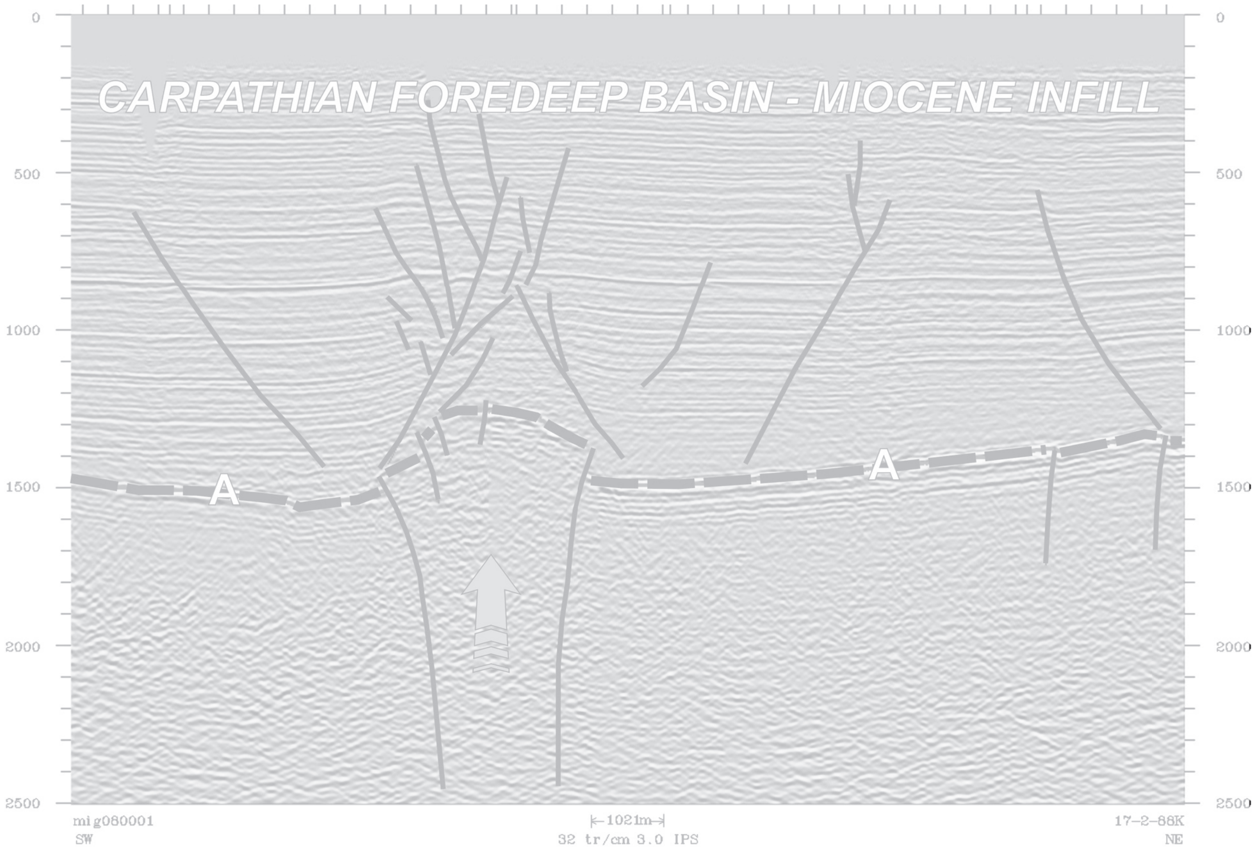

Fig. 1. Seismic image of the Ryszkowa Wola High – basement pop-up structure related to strike-slip movements. Vertical scale – two-way traveltime. A – strong composite seismic horizon related to the top of the pre-Miocene basement and Badenian anhydrites.

extensional system caused by Carpathian collision formed. Towards the NW extensional features are replaced by strike-slip related basement pop-up structures (e.g. Ryszkowa Wola High; Fig. 1). Basement wrenching resulted from the Miocene reactivation of inherited Mesozoic fault zones, obliquely oriented in respect to the advancing Carpathians. Localised basement uplift led to formation of complex fault zones within the Miocene sedimentary infill.

