WEB OF SYNERGY:
International Interdisciplinary Research Journal
Volume 2 Issue 5, Year 2023 ISSN: 2835-3013
https://univerpubl.com/index.php/synergy

Indicator of Driving Water to Oil Pumps – the Dynamics of Oil Supply Dependence are Analyzed

Холмухаммадиев Абдухолиқ Мухаммади ўғли
Assistant of Termiz Institute of Engineering and Technology

Эргашев Акрам Холмўминович
Assistant of Termiz Institute of Engineering and Technology

Исмоилов Бекзод Шавкат ўғли
Student of Termiz Institute of Engineering and Technology

Article Information

Received: March 29, 2023
Accepted: April 29, 2023
Published: May 31, 2023

Basic words: *Capillary forces, porous layer, porous layer, gas layer , internal contour, optimal speed, non-optimal speed.*

ABSTRACT

When oil is compressed with water in real impurity formations with low permeability in formations, acceleration of oil compression in formations and high oil yield is achieved. They came to this conclusion after qualitative analysis of the capillary forces and the data on the compression of oil with water in the cracked-porous stratified layers.

Enter

Water suppression is the most complex and difficult problem in the oil industry because of its impact on oil recovery. A lot of research (theoretical, experimental and mining) has been devoted to finding a solution to this problem in various fields.

The main part

When oil is extracted, it is highly permeable, water penetrates the formations at a high rate, the amount of water suppression is small and the oil yield is reduced as a result .

In practice, from a theoretical point of view, the effect of capillary suction in impure oil-aqueous formations is that under certain conditions in impure formations, capillary forces squeeze out oil

in low-permeability formations, balance the water front, and capture water trapped in the formation.

In order to put this efficiency into practice, the rate of movement of oil field contacts during field operations is measured by the rate of capillary absorption.

Capillary forces in hydrophilic layers are shown to change hydration characteristics in non-intact multi-layered layers, and it is suggested that the dependence of pressure changes between the driving system and the extraction zone is measured by capillary pressures at pressures not greater than 0.3 MPa.

In such a depression, only one (Anastasiev-Trontsky) deposit has been developed in the gas reservoir and in the groundwater.

Short-season operation of conventional fields is not practical, so it is safe to conclude that short-season operation increases oil productivity, but it is not practical.

The peak season increases oil production.

of polymers in the water solution with squeeze the oil _ release _ Mainly in this of polyacrylamide (PAA) is neutralized calcareous solution q is killed . It is known to water of PAA the addition of his viscosity increases, as a result of oil to water relative viscosity less water _ squeeze issuer feature increases, so in case squeeze release front stability increases and more oil squeeze release opportunity appear will be Such method high to viscosity have has been in oils application (10 - 50 MPa*s) to the target is appropriate.

of waters viscosity increase as a result water driver of wells acceptance dexterity feature much decrease account taking , such method good permeable to ability have in collectors (0.1 μM^2 from increase), basically cavity kind of in collectors apply to the goal is appropriate . That's it attention get must be in the process of filtration of polymers one part hollows on the wall stay goes _ That's why for to water saturation is more than 8 - 10% didn't happen and little amount clays is available in collectors at least temperature $70-800\,^{0}C$ under the circumstances this method apply to the goal is suitable (temperature indicator in particular the idea some this indicator different they give). Surfactants _ _ solution with oil squeeze release _ Most OP-10s are different neonogen didn't happen surfactants _ _ from the solution these are the reasons for is used. of surfactants _ to water the addition of his washability feature increases , as a result of water with oil at the border surface tension decreases . This method to water saturation up to 15% has been and layer of oil viscosity of the layer is 5-30 MPa *C conductivity feature 0.03-0.04 μM^2 and temperature up to 70°C has been cases app reach recommendation will be done . This of the method giving the result is an increase in oil yield by 3-5% ability. Mitsilliar solutions with oil squeeze release _ First of all micellar of solutions composition in particular It is light hydrocarbons , sweet from a mixture of water , surfactants , alcohol harvest done is substance . Solution of microemulsion consists of being, then water molecules, hydrocarbon and surfactants _ _ molecules pause solution harvest does _ Him oil squeeze release for when used approx 10% of porosity in the amount micellar solution to layer is put, his from him layer according to pushing walking buffer solution for - polymer solution is placed and s then by water power solution is pushed. As a result micellar solution layer is available oils in itself melting keeps going Known from the deadline after receiver wells using micellar solution up is released and separating oil from it is taken .

