International Association of Drilling Contractors

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DEC Q3 Tech Forum

"Drilling Data – What Is Available? How Good Is It? What Can We Do with It?"

25 September 2019

8 am – 1 pm

Weatherford
11909 FM 529 (Spencer Road)
Houston, TX 77041

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Minutes

Agenda:

08.00-08.20 Refreshments and networking

08.20-08.25 Welcome and JIP updates (handouts) – Dennis Moore, Marathon Oil, Chairman

08.25-08.30 Introduction to spotlight presentations – Michael Edwards, BP

SPOTLIGHT PRESENTATIONS: These five-minute video presentations will provide context around the data landscape in today's industry and frame the discussion at today's event.

08.30-08.35 [Data and the Automation Standards](#), Mark Anderson, Anderson & Spilman

An introduction will be given to International Society of Automation (ISA)-95 and the Purdue Enterprise Reference Architecture.

08.35-08.40 [Operators Group for Data Quality Focuses on Drilling and Completion Critical Measures](#), Matt Isbell, Hess or Michael Behounek, Apache

The OGDQ is an industry group of operators seeking to collaboratively define process capability requirements for drilling and completion activities. The group has a number of updates on their efforts related to data quality contract addendums, standardization (such as API recommended practices, data transfer methods), and expanding focus from drilling to include completions.

International Association of Drilling Contractors

08.40-08.45 [**Reducing the Data Verification Resource Drain with Data Assurance**](), Ross Philo, Energistics

> The amount of drilling-related data is increasing exponentially, as is the number of providers of processing, analysis and visualization tools. Data needs to be able to move seamlessly across software platforms and organizational boundaries. One major bottleneck is the time available for subject matter experts (SME) to assess that the data for a given workflow meets criteria for quality, reliability and accurate referencing. Legacy data transfer processes do not typically provide metadata to allow rapid verification that quality criteria have been met, nor is there usually any history of prior verification activities and their outcomes. The latest versions of industry-developed standards now make it possible to assess data quality automatically and include this information in data transfers.

08.45-08.50 [**Open Subsurface Data Universe Industry Group**](), Anupam Ghosh, BP

> This presentation will describe the Open Subsurface Data Universe Industry Group that is aimed at addressing and removing data silos, creating an ecosystem to accelerate digital innovation and facilitate data sharing with JV partners. Four subcommittees have been created to address key industry challenges: Enterprise Architecture, Data Definition, Information Security and Business Model: Defining the Sustainable Model for the Future.

08.50-08.55 [**An Open Source Data Aggregation Platform on a Rig**](), Pradeep Ashok, Intellicess

> Many operators are exploring the possibility of putting their own data aggregators on rigs in order to implement their own real-time drilling analysis at the rig site. Open source data aggregation platforms make this possible but are still a novel concept. This presentation will look at what is enabled by such a platform.

08.55-09.00 **Wrap-up remarks**, Michael Edwards, BP

PANEL: Five speakers will each give 20-minute presentations before convening in a Q&A with the audience.

09.00-09.20 [**Measuring Success in Automated Directional Drilling**](), Scott Coffey, Nabors Drilling Technologies

> Quantifying the success or failure of an automated directional drilling process requires the development and implementation of new key performance indicators that measure those activities that are directly

impacted by drilling automation. This presentation describes new performance metrics necessary to measure the success of automated slide drilling and outlines a practical approach for computing and measuring these KPIs on a single-well and macro level. The process of transforming these measured KPIs into concrete adjustments to the automation process is also described.

09.20-09.40 The New Value of Drilling & Completions Data, Harris Swartz, Oxy

Historically, engineers and superintendents used drilling and completions data for morning calls and depth versus day curves to monitor progress. In fact, the morning report format has not changed significantly from the old hand-written notes to the easier-to-read pdf format. As a result, drilling and completions data was of low value unless our managers asked us to demonstrate who drills fastest. Today, the value of data has increased significantly. Engineers now analyze multiple variables that affect the entire drilling and completions process to drive efficiencies and lower NPT. As systems become more user friendly, drilling, completion and overall safety performance will improve.

09.40-10.00 Break

10.00-10.20 Combining Disparate Data Sources to Power Fleetwide Performance Initiatives, Alex Groh, Patterson-UTI Energy

Although drilling operations generate a tremendous volume of data, most consumers fail
to adequately ensure its quality, efficiently store, or effectively employ it to monitor and
improve operational efficiency. This presentation will explore how Patterson-UTI has overcome these challenges to perform productive data mining and develop effective business intelligence tools to drive fleetwide performance initiatives and provide all company personnel a comprehensive understanding of holistic rig performance. Ongoing initiatives to further enhance and extend current aggregation efforts will also be discussed.

10.20-10.40 Data, Digitalization and Human Interfaces in Drilling and Completions, George Buck, Chevron

The industry has been working with big data for many years in the form of seismic data, but only recently has begun to use it to change the way we do business on drilling rigs. Some challenges we face are getting access to the right data, cleaning it, visualizing it and interpreting it in an effective

timeframe. The bigger challenge is often with the people involved and the behavioral change management aspects associated with changing the way decisions have historically been made. This talk will touch on the technical aspects at a high level but will primarily focus on the human behavioral aspects.

10.40-11.00 **Are We Actually Getting the Data We Need to Move Towards Digitalization and Automation?**, Andy Hawthorn, Baker Hughes, a GE company

Industry surveys show that in complex offshore wells, real-time downhole data may only be available around 15% of total well construction time. How can we drive step changes in well efficiency and safety through the applications of digitization and automation when we may not actually have the data required? This presentation will demonstrate through case histories extracted from multiple well construction activities how real-time downhole data can vary significantly from surface data. Additionally, it will show examples of how through new telemetry systems real-time downhole data has affected both nonproductive time and the overall efficiency of complex well operations.

11.00-11.20 **The IT "Crossover"**, Corey Thompson, Pacific Drilling

11.20-12.00 Panel Q&A to address the event theme: How good is the drilling data we have today? What can we do with this data, and are we actually leveraging data in the way that we should? How is the promise of Big Data making an impact on the way decisions are being made in today's rig operations?

12.00 Adjournment and lunch (sponsored by Weatherford)