Coiled tubing (CT) in the oil and gas industry, primarily for upstream activities, continues to lead well intervention practices. CT applications range from basic clean-outs, nitrogen kick-off, and fluid circulation to more advance applications in matrix stimulation, water shut-off, milling and conformance to list a few. These applications either basic or advance requires to be completed in challenges environments, sometimes we find low pressure and depleted wells, some other we are on the HPHT end; wellbore depths becomes longer and longer with more difficult and challenging accessibility; multilateral wells are becoming more common challenging not only access but fluid placement; and it is common to work today in highly H₂S or CO₂ corrosive environment bringing CT pipe to its limits.

The advantages on the usage of coiled tubing in the oil and gas industry are well known ranging from interventions in live wells with contained pressure, quicker trip times and lower personnel requirement among others. Technology advancements in the CT industry allows us to defeat new challenges, and the integration of real time measurements in the CT intervention provides better engineering decisions live during the jobs.

With over 237 active CT units operating in the Middle East, this workshop aims to bring together industry and area experts from CT service providers, pipe and equipment manufacturers, operating companies, rig contractors, drilling and completion companies, academia, and many more. They will share information about new CT technology and innovation, best practices, case histories, new CT pipe materials, new surface and subsurface equipment and tools, and advanced applications used in challenging CT environments. The workshop will also offer the opportunity for networking and for dedicated group discussions on the way forward in CT.
SPE Coiled Tubing: Innovations and Expectations

**Sponsorship Support**

Sponsorship support helps offset the cost of producing workshops and allows SPE to keep the attendance price within reach of operations-level individuals; those who benefit most from these technical workshops.

Sponsors benefit both directly and indirectly by having their names associated with a specific workshop.

While SPE prohibits any type of commercialism within the conference hall itself, the society recognises that sponsoring companies offer valuable information to attendees outside the technical sessions.

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**For More Information**

For a detailed list of available sponsorships, including benefits and pricing, contact Mohamed Aamer, event manager, at maamer@spe.org.

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**Workshop Pricing, Contact Mohamed Aamer, Event**

**For More Information**

**SPE Coiled Tubing: Innovations and Expectations**

**Wednesday, 27 May 2015**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details</th>
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<tbody>
<tr>
<td>0830–0900</td>
<td>Welcome Coffee, Collection of Badges and Delegate Packs, SPE Ice Breaking</td>
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<tr>
<td>0900–0930</td>
<td>Keynote Speech/Q&amp;A</td>
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<tr>
<td>0900–1100</td>
<td>Session 1: Coiled Tubing Equipment and Materials</td>
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<tr>
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<td>Session Chairs: s Quick, National OilWell Varco (NOV); Khalid Al-Sadoon, Welltec; Pierre Fize, ArcelorMittal</td>
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Over the past two decades coiled tubing applications have increased exponentially as coiled tubing services continue to be one of the fastest growing sector in the oilfield industry. More specifically, the coiled tubing rig count in the Middle East has seen an increase of over 20 % since 2012. This, consequently, has driven huge growth in the demand for advanced coiled tubing surface equipment, pipe, downhole tools, wellhead equipment, and pipe integrity monitoring hardware and software. Coiled tubing manufacturers, suppliers, and service providers work very hard to meet this increasing demand through large investments in research, engineering, and development of advanced technologies, techniques, tools, procedures, fiber-optics, and real-time monitoring for both conventional and non-conventional coiled tubing applications and environments. Most of you probably know about the booming utilisation of coiled tubing in Saudi Arabia with an increase in CTU’s of + 50% since 2012.

The evolutions in our technologies must take into account such a shift. This session will enable presenters and participants to shed light and update their fellow attendees on the latest technologies and techniques regarding new or improved materials and equipment advances. Also it is hoped to bring up the subject of equipment standards and specifications, in the industry. This is the ideal forum to share ideas and experiences and see what is really needed in the next decade?

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<th>Time</th>
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<tr>
<td>1000–1130</td>
<td>Coffee Break</td>
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<tr>
<td>1130–1300</td>
<td>Session 2: Coiled Tubing Standard Practice and Procedures</td>
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<td>Session Chairs: Ahmad A Omair, Saudi Aramco; Osama Hanna, ADCO</td>
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This session will include the following topics:

**Pressure Control for CT Operations**

As the use of CT as a rigless intervention tool is on the rise, more risk is posed with regards to pressure control. With a few incidents encountered there must be a reference for use with CT operations on land similar to that in North Sea (NORSOK created in the year 2000). It is very important to use suitable barriers and probably modify some existing equipment to meet the rising challenges posed by high pressure wells. Gas wells with H2S high content also pose a major risk and proper PCE is a key in keeping our operations safe. Saudi Aramco has developed a manual with standards that we may adapt and enhance for the industry.