This method with before using divided mines again again revive opportunity is born Of this for more than 0.1 μM^2 to conductivity have has been a terrigenous collector is selected. Of course in layer is available residual of oil amount less than 25-30% not to be because it is necessary this method himself does not increase can _ In the layer of oil viscosity is around 3-20 Mpa*s if to the goal is compatible , layer temperature 70-90 °C if better _

Such a conclusion was reached by F.I. Kotyakhov in his scientific work entitled "The speed of movement of contour waters and oil yield" on secondary oil production.

Similar points were made by many researchers.

Maksimovich G.K. In 1954, forcing established the physical basis of fluid withdrawal, which is the flow of oil from low-permeability formations to high-permeability formations when the fluid withdrawal rate is increased. As a result, the mobility of oil increases in the less permeable sections and the oil yield of the formation increases.

American scientists D. Buckalter, V. Stiles and M. Edgerban in 1958 made a completely different conclusion that the oil yield of the formations decreases when the utilization rate is limited, when the formation is flooded, when the formation is limited, when the formation is flooded.

N.N. Tseprimerov and A.G. Sharachin came to the closest series of conclusions that the more pressure difference there is in the working characteristics of the oil layers along the internal contour of the Ramashkin field, the higher the ability of the layers to yield oil and their performance index.

Several scientists have come to the same conclusions about increased oil yield in high-speed compression.

Optimum field operation ensures the highest oil yield.

There are data on oil field performance in porous media with optimal rate of compression of oil with water.

O.F.Martintsov, V.M.Ryzhiklar in 1964 obtained the optimal compression speed and obtained the maximum oil yield without water at all permeability ratios and oil viscosity at water ratios. Differences in water-free compression ratio at optimal and suboptimal speeds are practically non-existent.

The performance index does not affect the oil yield of the layers. Considering the conflicting conditions above, sometimes the research results cancel each other out, many of them are not practical, and it can be concluded that oil production can be applied based on the idea that it has a working pace and based on a general idea. But such practical conclusions have been confirmed by many researchers.

In 1960, on the basis of the analysis of the speed ratios of water movement in the oil-mining industry in the two-layer impure hydrophilic layer, in the case when the pressure difference in the oil-water contact is in the receiving zone (0.3MPa - large) in the real situation, it was concluded that the permeability of the layer when the layer is hydrated is always determined in the ratio.

Thus, many scientists in their studies have expressed opinions that oil yield does not depend on the rate of use (indicator).

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

Thus, from the many works, which are of different description according to the form and the research conditions are not suitable, according to the experimental data on the effect of water flooding rate on the oil permeability of the layers, it is possible to confirm the conclusion that the water flooding and oil permeability in uncontaminated layers do not depend on the production rate and usage index.

Summary

Acceleration of the water suppression system not only reduces the technological and economic indicators of pile operation, but also provides an opportunity to use oil wells in the fountain way.

Used literature :

1. Eshev S.S. , Bekjonov R.S. Textbook of "General and underground hydraulics"; Tashkent - 2019
2. Bogdanov S.D. Vliyanie geologo-fizicheskikh parametrov na tochnost prognoza koeffitsienta nefteizvlecheniya //J. geological oil and gas. – 201 7..
3. Bogdanov S.D., Chernikova Z.N. Sravnetelnye issledovaniya ekonomicheskoy i kommercheskoy otsenke proektov osvoeniya mestorojdenii na ranney stadii rabot - 2000. - №7. - S. 20-23.
4. Baskov V., Zabolotnov A. Problemy otsenki effektivnosti metodov uvelicheniya nefteotdachi plastov. J. oil and capital. - 2001.