IRANIAN SOCIETY of CRYSTALLOGRAPHY and MINERALOGY

Vol. 24, No. 2, Summer 1395/2016

IRANIAN JOURNAL of CRYSTALLOGRAPHY and MINERALOGY

Mineralogy, geochemistry and tectonic setting of metabasites from Gasht metamorphic complex (west Rasht)

M. R. Javanmard[1], M. Nasrabady[*1], K. Gholizadeh[2]

1- Department of Geology, Faculty of Sciences, Imam Khomeini International University, Ghazvin, Iran
2- Department of Geology, Faculty of Sciences, Shahid Beheshti University, Tehran, Iran

(Received: 07/06/2015, in revised form: 13/09/2015)

Abstract: Gasht metamorphic complex is situated in the Talesh mountains of western Alborz range. This metamorphic complex consists mainly of metapelite and metabasite. Metabasites display metamorphic conditions of amphibolite and greenschist facies. Mineralogical paragenesis of greenschists are amphibole, feldspar and epidot and clinopyroxene occures as accessory minerals. The amphibolites of Gasht metamorphic complex are both granular and foliated types. Rock forming minerals are andesin and magnesiohornblende and accessory minerals contain sphene, ilmenite and clinopyroxene. Biotite formed as a result of amphibole altration. Thermobarometry results, that calculated by different thermobarometry methods, show temperature rangs between 550 to 750°C and pressure between 6 to 8 Kb that are nearly equivalent to geothermal gradient of 30°C/Km. These metamorphic conditions and geothermal gradient are resemble to the adjacent metapelites. Whole rock chemistry of metabasites from Gasht metamorphic complex display geochemical characteristics of subduction setting basic magmas. Probably, greenschists and amphibolites of Gasht metamorphic complex are indicative of basic magmatic arc products that resulted of Paleotethys oceanic basin subduction beneath edge of the Turan plate and has experienced continental active margin or collision metamorphism.

Keywords: *metabasite, whole rock chemistry, active continental margin, Gasht metamorphic complex*

متن فارسی اصل مقاله از صفحه ۲۴۳ تا ۲۵۸ در این شماره به چاپ رسیده است.

[**]Corresponding author, Tel: 02833901360, fax: 02833907800, Email: nasrabadi@sci.ikiu.ac.ir

[Downloaded from ijcm.ir on 2024-04-19]