Technological Task 29	**Analysis of sulfate-reducing bacteria (SRB) in water and hydrogen sulfide in associated gas.**
Problem Statement:	Contamination of the reservoir with sulfate-reducing bacteria (SRB) leads to active corrosion processes during extraction and contributes to increased mechanical impurities, which negatively affects the formation of oil emulsions. Therefore, the presence of SRB in the reservoir exacerbates the negative impact on extraction by stimulating corrosion and emulsion formation processes. Combatting SRB is necessary through improved reservoir water preparation and the use of bactericides in water injection systems (PPD). The effectiveness of bactericide injection against SRB in water and hydrogen sulfide in associated gas.
Required Technological Parameters:	1. Gathering information on the current contamination status of the reservoir and the application of reagents against sulfate-reducing bacteria (SRB) at production sites (PU). 2. Sampling and determining the hydrogen sulfide content in associated gas across all production units (PU). 3. Sampling and determining the extent of SRB contamination at sites (up to 4 samples per site). 4. Sampling and determining the hydrogen sulfide content in gas from producing wells in problem areas. 5. Analysis of the effectiveness of reagent application and injection technology, and other methods to combat SRB. Compilation of a list of negative factors stimulating SRB growth and reducing the effectiveness of control methods. 6. Processing analysis results and creating a map of problem areas/production units (PU). 7. Development/selection of bactericides and other reagents for combating SRB and technology for their application. 8. Selection of up to two injection points for impact bactericide injection on problem PUs based on results obtained. 9. Selection of up to 10 injection wells for bactericidal treatment based on results obtained. 10. Impact injection on selected injection points. Injection scheme for bactericides without measurement according to the current treatment scheme (2 kg/m³). Suspension of injection points for 24 hours of reaction time. 11. Targeted injection into injection wells in problem areas (based on hydrogen sulfide content analysis per well in the problem PU) at a dosage of 2-3 kg/m³ well capacity according to the current treatment scheme. 12. 5 wells at a dosage of 2 kg/m³. 13. 5 wells at a dosage of 3 kg/m³. 14. Sampling gas for hydrogen sulfide content from PUs responsive to bactericide injection. (Up to 4 samples per object within 60 days). 15. Sampling and determining hydrogen sulfide in gas from producing wells (with high H_2S content) where bactericide injection into injection wells has been conducted. To determine the effectiveness period of treatment, at least 4 samples should be taken from wells within 60 days.

	16. Development of a methodology for determining the effectiveness of bactericides and reagents on the reservoir. 17. Requirements for organization and execution: • The Contractor conducts field visits to gather information and study operational documentation at the location of the object. • The Contractor provides all technical survey services with their own forces, instruments, equipment, at their own expense, including accommodation and meals. • The Contractor has an accredited or certified laboratory (owned or leased, or service contract). Confirmation documents include an accreditation certificate or an assessment certificate of measurement status or a service contract. • If necessary, the Customer provides access to production units and allows the Contractor to collect necessary technical data in accordance with requirements.
Scale of the Problem:	Prevention of sulfate-reducing bacteria (SRB) formation in water and hydrogen sulfide in associated gas.
Current Solutions:	Protection is carried out chemically using bactericidal inhibitor injection.
Contact Person: Name, position, phone, email	Expert Notes