

4th Quarter Meeting December 3-5 2013 Oslo, Norway

DAY 1 - Tuesday December 3rd 2013

Welcome, Announcements & Safety Moment

Mike Vander Staak welcomed the UBO-MPD committee, thanked DNV for hosting the meeting and for providing the coffee and lunches. Lars Tore Haug (DNV) gave the group a safety orientation and reviewed emergency procedures.

Scott Maddox (IADC) reviewed the IADC Anti-Trust Guidelines and expressed that the guidelines could be retrieved in their entirety from the IADC web site.

Mike encouraged the group to use the upcoming days to participate in the meetings and subcommittees.

Mike then presented a safety moment on "situational awareness". He presented a personal example of travel. He travels frequently and likes to minimize wasted time, by checking in close to departure time. Due to this focus, situational awareness is risked with personnel not aware of their situations and surroundings. So it is important to always be aware of environment and surroundings. Remain aware of hazards at anywhere, anytime.

Introduction of New Committee Members and Guests

Each attendee gave an introduction including company name and work location. See Appendix 1 for the detailed list of the attendees.

3Q13 Meeting Minutes - Action Items Review

See Appendix 2

Action items in the previous meeting minutes were then reviewed,

- #1 Complete. We are at DNV for this meeting
- #2 92U Documents status same. Searching for technical writer
- #3 Bob working on this. Open action
- #4 Near completion at Forum in Portugal. Still open
- #5 Interview scheduled but company (HESS) denied permission. So Mike searching for volunteers to contribute
- #6 HSE, DGD, MPD material received. Regulatory nothing has changed. Outreach, UBD committee outstanding
- #7 Task Eric to look for 92U and 92M. Develop a RP for next year
- #8 Updated document sent by Sara. Maybe after this session a draft can be put on website
- #9 Role of outreach subcommittee seems ill defined
- #10 Complete

Subcommittee reports



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Mike encouraged attendees to get involved in the various subcommittees. Following are the updated as provided,

• API16RCD Subcommittee – Sara Shayegi

Sara started by presenting a Proposal to the group for revision of API16RCD. The plan would be not to change the current testing, but to enhance for several cases and devise an Option B (e.g. for HPHT, etc) for optional compliance. This was followed by a lively discussion of benefit and disadvantages. Discussion was halted to enable session to progress but needs to be revisited in breakout session.

MPD Subcommittee – David Pavel

David provided a quick update on "92M Surface Back Pressure MPD update – Brian Grayson PMCD – Wet stack". No update from Brian. Two figures need to be changed

• DGD Subcommittee - Kristin Falk

Kristin provided the update and informed the group that they are still in the first phase - focused primarily on education and outreach. No RP yet. Workshop agenda needs to be finalized for the 2014 DGD seminar to be held in Madrid in April 2014. Format, sessions, speakers, suggestions will be discussed.

HSE and Training Subcommittee – CJ Bernard

No action to report from the HSE subcommittee Plan to update and revise HSE and training guidelines in 2014

Outreach Subcommittee –Dag Ove Molde

No update from Brian. Dag Ove mentioned he has had discussions on what could be done. Scott (IADC) – has said nothing received to update on website. He further mentioned that IADC is now represented by 9 additional chapter liaisons worldwide (e.g. Asia, Europe, Australia etc), need to develop some material that can be distributed.

Regulatory Liaison Subcommittee – Per Cato

No detailed update

Per Cato – Norsok Standard D-010 updated Bill Tanner – Washington DC government affairs Taff Powell – Europe

• UBO Subcommittee - Mike

No update.

Vote of New Committee Members

The vote has been delayed till this afternoon to allow additional members to attend. But the group was consulted on nominations, which were as follows,



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UBO: Everyone OK with candidates

MPD: Everyone OK with candidates

Volunteer – Saad Saeed added to candidates Volunteer – Scott Petrie added to candidates

DGD: Everyone OK with committee

Volunteer - Scott Petrie added to candidates

HSE and Training: Everyone OK with committee

Outreach: Everyone OK with committee

MPD-UBO Committee:

Martin Cullen - Chair position next year

Ray Bullock – requested to be removed from list as unable to make 2 year commitment

Review & Approval of 3Q13 Meeting Minutes.

