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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.

Japanese and Cal Valleys faults (Class A) No. 2447

Last Review Date: 2004-07-01

Compiled in cooperation with the Utah Geological Survey

citation for this record: **Black, B.D., Hylland, M.D., and Hecker, S., compilers, 2004, Fault number 2447, Japanese and Cal Valleys 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 02:56 PM.**

Synopsis	Poorly understood middle to late Pleistocene faults bounding Japanese and Cal Valleys.
Name comments	**Fault ID:** Refers to fault number 13-20 of Hecker (1993 #642).
County(s) and State(s)	SEVIER COUNTY, UTAH MILLARD COUNTY, UTAH SANPETE COUNTY, UTAH
Physiographic	BASIN AND RANGE

province(s)	COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Mapped or discussed by Anderson and others (1978 #4548), Witkind and others (1987 #4550), Willis (1991 #4549), Oviatt (1992 #4544), and Hintze and Davis (2002 #6754, 2003 #6741). Fault traces from 1:100,000-scale mapping of Oviatt (1992 #4544).
Geologic setting	Generally north-trending faults in the Valley Mountains east of Scipio Valley. Along valley margins, the faults form the contact between Tertiary Flagstaff Limestone and unconsolidated Quaternary valley-fill deposits.
Length (km)	30 km.
Average strike	N4°E
Sense of movement	Normal
Dip Direction	E; W
Paleoseismology studies	
Geomorphic expression	Fault scarps on alluvium are as much as 4 m high. The pattern of faulting in Japanese Valley suggested to Witkind and others (1987 #4550) that the graben-formed valley may be a collapse feature, perhaps related to dissolution of salt from the underlying Arapien Shale. However, Willis (1991 #4549) interpreted the faults as Basin and Range extensional faults.
Age of faulted surficial deposits	Quaternary
Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) *Comments:* Timing of most recent surface faulting is based on scarp morphology, basin closure, and fault control of the bedrock-alluvium contact.

Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr
Date and Compiler(s)	2004 Bill D. Black, Utah Geological Survey Michael D. Hylland, Utah Geological Survey Suzanne Hecker, U.S. Geological Survey
References	#4548 Anderson, R.E., Bucknam, R.C., and Hamblin, W.K., 1978, Road log to the Quaternary tectonics of the Intermountain seismic belt between Provo and Cedar City, Utah: Geological Society of America, Rocky Mountain Section Annual Meeting, Provo, Utah, Field Trip no. 8, 50 p. #642 Hecker, S., 1993, Quaternary tectonics of Utah with emphasis on earthquake-hazard characterization: Utah Geological Survey Bulletin 127, 157 p., 6 pls., scale 1:500,000. #6754 Hintze, L.F., and Davis, F.D., 2002, Geologic map of the Tule Valley 30' x 60' quadrangle and parts of the Ely, Fish Springs, and Kern Mountains 30' x 60' quadrangles, northwest Millard County, Utah: Utah Geological Survey Map 186, scale 1:100,000. #6741 Hintze, L.F., and Davis, F.D., 2003, Geology of Millard County, Utah: Utah Geological Survey Bulletin 133, 305 p. #4544 Oviatt, C.G., 1992, Quaternary geology of the Scipio Valley area, Millard and Juab Counties, Utah: Utah Geological Survey Special Studies 79, 16 p., scale 1:100,000. #4549 Willis, G.C., 1991, Geologic map of the Redmond Canyon quadrangle, Sanpete and Sevier Counties, Utah: Utah Geological Survey Map 138, 17 p. pamphlet, scale 1:24,000. #4550 Witkind, I.J., Weiss, M.P., and Brown, T.L., 1987, Geologic map of the Manti 30' x 60' quadrangle, Carbon, Emery, Juab, Sanpete, and Sevier Counties, Utah: U.S. Geological Survey Miscellaneous Investigations Map I-1631, scale 1:100,000.

Questions or comments?