Paleogene–Neogene hydrocarbon potential of the southern part of the Bulgarian Black Sea Basin

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The Bulgarian Black Sea offshore belongs to the Western Black Sea Basin, originated probably as a back-arc basin during Cretaceous times. Continental rifting is assumed to take place within during the Aptian-Albian, and the main opening event is addressed to Cenomanian to Coniacian time. During Santonian to Paleocene and Neogene Black Sea region was affected by number of compressional and extensional deformational episodes, accompanied by intensive deepening. As a result more than 10-12 km sedimentary sequences are recognized. The southern part of Bulgarian offshore extends over more than 10,000 km^2 area. The northern boundary is traced by Bliznatci listric fault, which separates the Moesian platform from Kamchia depression and Eastern Balkan continuation into the offshore. The main structural units within the area of work are the Resovo structural zone and the Bourgas Basin extending onshore. Irrespective of the existing seismic reflection surveys and the already drilled 10 wells, the area is considered underexplored. But the data available from the vintage exploration work is very promising. All the tests of the wells demonstrates gas shows, as well as source rock intervals rich in organic matter, predominantly of II and III type, probably related to the well known Maykop formation. The main purpose of the current work is to highlight the important tectonic boundaries, the stratigraphy of numerous reservoir and seal facies units; potential source rocks and traps of structural or/and stratigraphic types. It could be undoubtedly conclude that all the controls over the hydrocarbon generation and accumulation are favorable and the area is promising for successful hydrocarbon exploration.