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Optimization of multistage Hydraulic fracturing technologies in reservoirs with close oil-gas and water-oil contacts and the presence of weak barriers with low stress contrast**Kazakov Evgenii, Fayzullin Ildar and Sayfutdinov Elnar**

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For effective stimulation of wells by hydraulic fracturing requires deep engineering and technological research work. The paper shows various ways of optimization multistage fracturing operations in reservoirs with weak barriers with low stress contrast. One of the solutions of the tasks is to optimize the existing guar fluid systems to control the fracture height. To achieve the maximum effect was carried out gradual decrease the polymer concentration, used low-viscosity liquids and combined "pad" stages. Additionally, had been performing works to optimize the pumping schedule and increase its aggressiveness. To achieve the maximum effect for cleaning of the created fracture, the concentration of enzyme destructor was gradual increasing. As an alternative approach to stimulation, was chosen hydraulic fracturing on a non-polymer fluid system (surface active agent). To minimize

the risks associated with STOP regime, has been implemented multi-stage completion system with reusable sleeves, which controlled by special key with involvement of coil tubing and bottom-hole pressure monitoring. As in addition methods of control had been using microseismic monitoring and different geophysical studies. Analysis of actual oil production rate showed the success of the applied approaches to achieve maximum efficiency of the stimulated wells.

Speaker Biography

Kazakov Evgenii is who as an Head specialist, Department of fracture designs in GAZPROM NEFT Science & Technology Center, Saint-Petersburg, Russia.

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