

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](#).

North Promontory Mountains fault (Class A) No. 2362

Last Review Date: 1999-10-01

Compiled in cooperation with the Utah Geological Survey

citation for this record: Black, B.D., and Hecker, S., compilers, 1999, Fault number 2362, North Promontory Mountains 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 02:57 PM.

Synopsis	Poorly understood Quaternary(?) fault in the North Promontory Mountains in northern Utah. Undated Lake Bonneville deposits are apparently displaced down-to-the-east at the east end of the fault, although there doesn't appear to be substantial Quaternary faulting on the west side of Blue Creek Valley.
Name comments	Fault ID: Refers to fault number 6-10 of Hecker (1993 #642).
County(s) and	BOY FOLDER COUNTY UTAH

State(s)	BOX ELDER COUNTY, UTAH
Physiographic province(s)	BASIN AND RANGE
Reliability of location	<p>Good Compiled at 1:24,000 scale.</p> <p><i>Comments:</i> Mapped or discussed by Jordan (1985 #4498), Jordan and others (1988 #4499), and Miller and others (1991 #4500). Mapping from Jordan (1985 #4498) and Jordan and others (1988 #4499).</p>
Geologic setting	<p>East-trending normal fault at the north end of the North Promontory Mountains between Hansel and Blue Creek Valleys. The North Promontory Mountains are in an aggregation of low, north-trending ranges and narrow valleys in northern Utah between Curlew Valley on the west and the Malad River Valley on the east. The ranges have few outcrops of bare rock, which is typical of weathering and erosion of the Permian Oquirrh Formation, and the valleys have great accumulations of gravel and sand along Lake Bonneville shorelines.</p>
Length (km)	6 km.
Average strike	N86°W
Sense of movement	Normal
Dip Direction	N
Paleoseismology studies	
Geomorphic expression	<p>Lake Bonneville deposits are apparently displaced down-to-the-east across a short north- to northwest-trending scarp at the east end of the fault, although well-developed soils and evidence for pediments shallowly buried beneath Quaternary deposits argue against substantial Quaternary faulting on the west side of Blue Creek Valley. Along the range front near the south end of the valley, several short unmapped faults cut Pliocene loess deposits but not overlying Holocene colluvium, and are probably no younger than early Pleistocene (Miller and others, 1991 #4500). A preliminary correlation of erosional Provo-level shorelines on the west side of Blue Creek Valley suggests that the shorelines are about 3 m lower to the north than to the south of the fault,</p>

	although the apparent displacement may be a result of difference in geomorphic expression in different lithologies across the fault and not the result of faulting.
Age of faulted surficial deposits	Late Pleistocene(?) Lake Bonneville deposits.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> Based on a spatial change in Quaternary activity. Could be younger if faulted Lake Bonneville deposits are late Pleistocene.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> Differences in the Provo shoreline elevations, if related to faulting, indicate a geologic slip rate slightly less than 0.2 mm/yr (3 m in past 16 k.y.). Other geomorphic evidence indicates a low slip rate.
Date and Compiler(s)	1999 Bill D. Black, Utah Geological Survey Suzanne Hecker, U.S. Geological Survey
References	#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. #4498 Jordan, T.E., 1985, Geologic map of the Bulls Pass quadrangle, Box Elder County, Utah: U.S. Geological Survey Miscellaneous Field Studies Map MF-, scale 1:24,000. #4499 Jordan, T.E., Allmendinger, R.W., and Crittenden, M.D., Jr., 1988, Geologic map of the Howell quadrangle, Box Elder County, Utah: Utah Geological and Mineral Survey Map 107, 10 p. pamphlet, scale 1:24,000. #4500 Miller, D.M., Crittenden, M.D., and Jordan, T.E., 1991, Geologic map of the Lampo Junction quadrangle, Box Elder

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