



«FORMATION DAMAGE AND PRODUCTIVITY ENHANCEMENT IN OIL & GAS RESERVOIRS», 5 days

COURSE OBJECTIVE:

improvement of professional competencies of petroleum engineers in sphere of prediction, prevention, mitigation and removal of formation damage in production and injection wells.

ACQUIRED ABILITIES:

- Apply studied methodology in practice;
- Analyze basic process and predict formation damage;
- Plan lab analysis and interpret acquired information;
- Detect well damage;
- Prevent, limit and eliminate formation damage.

COURSE CONTENT:

Module Name	Content
Fundamental formation damage concepts	Formation damage in injection and production wells. Modeling and lab analysis. Training, practice, examples. Injectivity tests. Case studies: North Sea, USSR, USA, Australia, Brazil, China, Oman.
Injectability while produced water re-injection	Waterflooding over fracturing pressure differential. The depth of grains penetration (practice). Forecast of skin factor after hydraulic fracturing (practice).
Technics of formation damage use for EOR	Low mineralization and smart waterflooding. Water-cut control and efficient EOR. Finely dispersed particles migration for waterflooding' improve. Case studies: North Sea, USSR, USA, Australia, Brazil, China.
Oil-field chemistry	Sulphating in bottom-hole formation zone of production and injection wells. Prevention and elimination of salt sediments. Finely dispersed particles migration in gas formation and falling production (Great Britain, Russia). Reservoir dehydration, grains lifting, rock deconsolidation. Development of inner seal and wall cake.
Russian and world experience	Damage of horizontal, fractured and combined wells. Damage prevention, limitation and elimination. Stimulation of damaged wells. Case studies: North Sea, USSR, USA, Australia, New Zealand, Brazil, China, Oman, UAE.