As the vote was delayed till the afternoon it was decided to review the previous meeting minutes. Mike went through the previous meeting minutes point by point – explaining and clarifying items. Group participation was also solicited where required. Following points were highlighted,

- DGD Workshop date listed in minute meetings was incorrectly listed as 10th April, it should be is 7th April.
- 2015 Location of IADC conference vote to be taken on Thursday at close of business
- The heading listed as "Report on MPD CBHP Floating Breakout" needs to have PMCD added to it

Once the review was complete a motion was made by Dave Pavel to approve previous minutes. It was seconded by Ken Rockwell and the minutes were approved.

Dave Pavel then raised an issue about Riser gas handling and Well control. A discussion then ensued about "whether we need an additional subcommittee on well control". The outcome was that it appeared that such a subcommittee / liaison may be required. There was then a Motion by Scott Petrie (MPO) to establish a liaison (Earl and Scott) for MPD/UBO Well Control and seconded by Dale Straub (Chevron).

After further discussion David and Scott to be involved in this subcommittee as liaisons. Further volunteers included Harish Patel and John Cohen

Document Status

Draft HSE Guidelines - CJ Bernard

• Document complete - 2012

<u>Update on 92M (MPD Recommended Practices Document)</u> – Sara Shayegi and David Pavel

- Comment period finished. Changes to document taking place
- Submitted to API in current form
- Revisions pending based on December meeting



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API Spec 16 RCD - Martin Culen.

No update

Review 2014 Meeting Plans and Locations

- Q1 Looking for sponsors. Either Chevron or HESS?
- Q2 Looking for sponsor. Repsol proposed? Further thought required
- Q3 Sponsored by AGR
- Q4 Sponsored by Shell

Scott (IADC) mentioned that each meeting costs about 10 – 15K dollars. Committee can have multiple sponsors.

Discussion

API 7K for mud hoses. Document needs to be reviewed in the afternoon during breakout sessions. Committee comments were sent off to API.

Lunch

Presentation from DNV

• See Appendix 3 for Questions and Answers regarding the presentation.

Vote of New Committee Members

One vote one company.

- (1) Vice Chair position for 2014
 - John K
 - David P ← Confirmed
 - Per Cato
 - Saad

(Each person – to give introduction)

It was a tie and a revote was required

(2) UBO:

- Mohamed
- Dennis (3)
- Isabel ← Confirmed (11)

Isabel ← Chairperson in 2014. Dennis ← Vice Chair



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- (3) Vice Chair for MPD:
 - John K ← Chair
 - Per Cato B ← Confirmed (10)
 - Oscar G
 - Dennis M
 - Saad
- (4) Vice Chair for DGD:
 - lain ← Confirmed (6)
 - Dale
 - Scott
 - Jim
- (5) Vice Chair for Training/HSE Role
 - Ryan (second runner up)
 - Oscar
 - George ← Confirmed (7)
- (6) Vice Chair for Outreach
 - Mike ← Confirmed (13)
 - Emad

IADC Conference locations (not committee meetings) – 2015 (April)

- Calgary (6) (8)
- KL (5) (9) ← Confirmed
- Dubai (0) (2)
- New Orleans (4) (5)

DAY 2 - Wednesday December 4th 2013

Safety moment for the day was presented by Adrian Houlbrook (DNV) on Competency. Driving and Road safety was used an analogy. This led to a presentation of forecasted personnel shortage and the linkage with competency and training. Emphasis was placed on structured systematic training to a known standard, which was demonstrable to a third party.

