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Regulation of filtration and reservoir features of oil stratum rock with use of composite solutions of SAS

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In the paper, the issues of oil production at the 15th oil well of the Supsa oilfield and the factors affecting its productivity are discussed. In details, the watering of the bottom hole zone, high viscosity of the extracting oil, residual oil, as well as the deposition of heavy oil components asphaltenes, resins and paraffin's. Here, we recommend a reagent method for solving problems, namely: The introduction of a multifunctional composite solution of SAS [Alkan-202+Sulfanol] into an oil reservoir to improve the fluidity of the oil flow and the filtration of rock aggregates. The article presents the results of laboratory studies conducted to determine the effect of SAS on the rate of filtration of rocks. The process of moving the water-oil contact in the reservoir layer depends on the surface properties of the rock, such as capillary wetting ability, oil and water permeability, hydrophilicity of the rock surface, filtration rate, etc. In this regard, the introduction of the SAS solution into the formation allows us to adjust, increase or decrease the rate of filtration which provides the intensity of the flow of oil in the plast. We investigated the dynamics of wetting of the surface of hydrophobic rocks on quartz. The effects of SAS on the rate of filtration of collectors are shown. The filtration rate was determined from the average value and it was found that by mixing the composite SAS mixture, the flow velocity increases. The work was conducted on the basis of scientific contacts and cooperation, the oil academy of Azerbaijan.

Biography

Nora Mamulaishvili is an Associated Professor in Batumi Shota Rustaveli State University, Georgia. She has developed several scientific projects and has supervised master's work. She has also participated in the creation of educational programs. She is the author of two monographs, a textbook (manual), three patents and 45 scientific works.

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