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PŮVODNÍ PRÁCE/ORIGINAL PAPER

Příspěvek k petrografii a mineralogii lokality Vyskočilka (Praha-Malá Chuchle, silur Barrandienu)

A contribution to petrography and mineralogy of the locality Vyskočilka
(Prague-Malá Chuchle, Silurian of the Barrandian Basin)

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Abstract

Classical locality Vyskočilka in the Barrandian Basin displays a well-exposed section of black Silurian shales penetrated by a ca. 10-m thick *diabase* sill. We examined the petrographic character and mineral composition of the intrusive body and enclosing shales, as well as the hydrothermal veins cutting the rocks. The *diabase* is a rock with basic affinity (paleobasaltoid), which was strongly influenced by post-magmatic alterations including albitization and zeolitization of feldspars as well as chloritization of clinopyroxenes and Fe-Ti spinelides. Host sediments show variously intense thermal overprint at the contact with the sill. The predominating Silurian shales are rarely accompanied by laminites, formed by siliciclastic material, calcite, apatite and probably also a pyroclastic component. A minor component of all sediments are Ti-rich chromspinelides, which are classified as chromite, magnetite, and spinel. Chromspinelides form isolated euhedral single crystals reaching up to 50 μm in size, as well as their intergrowths and fragments, which all do not display marks of abrasion due to transport. We therefore presuppose that they represent relics of ultrabasic pyroclastic material (volcanic ash), which was deposited during sedimentation of Silurian sediments. There are known few sills of Silurian meimechites in the Prague Basin containing chromspinelides with comparable chemical composition, which can thus represent a likely source of chromspinelides. The vein hydrothermal mineralizations, present at the study site, probably originated during different geological processes. The calcite veins with minor quartz and hydrocarbons likely formed during Variscan tectono-thermal overprint of the area. By contrast, the vein mineralization containing calcite, quartz, titanite, anatase, and Zn-Fe-Ni-Cu sulphides was likely associated with contact-metamorphic processes related to intrusion of *diabase*.

Key words: Barrandian, tuffite, pyrometamorphism, *diabase*, chrome spinels, hydrothermal veins

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