

sode of Late Neogene tectonic compression along  $\pm$ E-W direction in the eastern part of the Carpathian foreland basin, possibly of regional extent. The structural interpretation of the Ryszkowa Wola structure proposed here is in line with published results of analogue modelling of fault patterns in sediments overlying active strike-slip displacements in a rigid basement. The basement-cover interaction within the Ryszkowa Wola high in the area of Sieniawa-Rudka was syndimentary with respect to the Mio-

cene deposition of the CFB infill. The uplift and horizontal displacements of the Ryszkowa Wola basement block modified the local subsidence pattern and the organisation of Miocene depositional systems. The syn-depositional strike-slip fault activity in the basement of the CFB resulted in differential movements and rotations of kinematically linked fault-blocks in the Miocene succession around and above the RWH, leading to the formation of numerous gas traps.

## Thermal Overprint in Paleozoic Sediments of the Moravo-Silesian Zone, Bohemian Massif: a Record of Late Variscan Orogen-Parallel Extension

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Moravo-Silesian Zone (MSZ) constitutes the eastern periphery of the Variscan orogene in Europe. Devonian and Lower Carboniferous sedimentary and volcanic rocks of the MSZ (eastern part of the Czech Republic and the Cracow-Silesia region of southern Poland) show a general trend in increasing thermal maturity from the foreland located to the E to the Variscan orogene located to the W. In the eastern, Polish part of the MSZ thermal overprint is relatively low and related mainly to intrusions of small intrusive bodies. In the western, Moravian and Silesian part, however, the thermal maturity is much higher and it shows some peculiarities that, so far, have not been sufficiently explained.

Principal characteristics of the thermal maturity field in the western part of the MSZ as revealed from combined vitrinite reflectance (Rr), conodont colour alteration index (CAI) and illite crystallinity (IC) data-base are as follows:

- (i) thermal maturity ranges from anchimetamorphic conditions ( $Rr = 3.5\text{--}5.5\%$ ,  $CAI5$ ,  $IC = 0.2\text{--}0.3^\circ 2\Theta$ ) to late diagenetic conditions ( $Rr < 1.8\%$ ,  $CAI3.5$ ,  $IC = 0.8\text{--}1.6^\circ 2\Theta$ );
- (ii) in some locations (e.g. borehole Potštát-1) saw-tooth pattern in  $R_{min}$  and  $R_{max}$  values downhole indicates that Variscan thrust tectonics, which is nicely visible in seismic lines, did not affect the area before it attained its final thermal maturity;
- (iii) general data distribution, however, indicates that especially in the western part isotherms intersect major Variscan tectonic structures;
- (iv) heat flow during the maximum heating was much higher than the present-day values;
- (v) Alpine tectonomagmatic cycle did not produce sufficient heat to overprint this principal pattern.

As the data show, the rocks in the Moravian part of the MSZ attained their maximum thermal maturation during the final stages of the Variscan deformation and just after it, within the Upper Carboniferous to Lower Permian period. This coincides well with the maturity field patterns in the Polish part of the MSZ (Belka 1993) as well as with the timing of some principal tectonomagmatic processes at the eastern margin of the Bohemian Massif. These include a major remagnetisation event occurring in the Moravian part of the MSZ, late Carboniferous ages of intrusion of the Žulová intrusive body in northern Moravia and 300–310 Ma cooling ages of white micas in the Keprník and Desná domes (Maluski et al. 1995). Stretching lineations in the mica-bearing blastomylonites of the Keprník and Desná dome as well as in the sediments of the MSZ document a Late Variscan orogen-parallel extension, which was associated with thermal overprint of the rocks in the MSZ.

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### References

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