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Assessment of the Influence of the Number of Layers on the Results of Reservoiment

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Abstract
Due to satellite oil gases, global warming, acid residues, climate change and the strengthening of the greenhouse effect are taking place.
In fulfillment of the tasks defined by the Action Strategy for five priority areas of development of the Republic of Uzbekistan in 2017-2021, developed on the initiative of the President of the Republic of Uzbekistan Shavkat Mirziyoyev, the Uzbekneftgaz National Holding has adopted a program to increase hydrocarbon production for 2017-2021.

Introduction

Opening up the formation by perforating in cased wells is one of the most important operations in the final well construction process. The degree of hydrodynamic connection between the formation and the well, the productivity coefficient and changes in operational indicators depend on its results.

Currently used cumulative, bullet, torpedo and hydrosand-blasting perforators vary greatly in the geological and physical conditions of their effective use, such as the thickness and depth of the productive formation, temperature and initial formation pressure, type, filtration-capacitive and mechanical properties of the reservoir, etc.

Analysis of the research results shows that in general, when opening up formations by perforation, it is necessary to overcome the layer of well fluid (5-10 mm), the wall of the steel pipe (6-12 mm), the thickness of the cement stone (25-50 mm or more), as well as the thickness the zone of near-wellbore blockage of the reservoir, which, depending on the type of reservoir and the influence of the negative factors of opening by drilling on it, can range from 40-50 to 100-150 mm or more

PreservedDepending on the geological and physical conditions of the deposits and the geodynamic stress in the formation, existing types of perforators provide filtration channels with diameters from 9 to 100 mm and a length from 115 to 500 mm. Changing the diameter and length of the punched channel in such large ranges leads to different results that differ in the degree of hydrodynamic connection between the formation and the well.

Today in Uzbekistan, the main objects providing about 80% of all oil production are the oil and gas condensate fields of the Bukhara-Khiva oil and gas region. These fields account for 57% of the current balance oil reserves of the Republic of Uzbekistan.

The peculiarities of the distribution of oil reserves in the sub-gas oil deposits of the Bukhara-Khiva oil and gas region are due to the fact that they are confined to thin oil rims with a thickness of 10-12 m, with a large reserve of gas and an underlying bottom will. These features of the geological structure of sub-gas oil deposits require a special approach to the process of opening the formation in order to ensure efficient operation of wells.

The main productive horizons (XV, XV-PR, XV-P, XV-NR) of the fields of Western Uzbekistan differ significantly in their occurrence depth, initial reservoir pressure and temperature, reservoir and mechanical properties of reservoir rocks, geological heterogeneity, which have a significant impact on the choice types of perforation and the results of their use.

An analysis of existing calculation methods shows that the method of perforating a formation affects the flow rate only through the well imperfection coefficient, depending on the number of perforations per 1 m of formation thickness, the depth of penetration of bullets into the rock and the diameter of the holes /2,3/.

Analysis of the results of calculating the flow rate of wells XV-P and XV XV-HP horizons and their geological and physical conditions show that with comparable values of almost all parameters affecting well flow rates, these horizons differ sharply in the value of the coefficient of dissection (sand content coefficients). It can be assumed that it is precisely this difference in the geological and physical conditions of the XV-P and XV-HP horizons that predetermines the sharp difference in well flow rates.

AAs can be seen from Fig. 2, with an increase in the number of perforated layers (poroplasts), the proportion of working layers (poroplasts) sharply decreases. If one single layer is perforated (conditions of the X V-P horizon), the entire interval is practically operational (98.2%), and when the number of interlayers in the perforation interval increases to 6 (conditions of the X V-HP horizon), the proportion of the working interval decreases to 29.2%.

References

1. Атакулова, Д. Д., & Абдувалиев, С. А. (2023). ИСПОЛЬЗОВАНИЕ ИНГИБИТОРОВ КОРРОЗИИ МЕТАЛЛОВ. Экономика и социум, (12 (115)-1), 938-942.
2. Мухаммадиев, Х. М. (2024). ОЦЕНКА ПРИРОСТА КОНЕЧНОГО КОЭФФИЦИЕНТА ИЗВЛЕЧЕНИЯ НЕФТИ. International Journal of Education, Social Science & Humanities, 12(3), 652-657.
3. Ziyadullayevich, B. U., & Normuradovich, S. N. (2023). EVALUATION OF THE POSSIBILITIES OF INCREASING OIL YIELD IN HIGH-VISCOSITY OIL FIELDS USING THERMAL METHODS. American Journal of Technology and Applied Sciences, 19, 69-71.
4. Ziyodullayevich, B. U. (2023). THE RESULTS OF THE FORECAST OF THE MAIN TECHNOLOGICAL INDICATORS OF THE DEVELOPMENT OF THE OIL AND GAS CONDENSATE FIELD EASTREN ISPANLI. American Journal of Research in Humanities and Social Sciences, 13, 102-104.

5. Soatmurodovich, B. R., Gayratovna, A. D., & Ziyodullayevich, B. U. (2023). Special Methods of Using Oil Fields with High Viscosity. The Peerian Journal, 18, 1-4.
6. Kibriyo, B. O. T. Z. M., & Aktam o'g, O. I. S. (2023). STUDY OF SECONDARY METHODS OF OIL PRODUCTION IN THE LAST PERIOD OF OPERATION. Innovations in Technology and Science Education, 2(8), 397-400.
7. Бобомуродов, У., & Бекжонов, Р. (2022). ПОКАЗАТЕЛИ РАЗРАБОТКИ НЕФТЕГАЗОКОНДЕНСАТНОГО МЕСТОРОЖДЕНИЯ.