



Blueschists of the Inner Makran accretionary wedge, SE Iran: Petrography, geochemistry and thermobarometry

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Blueschist facies rocks are an essential element in all discussions related to subduction processes. Some uncertainty concerns their depth of burial and subsequent exhumation mechanisms, which should involve tectonic processes sufficiently rapid to preserve mineral phases stable under high pressure – low temperature conditions. It has become crucial to understand and ascertain the thermobarometric conditions under which such rocks recrystallize in order to provide a precise record of vertical movements and thermal variations in accretionary wedges and related subduction zones.

Fe³⁺/Fe²⁺ ratios of mineral phases, sodic amphiboles in particular, are important for metamorphic pressure and temperature calculations. However, these ratios are poorly known for most minerals.

We approached the problem by studying the petrography, geochemistry and thermobarometry of scarcely surveyed blueschists, in northern Makran, comparing the influence of both bulk and mineral ferric/ferrous iron ratios on recalculated pressure and temperature conditions. The regional and thematic consequences of these preliminary results are discussed.