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Role of the SW Margin of the East European Craton During the Mid-Polish Trough Mesozoic Development and Inversion – Integration of Seismic and Potential Field Data

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Mid-Polish Trough (MPT) developed along the NW-SE trending Tornquist – Teisseyre Zone from Permian to Cretaceous times and was filled with several kilometres of sediments including thick Zechstein evaporites. MPT was inverted in Late Cretaceous – Palaeocene times, at which time its axial part was eroded (see Krzywiec, 2002 for recent overview and

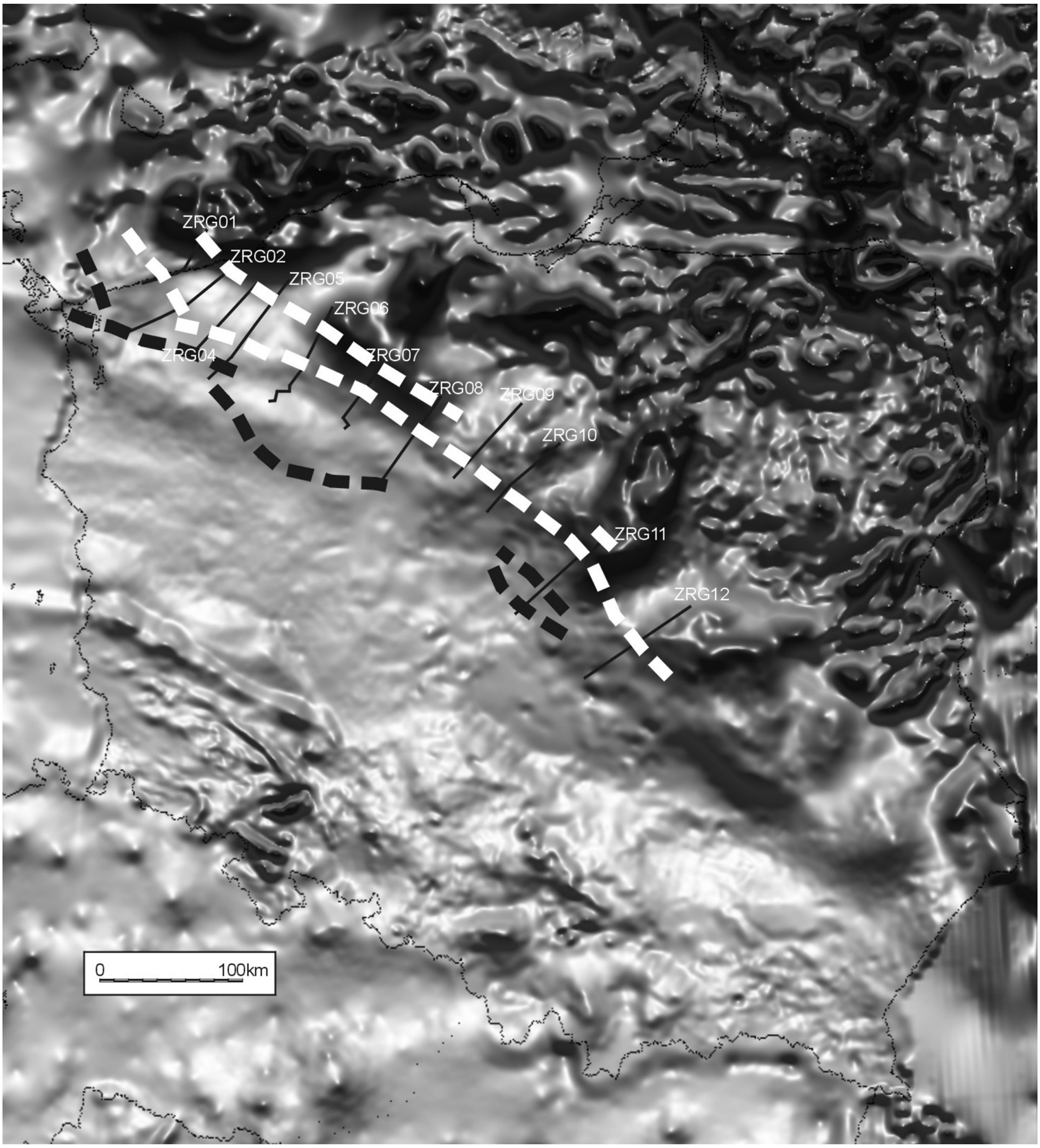

Fig. 1. Location of the main tectonic zones (dashed white lines) along the NE margin of the East European Craton related to the development and inversion of the Mid-Polish Trough. Dashed black lines – other tectonic zones identified within the MPT's pre-Zechstein basement. Thin black lines – regional seismic profiles (fragments) located above the EEC's SW margin.

