Geophysical Research Abstracts
Vol. 12, EGU2010-7033-1, 2010
EGU General Assembly 2010

Geology and Petrography of Igneous and Metamorphic Rocks in North Hamedan,Sanandaj-Sirjan Zone,Iran

Safar Ali Eshraghi (1) and Mosaieb Sabzehei (2)

(1) Geological Survey Of Iran,Tehran,Iran,sa_eshraghi@yahoo.com, (2) Islamic Azad university,Shiraz brach ,Shiraz,Iran,msabzehei@yahoo.com

Metamorphic and igeous rock complexes of Hamadan area is part of a more extensive metamorphic belt called Sanandaj- Sirjan.

Gabbroic and granitoidic masses like Alvand granite. Almabulagh mafic to felsic, Zamanabad and Mangawi pegmatite characterize this area.

Almabulagh intrusive body is comparised of metagabbro, micromonzonite to diorite. Felsic bodies of this area is composed of quartz syenite, tonalite and alkaligranites.

Alvand basic intrusive bodies are composed of gabbronorite, olivine gabbro, quartz diorite accompanied by microgabbroic to doleritic dykes.

In Zamanabad microgabbroic to dioritic rocks are accompanied by hololeucogranitic rocks are composed of Biotite granite to Biotite granodiorite xenoliths of metamorphic rocks and minerals are abundant. Part of these granitoidic rocks are converted to Orthogneisis in shear zones. Porphyritic granites, Pegmatite are subordinate.

Stages of metamorphic and metasomatic recrystallization., scapolite, albite, amphiboles, biotite, chlorite, epidote and tourmaline are formed in these events.

Metamorphic processes related to Alvand magmatism produced various slates, phyllite, schists and hornfelses at the expense of pelitic – Psammitic rocks.

Various garnet schist, Andalusite schist, Andalusite-Sillimanite schist, Kyanite + Staurolite schist constitue on early Barrovian (moderate P/T) type metamorphic events are of Abukuma type metamorphism.

Contact metamorphic events are superimposed on all previous events and produced various type of metamorphic rocks. These rocks show. Typical zone from migmatite at the close vicinity of intrusive bodies to hornfels, spotted schist and spotted slate in more distant parts from intrusive body.

The most important metamorphic events has happened in period before Upper Trassic-Lower Jurassic.