**Competency vs. Qualification**

As the CT operations expand worldwide there is a growing demand for qualified and competent staff. So far there are no college degrees or certification programme for people operating and supervising the CT operations. Most staff are trained on the job and that varies from one place to another. It is high time to standardise a set of skills needed and battery of tests to assess the competency of operating staff similar to IWCF or IADC. The testing should include simulators similar to those used for well control certification.

**Advancement in Procedures**

NORSOK seems to be the only recognised standard for operating procedures. The industry represented by the manufacturer’s, service providers, and end users (OPCO’s, NOC’s or IOC’s) should all come to an agreed set of procedures similar to those used for perforating charges or well control. The procedures will be comprehensive if they are developed by all stakeholders. Consider this an invitation to contribute.

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<th>Time</th>
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<tr>
<td>1300–1400</td>
<td>Luncheon and Prayers</td>
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<tr>
<td>1400–1530</td>
<td>Session 3: Coiled Tubing Pipe Management</td>
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<tr>
<td></td>
<td>Session Chairs: Jacques Attie, Global Tubing; Richard Hampson, Halliburton</td>
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Coiled tubing failures can lead to unsafe situations and expensive downtime so therefore need to be avoided wherever feasible. In order to achieve this goal, the coiled tubing itself needs to be carefully looked after to not only avoid any unforeseen failures but also to obtain maximum allowable usage to carry out operations as economically as possible. The key to this is a good pipe management programme that takes into account string design, selection, and usage along with a good short- and long-term storage practices. Inspection can also contribute to reducing any unexpected failures.

As the boundaries of coiled tubing operations are continually expanding, then advancements in pipe management techniques need to be regularly explored to extend the life of the pipe while increasing safety but reducing costs.

**SAVE USD 450 BY REGISTERING BEFORE 12 APRIL 2015**
This session will look at existing best practices and advancements relating to string design, usage, maintenance, and inspection along with the repair and quantifying of existing pipe damage. Discussion will be encouraged around trying to gain the maximum amount of string reliability while still operating at a cost that keeps operations feasible for both the customer and the coiled tubing supplier.

1530–1600 hours  Workshop Closing Remarks

Thursday, 28 May 2015

0900–0930 hours  Welcome Coffee
0930–1100 hours  Session 5: Coiled Tubing Solutions and Applications
Session Chairs: Daniel Erickson, Al Hosn Gas; Rita Painter, James Fisher & Sons

The demands placed on coiled tubing, downhole tools, and service quality are ever increasing. Wells are being drilled in harsher environments, with more complexity, higher temperatures and pressures, and an increasing number of horizontal sections. This session will focus on advancements in coiled tubing applications such as completions and re-completions (straddle and velocity strings), perforating, multi-lateral, extended reach, and other topics which may be covered in this session include wellbore clean-outs (debris, sand, scale, and filter cake), plug and abandonment operations, zonal isolation (cement, non-cement, and mechanical plugs), and mechanical applications (fishing, milling, and tubular cutting). The application of new technologies, improvements in best practices, and innovations are important to increase the working envelope, efficiency, and cost effectiveness of coiled tubing applications.

A collaboration of presenters and participants will address the key factors in these coiled tubing applications and initiate open dialogue to identify areas still requiring improvement in order to increase production, extend well life, and reduce cost.

1100–1130 hours  Coffee Break
1130–1300 hours  Session 6: Coiled Tubing Stimulation and Water Control
Session Chairs: Dhafir Badraoui, Well Services Group; Martin McCaffrey, OISERV

Stimulation and water control are two of the main applications for coiled tubing in today's market. Some of the challenges facing these applications are HPHT, placement of the stimulation fluid, and accurate selection of the stimulation zones. There are many techniques and methods which have been used in the past and the key to success of these applications is ease of use and reliability.

The intention of this workshop is to discuss the development and adaptation of old techniques and also what new techniques are available in the market to meet and exceed these challenges and expectations of the industry.