Following the safety moment the day's agenda was discussed. The main focus of the day is to break out into task groups (e.g. DGD, 7K and MPD) and work on outstanding tasks. Also DNV has offered a tour of their labs at 1 pm. There are 3 labs (Process lab, Mechanical lab, Damage investigation lab) which will be toured.

The group was reminded that the location for tomorrow's meeting was at different facility

Nominate individuals for Well Control liaison

- Scott (MPO) ← Accepted and confirmed
- Earl (Blade) ← Accepted and confirmed



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Dave

Breakout

DGD breakout – Moved into separate room 7K breakout – Moved into separate room MPO subcommittee – Main room

PMCD document review. The group first reviewed definitions together, before dividing into 3 groups to work on specific chapters,

Group 1- Chapter 5 – Marine Equipment

Group 2- Chapter 11

Group 3- Chapter 4, 6, 7, 10

A proposal was brought by Dave Pavel and his group to suggest that we let 92M proceed through the API and receive approved and issuance. But moving forward the aim is to let 92M be the master (generic) document, underpinned with separate chapters/appendices that refer to specific technologies and variants. This structure would be in place rather than new documents for each specific variant with large overlap.

Once these appendices/chapters are created the aim would be to revise & reissue 92 M to act as the main generic document.

The acceptance of this proposal was unanimous amongst the group.

Return from Breakout

Return from breakout. Mike adjourned the meeting by thanking DNV for excellent facilities and tour.

DGD Summary (Kristin)

Minutes of meeting:

- Final version of Workshop program sent to Leesa.
 - o Dale and Dag Ove will discuss content of the opening presentation start of January.
 - o lan will present the opening remarks in the Q1 meeting. Where we are going as an industry and what we will focus in the committee?
- Tool for showing DGD pressure profile
 - Would like to have in web pages
 - We will collect what we have and discuss in Q1 meeting where we will decide way forward
- In Q1 meeting we will discuss focus areas for the Dual Gradient group.
 - So far we have focused on brining information out to the industry through the Selection Tool and the DGD Workshop.
 - o Are there new items that need to be addressed?

7K Summary (Isabel)

- The document seems to be incomplete,
- Numbering is not consecutive,
- Missing pieces such as Table 9.
- Need to consider that crude oil/native oil and/or natural gas can also be used as injection fluids.



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• Testing for different specification levels is confusing, a flow chart could help.

Equipment (Chapter 5) Summary (Per Cato)

- Did not change large amounts of document
- lain great job to highlight a lot of important points upfront
- Consolidated the information and data

Chapter 4, 6, 7, (Dave)

- Reformatted for reference to 92M
- Section 4: We feel that the logistics section should be supplemental to the planning section in 92M. We edited the section to reflect the following supplemental paragraph:
 - As with any operation, it is essential that logistics considerations be adequately addressed to make sure that all required materials are on hand and in sufficient quantities to ensure that operations are not interrupted. For PMCD operations this means the sacrificial fluid as well as dry material for additional mud mixing (LAM), spares for the RCD and other expendables, etc. are available.
- Section 6 Drillstring: We state that the drill string requirements for PMCD operations with a subsea stack are the same as stated in section 6 of 92M with the following supplements:
 - BHA configuration should be considered when choosing what type of logging tool should be used when logging through drill pipe with total losses.
 - o Consideration should be given to the ability to pump cement through the BHA.
- Section 7: We feel that this section should be supplemental to section 8.1 of 92M with the following points:
 - Distribution manifold should be considered for the desired operational functionality
- Sacrificial fluid treatment upstream of the rig pump suction should be considered
- Sufficient pump capacity to pump sacrificial fluid down the drill string and LAM in the annulus should be available
- Sufficient seawater suction must be available to meet/exceed the pump rate required to go downhole
- Section 8 will be completed tomorrow.

