



The 3D geological model of the Eastern Romania tectonics and structure

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3D geologic modelling is a modern tool which allow the conceptualization of geologic relations in an interactive environment, strengthening the ability to understand and present tectonic and structural geologic models.

We integrated the data available in the literature (wells, maps, cross-sections) for the geological structure of the Eastern Romania, comprising the Eastern Carpathians Orogen and its foreland. The subducting East European plate generated the Eastern Carpathians thrusts. Under the Eastern Carpathians, beside East European plate, the Tornquist-Teysseire zone is caught. East European Craton (Proterozoic), Scythian Platform (Paleozoic), North Dobrogean Orogen (Paleozoic) and Moesian Platform (Paleozoic), all neighbor Tornquist-Teysseire zone (Paleozoic), playing the role of foreland for the Eastern Carpathian Orogen. The Eastern Carpathians Orogen has two flysch belts, the Inner Carpathian called Dacides formed in Cretacic deformations and the Outer Carpathian called Moldavides and formed in Late Badenian to Sarmatian deformations.

The modelling was performed in Midland Valley's Move software. The boundaries of all the structural units presented above were modelled, together with the faults which are represented on the various osurces used. The created 3D geological model is seen as a tool to better understand and represent the tectonic and structural model of the Eastern ROmania and will also allow a better quantification of the relations between geology and landforms in Eastern Romania.