SPE RUSSIAN PETROLEUM TECHNOLOGY CONFERENCE

«THE FUTURE BELONGS TO THOSE WHO PREPARE FOR IT TODAY»

16-18 October 2017

CONFERENCE PREVIEW

Holiday Inn Sokolniki, Moscow, Russia
THANK YOU TO OUR SPONSORS!

Conference Sponsors ..........................................1
Welcome from the Programme Committee Cochairs ................................2
SPE Regional Advisory Committee ..........4
Programme Committee ......................................5
Schedule of Events Overview .........................6
Conference Highlights ........................................8
Plenary Sessions Summary .........................10
Plenary Sessions and Round Tables Overviews ..............11
Technical Programme .........................................20
Young Professionals Technical Session ........27
Knowledge Sharing
Eposter Presentations ......................................28
Training Courses .................................................34
Registration ..........................................................38
Information for Delegates .........................39
Travel and Accommodation .........................40
Supporting Media and Associations ..........41

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CONTENTS

CONFERENCE SPONSORS ........................................1
Welcome from the Programme Committee Cochairs ................2
SPE Regional Advisory Committee ............................4
Programme Committee .......................................5
Schedule of Events Overview ..............................6
Conference Highlights .......................................8
Plenary Sessions Summary ...............................10
Plenary Sessions and Round Tables Overviews ..............11
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WELCOME FROM THE PROGRAMME COMMITTEE COCHAIRS

DEAR COLLEAGUES!

We are delighted to invite you to one of the largest Russian oil and gas events – the SPE Russian Petroleum Technology Conference. The event will be held on 16-18 October 2017 in Moscow, Russia.

Year after year, the oil and gas industry faces new challenges that require more time and resources to solve them. The percentage of hard-to-recover reserves in the Russian mineral resource base is growing and more innovations are required. By creating and promoting innovations, we contribute to the progress, and by developing and applying technologies, we build a sustainable base for future generations.

Events like the SPE Russian Petroleum Technology Conference serve as a platform to bring together the efforts of different specialists battling for the industry wellness: strengthening the ties of scientific and engineering societies, seeking investments both from foreign and national companies, adopting best practices, and sharing intelligence on the most trending and interesting topics.

This year the conference technical programme includes presentations on traditional and hot topics including well construction, hard-to-recover reserves, oil and gas production, geomechanics, etc. Special attention will be paid to the development of the oil and gas market in Russia and worldwide, big data analysis and interpretation, modelling development and latest technologies.

During the conference you will also have opportunity to join plenary sessions and roundtable discussions devoted to different oil and gas industry issues. More information is available in this brochure.

We extend a warm and cordial invitation to you to take part in the conference, share your achievements and ideas, find out more about colleagues’ projects presented at technical and knowledge sharing eposter sessions, discuss relevant problems at round tables, extend your professional network and use your time productively.

We are looking forward to seeing you at the SPE Russian Petroleum Technology Conference 2017!

Sergey Kolbikov
NOVATEK

Alexander Timchuk
ZapSibNIIoil

Andrey Kharitonov
Halliburton

We invite you* to celebrate SPE Birthday!

SPE International - 60 Years
SPE in the Region - 25 Years
SPE Regional Office - 10 Years

The celebration will take place 16 October at 1800 hours in the “Holiday Inn Sokolniki” Hotel.

* Only for the conference delegates
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<td>Scientific Research Institute of Production and Drilling Technologies of «KazMunayGas»</td>
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### Programme Committee

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### SPE Regional Advisory Committee

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<tr>
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<tbody>
<tr>
<td>Mars Khasanov</td>
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<tr>
<td>Director for Technology Development, Gazprom Neft</td>
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<tr>
<td>Business Development Manager</td>
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**SCHEDULE OF EVENTS OVERVIEW**

### DAY 1
**OCTOBER 16, 2017**

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<th>Time</th>
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<td>08:30–17:30</td>
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<td>SOKOLNIKI 1</td>
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<td>KRYMSKY VAL</td>
<td>OKHOTNY RYAD</td>
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<td>09:30–11:30</td>
<td>PLENARY SESSION «Key Drivers and Challenges of Oil and Gas Industry Development in Russia and Worldwide»</td>
<td>SOKOLNIKI 1</td>
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<td>11:45–12:45</td>
<td>Knowledge Sharing Eposter Presentations</td>
<td>KRYMSKY VAL</td>
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<td>12:45–14:45</td>
<td>PLENARY SESSION «Overcoming Technological Barriers in Unconventional Reserves Development»</td>
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**OCTOBER 17, 2017**

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<td>15:00–16:00</td>
<td>Technical Session 19, Technical Session 20, Technical Session 21, Technical Session 22</td>
<td>SOKOLNIKI 1</td>
<td>SOKOLNIKI 2</td>
<td>KRYMSKY VAL</td>
<td>OKHOTNY RYAD</td>
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## SCHEDULE OF EVENTS OVERVIEW

### OCTOBER 16, 2017

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>08:30–17:30</td>
<td>REGISTRATION</td>
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<tr>
<td>09:30–11:30</td>
<td>PLENARY SESSION: Key Drivers and Challenges of Oil and Gas Industry in Russia and Worldwide</td>
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<tr>
<td>11:45–12:45</td>
<td>Technical Session 1 Technical Session 2 Knowledge Sharing Eposter Presentations Knowledge Sharing Eposter Presentations</td>
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<tr>
<td>12:45–14:45</td>
<td>PLENARY SESSION: Overcoming Technological Barriers in Hard-to-Recover and Unconventional Reserves Development Technical Session 3 Technical Session 4 Knowledge Sharing Eposter Presentations Knowledge Sharing Eposter Presentations</td>
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<tr>
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<td>Technical Session 5 Technical Session 6 Technical Session 7 Technical Session 8 Knowledge Sharing Eposter Presentations Knowledge Sharing Eposter Presentations</td>
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<td>Technical Session 15 Technical Session 16 Technical Session 17 Technical Session 18 Knowledge Sharing Eposter Presentations Knowledge Sharing Eposter Presentations</td>
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<td>PLENARY SESSION: Young Professionals Development • Oil &amp; Gas Equipment Manufacturing ROUND TABLE: Database Mining Knowledge Sharing Eposter Presentations Knowledge Sharing Eposter Presentations Knowledge Sharing Eposter Presentations Knowledge Sharing Eposter Presentations</td>
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<td>15:00–18:00</td>
<td>Technical Session 25 Technical Session 26 Technical Session 27 Technical Session 28 Knowledge Sharing Eposter Presentations Knowledge Sharing Eposter Presentations Knowledge Sharing Eposter Presentations Knowledge Sharing Eposter Presentations</td>
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and universities and provides a unique opportunity to
from oil and gas and service
bringing together professionals
a truly international conference,
The SPE Russian Petroleum
«XXI CENTURY PETROLEUM
NATIONS FRAMEWORK
PRMS AND 2009 UNITED
AND DIFFERENCES BETWEEN
CLASSIFICATION, SIMILARITIES
OF NEW RUSSIAN RESERVES
ROUND TABLE
MONDAY
16 OCTOBER
ROUND TABLE
«ASPECTS AND OPPORTUNITIES
OF NEW RUSSIAN RESERVES
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PRMS AND 2009 UNITED
NATIONS FRAMEWORK
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The SPE Russian Petroleum Technology Conference will be a truly international conference, bringing together professionals from oil and gas and service companies, research institutes and universities and provides a unique opportunity to exchange experiences, best practices and ideas in a non-competitive environment.

A year and a half has passed since the new classification for oil and gas in place, reserves and resources evaluation came into operation in the Russian Federation. On the basis of the new classification regulatory documents hundreds of reserves reports and development plans were reviewed and defended which revealed a number of unprovisioned issues and initiated proposals to clarify the statements of the new rules for the hydrocarbon fields’ development and Rules for the Field Development Planning Design instead of temporary guidelines. Currently, taking into account the accumulated experience of their application, the second edition of the regulatory documents is being prepared. Not all proposed changes in regulatory documents are equally perceived by specialists from design institutes and production companies. The round table will allow to discuss the experience of implementing the classification, exchange opinions as well as discuss them with representatives of government institutions responsible for the implementation.

MODERATORS:
Nikolay Shabalin, Marine Research Center of Lomonosov MSU
Dmitry Bogdanov, GeoLog

For many years, environmental preservation has been a key priority for companies as the necessity of environmental protection is absolutely clear. Detailed schemes were developed for operating and monitoring environmental safety by international, national and industry regulators. However, is it beneficial not only for mankind, particular countries and administrative authorities, but for the oil and gas industry and for particular oil and gas companies? The main purpose of the round table is to discuss aspects of environmental safety issues during exploration, production and field operations of oil and gas industry facilities—in terms of separate players in the market and in the industry. How beneficial is it for oil and gas operators and service companies to be eco-friendly, both long and short term? Is there any advantage of nuanced approach to ecological maintenance of round table development in terms of industry operation and how it appears?

CONFIRMED AND INVITED SPEAKERS:
Gazpromneft-Sahlink, Gazprom Geologorazvedka, Rosneft, Marine Arctic Geological Expedition, Oil and Gas Center of Lomonosov MSU, WWF, FRECOM.

MODERATOR:
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In the last 10-20 years, the oil and gas industry has significantly changed, engineers and specialists’ qualifications have increased. The same changes have affected universities and students of graduate course enter the labour market annually. However, not all of them can find a job easily. Sometimes employers are not satisfied with job applicant’s professional knowledge level, their analytic skills, ability to solve non-typical problems and their experience in the field. Discussions during this round table will include the following issues:
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Vycheslav Solonich, DUG

Successful examples of localization by local development companies and by oil and gas equipment manufacturers will be addressed during this round table. There will be a special focus on governmental policies and support.

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Big data collection, storing and processing technologies have affected many industry spheres. Database mining is often used during optimization of production and business processes. Amount and quality of data grows every year and prospective of predictive analytics technologies successful use become more realistic.

Using Big Data Analytics for effective economic increase in exploration, development and production arouse high pragmatic interest. This round table will discuss predictive analytics and highlight current tasks for big data analytics in the oil and gas production industry.

SPEAKERS:
• MACHINE LEARNING FOR OPTIMISING TECHNOLOGICAL WORKFLOWS AT EXPLORATION AND PRODUCTION OF HYDROCARBONS
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• COGNITIVE AND PREDICTIVE TECHNOLOGIES WHILE WELL CONSTRUCTION
Sergey Stishenko, General Director, Geosteering Technologies
• IBM EXPERIENCE OF BIG DATA AND ANALYTICS IN O&G CHALLENGES
Artym Semenikhin, Leader of Industrial Research Team, IBM Science and Technology Center
• TECHNOLOGY TRANSFER: INTERNET, METALS, AND OIL & GAS. HOW TO USE ARTIFICIAL INTELLIGENCE TO REACH NEW LEVELS OF OPERATIONAL EFFICIENCY
Alexander Khaytin, Chief Operating Officer, Yandex Data Factory

This event will take place on 16 October 2017. Regional and section awards recognize members who contribute exceptional service and leadership within SPE, as well as making significant professional contributions within their technical disciplines at the SPE regional level. Young professionals assemble an active group who are in the transition stage between a promising student and experienced specialist. Companies support young professionals’ development by encouraging their participation in conferences, competitions and career enhancement trainings. Spearheaded by the SPE Regional Advisory Committee, SPE traditionally holds special Young Professionals Technical Session at the conference. During this session, the winners of internal corporate young professionals’ contests of Russian and Caspian oil and gas companies will speak. Find more on page 27.

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• Undergraduate Division
• Postgraduate Division: Masters and Diploma projects
• Candidates

The winner of each division is invited to attend the International SPE student paper contest to be held at the 2018 SPE Annual Technical Conference & Exhibition in Dallas, USA. If you have any questions please contact Yaroslava Orliva at speMoscow@spx.org or by phone: +7 495 268 04 54.

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**MONDAY 16 OCTOBER**

**ROUND TABLE**

**ASPECTS AND OPPORTUNITIES OF NEW RUSSIAN RESERVES CLASSIFICATION, SIMILARITIES AND DIFFERENCES BETWEEN PRMS AND 2009 UNITED NATIONS FRAMEWORK CLASSIFICATION**

**MODERATORS:**

Nikolay Shabalov, Marine Research Center of Lomonosov MSU

Dmitry Bogdanov, Sibur

For many years, environmental preservation has been a key priority for companies as the necessity of environmental protection is absolutely clear. Detailed schemes were developed for operating and monitoring environmental safety by international, national and industry regulators. However, is it beneficial not only for mankind, particular countries and administrative authorities, but for the oil and gas industry and for particular oil and gas companies? The main purpose of the round table is to discuss aspects of environmental safety issues during exploration, production and field operations of oil and gas industry facilities—in terms of separate players in the market and in the industry. How beneficial is it for oil and gas operators and service companies to be eco-friendly, both long and short term? Is there any advantage of nuanced approach to ecological maintenance of resource development in terms of industry operation and how it appears?

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**CONFERENCE HIGHLIGHTS**

**TECHNICAL CATEGORIES**

1. Hard-to-Recover Reserves
2. Well Construction - Drilling and Completion
3. Oil and Gas Production – Equipment and Technologies, Production Gathering and Processing
4. Well and Formation Testing, Formation Fluids Sampling and Evaluation
5. Field Development Management and Monitoring
6. Static and Dynamic Modeling
7. Geomechanics
8. Brownfields
9. Gas, Gas Condensate and Oil Gas Condensate Field Development
10. Core Analysis
11. Field Geology and Geophysics
12. Well Logging

**TUESDAY 17 OCTOBER**

**ROUND TABLE**

**LOCALIZATION: A WINDOW OF OPPORTUNITY FOR RUSSIAN OIL AND GAS EQUIPMENT MANUFACTURERS**

**MODERATORS:**

Dmitry Korolev, Skoltech

Alexander Sitnikov, Gazpromneft STC

Artem Karapetov, Schumberger

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Alexander Khaytin, Chief Operating Officer, Yandex Data Factory

**WEDNESDAY 18 OCTOBER**

**ROUND TABLE**

**DATABASE MINING**

**MODERATORS:**

Konstantin Fedorov, Tyumen State University

In the last 10-30 years, the oil and gas industry has significantly changed, engineers and specialists’ qualifications have increased. The same changes have affected universities and thousands of graduates enter the labour market annually. However, not all of them can find a job easily. Sometimes employers are not satisfied with job applicant’s professional knowledge level, their analytic skills, ability to solve non-typical problems and their experience in the field.

