International Association of Drilling Contractors

**Drilling Controls Systems Subcommittee
IADC Advanced Rig Technology Committee
9.00-11.00 Thursday, 8 August 2019
IADC Headquarters, Crown 1 Conference Room
3657 Briarpark, Ste 200
Houston, TX 77042**

Minutes

DCS Subcommittee Chair Nathan Moralez, BP, opened the meeting and welcomed the attendees. IADC's Linda Hsieh gave an overview of the IADC antitrust policy and the facility.

In preparation for kicking off the Rig Sensor Stewardship initiative, DCS invited Dung Nguyen, ConocoPhillips, to make a presentation on Calibration and Field Verification of Rig Instrumentation. Ms Nguyen represents the Operators Group for Data Quality (OGDQ) and the API SC8 – Subcommittee on Drilling Structures and Equipment. Scope of the SC8 proposed work is the field verification of rig measurements of: torque (rotary/top drive, joint makeup/breakout torque), hookload, rotary/top drive rotational speed, stand pipe pressure, drilling fluid pump rate, and block position.

DCS also invited Mike Anatra, Parker Drilling and Chair of the IADC Maintenance Committee, to discuss collaboration on the Rig Sensor Stewardship project. DCS' vision for the initiative is to generate guidelines based on recognized standards and best practices for rig owners, equipment vendors and service companies to ensure their sensors and instruments perform as intended on a continuous basis.

The intended activities of the subcommittee working group are to:
• Identify and list all sensors used during well construction.
• Develop a structured method to identify the importance and criticality of the data based on risk (impact severity and probability of occurrence) and then operations efficiency. Review, modify and agree on the methodology.
• Apply the structured method to rank the identified sensors.
• Select one of the highest-ranked sensors for the initial assessment and draft of stewardship guidelines as a proof of concept.
• Identify internationally recognized methodologies and standards that can apply to drilling sensors that could be relevant.

Mr. Anatra discussed how the IADC Maintenance Committee includes and implements open forum discussion with drilling contractors surrounding equipment issues, as well as said discussions' resultant communication, lessons learned, knowledge shared, and solutions found.

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Mr. Anatra also stated that if a standard is going to be developed in regard to the process and procedures for verification, that there needs to exist a scale specifically for verification, dependent on the equipment type and said equipment's criticality.

Mr. Moralez then provided an update on the Drilling Rig Control Systems Minimum Safety Features Guidelines, which is nearing conclusion. Mr. Moralez is working on the last two sections - machine interlocks and emergency stops - and once completed, will be sent to Ms. Hsieh to be placed into the IADC format and sent out to the industry for comment. A volunteer is needed to assist with the emergency stops section.

David Shackleton, IDS, then provided an update on DDR Plus. Work is ongoing. Mr Shackleton and Robert van Kuilenburg, Noble Drilling and ART Chair, have been working through the activity codes looking for duplications and rewording descriptions. It was mentioned the codes may need compartmentalization/cascading/filter, as the issue of the openness and magnitude of the codes can create trouble for some users.

Rob Shank, Parker Drilling and ART Vice Chair, provided an update on changes to the print tour sheet. Fields added to the tour sheet were: Spud, Rig Release, Pause, Resume, TD, No. of Days from Spud, Cumulative Rotating Hours, Fuel Used, Fuel on Hand. Main codes 21-23 and 31-38 on the print tour sheet have also been revised to:
21 other
22 other
23 other
31 Run/retrieve riser equip.
32 Surface testing
33 Operating status
34 Safety
35 Well control
36 Coiled tubing
37 Completion activities
38 Subsea installations

In addition, Will Fox, DataGumbo, proposed that the DCS work on developing an IADC set of rig state definitions. He stated that it would be useful from a contract automation standpoint to have more granular definitions. He presented an example of such a definition for tripping.

There being no other business, the meeting was adjourned.

The next ART meeting will be 12 September, at IADC HQ, 3657 Briarpark Drive, Suite 200, Houston, TX 77042.