



IADC Well Control Committee Meeting Minutes
Thursday 3 December 2009
Wild Well Control, Houston, TX

Steve Vorenkamp of Wild Well Control, meeting host, welcomed all and provided building safety information. Attendees introduced themselves and **Steve Kropla** of IADC, called the meeting to order.

IADC Anti-Trust Policy and Guidelines

Mr. Kropla reviewed IADC Anti-Trust Policy and Guidelines, referring attendees to the IADC website for a copy. The latest revision of the Anti-Trust Policy & Guideline dated March 2009 is available at <http://www.iadc.org/antitrust>.

Well Control While Drilling with Casing

Steve Rosenberg of Weatherford offered a presentation titled "Well Control Considerations for Non-Retrieveable DwC Systems". Highlights of the presentation follow.

- When using non-retrieveable casing while drilling (CwD) technology, the casing is drilled in using a drillable or sacrificial non-drillable bit that is left in hole, through which cement is pumped.
- Benefits of DwC include safety and cost/time.
- Main advantages of CwD over conventional drilling
 - Smear Effect - reduces losses, wellbore strengthening
 - Hydraulics – dynamically control influx (annular velocity is faster per unit pump rate compared with conventional drilling methods)
 - Casing/Liner on bottom – Can circulate anytime, and ready to cement when TD reached
 - No tripping or trip margin – Trips are primary reason for well control incidents with conventional drilling methods
 - Reduced surge/swab effects - minimal tripping
 - Mechanical Well Control Barriers already in place
 - Floating Mud Cap barrier
 - Can cement almost immediately after TD reached
- CwD Disadvantage
 - influx will be longer and come to surface quicker due to narrow casing annulus as compared to conventional drilling. (This needs to be taken into account when calculating kick tolerances.)
- Top Drive Casing Drive Tool provides mechanical and hydraulic energy to CwD and contains valving and sealing elements for well control.
- Conventional casing float equipment is mechanical well control barrier in casing or liner.
- ECD's are higher with CwD.
- CwD under diverter uses similar kill procedures as conventional drilling under diverter. (The diverter sealing element will close on pipe faster using CwD due to larger diameter of casing vs. drill pipe.)
 - Conduct DWOP with key operator, Contractor, and service personnel and assign responsibilities
 - Higher AV and ECD s created from CwD will mitigate shallow influx (case histories in Lake Maracaibo, Venezuela).
- CwD under surface BOPE
 - Recommend double ram BOPE with upper and lower casing rams.
 - Shear rams to shear casing may be required (refer to local regulatory agency requirements). (MMS requires shear rams.)

- Conduct DWOP with key operator, Contractor, and service personnel, and assign responsibilities.
 - If influx detected with casing on bottom, use similar kill procedures as in conventional drilling operations (driller's method or wait and weight).
 - If influx occurs while tripping in hole with casing, consider stripping to bottom, or if casing shoe shallow, tie casing down and bullhead to stabilize well.
 - Liner Drilling – If influx taken with liner on bottom, use same procedures as conventional – circulate out kick, condition hole, and cement liner in place.
 - If influx taken with liner off bottom, consider stripping liner to bottom, circulate out influx, condition hole and cement in place.
 - If liner too far off bottom to strip in hole when influx taken, consider bullheading to stabilize well and POOH to make conditioning trip prior to starting liner drilling operations.
- In non-retrievable systems, the driller must plan ahead to assure that one bit can complete the drilling to depth. If multiple bits needed, a non-retrievable CwD will not be the system to use.

Dale Oveson from Tesco Corporation delivered a presentation focusing on Well Control issues when CASING DRILLING™ with Retrievable Bottom Hole Assembly (BHA). An emphasis was put on Kick Detection as well as the tools and methods used at surface to bring a kick under control when tripping retrievable BHA's. The presentation also discussed the need for planning each individual job, CASING DRILLING™ specific Well Control issues, and training prior to starting a job.

Casing Drilling with Retrievable BHA needs additional well control equipment, many different retrieving configurations, pre-planning and training, and practice of procedures before needed.

Tesco has had no significant well control incidents in 500+ wells drilled since first commercial application of Casing Drilling with Retrievable BHA.

MMS Subpart –O Audits

Brandy Harrington, Consultant, discussed Well Control Training Plans and audits by Operators. Ms. Harrington recommended that, when the drilling Contractor is developing a plan, don't take the Operator's training plan – develop your own. Also don't use a standardized plan like T2. You will be required to demonstrate all aspects of the plan's implementation. Be sure that all aspects of your plan fit your business. She also reminded Contractors that Subpart O does not apply to the drilling Contractor; the Operator company is responsible for developing the training plan, but is passing along the requirement to develop a training plan to drilling Contractors.

Relevant content for a Well Control Training Plan should include:

- How to select a training provider;
- Process for verifying employee retention;
- Internal audit;
- Maintaining documentation (Five year retention for both active and inactive employees is required.)
- Include the revision date;
- Make plan widely available throughout the company (including marketing, sales, HSE, etc.).

Audit by Operators – During an Operator's audit, Contractors must be able to provide the number of personnel on each rig, as well as the number of years experience for each employee on the rig, and records of the employees' training. Ms. Harrington encouraged Contractors to improve recordkeeping to assure they could produce documented evidence of the above quickly, generally meaning within 20 minutes of request.

