

Albania. The main oil play type are Ionian Carbonates of an Upper Cretaceous to Eocene age in a ramp anticline or imbricate structure. Porosity and permeability are mainly created by fractures in the crestal part of the anticline. In near platform or slope settings, dolomitisation is likely to enhance porosity and fracture density. Shaly and marly Oligocene Flysch sediments act as lateral and top seals. Sourcing is possible from a variety of Upper Triassic to Upper Cretaceous, moderate - high quality, high TOC, oil-prone source rocks within the individual imbricate or duplex.

A variety of structural and stratigraphic plays in the Neogene has been defined in the Periadriatic Depression. Reservoir rocks were deposited in shallow marine to deep water environments. Shaly intervals within the Neogene section act as lateral and top seals. Play types include lateral and up dip pinch-outs, four-way dip closed drapes, fault bounded sandbodies and four-way dip closed backthrust ramp anticlines.

Both oil and gas have been discovered in the Neogene. Gas is mainly of a biogenic origin from disseminated organic matter in the Neogene, with some admixture of thermogenic gas. Oil is sourced from source rocks in the carbonate section and migrates along carbonate structures and breached seals and fracture zones into the Neogene above.

Neogene superterrane of Dinarides and Carpatho-Balkanides in SR Yugoslavia

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Two regions of the Miocene lacustrine sedimentation on Balkan Peninsula are known for more than 100 years. Better studied is the Dinaridic realm of ancient K&K. The lacustrine Miocene between the Drina and Timok rivers were often, but unsuccessfully equalized to the Dinaridic one. After the recognition of the older terranes (Karamata et al., 1994) was possible to delimitate two large Neogene superterrane, one in the Dinarides and the other in the central Balkan Peninsula.

On the deep seismic profile (from Petrovac-na-Moru to Negotin) there is a sign of a dislocation in the region of Tutin delimiting, possibly, the two Neogene superterrane.

The sediments of the two lacustrine systems belong to two large sedimentary cycles, the single cyclotheme each. In SR Yugoslavia the older

cyclotheme is developed in Northern Montenegro and, as a "gulf" (trench?), it cross from Pranjani, via Cacak and Trstenik to Alcksinac. In that area there is overlapping of the two cyclothemes. The younger cyclotheme covers all of Serbian area. ('Serbian Lake') reaching in some time portions to the Skopic surroundings in the South. It is in places ca. 1000 m thick; because of the great depth of burial the vitrinite reflectance is 0,77-0,91 for the Ibar coal (Ercegovac, 1991).

The age of the western Balkan lacustrine system was determined as Karpathian equivalents while covered by the marine Upper Karpathian and Badenien (Kochansky and Sliškovic, 1978) The age of the central Balkan lacustrine system ('Serbian Lake') is determinable by the findings of the ostracode genus *Mediocypripis*, the key fossil for the lacustrine Middle Miocene for Eurasia (Kheil, 1968). Some controversy of the age determination by flora and mammals were caused by the great stratigraphical reach of these land fossils (Pavlovic, 1995).

Several thick tuff beds appear in the upper part of the Serbian Lake cyclotheme. Some of its measurements gave 15-16 Ma of age (Duraki, in press). The tuff was extruded from the few large volcanic centres like Kontlenik and Borac. That ancient volcanic activity, placed mostly in the Vardar Zone Composite Terrane, are the result of the collision and following relaxation (Cvetkovic et al., 1995). Differential neotectonic movement complicate present geological structure.

From compression through extension to inversion - Miocene tectonics of the Polish Carpathian Foredeep basin

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Polish Carpathian Foredeep (PCF) basin developed in Miocene times in front of the advancing Carpathian thrust belt (Oszczypko, Słaczka, 1989).

Recently completed structural interpretation of four regional, basin-wide seismic profiles located between Kraków and Przemyśl provided information on large-scale framework of Miocene tectonic development of this part of the PCF.

For the western part of the study area located between Kraków and Rzeszów it was concluded that only minor tectonic deformations of Miocene age can be observed within the PCFs' Mesozoic basement. They developed in form of normal faults located NW-SE. Immediately in front of the Carpathians, particularly between Bochnia and Tarnów, series of frontal thrusts developed within the foredeep sediments. Gentle flexure of