

## **Evolution of the North-East Black Sea paleobasin during the Mesozoic and Cenozoic**

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Concept “North-East Black Sea paleobasin” includes constituents of modern regional structure of the Black Sea: Tuapse Trough and a part of the Shatky Ridge, as well as adjacent areas of North-West Caucasus, Indolo-Kuban Trough (Ciscaucasia), Crimea and their marine extension.

Thirst rough regional paleogeographic and paleotectonic reconstructions, performed as early as 1960. Results of these investigations revealed, that common extensive and rather deep basin existed here at least from middle Paleozoic. It divided two microcontinents with Precambrian (Rostov-Stavropol, located to the North) and Early Paleozoic (Evksinian, located to the South) crusts. Later, we suppose, part of this paleobasin forms one of the base constituents of Cenozoic Black Sea depression.

But only new seismic and borehole data, were collected last years, make possible to mapped coverage of this basin as well as its migration and evolution from Triassic up to the Neogene.

By now, Triassic, Jurassic and Cretaceous deposits have been lied here with 110 boreholes in West Ciscaucasia, Transcaucasia, Sea of Azov, Plain Crimea and described in outcrops in North-West and Central Caucasus, Transcaucasia, Mountain Crimea. Cenozoic sediments, only in West Ciscaucasia, were studied in 350 deep boreholes, in numerous outcrops in Mountain Crimea, North-West Caucasus, Transcaucasia and on the continental slope of the North-East part of the Black Sea. Conceptions about structure of mentioned deposits in the East part of the modern Black Sea depression have been gained as a result of 2D and particularly 3D seismic.

All available published and reported data were accumulate and summarized. And as a result:

- regional paleogeographic reconstructions have been performed for main geologic time steps (Triassic-Lower-Middle Jurassic, Upper Jurassic, Cretaceous, Paleogene, and Neogene);
- specific features of the sedimentation of the different parts of the paleobasins were described and facial and lithologic charts have been constructed;
- areas of possible reservoirs (terrigenous and carbonate) distribution as well as source rock distribution were distinguished, and essential elements of the speculative and hypothetical petroleum systems in Mesozoic and Cenozoic were justified.