

The Bisse Marl is replaced at a marked contact by flysch type succession of the Bóly Sandstone Formation in the Late Albian. Based mainly on micropaleontological association the lower part of the Villány succession could be compared with the Dobrești and Coposeni members of the Blid Formation, while its middle and upper parts of the Nagyharsány Limestone could be correlated with Valea Bobdei-Valea Măgurii, and Subpiatră Limestones, respectively. The Vârciorog Fm is equivalent to the Bisse and Bóly Formations.

Acknowledgments: The study was partly financed by CNCISIS (grant ID\_95, Ioan Cociuba), and by Alexander von Humboldt Foundation (Ioan I. Bucur).

## **Clay, secondary dissolution, and tectonic controls on the reservoir properties in Upper Eocene tuffs, West Thrace Basin, Turkey**

Buyukutku A.

*Department of Geological Engineering, Faculty of Engineering, Ankara University, 06100, Beşevler, Ankara, Turkey, butku@eng.ankara.edu.tr*

The diagenetic history of the Upper Eocene tuffs in the West Thrace Basin is based on petrological analysis of samples from six boreholes. Diagenesis in the tuffs principally involves the progressive development of various types of cements in the following order: quartz overgrowth, zeolite authigenesis, chlorite and illite authigenesis. After the formation of the cementation phases, there was a dissolution phase creating secondary porosity via the dissolution of volcanic glass and feldspars, accompanied by generation of analcime and a late mordenite cementing phase. The tuffs also have been affected by the following diagenetic processes; fracturing and calcite, quartz, and zeolite cementation.

Tuffs in the West Thrace Basin may contain significant amounts of secondary porosity owing to unstable grain and volcanic glass dissolution caused by relatively rapid rates of pore-fluid flow. Also tectonic stress appears to have controlled development of secondary porosity formation in the West Thrace basin which in turn might have been responsible for high porosity of the deep reservoirs. At depths greater than 2000 m, the porosity increases with depth due to secondary solution activities and fracturing in the West Thrace basin. Secondary Porosity is very important for hydrocarbon explorations in the Upper Eocene tuffs in the West Thrace basin. The dominant porosity type produced by dissolution processes (intragranular, intergranular). Fracture porosity also significantly increases reservoir quality. Authigenic clays may affect reservoir quality depending on type of clay and its distribution. However, dissolution and fracturing are generally a more effective diagenetic process than cementation in the tuffs of West Thrace basin.

## **Statistical tidal tomography of the Vrancea intermediate-depth seismic zone**

Cadicheanu N.<sup>1</sup> and van Ruymbeke M.<sup>2</sup>

<sup>1</sup>*Institute of Geodynamics of the Romanian Academy, 19-21, Jean-Louis Calderon St., Bucharest-37, 020032, Romania, cadichian\_nicoleta@yahoo.fr*

<sup>2</sup>*Royal Observatory of Belgium, ORB-avenue circulaire 3, 1180, Bruxelles, Belgium*

The aim of the study is to identify specifically temporal and spatial patterns of the intermediate seismic activity in Vrancea seismic zone using new approaches. We have investigated the influence of the principal lunar semidiurnal tidal component M2 on intermediate seismic activity in Vrancea (Romania) sub-crustal region from 1934 to 2009 with a special regard for the time series of events from 1980 to 2009. The constituent is assigned by HiCum stacking method according to the earthquake occurrence. “Schuster” and “Permutation” independent tests are applied to distributions found by stacking. Null hypothesis between seismic activities and selected tidal periodicities is rejected when the statistical p-values obtained by the two tests are less than 5% level of confidence in term of statistics. The stacking function is applied to time series of events belonging to windows