



**Society of Petroleum Engineers**

**Registration Deadline  
February 6, 2017**

## SPE WORKSHOP

**FEBRUARY 21-22, 2017**

AZIMUT Olympic Hotel

Moscow, Olympiysky ave., 18/1

## CARBONATES: NEW FRONTIERS

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Carbonate oil and gas reservoirs in the Russian Federation are present at all stages of field development: from brown carbonate oil fields in the Timan-Pechora basin, gas-condensate and gas fields of the Volga Urals region to green fields in Eastern Siberia and the Northern seas.

The focus on much of the field development activity in the Volga Urals basin is on maintaining production and improving ultimate recovery. Nevertheless new concepts in field development of reservoirs with complex pore systems (fractures, karst and mega-karst) are rejuvenating exploration interest in the region.

In contrast to the situation in South Western Russia, production from deep carbonate reservoirs in the Timan Pechora basin is relatively recent, and the development of carbonate reservoirs in the Pechora Sea and Eastern Siberia largely in the planning stage. These areas in the North and East of Russia are new frontiers for carbonate field development. The reservoirs in all of these regions contain a variety of fluid types ranging from heavy oils, to gas-condensate and gas. The majority of oils are medium to light, gas can be sour. Pore types are similarly variable and understanding the role of fractures and karst critical to successful field development.

#### Workshop Objectives and Deliverables

- To present case studies of carbonate fields, identify best practices and areas where new ideas and technology are required.
- To identify and record optimal recovery strategies from carbonate fields with differing fluid types, pore types and pressure maintenance schemes
- To determine the limitations of existing technologies and to identify potential breakthrough technologies to improve recovery from carbonate fields.
- To facilitate the interchange of ideas on carbonate reservoir classification, description and field development

<http://rca.spe.org/en/events/workshops/>

## Session 1. Geology and carbonate reservoir characterization

Carbonate reservoirs display a large variability in their characteristics which affects their performance and economic viability. Primary facies distribution (i.e. reef, platform, shallow or deepwater), rock properties (primary and secondary), diagenesis, and fracturing are among the key controls on reservoir performance.

Key topics to be discussed include:

- Carbonates Reservoirs evolution. Stages and the main facies conditions of carbonate oil, gas and condensate fields' formation.
- Carbonate Reservoir Structure. Pore structure and material composition. Influence of secondary transformation on reservoir porosity and permeability
- Carbonate Reservoir fracturing study issues
- Well logging in carbonate reservoirs. Core analysis in carbonate deposits. Whole core lab tests
- Key heterogeneities impacting Dynamics in Carbonate fields

## Session 2. Geological and full field modelling

In common with the rest of the world a significant part of Russia's hydrocarbon resources are in carbonate reservoirs. Geological and filtration modeling helps to mitigate development risk and develop complex reservoir in the optimum way. The complexity of tectonic structure (faults, fractures etc.) and carbonate deposition characteristics (different wetting conditions, diagenetic processes, etc.) result in extra complexity of modeling. The integration of subsurface disciplines can contribute to the understanding and prediction of reservoir performance and development strategies.

Key topics to be discussed include:

- Control of reservoir porosity and permeability change, while development in fracturing and saline carbonate reservoirs
- Enhanced oil recovery methods in carbonate brownfields
- Porosity and permeability heterogeneity in carbonate reservoirs: geological modeling aspects

## Session 3. Carbonate field development

Oil recovery efficiency of any field mainly depends on its condition as well as geologic and field control, its results analysis and applying the results to improve the forecast reliability, to adjust development system and technologies.

Analysis on how operational characteristics changes by development stages and comparison of the results with the same characteristics of sandstones shows differences in dynamics of oil production. Oil recovery factor in carbonates (even for highly productive collector) often significantly lower than in terrigenous collectors due to fundamental difference in water-oil displacement conditions. Thanks to sweeping efficiency in highly productive carbonate collectors and implementing active development system (with excess capacity) 2<sup>nd</sup> stage lifetime in carbonates turned out to be longer on average, than in sandstones.

