

## EDUCATION WORKSHOP

# “COILED TUBING: EQUIPMENT, APPLICATIONS AND TECHNOLOGY”

### PROGRAMME

09.00 - 10.00 Registration of the seminar's participants. Morning tea/coffee break

#### 10.00 - 11.00 **Equipment**

*Sergey KABLASH, Fidmash*

**Main components and technical specifications of CTU.  
Data acquisition systems and software.  
Tools and equipment for CT fatigue control.**

11.00 - 11.30 Coffee break

#### 11.30 - 12.30 **The Tubing**

*Tenaris*

**Coiled tubing sizes (outer diameter and wall thickness), tubing grades in terms of length and fatigue, standard and corrosion resistant design.**

**Tracking of CT fatigue life. CT failure sources (mechanical damage, corrosion, manufacturing defects, operator errors). Practical examples of operator errors (tensile strength exceedance, buckling defects, tubing sticking).**

**Coiled tubing storage, especially in extremely cold conditions.**

**Coiled tubing servicing before and after operation.**

**Repair of the tubing (welding, after welding testing, grinding, butt welding, mechanical connectors).**

**Typical cases and reasons of CT failures.**

**Tubing defects identification.**

**Technology and equipment for guiding of the logging cable in CT.**

**Estimation of erosion damage in coiled tubing, used for hydraulic fracturing. Influence of the nitrogen, used for the operation.**

**Coiled tubing implementation at extremely high and extremely low temperatures.**

#### 12.30 - 13.00 **CT implementation — well workover**

*Dmitriy HOLODOV, Trican Well Service*

**Technology and equipment for wiper trip in production casings and open holes with tubing string RIH.**

**Technology, equipment and software for aerated wellbore cleaning.**

13.00 - 14.00 Lunch

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#### 14.00 - 15.30 CT implementation — well workover

*Stanislaw ZAGRANICHNY, Trican Well Service*

**Squeeze jobs, including selective cement squeeze in horizontal wellbores with application of hydrocarbon based cement slurries.**

**Coiled tubing technologies for production stimulation: bottomhole acidizing and hydraulic fracturing.**

*Konstantin BURDIN, Schlumberger*

**Water shut-off technologies, compositions for CT water suppression jobs, requirements for composition properties.**

**Remedial CT operations, cement plugs setting and drilling out, bridge plugs and shutdown valves setting and drilling out, packer equipment, used for CT jobs, and operations description.**

**CT application for cleaning of sidetracks in multilateral wells of I and II category of difficulty according to TAML classification.**

**CT conveyed geophysical surveys.**

15.30 - 16.00 Coffee break

#### 16.00 - 17.00 Coiled tubing drilling

*Stanislaw ZAGRANICHNY, Trican Well Service*

**Review of coiled tubing drilling practical applications, including underbalanced drilling, theoretical background for choosing CT diameter, BHA and bit for directional drilling, theoretical background for calculation of gas-liquid mixture for underbalanced drilling, design of downhole equipment for underbalanced drilling (production strings and calculation of their length, shutdown valves and calculation of their settings).**

*Sergey ATRUSHKEVICH, Novinka*

**Basic CTU design, downhole and well head equipment for coiled tubing drilling.**

**BHA for coiled tubing drilling, directional drilling systems and particulars of their operation.**

#### 17.00 - 17.30 New technologies

*Stanislaw ZAGRANICHNY, Trican Well Service*

**Latest developments of equipment and tools, new CT technologies, elaborated during the last year.**

18.00 - 19.00 Fourchette