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PŮVODNÍ PRÁCE/ORIGINAL PAPER

Mineralogická charakteristika polymetalického rudního výskytu Hostětice u Telče (moldanubikum, Česká republika)

Mineralogy of polymetallic ore occurrence Hostětice near Telč (Moldanubian unit, Czech Republic)

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Abstract

Samples from a small vein Pb-Zn-(Ag) ore occurrence near Hostětice (1.5 km east from the town of Telč, Českomoravská vrchovina Upland, Czech Republic) were studied mineralogically by means of electron microprobe and sulfur stable isotope analyses. Major sulfide minerals are represented by black sphalerite (with 0.044 - 0.192 *apfu* Fe, 0.005 - 0.006 *apfu* Cd, and 0.001 - 0.008 *apfu* Mn), galena (with low both Sb and Ag up to 0.003 *apfu*) and arsenopyrite (rarely with up to 0.010 *apfu* Co), which are accompanied by rare pyrite (rarely with up to 0.004 *apfu* Ni or As), chalcopyrite, and native bismuth. Ore minerals are hosted by quartz gangue with subordinate illite-muscovite, siderite ($\text{Sid}_{52-79}\text{Mag}_{19-43}\text{Rdc}_{1-3}\text{Cal}_{0-2}\text{Smi}_{0-2}$), anatase, and a kaolinite-group mineral. Supergene minerals are represented mainly by scorodite and anglesite and, rarely, by probable zýkaite. The $\delta^{34}\text{S}$ values of galena and sphalerite range between 2.2 and 5.7 ‰ CDT. Arsenopyrite thermometry, illite compositional thermometry, sulfur isotope thermometry, and stabilities of anatase, muscovite, and a kaolinite-group mineral suggest formation temperatures of primary mineralization between 480 and <200 °C and at least episodically acidic pH of the parent fluids. The mineral assemblage and compositions of minerals from Hostětice resemble the so-called *k-pol* type of base-metal veins widely occurring in the wider area, however, the formation temperatures seem to be somewhat lower at Hostětice in comparison with typical *k-pol* mineralization.

Key words: Hostětice, Českomoravská vrchovina Upland, Pb-Zn-(Ag) veins, sulfides, zýkaite

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