IRANIAN SOCIETY of CRYSTALLOGRAPHY and MINERALOGY

Vol. 16, No. 2, summer 1387/2008

IRANIAN JOURNAL of CRYSTALLOGRAPHY and MINERALOGY

Petrology and Petrogenesis of Igneous Bodies of Divan-Daghy, Ghareh-Gose North of Marand (East Azarbaijan)

S. Aamini[1], A. Ravankhah[1], M. Moayyed[2]

1- Tehran,Tarbiat Moallem University ,Faculty of sciences, Department of Geology.
2- Tabriz, University of Tabriz, Department of Geology.
E-mail:Sadramini@tmu.ac.ir

(Received: 20/5/2007, in revised form: 10/4/2008)

Abstract: Acidic and basic volcanic and intrusive rocks of Harzandat-Divan Daghy as individual masses, are located in North and Northwest of Marand (Harzandat) and South of Jolfa (Ghareh Gose-Divan Daghy) trending NW-SE.These rocks are located under Permian progressive deposits, which are covered by an igneous sole unconformity. Lithological composition of the acidic volcanic rocks ranges from dacite, rhyodacite to rhyolite, and basic volcanic rocks range from basalt to basaltic-andesite, where as plutonic rocks are of quartz-syenite. Major minerals of the acidic volcanic rocks and acidic intrusive bodies are quartz, plagioclase and K-feldspar and of the basic volcanic rocks are plagioclase, pyroxene and olivine. Minor minerals of these rocks are biotite, amphibole, sodic pyroxene, apatite, titanite and zircon. Emplacement of intrusions was in shallow depths as dyke, sill and small stocks and are of A-type. Studies show that acidic volcanic rocks are cognate to intrusive bodies and these rocks are A_1 type. Basic volcanic rocks plot in two field on the discriminant diagrams for basalts: oceanic basalts and within plate basalts, therefore two possibilities may reinforced:1) either these basalts are the remanents of early Paleo-Tethys oceanic-crust or 2) these basalts were erupted in post collision and within plate environments perior to acidic eruptions and intruding of acidic masses. With respect to shoshonitic characteristics of these basalts which have been determined on the basis of immobile elements, and considering absence of shoshonitic rocks in oceanic environments the latter idea seems to be more acceptable.

Keywords: *Petrology, Divan Daghy -Ghareh Gose, Basalt, Shoshonite, Marand ,A-type*