Chapter 11 (Earl)

- Summarized definitions and supported with example
- Moved order of definitions
- Candidate selection was considered
- Fluid section moved into the light annular mud section
- Procedures edited
- Updated "nice to" terminology to "shall" terminology
- Discussion on combining RCD sections into one section
- Action Need volunteers to work on Barrier and Environmental section
 - o Per Cato Volunteer for Barrier
 - lain Talking to John for the Environmental
- Section 12, 13 will be covered by 92M

DAY 3 - Thursday December 5th 2013

Mike Vander Staak



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Called the meeting to order and asked for a safety moment. Scott provided the safety moment regarding step ladders and preventing of falls.

Adrian Holbrook discussed the MPD HSE Guidelines in its current format. Adrian indicates the document is not current and does not reflect current industry requirements

- Training and Competencies
- Hazids and hazops (Define and were to get extra information)
- Revision of text to include cross referencing documents committee has worked on
- Detailed Bow Ties
- Equipment qualification
- Whole document need to be more focused on risk management. Needs to be geared toward safety engineered.
- Safety and Integrity Studies and Integrity studies.(SIL and LOPA)

Adrian is willing to provide detailed information in the document and send it to CJ. CJ will present it to the committee.

Need to invite more HSE professionals and have an HSE breakout session. Committee agreed that the HSE Guidelines needs to be reviewed and revised.

Mike reconvened the work groups.

Wrap up, Adjournment and Meeting Minute Approval

Mike thanked committee participants and DNV for hosting the UBO / MPD Committee meeting for December 3-5, 2013.

Ken Downs made the motion the minutes and Harish seconded the minutes. Minutes were approved by the committee.

Appendix 1: Attendees List

#	Name	Company Name		
1	Harish Patel	ABS		
2	David Pavel	AFGlobal Corporation		
3	Roger Stave	AGR Enhanced Drilling		
4	Lars Fosker	Aker Solutions Inc		
5	Earl Dietrich	Blade Energy Partners Ltd		
6	Dale Straub	Chevron		



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7	Per Esvall	Det Norske Veritas		
8	Arne Handal	Det Norske Veritas		
9	Lars Tore Haug	Det Norske Veritas		
10	Raymond Bullock	Halliburton		
11	Saad Saeed	Halliburton		
12	Joseph Karigan	Halliburton		
13	Christopher Bernard	Halliburton		
14	Scott Maddox	IADC		
15	Scott Petrie	Managed Pressure Operations (MPO)		
16	Greg Cantrell	Mathena Inc		
17	Erick Harp	Mathena Inc		
18	Charles Kamps	M-I Swaco		
19	Neil Ross	National Oilwell Varco		
20	Sara Shayegi	Shell International E&P		
21	Per Berg	Statoil		
22	lain Sneddon	Transocean		
23	James Chambers	Weatherford		
24	Dag Ove Molde	Statoil		
25	Isabel Poletzky	Halliburton		
26	Ken Downs	Pruitt Tool		
27	Francisco Chavez	Det Norske Veritas		
28	Adrain Houlbrook	Det Norske Veritas		
29	Mike Vander Staak	Hess		
30	Kristin Faulk	AGR Enhanced Drilling		
31	Corrado Cecconi	Schlumberger Oilfield Services Latin America		



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Appendix 2: Action Item Tracker snapshot as of Dec 5th 2013