**DISCUSSIONS DURING THIS ROUND TABLE WILL INCLUDE THE FOLLOWING ISSUES:**

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MODERATORS:
- Mars Khasanov, Gazprom Naft, SPE Advisory Committee Cochair
- Richard Symes, BP, SPE Advisory Committee Cochair

SPEAKERS:
- Darcy Spady, Broadview Energy, 2018 SPE President
- Tamsa Soregi, Managing Director, Europe, CIS, Africa, Accenture
- Geir Tungesvik, Senior Vice President, Drilling & Well, Statoil
- TBC
- Kirill Strizhnev, President, Russia & Central Asia, Schlumberger

MODERATORS:
- Kirill Strizhnev, Gazpromnaft – Angara
- Alexander Shpilman, Ut. Shpilman Research and Analytical Centre for the Rational Use of Subsoil

SPEAKERS:
- Status and outlook of Bazhenov formation development project
- Kirill Strizhnev, Executive Director, Bazhen project, Gazpromnaft – Angara
- Technologies and approaches to hard-to-recover reserves development
- Andrey Potyayev, First Deputy Director, LUKOIL-Engineering
- Generation potential of Bazhenov formation fields and prospective development methods
- Alexey Cheremisin, Deputy Director, Center for Hydrocarbon Recovery, Skoltech

INVITED AND CONFIRMED SPEAKERS:
- Denis Sugalyov, Director, Large-Scale Projects Dpt, Gazprom Naft, CEO, Gazpromnaft-Razvitie
- Alexander Chirgin, Chief Geologist, Verkhnechonskneftegaz
- Alexander Timchuk, Deputy Director for Science, ZapSibNIIGG
- Eder Lizcano, Vice President, Reservoir Development, BP Oman Khazzan Field

SPEAKERS:
- Integrated modeling and oil-gas assets evaluation under uncertainty: vision, technological capabilities, and challenges
- Dimitry Bolotnik, General Manager Russia and CIS, Vice President, ROXAR
- Digital E&P future, already today!
- Artem Karapetov, Vice-President, Sales Software Integrated Solutions, Schlumberger
- Integrated approach to field development at different project implementation stages
- Aleksy Yazykov, Deputy General Director on Development, NOVATEK STC
- Modern trends in computational platforms for reservoir modeling
- Kirill Bogachev, CTO, Rock Flow Dynamics

COMPETITIVE AT ALL TIMES

Mr. Tungesvik has worked for Statoil since 1985 and has held central management positions in the company, including the position of vice president for exploration drilling, vice president for Grane production field, vice president for health, safety and the environment in Exploration, head of corporate improvement initiative “Staff and Services” and senior vice president for Drilling and Well.

He has a master degree in petroleum from the University of Stavanger (UiS) and master degree in strategic management from Norwegian Business School (BI).

ABSTRACT

Senior Vice President Geir Tungesvik will share Statoil’s perspective on how to stay competitive in the current market environment. An important way of building resilience is to improve the way we drill wells thus reducing overall exploration and field development costs.

Gokhan Saygi is President for Russia and Central Asia (Operations & Integration), a position he assumed in April 2012. Prior to his current role, he held various management positions including vice president for East Asia (Malaysia, Thailand, Vietnam, Brunei, Myanmar and Philippines); vice president of strategic marketing; vice president marketing for Reservoir Characterization Group; vice president marketing for Wireline; and previously, vice president for Middle East and Asia for Wireline.

Earlier in his Schlumberger career, Saygi held various field operations, human resource and leadership positions in Dubai, Iran, Turkey, UK, France and Malaysia. He began his career with Schlumberger in 1985 in wireline operations in Oman.

Saygi holds a Petroleum Engineering degree from the Middle East and Technical University in Ankara, Turkey.

Gokhan Saygi is a member (academician) of the Academy of Technological Sciences of the Russian Federation.

Mr. Saygi was honored with the state award “Order of Friendship” in accordance with Executive Order of President of the Russian Federation Vladimir Putin for significant contribution to organizing and conducting drilling operations in Universitetskaya-1 prospect (Kara Sea).
PLENARY SESSIONS SUMMARY

MONDAY 16 OCTOBER 09:30–11:30
PLENARY SESSION “KEY DRIVERS AND CHALLENGES OF OIL AND GAS INDUSTRY DEVELOPMENT IN RUSSIA AND WORLDWIDE”

MODERATORS:
Mars Khasanov, Gazprom Naft, SPE Advisory Committee Cochair
Richard Symes, BP, SPE Advisory Committee Cochair

SPEAKERS:
- Darcy Spady, Broadview Energy, 2018 SPE President
- ENERGY COMPANY OF THE FUTURE
  Tamas Szepf, Managing Director, Europe, CIS, Africa, Accenture
- COMPETITIVE AT ALL TIMES
  Geir Tungesvik, Senior Vice President, Drilling & Well, Statoil
- TBC
  Gokhan Saygi, President, Russia & Central Asia, Schlumberger

TUESDAY 17 OCTOBER 09:30–11:30
PLENARY SESSION ON GIANT PROJECTS

MODERATORS:
Kirill Strizhnev, Gazpromneft - Angara
Alexander Shpilman, St. Shpilman Research and Analytical Centre for the Rational Use of Subsoil

SPEAKERS:
- STATUS AND OUTLOOK OF BAZHENOV FORMATION DEVELOPMENT PROJECT
  Kirill Strizhnev, Executive Director, Bazhen project, Gazpromneft - Angara
- TECHNOLOGIES AND APPROACHES TO HARD-TO-RECOVER RESERVES DEVELOPMENT
  Andrey Potyvashov, First Deputy Director, LUKOIL-Engineering
- GENERATION POTENTIAL OF BAZHENOV FORMATION FIELDS AND PROSPECTIVE DEVELOPMENT METHODS
  Alexey Cheremisin, Deputy Director, Center for Hydrocarbon Recovery, Skoltech
- IMPLEMENTATION STAGES
  A. L. P. R. S. T.

WEDNESDAY 18 OCTOBER 09:30–11:30
PLENARY SESSION “FROM IT SOLUTIONS TO INDUSTRY HIGH EFFICIENCY”

SPEAKERS:
- INTEGRATED MODELING AND OIL-GAS ASSETS EVALUATION UNDER UNCERTAINTY: VISION, TECHNOLOGICAL CAPABILITIES, AND CHALLENGES
  Dimitry Bolotnik, General Manager Russia and CIS, Vice President, ROXAR
- DIGITAL E&P FUTURE, ALREADY TODAY!
  Artem Karapetov, Vice-President, Sales Software Integrated Solutions, Schlumberger
- INTEGRATED APPROACH TO FIELD DEVELOPMENT AT DIFFERENT PROJECT IMPLEMENTATION STAGES
  Alexey Yazykov, Deputy General Director on Development, NOVATEK STC
- MODERN TRENDS IN COMPUTATIONAL PLATFORMS FOR RESERVOIR MODELING
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PLENARY SESSIONS AND ROUND TABLES OVERVIEWS

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**PLENARY SESSIONS AND ROUND TABLES OVERVIEWS**

**A CASE STUDY OF VERKHNECHONSKOYE FIELD: THEORY AND PRACTICE OF EASTERN SIBERIA COMPLEX RESERVOIRS DEVELOPMENT**

Alexander Timchuk started his career in 1986, and for already 30 years he works in profession. Over the years he has gained experience in field development in different regions of Russia, modeling of development processes, preparation of well intervention and EOR programs, as well as in project management, interaction of subsoil users with design, research and state institutes.

Alexander is an associate professor at Development and Exploitation of Oil and Gas Deposits Department at Tyumen Oil and Gas University. Every year he joins programme committees of SPE conference.

**ABSTRACT**

At present, a number of large greenfield deposits are being developed in Eastern Siberia, Russia, one of which is Verkhnechonskoye oil and gas condensate field.

The report describes the evolution of reservoir engineering solutions, starting with the first steps in defining a development system based on pilot well operation, till full-field development, addressing new challenges in operating the wells in low-temperature reservoirs and maintaining the production plateau through new development approaches for zones with poor reservoir properties and under-gas-cap zones.

For the first time in domestic oil and gas production on a regional scale, geologists have faced with a highly mineralized sequence where the pore space of productive horizons can be completely filled with salt. The paper pays special attention to the experience of modeling the displacement processes in a saline reservoir, as well as risk management in making decisions on saline reservoirs development.

**INTEGRATED MODELING AND OIL-GAS ASSETS EVALUATION UNDER UNCERTAINTY. VISION, TECHNOLOGICAL CAPABILITIES, AND CHALLENGES**

**INTEGRATED MODELING AND OIL-GAS ASSETS EVALUATION UNDER UNCERTAINTY. VISION, TECHNOLOGICAL CAPABILITIES, AND CHALLENGES**

Graduated from State Academy of Oil and Gas named after I.M. Gubkin as an Engineer-mathematician, Dimitry Bolotnik has more than 20 years of experience in oil-gas industry.

Dmitry Bolotnik has been working in ROXAR since 1995, currently he provides strategic guidance of the company and interaction with key clients. D.N. Bolotnik is the author and co-author of the numerous scientific publications and presentations at conferences and seminars.

**ABSTRACT**

Currently, in the field of geological and hydrodynamic modeling the leading companies present a number of software products that provides full circle of functional. Starting from log data and seismic data interpretation, goes through geological and filtration modeling to support and optimization of surface infrastructure.

Due to the wide range of functionality of purpose solution, users of such software systems can use not only hi-tech technologies for geological and hydrodynamic modeling, but also to create and to use integrated models of fields, taking into account economical situation and probable development scenarios.

The main subject of this report is integrated modeling of oil and gas assets with the purpose of maximizing the integral effect from their development. Herewith, special attention is paid to the technologies of uncertainty analysis and risk reduction.

**ResView**

ResView is a fully integrated software for data analysis and visualization. It provides tools for working with field and simulation data. ResView is a useful software specially for oil and gas production departments.
PLENARY SESSIONS AND ROUND TABLES OVERVIEWS

A CASE STUDY OF VERKHNECHONSKOYE FIELD: THEORY AND PRACTICE OF EASTERN SIBERIA COMPLEX RESERVOIRS DEVELOPMENT

Alexander Timchuk started his career in 1986, and for already 30 years he works in profession. Over the years he has gained experience in field development in different regions of Russia, modeling of development processes, preparation of well intervention and EOR programs, as well as in project management, interaction of subsoil users with design, research and state institutes.

Alexander is an associate professor at Development and Exploitation of Oil and Gas Deposits Department at Tyumen Oil and Gas University. Every year he joins programme committees of SPE conference.

ABSTRACT
At present, a number of large greenfield deposits are being developed in Eastern Siberia, Russia, one of which is Verkhnechonskoye oil and gas condensate field.

The report describes the evolution of reservoir engineering solutions, starting with the first steps in defining a development system based on pilot well operation, till full-field development, addressing new challenges in operating the wells in low-temperature reservoirs and maintaining the production plateau through new development approaches for zones with poor reservoir properties and under-gas-cap zones.

For the first time in domestic oil and gas production on a regional scale, geologists have faced with a highly mineralized sequence where the pore space of productive horizons can be completely filled with salt. The paper pays special attention to the experience of modeling the displacement processes in a saline reservoir, as well as risk management in making decisions on saline reservoirs development.

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Artem graduated from Moscow State Oil and gas university named after Gubkin, speciality “rock engineer” in 1995 (Moscow, Russia). Upon graduation from University in 1995, Artem joined Schlumberger as an engineer-geophysicist where he was working in different engineering positions, as well as in marketing role until 2002. In 2002–2003 Artem has joined a special Schlumberger project dedicated to Real-time Oilfield Project management organized by Schlumberger and Heriot Watt University (Edinburgh, Scotland) and following graduation from Heriot Watt joined Schlumberger Business Consulting (Paris, France).

During next period from 2004 through 2008 Artem took a role of business development manager for Schlumberger Information Solutions based in Moscow and then was promoted to GeoMarket marketing manager (South region) based in Tyumen, Russia.

In 2008 Artem took a role of vice-president Software Information Solutions, Russia, where he successfully led the company throughout crisis period and managed to establish Software Technology Centre that was building the backbone of the Ocean development in Russia.

From 2010 through summer 2013 Artem was director of Personnel Schlumberger Russia and Central Asia, where he was engaged in major company transformations in connection to development of company’s human capital in new territories of expansion, integration of newly acquired companies into business environment of Schlumberger.

From 2013 is vice-president Sales for Schlumberger company – Software Integrated Solutions, responsible for global strategic business development, expansion into new geographical and technological territories based in London, United Kingdom.

SPE member since 2003.

ABSTRACT
It is undisputed, that the so called “digital revolution” has completely changed some of the industries’ landscape and also dramatically affected our day-to-day life. Despite information technologies were applied in E&P industry for decades, these did not fundamentally transform the way we operate when exploring, developing and producing hydrocarbon resources. With the recent fundamental economic changes occurred at the end of 2014 that drastically affected E&P industry as well as with the new information technology capabilities we entered the perfect storm that is making it possible today to commence the fundamental changes in our industry that were delayed for some time. In this presentation we will only cover a few examples of how new digital technologies are changing the E&P landscape today and will also discuss next steps (as Schlumberger sees them), that are required for fundamental and long-term changes that shall dramatically improve E&P operations performance efficiency.

In 2005 Alexey graduated from Novosibirsk State University, Department of Physics. He holds a bachelor’s and a master’s degree in physics. In 2006 Alexey successfully received a master’s degree in petroleum engineering at Heriot-Watt University and at the same time he received a degree in Oil and Gas Field Development and Operation at Kirov Tomsk Polytechnic Institute. In 2015 Alexey graduated from Moscow International Higher Business School MIRBIS studying there strategic management and received a master’s degree in Business Administration.

Alexey is an experienced specialist who has worked in scientific institutions such as Institute of Nuclear Physics SB RAS, Institute of Hydrodynamics SB RAS, Institute of Semiconductor Physics SB RAS. He also has previous experience as head of Geology and Field Development at Tyumen Petroleum Research Center, TNK-BP. In 2010 Alexey was invited to lead the Development sector in NOVATEK STC LLC. Currently he is a candidate for PhD in Engineering Science, an author and co-author of 30 research papers and one patent.

ABSTRACT
The paper presents the core of integrated approach in field development implemented in NOVATEK, PJSC. Integrated model case studies are demonstrated in the paper for field at early stage of production design and for field under development monitoring.

