

Tectonic situation of Bidkhan volcano in Urumieh-Dokhtar

Magmatic Belt, SE Iran

Regional faulting can control magma movements, deform volcanoes and may destabilize their flanks. Accompanying continuous convergence of Arabian-Eurasian plates and thickening and shortening of the Iranian continental crust, volcanic activity has continued from early Tertiary until present along the Urumieh-dokhtar magmatic belt in central Iran. It is NW-SE striking parallel to the Zagros mountain. Bidkhan volcano in this belt has intruded in a weakness point controlled by Rafsanjan strike-slip fault. Lateral strike-slip Rafsanjan fault has NW-SE

strike sub parallel to the Urmieh-Dokhtar magmatic belt. Structural analysis and its satellite images illustrating that Bidkhan volcano located in extension termination of the Rafsanjan Fault. Extension in this region leads to the eruption and subsequent structural evolution of the Bidkhan volcano. Field investigation on caldera, slopes and dykes in the Bidkhan volcano revealed that kinematics of faults, fractures and their trends are result of existing Rafsanjan major strike-slip fault. Strike of all these structures are NE-SW and the faults are left lateral strike-slip normal faults.

