to understand the source areas of the fill and the evolution of the basin.

The eastern limb of the Boskovice Furrow is characteristic of monotonous deposition (the Rokytná conglomerate), which represents typical proximal facies (alluvial fan deposits). Pebbles of Lower Carboniferous graywackes, arkoses, sandstones and shales together with Devonian limestones dominate the pebble composition. The study of arkosic sandstones, graywackes and conglomerates revealed that petrographic character of some groups of these rocks reflect similarities to some facies of the Lower Carboniferous (Culmian) Luleč Conglomerates.

Macroscopically very similar graywacke and conglomerate pebbles were also recognized within the deposits of the western limb of the BF.These pebbles, however, are here in the association with the rock material derived from the Moldanubian and Moravian units (sillimanite, large grains of K-feldspars from durbachite, serpentinized ultramafics). Remarkable differences were observed in the content of rocks revealed "western" vs. "eastern" provenance in the sedimentary profile of the western limb of the basin.

These observations can be interpreted in the way that the distal part of the deposits of the eastern limb of the basin shared in the provenance of the deposits of the western limb of the basin. The cyclicity of this process during the evolution of the basin can be connected with the tectonic processes along the eastern marginal fault of the basin (allocyclicity). Tectonic processes influenced the basin morphology, the gradient of the basin bottom, distribution of depositional environments, etc. Different role of axial and transverse transport within the basin can be assumed.

This model of material redistribution within the basin can also explain some observation of "exotic" pebbles and beds with "mixed" provenance within the BF in slightly untraditional way.

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Microstructures and Finite Strain Pattern in Heterogeneous Crustal Extension, an Example from the Vepor Basement of the West Carpathians

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The Vepor Unit composed of the pre-Alpine basement and Mesozoic cover sequences is one of the major crustal segments incorporated into the Alpine structure of the Central West Carpathians. The basement is mostly composed of high-grade orthogneisses, migmatites and large Variscan calc-alkaline intrusive bodies in the hanging wall and metasedimentary rocks, mainly micaschists, paragneisses and amphibolites in the footwall. It is generally accepted that this superposition results from a southward Variscan nappe stacking (Janák 1994). Two major Alpine deformational events have been recognized in the Vepor unit, the early E-W extensional phase followed by almost orthogonal compression. In this work we concentrated on deformational and metamorphic gradients associated with early extensional phase. The age of this event is confirmed by several $^{40}Ar/^{39}Ar$ cooling ages of micas ranging between 90 to 85 Ma (Kováčik et al., 1996; Maluski et al., 1993).

We distinguish extensional domains marked by an E-W strain and metamorphic gradients. The highly deformed rocks exhibiting the upper greenschist facies overprint often developed in footwall of highly mylonitized lower greenschist Mesozoic cover. Towards the west the metamorphism decreases and deformation becomes confined to an anastomous network of shear zones. These domains are repeatedly developed in E-W direction, but bulk intensity of metamorphism and deformation decreases towards west. In addition, we observe non-systematic alternations of weakly deformed and highly sheared rocks in N-S direction. The strain variations are documented by various finite strain techniques and the metamorphic imprint is studied using standard petrological and microstructural methods. An attempt is made to attribute the spatial distribution of finite strain and metamorphism to global extensional regime associated with development of concave normal shear zones. The decoupling of the Mesozoic cover from the footwall basement is manifested by viscous deformation of the attachment zone experiencing both vertical shear gradient and horizontal shearing along vertical transfer zones.

The second Alpine structure generally results from oblique convergence of the Vepor basement and presumed 'southern continental segment' (Lexa et al., 2002). This deformation in the studied area is manifested by the development of NE-SW trending shear zones, preferentially developed in garnetiferous micaschists and paragneisses. Inside the zone, extensional mylonitic foliations and/or older fabrics are strongly folded and transposed so that new planar and vertical fabric developed. Outside of this shear zone, a weak E-W trending crenulation cleavage affects flat extensional mylonitic foliation.

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