Coiled Tubing Technology

Increase the awareness and knowledge of the coiled tubing operations and factors which affect its performance

5-9 October 2015, Kuala Lumpur, Malaysia

Petrosync Distinguished Instructor

Magdi Taha El Naggar
Managing Director
Oil Fields Global Consultants (OFGC)

- Over 39 years dedicated outstanding service in oil and gas field with excellent HSE record
- Officially certified & registered as Professional Petroleum Engineering Consultant (License 116/7)
- Extensive training capabilities, currently joint venturing with several major professional international training institutes and conducting several training at Singapore, Malaysia, Vietnam, Indonesia, Egypt etc

Course Objectives

- UNDERSTAND the fundamentals & concept of the coiled tubing unit
- INCREASE the awareness and knowledge of the coiled tubing operations and factors which affect its performance.
- LEARN an overview of coiled tubing operational techniques, technologies and equipment.
- UNDERSTAND alternate deployment scenarios and multisensory applications for surveillance and optimization.
- POSSESS the basic skills required to select and implement the various coiled tubing techniques as per operational requirements.
- ABLE to handle various coiled tubing emergency situations, plan its operations, monitor and analyze its performance.
- LEARN strategies and best practices for field the coiled tubing operation optimization

Specially Designed for

This course is specifically designed for, but not limited to employees in the oil and gas industry who holds the following roles:

- Drilling Managers
- Drilling Supervisors
- Drilling Superintendents
- Senior Drillers
- Drilling Engineers
- Operation Engineers
- Project Engineers
- Well Engineer
- Production Engineer

HYBRID TRAINING SOLUTIONS

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This course is designed to introduce an overview of the coiled tubing operations concept and its applications in oil fields. It introduces variety of coiled tubing technologies with special attention on the unit as surface equipment and downhole tools. Moreover, the course covers the main components, application envelope and the coiled tubing special applications and contingency plan for all possible situations, which could be encountered throughout various operations.

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Magdi Taha El Naggar
Managing Director
Oil Fields Global Consultants (OFGC)

Magdi is an independent consultant having more than 39 years of experience in Petroleum industry. He has extensive experience in IWCF and IADC certification. He also has extensive professional experience in various phase of petroleum, reservoir, production, drilling & workover engineering and field operations with several multinational companies including ARAMCO (Saudi Arabia) and ADCO (UAE). Magdi is experienced professional in all phases of well intervention operations utilizing coiled tubing and well emergency cases, well control as well as extended reach operations. He also has experience in conducting training with several major professional international training institutes at Singapore, Malaysia, Vietnam, Indonesia, China, Egypt, Oman and so on. In additional, he has the extensive experience in full field development studies, reservoir studies, production enhancement for oil fields as well as various types of wells.

IN-HOUSE SOLUTIONS

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Module (1) Well Completion Types
- Definition of well completion
- Well completion Classification
- X-mas Tree
- Wellhead
- Casings
- Liners
- Production Tubing String
- Packers
- Sub-Surface Control System (SC-SSSVs)
- Wellhead Control System
- Artificial lift completions (ESP, GL)
- Smart Completions
- Impact of well completion selection on future operations in the well

Module (2) Well Completion Operations
- Definition of well completion concept
- Perforation
  - Types
  - Guns
  - Bullets
  - Phasing
  - TCP
- Stimulation operation
  - Basics and concept
  - Candidates selection
  - Reservoir lithology & impact on stimulation methodology
- Hydraulic Fracturing

Module (3) Well Intervention Operations
- Conventional:
  - Coiled Tubing Operations
    - Well kick-off operations
    - Stimulation
    - Scale Removal
    - Cement Squeeze
    - Fishing Operations
  - Well killing & securing for well routine maintenance operations
  - Wireline (Slick, E-line)
  - Snubbing operations
  - Well Testing (PTS, MPFM)
- Non-Conventional:
  - Well Control
  - Emergency
- Impact of well completion and well intervention operations

Module (4) Coiled Tubing Unit
- Introduction
- Coiled tubing description
- Coiled tubing equipment design
- Coiled tubing applications
- Coiled tubing advantages
- Coiled tubing disadvantages

Module (5) Coiled Tubing Surface Equipment
- Depth meter
- Goose neck
- Injector head
- Coiled tubing reel
- Prime movers
- Power Pack
- Stripper (conventional, side door)
- BOP

