Evidences of South Caspian basin development in Alborz range (Between Sepidroud and Polroud rivers)

Hakimi Asiabar* S[1], Pour Kermani, M. [2], Shahriari, S. [3], Ghorbani, M. [4], Ghassemi, M. R. [5]

*Corresponding author; Azad University, Lahijan branch, Tel.: +98 9113441056; E-mail: saeid_sarooj@yahoo.com

Abstract

Based on lithological, structural and rock unit sequences which exposed in the Alborz range of northern Iran, Several Mesozoic tectonostratigraphic units of Alborz are distinguished: (1) an upper Triassic to lower Jurassic coal-bearing deltatic to fluvial siliciclastics sequence; (2) a middle Jurassic to lower Cretaceous epicontinental to continental shelf sequence; (3)a lower Cretaceous epicontinental to continental shelf in the southern margin of Alborz followed by volcanic activity; (4) an upper Cretaceous epicontinental to continental condition in the southern margin of Alborz, synchronous with about 2500- 3000m basaltic to andesitic pillow lava and pelagic sedimentation in the northern margin of Alborz range.

According to structural styles and tectonosedimentary basins of the Western Alborz range, five tectonostratigraphic zones are distinguished in the Western Alborz mountain range from south to north. These five tectonostratigraphic zones are included; (1) Alborz Magmatic Assemblage, (2) Southern Alborz which situated south of Anglool- Daryasar fault, (3) Median Alborz, (4) Northern Alborz which situated north of the Dorfak- Deylaman fault and (5) Gorgan- Rasht Plain.

[1] -*Hakimi Asiabar, S. , PhD. Student, Azad University, Lahijan branch, Iran, Phone no. +98 911 3441056 Fax no. +98 141 2242607,Email: saeid_sarooj@yahoo.com
[2] - Pour Kermani, M. , Shahid Beheshti University, Evin, Tehran,Iran, Phone no. (+98) 09122835055, 02129902628
[3] - Shahriari, S. , Shahid Beheshti University, Evin, Tehran,Iran. Phone no. (+98) 09128064268, 02122259236
[4] - Ghorbani, M. , Ass. Prof. of Shahid Beheshti University, Email: m-ghorbani@hotmail. com
[5] - Ghassemi, M. R., Ass. Prof. of Geosciences Institute of Geological Survey of Iran. m. r. ghassemi@gsi-iran. org

Investigations carried on, stratigraphic rock units of Mesozoic, in different geologic zones of area, show evidences of a back arc basin in South Caspian depression in northern side of Alborz range during Cretaceous period which in turn, it's nucleation probably started during upper Triassic- Jurassic time.

The aim of this paper is to provide an outline of the geological conditions of South Caspian- Northern Alborz during Late Jurassic- Late Cretaceous time, and to investigate geological conditions, four time interval maps were constructed, which depict plate tectonic configuration, paleogeography and general lithofacies of several parts of the Alborz mountain range during Cretaceous period.

The commentation of constructed maps of Late Jurassic– Cretaceous times, show that the northern Alborz- south Caspian back arc basin, which mainly exposed in Lahijan and Amlash areas, developed synchronously with some uplifting events which printed in the median and southern parts of Western Alborz range.

Key words: South Caspian, Western Alborz range, Back arc basin, Iran