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PŮVODNÍ PRÁCE/ORIGINAL PAPER

Zeolitová mineralizace se stelleritem z Malého Jeleního vrchu u Stráže pod Ralskem (Česká republika)

Zeolite mineralization with stellerite from the Malý Jelení vrch hill near Stráž pod Ralskem (Czech Republic)

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Abstract

A zeolite mineralization (stellerite, chabazite-K, heulandite-Ca, lévyne-Ca and erionite-Ca) in tiny cavities of Cenozoic basaltic rocks was sampled at the Malý Jelení vrch hill (500 m above sea level) near Stráž pod Ralskem, northern Bohemia (Czech Republic) and studied by means of electron microprobe and X-ray powder diffraction. Stellerite is the most interesting zeolite in association, this find is its second confirmed occurrence in the Czech Republic. Stellerite forms colourless to white prismatic crystals up to 3 mm in size and rare fan-shaped aggregates up to 1 cm in size. It is orthorhombic, space group *Fmmm*, the unit-cell parameters refined from X-ray powder diffraction data are: *a* 13.614(2), *b* 18.226(2), *c* 17.862(2) Å and *V* 4432.1(9) Å³. Its chemical analyses correspond to the empirical formula $(\text{Ca}_{4.23}\text{K}_{0.53}\text{Na}_{4.76})(\text{Si}_{27.64}\text{Al}_{8.11})\text{O}_{72} \cdot 28 \text{H}_2\text{O}$ on basis of 72 atoms of oxygen. The time sequence of crystallization of described mineralization at the Malý Jelení vrch hill is as follows: heulandite-Ca - stellerite - chabazite-K - lévyne-Ca - erionite-Ca - calcite.

Key words: stellerite, chabazite-K, heulandite-Ca, erionite-Ca, lévyne-Ca, Cenozoic basaltic rocks, X-ray powder diffraction data, unit-cell parameters, chemical composition, Malý Jelení vrch hill near Stráž pod Ralskem, Czech Republic

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