tral Bohemia wavy and around the Moldanubicum are disrupted and thrusted due to younger orogenies.

The Cadomian orogeny produced segments trending NE–SW and their arcs encompasse the Moldanubicum or penetrate it. The Cadomian tectonics is documented in Upper Proterozoic rocks e. g. in the Teplá–Barrandian area. The structures are mostly linear.

The Variscan folding with many thrusts dipping generally south was very intense in outer parts of the Bohemian Massif. The deformation connected older disrupted units but did not alter ancient Danubian and Cadomian structures.

The inner structure of the Bohemian Massif is complicated but oriented. The resulting picture clearly demonstrates superimposed tectonic history. It is illustrated by the author on the Structural map of the Bohemian Massif in the scale 1:500000. It is a good basis for many studies as to the tectonic evolution of Europe.

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MAGNETIC FABRIC RELATIONSHIP BETWEEN PALAEOZOIC VOLCANIC AND SEDIMENTARY ROCKS IN MORAVIA

F. HROUDA[1], A. PŘICHYSTAL[2]

[1] *Geofyzika, a.s., Brno, Czech Republic*

[2] *Institute of Geology and Palaeontology, Masaryk University, Brno, Czech Republic*

Anisotropy of magnetic susceptibility (AMS) was used to investigate the fabric of magnetic minerals in Palaeozoic volcanic rocks of the Šternberk – Horní Benešov Belt in the Nízký Jeseník Mts. (NE Bohemian Massif) and in surrounding Lower Carboniferous sedimentary rocks. The purpose of this study was to investigate the origin of the magnetic fabric in the volcanic rocks and the fabric relationship between the volcanic and surrounding sedimentary rocks.

The degree of AMS in the investigated volcanic rocks is relatively high in most specimens, much higher than that in undeformed volcanic rocks. The orientations of the magnetic foliation and magnetic lineation are near those of the magnetic fabric and deformational mesoscopic fabric elements in surrounding sedimentary rocks whose magnetic fabric is no doubt deformational in origin. Consequently, the magnetic fabric in the investigated volcanic rocks is deformational in origin and had at least a part of its deformational history the same as the magnetic fabric of surrounding sedimentary rocks. This conclusion is in agreement with the results of geological research of the studied area.

THE PRE–VARISCAN EVOLUTION OF THE SOUTHERN MONTAGNE NOIRE (FRANCE)

H. HÜSSNER

Institut und Museum für Geologie und Paläontologie, Sigwartstraße 10, 72076 Tübingen, Germany

Large parts of the Montagne Noire, which is the southernmost tip of the French Massif Central, are formed by magmatic and metamorphic rocks. Its southern zone, however, is composed of unmetamorphosed sediments, forming napes emplaced during the Variscan orogeny. The paleoenvironmental analysis of these sediments provides unequivocal evidence as to the plate tectonic history of the area.

The sedimentation of Ordovician sandstones and shales was followed by a long time of nondeposition. The Lower Devonian saw the recurrence of marine sedimentation, mainly in form of thick shallow water carbonates. The remainder of the Devonian and the Lower Carboniferous is characterized by deeper water sediments. The shallow water carbonates are overlain by cephalopod limestones, stromatactis limestones, crinoid limestones, a great variety of nodular limestones, black lydites, allodapic limestones and finally flysch sediments. Analysis of sediments and faunas indicate increasing depth of deposition, interrupted by a few major regressions.

A relative regional sea level curve for the Montagne Noire, constructed from sedimentological and paleontological evidence exhibits remarkable differences to published global sea level curves for that time period. In order to reveal the nature of this divergence a geohistory curve for the Devonian to Lower Carboniferous of the Montagne Noire has been constructed. It includes the backstripping of the sedimentary cover, corrections for sea level, for water depth and for sedimentary load. The geohistory curve demonstrates, that for the Lower and Middle Devonian and for the Frasnian the tectonically induced subsidence decreases exponentially. This is well in accordance with a passive margin model. The increasing water depth is due to sediment load, to reduced sedimentation rates and to a global sea level rise. Beginning with the Fammenian, the tectonically induced subsidence is increasing, marking the transition from a passive to an active margin setting. Despite a global sea level fall the water depth is increasing.

In conclusion, the findings of this geohistory analysis can only be explained by assuming that the southern Montagne Noire was part of a terrane, which began to separate from Gondwana during the Upper Ordovician, drifted over the Rheic Ocean for most of the Silurian and Devonian, approached Laurussia in the Upper Devonian and finally collided with it in the Carboniferous.

MAJOR UNITS OF BOHEMIAN MASSIF AND THEIR METALLOGENIC FEATURES

P. JAKEŠ, Z. PERTOLD & Z. POUBA

Department of Geology of Mineral Deposits, Charles University, Albertov 6, 128 43 Praha 2, Czech Republic

Variscan orogeny have assembled into "Bohemian massif" number of crustal (and oceanic) units (terrains) that were most probably separate geologic entities in pre–Variscan past. PreVariscan precursors (e.g. Saxothuringicum, Bohemicum, Moldanubicum, Lugicum, Moravosilesicum, Brunovistulicum) are stitched by plutons (e.g. Central Bohemian Pluton, or Železné hory pluton) or separated by tectonic features of regional importance. The Variscan metallogeny manifested within all major units reflects however the precursors compositional features. In order to distinguish Pre–Variscan units and mineral deposits following critena are used:

a. geochemical features of precursors of Variscan rocks
b. lithostratigraphical features of pre–Variscan terrains
c. metallogenic speciation of pre–Variscan complexes
d. tectonic features preceeding the Variscan deformations

The above criteria that characterize the regional units of Bohemian massif together with the interpretation of volcanic associations of late Proterozoic and early Paleozoic rocks as well as their metallogenic speciations of all major units help to reconstruct paleogeographic and paleogeotectonic environments of the pre–Variscan units, now assembled in the Bohemian massif.

In our interpretation Bohemicum – represents series of Proterozoic and Lower Paleozoic little evolved island arc rocks apparently formed in an oceanic environment, though upper stratigraphic levels contain "continetal crustal component". Tholeiitic volcanic rocks together with calc–alkaline rocks are present providing to accompanying sediments low silica contents, low concentration of lithophile ions and relatively high concentrations of chalkophile and siderophile elements. Synsedimentary metallogeny is characterized by the presence of pyrite concentrations, manganese ores, and sulphide exhalative (Cu, Zn sulphides and barite) manifestations. Variscan processes are of minor extent in major (weakly metamorphosed) part of Bohemicum, though at margins Bohemicum is difficult to separate from Moldanubicum through the "stitching" metamorphic and magmatic processes..

Saxothuringicum represents also series of Proterozoic and Lower Paleozoic strata with geochemically relatively evolved series of medium to high silica precursor rocks with continental margin abundances of lithophile and transitional elements, at places accompanied by Lower Paleozoic "island arc" rock and submarine exhalative Cu, Zn sulphides and barite mineralizations. The Variscan transport of Saxothuringian rocks into high pressure environment and consequent retrogression and decompressional plutonism may have wiped off the precursor features more intensively than within the other units of Bohemian massif, though Variscan mineralization derives from subcrustal mafic sources (e.g.Co–Ni) and geochemically highly evolved crust sources (e.g. Sn – W).

Moldanubicum represents strongly differentiated piece of continental crust with typical upper crustal abundances of lithophile elements. Due to extensive metamorphism (HP–LT followed by LP–