INTRODUCTION

The SPE R&D Technical Section (RDTS) aims to facilitate R&D that addresses E&P industry needs, to provide mechanisms for R&D-related communication and collaboration, and to promote networking by creating an active community of R&D users and providers in the E&P sector. It is my pleasure to introduce you to the section’s second newsletter.

As a board, we are conscious of the wide geographical spread of the RDTS membership. Our 600+ members are spread across 53 countries and it presents a challenge to meet everyone’s needs. This year we have been able to make our webinar series available on demand through the RDTS website so that those who cannot participate due to time zone issues can access the presentations. And we’re continuing to consider other ways that we can serve the section’s diverse membership.

This newsletter gives us a chance to look back on a busy 12 months (see ‘inside’), but there is plenty being planned to keep an eye out for:

✓ Upcoming Webinars – our program continues apace
✓ R&D Directory Launch
✓ ATCE – annual dinner and topical luncheon
✓ New website launch
✓ Articles on R&D in BRIC (Brazil, Russia, India, China)

None of the RDTS activities take place without the hard work of volunteers on the RDTS board (officers and directors). We are actively seeking new board members for 2012/13 (appointed at the ATCE), so please consider if this is something that you or a colleague could take on and contact either me (david.curry@bakerhughes.com) or Earl Koskie (etkjr@yahoo.com) to discuss it further. And, as always, I welcome your feedback and suggestions on what we can do to serve you, the RDTS membership, more effectively.

David Curry
Chairman – R&D Technical Section

RDTS Membership - Regional Distribution

- United States
- Canada
- Europe
- Middle East
- Asia + Asia Pacific
- Central & South America
- Africa

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WEBINAR SERIES

Following on from its successful first year, the past 12 months have seen another strong output from the RDTS webinar series. The series has sought to address the SPE's R&D five grand challenges on which you’ll have seen articles in the JPT, as well as other topical R&D issues.

Over the past 12 months, we’ve had almost 700 attendees at our webinars (average of ~140 / event) and over 200 viewings by RDTS members, accessing the webinar via our website after the event. This is testament to the popularity of the series amongst our industry peers and we’d like to acknowledge Baker Hughes for kindly sponsoring the series, Dominique Guillot (RDTS Program Chairman) for ably coordinating and arranging the series and Shasta Stephenson and Marcela Soto (at SPE) for their effective and essential administration. Finally, our thanks go to all of the speakers for contributing their time and expertise in putting on these events:

- Dr. Kris Ravi, Halliburton & Dr. Vikram Rao, RTEC, “In-Situ Molecular Manipulation”
- Kishore Mohanty, Professor, Petroleum & Geosystems, Engineering, The University of Texas at Austin, “Increasing Recovery Factors”
- Jack Neal & Chris Krohn, ExxonMobil “Higher-Resolution Sub Surface Imaging”
- Prof. Martin Blunt, Imperial College London, and Dr. Herman Lemmens, FEI, “Pore-Scale Imaging and Modeling of Rocks”

MISSED A WEBINAR? This year is the first time that it is possible to view all of the past webinars after the event (although you don’t get to engage in the interactive Q&A sessions, so it is still best to join the live event!). As a member, simply log into the RDTS website and follow this: http://communities.spe.org/TechSections/RD/WebinarBlog/default.aspx

WATCH OUT FOR THE NEXT WEBINARS: “Ultra-High Resolution Rock Imaging” by Herman Lemmens, FEI; and “X-Ray Tomography for Imaging Rocks” by Martin Blunt, Imperial College London and “Cement Evaluation Challenges” by David Stiles.

DO YOU HAVE A GOOD IDEA FOR A TOPIC, OR EVEN BETTER, WANT TO PRESENT? CONTACT Dominique at guillot1@slb.com.

R&D DIRECTORY

Over the past year, the RDTS has been developing a purpose-built, structured, searchable directory for R&D providers and projects. It is a free service, open to all R&D providers and SPE members, with its aim to help make connections between R&D providers and the E&P industry.

The R&D Directory gives research and development providing organizations, such as universities, contract research companies and government research laboratories, the opportunity to inform SPE members about their research capabilities and projects. Joint Industry Projects, whether newly proposed, underway, or completed, can be described in it. University departments can use the R&D Directory to advertise PhD and post-doctoral research opportunities and to seek industry placements for junior faculty. Academics from outside petroleum engineering are particularly encouraged to use the R&D Directory to publicize research they believe could be relevant to the E&P industry and to make contact with people who could provide useful input and potentially help them find application for their work.

Prototype testing has been completed and we are in the process of populating the Directory, with new entries being reviewed by SPE staff and officers of the R&D Technical Section to ensure consistency with the aims of the Directory.

If you are a researcher and would like to make sure your details are included in the Directory, then please contact Bill Pike (William.Pike@CONTR.NETL.DOE.GOV) or David Curry.
It was a busy time in Denver (30 October – 2 November 2011) for the RDTS. We hosted the regular annual section dinner and also obtained a first for the section as we hosted an R&D topical luncheon on Nanotechnology R&D.