Precise analysis and reserves recovery reasoning require, alongside with the standard set of studies, advanced studies, including pilot operation of wells in different modes, interference test combined with special core analysis, well logging and 3D seismic results.

Key topics to be discussed include:

- Reserves recovery aspects
- Carbonate and terrigenous reservoirs development: difference in approach
- Carbonate Reservoir Management

## Session 4. Carbonates reservoir stimulation and recovery optimization

Efficient Carbonate Reservoirs development requires complex approaches and innovative methods. Russia has reservoirs at all stages of development. Regardless of the development stage, these reservoirs are subject to stimulation and enhanced recovery operations. Most of green fields has unique characteristics and pose new challenges to the industry. The workshop will explore cases to highlight assessment, advanced technologies for production stimulation and how we can apply these to the new frontiers.

Key topics to be discussed include:

- Key formation characteristics to determine EOR method
- Stimulation method and candidate well selection principles for intervention
- Well stimulation technology: how to select, including quality assurance and quality control
- Oil recovery methods: core testing

## POSTER SESSION

In addition to the main Technical Sessions the Program Committee is interested in organizing of Poster Session. Posers will give the participants additional opportunities to share their ideas and technologies. To get more information ant to participate in Poster Session you can contact Antonina Kozmina at [akozmina@spe.org](mailto:akozmina@spe.org).

## INFORMATION FOR PRESENTERS

If you are interested to be a speaker at the workshop, please send your presentation abstract (2-3 paragraphs with description of nature and scope of work, possible applications and summary of results or technical contributions) to Antonina Kozmina at [akozmina@spe.org](mailto:akozmina@spe.org) before January 23, 2017. Your abstract will be reviewed by the Programme Committee to consider its acceptance for the Workshop Program.

The following information is required for each abstract:

- Participant's name, Company name;
- Contact details- phone number, address, e-mail address;
- Session's title;
- Title of your presentation

## CONFERENCE REPORT

Presentation materials will not be published, therefore formal papers and handouts are not expected from speakers. PowerPoint presentations will be posted on a specific SPE URL address after the Workshop and be available for workshop attendees only.

The Committee will prepare a full report containing the highlights of the Workshop description. This report will be circulated to all attendees. The copyright of the summary report will belong to SPE.

## COMMERCIALISM

In keeping with Workshop objectives and the SPE mission, excessive commercialism in posters or presentations will not be permitted. Company logo must be limited to the poster slide and used only to indicate the affiliation of the presenter and others involved in the work.

**REGISTRATION RATES**

Registration rates	RUB, No VAT	VAT 18%	RUB with VAT
SPE members Non residential	34,000.00	6,120.00	40,120.00
SPE Non members Non Residential	36,000.00	6,480.00	42,480.00

According to SPE Policy Registration rates are the same for all participants, including presenters and Programme Committee Members. **Registration is open till February, 6 2017.**

Should you have any questions about workshop registration and attendance, please contact **Ulyana Dmitrieva** [udmitrieva@spe.org](mailto:udmitrieva@spe.org) or **Irina Merkul** [imerkul@spe.org](mailto:imerkul@spe.org)

**General information**

Programme information  
Detailed information on Workshop Programme will be posted on SPE regional web-site: <http://rca.spe.org/en/events/carbonates-new-frontiers/>

Workshop participants  
The number of attendees shouldn't exceed 100 oil and gas specialists

Dress Code  
Casual clothing is recommended, The Workshop atmosphere is Informal

Attendance Certificate  
All attendees will receive a certificate from SPE attesting to their participation in the workshop

**SPONSORSHIP SUPPORT**

Sponsorship support helps offset the cost of producing workshops and allows SPE to keep the attendance price within reach of operations-level individuals, those who benefit most from these technical workshops. Sponsors benefit both directly and indirectly by having their names associated with a specific workshop. While SPE prohibits any type of commercialism within the conference hall itself, the society recognizes that sponsoring companies offer valuable information to attendees outside the technical sessions.

For more information regarding sponsorship support please contact Antonina Kozmina at [akozmina@spe.org](mailto:akozmina@spe.org) , tel. +7-495-284-04-54.

