

## **PETROLEUM GEOLOGY OF THE OXFORDIAN-KIMMERIDGIAN RESERVOIR IN WEST SIBERIA**

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Over the significant part of West Siberia the Oxfordian-Kimmeridgian deposits are mainly represented by sandy horizon Yu1 which is a regional reservoir for hydrocarbon pools. The complete section of the horizon includes 4-5 sandy beds, the thickness of which reaches 20m, porosity 25% and permeability 1-3 D. The reservoir deposits are overlain by argillaceous-siliceous deposits of the Bazhenov Formation, uniquely enriched in organic matter and being the main oil generator in West Siberia. The presence in the section of regionally developed reservoir and overlapping deposits of the Bazhenov Formation which simultaneously serve as the main hydrocarbon source and a regional seal, creates the favourable conditions for the formation of oil and gas fields. In West Siberia more than 200 oil and gas fields have been discovered, in which hydrocarbon pools are concentrated in sandy beds of the Oxfordian-Kimmeridgian reservoir. These are mainly oil pools and are controlled by both the structural factor and the tectonic, lithologic and capillary seals. The sandy deposits of the reservoir formed in littoral-marine environments and are characterized by facies inhomogeneity and an essential variation of poroperm properties that hampers the completion of oil- and gas promising objectives by exploration. Based on the integrated analysis of seismic exploration and drilling data, the technique has been devised to predict the distribution zones and reservoir quality in the deposits of horizon Yu1. The regional geologic-mathematical model of structure of the Oxfordian-Kimmeridgian deposits has been created.