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PŮVODNÍ PRÁCE/ORIGINAL PAPER

Mineralogická charakteristika fosforitové konkrece s rodochrozitem z lokality Tabarky, severní Chřiby

Mineralogy of a rhodochrosite-bearing phosphorite concretion from the locality Tabarky, northern part of the Chřiby Mts.

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Abstract

The second occurrence of phosphorite in the Chřiby Mts. was found in a secondary position (pebble from stream gravel) in the northern part of the mountain massif at the Tabarky site. Its original host rock environment were Cretaceous-to-Palaeocene flysch sediments of the Soláň Formation, belonging to the Rača Unit of the flysch belt of the Outer Western Carpathians. Based on bulk chemical composition, the studied phosphorite concretion is formed by ca. 47 wt. % of carbonate-fluorapatite, 31 wt. % of carbonate (rhodochrosite to Fe-rich rhodochrosite), and 21 wt. % of detritic admixture. The grains of carbonate are zoned with increasing Fe/Mn ratio from core to rim. Accessory pyrite with elevated contents (0.X wt. %) of Mn, Ni, Co, Cu, As and Pb as well as a very rare sphalerite were also found. Phosphorite is a product of early diagenetic processes operating in unconsolidated host deep-sea sediments. The material source of this mineralization was in unstable components of host sediments, which were remobilized by pore fluids under reducing conditions associated with shallow burial. The geochemical signature suggests that material resembling oceanic manganese nodules could have participated in the formation of the studied authigenic mineralization.

Key words: phosphorite, rhodochrosite, fluorapatite, chemical composition, Soláň Formation, Flysch belt, Western Carpathians, Chřiby Mts.

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