



«GAS CONDENSATE STUDIES», 4 days

COURSE OBJECTIVE:

Improvement of professional competencies of specialists in sphere of:

- content and phase state of natural hydrocarbon systems studying,
- system approach to targeting,
- implementation, long-term planning and analysis of gas condensate studies,
- specification and structuring of professional skills and knowledge with synergistic effect.

ACQUIRED ABILITIES:

- define current and perspective objectives and tasks of gas condensate studies at different stages of prospecting and exploration;
- select study objects;
- optimize prospect generation without loss of informative value;
- assess quality of testing equipment and qualification of service staff;
- implement quantitative and qualitative analysis of study results (GCR, consistence of, etc.) and its validity.

COURSE CONTENT:

Module Name	Content
Gas condensate study of natural hydrocarbon systems. General.	Fields classification. Gas-condensate system (GCS) and gas-condensate characteristic (GCC). Phase state and features of GC deposits development. Objectives and targets of gas-condensate study. Study object: object selection, starting composition and GCC, phase changes at formation pressure decline, formation losses. GCS complexes outline. Methodology development history. Terminology.
Complex of field gas-condensate studies	Classification of field gas-condensate studies. Full-flow study method with separation unit at hole mouth. Major and additional equipment. Full-flow study method with test separator CGTU. Full-flow method of major study. Multiphase flowmeters. Methods of flow part selection. Small test separation unit. Flow scan. Test equipment for flow part selection methods. Impact of lift jack work schedule.
Sampling and its representativeness assessment	Separation sampling. Sampling from multiphase flowmeter. Downhole sampling. Assessment of sampling representativeness.
Laboratory study and composition of reservoir gas	Composition of separation gas analysis. De-gassing of unstable condensate sampling. Study of outgas condensate. Calculation of

analysis	reservoir gas composition and analysis of C5+ content.
Experimental (thermodynamical) testing and application of gas-condensate study results	Tasks of experimental testing. Experimental testing equipment. Sampling recombination and z determination. Testing at Constant Expansion (CCE) and Constant Volume (CVD). Application of gas-condensate study results. Principles of development and adaptation of PVT models of gas-condensate systems.