

# 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](#).

## Kawich Valley fault (Class A) No. 1086

Last Review Date: 1998-12-10

*citation for this record:* Anderson, R.E., compiler, 1998, Fault number 1086, Kawich Valley 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 02:19 PM.

<b>Synopsis</b>	The Kawich Valley fault, as shown herein, is located mostly in a basin medial position in the north-central part of Kawich Valley; a faint alignment of north-striking scarps and lineaments in the southern part of valley, however, is also shown and may express an isolated continuation of the fault. Where the Kawich Valley fault is best expressed, in the northern part of Kawich Valley, a cluster of scarps and lineaments that is about 10 km long strike northeast. Most of the scarps are southeast-facing, suggesting the fault is probably down-to-the-southeast. No data are available on the height of scarps or on the age of the surficial materials they are formed on. Several scarps and lineaments in Tertiary rocks, which were shown on previous photogeologic maps and compilations of this area, are excluded from this compilation of Quaternary faults in the Kawich Valley.
<b>Name</b>	Name was applied by Piety (1995 #915) to widely separated and

<b>comments</b>	<p>largely unaligned lineaments or scarps on Tertiary and Quaternary deposits over a north-south distance of about 43 km in Kawich Valley. The fault was not shown on geologic maps by Cornwall (1972 #1482) or Ekren and others (1971 #1505). The traces shown by Piety (1995 #915) show little alignment and continuity to suggest a single fault. The traces shown by Piety (1995 #915) were derived from photogeologic maps by Reheis (1992 #1604) and Dohrenwend and others (1992 #289), but those source maps show little agreement on the location of the traces, that is, features on one map are not shown on the other, creating considerable ambiguity. Based on a lack of evidence for Quaternary displacement, Piety (1995 #915) appropriately excluded numerous fault traces in Tertiary rocks from the east and south flanks of Kawich Valley, some of which were shown by Reheis (1992 #1604) and others by Dohrenwend and others (1992 #289). However, Piety (1995 #915) did not exclude all such traces and gave no rationale for how those retained were chosen, adding to the ambiguity. The lineaments and scarps that are shown by Reheis (1992 #1604) and Dohrenwend and others (1992 #289) as developed on Quaternary deposits are short (&lt; 1 km), highly discontinuous, weakly expressed features that plot in two disconnected areas. The Kawich Range fault, as shown herein, is marked by a southern trace that connects short, aligned, north-striking scarps and lineaments, and marked more numerous scarps and lineaments that form a cluster of northeast striking northern traces. The southern trace is separated from the cluster of northern traces by an area, about 15 km long, that does not show scarps or lineaments on Quaternary deposits and surfaces. The southern trace is about 5 km long and present about 6 km east of Saucer Mesa, near the south end of Kawich Valley. The northern cluster of traces is about 10 km in length, from southwest to northeast, and is present in the northern part of the Kawich Valley, between White Ridge and Lava Ridge.</p> <p><b>Fault ID:</b> Shown as KV 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>	Good Compiled at 1:100,000 scale.  <i>Comments:</i> Location is from Reheis (1992 #1604) and based on

	photogeologic mapping on 1:60,000 and 1:80,000 scale aerial photographs compiled on 1:100,000 scale topographic maps.
<b>Geologic setting</b>	The main cluster of lineaments and scarps (Reheis, 1992 #1604) occupy a mid-valley position in the northern part of Kawich Valley, and these features probably reflect a basin-medial fault.
<b>Length (km)</b>	31 km.
<b>Average strike</b>	N15°E
<b>Sense of movement</b>	Normal
<b>Dip Direction</b>	SE  <i>Comments:</i> Inferred to be SE
<b>Paleoseismology studies</b>	
<b>Geomorphic expression</b>	Most of the features identified by Reheis (1992 #1604) occupy an area about 10 km long and 2 km wide, are in a low-relief, mid-valley position, and are characterized as weakly expressed lineaments or scarps in Quaternary deposits. Except for one short scarp at the south end of Kawich Valley, all scarps are shown by Reheis (1992 #1604) as southeast-facing.
<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> The Quaternary deposits of the Kawich Valley have not been mapped and subdivided in detail. Cornwall (1972 #1482) mapped the basin-fill deposits as Quaternary and Ekren and others (1971 #1505) mapped them as Quaternary and Tertiary.
<b>Recurrence interval</b>	
<b>Slip-rate category</b>	Less than 0.2 mm/yr

	<i>Comments:</i> Not reported; low slip rate selected on the basis of the faults geomorphic expression. No data are available on the height of the scarps or on the age of the faulted materials.
<b>Date and Compiler(s)</b>	1998 R. Ernest Anderson, U.S. Geological Survey, Emeritus
<b>References</b>	<p>#1482 Cornwall, H.R., 1972, Geology and mineral deposits of southern Nye County, Nevada: Nevada Bureau of Mines and Geology Bulletin 77, 49 p., 1 pl., scale 1:250,000.</p> <p>#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.</p> <p>#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.</p> <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.</p> <p>#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.</p>

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