Petrological, geochemical and K-Ar dating studies on Band-e-Ziarat ophiolitic complex, south of Kahnuj, Kerman Province

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Abstract: Band-e-Ziarat ophiolitic complex is located approximately about 45 Km south of Kahnuj, Kerman Province. The complex is a horst structure at the western boundary of the Jaz Murian depression, southern Lut block and southeastern Sanandaj-Sirjan zone. It bounded to the east and to the west by two major north-south trending fault zones of Jiroft and Sabzevaran. The complex is mainly composed of low- and high level gabbroic sequences, diabasic dikes with lesser amounts of basaltic lavas and the intrusive sodic plagiogranites. The ultramafic rocks are rare and only, found near the fault zones, without any distinct stratigraphic position. Petrological and geochemical investigations along with K-Ar dating on ophiolitic rocks indicate that these rocks crystallized from Ti-rich tholeiitic melts during fractional crystallization at the Late Cretaceous time in Neotethyan oceanic basin.

Keywords: petrography; geochemistry; dating; ophiolite; Band-e-Ziarat; Kerman.