Kirill Bogachev is the CTO of Rock Flow Dynamics. Kirill graduated from the faculty of Mathematics and Mechanics of Moscow State University. He is one of the leading experts in the area of high-performance parallel computing. Kirill holds degree of Dr. of Science. He worked in YUKOS as the key software developer for dynamic reservoir modeling. In 2005 he became a co-founder and CTO of Rock Flow Dynamics, which develops tNavigator – software package for reservoir modeling.

Kirill also gives lectures to the students studying numerical mathematics on the faculty of Mathematics and Mechanics in Moscow State University.

ABSTRACT
In this talk, the author will give an overview of the capabilities of the modern hardware platforms for high-performance simulations. Detailed analysis of the hardware architecture and characteristic features of personal computers and workstations, high-performance clusters, graphical adapters and cloud platforms will be presented. There will be a discussion about computational performance of these platforms in application to the reservoir simulations, and also about potential technical limitations.
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ABSTRACT

The offshore projects and projects that involve specially protected natural areas are more likely at ecological risks. Special focus on the impact evaluation on environment during the above-mentioned projects realization is based upon ecological vulnerability of natural components at project areas, environmental management active constraints and seasonality. Such projects in particular are subject to two levels of federal expert reviews: state ecological appraisal (Federal Service for Supervision of Natural Resource Usage) and state expert review of project documentation and of engineering survey results (State Expert Evaluation Department). The projects supported by international financial institutes and by first class banks must be evaluated by the level of impact according to the international requirements (ESHIA).

For complex ecological support it is necessary to take into consideration local work area qualities, to develop risk reduction measures, to pay special attention to working with the community, to take into consideration the most essential typical questions of state expert commission as early as the project documentation development. Complicated environmental conditions, high ecological vulnerability of natural components and strict environmental management active constraints of different kinds stipulate special focus on the environment. Searching balance between essential technical and economic solutions and supreme minimization of negative impact on environment stipulate ecological support duration time of oil and gas projects.

The time frame of public consultations, approvals and expertises are compared with the design period and can take from 6 to 12 months.

MACHINE LEARNING FOR OPTIMISING TECHNOLOGICAL WORKFLOWS AT EXPLORATION AND PRODUCTION OF HYDROCARBONS

Dmitry graduated from Lomonosov Moscow State University (MSU) in 2006 and continued his studies there as a PhD student, obtaining his PhD degree in Chemical Physics in 2008. From 2005 to 2014 and 2015 to 2016 Dmitry spent at various roles with Schlumberger Moscow Research.

He was leading new technologies department of Gazprom Neft’s Science and Technology Center in 2014 and 2015. In November 2016 Dmitry joined Skolko Institute of Science and Technology as an assistant professor.

He leads R&D theme on involvement machine learning methods for optimizing technological processes within exploration and production domain.

ABSTRACT

Today any industry, whether oil and gas or iron and steel considers the automatization the right path to be on. This approach not only helps industries to reduce production expenditures, to significantly raise their technological efficiency and to mitigate risks, but also gives tools to predict any issues, which being aware of in advance keeps the technological cycle permanent and safe.

Based on best practices and performance analysis we see a huge role of predictive analysis in well construction process. With help of machine learning algorithms these technology provides clients with a detailed history of the well (tied to the certain field and the license area) with the probabilistic risks forecast that may occur during drilling or RIH/POOH operations.
ELENA LUGOVAIA
Deputy Head of Project Approval and Expertise Department, FRECOM

Dmitry Koroteev
Assistant Professor, Skoltech

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MACHINE LEARNING FOR OPTIMISING TECHNOLOGICAL WORKFLOWS AT EXPLORATION AND PRODUCTION OF HYDROCARBONS

Sergey Stishenko is in oil and gas technology business since 2007. He graduated from Dostoevsky Orsk State University (Russia) in 2005, where he studied Applied Mathematics and IT, and from Heriot-Watt with honors in Field Development and Petroleum Engineering. After his graduation, Sergey worked for the first Russian LNG project Sakhalin Energy (joint venture Shell, Gazprom, Mitsui, & Mitsubishi).

He joined the well construction team and was responsible for all the petrophysics and geosteering work by the well construction on the fields of Sakhalin Shell. Several years later he co-founded “Geosteering Technologies” (GT) and introduced to the Russian market the first domestic commercial product for the geological well drilling. Sergey is the CEO of “Geosteering Technologies” and the co-author of “Geosteering in Five Clicks” – the first book in Russian on well placement that features a detailed description of all modern geosteering methods used at oil fields all over the world.

ABSTRACT
An overview of machine learning and predictive analytics application for oil and gas upstream will be presented. Examples of practical usage of Big Data technologies is based upon ecological vulnerability of natural components at project areas, environmental management active constraints and seasonality.

In particular, we touch the topics of automation of the workflow for building the geological models of the reservoirs, optimization of electric submersible pumps performance, development of computer-based advisory for directional drilling, and others.

Speaker initiates discussion of current issues with extensive implementation of Big Data technologies. Finally we highlight key directions for development of predictive analytics approaches for oil and gas upstream.
ARTYOM SEMENIKHIN
Leader of Industrial Research Team, IBM Science and Technology Center

IBM EXPERIENCE OF BIG DATA AND ANALYTICS IN O&G CHALLENGES

Artyom Semenikhin is a leader of Industrial Research team in IBM Science and Technology Center located in Moscow, Russia. He focuses on application of Big Data analysis methods and cognitive technologies to address O&G challenges with data overflow. Industrial Research team authors several SPE / EAGE papers and patents of data analytics systems for O&G.

ABSTRACT
This presentation covers Russian and worldwide experience of IBM in Big Data and cognitive technologies application for technological challenges in oil and gas industry. IBM vision is in creation of decision support systems which augment human intelligence rather than replace it. Cognitive technologies allow significantly extend human capabilities of efficient decision taking due to capabilities to process big amount of data received from different sources in very short time with a help of information technologies. This is especially important in the context of upcoming massive Internet of Things deployment and general digitalization of the industry. In order to survive in this ocean of data, companies will have to integrate tools of automatic data processing, predictive and prescriptive data analytics.

TECHNOLOGY TRANSFER: INTERNET, METALS, AND OIL & GAS. HOW TO USE ARTIFICIAL INTELLIGENCE TO REACH NEW LEVELS OF OPERATIONAL EFFICIENCY

ALEXANDER KHAYTIN
Chief Operating Officer, Yandex Data Factory

ABSTRACT
When it comes to oil and gas, the market demands increased efficiency gains in all areas of production from upstream to downstream. Simple solutions are often already in place, but companies are more wary of making the considerable capital investments necessary to implement new sources of optimisation. Given this attitude, AI and machine learning technologies are often seen as yet another costly investment (in new sensors, data storage systems, etc.) rather than a means to generate immediate business returns. Additionally, companies often overlook AI’s potential when it comes to optimising existing processes. During Alexander Khaytin’s talk you will learn:
• How AI can be applied in oil & gas to reach new levels of operational efficiency
• Particular aspects of implementing this new technology
• How to exploit other companies’ experiences using AI to get immediate business returns.

ПЕЧАТЬ СВОИМ АВТОСПОРТА ВЫБИРАЮТ «ЭКТО ПЛЮС».
А КАКОЕ ТОПЛИВО ЗАВОДИТ ВАШУ МАШИНУ?

ЛУКОЙЛ представляет высокотехнологичное топливо «ЭКТО Плюс», которое переносит двигатель автомобиля на неуязвимый уровень и значительно улучшает его работу благодаря очищающим свойствам и модернизируя топливную смесь. Не случайно компания «Экто Плюс» стала первым партнером Porsche — производителя спортивных автомобилей, заключившим соглашение на всем мире. Улучшение мощности двигателя при использовании топлива «ЭКТО Плюс» подтверждено испытаниями независимого британского центра Tickford Power Test Ltd. Приток топлива «ЭКТО Плюс» соответствует экологическому классу «Евро-5». 
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In order to survive in this ocean of data, companies will have to integrate tools of automatic data processing, predictive and prescriptive data analytics.

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<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>187680 Precise Fracturing: Increasing Number of Stages and Reducing Treatments Size in Oil Rims of Noolopotivskoe Oil Field</td>
</tr>
<tr>
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</tr>
<tr>
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</tr>
<tr>
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</tr>
<tr>
<td>187684 Field Development Optimization of Tight Reservoir VN. Vinogradov of Oil Field by Applying Multi-Stage Fracturing</td>
</tr>
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<tr>
<th>TECHNICAL SESSION «WELL CONSTRUCTION – DRILLING AND COMPLETION»</th>
</tr>
</thead>
<tbody>
<tr>
<td>187696 New Technologies of Effective Recycling of Oil Based Mud. Experience of Primotomnoye Field</td>
</tr>
<tr>
<td>187697 Specially Formulated Delayed-Breaker System for Ashnov Oil Rims in West Siberia</td>
</tr>
<tr>
<td>187698 Successful Zonal Isolation of Horizontal Liner with Cement Designed for Mechanical Loads During Multiple Hydraulic Fracturing Treatment in Western Siberia</td>
</tr>
<tr>
<td>187699 Using a New High-Performance, Water-Based Fluid System for Drilling through Unstable Shale in the Ustilyusky Oil Field of West Siberia</td>
</tr>
<tr>
<td>187700 Optimum Practices to Mitigate Gas Migration Problems in Deep Gas Wells Lab Studies and Field Cases</td>
</tr>
<tr>
<td>187701 Best Practices in Managing Lost Circulation Events in Shaubka Formation, South Rumaila Field. Iraq in Terms Preventive Measures, Corrective Methods, and Economic Evaluation Analysis</td>
</tr>
<tr>
<td>187703 Evolution of Completion Strategy and its Impact on Field Management Optimization at the North Caspian Shelf</td>
</tr>
<tr>
<td>187704 Resolving Directional Drilling Challenges to Deliver Small Bore Open-Hole Stand Alone Screen Completion in an ERD Well of the Pitun-Astakhovskoe Field, Sakhalin</td>
</tr>
<tr>
<td>187705 Well Placement Application to Drill Fishbone Well on Russkoe Field</td>
</tr>
<tr>
<td>187706 ERD Wells on Remote Islands: Successful Optimization Strategy to Boost a Performance</td>
</tr>
</tbody>
</table>

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<tr>
<th>TECHNICAL SESSION «STIMULATION AND MULTISTAGE HYDRAULIC FRACTURING»</th>
</tr>
</thead>
<tbody>
<tr>
<td>187714 The Experience of Multilateral Wells Stimulation with CT Raemy Hydraulic System, Oil-in-Water Emulsion, Dissolvent and Viscoelastic Diverting Acid</td>
</tr>
<tr>
<td>187715 Coiled Tubing Boosts Efficiency of Multistage Hydraulic Fracturing Techniques in Nooolopotivskoe Field</td>
</tr>
<tr>
<td>187716 Multistage Fracturing at Top Gear</td>
</tr>
<tr>
<td>187717 Opportunity in Adversity: a Paradigm Shift in Chemical Stimulation</td>
</tr>
<tr>
<td>187718 First in Russia Large-Scale Implementation of the Channel Fracturing Technology in Horizontal Wells</td>
</tr>
<tr>
<td>187719 New Opportunities for Brownfields: Channel Fracturing Offers a Significant Increase of Well Productivity in Complex Geological Conditions in the Samara Region</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TECHNICAL SESSION «OIL AND GAS PRODUCTION – EQUIPMENT AND TECHNOLOGIES. PRODUCTION GATHERING AND PROCESSING»</th>
</tr>
</thead>
<tbody>
<tr>
<td>187732 ESP Modeling and Application for Liquid Loading of Gas Condensate Wells on Severo-Urengoiskoye Field</td>
</tr>
<tr>
<td>187733 Cable-Deployed Riggers ESP Systems - Revolution in Oil Production Technology</td>
</tr>
<tr>
<td>187734 Experimental Studies of Technology of SWAG Injection into Wells Using Mixing Devices</td>
</tr>
<tr>
<td>187735 The Evolution of ESP Technology in the North Sea: A Reliability Study Based on Historical Data and Survival Analysis</td>
</tr>
<tr>
<td>187736 Peculiarities of the in-Field Gas Gathering Systems at the Latest Stage of the Development of Carnominan Deposit (Yamburgskoye Gas Field)</td>
</tr>
<tr>
<td>187737 Experience and Features of Calculation During Selection of Optimal Technological Regimes, Using GTU Model in HYSYS</td>
</tr>
</tbody>
</table>

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TECHNICAL SESSION «HARD-TO-RECOVER RESERVES»

187680 Precise Fracturing: Increasing Number of Stages and Reducing Treatments Size in Oil Risks of Novoportovskoe Oil Field
E. Kazakov, S. Vereshchagin, Schlumberger; F. Bulatov, Gazpromneft-Vamal; E. Safitdinov, Gazpromneft STC

187681 Forecast Gas Production from Unconventional Gas Formation in Case of Variable Bottomhole Parameters
A. Shandrygin, DelGolyer and MacNaughton

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M. Martynov, A. Konopelko, E. Zagraefloity, Mossoyakhanefugaz

187683 Bora de Jaruco Steam Injection Pilot: Bitumen Recovery from Oil-Wet Fractured Carbonate Rocks
E. Yudin, A. Lubrin, O. Petrashto, T. Azimov, Zarubshneft; A. Ospov, VNIMft

187684 Field Development Optimization of Tight Reservoir: VN. Vinogradov of Oil Field by Applying Multi-Stage Fracturing
A. Alenov, M. Chertanov, N. Veremto, Sh. Kuchmasov, LUKOL-Engineering; V. Karpov, N. Parshin, RITEK

187685 Heat and Mass Transfer Processes in Oil-Containing Media under the Influence of a High-Temperature Heat Agent that Does Not Penetrate into the Oil Reservoir
V. Larinov, V. Osos, V. Kuznetsov, Yu. Vankov, E. Safitlin, A. Garnetdinov, Kazan Federal University

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V. Kheutuk, P. Dobnishib, Schlumberger

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Z. Jekel, S. Sargmin, A. Arkhipov, Halliburton; B. Ivanov, RN-Niyanegaz

187699 Using a New High-Performance Water-Based Fluid System for Drilling through Unstable Shales in the Ustugsky Oil Field of West Siberia

187700 Optimum Practices to Mitigate Gas Migration Problems in Deep Gas Wells Lab Studies and Field Cases
A. Al-Yami, Saudi Aramco

187701 Best Practices in Managing Lost Circulation Events in Shubaila Formation, South Rumaila Field, Iraq in Terms Preventive Measures, Corrective Methods, and Economic Evaluation Technology
A. Al-Hameedi, S. Dunn-Norman, H. Alkinani, Missouri University of Science and Technology

