Using chemical compositions of minerals in recognition of tectonometamorphic evolutions of Gole-Gohar and Rutchun metamorphic complexes (South of Baft, Kerman province)

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Abstract: Gol-e-Gohar and Rutchun metamorphic complexes in south-east of Sanandaj-Sirjan metamorphic zone contain alternation of meta-sedimentary, meta-basites and impure meta-limestone that have been affected by different metamorphic events and deformational phases. In the first metamorphic event that was associated with the first deformational phase, muscuvite, biotite and garnet minerals were formed and oriented along the first schistosity (S1) just parallel to the primary layering. The second event acted simultaneously with the second deformational phase and led to the overgrowth of the previous porphyroblasts and re-orientation of them parallel to the second schistosity. The third metamorphic event in associated with the third deformational phase that produced fine-grained muscuvites along the shear zones. The first metamorphic event occurred at the temperatures of 440-460 ºC and pressures of 3/5-4/5 kb, but the second metamorphic event (peak of metamorphism) took place at the temperatures between 570-600 ºC and pressures between 7-8 kb that are correspondent with early Cimmerian orogenic phase

Keywords: Baft; deformation phase; Gol-e-Gohar and Rutchun metamorphic complexes; Sanandaj-Sirjan metamorphic zone.

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