

Enhancement of horizontal well oil recovery by means of chemical stimulation

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Abstract

© 2015, Asian Social Science. All rights reserved. Complex of self production technologies solves the problem of preservation, restoration and enhancement of natural collection characteristics of bottom hole formation zone and, moreover, enhancement of active draining field and level of hydrocarbon selection by oil wells of different construction in non-uniform porous fractured carbonate reservoirs. The scientific and methodological basis for complex of well stimulation technologies in carbonate reservoirs is the following principle – phased, consistent, rational inclusion in the development and exploitation of the entire producing formation thickness, and only thereafter – successive, phased realization of physical and chemical influence on the formation-reservoirs depth and extent. The article deals with the solution of up-to-date problems of restoration and enhancement of productivity of oil wells in Tatarstan carbonate reservoirs under conditions of import substitution of advanced technologies of the formation oil recovery enhancement. Stimulation issues on the entire chain of oil extraction technological process are regarded from the formation drilling-in until repair-isolation works. Reduction in oil recovery cost is taken into account by means of the effective application of complex technical solutions, operations matching in time and power inputs on production enhancement in wells from water-bearing horizon. Enhancement of technical and economic efficiency of one's own technologies of acid treatment of vertical and horizontal wells leads to enhancement of current and final coefficient of hydrocarbon resources extraction. Solution of the above stated tasks was performed on the basis of the suggested by the authors principally new, scientifically based, mastered in production and inculcated in industrial scales complex of our own technical and technological solutions providing achievement of considerable enhancement of the efficiency of hydrocarbon raw materials extraction in Tatarstan.

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Keywords

Additional oil extraction, Bottomhole formation zone treatment, Carbonate sediments, Complex, Efficiency, Enhancement of oil output, Technology of hydrochlorid-acid formation treatment