187702 An Analysis of Rotary Steerable System Usage when Sidetracking in Open Hole in ‘Frifichka’ Multilateral Wells in Vostochno-Messoyakhtskoy Field

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M. Golenkin, LMKOL-Nizhnevolzhsk

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187705 Well Placement Application to Drill Fishbone Well on Russkoe Field
D. Nazipov, S. Kochyrev, V. Donets, R. Khabibullin, M. Miahambalov, A. Shnyrov, Schlumberger; D. Orloy, R. Erkalov, Tyumnenefugaz

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A. Ruzhnikov, Abu Dhabi Marine Operating Company

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O. Sissarov, E. Dolgushin, K&M Technology; A. Ruzhnikov, Schlumberger

187708 First Wildcat HPHT Well in Central Part of the Caspian Sea: Well Design and Project Execution
A. Benko, A. Ramanazar, Schlumberger

187709 New Solutions - New Opportunities: Managed Pressure Drilling as an Effective Technology for Naturally Fractured Reservoirs of Eastern Siberia
K. Chemikov, Vlastibilenefugaz; P. Dobrokhleb, D. Volkeno, T. Soroka, Schlumberger

187710 Automatic System for Analysis of Data on Field Drilling Parameters
S. Galiev, Yu. Lint, B. Gabbasov, T. Shapto, K. Shlychikov, BadNIPIMft

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N. Breklov, A. Truba, D. Zadrov, O. Gheatv, A. Sandutsha, Schlumberger; D. Gnostinul, V. Kreinov, E. Pipilo, D. Gazimov, D. Krepotinov, M. Miluckin, V. Khlibnikov, P. Medvedev, Rosneft

187712 Drilling Progression in the Srednebotobinskoye Field Development
M. Ryland, BP Russia; S. Alyaev, Tey-Yarjakh Neftegazdobycha

187713 Safety Drilling Technology for Horizontal Wells in Ultra-Thick Salt-Gypsum Rock in the Right Bank of the Turkmen Amu-Darya
W. Li, H. Zhou, CNPC Drilling Research Institute

TECHNICAL SESSION «STIMULATION AND MULTISTAGE HYDRAULIC FRACTURING»

187714 The Experience of Multilateral Wells Stimulation with CT: Reamyn Hydraulic System, Oil-in-Water Emulsion, Dissolvent and Viscoelastic Diverting Acid
T. Galiev, Rezpol

187715 Coiled Tubing Boosts Efficiency of Multistage Hydraulic Fracturing Technique in Novoportovskoe Field
A. Belov, Gazpromneft-Vamal; A. Kishgin, K. Burdin, Schlumberger; S. Simakov, Gazpromneft STC

187716 Multistage Fracturing at Top Gear
M. Dambovich, A. Albayev, Schlumberger

187717 Opportunity in Adversity: a Paradigm Shift in Chemical Stimulation
M. Ryland; BP Russia; A. Hoy, BP Aberdeen

187718 First in Russia Large-Scale Implementation of the Channel Fracturing Technology in Horizontal Wells
N. Cheblikin, Gazpromneft Khantos; I. Fazullevin, Gazpromneft STC; A. Yudin, A. Trosunovski, Schlumberger

187719 New Opportunities for Brownfields: Channel Fracturing Offers a Significant Increase of Well Productivity in Complex Geological Conditions in the Samara Region
A. Letachevich, A. Nikitin, A. Parfenov, V. Makarrov, I. Lamonov, Samaranefugaz; G. Rukan, D. Ovseyennikov, Schlumberger

TECHNICAL SESSION «OIL AND GAS PRODUCTION - EQUIPMENT AND TECHNOLOGIES. PRODUCTION GATHERING AND PROCESSING»

187720 ESP Modeling and Application for Liquid Loading of Gas Condensate Wells on Severo-Utenganyskoye Field
A. Sprinov; P. Minkevich; S. Sillagay, NOVATEK STC; A. Fastovets, Schlumberger

187721 Cable-Depoyed Rigless ESP Systems - Revolution in Oil Production Technology
D. Gorbururo, Novomelt-Perm

187722 Experimental Studies of Technology of SWAG Injection into Wells Using Mixing Devices
E. Sargmin, U. Albulatov, A. Ivanov, A. Ktabkov, P. Vinogradov; P. Ospov, BadNIPIMft

187723 The Evolution of ESP Technology in the North Sea: A Reliability Study Based on Historical Data and Survival Analysis
L. Pastre, A. Fastovets, Schlumberger

187724 Peculiarities of the In-Field Gas Gathering Systems at the Latest Stage of the Development of Cannoman Deposit (Yamburgskoe Gas Field)
G. Kudiyarov, Gazprom dobycha Yamburg; V. Istomin, I. Stonchenkro, A. Rotov, Gazprom VNIGAZ

187725 Experience and Features of Calculation During Selection of Optimal Technological Regimes, Using GTU Model in HYSYS
V. Buleiko, S. Babdutakos, S. Romashkin, Rospan International
TECHNICAL SESSION «WELL AND FORMATION TESTING, FORMATION FLUIDS SAMPLING AND EVALUATION»

187746 Well Completion Technology Evaluation for Oil Rim Field Development Using Permanent Tracers: a Case Study from North-Komsomolskoye Field
R. Gashimov, A. Safin, R. Lazarev, RN-Purnemfeldeif; V. Salayev, Rosneft; I. Mushtakhmatov, A. Protev, Rosneft; Reisman, M. Nukhaev, Rosneft; Basha Prince; S. Petruk, Siberian Federal University

187747 Successful Wireline through Tubing PVT Sampling in Sideloads
M. Mineriis, Weatherford; H. Kurasawa, LUKOIL-Perm

187748 Investigation of Temperature Field in the Formations by Hydraulic Fracture
R. Sharafudinov, R. Valeev, A. Sharipov, Bashkir State University; A. Ramazanov, Bashkir State University; S. Pertz, Rostov; V. Zhuchenko, Total Exploration and Production Russia

187749 A New Approach to Test Production of Exploration Wells in the Territory of Eastern Siberia
N. Dadakin, RN-KrasnoyarskPIMneft; M. Nukhaev, Siberian Federal University; K. Rymarenko

187750 Identification of Fracturing Reorientation Using Decline-Analysis and Geomechanical Simulator
G. Aslankhuzha, A. Dzavelaeva, A. Fedorov, A. Yuldasheva, RN-UfaPIMneft; A. Efremov, RN-Yuganskneftegaz; A. Sergeyevsky, Rosneft; D. Ishkin, Bashkir State University

187751 Production Logging in Horizontal Wells without Well Intervention
K. Ochchimov, A. Gunyauov, A. Katalash, Geoplit

187752 New Possibilities of Well Testing and Production Logging in Horizontal Wells with Non-Uniform Inflow Profile
M. Kremenetskii, S. Matisov, Gazpromneft STC

187753 Use of Fluids ID* Model in Gas Condensate Testing with Multiphase Metering
A. Davydovskii, S. Abramochkin, N. Lopatina, Schlumberger

187754 Reservoir Uncertainties in Formation Properties by Hydrodynamic Well Testing at Exploration Phase on Perspective Fields of Uvat Project
G. Kulyatin, Upstream Peer Review and Technical Assessment Center Rosneft; A. Sossnovich, RN-Uvatneftegaz

187755 Development of Automatic System for Decline Analysis
V. Koteichev, Gazpromneft STC

187756 Isokinetic Sampling of a Multiphase Mixture of Formation Fluids in the Near Critical Region
A. Muravev, VInNeft

187757 Geochemical Tools to Correlate Light Petroleum and Evaluate Thermal Maturity: a Case Study of Precambrian Condensates from the East Siberia, Russia
A. Chakhmakchokov, SGS, D. Shigapov, A. Achmedov, SNIGGSM; V. Andrus, IRS Market

TECHNICAL SESSION «FIELD DEVELOPMENT MANAGEMENT AND MONITORING»

187767 Well Performance Wireless Monitoring with Stationary Intelligent Tracer Systems at the Prianozhnoe Oilfield
A. Koloda, O. Morozov, M. Andriyanov, Gazprom neft shelf

187768 Yu. Korchagin and V. Firovskiy Fields Development Using Integrated Asset Modeling
A. Danko, A. Senkov, LUKOIL-Nadnevolzhskneft; A. Asmahadley, LUKOIL International; V. Volon, LUKOIL-Engineering PermPIMneft

187769 Distributed Multi-Gauge Monitoring System for Horizontal Wells. Novosporoskoye Oil and Gas-Condensate Field Case Study
I. Kashaev, Gazpromneft STC

187770 Providing Start-Up and Steady Operation of Yamal LNG Plant by Optimization of Uktin-Tambeley Field Technological Regime
A. Yadvov, A. Suljapov, A. Yamin, A. Ehrtshew, R. Valov, NOVATEK STC

187771 Benchmarking of Various Types of Completions and MS Technologies for Horizontal Wells at the Primoboke Field (Southern License Topics)
R. Zulunsev, A. Stivkov, A. Anzamjanov, A. Pustovolov, Gazpromneft STC; D. Kolesar, Gazpromneft-Khantos

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187773 Challenges and Results in Implementing a Smart Field Concept to Increase an Operability and a Developing Efficiency at Mature Field (AO "RITEK" Case Study)
D. Ihmawe, A. Maklany, A. Aminov, I. Batikov, K. Ratanov, RITEK; A. Kozer, V. Fomin, A. Klimba, A. Rybaklov, M. Guletiks, SBImsh/Automation

187774 Automatic Control Algorithms of Water-Gas Mixture Injection Under Implementation of SWAG-Technology
M. Gladysheva, P. Vinnikov, A. Luukhakhmanov, D. Nadezhkin, D. Efimov, E. Sergeev, Bashpa Prince

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M. Mishenkov, Weatherford; M. Kurasova, LUKOIL-Perm

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M. Kremenetsky, S. Melnikov, Gazpromneft STC

187753 Use of Fluids ID® Model in Gas Condensate Testing with Multiphase Metering
A. Davidovskiy, S. Abramochkin, N. Lopatina, Schlumberger

187754 Resolving Uncertainties in Formation Properties by Hydrodynamic Well Testing at Exploration Phase on Perspective Fields of Uvat Project
G. Klyukhin, Upstream Peer Review and Technical Center Rosneft; A. Sizonovskiy, RN-UvatnefTez

187755 Development of Automatic System for Decline Analysis
V. Kotezhkov, Gazpromneft STC

187756 Isokinetic Sampling of a Multiphase Mixture of Formation Fluids in the Near-Critical Region
I. Maravits, VNIFteh

187757 Geochemical Tools to Correlate Light Petroleum and Evaluate Thermal Maturity: a Case Study of Precambrian Condensates from the East Siberia, Russia
A. Chkalakhchov, SGS, O. Shiganov, A. Achmedov, SNIGGIPS; V. Andrus, IRS Markit

TECHNICAL SESSION «FIELD DEVELOPMENT MANAGEMENT AND MONITORING»

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A. Danko, A. Senkov, LUKOIL-Nizhevozholnefte; R. Ashkudov, LUKOIL, International; V. Volkov, LUKOIL-Engineering PermNP/NIIP

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A. Yadvov, A. Sulyagayev, A. Yarov, A. Eprymtsev, R. Valov, NOVATEK STC

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R. Zuluev, A. Stikov, R. Andrianovskiy, P. Pustovskiy, Gazpromneft STC; D. Kolapov, Gazpromneft-Kharasov

187772 Evolution of Approaches to Oil Rims Development in Terogenous Formations of Eastern Siberia
A. Levanov, A. Kobyshev, A. Chupnev, S. Yashchenko, Tyumen Petroleum Research Center; A. Nazir, A. Chupnev, Vankhchosnimflegaz; A. Svyachenskii, V. Grinchenko, Taza-Yurakh Neftegospodarstvo; A. Ochshnikov, D. Burlakov; S. Zimin, Irkutsk Oil Company

187773 Challenges and Results in Implementing a Smart Field Concept to Increase an Operational and a Developing Efficiency at Mature Field (AO "RITEK" Case Study)
D. Ilmeev, A. Masliankov, A. Andronov, I. Bakhtiy, K. Ruzmlev, RITEK; A. Kozhin, V. Fomin, A. Klemba, A. Rybalko, M. Guletsky, SibnefteO"ITEK

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M. Gladisheva, P. Vrotnykov, A. Lutsakhanov, M. Nukhov, RITEK; S. Efremov, S. Gashev, BathNP/NIIP

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187775 Successful Real Time Production Optimization Examples for Four Intelligent Wells Offshore, Caspian Sea
M. Gurelkin, LUKOIL-Nizhevozholnefte

187776 Dynamic Reservoir-Pressure Maintenance System Research in Complicated Carbonate Reservoir by Production Analysis, Production Logging and Well-Testing
S. Korshelkin, O. Lyubimova, K. Budkin, D. Yulayev, A. Pimenov, A. Makina, Bath NP/NIIP

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E. Konulova, V. Syrtanov, A. Alexeev; Weatherford

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M. Chertkency, J. Zolova, E. Pryanichnikova, LUKOIL; V. Vidyakin, GEOSPLEN

187779 Comprehensive Approach to the Fractured Reservoir Management on the Example of Parnson Beam Oilfield
A. Polshakov, I. Bogatyrev, E. Kharyba, M. Dragosavac, NIS-Gazpromneft

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M. Naugolnov, M. Boldakov, Gazpromneft STC

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D. Pavlov, A. Vasilev, Sakhalin Energy Investment Company

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D. Ivaschenko, RN-UfaNP/NIIP

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B. Stasyuk, V. Camaro, Chevron

187784 Control of Displacement Front Uniformity by Fractal Dimensions
B. Sulimanov, N. Guzeynova, E. Vel'mey, OilGasScientificResearchInstitute, SOCAR

TECHNICAL SESSION «STATIC AND DYNAMIC MODELING»

187793 Building and Application of Integrated Model of a Large Sakhalin Offshore Oil and Gas Condensate Field
M. Kuzovarov, D. Gvozdevs, K. Karanom, S. Bushinsky, Tyumen Petroleum Research Center

187794 Selection of Infrastructure Development of Unioque Gas-Condensate Field Using the Integrated Modeling
A. Pouchkov, T. Gubasov, A. Sulyagayev, A. Prokopenko, NOVATEK STC; R. Ishakov, A. Malteev, E. Tarasov, Sh. Mingulov, Arctic LNG 2

