

BRITTLE DEFORMATIONS ALONG BAKHTIYARI FAULT AS A SEGMENT OF MAIN RECENT ZAGROS FAULT, IRAN

JAHANI, S., Ghods Niroo Consulting Engineers, Tehran, Iran, P.O.Box 15745/516

Bakhtiyari Fault, the continuation of the Doroud fault from the Main Recent Zagros Fault, is situated below 33°N in the north Zagros structural zone. In this study Bakhtiyari strike slip fault and its brittle deformations are introduced. This fault is a segment of the active quaternary fault system of the Main Recent Zagros Fault. It is about 50Km long, with N143° strike and almost vertical dip with an en-echelon structure which initiates from 33°N in the far southeast. Surficial evidences indicate about 20Km cumulative displacement along its strike. According to the model for brittle deformations in the studied area, Bakhtiyari fault is the second-degree fault of the Riddles fracture system. Geomorphologic evidences such as drainage displacement, sag pounds, fault linear valleys, shutter ridge, fault scarps and silken-sides all indicate right-hand strike slip movements in this fault. Contemporary earthquakes resulted from this fault, which is similar to the historical and instrumental earthquakes in the adjacent fault systems, indicates the activity of Bakhtiyari segment along with Zagros. Estimation of the abundance of the fractures according to their length reveals eight major trends, which the most important ones are the Zagros trend (N130°), N145° and N-S trends. Most faults belong to the first degree N130° trend, which has reverse mechanism and is the oldest trend. The latter is intercepted and displaced by other trends, especially N145°. The youngest trend in the area is N-S trend.