

Active tectonic investigations on Badamestan anticline

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Badamestan anticline with an axial surface attitude of 312,64NE is situated in south of Chharmahalo-Bakhtiari province in Zagros active folded belt of Iran. Lordegan valley, an antecedent river gorge, is cut through the limestones of Asmari formation within the anticline with an approximate trend from east to west.

Existence of erosional and cut-in-bedrock cyclic stream terraces appear to be a result of a periodic active uplift. Change in valley cross section geometry from U to V-shape, increase of longitudinal dip and step-like shape of the river with an area under longitudinal profile greater than 60% through the anticline, not only show that the uplift is active in the recent times, but also indicate that the north-east terrains are uplifted to higher levels with respect to those at south-west.

Considering the asymmetrical geometry of the anticline, existence of a reverse fault system may be inferred under the anticline. The occurrence of earthquakes along this structure is another proof to such active brittle deformations.