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A. Krentsov, NOVATEK STC

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A. Borsky, D. Mitsukhin, I. Kuldyaykov, MIPT Center for Engineering and Technology; V. Plyrn, Zapalskik

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A. Telishev, K. Bogachev, V. Shalosh, D. Eydrosov, Rock Flow Dynamics

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N. Bakhtiy, G. Bembel, Surogovflegaz

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D. Filipovic, B. Vasilev, D. Malakov, I. Kuldyaykov, D. Mitsukhin, MIPT Center for Engineering and Technology; A. Roshkichaev, Gazpromneft STC

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I. Breslavich, G. Sarkisov, E. Makarova, Rosar Service

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V. Plyrn, S. Urazov, Zapalskik

187802 Experience in Creation of Variant Hydrodynamics Models on the Example of Tyumen Deposits in Conditions of Geological Structure Uncertainties
D. Metl, S. Sukhodanov, LUKOIL-Engineering

The programme is relevant as of May 12, 2017. All authors' names, companies' and paper titles are listed as submitted to SPE.
TECHNICAL PROGRAMME

187803 Automated Geologically-Consistent History Matching of Facies Distribution and Reservoir Properties in Inter-Well Space by Adjunct Methods
E. Zakirov, O. Lyubimova, I. Indupsky, D. Ankeev, OGSI RAS

187804 The Concept of the Complex Carbonate Reservoir Saturation with the Variable Wettability
R. Kamegawa, S. Korobkin, T. Isakova, O. Lyubimova, K. Budkin, A. Markova, BashNIPIneft

187805 Reactive Flow Modeling at a Pore Scale
A. Beletskaya, E. Ivanov, M. Stukan, S. Safonov, O. Dinariev, Schlumberger

187806 Modelling of Well Injectivity with Account for Permeability Damage and Recovery in the Near-Wellbore Zone
A. Ostashov, K. Tomacheva, S. Bonnin, D. Korotov, Skoltech; A. Shiryaev, A. Yaroshev, B. Belousov, R. Galiev, Gazpromnft STC

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M. Bataee, Z. Hamdi, Asia Pacific University

M. Trimonova, N. Baryshnikov, E. Zanchenko, P. Zanchenko, Institute of Geosphere Dynamics RAS

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N. Dubnya, T. Tikhonov, I. Bayuk, D. Beloborodov, M. Krasnova, A. Makarova, D. Ilutina, I. Fokin, IPE RAS

187810 Deformation Processes in Reservoir Engineering of the Limestone and Their Influence on the Engineering Processes
A. Belozhizhski, BashNIPIneft

187811 Practical Application of Geomechanics for Critical Depression Estimation in Sand Control Problem. Case Study for Khilen Oilfield
T. Timofeeva, Gazpromnft STC; M. Blutila, NTU NAFTAGAS Doo.

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A. Vishnevetskii, T. Sobolev, Yu. Naumov, D. Martinov, V. Kleeve, Weatherford; A. Raynushkin, A. Frossin, YarGeo; I. Leontov, A. Abdrakhimov, V. Konovshchik, NOVATEK; A. Berezov, NOVATEK STC

187813 Case Study: 3D Reservoir Geomechanics Applied to a Shale Gas Reservoir in Sihjun Basin, China
K. Qi, Schlumberger

TECHNICAL SESSION «BROWNFIELDS»

187837 Operational Localization Technique of Current Mobile Oil Reserves for Mature Reservoirs Based on Material Balance
A. Aliev, S. Vyrtanov, Weatherford

187838 West, Salym ASP pilot
Ya. Volokitin, M. Ushter, V. Kanep, E. Mikhailenko, I. Kolots, I. Trachev, Salym Petroleum Development

187839 EOR by Smart Water Flooding in Sandstone Reservoirs - Effect of Sandstone Mineralogy on Initial Wettling and Oil Recovery
A. Mamontov, University of Stavanger

TECHNICAL SESSION «GAS, GAS CONDENSATE AND OIL GAS CONDENSATE FIELD DEVELOPMENT»

187851 OSOG Evaluation by Using Specific Drainage Volumes Method: Theory and Case Study
S. Kobilov, NOVATEK; M. Kimlov, R. Ramazanov, NOVATEK STC

187852 Frci Size Matters: the Experience of Achimov Deposits Development in Unerygoskoe Gas Condensate Field
Yu. Zakharovskiy, Rospi International; A. Yudin, D. Kubyshev, Schlumberger

187853 Integrated Approach to Determination of Optimal Capacity and Configuration of Booster Compressor Station at Different Realization Stages
A. Poshech, O. Nenonenko, P. Kudrin, A. Yaskov, NOVATEK STC

187854 Accounting for Static Criteria of Liquid Unloading for Downhole Equipment Optimization and Prolongation of Gas Wells Operation
I. Maksimovskiy, M. Firkievich, R. Mangushev, NOVATEK STC

187855 Study of the Efficiency of Methods for Enhanced Condensate Recovery Based on Reservoir Simulation Models
E. Malinov, A. Romanov, Tyumen Petroleum Research Center

187856 Brownfield Development Optimization under Uncertainty – a Structured Workflow Design for Complex Case Scenarios
M. Korin, R. Schutz-Riegert, I. Magdeva, V. Chernyak, Schlumberger

187857 Features of Development, Construction and Exploitation Oil and Gas Fields. Implementation Results of Integrated Model
K. Povyesh, S. Vorovshina, O. Vernikovskaya, Gazpromnft STC

187858 EOR Miscible Gas Project in Oil-Gas Condensate Field
G. Glavnoy, V. Kuntsevich, M. Veshchennaya, I. Peresvokin, G. Udinaev, Gazpromnft STC; D. Bashkov, Gazpromnft-Yamal

187859 First in Russia Viscoelastic Surfactant Based Fluid Implementation in Multi-Stages Fracturing for the Development of Oil Rims
D. Galenkovskiy, A. Korpanov, Gazpromnft-Yamal; D. Vernigora, O. Olennikova, Schlumberger

187860 Influence of Permeability Distribution on Gas Recovery from Massive Reservoir with Bottom Water

187861 Reconstruction of the Initial State of a Gas-Condensate System Based on a Limited Set of Field Data; A Case Study of One of the Fields in South Caspian Basin
A. Semenov, D. Olenchikov, Rosar

187862 A Case Study of Gas Condensate Reservoir Performance under Bottom Water Drive Mechanism
T. Tran, T. Trungg, A. Ngo, N. Tran, Bien Dong POC

TECHNICAL SESSION «CORE ANALYSIS»

187871 Integrated Laboratory Research Procedure for Core Cavernous Samples
Ya. Gilmanov, I. Vakhmutshina, M. Nikolaev, M. Zagudalin, Tyumen Petroleum Research Center

187872 Carbonate Core: Research Features, Complexities, Prospects
K. Kovalov, P. Grishin, A. Fomkin, A. Kunchkin, M. Kolesnin; A. Lechikhin, K. Gabytov, VShIneft

187873 Mosaic Hydrolphication of the Surface of Organic-Mineral Matrix from Rocks of Bazhenov Formation
N. Bogdanovich, E. Kuzina, M. Spayenkikh, Skoltech; B. Borisenko, S. Rudakovskaya, Arctic-Gers

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K. Giriie, M. Krasnova, Institute of Geosphere Dynamics RAS; T. Spavilens; KF RAS; X. Hao, Ray Laboratory of High- Efficient Mining and Safety of Metal Mines (Ministry of Education), University; D. Gafurova, D. Konet, Lomonosov MSU, The Faculty of Geology

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TECHNICAL PROGRAMME

187840 Data-Driven Optimization in Mature Fields
C. Temzea, Aera Energy (Shell-ExxonMobil JV)

187841 Application of Capacity-Resistance model (CRM) for Production and Remaining Oil Reserves Reservoir Allocation in Mature West-Siberian Waterfield Field
R. Sabitgareev, A. Gladkov, Modelltech

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I. Lyamar, A. Serennobkov, Belozersk

The programme is relevant as of May 12, 2017. All authors’ names, companies’ and paper titles are listed as submitted to SPE.
The Concept of the Complex Carbonate Reservoir Saturation with the Reactive Flow Modeling at a Pore Scale
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Effect of Saturation Alteration on Wellbore Stability during WAG Injection
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Ya. Volokitin, M. Shuster, V. Karpan, E. Mikhaylenko, I. Koltsov, Schlumberger

Methodology for Calibration of Geomechanical Field Model for Asymmetric Hydraulic Fracture Design Based on Actual Data
A. Vashityevskiy, T. Soboyev, Yu. Naumov, D. Martynov, V. Kiselev, Weatherford; A. Raynushin, A. Leontiev, A. Abdrakhmanov, V. Konyshev, NOVATEK; A. Beletskiy, NOVATEK STC

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D. Garenskikh, A. Korepanov, Gazpromneft-Yamal; D. Vernigora, Schlumberger

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A Case Study of Gas Condensate Reservoir Performance under Bottom Water Drive Mechanism
T. Tran, T. Truong, A. Ngo, N. Tran, Bien Dong POC

TECHNICAL SESSION «GEOMECHANICS»
187816 Extending the Stress-Testing Deployment Envelope to Highly Deviated Wells: Pipe-Deployed Dual-Flapper Stress Testing a Proven Solution
M. Rylance, BP Russia; A. Hoq, A. Ronald, S. Smithells, BP Aberdeen; R. Naidu, BP

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B. Baschankin, Colorado School of Mines

187820 Using of Modern Technology for Continuous Profiling of Core Geomechanical Properties in Solving Drilling Optimization Problems
A. Chenemian, Geomechanics Systems; A. Sobolev, Yu. Petrikov, G. Tutar, Geoengineering Technologies; V. Stukachev, Schlumberger

187821 Application of Special Well-Logging Techniques for Geomechanical Model Improvement in Naturally Fractured Reservoirs
K. Ezhin, NIS STC; N. Dubynina, IPE RAS; A. Arskobkov, Schlumberger

187822 The Study of the Water-Induced Hydraulic Fracture Propagation: Numerical and Experimental Modeling
M. Trimonova, N. Baryshnikov, E. Zarchenko, P. Zarchenko, Institute of Geophysical Dynamics RAS

187823 Prediction of Physical-Mechanical Properties and In-Situ Stress State of Hydrocarbon Reservoirs from Experimental Data and Theoretical Modeling
N. Dubyna, S. Tikhonov, I. Bayuy, D. Beloborodov, M. Krasnov, A. Makarova, D. Rusanov, I. Fokin, IPE RAS

187824 Deformation Processes in Reservoir Engineering of the Limestone and Their Influence on the Engineering Processes
A. Belonozhko, BashNIPIneft

187825 Practical Application of Geomechanics for Critical Depression Estimation in Sand Control Problem: Case Study for Khilema Oilfield
T. Timofeeva, Gazpromneft STC; M. Bluta, NTC NIS NAFTA GAS DoCo

187826 Effect of Saturation Alteration on Wellbore Stability during WAG Injection
M. Bataee, Z. Hamdi, Asia Pacific University

187827 Methodology for Calibration of Geomechanical Field Model for Asymmetric Hydraulic Fracture Design Based on Actual Data
A. Vashityevskiy, T. Soboyev, Yu. Naumov, D. Martynov, V. Kiselev, Weatherford; A. Raynushin, A. Leontiev, A. Abdrakhmanov, V. Konyshev, NOVATEK; A. Beletskiy, NOVATEK STC

187828 Case Study: 3D Reservoir Geomechanics Applied to a Shale Gas Reservoir in Sihouan Basin, China
K. Qiu, Schlumberger

TECHNICAL SESSION «BROWNFIELDS»
187837 Operative Localization Technique of Current Mobile Oil Reserves for Mature Reservoir Based on Material Balance
A. Aleev, V. Syrtlanov, Weatherford

187838 West, Salym ASP pilot
Ya. Volokitin, A. Shuster, V. Karpan, E. Mikhaylyenko, I. Koltsan, I. Trachak, Salym Petroleum Development

187839 EOR by Smart Water Flooding in Sandstone Reservoirs - Effect of Sandstone Mineralization on Initial Wettling and Oil Recovery
A. Manenkov, University of Stavanger

TECHNICAL SESSION «GAS, GAS CONDENSATE AND OIL GAS CONDENSATE FIELD DEVELOPMENT»
187851 OGIP Evaluation by Using Specific Drainage Volumes Method. Theory and Case Study
S. Kobilkov, NOVATEK; M. Kimlov, R. Ramazanov, NOVATEK STC

187852 Free Size Matters: the Experience of Achimov Deposits Development in Urengoygloy Gas Condensate Field
Yu. Zakhardevich, Rospan International; A. Yudin, D. Kubyshkin, Schlumberger

187853 Integrated Approach to Determination of Optimal Capacity and Configuration of Booster Compressor Station at Different Realization Stages
A. Pouchut, D. Nedenko, P. Kudrin, A. Yaskov, NOVATEK STC

187854 Accounting for Stationary Criteria of Liquid Unloading for Downhole Equipment Optimization and Prolongation of Gas Wells Operation
I. Makimovskiy, F. Minkevich, R. Mangushew, NOVATEK STC

187855 Study of the Efficiency of Methods for Enhanced Condensate Recovery Based on Reservoir Simulation Models
E. Malarov, A. Romanov, Tyumen Petroleum Research Center

187856 Breenfield Development Optimization under Uncertainty – a Structured Workflow Design for Complex Case Scenarios
M. Komir, R. Schaud-Wiegert, I. Magdeva, V. Chernyak, Schlumberger

187857 Features of Development, Construction and Exploitation Oil and Gas Fields Implementation Results of Integrated Model
K. Posyshnev, V. Vorobich, V. Varnavskiy, Gazpromneft STC

187858 EOR Miscible Gas Project in Oil-Gas Condensate Field
N. Glavnov, V. Kuntsevich, M. Varnavskiy, I. Peresvokin, G. Utisnov, Gazpromneft STC; D. Bashnev, Gazpromneft-Yamal

187859 First in Russia Viscoelastic Surfactant Based Fluid Implementation in Multi-Stage Fracturing for the Development of Oil Rims
D. Ganemskiy, A. Konoprynov, Gazpromneft-Yamal; D. Varnavskiy, O. Olennikova, Schlumberger

187860 Influence of Permeability Distribution on Gas Recovery from Massive Reservoir with Bottom Water

187861 Reconstruction of the Initial State of a Gas-Condensate System Based on a Limited Set of Field Data: A Case Study of One of the Fields in South Caspian Basin
A. Semenov, D. Olshchikov, Rospan International