1300–1400 hours  Luncheon and Prayers
1400–1530 hours  Session 7: Advancements Coiled Tubing Technologies
Session Chairs: Adrian Terry, Baker Hughes; John Jenie, Schlumberger

Coiled tubing by virtue of its convenience, flexibility, and the ability to work in live well conditions continues to be the tool of choice for many operators and well service providers. From its origins back in the early 1960's, where it was initially developed as an effective cleanout tool, this growth has been fuelled by continuous development of materials, equipment, products, and the ingenuity of those within the industry to expand its usage and transcend it into the tool that we know today.

In addition to that, the current coiled tubing working envelope is more demanding, mainly due to harsh environment, high temperature and pressure, wellbore complexity, and brownfields that require efficient intervention. Innovation and the application of new techniques are important to increase the working envelope, efficiency, and cost effectiveness of coiled tubing applications. The boundaries are continuously being pushed and as such coiled tubing applications need to evolve to a higher level to meet the ever more demanding industry needs.

This session will provide a platform to explore the technological developments associated with the latest and future advancements in coiled tubing technologies, intelligent coiled tubing solutions, integrated intervention solutions, and coiled tubing drilling applications.

1530–1600 hours  Coffee Break
1600–1700 hours  Session 8: Breakout Session
1700–1715 hours  Workshop Closing Remarks
**REGISTRATION FORM**

**SPE Coiled Tubing: Innovations and Expectations**  

**Important:** Attendance is limited and is not guaranteed. Early registration is recommended. Please print or type in black ink. Registration Fee MUST be paid in advance to attend the workshop.

**Workshop Fee:**

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<tr>
<th>Before 12 April 2015</th>
<th>After 12 April 2015</th>
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<tbody>
<tr>
<td>USD 1,150 for SPE Members</td>
<td>USD 1,600 for SPE Members</td>
</tr>
<tr>
<td>USD 1,350 for Nonmembers</td>
<td>USD 1,800 for Nonmembers</td>
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</table>

**Workshop Fee includes:** Technical sessions, materials, daily coffee breaks and luncheons, certificate of Continuing Education Units (CEU), and welcome reception and dinner (if applicable). Accommodation is NOT included in the workshop registration fee.

**IMPORTANT:** All SPE Middle East rates are net of taxes. The fees in this form do not include any local or withholding taxes. All such taxes will be added to the invoice.

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**First Name/Forename ____________________________________ Middle Name ____________________________________**

**Last/Family Name _______________________________________________________________________________________**

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**Member No. ___________________ Job Title ____________________________________________________________________**

**Company/Organisation ______________________________________________________________________________________________________________**

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**NO REFUNDS will be granted for cancellations on or after 20 May 2015.**

**Card Number (will be billed through Society of Petroleum Engineers)  Expiration Date (mm/yy)  Security Code**

**Name of Credit Card Holder (printed) ______________________________________________________________________________________________**

**Signature (required) __________________________________________________________________________ Date ______________________________**

Please inform us of mobility or special dietary needs ____________________________________________________________________________________

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**Payment by Bank Transfer:** IMPORTANT—For reference: Please quote “15ADEA” and name of delegate

Make Payment to: HSBC Bank Middle East Ltd, Jebel Ali Branch, P.O. Box 66, Dubai, UAE

Account Name: SPE Middle East DMCC  Account Number: 036-217131-100  Swift Code: BBMEAEAD

IBAN Code: AE180200000036217131100

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**Cancellation and Refund Policy:**

- A processing fee of USD 100 will be charged for cancellations received before the registration deadline of 27 April 2015.
- For cancellations received after the registration deadline, 27 April 2015, 25% of the fee will be refunded to the registrant.
- No refund on cancellations received within seven (7) days prior to the workshop date, i.e. on or after 20 May 2015.
- No refund will be issued if a registrant fails to attend the workshop.

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**Visa:**

SPE Middle East, North Africa, and South Asia will assist in providing a visa invitation letter, upon receiving a written request, to confirmed registrants after receiving full payment of registration fees. Visa invitation letters take five days to issue from the date of request and it is the course attendee’s responsibility to obtain their own visa. SPE cannot issue the visa nor can we guarantee it will be obtained.

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**For questions or additional information contact: Mohamed Aamer event manager, at maamer@spe.org.**

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**To submit your registration online, please visit the event website at: www.spe.org/events/15adea**

**Alternatively, you can email this form to: formsdubai@spe.org, or fax it to: +971.4.457.3164.**