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## Application of Paleofacial Reconstructions for Forecasting Oil Traps in Turbidite Systems, Lower Cretaceous, Western Siberia

The Lower Cretaceous deposits of Western Siberia are the most promising oil-gas-bearing rocks. They contain some large and giant fields (Urengoiskoe, Gubkinskoe, Salymskoe, and others) at the stratigraphic traps associated with ancient deepwater fans. Sharp lithologic non-uniformity makes the prediction of oil pools in these deposits only on seismic survey data difficult.

Regularities in forming and distribution of stratigraphic traps are established on the basis of data of facial, sequence-stratigraphic, and paleodynamic analyses. 16 sequences of the fourth order, related to the discrete filling of the basin of sedimentation in the Frolovskaya, Kaimysovskaya, and Nadym-Purskaya oil-gas regions, are identified and mapped. It is established that these deposits have a turbidite nature. The best reservoir rocks are associated with supply channels and the central parts of the fans. The impact of contourites on the ancient fans has played a positive role The reservoir rocks occurred on the flanks of structures or in depressions on the way of clastic material transportation. A paleostructural analysis allowed the identification of such zones in sandy depocenters established on geophysical data. The estimation of potential oil and gas resources for the established predicted zones on the basis of modeling the processes of hydrocarbon generation, migration, and accumulation is given. 11 prospective objects are determined on the south of Western Siberia. The most large of them are associated with the Tailakovskaya, Gavrekovskaya, Travyanaya, and Polunyakhskaya areas.

The proposed method showed itself to advantage during exploration in Western Siberia. So, contrary to the existing opinion about the absence of any prospect in AC bed groups of Krasnoleninskaya area, a commercial oil inflow has been received as a result of testing an object established on the proposed method. A new pool, new oil-gas complex have been discovered here.