Section Annual Dinner Report
Hosted by Chris Buckingham and David Curry and with 95 attendees, the annual section dinner provided a good opportunity for informal networking between members, as well as a chance to get an update on the section activities.

SPE Technical Director Kamel Bennaceur was the section’s guest speaker at the annual RDTS dinner. He provided an insightful overview of the role of gas in the global energy mix (particularly its impact on emissions) and how technology impacted on the gas value chain. He was unequivocal of his view of the impact of technology in unconventional gas:
“Technology has completely changed the game from a very low resource to resources that are sometimes 10 times higher than what we had only 10 to 15 years ago.” But he predicts reservoir characterization technology can still greatly increase the efficiency of unconventional gas developments by improving decision-making on well locations and completion intervals, as well as continuing the improvement in simulation designs to maximize fracture effectiveness. In addition, the industry is already seeing efficiency improvements in areas such as proppants, which can reduce water usage by 40% and horsepower usage by 25%.

Topical Luncheon Report
The RDTS put on a topical luncheon to educate the wider industry on the topic of “Nanotechnology Developments for the Upstream Oil and Gas Industry”. 232 people joined us for lunch to listen to and engage with four distinguished industry panel speakers: Matt Bell, Leandro Balzano, Howard Schmidt and Gaurav Agrawal. Each speaker provided insights before moving into a plenary question and answer session. Despite running over our allotted time almost everyone stayed to listen to the presentations and participate in an enthralling session. Thanks go to all of the speakers for their contributions and to Cam Matthews for spearheading the session from the RDTS side, supported by Crispin Keanie and David Curry. Some highlights & photos:

Matt Bell (GEODynamics/ OTM Consulting) provided an entertaining introduction to the panel session describing the obvious role nanotechnology has to play in the industry and indicating its uptake is often hampered by the language barrier between nanotechnology researchers and oilfield engineers.

Leandro Balzano (Shell) gave an overview of the industry needs and expectations for nano materials / technologies from an oil company perspective. He also introduced the AEC consortium which is driving pre-competitive research in nanotechnology (with an initial emphasis on sensors and materials).

Howard Schmidt (Saudi Aramco) discussed his company’s work with nanotechnology, which began its research in 2005 by focusing on active, passive, and reactive nano-agents for in-situ sensing and intervention. The ongoing field trials were described where they’ve demonstrated the ability to pass nanomaterials through the reservoir.

Gaurav Agrawal (Baker Hughes) addressed case studies of Nano-Product Development and Commercialization focused on disintegrating frac balls, which are made of a new nanomaterial and developed by in-house scientists for multistage fracturing systems.

JOIN US IN SAN ANTONIO FOR ATCE 2012
We’re in the process of planning the RDTS activities for this year’s ATCE, due to be held in San Antonio, Texas. We will have the annual section dinner on Sunday 7th October. This event will include a short discussion highlighting the activities of the RDTS and an interesting keynote presentation by Dr. Scott Tinker. Dr. Tinker will discuss the future of global energy, referencing his recently completed acclaimed documentary film entitled SWITCH. Please plan to arrive in San Antonio early enough so that you can join us for another great evening, with dinner starting at about 7:00 p.m. We’ll also host another topical luncheon on Tuesday with the focus on “Subsurface Hydrocarbon Containment – Challenges and R&D Needs.”

In recent years, “Subsurface Hydrocarbon Containment” has become a hot topic within the oil and gas industry. The widespread interest has been sparked by a number of events and new developments including: the occurrence of some major offshore and deepwater well integrity incidents; the general unease of the public toward the rapid growth in the application of resource recovery methodologies involving fracturing; uncertainties regarding the long-term risks associated with CO₂ sequestration in reservoirs; reliability concerns with aging wells and infrastructure; and questions related to cap rock integrity in conjunction with the expanding use of thermal EOR methods. The SPE Research and Development Technical Section is pleased to announce that a special topical luncheon will be held at the 2012 ATCE in San Antonio at which a diverse panel of industry experts will address various issues, challenges and R&D needs relevant to this topic in a series of informative and thought-provoking presentations. A panel question and answer session will follow the presentations. We look forward to seeing you at this event.
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NOT YET AN SPE RDTTS MEMBER?
Follow the link: http://www.spe.org/spe-app/spe/groups/tech_section/index.htm
• Click on Technical Sections & ‘Research and Development’
• Log in using your email address and password
• Double-click on Join Community (to the right of the page)

INTERESTED IN DOING MORE WITH THE RDTTS?
Contact David Curry or Earl Koskie to see what board positions are still open, or to discuss how you can help.

The officers and directors serve in a voluntary capacity and are committed to advancing R&D within the industry. They are always keen to hear new ideas of what the RDTS might do to add value within the oilfield R&D community. Please do feel free to contact us.

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CONNECT WITH THE COMMUNITY
Are you engaged with the RDTS webpage? Log in now via the following link:
http://communities.spe.org/TechSections/RD/default.aspx

Join in with other SPE members to share ideas, promote competence, develop projects, and access information related to R&D. We are looking to update and improve the webpage in the coming months, so please contact Paul Street with your ideas and comments.

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