

<https://doi.org/10.46861/bmp.31.010>

PŮVODNÍ PRÁCE/ORIGINAL PAPER

Forsterit-serpentinový mramor s klinohumitem a spinelem u Chotěboře (moldanubikum; Český masiv); příklad retrográdní metamorfózy dolomitického mramoru

Clinohumite- and spinel-bearing forsterite-serpentine marble from Chotěboř (Moldanubicum, Bohemian Massif); an example of retrograde metamorphism in dolomite marble

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HOUZAR S (2023) Forsterit-serpentinový mramor s klinohumitem a spinelem u Chotěboře (moldanubikum, Český masiv); příklad retrográdní metamorfózy dolomitického mramoru. Bull Mineral Petrolog 31(1): 10-17 ISSN 2570-7337

Abstract

A body of dolomite marble near Chotěboř was found in migmatized biotite paragneiss of the Moldanubicum directly on the border with migmatites/orthogneisses of the Kutná Hora Crystalline Complex. The area underwent significant tectonic reworking of rocks along the Přebyslav mylonite zone. Therefore, only small relics of early prograde HT/LP metamorphism at $T > 650 - 700$ °C were preserved in this marble. They are represented by the assemblage dolomite+calcite+forsterite+Zn-spinel+clinohumite \pm Ba-phlogopite and rare baddeleyite. This mineral assemblage underwent strong low-temperature retrograde metamorphism ($< 400 - 300$ °C) under the conditions of high H_2O activity ($X_{CO_2} < 0.10 - 0.15$), which was manifested by almost complete serpentinization of forsterite. Partial alteration of clinohumite produced *serpentine* with numerous inclusions of a TiO_2 -mineral and rare sphalerite. The examined serpentine marble (ophicalcite) is lithologically and mineralogically similar to the dolomite marbles found in the Strážek Moldanubicum.

Key words: *serpentine, dolomite marble, retrograde metamorphism, regional geology, Bohemian Massif, Czech Republic.*

Obdrženo 5. 2. 2023; přijato 25. 5. 2023