



«ADVANCED WELL TEST DESIGN AND ANALYSIS (GAS)», 5 days

COURSE OBJECTIVE:

Development of professional competencies in the field of gas-dynamic research and interpretation of obtained data with Saphir (KAPPA) / Pan System (Weatherford) software, as well as in the field of information support, supervisory control of field development and reduction of costs caused by inefficient sampling and research.

ACQUIRED ABILITIES:

- Plan the frequency, content, and number of well stock testing based on the objectives of field development control;
- Choose the most suitable set of studies;
- Competently plan the sequence and duration of studies;
- Interpret studies with respect to uncertainties;
- Apply the obtained results in planning of well intervention and modeling by taking into account the degree of data reliability.

COURSE CONTENT:

Module Name	Content
The role of gas-dynamic studies in the formation knowledge and reservoir management system	Input data for reservoir geological modeling. Information of different sources and its integration into geological models. Theory of gas-dynamic studies.
Gas-dynamic studies of complex wells	Productivity of horizontal wells, external boundary, effective length. Well testing capacity while multi-stage well intervention, and for multilateral wells. Main flow regimes, their connection with well and formation parameters.
Design of gas-dynamic studies	Numerical model study. Planning of studies. Selection of equipment and technologies.
Nonconventional gas-dynamic studies	Approaches to the analysis of continuous pressure records. Practical use of deconvolution at wells with permanent systems. Minifrac test. Slug test (study, results interpretation).
“Hidden dangers” of interpretation	Complicated cases. Model ranking. Input data analysis and processing.
Well interference testing	Theory, equipment and wells requirements. Design of well interference testing. Interpretation of results. Case studies.