

Mesozoic-Cenozoic alluvial-lacustrine deposits of the Middle Amur and Upper Bureya depressions and the East China Basins

LARICHEV A.I., RYAZANOVA T.A., PEROZIO G.N. Siberian Research Institute of Geology, Geophysics and Mineral Resources, Novosibirsk, Russia.

Cenozoic deposits of the Middle Amur depression are represented by argillaceous-carbonaceous sediments of the lacustrine-swampy complex.

In mineral composition the Upper Cretaceous sandstone and silt are referred to greywacke. The rocks are enriched to a variable degree in pyroclastic material. Sedimentation occurred in lacustrine-alluvial coastal plain environment recurrently substituted for marine shelf environment.

The Cretaceous section of the Upper Bureya depression reveals four macrocycles of sedimentation. The macrocycle initiates with gravelly-pebbly material and completes with fine-grained deposits with abundant carbonaceous detritus. Each formation displays microcycles: the lower part is shown by alternating sandy and sandy-silty members, the upper one - by members of alternating siltstone and clay. Sedimentation took place in the environment of swamped lacustrine-alluvial and coastal plains with beaches.

Catagenesis resulted in either rock desintegration (kaolinization), or calcite formation. Channel sandstones (reservoirs of class I-III; rarely class V) obtain the best filtrational-volumetric properties.

In the East China basins argillaceous strata of lacustrine genesis are interbedded with sandstone - porous reservoirs. Sedimentation occurred in the environment of fresh-water lakes, rarely brackish-water ones. Furthermore, volcanism, affected the formation of effusive-sedimentary strata, is traced through the whole section.