

Mineralogy and Classification of Altered Host Rocks in the Zaghia Iron Oxide Deposit, East of Bafq, Central Iran

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Abstract : The Zaghia Iron ore, in 15 km east of a town named Bafq, is located in Precambrian formation of Central Iran in form of a small local deposit. The Volcano-sedimentary rocks of Precambrian-Cambrian age, belonging to Rizu series have spread through the region. Substantial portion of the deposit is covered by alluvial deposits. The rocks hosting the Zaghia iron ore have a main combination of rhyolitic tuffs along with clastic sediments, carbonate include sandstone, limestone, dolomite, conglomerate and is somewhat metamorphed causing them to have appeared as slate and phyllite. Moreover, carbonate rocks are in existence as skarn compound of marble bearing tremolite with mineralization of magnetite-hematite. The basic igneous rocks have dramatically altered into green rocks consist of actinolite-tremolite and chlorite along with amount of iron (magnetite + Martite). The youngest units of ore-bearing rocks in the area are found as dolerite - diabase dikes. The dikes are cutting the rhyolitic tuffs and carbonate rocks.

Keywords : Zaghia, iron ore deposit, mineralogy, petrography Bafq, Iran

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