#	Assigned To	Issue	Action	Initiation Date	Desired Completion Date	Status
1	M. Culen	92U Status – Next step to send document to technical write	Action Item for Mike – Chase up Blade to find out status of technical writer / Follow up	Sept. 13, 2013	01 Dec. 2013	Open
2	M. Vander Staak	PMCD Best Practices	Follow up with Bob	June 06, 2013	01 Dec. 2013	Open
3	M. Culen	RCD16 End User List	Complete List	June 06, 2103	01 Dec. 2013	Open
4	M. Vander Staak	Write articles and updates for drill bits and drilling contractor magazine. Conduct interview	Chase SC chairs for Updates	June 06, 2103	01 Dec. 2013	Open
5	M. Vander Staak	Content for Subcommittee Web Pages	Chase SC chairs for Updates	June 06, 2103	01 Dec. 2013	Open
6	M. Vander Staak	Air Drillers in Committee	Reach out to air drillers and invite into committee	June 06, 2103	01 Dec. 2013	Open
7	M. Culen	CBHP Best Practices Document	Send sanitized Riser Tension Curve to Sara	12 Sept 2013	01 Dec. 2013	Open
8	B. Grayson	Role of outreach subcommittee seems ill defined	Develop mission statement for outreach subcommittee	12 Sept 2013	01 Dec. 2013	Open
9	Ryan Haggins	Curriculum has been circulated within IADC	Action was taken to review status of document in Frankfurt lead by Ryan, and Brenda's recommendations from IADC.	05 December 2013	12 February 2014	Open
10	Scott Maddox	Well Control committee coordination	Scott to advise committee when next Well Control Meeting is	05 December 2013	12 February 2014	Open



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#	Assigned To	Issue	Action	Initiation Date	Desired Completion Date	Status
12	Scott Maddox	HSE Guidelines.	Send CJ the latest version of the	05 December 2013	05 December 2013	Complete



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Appendix 3: Q & A from DNV Presentation

Arne Handal (DNV) presented "Class Requirements for MPD Systems" to the group. The outline of the presentation was as follows,

- Introduction to DNV GL
- Categories of business (Maritime, Energy, Oil & Gas, Business Assurance)
- Process Overview
- Definitions and Rules
- Standards (DNV-OS-E101 Offshore Standard for Drilling Plant)
- Roles and Involved Parties
- Rules and Recommendations

Nomenclature:

- Q: Question
- A: Answer
- C: Comment
- Q: CJ (Halliburton)
 - Q: Was the material worked on internally or from external sources? I.e. Was this document raised internally or from external influences?
 - A: Both. Very interested in what customer think about things. Before updating, the rules were published. Internal review and external review. Comments from different companies in the world. Some rules modified after input from different companies. Process use experience from different projects, internal capacities, etc. New proposal goes out external.
 - o C (CJ): Many people haven't seen or been involved with this standard
 - o C (Mike): Heard about standard in Q2 when it appeared that the revision was underway.
 - A: It is a self-facilitating standard. Uses API standard as references. Industry benchmarking and minimum safety level is the aim. DNV would like to work together with everyone. Feedback welcome.
 - C (Mike): This Classification is released now and being implemented now. So if revision and feedback is required. Now is the time
 - A: Implementation is 6 months
- Q: Dag Ove (Statoil)
 - Q: Presented in May this presentation was given as a way to do development projects i.e. project based development. Way too early to release a standard. In my opinion we do not have authenticated rule and regulation for components yet. But seeking for something that is familiar. Too early. Statoil is still trying to work on internal rules and regulations which are still evolving. E.g. within 2 months it may change
 - A: Not all details in standards. Addressing some of the equipment is primary well control. The primary intention was to introduce a framework and not specify all details. DNV feels they are aligned. Project with Statoil and other companies DNV is being pushed in direction to find out how to interpret rules & find a solution.
 - C (D.O): What you presented project based approach Statoil liked. It is good as we are working as a close team. Seeking information to develop standard. But suddenly you come up from this standard – which is concerning
 - A: Not all new. Followed same principles for other systems. The standard is a functional requirement and not prescriptive. Rules are in place, but if a variation



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is required then with proper documentation, etc – then it is OK. Not closing any doors for cooperation or development

