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

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Variscan orogeny have assembled into "Bohemian massif" number of crustal (and oceanic) units (terrains) that were most probably separate geologlc 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–

HT), in places representing the transport to several kilometers depths, the age of precursors is difficult to determine. Lithostratigraphically the rock series represents melange of upper crustal rocks with slices of upper mantle ultramafic assemblages. High grade terrains contain some skarn mineralization with Fe in oxidic, silicate and sulphide forms and some Zn, Cu and Sn. Large massive sulphides concentrations were encountered in Bavarian part of Moldanubicum with sulphides of Fe,Cu,Zn,Pb. Variscan mineralization reflects upper crustal evolved precursors (Sn,W, U–Th) in spite the upper mantle ultramafic rocks are present within the Moldanubian area. Isolated intrusions of mafic rocks carry some (Cu and Ni) mineralization (Ransko).

Brunovistulicum. The Proterozoic rocks derive from geochemically relatively primitive environments having gabbro – tonalite – trondjemite and their volcanic equivalents.In accompanying sedimentary strata the element abundances are far from evolved continental levels. Precambrian metallogeny may be represented by banded iron ores (B.I.Q) in "brunovistulian gneisses" in Moravosilesicum. Variscan processes had apparently minor compositional effect.

Moravosilesicum. Geochemicaly rather simple character is preserved in Lower Paleozoic where active continental margin could have been situated in pre–Devonian and Devonian times. Mixture of lithologically continental sedimentary rocks and synsedimentary "island arc" or back arc basin volcanic series are present. The accompanying mineralization bears the iron banded formation as well as originally "syngenetic" sulphide mineralization in both pre–Devonian and Devonian series.

The Variscan events e.g. collision, metamorphism, and extension related plutonic activity apparently reflect both: the composition of pre–Variscan precursor materials and enormous intensity of Variscan collision, deep transport of some of the units (Moldanubicum and Saxothuringicum) uplift and thermal effects and consequent stitching of all units.

Variscan epigenetic mineralization. Similarly to "Variscan plutonic stitching" the Variscan metallogeny that is represented by epigenic mineralizations "unites" these units apparently with the inheritance of precursor materials.

GEOLOGICAL SETTING AND POSITION OF ULTRAMAFIC ROCKS FROM BYSTRZYCA GÓRNA INSIDE THE ALLOCHTONOUS GÓRY SOWIE BLOCK (LUGOSUDETICUM, POLAND)

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The Góry Sowie Block (BGS) is the oldest tectonostratigraphic unit of the Western Sudety Mountains. It is triangular in shape, surrounded by dislocation zones. Moreover, that unit is divided into two parts: Sudetic and Foresudetic ones, by the Sudetic Marginal Fault (SMF). The Góry Sowie Block is built of metamorphic rocks, predominantly different types of gneisses, metamorphosed in the upper amphibolite facies (Polański 1955, Grocholski 1967, Morawski 1973, Kryza 1981, Żalaźniewicz 1987). A gneissic complex of Góry Sowie developed from Upper Proterozoic pelitic and graywacke sediments. Before late Devonian it was affected by five tectonic deformational episodes (Żelaźniewicz 1987).

The Góry Sowie Block is surrounded from NE, E and S with mafic and ultramafic rocks (Maciejewski 1968, Narębski et al. 1982, Majerowicz & Pin 1987, Pin et al. 1988, Narębski 1990) which belong to the Upper Devonian – Lower Carboniferous ophiolite complex (Pin et al. 1988). The unit under consideration is now interpreted as a remnant of the crystalline nappes overthrusted on the outer zones of the Variscan Belt. Rocks similar to the ophiolite complex underlie in a different extent the mentioned block (Znosko 1981, 1984, Jamrozik 1981, 1989a,b, Cymerman 1987, 1989, Oberc 1991). According to Cwojdziński (1980) and Grocholski (1987) gneissic complex of Góry Sowie Block is a microcontinent. Quernadel & Brochwicz–Lewiński (1985) and Aleksandrowski (1990) suggested it is a terrane; Matte et al. (1990) and Cymerman (1991) proposed that it could be only a fragment of the mentioned terrane.

Within the gneissic complex of Góry Sowie Block small serpentinized intrusions of mafic and ultramafic rocks occur together with associated granulites. The biggest outcrops of those rocks are situated in Bystrzyca Górna. Occuring here granulites correspond with "granulites type I" (Kryza et al. 1988, Kryza 1991). Their emplacement took place in the early periods of the evolution of inner zones of the Variscan orogene (Pin & Vielzeuf 1983) and might have been connected with the subduction process. Ultramafic rocks (Smulikowski 1973, Smulikowski & Bakun–Czubarow 1969, 1973, Bakun–Czubarow 1980, 1981), have intrusive, sharp contacts with granulites (Żelaźniewicz 1985).