Organic Facies and Source Rock Potential of the Dysodilic Shales in the East Carpathians, Vrancea and Teleajen - Prahova Areas, East Carpathians, România

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Oligocene lower dysodilic shales and Miocene upper dysodilic shales outcraps of the Marginal Fold nappe and Tarcau nappe of the East Carpathians Outer Flysch in the Vrancea half - window and the Homorâciu and Valeni "spurs" between Teleajen Valley and Prahova Valley were investigated with organic - geochemical and microscopic analyses. Our investigations were able to differentiate organic facies types (sensu Jones, 1987), to estimate their source rock potential, and to integrate these facies into the sequence stratigraphic framework.

The total organic carbon contens (TOC) define mainly a high preservation rate of the organic matter, indicating good to excellent source rocks. The characteristics of the biomarker data as organic facies indicators and maturity indicators (Moldowan et al., 1985, Bein and Sofer, 1987; Waples and Machihara, 1991; Peters et.al., 1993; Christiansen et. al., 1993; Moldowan et. al., 1994) support a marine depositional environment with varios rates of the influx of terrestrial material.

Two modes are offered for the deposition of the dysodilic shales.

In the Marginal Fold nappe of the Vrancea half-window marine organic matter was deposited under anoxic conditions on the upper continental slope. Turbidites carried these sediments downslope in oxic middle and lower intraslope basins, where a rapid sedimentation preserved organic matter into sediments.

In the Homorâciu and Valeni "spurs" area the turbidites appear to be deposited in poorly oxygenated or anoxic conditions in the bottom - water column.

The biomarker data show different stages of thermal maturity for the dysodilic shales outcrops of these areas.