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Výsledky studia vivianitu, stilbitu-Ca a doprovodných minerálů z grafitového dolu Odolen v Českém Krumlově (Česká republika)

Results of the study of vivianite, stilbite-Ca and accompanying minerals from the Odolen graphite mine in Český Krumlov (Czech Republic)

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Abstract

An unusual mineral association with stilbite-Ca, pyrite, rhodochrosite, siderite and vivianite was studied on historical samples from the Odolen graphite mine in Český Krumlov (local part Domoradice, South Bohemia, Czech Republic). This low-temperature mineral association was formed on fractures of graphite paragneisses, calc-silicate rocks and quartzites. The oldest studied mineral of this association is stilbite-Ca, which forms continuous layers up to 4 mm thick composed of pale yellow pearly lustrous elongated flat crystals. Carbonates of the rhodochrosite-siderite series occur on stilbite-Ca in 1 - 2 mm thick layers composed of spherical aggregates or as solitary 2 - 4 mm large spherical and sheaf-like aggregates. These translucent carbonates are brownish-yellow to brownish-orange. Two generations of pyrite have been observed in association with these carbonates. The first generation, older than the carbonates, is composed of up to 1 mm large, perfectly developed crystals with predominant octahedron faces. Second-generation pyrite locally overlies carbonate aggregates as isometric crystals up to 0.5 mm in size. The youngest mineral of the studied association is vivianite, which forms up to 38 mm large flat cleavable crystals of dark blue-green to green colour. The results of chemical composition studies and PXRD analysis of individual minerals are presented in this paper.

Key words: *vivianite, stilbite-Ca, rhodochrosite, siderite, amorphous Fe-Mn silicate, powder X-ray diffraction data, unit-cell parameters, chemical composition, Odolen graphite mine, Domoradice, Český Krumlov, Czech Republic*

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