



«REEF COMPLEXES», 4 days

COURSE OBJECTIVE:

improvement of professional competencies of petroleum engineers in sphere of carbonate and reef reservoirs for further search, exploration and simulation of carbonate reef activity.

ACQUIRED ABILITIES:

- determine various forms of carbonate reef position according to G&G data;
- identify carbonate rock type on base of rock section;
- consider features of origin and forms of reef position, lithofacies structure and regional allocation of reefs and other organogenic buildups during regional reef position forecast;
- facies analysis for carbonate and reef reservoirs forecast and reserve estimation;
- determine reservoir type and development approach.

COURSE CONTENT::

Module Name	Content
Carbonate rock origin and structure	The nature and origin of carbonate rock. Carbonate platforms. Occurrence modes (offshore, clinoforn, organic). Organic constructions: types, features. Evaporites. Regional features of carbonate deposits in geological history. The base of carbonate rock sequence stratigraphy. Traps, deposits, source rocks. Facies schemes of carbonate rock. Types and structure. Secondary alteration of properties: mechanisms, results. Reservoir properties (porosity, permeability, saturation, wettability).
Features of carbonate deposits modeling	Carbonate rock study (geophysical interpretation, seismic). Features of carbonate rocks geological modeling. Identification and simulation of fractured reservoir. Reservoir modeling.
Carbonate deposits development features	Reservoir type identification. Desaturation process differences: porous vs. fractured reservoir. Development concept. Well coverage selection. Well completion. Recovery.
Examples of fields with carbonate reefs	Foreign and Russian case studies.