the Davle Formation. In the E the same horizon onlaps onto the volcanic complex made of metamorphosed tholeiitic, low--Ti basalts and boninites comparable with arc-related volcanics known from the neighbouring Jílové Belt.

(3) Close to village of Netvořice, the Proterozoic and Cambrian rocks are overlain by light sillimanite-andalusite quartzites and hornfelses with intercalation of conglomerates and amphibole matrix, which are typical of the lower part of Ordovician succession in other islets (Kachlík 1992) and whose age was paleontologically proved by ichnofossils (Chlupáč 1987). From the map is apparent that Ordovician basal successions overlap the underlying Proterozoic and possibly Cambrian sequence with marked structural unconformity.

(4) Sm-Nd isotopic data ($\varepsilon^{530}_{Nd}$ + 8.2 to + 8.6, $T^{DM}_{Nd}$ = 0.51 – – 0.56 Ga) show that the most basic magmas were derived directly from the Depleted Mantle reservoir in Cambrian times; these data offer a little scope for contamination by older, a more evolved material.

Due to relatively strong Variscan LP-HT overprint, the detailed correlation with unmetamorphosed Barrandian Cambrian without additional information (such as precise U-Pb dating of acid volcanics or detailed geochemical correlation of metasedimentary units) is difficult. Xenoliths of the Cambrian sandstones in the western part of the CBP and occurrences of the Cambrian in the Islet zone prove that the original extent of the Cambrian was significantly greater compared with the present erosion level. Differences in the facial development of Cambrian and younger units show that the Islet zone represented during Early Palaeozoic relatively independent basin separated for some time by an active ridge, whose material was periodically fed into the Islet zone basin.

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# Late Devonian to Early Carboniferous Bimodal Volcanic Rocks of the Ještěd Range Unit (W Sudetes): Constraints on the Development of the Variscan Orogenic Wedge

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Late Palaeozoic volcanism characterizes the Ještěd Range Unit (JRU) (e.g., Gallwitz 1930; Chaloupský et al. 1989; Chlupáč 1993) forming the westernmost margin of the Krkonoše-Jizera terrane (KJT) and the lowermost part of the W- to NW-directed KJT orogenic wedge (W Sudetes). Taken both from NW to SE and upwards, two lithotectonic units compose the JRU (e.g., Kachlík and Patočka 1998):

(1) Autochthonous domain basement is composed of Lusatian granitoids (540–587 Ma – Kröner et al. 1994) and host rock mantle of weakly deformed and regionally metamorphosed Late Proterozoic flysch sequence (Chaloupský et al. 1989). The Cadomian basement is transgressively overlain by low-grade metamorphosed Early Palaeozoic volcano-sedimentary sequence which is presumed to pass into Middle/Late Devonian to Early Carboniferous succession of slates, greenschists, porphyroids, marbles and Variscan flysch. The marbles and slates provided rich fauna of late Givetian to Tournaisian age (Koliha 1928; Gallwitz 1930; Galle and Chlupáč 1976; Chlupáč and Hladil 1992; Chlupáč 1993 etc.).

(2) Parautochthonous to allochthonous domain is a slightly metamorphosed volcano-sedimentary sequence of Early Palaeozoic age (comprising sericite-chlorite phyllites, quartzites, mafic metatuffs and metadiabases) with graphite phyllites (±cherts) and limestones of Ockerkalk facies of Silurian age on top (e.g. Chlupáč 1993). It is flatly thrust over Middle/Late Devonian to Early Carboniferous succession of the autochthonous domain, and on the JRU eastern side it is overthust by allochthonous slice of the South Krkonoše Complex (Patočka et al. 2000).

The Late Palaeozoic metavolcanics of the JRU Middle/Late Devonian to Early Carboniferous sequence are represented by metarhyolite bodies, submarine basic amygdaloidal lavas and sills (± dykes) of doleritic basalts. The latter often show relics of ophitic textures and of mafic minerals as pyroxenes and amphiboles. The rocks are bimodal in $SiO_2$ contents displaying spans of 48 to 52 wt % and 74 to 76 wt %, respectively. The mafic rocks usually show moderate LREE/HREE fractionation. Chondrite-normalized REE distribution patterns of the metabasites have tholeiitic WPB-like $(Ce/Yb)_N$ ratios. The metabasite trace element abundances resemble those of modern basalts of both E-MORB and tholeiitic to transitional WPB compositions. The felsic metavolcanics are significantly enriched in LILE, HFSE and REE. They show pronounced negative anomalies of Ba and Eu in ORG- and chondrite-normalized trace element and REE distributions, respectively. Regarding these features, the porphyroids may be compared with within-plate felsic igneous rocks.

