

# 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](#).

## East Jakes Valley fault zone (Class A) No. 1225

Last Review Date: 2000-10-25

*citation for this record:* Redsteer, M.H., compiler, 2000, Fault number 1225, East Jakes Valley fault zone, 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 02:16 PM.

<b>Synopsis</b>	The East Jakes Valley fault zone is defined by a series of down-to-the-west anastomosing lineaments and scarps on the southeastern side of Jakes Valley that continues along a roughly north-south trend. The last fault movement is of probable late Pleistocene age. The zone is poorly expressed topographically, with maximum scarp heights of less than 15 m (Schell, 1981 #2843). Reconnaissance photogeologic mapping and limited field reconnaissance is the sources of data. Trench investigations and detailed studies of scarp morphology have not been completed.
<b>Name comments</b>	Refers to East Jakes Valley fault of Schell (1981 #2843), also mapped by Dohrenwend and others (1992 #2480). The fault zone is located 8 to 10 km east of Hayden Canyon in the Jakes Wash area on the southeastern side of Jakes Valley.  <b>Fault ID:</b> Refers to fault number 53 of Schell (1981 #2843).

<b>County(s) and State(s)</b>	WHITE PINE 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> Location based on 1:250,000-scale map of Dohrenwend and others (1992 #2480). Mapping based on photogeologic analysis of 1:24,000-scale color aerial photography supplemented with 1:60,000-scale black-and-white aerial photography, transferred to 1:62,500-scale topographic maps and photographically reduced and transferred to 1:250,000-scale topographic maps. Subsequent mapping by photogeologic analysis of 1:58,000-nominal-scale color-infrared photography transferred directly to 1:100,000-scale topographic quadrangle maps enlarged to scale of the photographs.</p>
<b>Geologic setting</b>	<p>The East Jakes Valley fault zone is a down-to-the-west range front fault on the western margin of the Egan Range and defines the eastern margin of Jakes Valley. Paleozoic carbonate strata exposed in the Egan Range by uplift along the East Jakes Valley fault are primarily of Pennsylvanian and Permian age. These older units are folded and faulted; overlain by east-dipping Tertiary strata that are cut by normal faults (Brokaw and Heidrick, 1966 #114; Feeley, 1993 #4401). The less deformed Tertiary rock consists of discontinuous intervals of limestone conglomerate overlain by lacustrine limestone and tuffaceous sedimentary rocks of Eocene age, Oligocene rhyodacite ash-flow tuff, and dacitic and andesitic flows and volcanoclastic deposits. Uplift along this fault zone is fairly typical of north-south oriented Basin and Range extensional faulting except that faulting is within the valley, 4 to 5 km west of the range front, and fault scarps are poorly expressed by local topography.</p>
<b>Length (km)</b>	15 km.
<b>Average strike</b>	N1°W
<b>Sense of movement</b>	Normal
<b>Dip Direction</b>	W
<b>Paleoseismology</b>	

<b>studies</b>	
<b>Geomorphic expression</b>	The East Jakes Valley fault zone lies on the western slope of a spur of the Egan Range (south of White River Wash and Kimberly, Nevada). These intravalley fault scarps are poorly expressed by topography, primarily as aligned features on surficial deposits (Dohrenwend and others, 1992 #2480). Dohrenwend and others (1992 #2480) showed many of the structures as lineaments, not having noted displacement on them. However, Schell (1981 #2843) estimated the maximum scarp height to be less than 15 m.
<b>Age of faulted surficial deposits</b>	These intravalley faults offset Pleistocene and Holocene deposits. Dohrenwend and others (1992 #2480) show scarps on deposits of late quaternary (<30 ka).
<b>Historic earthquake</b>	
<b>Most recent prehistoric deformation</b>	late Quaternary (<130 ka)  <i>Comments:</i> Schell (1981 #2843) indicates an age of middle to early Pleistocene for displaced units (15 to 1,800 ka) whereas Dohrenwend and others (1992 #2480) estimated the age of faulting to be late Quaternary (<30 ka).
<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. Accordingly, the less than 0.2 mm/yr slip-rate category has been assigned to this fault.
<b>Date and Compiler(s)</b>	2000 Margaret Hisa Redsteer, U.S. Geological Survey
<b>References</b>	#114 Brokaw, A.L., and Heidrick, T., 1966, Geologic map and sections of the Giroux Wash quadrangle White Pine County, Nevada: U.S. Geological Survey Geologic quadrangle Map GQ-476, 1 sheet, scale 1:24,000.  #2480 Dohrenwend, J.C., Schell, B.A., and Moring, B.C., 1992, Reconnaissance photogeologic map of young faults in the Ely 1° by 2° quadrangle, Nevada and Utah: U.S. Geological Survey

Miscellaneous Field Studies Map MF-2181, 1 sheet, scale 1:250,000.

#4401 Feeley, T.C., 1993, Geologic map of the Robinson Summit quadrangle, Nevada: Nevada Bureau of Mines and Geology Field Studies Map 2, 1 sheet, scale 1:24,000.

#2843 Schell, B.A., 1981, Faults and lineaments in the MX Sitting Region, Nevada and Utah, Volume I: Technical report to U.S. Department of [Defense] the Air Force, Norton Air Force Base, California, under Contract FO4704-80-C-0006, November 6, 1981, 77 p.

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