



Thirty Years of Innovative Thought and Accelerated Results

25–30 October 2009

Dorado Del Mar, Puerto Rico

Application  
Deadline:  
11 August  
2009

## Committee:

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Hesketh Streeter  
Wood Mackenzie

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# Operational and Technical Innovation for Field Rejuvenation

Published data suggest that approximately 80% of our oil and gas fields are characterized as mature or nearing depletion. While a relative handful of these fields have been abandoned, less than 20% have undergone significant rejuvenation once they have experienced significant decline after achieving the initial production plateau.

With many fields ranging from 20–50 years old and a 10- to 20-year gestation for broad acceptance of new technology, a field developed with and still using 30-year old technology is not that uncommon. Rejuvenation efforts in these fields could benefit through the application of subsurface separation and processing where water cut encroaches on existing transport capacity, smart well completion systems to improve reservoir management, and potentially from subsurface power generation. This forum will focus on the application of these systems and capabilities with an emphasis on their application in land and offshore fields experiencing advanced production decline, and the extension of technology developed for subsea applications to onshore applications.

The forum will particularly appeal to individuals who are responsible for, and have an interest in, the application field rejuvenation technology, and the planning and execution of revitalization projects.

## SPE Forums: Innovative Thought and Accelerated Results

SPE Forums offer an exclusive opportunity to discuss complex industry challenges with top technologists, innovators, and managers. The forums' limited size and intensive format maximize your opportunity to contribute. The objective is to stimulate thought, accelerate innovation, and inspire the development of new technology.

To create a cohesive group in which discussion is free flowing, only committee-selected applicants are invited to attend. Participants are encouraged to come prepared to contribute their experience and knowledge, not to be spectators or students.

If you have a role to play in meeting the challenges of tomorrow head-on, apply today. Participants will be selected based on their ability to contribute to the discussion and to represent their stakeholder group.

## How Participation Benefits You—and Your Organization

- Learn in days what would usually takes months—even years—of research to learn.
- Effectively focus on a topic that directly relates to your work.
- Gain insight and perspective through conversations with peers who share your same interests.
- Meet with other experts from international companies, research institutes, and universities in an off-the-record format.
- Form professional relationships that will continue after the forum has ended.

[www.spe.org/events/09flat](http://www.spe.org/events/09flat)



Society of Petroleum Engineers



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## Operational and Technical Innovation for Field Rejuvenation

These exciting topics will be discussed in an open setting designed for optimal input from all participants.

### The Ever-Changing Business Environment—Can We Deal With It?

**Session Leader:** Hesketh Streeter

- Continuous change in the rules of access, regulation, and risk and resulting economics is having a major impact on the business.
- Over the past several years, rising oil prices have to some degree resulted in more focus on exploration rather than field rejuvenation.
- Independents purchasing aging fields focused on reducing operational costs to allow economic production to continue.
- How do fluctuating non-technical risk and commodity prices influence the potential rate of return through field rejuvenation?
- Who and how do we drive the application of technology needed to spark field rejuvenation on a large scale?

### Rescue the Orphans

**Session Leader:** Graham Watson

- No matter how wells have been operated to produce hydrocarbons, there is always a relatively high percentage left in place, either due to drive bypass or irreducible saturation.
- This session should stimulate discussion on innovative techniques to recover more hydrocarbons.
  - Included techniques are
    - geomechanics
    - advanced well placement
    - multilateral completion designs

### Yellow Submarines?

**Session Leader:** Richard Barratt

- Do relocating processing and pressure management systems from topside to subsea improve recovery from mature fields?
- Subsea equipment such as pumps, valves, compressors, etc. could be powered with energy from the well stream.
- How do you handle subsea pressures?
- What do you do with the residuals? Is there a standard we need to use?

### Application Information

Participants at SPE Forums are selected by a steering committee on the basis of ability to contribute to the discussion of the topic. You can apply via the web, mail, or fax. You must apply by **11 August 2009** to be considered.

Online: [www.spe.org/events/09flat](http://www.spe.org/events/09flat)

Mail: SPE FORUM SERIES, PO Box 833836, Richardson, TX 75083-3836 USA

Fax: +1.972.952.9435

An electronic version of the printed application form is available for downloading and printing at [www.spe.org/events/09flat](http://www.spe.org/events/09flat). You may also contact SPE at +1.972.952.9393 or [service@spe.org](mailto:service@spe.org) to receive a printed registration form via mail, fax, or email.

Please obtain appropriate approvals from your supervisor PRIOR to applying to the forum. Include enough information about your experience and knowledge to enable the steering committee to evaluate your potential contribution to the forum.