Basaltic rocks of WPB-like composition were protolith of the JRU metabasites. The primary magmas were produced by limited melting in the upwelling astenosphere associated with extension of continental lithosphere. Prior to the regional metamorphism, the porphyroids were high-silica rhyolites, and may be co-genetic with the basaltic rocks by prolonged fractionation of common mantle-derived melt.

The paraautochthonous to allochthonous domains of the KJT are interpreted as NW branch of the West Sudetic accretionary complex with inverted metamorphic pattern and stratigraphy, originated during the closure of the Saxothurigian oceanic seaway (Kachlík and Patočka 1998; Franke 1999; Pharaoh 1999). The

Variscan orogenic wedge propagated generally in E-W direction from central West Sudetes to frontal parts of the KJT accretionary complex (the JRU) since the pre-Late Devonian to Tournaisian.

The JRU Late Palaeozoic volcanism started in the latest Middle Devonian according to the fossil record, and was rather protracted as the Tournaisian flysch is intruded by diabase dykes and sills. Timespan of the Ar-Ar ages of the Variscan metamorphic events related to the waning of subduction and subsequent exhumation + thrusting on the E and S of the KJT (365–340 Ma) (Maluski and Patočka 1997; Marheine et al. 2000) extends from Late Famennian to the latest Tournaisian (cf. Gradstein and Ogg 1996; Tucker et al. 1998). It is shorter than, and also set within the active period of the JRU Late Palaeozoic volcanism. Tectonic setting of the lithospheric extension-related Late Palaeozoic bimodal volcanism of the JRU is essentially antagonistic, albeit contemporaneous, in relation to tectonic regime of the W-propagating orogenic wedge in the other parts of the KJT. This contrast supports an idea that juxtaposition of the KJT complexes is a result of Variscan large-scale nappe stacking originated since Late Devonian to Early/Late Carboniferous boundary.

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# The Role of Palaeotopography and Tectonics in the Stratigraphy of Fluvial Through Shallow-Marine Deposits of the Peruc–Korycany Formation (Cenomanian) in the SE Part of the Bohemian Cretaceous Basin

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The initial phase of deposition in the Bohemian Cretaceous Basin during the Middle-Late Cenomanian was characterized by filling of pre-depositional topography by fluvial and paralic depositional systems. One of the important problems in understanding the evolution of the basin is the relationship between the "passive" topographic elements such as palaeovalleys and the formation of actively subsiding depocentres which dominated the later phases of shallow-marine deposition.

This study focuses on regional stratigraphic patterns in the Peruc–Korycany Formation (Middle to Late Cenomanian) in the southeastern part of the Bohemian Cretaceous Basin, the Svitavy sub-basin according to Uličný (1997). The main data base for our study is a number of regional cross-sections based on well-log, core, and outcrop correlation, and a series of regional isopach maps in time-slices.

The whole sedimentary succession of the Peruc–Korycany Fm. was divided, on the basis of detailed well-log correlation, into four informal stratigraphic units A–D. Unit A corresponds approximately to the lower part of the Peruc Member and it is interpreted as deposits of braided and meandering rivers. Units B and C correspond to the upper (paralic) part of the Peruc Member. Marine microfossils reported from these units by previous studies prove the proximity of epicontinental sea. Unit B comprises sediments deposited in estuarine environment: deposits of bay-head deltas, central basin, and marginal swamps are interpreted as parts of a back-barrier depositional system. Facies of unit C developed almost completely in the deeper central basin of the assumed estuary. Unit D roughly corresponds to the shallow-marine Korycany Member in the study area. Highly glauconitic, bioturbated sandstones and cross-bedded quartz sandstones with mud drapes and reactivation surfaces are typical lithofacies of this unit characterized by strong tidal influence.

The isopach map of the whole thickness of Cenomanian sediments, based on over 600 borehole logs, revealed two main centres of sediment accummulation, generally coinciding with the "depressions" previously described by other authors. However, such map provided no information about the history of deposition and also did not distinguish between filling of pre-existing palaeovalleys and deposition of tectonically active dep-