Comments:</i> Dip measurements of 63°–76° (W and E) are from Personius and others (2000 #1413).
<b>Paleoseismology studies</b>	
<b>Geomorphic expression</b>	These faults are exposed in upper Santa Fe Group sand and gravel but do not appear to offset extensive piedmont surfaces, and thus have little if any geomorphic expression.
<b>Age of faulted surficial deposits</b>	These faults offset probable early Pleistocene upper Santa Fe Group sand and gravel, but do not appear to offset middle Pleistocene piedmont deposits.
<b>Historic earthquake</b>	
<b>Most recent prehistoric deformation</b>	undifferentiated Quaternary (<1.6 Ma)  <i>Comments:</i> Faults near Loma Barbon offset probable early Pleistocene Santa Fe Group sediment, but do not cut middle Pleistocene piedmont deposits, so the most recent movement on

	these faults probably occurred in the early Pleistocene.
<b>Recurrence interval</b>	
<b>Slip-rate category</b>	Less than 0.2 mm/yr <i>Comments:</i> No detailed studies of fault offset or age of offset deposits are available; slip rate estimate is based on lack of prominent fault scarps and low rates of slip on other faults in this part of the Rio Grande rift.
<b>Date and Compiler(s)</b>	2016 Stephen F. Personius, U.S. Geological Survey Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
<b>References</b>	#1106 Kelley, V.C., 1977, Geology of Albuquerque basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Memoir 33, 60 p., 2 pls.  #1404 Manley, K., 1978, Geologic map of Bernalillo NW quadrangle, Sandoval County, New Mexico: U.S. Geological Survey Geologic quadrangle Map GQ-1446, 1 sheet, scale 1:24,000.  #1413 Personius, S.F., Machette, M.N., and Stone, B.D., 2000, Preliminary geologic map of the Loma Machete quadrangle, Sandoval County, New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-2334, scale 1:24,000.

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