



Syn-thrusting remagnetization of the Neocomian limestones (Strazov Mts, Slovakia, Krizna nappe): paleo-, rock magnetic and vitrinite reflectance study.

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The Central West Carpathians (CWC) constitute a thick skinned fold and thrust belt situated between the Pieniny Klippen Belt in the north and Meliata suture in the south, mostly in the territory of Slovakia, except northern slopes of the Tatra Mts (Poland). Tectonic units of two types are recognized there. First type comprises units with crystalline pre-Mesozoic rocks and their Upper Paleozoic and Mesozoic sedimentary cover. These are from north to south: Tatricum, Veporicum and Gemicum. The second type of tectonic units comprises a thin – skinned nappes, consisting mainly of sedimentary Mesozoic rocks, thrust over the Tatric, Veporic and Gemic complexes. To this type belong. Fatric (i.e the Krizna nappe) and Hronic units (i.e Choc nappe). The Krizna nappe is a highly differentiated structure that consists of numerous slices and partial nappes (duplexes). Its original substratum is now buried below the Veporic/Tatric overthrust. Mesozoic orogenic processes in the CWC advanced from the south to the north. Closure of the Meliata oceanic trough is dated for 160 – 150 Ma (Late Jurassic). Thrusting of the Gemicides onto Veporides took place just afterwards in the Early Cretaceous (130 – 110 Ma) and the thrust of the Veporicum over Tatricum occurred in the early Late Cretaceous (90 - 80 Ma). Around 90 Ma emplacement of the Fatric and Hronic nappe systems occurred. Pre- Cainozoic basement of the CWC occurs now in the form of tectonic horsts (like in the Tatra, Strazov Mts and other massifs) surrounded by Tertiary basins. These features result from variegated transpressional and transtensional stress regimes in the Tertiary. Uplift of the base-

ment rocks must have changed the geometry of Mesozoic structures which now dip mostly to the north. However until now, it was poorly known what was the attitude of strata and thrust surfaces during Cretaceous thrusting

Paleomagnetic study was undertaken in several localities of the Krizna nappe in order to establish the reference apparent polar wander path and internal rotation pattern. Primary Berriasian magnetization was established in the calpionellid limestones from the northernmost zone of the Krizna nappe (in the Tatra Mts). However some Mesozoic complexes revealed “pre-folding” but clearly secondary magnetizations. The results from the Neocomian limestones of the Strazovce section (18.5°E, 48.9°N) from the Strazov Mts will be presented. A strong magnetite-related, exclusively normal polarity magnetization was isolated. It reveals a pre-folding geometry with subvertical inclinations and can not be interpreted as primary. It is assumed that the rocks were remagnetized during the Cretaceous northward directed thrusting, with beds dipping up to 20-30° to the south. Preliminary vitrinite reflectance data point to high maturity of the organic matter. This, together with already published ¹⁸O isotope data, point to strong thermal alteration of the section. Additionally rock magnetic data (IRM, hysteresis and low temperature susceptibility studies) will be presented in order to evaluate the nature of the remagnetization event.