

Boundaries and structure of akchagylian stage within middle volga area

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Abstract

© SGEM2017. All Rights Reserved. Accordingly to decision of International Commission on Stratigraphy in 2011 Quaternary period was increased till 2,6 million years. As a result of lowering Quaternary boundary the upper part of regional Akchagylian stage (Gelasian stage) was included into Quaternary as bottom subdivision. Thus upper boundary of Akchagylian stage-boundary between Neogene and Quaternary, upper boundary of Akchagylian stage located between Upper and Lower Pliocene. Currently Sokol layers within Middle Volga area conventionally included into regional Akchagylian stage. Their feature of bedding within Middle Volga area is a correlation with ancient river network. Therefore the important point for Sokol layers study is Geomorphological analysis associated with palynological and paleomagnetic data. Material for research was received after study of 7 reference Neogene sections in Middle Volga area (northward from Samara bend), palynological analysis of 14 wells that have exposed the Sokol layers, as well as reconstruction materials of the Neogene River Network in the Middle Volga Region. The sediments consist of massive sand, sandstone, clay and siltstone layers. Sokol layers has alluvial and alluvial-lacustrine genesis. Deposit thickness fluctuate from 12,0 to 93,0 meters. Absolute base surface marks vary from minus 70,0 meters within Kama's valleys range up to 65,0–100,0 meters in the upper reaches of tributaries Kama and Volga. The rocks are straight magnetized, which makes it possible to compare them with the Gauss epoch. Palinologic analysis of deposits allowed to distinguish in the Sokol layers 3 palynocomplex: pine, broadleaf-pine-spruce and pine-spruce, which reflect the change of vegetation during this period. the nature of the change in vegetation indicates that the beginning of this time was moderately warm and fairly dry, and the end was more humid.

<http://dx.doi.org/10.5593/sgem2017/11/S01.008>

Keywords

Akchagylian stage, Middle Volga, Neogene

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