

**Petrological investigations of Eocene volcanic rock at
southern part of the Qazvin region, (Danesphahan area)
Northern part of IRAN**

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The studied area is a portion of Urumieh-Dokhtar magmatic Assemblage (UDMA) south of Qazvin located in part of the geological map of SAVEH. The sedimentary – volcanic sequence, which constitutes a major part of the outcrops in the region includes pyroclastic and sedimentary deposits with basaltic, andesitic basalt, trachyandesite, trachyt and rhyolitic composition with Eocene in age.

The present study indicate that there is a general geochemical similarity between the rocks of the region and those documented from the setting probably Island arc. It appear that the basaltic rocks of the region were resulted from partial melting of metasomatized mantel wedge in the presence of the fluid rich in large ion lithophyle (LIL) elements. These elements were resulted from subduction of an oceanic slab, and their presence with in the shallow crust magmatic chambers caused fractionation, contamination and probably crustal melting.

Normalized multi – elements diagrams (spider diagrams) of basalt and andesite basalt from Danesphahan area and other region of Iran can be compared with orogenic environment and probably indicate that during Eocene volcanic activities, the Iran plate was under contineous changes resulted from the compression by other plates.

Therefore, a major part of the orogenic actives pertains to the subduction of various zones and blocks in different parts of Iran.