

Technological Task 30	Selection of equipment and technology for preparing process fluid for oil desalting.
Problem Statement:	Using fresh water for production purposes leads to changes in its original properties, turning it into wastewater, which requires compliance with environmental standards (PDS norms).
Required Technological Parameters.	<ol style="list-style-type: none"> 1. Gathering necessary information on the current state of the Produced Water Treatment System (PWT). Study of the chemical composition of the water used and its change, as well as determination of the optimal chemical composition of the process fluid. 2. Study of conditions for preparing "commercial" oil at the PWT production unit. 3. Examination of the water used, determining the Min and Max chemical composition parameters of the fluid for oil desalting. Modeling oil desalting technology under laboratory conditions, including using thermally prepared process fluid in combination with reagents. 4. Selection of necessary technology and equipment for preparing process fluid based on Albsk water. 5. Selection of necessary technology and equipment for preparing process fluid based on wastewater, including pre-treatment and quality improvement technologies for wastewater. 6. Justification of the optimal technology and equipment selection for preparing process fluid for oil desalting. 7. Finding an alternative to Volga water. 8. Investigating the possibility of using a combined solution involving prepared Albsk water. 9. Enhance the digitization of the process of preparing process fluid with the aim of "completely phasing out" the use of fresh water. 10. Develop a feasibility study for applying technologies to improve the quality of process fluid preparation, with the cessation of using Volga water. 11. Compilation of a scientific report.
Scale of the Problem:	<p>Using Volga water results in penalties for injection without compliance with PDS norms, as well as addressing the "Water Issue of the RK" (historical, current, proposed solutions). Currently, oil desalination at the field is carried out using Volga water according to the Produced Water Treatment (PWT) Technological Regulation. Potential use of Albsk water with necessary procedures to achieve the quality equivalent to Volga water.</p> <p>Development of desalination technological regimes with pre-heating of process fluids using specific high-temperature-resistant reagents.</p> <p>Development of a digitization system for technological processes to reduce dependence on Volga water to achieve desired technological fluid parameters.</p> <p>Exploration of alternative methods for obtaining fresh water in case of excess thermal and electrical energy at the field.</p>

Contact Person: Name, position, phone, email.	
Expert Notes.	