Program Schedule

Day One - 5 October 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>08:00 - 09:00</td>
<td>Registration</td>
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<tr>
<td>09:00 - 11:00</td>
<td>Session I</td>
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<tr>
<td>11:00 - 11:15</td>
<td>Refreshment &amp; Networking Session I</td>
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<tr>
<td>11:15 - 13:00</td>
<td>Session II</td>
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<tr>
<td>13:00 - 14:00</td>
<td>Lunch</td>
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<tr>
<td>14:00 - 15:30</td>
<td>Session III</td>
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<tr>
<td>15:30 - 15:45</td>
<td>Refreshment &amp; Networking Session II</td>
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<tr>
<td>15:45 - 17:00</td>
<td>Session IV</td>
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<td>End of Day</td>
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</tbody>
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Module (6) Surface Equipment Handling & Testing Procedures

- Depth meter
- Injector head
- Reel
- Power pack
- Control cabin
- Pressure control equipment
- BOP
- Stripper (conventional, side door)
- RTMS
- Auxiliary surface equipment

Exercise and Case Studies Provided

Module (7) Coiled Tubing Downhole Tools

- Standard threads
- Grapper connectors
- Connectors
- Check valves
- Nozzles & Jetting subs
- Swivel joint
- Release joints
- PRV
- Centralizers
- Accelerators
- Jars
- Overshots

Module (8) Pre-Job Safety Procedures

- General requirements
- General HSE aspects
- PTW
- TBM
- Coiled tubing well control drill

Module (9) High Pressure Coiled Tubing

Module (10) Coiled Tubing Applications

- Matrix treatment
- Logging operations (open hole, Cased hole)
- Drilling contingencies
- Squeeze cement
- Under reaming/milling
- Inflatable packers and bridge plugs
- Coiled tubing drilling
- Coiled tubing completion
- Well Kick-off
- Fill Cleaning
- Scale removal
- Well control/killing
- Excessive water/gas shut-off
- Fishing operations
- P & A
- Artificial lift

Module (11) Coiled Tubing Operation Procedures

- Pre-Job requirements
- Scaffolding
- Pre-job equipment requirements
- Coiled tubing rigging-up & function testing
- Treating line rigging-up & testing
- General running procedures
- Operational procedures:
  - Well Control/Killing
  - Well Kick-off
  - Nitrogen properties & uses
  - Fill cleaning
  - Scale removal
  - Excessive water/gas shut-off
  - P & A
  - Well stimulation
  - Production logging pressure deployment procedures
  - Fishing operations
  - Rigging down and HSE requirements
  - Coiled tubing stability during mobilization
Module (12) Coiled Tubing Technical Data
- Definitions
- Coiled tubing operating limits
- Burst pressure
- Collapse pressure
- Coiled tubing ovality
- Fatigue and corrosion
- Stress and strain
- Forces affecting the coiled tubing performance
- Buckling
- Depth correction and stuck point calculations
- Helical lock-up
- Catastrophic buckling
- Coiled tubing sizes, volumes and displacement volumes
- Coiled tubing components (Dims & Wts)
- Coiled tubing speed limits
- Common nipples and lock system data
- Coiled tubing pressure drop curves

Module (13) Coiled Tubing Contingency Procedures
Module (14) Coiled Tubing Operational Troubleshooting & case History
Module (15) Coiled Tubing Maintenance

Petrosync Quality
Limited Attendees
The course has limited seats to ensure maximum learning and experience for all delegates.

Certificate of Attendance
You will receive a Certificate of Attendance bearing the signatures of the Trainer upon successful completion of the course. This certificate is proof of your continuing professional development.

Interactive Training
You will be attending training designed to share both the latest knowledge and practical experience through interactive sessions. This will provide you with a deeper and more long-term understanding of your current issues.

High Quality Course Materials
Printed course manual will provide you with working materials throughout the course and will be an invaluable source of reference for you and your colleagues afterward.
Attention Invoice to: ______________________________________________________________________________

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1st Delegate Name ________ Mr  Mrs  Ms  Dr  Others

Head of Department:

Direct Line Number:            Email:

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Please note:
- If you have not received an acknowledgement before the training, please call us to confirm your booking.
- For credit card payment, there is additional 4% credit card processing fee.
- Group Discount is based on Standard Price

PAYMENT TERMS : Payment is due in full at the time of registration. Full payment is mandatory for event attendance.

I agree to PetroSync’s terms & conditions,payment terms and cancellation policy.

Authorized Signature :