### Down the Hole—Perpetual Motion

**Session Leader:** Hesketh Streeter

- What role does subsurface processing have in existing field rejuvenation efforts?
- This session will focus on subsurface processing and transfer of technology from subsea applications.
- Are down hole applications easier to implement in existing wells both offshore and onshore?
- There are obvious payload benefits in an offshore application but what have we learned from the technology that we can also economically apply on land?

### Can You Hear Me? Can You Feel Me?

**Session Leader:** Robert Lannom

- Utilizing advanced non-mechanical technologies can improve performance of water and gas drive reservoirs.
  - Items to consider include
    - water conformance and compatibility
    - injection performance and location
    - sweep efficiency
- How best can we use sound, light, heat, radiation, and chemical methods?

### Minimize the Unwanted!

**Session Leader:** Graham Watson

- Smart wells and so-called “dumb” smart wells provide a means to shut off un-wanted gas and/or water production at the reservoir.
- The application of smart completion systems has largely been isolated to new field development.
- What role do smart wells have in field rejuvenation and what makes them economically attractive?

### So How Are We Doing and How Do We Know?

**Session Leader:** Robert Lannom

- Reservoir optimization is the goal.
- Current technology—permanent gauges, fiber optics, flow meters, surface automation, temperature probes, etc.—provide data and information on the state of the reservoir.
- What do you do with your data?
- Can you use this data to improve your recovery?
- Why aren't you using this data?

### All Systems Go

**Session Leader:** Richard Barratt

- Each of the technologies discussed requires substantial consideration and design effort to achieve a thoroughly integrated system.
- The sum of the parts does not always add up to the whole.
- How will we integrate the critical interfaces?
- How does the final solution meet reliability, safety, intervention, and business objectives for field rejuvenation applications in the future?

If the committee approves your application, you will receive registration materials, including more detailed information on housing, transportation, and fees. If your application is placed on a waiting list, you will receive notification of that fact. After notification of acceptance, your registration form with payment must be returned by **10 September 2009** to ensure your place in the forum.

#### The forum fee is USD 2995 and includes

- Registration to attend all nine forum sessions
- Five nights of hotel accommodation based on single occupancy
- Monday evening reception and dinner
- Daily breakfast buffet
- Thursday farewell reception and dinner
- A.M. and P.M. coffee breaks throughout the duration of the forum

**Please note:** The base registration fee does not include accompanying persons. The registration fee is not transferable. Gratuity for exceptional services is discretionary. The full fixed fee is charged regardless of the length of time a registrant attends the forum. Attendees are expected to attend the entire forum.



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## The Forum Series Format

The SPE Forum Series provides nine alternate morning, afternoon, and evening sessions of scheduled and unscheduled presentations with maximum time available for informal discussions and exchange of experience. Presentations are generally limited to three or four slides. Breakout sessions for discussions are common. A short, written summary of major issues and consensus arising from the forum may be prepared and distributed to attendees after the forum at the discretion of the program committee and with appropriate SPE approval.

## Forum Guidelines

- Participants are expected to attend every session.
- Lengthy, formal presentations are discouraged to promote maximum discussion.
- SPE Forums are conducted off the record to support the free interchange of information and ideas.
- Written papers are prohibited, and extensive note taking is not allowed.
- Mechanical recording of any portion of the forum in any form (photographic, electronic, etc.) is prohibited.
- Information disclosed at a forum may not be used publicly without the originator's permission.
- Participants are requested to omit reference to forum proceedings in any subsequent published work or oral presentation.

## The 2009 SPE Forum Series Program

### 19–24 April

#### Overcoming Barriers to Deliver ERD Wells Beyond 15 km

Kota Kinabalu, Sabah, Malaysia

### 17–22 May

#### The Heavy Oil Challenge: Completion Design and Production Management

Tunisia, Africa

### 31 May–5 June

#### Artificial Intelligence in the E&P Industry: Future Opportunities for Better Decision Making

Colorado Springs, Colorado, USA

### 31 May–5 June

#### Maximizing Oil Recovery in the 21st Century

Colorado Springs, Colorado, USA

### 16–21 August

#### The Future of Stimulation in Tight Gas and Gas Shale

Kananaskis, Alberta, Canada

### 13–18 September

#### CO<sub>2</sub> Capture and Storage: Can the Oil and Gas Industry Support its Development and Deployment?

Cadiz, Spain

### 20–25 September

#### The Battle to Reduce Drilling NPT: Technology, Processes, and People

Cadiz, Spain

### 11–16 October

#### Getting to Robust Production Forecasts

Cadiz, Spain

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