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PŮVODNÍ PRÁCE/ORIGINAL PAPER

Minerály kontaminovaných granitových pegmatitů z lomu Pohled u Havlíčkova Brodu (moldanubikum), část I: oxidy, karbonáty, silikáty a fosfáty

Minerals of contaminated granitic pegmatites from the Pohled quarry near Havlíčkův Brod (Moldanubicum, Czech Republic), part I: oxides, carbonates, silicates and phosphates

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Abstract

In the Pohled quarry near Havlíčkův Brod town (central part of the Czech Republic), granitic pegmatites form dikes or irregular bodies cementing breccia of host metamorphic rocks (paragneisses, amphibolites) belonging to the Monotonous (Ostrong) Group of the Moldanubicum of the Bohemian Massif. Pegmatites exhibit coarse-grained textures and very simple mineral composition, which, however, was in places strongly modified by superimposed hydrothermal alterations and locally also by crystallization of ore minerals. K-feldspar, plagioclase (An₀₋₃₈), biotite (phlogopite), apatite (fluorapatite to hydroxylapatite), zircon, allanite-(Ce) and part of quartz undoubtedly originated during the magmatic stage. Products of hydrothermal alterations include younger quartz, Fe-Mg chlorites (older clinocllore and younger chamosite with an admixture of Ca-smectite), prehnite, clinozoisite, amphibole (actinolite), titanite, calcite, and very probably also ilmenite (with up to 22.5 mol. % of pyrophanite), rutile, anatase and V-Cr-Fe-rich grossular with 13 - 25 mol. % of goldmanite and 12 - 24 mol. % uvarovite. The elevated contents of Mg, Ca, V and Cr found in some minerals are associated with a material contamination by the surrounding metamorphic rocks (especially amphibolites, serpentinites and perhaps also graphitic lithologies), which took place with varying intensity during both magmatic and hydrothermal stages of evolution of the studied pegmatites. Geochemically, they are poorly fractionated pegmatites, whose origin was probably connected with anatexis of the host Moldanubian metamorphic rocks, which was likely associated with emplacement of adjacent small body of the Pohled Granodiorite.

Key words: contaminated granitic pegmatites, hydrothermal alteration, chlorite, allanite, V-Cr rich grossular, chemical composition, Moldanubicum, Bohemian Massif

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