

Trace and rare earth elements geochemistry of the Lower Cretaceous siliciclastic red beds in north east Isfahan: Implication for provenance and source rocks

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Abstract

Provenance studies has been done through geochemical analysis on the Lower Cretaceous siliciclastic red beds of the Kuh-e-Bejareh section in north east Isfahan in order to determine the tectonic setting, source rocks and palaeoclimate. This studies include analysis of trace and rare earth elements which have been compared with previous interpretation from major elements analysis of same samples. The geochemical investigation on the Lower Cretaceous siliciclastic red beds indicate that the data plots on passive continental margin (PM) and continental island arc (CIA) areas. Moreover, it is indicated that the source rocks shows felsic (felsic and andesitic) and mixed mafic rocks. Weathering analysis approved high intensity weathering of the source area for the studied succession.

Keywords: *Geochemistry, Lower Cretaceous, Provenance, Kuh-e-Bejareh section, Northeast of Isfahan*