

ART Committee Meeting

8 February 2018

9 – 11 am

IADC 10370 Richmond Ave, Suite 760 Houston, TX 77042

<u>Minutes</u>

IADC Advanced Rig Technology Committee Chair Robin Macmillan opened the meeting and welcomed the participants. Mike Killalea provided a brief review of building facilities and of the IADC antitrust policy.

Then IADC President Jason McFarland gave an update on IADC initiatives for 2018. Key efforts highlighted included advocacy, such as engagement with national and local regulators and legislators, as well as outreach to the public through programs like IADC's DrillingMatters.org initiative; well control, especially improved training through IADC WellSharp; and enhancing the print and electronic versions of the IADC Daily Drilling Report ("DDR Plus"). The DDR Plus effort is part of a project undertaken by the ART Drilling Control Systems Subcommittee.

Then ART officers presented subcommittee updates.

Robert Van Kuillenberg, Noble Drilling, Co-Chair of the Drilling Control Systems SC, presented that update. The DCS SC, chaired by Nathan Moralez, BP, proposes a three-pronged effort: improve the IADC Daily Drilling Report form (DDR Plus), map rig sensors to rig states, and provide guidelines for sensor stewardship. The form would be updated to include new terminology, then transformed into a new electronic format.

Plans are to organize task forces for this effort. It is important that data being included on the DDR form be precise, which highlights the wisdom of using sensors to fed into the DDR. The group plans to create a matrix of which sensors can be automated, and explore how to maintain sensor integrity.

To move forward, the group decided to establish a mission statement and three stage gates:

- -- Stage Gate 1 (SG1): Content and Format, to cover:
 - -- Rig states needed to enhance existing IADC DDR
 - -- Digitization
 - -- Purpose

- -- Stage Gate 2 (SG2): Rig Sensor Mapping to States
 - -- State automation identification
 - -- State performance
- -- Stage Gate 3 (SG3): Rig Sensor Stewardship
 - -- Maintenance:
 - -- Condition-based/usage
 - -- Schedule
 - -- Specification: Sensor signal requirements, framework

The effort will include no contractual implications.

Roy Mills, Noble Corp, Chair of the BOP Controls SC, provided an update of the BOP Controls SC. The SC has prepared draft guidelines for pre-qualification testing of shuttle and SPM valves. However, some members of the RAPID-S53 JIP, formerly the IADC/IOGP BOP Database JIP, questioned whether the data supported the need for pre-qual testing. The chairman of RAPID-S53 will attend the next meeting of the SC, scheduled for 10.00 Tuesday, 27 February, at IADC HQ.

ART Vice Chair Trenton Martin, Transocean, provided the Cybersecurity SC update, in the absence of Chair Dr Siv Hilde Houmbe, Secure NOK. Highlights are:

- The new "<u>IADC Guidelines for Baseline Cybersecurity for Drilling Assets</u>" have been published and are available on the IADC eBookstore, along with the 2016 "<u>IADC</u> <u>Guidelines for Assessing and Managing Cybersecurity Risks to Drilling Assets</u>".
- The subcommittee is organizing its second workshop in Stavanger on 12 April. The SC has secured space from IRIS for the event. (The first IADC Cybersecurity Workshop was held in 2014 in Houston.) The agenda and registration for the 12 April workshop is <u>here</u>.
- IADC guidelines for network segmentation is the next item on agenda, along with guidelines for cybersecurity training and awareness. The network segmentation work is expected to be close to completion by the time of the IADC Cybersecurity Workshop in Stavanger on 12 April.
- Next subcommittee meeting is 15 February. This meeting will focus on regulatory activities and a case-based walk-through of how ONG-ISAC supported its members through the NotPetya attack. Subsequently, the SC plans to shift emphasis in its meetings toward practical discussions to further enhance member knowledge and experience sharing.