- Q: Dave Pavel (AFP)
 - o Q: How many Drill or Drill N class have that notation are there 10's, 100's?
 - A: More than 100
 - o Q: What level of cooperation between DNV and other bodies
 - A: Open. No particular cooperation with other rules of bodies. Offshore standards no cooperation
 - Q: Safety Logic Control if loss of logic control, if compromised well barrier (pg 21). Please clarify – is there a safety system required as a redundancy?
 - A: If control system has a failure, and it can cause a loss of primary well barrier or safety critical for installation.
 - A: MPD systems are wide and varied. MPD control/process systems. Process control industry secondary or third means of safety ensuring have a safe process. What needs to be ensured is that if you lose the control system, then the system should be able to shutdown the process system in a safe way. Additional control to bring logic to a safe state
 - C: This should have been worked out in Hazop. Will find mitigation for scenarios without having to build a secondary unit.
 - A: Way it is documented in Hazop it will be identified
 - Q (Per Cato): No one has got this today won't this hurt DNV today
 - A: Not talking about redundant system. Talking about safe situation/system.
 - O Q (Dag Ove): Are you moving to no redundancy, but only require safety system
 - A: DNV rules based on safety. If you can bring you process to safe situation that is the main aim.
 - Q (Dave Pavel): What complexity of safety system
 - A: Can be simple hand switch, pressure transmitter, etc. Not telling how to operate or implement
 - o C (Ray): Safety Logic Unit to most means PLC, automation
 - A: Not care of control of ordinary control. Only care when lost. So you have to detect failure. Mixed of automatic or manual. (1). Knowing that you lost it. (2) How to handle
 - o C (Group): Example discussion
 - o C (Group): Need to understand us and terminology
 - o C (Ray); DNV inspectors no understanding on your our side as to rules
 - A: All approval by Norway (this office)
 - C (Mike): Where we are heading is the correct direction. Our involvement is critical to clarify. Semantics we need to work out. Not attacking rules. Need to understand document and interfaces
 - A: In principle nothing new. E.g. Well testing. Not trying to introduce anything new.
 - C (Mike): Responsibilities who is responsible?
 - A: Rig contractor (who has class certification)
 - C (Dave Pavel): Not operated out of spec (pg 22, 25) to do with liability and not classification
 - A: Rig owner has classification certificates so they need to comply. Also not in spec it is a general comment
- Q: CJ (AFP)
 - Q: If there was a system that was preapproved with another certifier (e.g. ABS) and then moved to a DNV facility would it be pre certified.



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- A: No. Needs to be certified again.
- Q: (Dale and Mike)
 - Q: Comment for next revision. How do we get involved?
 - A: Would like to get your feedback. There may or may not be a revision in April next year.
 - C (Scott): Send to IADC Scott will send to participants. Scott can consolidate responses and send to.
 - o C (Dale): Want to respond independently
 - A: Many revised in 2013. So there should be a revision in April
- Q: (Scott)
 - Q: Is there a website where people can personally provide feedback
 - A: Yes during hearing process
 - A: Refers back to other standards
- Q: (Dag Ove)
 - o Q: Once you have DNV certification (pg Triangle) can it be moved to another well
 - A: Not necessarily. May be in parts.
 - C: New pressure window. Need to get new approval
 - A: Yes. Re approval (as not required to start from scratch)
 - A: Major overhaul every 5 years
- Q: (CJ)
 - Q: What is the main driver for this standard is the driver oil companies or is it regulatory driven?
 - A: Whole industry is the driver. Main customers are rig owners. Rig owners are driven by insurance.
 - A: Hull classed all of the time. Drill plant optional (Drill or Drill N are optional).
 Only 35 Drill N.
- Q (Mike)
 - Q: How do we proceed
 - A: CJ we had started a task group to work with DNV, ABS, etc. CJ to work with Scott to communicate and coordinate
 - A: DNV welcomes all forms of communications. They will present a mailbox.
 - C: Need to have involvement from all classification groups. Need to have breakout to bridge gap. Prepared in Q1 next year CJ to determine time, delivery date. For the Review of current documents
- Q (DNV)
 - o Q: For ABS is there rules for MDP systems
 - A: Started process a month ago. Draft should be out in February 2014.
 - o C: Liaison is CJ