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About Geodynamic Situation of the Formation and Development of the Inside Formation Throughs of the Volga-Ural Region

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The study area is the South Tatarstan Arch located in the Volgo-Ural Region, which is an enigmatic crustal segment occupying one third of the East European Platform. Tatarstan remains the oil-richest region of the Volga-Urals petroleum province. Sedimentary geological section consists of terrigenous–carbonate rocks of Devonian, Carboniferous and Permian systems. Its thickness is as much as 1,6 – 1,7 km in the most elevated parts of South Tatarsky Arch. It is supposed that deposits of Semilukian horizon (D3fm) represented by carbonate and argillo-carbonate silicified rocks characterized by the 3-5% abundance of organic carbon are major oil-generating complexes within the limits of this area. Oil accumulations are confined mostly to terrigenous reservoirs of the Lower Frasnian stage and to a lesser extent to sandy-aleurolite rocks of the Lower and Middle Carboniferous. Submeridional, latitudinal and diagonal faults related to processes taking place in the crystalline basement at the Early Paleozoic stage are predominating among faults identified within the limits of the studied area. The traces of discontinuities are identified from the gabbro - diabase dykes, products of the volcanic activity encountered in the Middle Devonian deposits, and from increased fracturing of rocks. Faults of various ranks are distinctly exhibited in the up-to-date relief. In the sedimentary cover faults are exhibited as flexure – discontinuity zones or structural terraces, they serve as boundaries between sharply replaced facies and sharp changes in the thickness of deposits.
Problem of the origin and development of the Kama-Kinel inside formation through (KKIFT) as before is topical and significant for understanding of geodynamic situation of paleoshelf of East-European platform in Middle-Upper Devonian. Absence in KKIFT of thick, massive carbonaceous rocks and occurrence of decreased thickness of clay- silicon-carbonaceous organic-rich sediments – result of the different conditions of the sedimentation processes, different conditions of the gas-water composition characteristics of the marine basin, different conditions of the lithosphere. Paleogeografical, paleotectonical, lithofacies conditions – result of the specific geodynamic and fluid regime of the sedimentftion. Similar forms are widespread on the territory of the Volga-Ural antecline (from Samara area in the south to Perm in the north) and are of significant interest for regional petroleum geology as a whole.
Section correlation of recognized components demonstrates their tectonic regime was deal with lithosphere decompression, active gas-fluid regime of the reduced system. Problem of studying carbonate deposits and their reservoir potential is related to the most important for board parts of the KKIFT.