



Petrology and structural modeling of skarn genesis in the Tange-Hana area (SW Iran)

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Tang-e-Hana region is located in the Snandaj-Sirjan structural zone in the Northwestern of Neyriz in the East of Fars province. The area mainly consist of ultramafic (harzburgite, dunite, wehrlite), mafic (gabbro) and marble rocks which partly changed to skarn. Contact of ultramafic rocks and Cretaceous calcite unites cause to form marble and skarn rocks in the study area. The main minerals in skarns are garnet (andradite+grossular), clinopyroxene (diopside, hedenbergite) Vesuvianite, Scapolite, wollastonite and magnetite. The skarn rocks show different temporal compound, so that the formation of wollastonite and garnet show gradual increase and decrease from SE to NW of the study area. The existence of wollastonite in the skarns of northern part of Tang-e-Hana is due to high temperature gradient and X_{CO_2} . According to microprobe analysis and field studies the temperature and X_{CO_2} of the skarn rocks at the time of generation was estimated between 600° - 800° and 0.03-0.3. Also the effective pressure of Oxygen was changed between 10-12 to 10-28. In this paper we try to explain the changes of mention parameters with application of structural evolution models.