The commissioning of new fields, known as greenfields always attracts the attention of management, technology partners and news agencies. For example, today the Bazhenov formation development has received much attention and become a very popular topic. At the same time, geologists and engineers spend most of their time to sustain the production from the fields with a high water cut and significant remaining oil reserves. Brownfields development efficiency enhancement masks the potential of maintaining oil production in Russia.

We are going to draw your attention to the development and application of technologies for remaining oil recovery. It has been often said from the lofty tribunes that Russian fields have relatively low oil recovery ratio (ORR), less than 40% and hardly reach this rate in practice. At the workshop, we are planning to discuss recovery enhancement best practices and case studies. Remaining reserves have great potential: about 75% of them are technically recoverable but unprofitable. It is necessary to direct the efforts to find a solution to this problem, which can ensure a significant increase in recoverable reserves on the current basis, in regions characterized by extensive infrastructure and operating companies’ presence.

We are also planning to:

- Identify the gap between companies’ business plans and technical limits
- Discuss what can reduce this gap: oil recovery enhancement or a new well design
- Decide if it is possible to achieve a technical limit in the cumulative production

Audience

- Production Engineers
- Reservoir Engineers (hydrodynamic modelling, waterflood system optimization, etc.)
- Drilling Engineers
- Managers
- Executives, etc.

Present your paper

Submit your your topic before 5 November 2019.

Send your abstract proposals to Antonina Kozmina at: akozmina@spe.org.

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Session 1. Searching for and Localization of Residual Oil Reserves

Searching for and localization of residual oil reserves is one of the main tasks of managing mature oil fields development. Understanding the structure and distribution of residual oil reserves in watered or partially depleted formations allows us to make optimal decisions for drilling wells and sidetracks with aim of a more complete oil reserves extraction, as well as the application of enhancement oil recovery methods.

Currently, the main way to localize residual oil reserves is still hydrodynamic modeling, which involves combining geomodelling and methods of production geophysics measurements, and, of course, a history matching of oil fields development. Unfortunately, now, with the exception of 4D seismic, there are no reliable “direct” geophysical methods for “scanning” formations in the interwell space to monitor the development of oil fields and find out “oil pockets”.

At this session, it is supposed to discuss the best practices of residual oil reserves localization, including those based on hydrodynamic modelling, existing and perspective technologies of production geophysics measurement and wells testing methods aimed at improving the reliability of assessing the structure of residual reserves, as well as the prospects for the development of “scanning” technologies interwell space to identify areas with undeveloped oil reserves.

Session 2. Technology Selection by Type of Remaining Oil in Place

Activation of a mature field development through emerging technologies is an important tool, which helps oil and gas companies to achieve their strategic goals. Large brownfields with the entire infrastructure in place are the perfect choice for new technologies implementation. It allows to prolong field depletion period and to increase additional reserves.

Recent advances in technologies made it possible to find mechanisms for low-permeable and ultra-low permeable reservoirs development and as a result increase economic efficiency.

Modern production well logging technologies help localize deposits in the subsurface and provide precise horizontal wells targeting. Researches of elastic-mechanical and geochemical properties of reservoirs open the way to unconventional reservoir development.

Today new technologies allow oil and gas companies to bring hard-to-recover reserves into development and enter new oil and gas regions, increase operational efficiency, and maintain sustainability under changing pricing conditions and access resources in exchange for technological competencies.

There are many examples of fields showing production growth at the third and fourth stages of field life. It can be done only with system approach to technology adjustment and implementation, taking into account geological structure and type of remaining oil in place. Thorough dividing of deposits by reserves recovery issues and factor of decrease production potential is required. This helps to develop system approach for focused technologies for hard-to-recover reserves and unconventional reservoir. The deposits grouping may result in spreading efficient technologies, which result in productions costs saving, optimize recovery drive and achieve max oil recovery rate and max production level.

Session 3. Waterflood Management

One of the basic issues of field development’ maximizing efficiency and mature fields profitability prolongation is optimization of waterflooding. Waterflooding optimization is a set of technological actions based on analysis of production and injection wells operation at the wells, grids and bigger blocks, description of the waterflooding behavior adjusted to geological concept of reservoir structure and remaining recoverable reserves localization out of waterflood area. Quality of the analysis depends on the availability of sufficient quantity of data, received during drilling, well monitoring, as well as understanding of the structure and deposits characteristics in general. Engineering and geological surveys result in integration of gathered data and forming action plan to optimize waterflooding.

In this session, we will discuss the basic issues of depleted fields development and exploitation, modern and perspective methods of conformance increase by waterflooding and development management. Delegates will have an opportunity to share their experience, to see case studies and approaches in waterflooding optimization, efficiency estimation in different companies, discuss economic viability of these fields.

Session 4. Integrated Approach: Best Practices and Lessons Learnt in Brownfield Development

Fields are not getting better during development: crude oil quality decreases, extraction is declining. Field depletion and traditional reserve determination necessitate new technologies search and implementation, which could increase income of operating companies.

Integrated approach to planning is required for revitalization of mature asset via system approach, considering mutual influence and integration of downhole (formation), technological (well) and surface (infrastructure) parts of the asset.

One of the instruments to solve this issue is integrated geological technical model “formation-well-infrastructure” which tracks dynamic interaction of reservoir characteristics, downhole equipment and surface facilities as a single system.

Balanced approach is crucial for brownfields. It should be based on a careful analysis of targeted and long-term well intervention, production and injection with due regard to additional formation appraisal of the field and neighboring license blocks.

Systematic approach to mature fields reengineering processes should be embraced in advance, before production rates go down, Reengineering should then be done on an annual basis to include the analysis and reconstruction of facilities depending on prospective production.

This session allows companies to share their experience and work results in this area.

POSTER SESSION

SPE will hold a Poster Session during the Workshop. The posters will give you further opportunities to share your ideas and technologies with the audience. The Programme Committee encourages attendance from those who can effect visually either in discussions.

If you wish to participate in the Poster Session please contact Antonina Kozmina at akozmina@spe.org.
Registration

Rates (including VAT)

<table>
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<tr>
<th>Category</th>
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<td>SPE Members</td>
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<tr>
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</table>

Contact Information

All registration questions and queries please address to Ulyana Dmitrieva at udm@spe.org and Irina Merkul at imerkul@spe.org; Tel.: +7(495)268-04-54.

Learn more at go.spe.org/19atyu-en.

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General Information

Abstracts Submission

To participate please send your abstract to Antonina Kozmia at akozmina@spe.org before 5 November 2019.

Abstracts Requirements

The following information is required for each abstract:

- Title in Russian and English languages
- Session name
- Name of the author and the company they are representing
- Name of the author and the company they are representing
- Contact details, including phone number, address, e-mail address

The abstract should consist of 350 – 400 words, including the short description of:

- the paper’s aim
- the novelty
- possible ways of application
- technologies
- main results and conclusions

Your abstract will be reviewed by the Programme Committee to consider its acceptance for the Workshop Program.

Proceedings

Proceedings will not be published; therefore, formal papers and handouts are not expected from speakers. The presentations will be available only to Workshop participants.

Commercialism

Commercialism in posters or presentations will not be permitted. Companies’ logos must be placed only at the title presentation slide.