

HP-METAMORPHISM INTO LOCAL NARROW ZONES OF DEFORMATION FROM RHODOPE MASSIF, BULGARIA

KOZHOUKHAROVA, E. Geological Institute, Bulgarian Academy of Sciences

During synmetamorphic folding of the Rhodope Massif basement, narrow (1-2 to 10-15 cm) shear zones were formed at the lithological contact between rock formations with different rheological properties, where interlaminar slip took place. As a result, temperature and pressure increased and an eclogitic mineral associations appeared. Among amphibolites it is presented by omphacite, almandine and rutile but at the periphery of some serpentinite bodies - by garnet enstatite, diopside, olivine and spinel. The P-T conditions of eclogitic mineral crystallization vary within the range: $T=500-740^{\circ}\text{C}$, $P=10-12$ kbars. At the same time the background regional metamorphism of the country rocks is typical medium pressure amphibolite facies. Eclogites are displayed along local shear zones in the deepest, highly compressed synclines and the most intensive folded metamorphic terranes in the Rhodope massif. The eclogitic zones are entirely concordant with stratification and metamorphic schistosity. The morphology of eclogitic associations is evidence for their syn-metamorphic crustal genesis and indicates the possibility to obtain eclogite P-T condition in the confined space of local shear zones. Key words: HP-metamorphism, eclogites, shear zones.