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WATER DRIVING TECHNOLOGY IN OIL FIELDS

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Annotation

When oil is compressed by pressing with water in real non-aligned strata, acceleration of oil compression in strata with low permeability and high oil recovery is achieved. Capillary forces and data on the compression of oil with water in the fractured-porous strata were qualitatively analyzed and came to this conclusion.

Keywords. Capillary forces, porous layer, non-aligned layer, gas duct, inner contour, optimal speed, nooptimal speed.

Introduction

The level of use of oil fields in flooding has an impact on the rate of oil recovery from the formation and is the most complex and difficult problem in the oil industry. A lot of research (theoretical, experimental and mining) has been devoted to finding a solution to this problem

in various fields. When oil is extracted, high permeability, high rate of water penetration into the strata occurs, the size of the flooding is small and the oil yield is also reduced.

In practice, from a theoretical point of view, the effect of capillary absorption in non-inhomogeneous oil-bearing strata is observed in no inhomogeneous strata under certain conditions when capillary forces squeeze oil in low-permeable strata, balance the water front and occupy pressurized water. In order to apply this efficiency in practice, the speed of movement at the contacts of oil fields during field operation is measured by the rate of capillary absorption.

Capillary forces in hydrophilic strata are shown to change the hydration property in non-anthracite-multilayer strata, and the dependence of the pressure change between the drive system and the intake zone is measured by capillary pressures at pressures not exceeding 0.3 Mpa.In this depression, only one layer (Anastasiev-Trontsky) was formed in the gas duct and in the groundwater.

The use of conventional fields at low speeds cannot be applied in practice, so a reliable conclusion is that small-scale exploitation increases oil recovery, but the practical situation does not arise.Getting at a high rate increases oil recovery.

Such a conclusion was reached by FI Kotyakhov in his scientific work "Secondary oil extraction" in his book "Contour water velocity and oil recovery."

Maksimovich G.K. In 1954, forcing established the physical basis for fluid retrieval, in which oil flow from low-permeable strata to high-permeable strata occurs after the fluid intake index is enhanced. As a result, oil mobility increases in low-permeability sections and reservoir oil recovery increases.

American scientists D. Bakualter, V. Stiles and M. Edgerban came to the conclusion in 1958 that when the water level is reduced, the oil recovery of the layers is completely different.

N.N.Tseprimerov and A.G.Sharachin came to the nearest series of conclusions that the greater the pressure difference in the internal contour performance of oil reservoirs in the Ramashkin field, the higher the oil recovery capacity and their performance..

The use of fields at the optimum rate provides the highest oil recovery.

There is data on the level of performance of oil fields in porous environments where oil is

compressed with water at an optimal rate.

The optimal compression rate was obtained in 1964 by O.F. Martintsov and V.M. Differences in anhydrous coefficient compression at optimal and nonoptimal velocities are practically non-existent. The performance of the seams is not affected by the performance index. Considering the contradictory conditions above, it can be concluded that sometimes the research results are mutually exclusive, many of which have no practical action, and the idea that oil can be applied to the rate of its operation can be applied correctly and based on common sense. However, such practical conclusions have been confirmed by many researchers.

In 1960, based on the analysis of water velocity ratios in the two-layer non-homogeneous hydrophilic layer, it was concluded that the permeability of the formation is always determined in proportions when the layers are irrigated. Thus, many scientists in their research have expressed the opinion that oil recovery does not depend on the rate (indicator) of use.

American scientists S. Pearson and F. Craig have done a lot of research on flooding, and based on their experimental data, they conclude that oil recovery depends on water compression only in layers with a large slope (greater than 300).

Thus, from many generalized studies, experimental data of different descriptions and unsuitable for research conditions can confirm the conclusion that the rate of flooding of reservoirs to oil recovery is such that flooding and oil recovery do not depend on production and use in non-solid formations. Acceleration of the flooding system will not only reduce the technological and economic performance of the units, but also allow the use of oil wells in the fountain method.

Publications

1.Богданов С.Д. Влияние геолого-физических параметров на точность прогноза коэффициента нефтеизвлечения //Ж. геология нефти и газа. – 2017..

2. Богданов С.Д., Черникова З.Н. Сравнительные исследования экономической и коммерческой оценке проектов освоения месторождений на ранней стадии работ -2000. -№7. – С. 20-23.

3.Басков В., Заболотнов А. Проблемы оценки эффективности методов увеличения нефтеотдачи пластов. Ж. нефт и капитал. – 2001.