

Technological Task 31

1	Technological Task 31	Development of an innovative method of bottom-hole zone treatment with multi-component chemical solutions including surfactants for the purpose of oil inflow stimulation
2	Problem Statement:	One of the key problems affecting oil production is ARPD deposition both in the bottomhole formation zone and on the tubing walls, which is one of the main reasons for the reduction of both production well flow rate and injectivity of injection wells. The second cause of productivity decrease is formation of salt deposits due to incompatibility of formation and injected water. Due to the large heterogeneity of the section in terms of permeability, injected water intensively moves through the most permeable layers. As a result, oil reserves in less permeable layers are not brought into development.
3	Required Technological Parameters:	<ul style="list-style-type: none"> ● Research and development work on the development of a multifunctional polymer-containing composite surfactant for field conditions; R&D work on the development of an inhibiting surfactant additive for field conditions; ● R&D work on development of viscoelastic rheological modified composition for the purpose of inflow profile equalization; ● Development of a polyethylene oxide composition to reduce the ultimate shear stress and viscosity of emulsions; ● Development of the concept and basic algorithmic intellectual system that allows selection of composition and dosage of multicomposite surfactant with additives of produced compositions depending on the geology and condition of the well bottomhole zone ● Development of a system for predictive analytics of well bottomhole formation conditions with ARPD deposition and wellbore complications
4	Scale of the Problem:	reduction of production well flow rate and injectivity of injection wells.
5	Existing Methods for Solving the Problem:	At the moment, when the above problems arise, classical acid treatments are performed, which is very expensive and does not give a full effect due to swelling of clays during killing. Treatment of the bottomhole cavity with traditional compositions, including those using multifunctional surfactant compositions, does not allow blocking the

		washed intervals. Another problem is the narrow focus of the applied solutions and, as a consequence, the difficulty in selecting a unique solution for the field peculiarities, which makes the process of production of local compositions costly due to their diversity and small quantity.
6	Contact Person: Name, position, phone, email.	
7	Expert Notes.	