

Cainozoic Delta Complexes in the Measures of the Ukrainian Part of the Black Sea

Maryan Olshanetskiy¹, Igor Popadyuk¹, Roman Kochetov¹

¹*Subsidiary Enterprise "Scientific & Research Institute of Oil and Gas Industry"*

National Joint Stock Company "Naftogaz Ukraine", Kyiv, Ukraine

e-mail: olshanm@rambler.ru

As a result of interpretation of regional seismic common-depth-point sections, new data on structure of Cainozoic sediments within the Ukrainian part of the Black sea is obtained. For the first time deep-water deltas of paleorivers were mapped in sedimentary section of Oligocene-Lower Miocene, and also more complete conceptions about structure of accumulative sedimentary forms of delta complexes of Upper Miocene and Pliocene-Pleistocene paleorivers were obtained.

It is possible to allocate from two to five erosive surfaces of difficult morphology at each level, which can be a basis concerning uneven-age fans. This fact indicates the duration of formation of delta systems in time and their migration on the area. The direction of distribution of uneven-age paleovalleys and delta systems in general coincides, indicating their heredity. Each later delta system progradates to the south towards the Black Sea depression, partially eroding earlier accumulative forms. We suppose that the role of turbidite sedimentation increases in the same direction within slope and foot.

The southern measure of distribution of deltas is drawn relative enough, on characteristic chaotic or crossbedded seismic textures which change to parallelbedded towards deep-water basin. Such character of seismic facies changing can fit the transition from proximal to its medial or distal part. The detail of tracing of delta complexes at different levels in the measures of Western and Eastern Black Sea depressions is little different. For Maykopian part of the section tracing of channels, paleovalleys, erosive surfaces is problematic, that is connected with complex evolution of Maykopian basin formation, though in the measures of mapped bodies Maykopian sediments unconformably lies on the range of Upper Cretaceous-Upper Eocene sediments. Clear erosive surface of complex morphology, some basic feeding channels (river channels), which broaden southwards to the deep-water depression and gradually changes to delta complex with considerable contents of turbidite sediments, are characteristic for Later Miocene-Pleistocene delta complexes.

Average thicknesses of delta complexes fluctuate from 500 m to 1200 m and more, from two to five lenticular bodies on chaotic seismic textures in their measures are allocated, with thickness up to 200 m and strike length more than 80 km at width more than 30 km. These bodies should be considered as perspective for exploration not anticlinal (lithologically screened) traps of hydrocarbons.

Key words: *Black Sea, Cainozoic, delta complex, paleovalley, seismic texture*