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INVITATION

to the Meeting of Young Geoscientists

06-07 April 2018

Hajdúszoboszló, Hotel Silver

www.hotelsilver.hu

Useful information:

Accommodation and meals are available only for pre-registered participants.

The talks are open and public.

Official languages of the conference are English and Hungarian.

Registration desk open: from 9:00 am, 6th April onwards

Organisers

Unfortunately, only two faults preserved two different sets of slickenlines. Overprinting relationships of these prove that Phase D is older than C.

I compared the results with the previously published articles which deal with similar phase separation and determination of paleostress fields in the Bükk area. Németh [3] based his system on data from the Eastern part of the Bükk Mts. Márton and Fodor [4] combined paleomagnetic (from igneous rocks) and stress data from the Southern foreland of the Bükk Mts. Relative ages of the phases A-E were based on kinematic similarity with the phases published by these studies.

The spatial distribution of the faults belonging to each phases show that the limestone exposed by mining activity was intensively and penetratively deformed. We can't delineate discrete fault zones across the quarry. Probably a network of the conjugate faults supported small scale displacement along each fault plane.

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- [2] Velledits F. (1985) Berva Valley Limestone facies analysis (Hun), Thesis, Budapest, 145.
- [3] Németh N. (2005): Structural reallion of Eastern part of the Southeast Bükk Mts. (Hun), PhD dissertation, Miskolc, 117.
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Structural mapping, well data and stress field analysis in the surroundings of the Nekézseny Thrust Fault, NE Hungary

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Poster

The Bükk and Uppony Mts. located in NE Hungary are two adjacent structural units with different origins: while the nappes of the Bükk Mts. once formed part of the Inner Dinaric nappe system, the Uppony Mts. are correlated with the Western Carpathians [1]. The mainly S-SW-vergent Bükk and N-NW-vergent Uppony Units are separated by the Nekézseny Thrust Fault along which the Bükk-type

Permomesozoic formations are thrust upon the Uppony-type Paleozoic and Senonian formations [2].

Despite of its obvious structural importance, the structural evolution of the Nekézseny Thrust Fault hasn't been studied in details. The possible timing of its movements is between the Senonian and the Early Miocene. In their preliminary structural study Fodor et al. (2005) interpreted the results in the lights of the Paleogene deformation of the Darnó Deformation Zone [3]. On the other hand, based on paleogeographic considerations Schmid et al. (2008) consider the Nekézseny Thrust Fault as the suture zone of the Meliata Ocean thus assume that the age of this structural contact is Early Cretaceous [1].

Consequently, the aim of our study was to understand the deformation geometry and the timing of activity along the Nekézseny Thrust Fault. As part of the study core samples from boreholes that drilled through the supposed structural contact were reviewed, sampled and interpreted. Detailed structural mapping in the surroundings of the Nekézseny Thrust Fault was followed by stress field analysis and preparation of cross-sections.

According to our preliminary results, at least five tectonic phases could be separated. Field work in the gently folded Senonian Nekézseny Conglomerate revealed both pre- and post-tilt low-angle thrust faults. While the pre-tilt thrust faults are clearly the results of NW-SE compression (D1), the post-tilt thrust faults can be separated into three groups that show slightly different N-S, NW-SE and E-W compression (D2). These deviations from the general NW-SE post-tilt compression only appear immediately at the Nekézseny Thrust Fault. The tilting itself is connected to NW-SE compression as well. The subsequent three deformation phases are connected to the later rotational events and extensional deformation history of the Pannonian Basin (D3: Early Miocene NNE-SSW extension, D4: Middle Miocene E-W extension, D5: Late Miocene—Pliocene NW-SE extension) [3] [4]. All this may contribute to understanding not only the deformation history of the Nekézseny Thrust Fault, but the role of the Darnó Deformation Zone during the Mesozoic structural evolution of the area.

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Numerical characterization of multitemporal Sentinel-1 radar imagery for agricultural applications

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Poster

In radar remote sensing ‘polarimetric descriptors’ are the counterpart of reflectance-derived spectral indices in multispectral imagery. The time-series of polarimetric descriptors (also known as phenological profiles) are expected to perform as well as for vegetation characterization and classification as multitemporal satellite imagery.

The intent of my study is to analyse which polarimetric descriptor’s phenological profile shows significant difference between different types of crops and so might be suitable for classification of crop types.

The selected study area is the surroundings of Lake Tisza, Hungary, having different types of crops (e.g. maize, sunflower, rapeseed, etc.) as land cover. Polarimetric descriptors were generated