RESULTS OF APPLYING NON-STATIONARY WATER FLOODING WITH THE CHANGE OF FILTRATION FLOW DIRECTION IN HIGH-VISCOUS OIL RESERVOIR OF THE FIRST NORTH BUZACHI OILFIELD PRODUCTION FACILITIES

Background
Industrial experiments on the application of various techniques of non-stationary effects are conducted on the site of the seventh block of the first production facility in North Buzachi oilfield. In 2013 – 2014 non-stationary flooding (NSF) was conducted with the change in direction of filtration flows. The paper gives the analysis of the current state of using NSF technique.

Aims and Objectives
Using actual data determine technological effectiveness of non-stationary flooding with the change in direction of filtration flows. Show how geological and technical activities conducted in the NSF zone impact on the flooding effectiveness.

Methods
Analysis of obtained data by plotting displacement characteristics.

Results
Presented results of reviewing the use of non-stationary flooding on the site of the seventh block of the first production facility in the North Buzachi field showed that non-stationary flooding was technologically effective. However, it should be noted that in comparison with the previous periods of NSF application the effect is weaker, which implies further modification of non-stationary flooding technique.

In 2014 the effect of NSF application at the site of the seventh block, according to various estimates, ranges from 5.5 thousand tons to 9.4 thousand tons of additionally produced oil.

It is shown that control (optimization) of the well operating modes in the NSF zone has significant influence on the NSF effectiveness. Wells with «optimized» operating modes demonstrate a much lower specific effect (the specific effect for about half of the wells with «optimization» is 27 tons/well against analogous index for wells without optimization – 692 tons/well).

Key words: non-stationary flooding technique, direction of filtration flows, geological and technical activities

References


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The author

Almukhatmetova Elvira M., Candidate of Technical Sciences
Oktjabrskiy Affiliate of Ufa State Petroleum Technological University
Assistant Professor of Exploration and Exploitation of Oil and Gas Fields Chair
54 a, Devonskaya str., Oktjabrskiy, Republic of Bashkortostan, 452607, Russian Federation
tel: (34767) 6-60-30, e-mail: elikaza@mail.ru