

Basic and Ultrabasic Rocks at the Bohemicum / Moldanubicum Boundary Along the Central Bohemian Fault

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Intrusive basic rocks of the Neukirchen-Kdyně Massif (Bohemicum) have in general basaltic composition and subalkaline tholeiitic character. Gabbros of the Neukirchen-Kdyně Massif are feldspar cumulates related to their pronounced positive Eu-, Ba- and Sr-anomaly. Diorites and quartz diorites show progressively andesitic to dacitic composition. Amphibolites close to dioritic bodies somewhat farther from the Central Bohemian Fault (CBF) into the Bohemicum have similar geochemistry with intrusive basic rocks and could thus be recognized as “metagabbros” or “gabbroamphibolites”. Amphibolites close to CBF in the easternmost extension of amphibolitic massif Hoher Bogen correspond to IAT-ocean floor basalts as reported by Propach and Pfeiffer (1998).

Amphibolites in Moldanubicum, close to CBF have basaltic subalkaline tholeiitic composition and amphibolites from the two-mica gneisses of Královský Hvozď Unit (KHU) exhibit basaltic subalkaline calc-alkaline character. Both are geochemically very similar to those of the Bohemicum with the exception of much higher contents of REE in the Moldanubian amphibolites probably due to contamination of neighbouring gneisses in which they build only thin layers. In contrast, the majority of amphi-

bolites from the Strážov Varied Group have alkaline basaltic composition.

Ultramafites along the CBF have character of cumulative komatiites. Amphibolites from the Rittsteig borehole drilled through the CBF correspond along the whole profile (around 550 m) to those of the Bohemicum.

Ultramafic pyroxenite at Brtí from the Moldanubian Strážov Varied Group is likely to have originated from the lower crust and could document the very beginning of the differentiation series of the basic intrusive rocks such as the Všeruby Massif belonging to Bohemian Neukirchen-Kdyně Complex. The differentiation processes in the lower crust could be thus similar both in Bohemicum and in Moldanubicum.

References

- PROPACH G. and PFEIFFER T., 1998. Ocean floor basalts, not continental gabbro: a reinterpretation of the Hoher Bogen amphibolites, Teplá-Barrandian, Bohemian Massif. *Geol. Rundsch.*, 87: 303-313.