detailed references). MPT is located along the SW margin of the East European Craton (EEC), hence it could be expected that this prominent crustal boundary played important role during MPT's evolution. In order to investigate this role results of interpretation of 13 regional petroleum seismic profiles have been integrated with various gravity and magnetic maps of

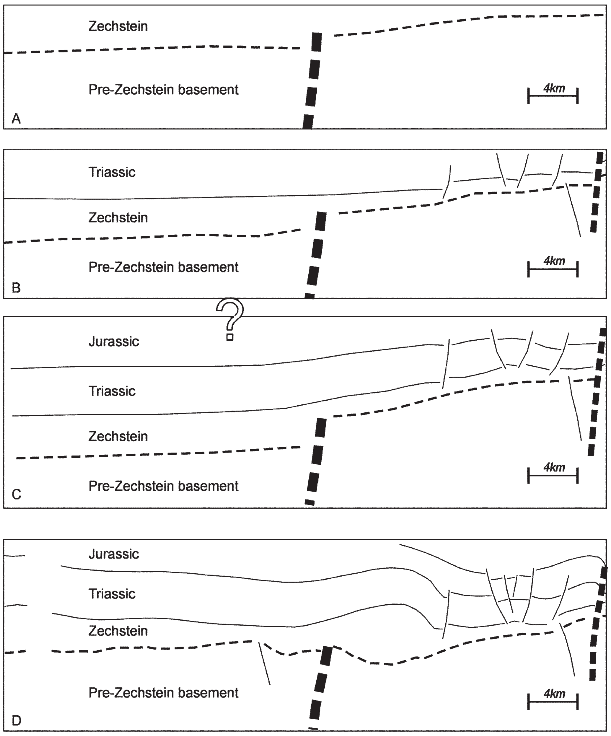

Fig. 2. Late Permian (approx. end of Zechstein) (A), late Triassic (B) and late Jurassic (C) reconstructions (without decompaction), and present-day upper crustal configuration (D) along the regional seismic profile ZRG07. Late Jurassic reconstruction could be regarded only as approximate because of deep erosion within the axial MPT that remove entire Cretaceous and partly Jurassic cover.

Poland. Interpretation of seismic data was focused on identification of potential sub-Zechstein fault zones responsible for MPT's subsidence and inversion. Low quality of seismic data related to strong seismic energy attenuation by the Zechstein evaporates did not allow to directly identify such fault zone. In order to locate them a model of decoupled basin's evolution with regional decoupling level related to the Zechstein evaporates has been adopted. Sub-Zechstein fault zones were located using mainly location of the zones characterised by significant thickness variations of the Mesozoic successions. Reconstructed profiles for end of Zechstein, end of Triassic and (for majority of the profiles) end of Jurassic have been also constructed (Fig. 2) in order to visualise role of the sub-Zechstein fault zones. Correlation of identified fault zones with gravity and magnetic data (Fig. 2) proved that NE MPT's boundary in Mesozoic times was strictly controlled by the EEC's SW margin defined by potential fields.

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Hydrothermal Mineralization in the Moravian Karst near Býčí Skála Cave: Post-Variscan Deformation History?

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Geological structure of the western central part of the Moravian Karst originated mainly during two different deformation processes: late Variscan oblique stacking of thrust units and Paleogene faulting of the Carpathian foreland. The above scheme of deformation can be followed by different stages of hydrothermal mineralization (Češková, 1978; Slobodník, 2002).

Detailed study of the natural gamma-ray and magnetic-susceptibility section of Josefov–Bárová (JOBA, M. Geršl – J. Hladil, a study in progress) unveiled the presence of calcite veinlets with sulphide mineralization also in well-bedded and low-deformed *Amphipora* banks of Early to Middle Givetian age. These scarce veinlets less than 5 cm thick are bedding-parallel, following opened sutures on bedding planes. Natural gamma-ray and magnetic-susceptibility values for the veinlets are lower that average values for the Devonian limestone and do not modify the stratigraphical patterns (low mineralization, presence of limonite-goethite, absence of siderite). Calcite veinlets of JOBA are similar to the NW–SE-striking veins in their neighbourhood (0.8 m thick calcite vein in the Býčí skála Cave, or veinlets of Josefov–Pila; Češková, 1978).

The bedding-parallel main veinlet (10 m above the base of the 100 m JOBA Section) is present in the Givetian limestone. Two other systems of jointing correspond to (1) the main N–S-striking cleavage planes (N–S to NNE–SSW/65–80°W) and (2) the W–E-striking, subvertical, fault-parallel cleavage planes.