

2495, FREMONT WASH FAULTS

Structure number: 2495.

Comments: Hecker's (1993) fault number 9-31.

Structure name: Fremont Wash faults.

Comments:

Synopsis: Poorly understood middle and late Quaternary faults in Fremont Wash.

Date of compilation: 10/99.

Compiler and affiliation: Bill D. Black (Utah Geological Survey) and Suzanne Hecker (U.S. Geological Survey).

State: Utah

County: Iron.

1° x 2° sheet: Richfield.

Province: Basin and Range and Colorado Plateaus.

Reliability of location: Good.

Comments: Mapped or discussed by Anderson and Bucknam (1979), Anderson (1980), and Anderson and others (1990). Mapping from Anderson and Bucknam (1979).

Geologic setting: Four short northeast-trending normal faults on the northwest and southeast sides of Fremont Wash at the northeast end of Parowan Valley. Parowan Valley is mainly in the Southern High Plateaus, comprised of distinct lava-capped plateaus defined by external bounding cliffs and internal alluvium-filled valleys following fault lines or narrow grabens.

Sense of movement: N

Comments:

Dip: No data.

Comments:

Dip direction: SE and NW(?).

Geomorphic expression: Scarps in alluvial deposits mapped as late Pleistocene in age. Radiocarbon samples from alluvium post-dating faulting yielded an age of 3,800 yr B.P.

Age of faulted deposits: Middle to late Quaternary.

Paleoseismology studies: None.

Timing of most recent paleoevent: (4) Middle and late Quaternary (<750 ka).

Comments:

Recurrence interval: No data.

Comments:

Slip rate: Unknown, probably <0.2 mm/yr.

Comments:

Length: End to end (km): 7

Cumulative trace (km): 4

Average strike (azimuth): N57°E

REFERENCES

- Anderson, R.E., 1980, The status of seismotectonic studies of southwestern Utah, *in* Andriese, P.D., compiler, Earthquake hazards along the Wasatch and Sierra-Nevada frontal fault zones: U.S. Geological Survey Open-File Report 80-801, p. 519-547.
- Anderson, R.E., and Bucknam, R.C., 1979, Map of fault scarps in unconsolidated sediments, Richfield 1° x 2° quadrangle, Utah: U.S. Geological Survey Open-File Report 79-1236, 15 p., scale 1:250,000.
- Anderson, J.J., Rowley, R.D., Machette, M.N., Decatur, S.H., and Mehnert, H.H., 1990, Geologic map of the Nevershine Hollow area, eastern Black Mountains, southern Tushar Mountains, and northern Markagunt Plateau, Beaver and Iron Counties, Utah: U.S. Geological Survey Miscellaneous Investigations Series Map I-1999, scale 1:50,000.
- Hecker, Suzanne, 1993, Quaternary tectonics of Utah with emphasis on earthquake-hazard characterization: Utah Geological Survey Bulletin 127, 2 plates, scale 1:500,000, 257 p.