Then, Mr Martin discussed the need to pre-clear planned guidelines with the IADC leadership. IADC staff will ensure that the highest levels of IADC leadership are aware of planned work well before the work nears finalization. ART initiatives are always well publicized through IADC media, such as DrillBits, Drilling Contractor, and videos, but future efforts will be brought to the attention of Drilling Services officers, and senior IADC management early in the process, Mr Killalea said.

Then Mr Martin and Abram Hudson, Barios, discussed ART's <u>possible collaboration with the</u> <u>International Council on Systems Engineering</u> (INCOSE, <u>https://www.incose.org/</u>). INCOSE's mission is to share, promote, and advance the best of systems engineering, with 10,000 members in 62 countries, and regional chapters. The committee agreed to move forward.

The committee then reviewed the <u>2018 ART Committee calendar</u> Some highlights include:

- ART Cybersecurity Workshop in Stavanger on 12 April
- <u>ART Committee meeting on 3 May in Houston</u> at OTC or at IADC, depending on room availability at OTC.
- <u>ART Committee meeting in Copenhagen on 18 June</u> in conjunction with <u>IADC World</u> <u>Drilling 2018</u> (19-20 June)
- <u>ART Committee meeting on 10 September in Austin</u>, in conjunction with the <u>2018 IADC</u> <u>Advanced Rig Technology Conference</u>, 11-12 September
- Three Spark Tanks, all at Houston HQ, on <u>4 April</u>, <u>30 August</u>, and <u>12 December</u>. ART welcomes submission of abstracts, as well as nominations of operators and drilling contractors for Sharks. Deadline for abstracts for the 4 April Spark Tank is 2 March.
- Regular monthly or bimonthly meetings of ART's working subcommittees. See <u>calendar</u> for details.

The committee then discussed the <u>2018 ART Conference</u>, 11-12 September, Hyatt Regency, Austin, Texas. Deadline for abstracts is 9 March

As mentioned, the ART Committee will meet next on 3 May, either at OTC or at IADC, depending on OTC room availability.

There being no further business, Mr Macmillan adjourned the meeting.

NOTE: This was the first IADC Committee meeting, except for the IADC Executive Committee, to be shared via the LifeSize video conferencing system. Post-meeting comments indicated that the audio and visual experience was satisfactory, although one participant who was "on the road" noted that bandwidth was a problem. Please send any other feedback on the experience to Mike Killalea, <u>mike.killalea@iadc.org</u>.

Name		Company Name
Abram	Hudson	BARRIOS TECHNOLOGY
Alton	Payne	BSEE
Lee	Womble	CAMERON A SCHLUMBERGER COMPANY
Rolf	Gullaksen	CAMERON A SCHLUMBERGER COMPANY
Tony	Carlson	CONTROL TECHNOLOGY

Attendance:

Stephen	Prachyl	DANFOSS
John	de Wardt	DE WARDT AND CO
David	МсКау	DNV GL
Rick	Cannon	GATES CORPORATION
Vianney	Nkeoua	GLOBAL HIGH VISION
Alberto	Morandi	GUSTO MSC
Sarah	Kern	HELMERICH & PAYNE INTERNATIONAL DRILLING CO.
Robert	Sliva	HP PIPING SOLUTIONS
Linda	Hsieh	IADC
Mike	Killalea	IADC
Alan	Spackman	IADC
Anthony	Bullion	INCOSE
Christopher	Goetz	KINGSTON SYSTEMS
Mark	Gravouia	MCCOY GLOBAL USA, INC
Roy	Mills	NOBLE DRILLING
Robert	Van Kuilwnbueg	NOBLE DRILLING
Robin	Macmillan	NOV
Ben	Madison	OTC SOLUTIONS, LLC
Mitch	Eichler	PARKER HANNIFIN HVD
Victor	Rasanow	PARKER HANNIFIN HVD
Gabriel	Felipe	PETROBRAS
Martin	Kershman	TEQNISOLUTIONS LLC
Robert	Ziegler	WEATHERFORD INTERNATIONAL
Kevin	Braggs	XCEL SAFETY TRAINING SOLUTIONS