



Paleotemperature regime and sedimentation dynamics in maykopian basin within the South-eastern Caucasus on the basis of palynological data

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Maykopian basin (Oligocene-Lower Miocene) existed in Caucasus more during than 15 Ma and over that period 2000 m of sediments were accumulated. In Azerbaijan maykopian deposits are of specific source rock features and of interest for exposure of large hydrocarbon accumulations. Detailed reliable stratigraphical division is one of the important terms for oil and gas exploration. However it is very difficult for lack of paleontological remains in maykopian sedimentary complex and results in relative age division into subcomplexes (subsuites) of different degree.

In earlier investigations paleotemperature conditions for organic matter transformation were determined according to the vitrinite reflectance (R₀). It has been established that the most favorable conditions for realization of hydrocarbon potential of maykopian deposits existed in the deepest part of Dzheyrankechmez depression at depth exceeding 4 km (Guliyev, Tagiyev, Feyzullayev, 2001).

Study of pollen and dinoflagellates allow us to determine paleotemperature regime and age of Maykop deposits of South-eastern Caucasus. 100 samples of maykop section within Central Gobustan have been collected and analyzed. Samples cover all sedimentation interval of maykopian basin. Analysis has been performed using the color scale of miospores (Rovnina, 1984) and temperature change of cysts *Tasmanites Newton* (Zdobnova, 2011). Results of analysis show the highest temperatures up to 135-155°C in Lower Maykop (Upper Oligocene, Rupel stage) with dark color of microfossils. The lowest paleotemperatures (50-80°C) were registered in Upper Maykop (Lower Miocene).

Analysis and correlation of previous and new data indicates that in maykopian time within the South-eastern Caucasus and adjacent territory of Kura Depression there was stagnant basin with average depth of 500-600 m and depocenter located in Central Gobustan.