187862 A Case Study of Gas Condensate Reservoir Performance under Bottom Water Drive Mechanism
T. Tran, T. Truong, A. Ngo, N. Tran, Bien Dong POC

TECHNICAL SESSION «CORE ANALYSIS»
187871 Integrated Laboratory Research Procedure for Core Cavernous Samples
Ya. Gilmanshin, I. Vakhitshina, M. Nikuliev, M. Zagdulin, Tyumen Petroleum Research Center

187872 Carbonate Core: Research Features, Complexities, Prospects
K. Kovalev, P. Grishin, A. Fomkin, A. Kurochkin, M. Kolesnikov, Gazpromneft Yamburg

187873 Mosaic Hydrophobization of the Surface of Organic-Mineral Matrix from Rocks of Bazhenov Formation
N. Bogdanovich, E. Kozlova, M. Spasennykh, Skoltech; A. Levchenko, K. Gabsiya, V Ivninfil

187874 Multi-Scale Image Fusion of X-ray Microtomography and SEM Data to Model Flow and Transport Properties for Complex Rocks on Pore-Level
K. Gerke, M. Kaksanina, Institute of Geosphere Dynamics RAS; T. Siarhonka, K.E. RES; X. Hao, Han Laboratory of High-Efficient Mining and Safety of Metal Mines (Ministry of Education); University; D. Galltova, D. Korost, Lomonosov MSU, The Faculty of Geology

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<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Authors/Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>187726</td>
<td>An Integrated Approach for Successful Drilling, Evaluation and Completion of Horizontal Well. Case Study from Field named after V. Frunzovskogo</td>
<td>D. Shepin, LUKOIL-Nizhnevorschtneft, S. Novikov, A. Fitner, A. Nahtamotov, V. Kuzakov, I. Bulgyn, Schlumberger</td>
</tr>
<tr>
<td>187727</td>
<td>Worlds First Successful Introduction of TAML 5 system for 7” casing on Yuzhno-Tambeyskoye Field</td>
<td>A. Fedotov, Schlumberger</td>
</tr>
<tr>
<td>187729</td>
<td>A Package of Technical and Technological Solutions for Enhancement of Casing Quality during Wells Construction</td>
<td>A. Isaev, R. Talhaatdino, V. Malykhin, A. Shafatullin, Sheshmaol</td>
</tr>
<tr>
<td>187730</td>
<td>Application of a Precisely Controlled Pressure Drilling System in Drilling of Fractured Cavernous Carbonate Horizontal Wells with Narrow Pressure Margins</td>
<td>P. Chen, Y. Zhou, X. Wang, W. Liu, H. Zhou, CNPC Drilling Research Institute</td>
</tr>
<tr>
<td>187731</td>
<td>Integrated Real-Time Pressure Monitoring Enabled the Success of Drilling a HTHP Offshore Well – a Casing Study in Lebeding, Area of South China Sea</td>
<td>P. Liu, Schlumberger; J. Cai, China National Offshore Oil Corporation</td>
</tr>
</tbody>
</table>

**KNOWLEDGE SHARING EPOSTER PRESENTATIONS «STIMULATION AND MULTISTAGE HYDRAULIC FRACTURING»**

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Authors/Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>187735</td>
<td>Improved Hydraulic Fracturing Results Utilizing Microfract Testing in a West Siberia Field</td>
<td>Ya. Zhang, A. Kornlov, Baker Hughes, A. Ryzanov, A. Mosse sko, RITEK</td>
</tr>
</tbody>
</table>

**KNOWLEDGE SHARING EPOSTER PRESENTATIONS «OIL AND GAS PRODUCTION – EQUIPMENT AND TECHNOLOGIES. PRODUCTION GATHERING AND PROCESSING»**

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Authors/Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>187738</td>
<td>Application of “Big Data” Tool for Unstructured Data Analysis to Improve ESP Operation Efficiency</td>
<td>N. Sarapulo, Gazpromneft STC</td>
</tr>
<tr>
<td>187739</td>
<td>Monotrization of Oil-Dissolved Gas of Oil-Gas Field in the High North of Tyumen Region and Yenezynsky Region</td>
<td>M. Sarachin, Tyumen Petroleum Research Center</td>
</tr>
<tr>
<td>187740</td>
<td>Development and Results of Implementation of Novel Dual Completion Technology, and New Methods of Evaluation of a Well’s Layers During Dual Completion</td>
<td>A. Isaev, R. Talhaatdino, V. Malykhin, A. Shafatullin, Sheshmaol</td>
</tr>
<tr>
<td>187741</td>
<td>Study of Suppresion of Gas Bubbles Coalescence in the Liquid for Use in Technologies of Oil Production and Associated Gas Utilization</td>
<td>A. Drozdov, Gublin Russian State University of Oil and Gas, N. Drozdov, N. Burkin, V. Kozlov, Innovative Oil Solutions</td>
</tr>
<tr>
<td>187743</td>
<td>Optimization of ESP Power Consumption with Permanent Magnet and High Voltage Motors</td>
<td>R. Mukaw, Schlumberger</td>
</tr>
<tr>
<td>187744</td>
<td>Oil Production Control in Water-Oil Reservoirs: Two-Phase Stratified Flow with Intermediate Layer</td>
<td>V. Domnovskiy, Yu. Perepechko, A. Manalois, Baker Hughes, Novosibirsk Technological Center, K. Sorokin, RIKI SB RAS</td>
</tr>
<tr>
<td>187745</td>
<td>Comparison of Numerical Algorithms for Carbonate Acidizing</td>
<td>E. Ababdalatif, M. Poursr, B. Shau, J. Harwell, University of Oklahoma</td>
</tr>
</tbody>
</table>

The programme is relevant as of May 12, 2017. All authors’ names, companies’ and paper titles are listed as submitted to SPE.
| 187686 | A Novel Approach for Multistage Fracturing Operations in Low-Porosity Formations on Vnogorodskoye Field: Lessons Learned and Application Results | N. Parshin, A. Alenov, RITEK; N. Nizamova, V. Astapenok, G. Oleinikova, A. Logirov, Schlumberger |
| 187687 | Efficiency Evaluation and Application of Multilateral Wells in Continental Depositional System Conditions of Vostochno-Messoyakskoye Field | I. Nitkina, V. Bogan, Gazpromneft STC |
| 187689 | New Approaches in the Development of Carbonate Deposits | D. Sentyukov, A. Kudryashov, V. Privoval, I. Zhuk, P. Povzhyk, Belorusneft |
| 187690 | Local Stress Shadow Effect Analysis in Multistage Hydraulic Fracturing Design Considering Small Drillhole Spacing (Vnogorodskoye Field Case) | A. Bochkarev, D. Minushin, R. Nikitin, MPT, Center for Engineering and Technology; A. Ryazanov, N. Parshin, V. Karav, A. Mossewko, RITEK |
| 187691 | Control Methods of Propellant Fracturing for Production Stimulation | V. Vychinskii, K. Fedorov, Tyumen State University; Yu. Garkin, GI Technology Center, A. Kirchess, SibnefteN |
| 187692 | Improving SAGD Efficiency in Carbonate Reservoirs by Combining Horizontal and Vertical Wells | E. Tarasov, LUKOIL-Engineering PermNPrite; S. Uregev, Skolevsko Institute of Science and Technology |
| 187693 | Evaluation of a Chemical Enhanced Oil Recovery (EOR) Application in a Libyan Oil Field Feasibility Study and Reservoir Simulation | R. Elhajjaji, Wintershall Libya; A. Behr, Wintershall Holding GmbH, D. Alexofolu, R. Hinacap, Clausthal University of Technology |
| 187694 | Applications of Material Balance for Determining the Dynamic Performance of Fractures in a Dual-Porosity System in HP-HI Reservoirs | R. Alcántara Vázquez, J. Ham Macossay, J. Parejas Enciso, PEMEX E&P |
| 187695 | Optimization of Water Injection Policy for Horizontal Wells in Tight Oil with Low Pressure | J. Wang, C. Tian, C. Shi, RIPED, PetroChina; X. Zheng, CNPC |

**KNOWLEDGE SHARING EPOSTER PRESENTATIONS «WELL CONSTRUCTION – DRILLING AND COMPLETION»**

| 187717 | New Ridge Diamond Elements Improve PDC Bit Efficiency | D. Gumich, M. Pak, M. Gorobchenko, A. Lomov, Schlumberger |
| 187718 | Refinement of Drillpipe-Slip Mechanical Mode | V. Tsytonos, L. Ring, D. Bukhanova, Weatherford; M. Geifard, Gubkin Russian State University of Oil and Gas |
| 187719 | Hybrid Drill Bit Mitigates Downhole Vibrations, Improving Drilling Efficiency in Challenging Curve Section of a Highly Interbedded Formation | S. Sheng, Baker Hughes |
| 187720 | Calculation Methodology of Drill Pipe Work Hours Considering Fatigue Wear | O. Fomin, Siberian Service Company |
| 187721 | The Ideal Approach for Casing Leak Repairs in Saudi Arabia | A. Al-Dossary, Saudi Aramco |
| 187722 | Tubular Strength Analysis Based on Mechanical Casing Wear | N. Chaudhut, E. Chukurova, A. Gonales, Halliburton |
| 187724 | Well Integrity Complex Approach to Prevent Gas Migration and Sustained Casing Pressure in Extended Reach Offshore Wells | V. Zvyagin, LUKOIL-Nizhnevolzhsknft; I. Pototskaya, Schlumberger; A. Valsievich, LUKOIL |

---

**KNOWLEDGE SHARING EPOSTER PRESENTATIONS «STIMULATION AND MULTISTAGE HYDRAULIC FRACTURING»**

| 187725 | Integrated Project Management Reduces Well Construction Time by 25% while Delivering Complete 3D Extended-Reach Drilling Campaign on Lebedinoye field, Sakhalin | I. Lebedeva, K. Mazurov, S. Savinov, A. Vasilshchikov, V. Khim, Schlumberger; V. Bochkarev, Rossvel, V. Sumrin, D. Tyurin, RN-SakhalinOilPMorneft |
| 187726 | An Integrated Approach for Successful Drilling, Evaluation and Completion of Horizontal Well. Case Study from Field named after V. Filanovsky | D. Shiepein, LUKOIL-Nizhnevolzhsknft; S. Nikitina, A.Filinters, A. Khainots, V. Kuzovtsov, I. Bulygin, Schlumberger |
| 187727 | Worlds First Successful Introduction of TAML 5 system for 7” casing on Yushman-Tembekoye Field | A. Fedotov, Schlumberger |
| 187728 | Integrated Solution of Casing (Surface Casing String) Cementing under Conditions of High-Intensity Process Liquid Absorption in the Eastern Siberia Oilfield | S. Paleev, V. Bykon, Surgutneftegaz; Yu. Medvedev, Samara Gypsum Plant |
| 187729 | A Package of Technical and Technological Solutions for Enhancement of Casing Quality during Wells Construction | A. Issao, R. Takhaudkhin, V. Malikhin, A. Sharifullin, Sheshmaoil |
| 187730 | Application of a Precisely Controlled Pressure Drilling System in Drilling of Fractured Cavernous Carbonate Horizontal Wells with Narrow Pressure Margins | P. Chen, Y. Zhou, X. Wang, W. Liu, H. Zhou, CNPC Drilling Research Institute |
| 187731 | Integrated Real-Time Pressure Monitoring Enabled the Success of Drilling A HTHP Offshore Well – a Casing Study in Lebeding, Asia of South China Sea | P. Liu, Schlumberger; J. Cai, China National Offshore Oil Corporation |

**KNOWLEDGE SHARING EPOSTER PRESENTATIONS «STIMULATION AND MULTISTAGE HYDRAULIC FRACTURING»**

| 187733 | Improved Hydraulic Fracturing Results Utilizing Microfrac Testing in a West Siberia Field | Ya. Zhang, A. Komlev, Baker Hughes; A. Ryazanov, A. Mossewko, RITEK |

**KNOWLEDGE SHARING EPOSTER PRESENTATIONS «OIL AND GAS PRODUCTION – EQUIPMENT AND TECHNOLOGIES, PRODUCTION GATHERING AND PROCESSING»**

| 187734 | Application of “Big Data” Tools for Unstructured Data Analysis to Improve ESP Operation Efficiency | N. Sarapulo, Gazpromneft STC |
| 187735 | Monetalization of Oil-Dissolved Gas of Oil-Gas Field in the High North of Tyumen Region and Verkhovansk Region | M. Serachin, Tyumen Petroleum Research Center |
| 187736 | Development and Results of Implementation of Novel Dual Completion Technology, and New Methods of Evaluation of a Wells Layers During Dual Completion | A. Issaq, R. Takhaudkhin; V. Malikhin, A. Sharifullin, Sheshmaoil |
| 187737 | Study of Suppression of Gas Bubbles Coalescence in the Liquid for Use in Technologies of Oil Production and Associated Gas Utilization | A. Drozdov, Gubkin Russian State University of Oil and Gas; N. Drozdov; N. Burkin, V. Kozlov, Innovative Oil Solutions |
| 187739 | Optimization of ESP Power Consumption with Permanent Magnet and High Voltage Motors | R. Mukaw, Schlumberger |
| 187740 | Oil Production Control in Water-Oil Reservoirs: Two-Phase Stratified Flow and Vertical Wells | V. Domrachev, Yu. Perepichkin, A. Maranov, Baker Hughes, Novosibirsk Technology Center; K. Sorokin, IGM SB RAS |
| 187741 | Integrated Real-Time Pressure Monitoring Enabled the Success of Drilling A HTHP Offshore Well – a Casing Study in Lebeding, Asia of South China Sea | P. Liu, Schlumberger; J. Cai, China National Offshore Oil Corporation |

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The programme is relevant as of May 12, 2017. All authors’ names, companies’ and paper titles are listed as submitted to SPE.
KNOWLEDGE SHARING
EPOSTER PRESENTATIONS

KNOWLEDGE SHARING EPOSTER PRESENTATIONS «WELL AND FORMATION TESTING. FORMATION FLUIDS SAMPLING AND EVALUATION»

187758 Sonic Logging – a Path to Ideal Hydraulic Stimulation of Achimov Formation
D. Metelkin, A. Snokhin, I. Tkhenimov, Rospan International; A. Brenev, E. Karapkin, Schlumberger

187759 Applications of Wireline Formation Testers for Through-Casing Reservoir Classification
V. Bilous, P. Weinbeber, I. Shmykhim, Schlumberger; R. Salfin, Gazprom geologorazvedka

