

Petrography and geochemistry of jarosite in Rangan (southwest of Ardestan)

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Abstract: The study area is a part of central Iranian Cenozoic magmatic belt. The dominant rock type in the area is rhyodacite with Eocene in age. These rocks have been effected by Qum-Zefreh fault as well as alteration by hydrothermal solutions. Due to sulfate - acid alteration, the following minerals are formed: pyrite + alkali feldspar + sericite + pyrophyllite + barite + jarosite + hematite + quartz. The presence of abundant jarosite mineral and the high heavy elemental content, as well as the high K/Na ratio, we suggest that the Rangan jarosite may have a magmatic - hydrothermal origin.

Keywords: *Rangan, Jarosite, Hydrothermal solutions.*