

Geological structure and hydrocarbon systems of the Russian Black Sea

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The Eastern Black Sea Basin originated as a back-arc basin during the Cretaceous times. Rifting started since Albian times. Both the Western and Eastern Black Sea basins have been opened nearly simultaneously during Cenomanian to Coniacian times. Shatsky Ridge was a carbonate platform and zone of carbonate buildups during the Late Jurassic. It was a platformal area since the Cretaceous. The Tuapse and Sorokin basins originated at the Eocene-Oligocene transition as a flexural foredeep basins. Shatsky Ridge was affected by flexural tectonics also at those times. Shatsky Ridge has a Miocene channel system. Tuapse Basin has Oligocene-Miocene channel systems. Since Pliocene Shatsky Ridge-Tuapse Basin area was subsided up to 2 km simultaneously with main folding event in the Tuapse Basin. Hydrocarbon potential of the Shatsky Ridge, Tuapse Basin and Sorokin Basin is connected with: (1) Late Jurassic carbonate platform and system of large reefs; (2) possible Paleocene bioclastic limestones; (3) possible Eocene nummulite limestones; (4) possible Oligocene turbidites with sandstone bodies; (5) Miocene channel system; (6) Miocene and Pliocene horizons of sandstones; (7) fractured pre-Oligocene rocks due to main compression event close to Eocene/Oligocene transition times.

Russian oil company Rosneft has done recently new 2-D and 3-D seismic projects in the area of Shatsky Ridge-Tuapse Basin region.