

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](#).

Groom Range Central fault (Class A) No. 1047

Last Review Date: 1998-01-22

citation for this record: Anderson, R.E., compiler, 1998, Fault number 1047, Groom Range Central fault, 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 02:20 PM.

Synopsis	Groom Range Central fault is an intrablock structure consisting of 3 echelon, north-striking parts that cut the central part of Groom Range structural block parallel to its generally north trend. The central trace follows the west boundary of Bald Mountain cauldron, a Tertiary volcanotectonic feature. Less than 2 km of an estimated total length of more than 25 km is mapped photogeologically (at 1:100,000 scale) as a weakly expressed lineament or scarp in Quaternary deposits. The remainder of trace is mapped as weakly expressed to prominent lineaments or scarps in bedrock. No descriptions of scarp morphology are available. Thus, fault is not a well documented Quaternary structure. No data are available to support an estimate of earthquake recurrence or slip rate.
Name comments	Name taken from Piety (1995 #915) who applied it to a set of echelon, north-striking faults extending the full length of the

	<p>central part of the Groom Range.</p> <p>Fault ID: Referred to as GRC by Piety (1995 #915).</p>
County(s) and State(s)	LINCOLN COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	<p>Good Compiled at 1:100,000 scale.</p> <p><i>Comments:</i> Locations compiled from a photogeologic compilation at 1:100,000 scale (Reheis, 1992 #1604) based on study of 1:60,000 and 1:80,000 aerial photos with no known field studies.</p>
Geologic setting	<p>Fault consists of 3 echelon, north-striking parts that cut the central part of Groom Range structural block parallel to its generally north trend. Only the central part of the fault is shown on the 1:250,000-scale geologic map of Lincoln County (Ekren and others, 1977 #1036). That part follows the west boundary of Bald Mountain cauldron, a Tertiary volcanotectonic feature (Ekren and others, 1977 #1036). Along most of its length, the fault cuts bedrock, making in an intrablock fault.</p>
Length (km)	26 km.
Average strike	N1°W
Sense of movement	Normal
Dip Direction	<p>W</p> <p><i>Comments:</i> Trace across topography suggests steep west dip (Ekren and others, 1977 #1036; Reheis, 1992 #1604).</p>
Paleoseismology studies	
Geomorphic expression	<p>Less than 2 km of an estimated total length of more than 25 km is mapped photogeologically (at 1:100,000 scale) as a weakly expressed lineament or scarp in Quaternary deposits; the remainder of trace is mapped as weakly expressed to prominent lineaments or scarps in bedrock (Reheis, 1992 #1604). No</p>

	descriptions of scarp morphology are available Thus, fault is not a well documented Quaternary structure.
Age of faulted surficial deposits	Quaternary
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> Although timing of most recent event is not well constrained, Reheis (1992 #1604) suggests a Quaternary time based on reconnaissance photogeologic mapping.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> No reliable estimate can be made, low value is inferred from knowledge of slip rates on other Pleistocene faults in the Basin and Range.
Date and Compiler(s)	1998 R. Ernest Anderson, U.S. Geological Survey, Emeritus
References	#1036 Ekren, E.B., Orkild, P.P., Sargent, K.A., and Dixon, G.L., 1977, Geologic map of Tertiary rocks, Lincoln County, Nevada: U.S. Geological Survey Miscellaneous Investigations Map I-1041, 1 sheet, scale 1:250,000. #915 Piety, L.A., 1995, Compilation of known and suspected Quaternary faults within 100 km of Yucca Mountain, Nevada and California: U.S. Geological Survey Open-File Report 94-112, 404 p., 2 pls., scale 1:250,000. #1604 Reheis, M.C., 1992, Aerial photographic interpretation of lineaments and faults in late Cenozoic deposits in the Cactus Flat and Pahute Mesa 1:100,000 quadrangles and the western parts of the Timpahute Range, Pahrnatagat Range, Indian Springs, and Las Vegas 1:100,000 quadrangles, Nevada: U.S. Geological Survey Open-File Report 92-193, 14 p., 3 pls., scale 1:100,000.

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