

# 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](#).

## Gold Flat faults (Class A) No. 1087

Last Review Date: 1998-12-10

*citation for this record:* Anderson, R.E., compiler, 1998, Fault number 1087, Gold Flat 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 02:19 PM.

<b>Synopsis</b>	The Gold Flat faults are marked by a northeast-trending cluster, of mostly weakly expressed, lineaments and scarps that cross the western part of the Gold Flat valley. Nothing is known of the relation of these features to buried structures, and there are no data on the age of faulted materials or scarp characteristics. A photogeologic map, which shows scarps and lineaments on Quaternary deposits and surfaces in the Gold Flat valley, is the main source of information for fault-related features that express the Gold Flat faults.
<b>Name comments</b>	Name modified from Piety (1995 #915) who designated a cluster of lineaments and scarps located in western Gold Flat as the Gold Flat fault. These scarps and lineaments were mapped by Reheis (1992 #1604) but not by Dohrenwend and others (1992 #289). The cluster of northeast-striking scarps and lineaments that express the Gold Flat faults is as wide as about 10 km and extends

	<p>from about the Salisbury well in the southern part of the Gold Flat basin, northeastward along the west side of Gold Flat to near Coyote Questa.</p> <p><b>Fault ID:</b> Referred to as GOL by Piety (1995 #915).</p>
<b>County(s) and State(s)</b>	NYE COUNTY, NEVADA
<b>Physiographic province(s)</b>	BASIN AND RANGE
<b>Reliability of location</b>	<p>Good Compiled at 1:100,000 scale.</p> <p><i>Comments:</i> Traces taken from Reheis (1992 #1604) who mapped them photogeologically using aerial photos at scales of 1:60,000 and 1:80,000; the traces were transferred by inspection to 1:100,000 scale topographic maps.</p>
<b>Geologic setting</b>	<p>The Gold Flat faults strike northeast and are located in a low-relief area in the western part of Gold Flat between Pahute Mesa on the south and Coyote Questa on the north. The relationship between the Gold Flat faults and Basin and Range deformation is not known. There are no apparent geologic mismatches across the fault trace or gravity gradients along it (Ekren and others, 1971 #1505) to suggest the presence of a large-displacement buried fault. Gravity data also suggest there is no deep fault-bounded basin beneath the western part of Gold Flat to which the Gold Flat faults are related (Ekren and others, 1971 #1505). The main group of Gold Flat faults strikes more easterly than the numerous well-exposed north- to north-northeast-striking faults in Tertiary rocks on Pahute mesa directly to the south (Minor and others, 1993 #3877; 1996 #2541), suggesting a crosscutting relationship.</p>
<b>Length (km)</b>	16 km.
<b>Average strike</b>	N30°E
<b>Sense of movement</b>	Normal
<b>Dip Direction</b>	<p>Unknown</p> <p><i>Comments:</i> Unknown; Reheis (1992 #1604) shows most scarps as facing northwest, suggesting a down-to-the-northwest displacement and possibly a dip in that direction.</p>

<b>Paleoseismology studies</b>	
<b>Geomorphic expression</b>	The faults traverse the flatlands of Gold Flat and are portrayed by Reheis (1992 #1604) mostly as weakly expressed lineaments and scarps on surfaces of Quaternary deposits. They do not appear to control drainage alignments despite low-angle intercepts with drainages. They were not shown in a photogeologic compilation of Quaternary faults at scale 1:250,000 by Dohrenwend and others (1992 #289).
<b>Age of faulted surficial deposits</b>	Quaternary
<b>Historic earthquake</b>	
<b>Most recent prehistoric deformation</b>	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> There has been no detailed mapping or stratigraphic subdivision of Quaternary deposits, which might provide constraint on the timing of Quaternary activity along faults in Gold Flat.
<b>Recurrence interval</b>	
<b>Slip-rate category</b>	Less than 0.2 mm/yr <i>Comments:</i> The late Quaternary characteristics of this fault (overall geomorphic expression, continuity of scarps, age of faulted deposits, etc.) support a low slip rate. No data available on offset amounts or height or shape of scarps to guide slip-rate estimate. Accordingly, the less than 0.2 mm/yr slip-rate category has been assigned to this fault.
<b>Date and Compiler(s)</b>	1998 R. Ernest Anderson, U.S. Geological Survey, Emeritus
<b>References</b>	#289 Dohrenwend, J.C., Schell, B.A., McKittrick, M.A., and Moring, B.C., 1992, Reconnaissance photogeologic map of young faults in the Goldfield 1° by 2° quadrangle, Nevada and California: U.S. Geological Survey Miscellaneous Field Studies Map MF-2183, 1 sheet, scale 1:250,000.

#1505 Ekren, E.B., Anderson, R.E., Rogers, C.L., and Noble, D.C., 1971, Geology of the northern Nellis Air Force Base Bombing and Gunnery Range, Nye County, Nevada: U.S. Geological Survey Professional Paper 651, 91 p., 1 pl., scale 1:125,000.

#3877 Minor, S.A., Sawyer, D.A., Wahl, R.R., Frizzell, V.A., Jr., Schilling, S.P., Warren, R.G., Orkild, P.P., Coe, J.A., Hudson, M.R., Fleck, R.J., Lanphere, M.A., Swadley, W.C., and Cole, J.C., 1993, Preliminary geologic map of the Pahute Mesa 30' x 60' quadrangle, Nevada: U.S. Geological Survey Open-File Report 93-299.

#2541 Minor, S.A., Vick, G.S., Carr, M.D., and Wahl, R.R., 1996, Faults, lineaments, and earthquake epicenters digital map of the Pahute Mesa 30' x 60' quadrangle, Nevada: U.S. Geological Survey Open-File Report 96-262, 13 p.

#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, Pahrnagat 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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