

Discussion: There is no apparent correlation between the occurrence of the different fluid inclusion types on one hand and the geological position of the host rock and the lithology on the other hand.

Type 1 and 2 are of different age. This is evidenced by the fact that they form different trails. The occurrence of type 2 inclusions in texturally late veins together with type 3 and 4 indicate that type 2 are younger than type 1. Among type 1b inclusions, some of the phenomena heterogeneous trapping, fluid immiscibility followed by unmixing, and H₂O-leakage out of originally mixed inclusions took place in the individual samples.

Characteristic features of the fluid inclusions (mode of occurrence, density) clearly show that their equilibration is younger than the peak of metamorphism and took place during a retrogressive stage of the evolution of the rocks. It is assumed that the CO₂-dominated inclusions were trapped continuously during a long period of uplift and cooling. The aqueous inclusions were equilibrated at a later stage and could represent the fluid that caused large scale rehydration.

LINNER, M. (1994): Metamorphism and migmatization of the paragneisses of the Monotonous group, SE Moldanubicum. - Mitt.Österr.Mineral.Ges., **139**, 83 - 84.

PETRAKAKIS, K. (1986): Metamorphism of high grade gneisses from the Moldanubian Zone, Austria, with particular reference to the garnets. - J.met.Geol., **4**, 323 - 344.

PETRAKAKIS, K., RICHTER, W. (1991): Metamorphosebedingungen in der Gföhler Einheit. - Zbl. Geol. Paläont., Teil 1, 1, 167 - 180.

STAUROLITE-GRADE MICA SCHISTS SE OF THE GÓRY SOWIE BLOCK (NE BOHEMIAN MASSIF)

JÓZEFIAK, D.

Institute of Geological Sciences, University of Wrocław, Cybulskiego 30, 50-205 Wrocław, Poland

In the Sudetic area, the eastern margin of the Bohemian Massif is located to the east of the Góry Sowie gneissic block. Mylonites of the Niemcza Zone and schists of the Niemcza-Kamieniec metamorphic complex form the easternmost part of the Massif (Fig. 1). The Niemcza-Kamieniec crystalline complex is dominated by mica schists. Its northern part, situated immediately to the east of the Niemcza Zone, is mylonitized. The sinistral or top to the south sense of shear is recorded in its rocks.

The southern part of the complex consists of intercalated mylonitized and non-mylonitized schists. The sense of shear in the former ones is the same as in the northern part of the complex, and the non-mylonitized ones exhibit top to the north direction of tectonic transport. This abstract shows some details on metamorphic history of the mica schists forming the southern part of the Niemcza-Kamieniec crystalline complex.

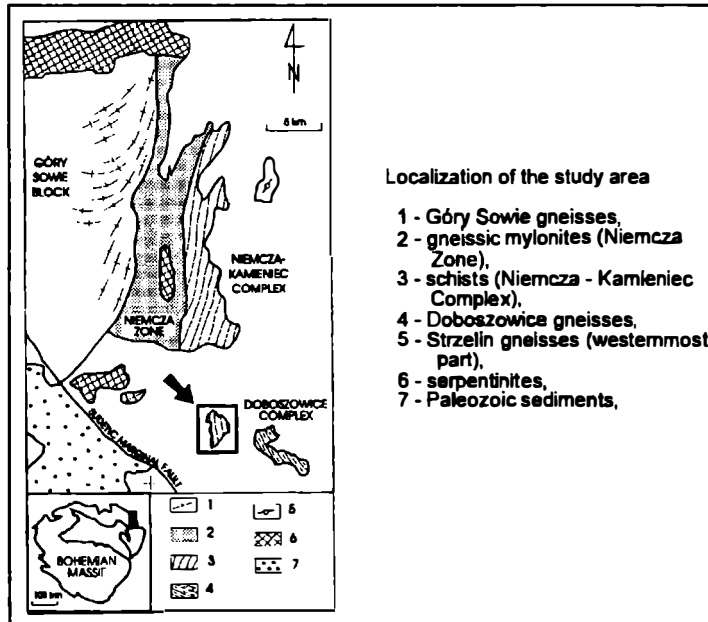


Fig. 1: Geological sketch map of the investigated area.

| | | Main deformation | |
|-------------|-------|------------------|-------|
| Muscovite | ----- | ----- | -- |
| Biotite | ----- | ----- | ----- |
| Garnet | | ----- | |
| Kyanite | ----- | | |
| Sillimanite | | | ?--- |
| Andalusite | | | ----- |
| Staurolite | | ----- | -- |
| Plagioclase | ----- | | ----- |
| K-Feldspar | | | ?--- |
| Chlorite | | | ----- |

Fig. 2: Crystallization sequence in the mica schists of southern part of the Niemcza-Kamieniec metamorphic complex.

The non-mylonitized schists are coarse-grained. Their main components are quartz and muscovite. Significant amounts of garnet, biotite, andalusite, sillimanite, kyanite, staurolite, chlorite, plagioclase and K-feldspar occur in them. Tourmaline,

apatite, rutile, ilmenite and zircon are accessories. The main deformation produced porphyroblasts of garnet with quartz, muscovite and biotite in pressure shadows. The supposed crystallization sequence of other minerals is depicted in Fig. 2. The mylonitized schists are fine-grained. Andalusite and plagioclase 2 are lacking. The syndeformational staurolite is common. Muscovite, biotite and quartz occur in its pressure shadows.

The non-mylonitized schists were subjected to kyanite metamorphism, followed by a high-temperature (K-feldspar) event. The main deformation was later and took place under staurolite-grade conditions. The post-deformational andalusite marks the end of metamorphism.

The northward directed shear sense in the non-mylonitized schists corresponds to that typical of the Moravian/Moldanubian boundary in the Czech Republic and Lower Austria. The schists are the northernmost element with this shear sense, in which the mineral crystallization sequence and conditions of metamorphism can be reasonably evaluated.

Rb-Sr-DATING OF ACID SUBVOLCANIC DYKE ROCKS - FINAL MAGMATIC PRODUCTS OF THE MOLDANUBIAN BATHOLITH

KLEČKA, M.¹, BENDL, J.² & MATĚJKA, D.³

¹ Institute of the Rock Structure and Mechanics, Academy of Science of the Czech Republic, V Holešovičkách 41, 182 09 Praha 8, Czech Republic

² Czech Geological Survey, Klárov 3, 11821 Praha 1, Czech Republic

³ Department of Mineralogy, Geochemistry and Crystallography, Charles University, Albertov 6, 128 43 Praha 2, Czech Republic

Acid dyke rocks of subvolcanic character are common in the southwestern part of the Moldanubian (South-Bohemian) Batholith and along its western margin (KLEČKA, 1984). These rocks correspond to alkali-feldspar bearing peraluminous and highly-differentiated granites with associated Sn-W mineralization (KLEČKA, 1986). They represent the youngest products of magmatism associated with an extensional regime of the final stages of Variscan orogeny in the Moldanubian core of the Bohemian Massif.

The acid dykes build a N-trending ca 85 km long volcanotectonic zone across the Czech-Austrian boundary. The zone is spatially associated with several ring volcanotectonic structures (VRÁNA, 1990) and small intrusive stocks (KLEČKA & MATĚJKA, 1992; KLEČKA & ŠREIN, 1992; KLEČKA et al., 1994) that are typically represented by topas-bearing muscovite granite (Homolka type) and Kozí hora-Hirschenschlag granite.