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PŮVODNÍ PRÁCE/ORIGINAL PAPER

Barytová mineralizace v granodioritovém porfyritu z Bělovsí u Náchoda (orlicko-sněžnické krystalinikum, Česká republika)

Baryte mineralization in granodiorite porphyrite from Běloves near Náchod (Orlica-Sněžník Crystalline Complex, Czech Republic)

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Abstract

A new occurrence of baryte mineralization at Běloves near Náchod is bound to a steep NNE-SSW trending fissure in a dyke of granodiorite porphyrite, which cut phyllites of the Nové Město Group (Orlica-Sněžník Crystalline Complex). The mineralization is composed of three generations of baryte differing in Sr contents (~0.10 *apfu* in the oldest generation, ~0.003 *apfu* in the youngest generation) and a small amount of hematite. The primary fluid inclusions in baryte belong to type L and L+V; the variable phase proportions are probably caused by postdepositional damage of part of the present fluid inclusions. The wide range of temperatures of both initial melting (-40 to -1 °C) and final ice melting (-0.3 to -12.3 °C) suggests involvement of fluids with very variable salt systems and salinities. The $\delta^{34}\text{S}$ values of baryte range between +5.5 and +7.1 ‰ CDT. The mineral composition, chemical composition of minerals and fluid inclusion data suggest that the studied mineralization is similar to Late Variscan vein baryte and mineralizations of the Bohemian Massif. The source of fluids is interpreted in evaporated fresh waters of Permian lakes, which occurred in the adjacent Krkonoše Piedmont Basin during the Permian.

Key words: baryte, hematite, fluid inclusions, stable isotopes, Orlica-Sněžník Crystalline Complex, Krkonoše Piedmont Basin

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