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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.

Emigrant Valley South faults (Class A) No. 1044

Last Review Date: 1998-01-21

citation for this record: **Anderson, R.E., compiler, 1998, Fault number 1044, Emigrant Valley South faults, 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	The Emigrant Valley south faults are expressed as two groups of short, discontinuous, variously facing scarps or lineaments located photogeologically in southern Emigrant Valley. The tectonic significance of these faults is not known, No detailed study or report of scarp characteristics available, so reliable estimates of earthquake recurrence and slip rate can not be made.
Name comments	Name given by Piety (1995 #915) to a group of short discontinuous north- to northeast-striking faults in the part of Emigrant Valley located east of Groom Lake and in Grant Valley east of the Papoose Range. **Fault ID:** Referred to as EVS by Piety (1995 #915).
County(s) and State(s)	LINCOLN COUNTY, NEVADA
Physiographic	

Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Location based on photogeologic mapping by Reheis (1992 #1604) using 1:60,000, 1:80,000 photos. No known field mapping.
Geologic setting	Two groups of short, subparallel, intrabasin faults within the structural basin occupied by Emigrant Valley; a north group of northeast-striking scarps or lineaments located east of Groom Lake and a south group of more north-striking features extending south from Emigrant Valley to Chert Ridge. Forms a zone about 20 km long and about 4 km wide. The tectonic significance of these intrabasin faults is not known. At their south end, they appear to intersect the Chert Ridge faults [1052], but the relation between the two is not known.
Length (km)	19 km.
Average strike	N15°E
Sense of movement	Normal *Comments:* Shown by Reheis (1992 #1604) as both down to the west and down to the east.
Dip Direction	E; W
Paleoseismology studies	
Geomorphic expression	Portrayed (at 1:100,000 scale) by Reheis (1992 #1604) as weakly to moderately expressed lineaments or scarps on surfaces of Quaternary deposits and, in a few cases, as moderately expressed lineaments and scarps on surfaces of Tertiary deposits.
Age of faulted surficial deposits	Quaternary
Historic earthquake	
Most recent	undifferentiated Quaternary (<1.6 Ma)

prehistoric deformation	*Comments:* 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 *Comments:* 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	#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, Pahranagat 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.