

## SEDIMENTATION SETTING OF THE BLACK SEA

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The Black sea basin is filled by Cenozoic sediments arranged in cycles of onlapping strata. The thickness of these sediments is 14 km.

On the data available in NIPlokeangeofizika, the Cenozoic sediments are represented by clays with bands of carbonates and sandstones (INITIAL. 1978). Among them the Maikopian sediments are represented mainly by clays, sandstones taking a small part of the total amount of rocks.

Deep or shelf nature of sedimentation setting is proved by some features, the most important of them is an old continental slope. We have designed for the Black sea a special technique of determination this old continental slope in the CDP seismic section (TUGOLESOV *et al.*, 1990). If we bear in mind this feature, the Black sea basins were deep in the Eocene time already. Another good indicator of the good setting is presence of thick oblique bedding sediments, connected with foredeltas. The same deltas occur in the Maikopian sediments. A complex dynamic picture of the sedimentation settings is typical of the Miocene time. From one hand, it was a depression of the Black sea basins, their extension, joining and formation of the entire basin. Thick submarine fans were discovered in the Miocene sediments in the periphery of the basin, which is an indirect index of deep sea. From another hand, the mountain structures rimming the Black sea were intensively growing at that time. Together with tectonic movements there were short-time and frequent eustatic sea level changes, which were recorded in the geologic section. In the Sarmatian section, along the northern flange of the Shatskiy ridge it was identified a cutting of the river bed, which testifies a sea level fall at this time. As for the Messinian time when a sharp fall of the sea level in the Mediterranean took place, there are no direct features which can prove the same fall in the Black sea. In the quaternary time, the formation of the deep basin of the Black sea was going on. All sediments were accumulated as a result of run-off of the rivers. The Danube was the main supplier of sediments, whose fans occupy a considerable part of the western half of the Black sea.

### REFERENCES

- Initial reports of Deep Sea Drilling Project, 1978, vol. XLII, part. 2, 1244 p.  
TUGOLESOV D. A., GORSHKOV A. S., MEISNER L. B., 1990. Ancient slopes of the Black sea basin and associated breaks & unconformities. *Geologica Balcanica*, V. 20, n°1 : 3-18.

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