PŮVODNÍ PRÁCE/ORIGINAL PAPER

Historická těžba pelosideritů na lokalitě Koryčanská cesta u Moravan, jižní Chřiby

Historical mining of pelosiderites at the locality Koryčanská cesta near Moravany, southern part of the Chřiby Mts.

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Dolníček Z, Kandrnál L, Ulmanová J, Vratislavská E, Hojač P (2019) Historická těžba pelosideritů na lokalitě Koryčanská cesta u Moravan, jižní Chřiby. Bull Mineral Petrolog 27(2): 304-316 ISSN 2570-7337

Abstract

The locality Moravany - Koryčanská cesta represents a small occurrence of pelosiderite concretions, which have been mined for production of iron in 19th century. The host rock environment is formed by green-grey to dark grey claystones of the Rača Unit (Flysch Belt of the Western Carpathians). The pelosiderites are formed by fine-grained siderite to manganese-rich siderite containing disseminated detrital material. Grains of carbonate are zoned with increasing Fe/Mn ratio from core to rim; on the rim itself there is sometimes present a thin zone enriched in Mg. In addition, a concretion of phosphorite was found in association with pelosiderites. It is formed by carbonate-fluorapatite enclosing some detrital material. Both pelosiderite and phosphorite also contain accessory pyrite with elevated contents of Ni (up to 3.9 wt. %), Co (up to 1.2 wt. %) and sometimes also Hg and Pb (up to 0.5 wt. %); the occurrence of rare chalcopyrite was also found. Pelosiderites and phosphorite are product of early diagenetic processes operating in unconsolidated host clayey deep-sea sediments. The material source of this mineralization was in both detrital and authigenic 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 participate during formation of the studied mineralization.

Key words: *pelosiderite, phosphorite, Mn-rich siderite, chemical composition, Flysch belt, Western Carpathians, Chřiby Mts.*

Obdrženo 24. 9. 2019; přijato 7. 11. 2019