187760 Permeability Anisotropy in the Thirty-Bedded Polkurskaya from Advanced Wireline Logs and Formation Testers
A. Tkilikov, Schlumberger; M. Martynov, Mesoyakhaneftegaz

187761 Adaptive System for Data Analysis and Interpretation of Combined Well Test.
V. Sergeev, T. Nguyen, A. Krainov, Tomsk Polytechnic University

187762 Interpretation of Indicator Studies of Multistage Fracturing
A. Mazo, M. Khamidullin, K. Potashev, Kazan Federal University; S. Sattarov, T. Trifonov, NMRSIG

187763 Estimation of Reservoir Pressure from the Sensor Data during Injection Tests in Low-Permeability Formations
Yu. Bobreneva, N. Makota, A. Davletbaev, RN-UfaNipinft

187764 Wireline Formation Testers Technologies Applications to Acquire Representative Formation Water Samples for Mineralization Analysis
V. Bilous, P. Weinbeber, Schlumberger, V. Khoshlatiara, Gazprom geologorazvedka

187765 Novel Approach to Data Analysis of Pressure Transient Testing in Fractured Carbonate Reservoir Anagagar Field Case
T. Kulagina, E. Karpov, Schlumberger, B. Vakocha, M. Amagambetov, Almex Plus

187766 Prediction Well Performance in Tight Oil Reservoirs with Complex Geometry Fractures with Well Test Analysis
E. Gritshina, Gubkin Russian State University of Oil and Gas; M. Kremenetsky, R. Morozovsky, Gazpromneft STC

KNOWLEDGE SHARING EPOSTER PRESENTATIONS «FIELD DEVELOPMENT MANAGEMENT AND MONITORING»

187785 Search and Argumentation of Decisions Aimed at Increasing the Efficiency of Bottom-Hole Zone Stimulation in Oil Accumulations with Challenged Reserves
V. Mushakezhin, Ufa State Petroleum Technological University; V. Andreev, The Institute of Oil Technology and New Materials of Bashkirian Republic

187786 System and Tools of Waterflooding Management in Gazprom Neft PSC
A. Margarit, A. Pustovskikh, Gazpromneft STC

187787 First in Russia Water Injection Wells with Downhole Distributed Temperature Sensor Combined with 4 Pressure Sensors
N. Viskuln, D. Khramov, Schlumberger; E. Taraskin, LUKOIL

187788 Possibilities of Microseismic Monitoring Technology for Control and Optimization of Hydrocarbon Reservoir Development the Case of Eastern Kazakhstani Oilfields
E. Anokhina, L. Zhiryagina, E. Ermolin, V. Strokov, E. Demidova, M. Kozlov, Immortal Hart Baltic Federal University

187789 Improving the Efficiency of Development Management by Optimizing Bottom-Hole Pressures in the Wells of the Field
V. Soitanov, I. Bobob, GeoExpert Service; B. Gamev, R. Khalimov, Tantalift

187790 A Calculation Tool to Achieve the Basic Production Potential
I. Zhidanov, A. Margarit, Ts. Andzhulaliev, Gazpromneft STC

187791 Oil Production Enhancement Operations Recommendations by Well-Testing and Decline Analysis
D. Lazutkin, Gubkin Russian State University of Oil and Gas

187792 Active Technologies of Production-Logging and Well-Testing in Injection Wells with Unstable Fractures
Kh. Musaleev, Gubkin Russian State University of Oil and Gas

KNOWLEDGE SHARING EPOSTER PRESENTATIONS «GEOMECHANICS»

187729 Application of 3D Geomechanical Modelling to Optimize Drilling and Completion on Active Exploration Drilling Phase
E. Konikov, V. Pavylov, D. Malisov, Z. Zinoviev, S. Strakhov, Schlumberger; M. Loginov, Gazprom geologorazvedka

187730 Application of 3D and Near-Wellbore Geomechanical Models for Well Trajectories Optimization

187731 Geomechanically Driven Approach to Drilling since the Early Stages of Field Development in the North Caspian
A. Oshtyarenko, R. Golubov, L. Sadaykov, Schlumberger; V. Zvyagin, A. Kim, LUKOIL-Nizhnevолжскнефт

187732 Geomechanics Modeling for the Steep Regima and Shlues Orientation Identification in the Example of One Field, Sakhalin Island
G. Grachev, Schlumberger

187733 Experience of 3D Geomechanical Modeling During the First Horizontal Well Construction at the Productive Formation J10 of the Tortasinskoe Oil Field
O. Ovcharenko, I. Bazyrov, O. Kalinin, S. Zhigulsky, I. Chibyshkov, A. Sidikhov, Gazpromneft STC

187734 Influence of the Elastic Moduli Contrast on the Height Growth of a Hydraulic Fracture
A. Galimshakov, Halliburton

187735 Mohr-Coulomb Failure Criterion under Cyclic Loading
A. Skripkin, TomskNipinft

187736 Development of 3D Geomechanical Model Case Study from One Off-Shore Sakhalin Field
A. Enzhov, A. Popova, A. Eydzin, GeoGrid Center

The programme is relevant as of May 12, 2017. All authors’ names, companies’ and paper titles are listed as submitted to SPE.
### KNOWLEDGE SHARING EPOSTER PRESENTATIONS «BROWNFIELDS»

| 187843 | Design of WAG Parameters | A. Shevelev, Tyumen State University; A. Valeyev, LUKOIL-Western Siberia |
| 187844 | Foam Acid Treatment - the Key to Stimulation of Carbonate Reservoirs in Depleted Oil Fields of the Samara Region | A. Latiatov, N. Nikitin, A. Parfenov, V. Malarenko, L. Lavrov, Samarenneftegaz; B. Bukin, O. Osypyanov, Schlumberger |
| 187845 | An Innovative EOR Method for the Target of 70% Recovery Factor - Graded Drainage-Flooding Technology and Verification by 3D Physical Modeling and Pilot Test | X. Wu, CNPC |
| 187846 | Reservoir Surveillance Informative Value on Brown Field | D. Gulyaev, I. Bogatyreva, N. Metelkina, R. Mustafin, BashNPPriil |
| 187847 | Enhanced Oil Recovery Using Carbon Dioxide Injection | A. Samnov, SamaranPPriil |
| 187849 | High-Pressure Air Injection Modelling in Bazhenov Source Rocks: History Matching of Laboratory Experiments and Modelling of Basic Scenarios | L. Khakimova, T. Bondarenko, A. Askarova, A. Cheremisin, A. Myasnikov, Stekfriz |

### KNOWLEDGE SHARING EPOSTER PRESENTATIONS «GAS, GAS CONDENSATE AND OIL GAS CONDENSATE FIELD DEVELOPMENT»

| 187863 | Assessment of Drained Gas Reserves in the Process of Gas and Gas Condensate Field Operation in Water Drive | D. Glumov, S. Sokolov, Tyumen Petroleum Research Center, A. Shetkov, Tyumen Industrial University |
| 187864 | System Approach to Gas Well Pattern Justification under High Geological Uncertainty | L. Kadizhikrova, A. Yakov, R. Ramazanov, I. Martynov, NOVATEK-STC |
| 187865 | Methods to Improve the Efficiency of Development of a Multi-Layer Offshore Gas Condensate Field: Thien Ung Case Study | A. Lubin, E. Yudin, Zarubezhneft |
| 187866 | An Additional Method Gas Field Development Control | E. Chekamrosa, V. Siloy, Gazprom dobycha Noyabrsk |
| 187867 | Comprehensive Selection of Reagents and Technologies for Water Shut Off in Gas Producers | G. Dubroks, V. Andreev, K. Fedinov; Institute of Strategic Research of the Republic of Bashkortostan |
| 187868 | Perspective View on Gas Well Stimulations in Case of Complex Carbonate Reservoir | A. Zhukov, A. Ermlov, I. Volnov, LUKOIL Uzbekistan Operating Company; R. Siddikhodzhaev, Ministry of Economy of the Republic of Uzbekistan |
| 187870 | The Research of Liquid Surface - Active Substance in Solution the Problem of «Sil-Kil» Gas and Gas Condensate Wells | A. Yushkov, V. Ogai, A. Khabsbulin, Tyumen Industrial University |

### KNOWLEDGE SHARING EPOSTER PRESENTATIONS «CORE ANALYSIS»

| 187883 | New Take on Mechanical Core Testing Methods and Results Interpretation for Geomechanical Rock Properties Evaluation | A. Zinurov, D. Makimov, A. Samoshkalov, A. Kostina, E. Kirelevsky, S. Shalnov, Schlumberger |
| 187884 | Laboratory Technique for Reservoir Properties Determination of Ultralow Permeability Samples of the Bazhenov Formation on Crushed Core | A. Gonikov, V. Varanos, Tomsk Polytechnic University; A. Skripkin, Tomsk NPPriil |
| 187885 | Automatic Rock Type Classification and Grains Clustering in Petrography Thin Sections Combining Image Processing and Machine Learning Approaches | S. Buderny, A. Pachezheters; D. Mitrshnik, A. Enefue, MPT Center for Engineering and Technology; B. Balzocev, Gazpromneft STC |
| 187887 | Experimental Study of Residual Oil Mobilization in Waterflooding | S. Maksimov, LUKOIL-Engineering PNPriil; N. Mikhaylov, Gubkin Russian State University of Oil and Gas |
| 187888 | New Features of the Experiment to Determine Lateral Anisotropy Filtration and Capacity Properties | S. Sutjubaly, M. Kravchenko, V. Kadi, Gubkin Russian State University of Oil and Gas; A. Bogdanov, Gazpromneft VNIP Gaz |
| 187889 | Determination Techniques of Archie’s Parameters, α, m and n and its Relevant Impact on Water Saturation Values in Sandstones and Carbonate Core Samples | A. Mihram, G. Hamada, A. Salim, Universiti Teknologi Petronas |

### KNOWLEDGE SHARING EPOSTER PRESENTATIONS «FIELD GEOLOGY AND GEOPHYSICS»

| 187898 | The Prediction and Application of Sandstone Reservoirs with Coal-Bearing Zone in South Turgay Basin, Kazakhstan | X. Sheng, Y. Lin, RIPED, CNPC |

### KNOWLEDGE SHARING EPOSTER PRESENTATIONS «WELL LOGGING»

| 187906 | Novel Formation Evaluation Techniques for the Berezovskaya Bio-Siliceous Gas-Shale of Western Siberia | E. Zarei, Tyumen Petroleum Research Center; A. Filimonov, Schlumberger |
| 187907 | A Quantitative Assessment Method of the Productive Formation Wellbore Integrity Indicator According to the Data of Geophysical Surveys | R. Akmatov, A. Andreev; Branch of Ufa State Petroleum Technological University in the City Oktyabrsky; V. Mashateinim, Ufa State Petroleum Technological University |
| 187908 | Increasing the Reliability of the Quantitative Interpretation of Nuclear Magnetic Resonance Method for Evaluation of Secondary Porosity Reservoirs of Uvinskampy and Gnebinsky Horizons on R. Trebs Oilfield | K. Shumats, O. Gribunka, E. Galanina, BashNPPriil; D. Norsid, Lomonorov MSU, Geography Faculty; D. Kuchumov, Bashneft-POLUS |
| 187909 | Identification of Infills in Low-Rate Horizontal Wells by Spectral Noise Logging | V. Pimantiev, TGT Oilfield Services Russia; A. Kuznetsov, VNI-KrasnoyarnosNPriil; A. Kolotov, SamaraNPriil; KrasnoyarskNPPriil |
| 187910 | Determination of Oil/Water Contact While Drilling by Interpreting Data from the Azimuthal Deep Resistivity Tool under Conditions of Uncertainty Associated with the Measurements of Incitation | P. Grechko, R. Kuz, Balibo, Halliburton |
| 187911 | Novel Approach for Evaluation of Petrophysical Parameters from Time-Lapse Induction Logging-While-Drilling Measurements in Deviated and Horizontal Wells | M. Probridhary, S. Pukhikin, Salym Petroleum Development; A. Malinov, Baker Hughes |
Design of WAG Parameters  
A. Shevelev, Tyumen State University; A. Valeev, LUKOIL-Western Siberia

Foam Acid Treatment - the Key to Stimulation of Carbonate Reservoirs in Deplated Oil Fields of the Samara Region  
A. Latishichev, A. Nikitin, A. Parfenov, V. Makarenko, I. Ivanov, Samaraneftegaz; B. Bukan, O. Oseyanne, Schlumberger

An Innovative EOR Method for the Target of 70% Recovery Factor - Graduated Direction-Flooding Technology and Verification by 3D Physical Modeling and Pilot Test  
X. Wu, CNPC

Reservoir Surveillance Inforamctive Value on Brown Field  
D. Gulyaev, I. Bogatyreva, N. Metelin, R. Mustafin, BashNIPIneft

Enhanced Oil Recovery Using Carbon Dioxide Injection  
A. Samar, SamarNIPIneft

Mechanism Study on Foam Flooding for Deep Reservoirs after Polymer Flooding  

High-Pressure Air Injection Modelling in Bazhenov Source Rocks: History Matching of Laboratory Experiments and Modelling of Basic Scenarios  
L. Khakimova, T. Bondarenko, A. Aiskarova, A. Cheremisin, A. Myasnikov, BashNIPIneft

Optimizing Oil Field Development Plan Using Values of Information (VDI) Approach  
A. Vasheenkov, M. Mityaev, R. Asmanlyanov, A. Oregov, Sh. Yogamatov, A. Solykh, A. Goncharov, Gazpromneft STC

Assessment of Drained Gas Reserves in the Process of Gas and Gas Condensate Field Operation in Water Drive  
D. Glumov, S. Sletoev, Tyumen Petroleum Research Center; A. Sletoev, Tyumen Industrial University

System Approach to Gas Well Pattern Justification under High Geological Uncertainty  
L. Katsenchikova, A. Yalovik, R. Ramazanov, I. Martynov, NOVATEK STC

Methods to Improve the Efficiency of Development of a Multi-Layer Offshore Gas Condensate Field: Thin Ung Case Study  
A. Lubtin, E. Yudin, Zarubin Neft

An Additional Method Gas Field Development Control  
E. Chupinaova, V. Silas, Gazpromdobycha Noyabrsk

Comprehensive Selection of Reagents and Technologies for Water Shut Off in Gas Producers  
G. Dubovsky, V. Andreev, K. Fedorov, Institute of Strategic Research of the Republic of Bashkortostan

Perspective View on Gas Well Stimulations in Case of Complex Carbonate Reservoir  
A. Zhulov, A. Emrlov, I. Volnov, LUKOIL Uzbekistan Operating Company; R. Siddikhodzhaev, Ministry of Economy of the Republic of Uzbekistan

Impact of Drain Length on Well Performance in Karachaganak Field  
T. Naurogaliyev, G. Mutazieyev, KPO b.v.

