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Optimization of Technical and Technological Solutions for the Development of Offshore Hydrocarbon Fields in the Kaliningrad Region

Authors: Pavel Shcherban, Viktoria Ivanova, Alexander Neprokin, Vladislav Golovanov

Abstract: Currently, LLC « Lukoil-Kaliningrad morneft» is implementing a comprehensive program for the development of offshore fields of the Kaliningrad region. This is largely associated with the depletion of the resource base of land in the region, as well as the positive results of geological investigation surrounding the Baltic Sea area and the data on the volume of hydrocarbon recovery from a single offshore field are working on the Kaliningrad region – D-6 « Kravtsovskoye». The article analyzes the main stages of the LLC « Lukoil-Kaliningradmorneft» ' s development program for the development of the hydrocarbon resources of the region' s shelf and suggests an optimization algorithm that allows managing a multi-criteria process of development of shelf deposits. The algorithm is formed on the basis of the problem of sequential decision making, which is a section of dynamic programming. Application of the algorithm during the consolidation of the initial data, the elaboration of project documentation, the further exploration and development of offshore fields will allow to optimize the complex of technical and technological solutions and increase the economic efficiency of the field development project implemented by LLC « Lukoil-Kaliningradmorneft».

Keywords: offshore fields of hydrocarbons of the Baltic Sea, development of offshore oil and gas fields, optimization of the field development scheme, solution of multicriteria tasks in oil and gas complex, quality management in oil and gas complex

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