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EFFECTIVENESS OF HYDRAULIC FRACTURING APPLIED IN BAVLY FIELD CONDITIONS

Background

The level and quality of oil recovery stimulation is largely dependent on the effectiveness of the treatment of the bottom-hole formation zone. The conventional methods of treatment are hydraulic fracturing, acidizing, vibration treatment of the bottom-hole zone, washing of the bottom-hole zone, and well stimulation using thermal, gas and chemical treatment methods. The paper presents a comparative analysis of the use of hydraulic fracturing in some wells of Bavly Field. After hydrofrac the production rate usually increases sharply. The method allows «reanimation» of idle wells when oil or gas recovery by conventional methods is already impossible or unprofitable.

Aims and Objectives

The paper contains the analysis of the bottom-hole stimulation methods applied in the wells Nos. 442, 1060, 3314, 226 and 893 of Bavly Field. The assessment of the well producing characteristics after treatment is given, and the impact of geological factors on the effectiveness of hydraulic fracturing is shown.

Methods

The algorithm and calculation methods to determine the technological effect of the bottom-hole stimulation are presented.

Results

The effectiveness of hydraulic fracturing in wells Nos. 442, 1060, 3314, 226 and 893 of Bavly Field is demonstrated on the basis of facts. Application of the method allows a significant improvement of producing characteristics of the wells. Thus, if one producing well in the working area operates in average 12 days of a month, then it is 25 days of operation per well after hydraulic fracturing. An important technological achievement is that a part of reserves in the marginal zone is involved in development. The efficiency of the well operation after hydraulic fracturing applied in the edge zones of the horizon is 4.5 times higher than the efficiency of the usual well operation without fracturing.

Key words: field, oil production, bottom-hole formation zone, well, hydraulic fracturing, profitability

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