Electron microprobe analysis was applied for determination of authigenic and detrital minerals. Authigenic chlorites can be used for the reconstruction of burial temperatures (CATHELINEAU 1988). Detrital muscovites show partly phengite character, which can be explained with authigenic growth, vertical to the crystallographic c-axis. They provide the possibility of direct measurement of burial/tectonic pressure by application of phengite barometry (MASSONNE & SCHREYER 1987).

Clay cements investigated by SEM analysis complete the informations on dissolution and authigenic growth of the coarse detritus delivered to the Rhenish Basin.

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AN ATTEMPT OF PALAEOGEOGRAPHICAL RECONSTRUCTIONS OF ROTLIEGEND (LOWER PERMIAN) BASINS IN CENTRAL EUROPE ON THE BASIS OF NEW PALAEOCONTINENTAL MAPS

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In the present paper, a new attempt of palaeogeographical reconstructions of Lower Permian Rotliegend basins in Central Europe on the basis of new palaeocontinental maps has been made.

The region studied was situated approximately between 12 and 15° northern latitude during the Lower Permian. The climate was at this time tropical semi–humi to semi–arid. These changes were caused by the northward drift of Pangaea. Some sedimentary basins in Africa, the Chad Lake north of the equator for example or the Lake Tanganyika resp. the Lake Malawi south of the equator may seen as some actualistic examples.

The climatic changes during the Lower Permian carn be postulated through the differences within the sedimentological and fossil record. In the Lower Permian there were some lakes with partly coal seams, black shales and bituminous limestones. These lakes prove the importance of long existing and in some regions very extended water bodies. The coal seams indicate a rich vegetation which lasted for quiet a long time. The bitumen content within the black shales and the limestones is derived from a lot of algae and/or cyariobacteria. In the most cases, the lacustrine facies is situated above fluvial red beds. Both types of facies characterize fluvial to lacustrine cycles. In the course of the Rotliegend gentle changes in some regions to alluvial fan deposits and playa sediments can be observed. In other regions were rapid changes in this development. The alluvial fan deposits and the playa sediments bear no fossils with the exception of some tetrapod foot prints. This fact may be used as an additional proof for semi–arid conditions in the Upper Rotliegend.

THE INNER STRUCTURE OF THE BOHEMIAN MASSIF

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The inner structure of the Bohemian Massif is defined on the basis of systematic geological, aeromagnetic and gravity investigations performed during last 30 years. An update tectonic concept was created.

The structure of the basement of the Bohemian Massif is a product of Danubian (Hudsonian), Cadomian and Variscan orogenies. Three geotectonic cycles are separated by panregional unconformities.

The Danubian orogeny produced segments trending NW–SE. In Central Europe they are designated as the Bohemian NW and the Bavarian. They build up an ancient Svecofennian basement of Central Europe and crop on the surface e. g. in the Moldanubicum, Erzgebirge and Góry Sowie. The segments display inner arcuate arrangement. In the Šumava Mts. the segments are straight, in Cen–