Geophysical Research Abstracts,
Vol. 10, EGU2008-A-00163, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-00163
EGU General Assembly 2008

Geochemical characteristics of the granitoid complex of Boroujerd

R.Zareisahamieh

Lorestan University(zareisah@yahoo.com),(00986612200185)

The Granitoid Complex of Boroujerd belongs to the Sanandaj-Sirjan Zone (SSZ) in the western of Iran. It is elongated and parallels the prevailing schistose in the metamorphic rocks by the trend of NWâEUR“SE and consists of quartz diorites, granodiorites, monzogranites and acidic dikes (aplites and pegmatites). This Complex is of subalkaline affinity; belong to the high-K calc-alkaline series, metaluminous to weakly peraluminous, and display features typical of I-type granites. Trace and rare-earth elements distribution patterns for the Boroujerd granitoid rocks indicate a distinctive depletion in Nb, Ta, Sr, Ba, P and Ti relative to other trace elements and a greater enrichment in LILE compared to HFSE. These geochemical characteristics suggest that these rocks derived from a crustal source. The granitoid Boroujerd has geochemical characteristics typical of arc intrusives and plot as volcanic arc granites on various discriminant diagrams. This granitoid is typical representatives of a volcanic arc environment, spatially related to an active continental margin. Probably, it is the result of the subduction of Neo- Tethyan oceanic crust below the Iranian microcontinent. All available data are compatible with the idea that these rocks represent the products of convergent margin processes during the Mesozoic.

Key words: Iran, Sanandaj-Sirjan Zone, I-type granite, continental arc, Neo- Tethyan