The Research of Liquid Surface-Active Substance in Solution the Problem of «Self-Kill» Gas and Gas Condensate Wells  
A. Yushkov, V. Ogai, A. Khalbaullin, Tyumen Industrial University

New Take on Mechanical Core Testing Methods and Results Interpretation for Geomechanical Rock Properties Evaluation  
A. Zinovoi, D. Maksimov, A. Samishkhvalov, A. Kostina, E. Kolesnikiy, S. Strakhov, Schlumberger

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Investigation of Relationships of Geomechanical Properties of Layered Rocks Depending on Hydrostatic Pressure  
M. Aike, I. Izagtromov, M. Baburova, Z. Isмагилова, Almetyevsk State Oil Institute; A. Lutsufin, Talim

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Experience in Predicting Reservoir Properties, Taking into Account Sedimentation-Heterogeneity and Secondary Transformations for Carbonate Rocks in the Example of the R. Trebs and A. Titov Fields  
A. Dushin, G. Gamalutdinova, F. Makhlova, BashNIPIneft

Uncertainty Estimation Methodology of Structure Model from Seismic Data in Appraisal Exploration, Case Study, Azer-Chirag-Guneshli Field  
Yu. Dyakonova, D. Machukaev, Rosar Services; A. Sultanov, SOCAR Upstream Management International

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M. Podberesnyy, S. Polzhikin, Salym Petroleum Development; A. Malanov, Baker Hughes

The programme is relevant as of May 12, 2017. All authors’ names, companies’ and paper titles are listed as submitted to SPE.
The course covers the basic principles and fundamentals of geomechanics, including theory and practice skills:

- Understanding the origin of stresses in the geological settings as well as how well logs and measurements can help in assessing the in-situ stress conditions.
- Data requirements for geomechanical modelling.
- Overpressure mechanisms, methodology and tools for pore pressure calculation and forecast.
- Rock mechanical properties – how to measure and calculate, evaluate uncertainties for in-situ stress calculation.
- Wellbore instability issues, methods for calculation and forecast.

The course is designed in such a way that, after the theoretical part students could implement gained knowledge in practice when building Geomechanical Earth Model for purposes and tasks arising at different stages of oilfield life cycle. The emphasis is on calculation of static elastic and strength properties, pressures and stresses, analyzing wellbore stability and sensitivity to input parameters, forecasting of safe mud window for a planned well trajectory.

The course also includes an introduction to reservoir geomechanics. The influence of field development (changes in pressure and temperatures) on the stress state will be considered, which in turn can lead to undesirable effects and risks in drilling and completion of wells, formation stimulation (fracturing, injection and flooding), production decline and to early water breaking through.

At the end of the course students will get an idea of what geomechanics is for and learn some practice aspects of its implementation:

- Plan well logging and core sampling programs required for geomechanics modelling.
- Use standard and special logs, well and core measurements for calculation of pore pressure and in-situ stresses, wellbore stability and sensitivity analysis for vertical, deviated and horizontal wells.
- Analyze and interpret well micro-scanners ( imagers), acoustic anisotropy, borehole measurements and well tests for the purpose of geomechanical parameters calculation and model calibration.
- Read and understand the meaning of wellbore stability and sensitivity plots, carry out basic calculation for drilling and fracturing optimization purposes.

Participants must bring a laptop to perform tests and if it is possible have a minimum set of data for geomechanical calculations.

Ruslan Melikov is experienced engineer in G&G and Geomechanics for Oil&Gas industry (40+ projects in experience portfolio), based in Russia. His oil and gas expertise includes quantitative seismic interpretation, shallow hazards assessment, structural modelling, seismic facies and attribute analysis including potential reservoir pay zone forecast and its properties, risks and uncertainty assessment. Since 2011 he joined Geomechanics Team as geomechanics-engineer for consulting projects worldwide - responsible in providing solutions to reduce drilling/completion risk, to optimize well placement, reservoir performance, and to assess geomechanics related risk in reservoir management, such as borehole collapse, completion damage, sand production issues, faults/fractures reactivation, cap rock integrity and top surface subsidence/uplift.
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TRAINING COURSES

19–21 OCTOBER 2017,
MOSCOW
TRAINING COURSE
«DRILLING EXTENDED
REACH WELL»

WHO SHOULD
ATTEND

Drilling and completion managers and engineers, field supervisors from service and operating companies. Also the course will be beneficial for geologists, geoscientists, and reservoir engineers for expanding drilling knowledge.

COURSE OUTLINE

- Purpose of ERD wells; particularities and potential difficulties while drilling and designing ERD wells.
- Geotechnics for designing and drilling of ERD wells, borehole stability. Swab and Surge.
- Directional drilling, mathematical methods of well trajectory calculation. Wells anti-collision.
- Drilling bottom hole assembly (BHA)s used for ERD wells, rotary steerable systems (RSS). Drilling string failure modes, torque and drag, buckling, vibrations.
- Effective hole cleaning, drilling fluid selection. Equivalent circulation density (ECD). Tripping practices for ERD wells.
- Casing running, running floated casing. Cementing ERD wells.
- Well control while drilling and completing ERD wells.
- Surface equipment, top drive (TDS), casing running systems.
- Completion of ERD wells: smart wells, inflow control devices (ICD), sand-control.
- Logging of ERD wells, well tractor.
- Drilling ERD wells offshore: offshore logistics and drilling waste disposal.

INSTRUCTOR

Kirill Bogachev
Offshore Drilling and Completion Supervisor, Sakhalin Energy

Kirill graduated from Gubkin University of Oil and Gas in 2005, then continued his education in Texas A&M University, where he got master’s degree in Petroleum Engineering. While studying Kirill worked as a research assistant in Petroleum department. After graduation Kirill worked for BP America as a completion engineer in unconventional gas fields (tight gas, shale gas, coal-bed methane). Since 2010 Kirill has been working as offshore drilling and completion supervisor at Sakhalin Energy (Gazprom-Shell JV). Kirill got exposure and experience drilling and completion high-rate offshore oil and gas wells including ERD wells with measured depth up to 8000 m. Kirill routinely worked with MWD, LWD, smart wells, big-bore gas wells (tubing OD – 244 mm – 9 5/8 in), hundreds of meter TCP guns, frac pack, etc.

Kirill has all Russian and international certificates for offshore drilling, including Shell Round 2 in Drilling and Completion/Well Intervention

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Training Courses

19–21 October 2017, Moscow

Training Course
“Drilling Extended Reach Well”

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REGISTRATION

Registration for conference delegates is open till October 2 and is obligatory for all attendees. Depending on your purpose and objectives attend one or three days of the conference and benefit from technical presentations.

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TRAINING-COURSES**

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| 19–20 October| **TOPIC:** Practical Uses of Geomechanics Modeling for Drilling, Production and Development Optimization.  
INSTRUCTOR: Ruslan Melikov, General Manager of Geomechanics, Rosneft | 39 300                       |
|              |                                                                                  | 42 300                       |
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Sokolniki metro station

TRAVEL—GETTING TO MOSCOW

There are three international airports in and around Moscow:

• Sheremetyevo Airport is located to the north of the city and the one-way trip from the airport will take you about an hour.

• Domodedovo Airport is situated 22 km to the south of Moscow. You will reach the venue from the airport by car in about one and a half hour.

• Vnukovo Airport is located to the southwest of the city and the trip from the airport will take you about an hour and twenty minutes.

Moscow is a busy city so the trip from the airport to the venue can take different time depending on the road traffic. We recommend you to book a car beforehand and make sure you get your time right. You can also reach the venue by aeroexpress train. The journey takes approximately 35–40 minutes. Check the website for more information [https://aeroexpress.ru/en](https://aeroexpress.ru/en).

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* Please note that the price does not include accommodation or any other travel services.

TRAINING-COURSES**

To register for training course please mark appropriate field while registering for the conference.

<table>
<thead>
<tr>
<th>DATE</th>
<th>TRAINING-COURSE</th>
<th>Price*, RUB, incl. VAT (18%)</th>
<th>SPE member</th>
<th>non SPE member</th>
</tr>
</thead>
<tbody>
<tr>
<td>19–20 October</td>
<td>TOPIC: Practical Uses of Geomechanics Modeling for Drilling, Production and Development Optimization, INSTRUCTOR: Ruslan Melikov, General Manager of Geomechanics, Rosneft</td>
<td>39 300</td>
<td>42 300</td>
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</tr>
<tr>
<td>19–21 October</td>
<td>TOPIC: ERD Wells Construction, INSTRUCTOR: Kirill Bogachev, Offshore Drilling and Completion Supervisor, Sakhalin Energy</td>
<td>49 500</td>
<td>52 500</td>
<td></td>
</tr>
</tbody>
</table>

** SPE reserves the right to cancel training course if the number of registered participants will be under the minimum.

HOW TO REGISTER

To register for the SPE Russian Petroleum Technology Conference please download the registration form at [http://www.spe.org/events/en/2017/conference/17rptc/registration.html](http://www.spe.org/events/en/2017/conference/17rptc/registration.html), fill it in and email to [RussianReg@spe.org](mailto:RussianReg@spe.org). You will receive an email from an event coordinator with all necessary details within 72 hours. If you haven’t received an email, please, contact us by phone +7 (495) 268-04-54.

INFORMATION FOR DELEGATES

- Preliminary registration and full payment are required to attend the SPE Russian Petroleum Technology Conference.
- For cancellations received before 22 September 2017 a refund of 80% will be made.
- For cancellations received on and after 22 September 2017 no refunds will be made.
- If participant does not attend the conference, no refunds will be made.
- Substitutions are accepted until 6 October 2017. To replace a delegate, please email us at [RussianReg@spe.org](mailto:RussianReg@spe.org) with a new delegate registration form and with the name of the person to be replaced.
- Cancellations must be emailed at [RussianReg@spe.org](mailto:RussianReg@spe.org).

Hotel
Holiday Inn Sokolniki
24 Russakovskaya St.,
Moscow, Russia
Sokolniki metro station

There are three international airports in and around Moscow:
- Sheremetyevo Airport is located to the north of the city and the one-way trip from the airport will take you about an hour.
- Domodedovo Airport is situated 22 km to the south of Moscow. You will reach the venue from the airport by car in about one and a half hour.
- Vnukovo Airport is located to the southwest of the city and the trip from the airport will take you about an hour and twenty minutes.

Moscow is a busy city so the trip from the airport to the venue can take different time depending on the road traffic. We recommend you to book a car beforehand and make sure you get your time right. You can also reach the venue by aeroexpress train. The journey takes approximately 35–40 minutes. Check the website for more information [https://aeroexpress.ru/en](https://aeroexpress.ru/en).
TRAVEL AND ACCOMMODATION

Special rates for the conference attendees are provided by the following hotels:

Sokolniki metro station, 24 Rusakovskaya str., Moscow

<table>
<thead>
<tr>
<th>ROOM CATEGORY</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Standard Single*</td>
<td>5100 RUB</td>
</tr>
<tr>
<td>Standard Double*</td>
<td>5600 RUB</td>
</tr>
</tbody>
</table>

*Sokolniki, Krasnoselskaya metro stations, 13 building, 5 Rusakovskaya str, Moscow

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</tr>
</thead>
<tbody>
<tr>
<td>Standard SDB/STB</td>
<td>Single /Double</td>
<td>6500 / 7500 RUB**</td>
</tr>
<tr>
<td>Business SBUS</td>
<td></td>
<td>8000 / 9000 RUB**</td>
</tr>
<tr>
<td>Studio STUD</td>
<td></td>
<td>9000 / 10000 RUB</td>
</tr>
</tbody>
</table>

**The price is valid if rooms are available. All the prices include breakfast and 18% VAT.

VISA SUPPORT

• We strongly advise you to apply for your visa reasonably in advance to ensure it is received in time for your trip. Please make sure that you have all the needed information before applying for visa.
• Visa support will be provided by the hotel you have chosen for accommodation. If you cancel your booking after delivered visa services you will be charged a penalty.

For more information about accommodation, transportation and visa services please visit: http://www.spe.org/events/en/2017/conference/17rptc/accomodation.html

SUPPORTING MEDIA AND ASSOCIATIONS
TRAVEL AND ACCOMMODATION

Special rates for the conference attendees are provided by the following hotels:

HOTEL
HOLIDAY INN
SOKOLNIKI
★★★★

Sokolniki metro station, 24 Rusakovskaya str., Moscow

<table>
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</table>

*The price is valid till October 2, 2017. All the prices include breakfast and 18% VAT.

HOTEL
BORODINO
★★★★

Sokolniki, Krasnoselskaya metro stations, 13 building. 5 Rusakovskaya str, Moscow

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2017 EVENTS

• SPE Workshop: Horizontal, Multilateral and ERD Wells Drilling and Completion
  19-21 September 2017 | Moscow, Russia

• SPE Russian Petroleum Technology Conference
  16-18 October 2017 | Moscow, Russia
  Registration is Open
  www.spe.org/go/en-17rptc
  Contact Mariya Berezinskaya: mberezinskaya@spe.org

• SPE Workshop: Mature Field Redevelopments
  21-22 November 2017 | Moscow, Russia

2018 EVENTS

• SPE Workshop: Enchanced Oil Recovery
  6-7 February 2018 | Moscow, Russia

• SPE/EAGE Joint Workshop on Static and Dynamic Modeling
  20-22 March 2018 | Moscow, Russia

• SPE Workshop: Petrophysics XXI
  5-7 June 2018 | Saint-Petersburg, Russia

• SPE Workshop: Hydraulic Fracturing in Russia: Experience and Future Perspectives
  18-20 September 2018 | Moscow, Russia

• SPE Russian Petroleum Technology Conference
  October 2018 | Moscow, Russia
  Contact Mariya Berezinskaya: mberezinskaya@spe.org

• SPE Workshop: Horizional Well Surveys
  20-21 November 2018 | Moscow, Russia

The Workshop technical programmes will be available on the SPE website rca.spe.org 2-3 months before the workshop and distributed among companies. Should you have any questions please contact Ulyana Dmitrieva (udmitrieva@spe.org), Antonina Kozmina (akozmina@spe.org), or Irina Merkul (imerkul@spe.org), tel. +7.495.268.04.54.

View the complete list of SPE Regional Events at http://www.rca.spe.org/events/events-russia.