do not fit the found "acceptable" reduced stress tensors. This fact can be explained by the assumption that some of the NNE-SSW to NE-SW trending nodal planes are not real faults and that some of these auxiliary nodal faults do not satisfy real stress conditions. Thus, at least some of WNW-ESE to NW-SE trending nodal planes (but not necessarily all of them) represent real faults.

The hypothetical steep (subvertical) NW-SE (azimuth about 120–130°) and N-S to NNE-SSW (azimuth about 0–10°) faults are ideally orientated with a view of their easy reactivation in the observed recent stress field. Thus, the steep WNW-ESE to NW-SE "sudetic" faults can be easily reactivated under recent stress conditions. The discussed analysis of the focal mechanisms shows that some "sudetic" faults are really recently active in the Jeseníky region and that these active dislocations are dextral strike-slip faults. In the case of the NNE-SSW faults, the possibility of their reactivation significantly increases with increasing value of their dip. The recent tectonic sinistral (oblique or horizontal) movements along the steep NNE-SSW faults are highly probable.

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Nappe Contact as a Tool of Paleotectonic Reconstruction (Inner Western Carpathians a Case of Study)

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Investigated areas are situated along northern part of the Gemericum (Margecany–Dobšiná–Vernár vicinity), and in the Veporicum (Tisovec–Ľubietová vicinity). Lithostratigraphic record and radiometric data were used to estimate of age individualization of different tectonic unit. Lowermost tectonic unit in investigated areas is the Veporicum. From point of view of facies is Veporicum divided into two subunits – the North Veporicum (the Veľký Bok sequence) and the South Veporicum (the Federáta sequence). The Gemericum is overlaing of the Veporicum. There are two different type of tectonic contacts. Late Jurassic/Early Cretaceous age of contact betwen North Veporicum and Gemericum – Margecany vicinity (see Fig. 1 and Polák et al., 1997, Maluski et al., 1993).

Late Triassic/Early Jurassic tectonic contact observed in Dobšiná vicinity (Fig. 1 and Mello et al., 2000). Scarce but systematicaly observed radiometric data (cca 200–172 Ma, Maluski et al., 1993, Faryad and Henjest-Kunst, 1997, Kráľ et al., 2000) are considered as a manifestation of tectonic event operated during Early Jurassic. This event is most probably responsible for destruction of "Protomeliaticum" volcanosedimentary domain which supplied a blocks of Middle Triassic olistholits into the Meliaticum basin in Middle Jurassic (Mock et al., 1998). Tectonic contact between the Gemericum and the Federata sequence is covered by the Meliaticum and Silicicum (remnants of the Turnaicum are somewhere between them). Age of this contact is possible to estimate as the Latest Jurassic – ?Early Cretaceous (Hók et al., 1995, Faryad and Henjest-Kunst, 1997). To the west/northwest of Dobšiná vicinity we defined a new tectonic (lithotectonic) unit – the Vernaricum. The Vernaricum contains facies comparable with Silicikum and Hronicum. Tectonic position of the Vernaricum is below Meliaticum/Silicikum and above Gemericum/Hronicum (Fig. 1). Paleotectonic position above-mentioned tectonic units is posible to arrange from south (inside) to north (outside) – Silicicum – Turnaicum – Meliaticum – (Protomeliaticum) – Vernaricum – Gemericum – South Veporicum – Hronicum – North Veporicum.

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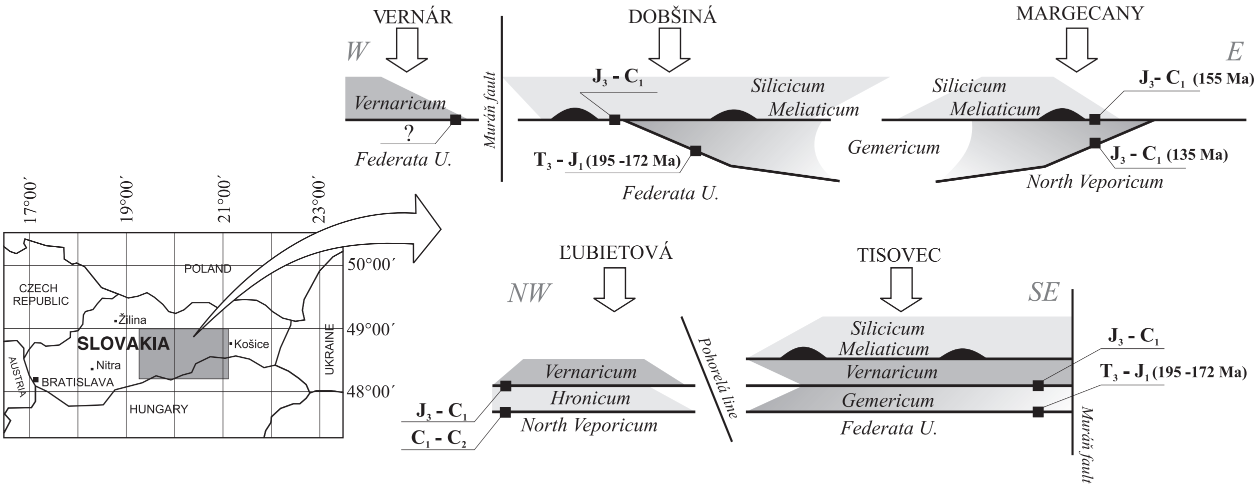

Fig. 1. Arrangement of different tectonic units in investigated areas. Explanation ($T_3 – J_1$: Late Triassic – Early Jurassic, $J_3 – C_1$: Late Jurassic – Early Cretaceous, $C_1 – C_2$: Early Cretaceous – Middle Cretaceous)

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Petrogenetic Diversity and Petrographic Convergence of Some Spheroidal Structures in Mafic Intrusive Rocks

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Several distinct types of spheroidal structures or textures occur in mafic igneous rocks of volcanic, dyke and also plutonic origin. They are termed globular, variolitic, ocellar, spherulitic and amygdaloid but terminology confusions of these terms are common and petrogenetic interpretation may be difficult (cf. Phillips, 1973). Comparative study of these structural phenomena was focused on problems of some dyke rocks and plutonic masses in the Central Bohemian Plutonic complex (CBPC) and its surroundings both in the Barrandian and Moldanubian blocks. For the better understanding of origin and evolution of some spheroidal textures, also selected volcanic rocks of various ages from Upper Proterozoic to Tertiary were studied.

Spherulitic crystallization of K-feldspar is common in some potassic lamprophyres of the minette group. Typical localities are, e.g., in Prague, Příbram, Kozárovice and Krásná Hora. Based on microstructural criteria these spherulites can be interpreted as "primary", i.e. as products of fast crystallization from scarce nuclei in hydrous feldspathic melt or hot glass under high cooling rates and strong undercooling. Distribution of macrospherulites within relatively thick dykes where these textures occur in some distance from the contacts can serve as another piece of evidence for such an origin. Varioles, common in some spilitized basalts of the Upper Proterozoic ages in the Barrandian (Bohemicum) and formerly interpreted as quenched droplets of a felsic immiscible liquid (Fiala 1967), may represent another case of spherulitic crystallization under different conditions. They can be best interpreted in terms of "secondary" devitrification of glass during post-magmatic processes of hydration and albitization during spilitic reactions.

The so-called felsic ocelli in lamprophyric dykes are of three genetic types: (1) more or less modified quartz or, less frequently, feldspar xenocrysts, (2) segregations vesicles filled with resid-