

Mineral Assemblages Sequence of Contact Aureole of Mashhad Granite

S. M. Homam

*Department of Geology, Faculty of Sciences, Ferdowsi University of Mashhad
E-mail: rezanima2010@yahoo.com*

Binalood region in north-eastern Iran forms a long and narrow belt which extends from several tens of kilometres in northwest-southeast direction. It has been considered as part of Alborz orogenic belt which its tectonic evolution is thought to be a result of the northward subduction of the Paleo-Tethys and subsequent collision between the Iranian Cimmerian microcontinent and Turan plate. Binalood region is formed from different thrust sheets with antiformal stack duplex structure and Mashhad metamorphic zone is considered to be the uppermost structural sheet of this duplex. In Mashhad metamorphic zone rocks are metamorphosed under lower greenschist facies conditions and are intruded by granite-granodiorite plutons that have produced a distinctive thermal aureole. Metamorphic sequences have been examined from contact aureole of Mashhad granite. According to field evidences and textural features, contact aureole of Mashhad granite belongs to contact facies series of type 2b. Therefore, a pressure range from 3.5 to 4.5 Kbar and a contact temperature of around 600° C is estimated.

Key words: *Metamorphic sequence, Mineral assemblage, Contact aureole, Mashhad Granite*