Job descriptions are also important records. The Contractor must maintain them, but should not include them as part of the Training Plan. The job description is helpful during MMS testing, as MMS can only test to the skills level specified in the job description.

MMS is likely to move to systematic testing as part of a systems audit. Ms. Harrington encourages Contractors to let employees know what to expect during the testing. Contractors should have review materials available to help employees prepare for testing. Contractors should also let employees know about and see the MMS Employee Interview Form to become more comfortable with the interview process.

MMS Operator audit schedule is to be announced in February.

Internal Audits – The training provider audit records of IADC may be beneficial to Contractors. Contractors may rely on IADC accreditation audit records as support of verifying training provider qualifications. The Contractor should be prepared to prove accreditation. The Gulf Coast Safety and Training Group's audit template could serve as a template for Contractor audits.

Break sponsored by Wild Well Control

Nomination of New WellCAP Panel Member

Mr. Kropla of IADC mentioned that Mark Milne of Transocean, a current member of the WellCAP Review Panel, needs to step down as a panel member since his work duties have shifted. The floor was open for nominations. Petar Radulovic of Diamond Offshore had been nominated in advance of the meeting. No other nominations were received. A motion to approve Mr. Radulovic as a new WellCAP panel member passed.

Curriculum Subcommittee Review

- Goran Anderssen of Chevron briefed members on the current activities of the Curriculum Subcommittee, which has met once.
- The Subcommittee concluded from its first meeting that basic well control has not changed. "Exotic" techniques have appeared on the stage since 1999, and some have become more "main stream". Therefore, the curriculum review is likely to look more at new techniques and equipment rather than to revisit the old techniques such as "driller method in a vertical well", as an example.
- The Subcommittee will review existing curriculum to consider whether or not new work processes, new procedures and new equipment need to be included to reflect recent developments in well control.
- Subcommittee members will consider the possibility of adding modules to a current curriculum. This is, in some ways, already practiced. Currently Sub-Sea is an add-on to regular Surface stack certification. The Subcommittee is looking into how, and the need for, adding topics such as Deepwater, Managed Pressure Drilling, Extended Reach Drilling, Drilling With Casing, Slim Hole, Underbalanced Operations, etc., as a part of the various levels in the WellCAP curriculum. Mr. Anderssen also asked for members to provide input into what add-ons to consider.
- The Subcommittee wants to make changes only when the change will add value.
- Six to nine months will be needed to complete the Drilling curriculum review.
- Mr. Anderssen asked for more volunteers to help complete this work. **Hal Kendall** and **Dale Oveson** volunteered.
- At this point in time, the Subcommittee considers Underbalanced Drilling, Air Drilling and Steam Drilling to be outside the scope of this Subcommittee.

Simulator Subcommittee Report

Mr. Vorenkamp of Wild Well Control reported that the Simulator Subcommittee is considering:

- Simulator use for new curriculum modules;
- Changing focus of the Subcommittee to include recommendations for instructor support by simulator companies; and
- Requirements for instructor competencies for simulator operations.

Mr. Vorenkamp requested feedback from members about what instructor requirements for knowledge of simulators should be considered. The thinking is that the requirements should be more than just hours of experience on the simulator, as is currently required in the WellCAP Instructor Qualifications.

Lunch provided by Wild Well Control

Other Subcommittees Reporting

Brenda Kelly of IADC provided an update of the SafeGulf CBT Subcommittee's work. She reported that the Subcommittee has nearly completed its work, and that the recommendation to permit E-learning delivery of basic rig safety orientation will be presented to the SafeGulf organization shortly. This recommendation will include specific conditions and limitations for E-learning delivery. These conditions are being finalized at this time.

Kenny Jordan of the Association of Energy Service Companies said that the IADC Well Service Committee has put together a subcommittee to review the WellCAP Curriculums for Well Servicing, Workover/Completion, and Wireline. The Subcommittee is in the process of distributing a questionnaire to both the membership of IADC and AESC to solicit input on what changes need to be made to current IADC Well Servicing-related curriculums. The responses from the survey will be used to make recommendations for changes to existing curriculums.

Committee members are urged in the strongest possible terms to ask the appropriate person in their organizations to complete this important, landmark survey. The link to the survey is: <http://www.surveymonkey.com/s/SBY26Q2>.

The Well Service Curriculum Subcommittee will provide input to the Well Control Curriculum Subcommittee for consideration and implementation into the Well Servicing-related curriculum documents.

WellCAP News

Ms. Kelly of IADC reported on several news items with the WellCAP programs.

- 1) A WellCAP Plus Facilitator Certification Course was conducted in September. This was the first course open to both WellCAP Plus and WellCAP instructors. Challenges arose from this course because of the blended course and the large percentage of participants with "English as the second language" skills. New administrative procedures governing registration needs to be developed to improve the course functioning. Things being considered are: 1. limit the number of internationals enrolling who have limited English skills; 2. define conditions under which WellCAP instructors may participate; and 3. restrict the course to WellCAP Plus-accredited companies.
- 2) Three WellCAP Plus courses will be offered in 2010. Specific dates are to be determined with the instructors. March, June and September dates are planned. IADC is seeking hosts for the courses.
- 3) Separating Instructors Approval from Program Approval – IADC staff was to develop new administrative procedures for this process. These are being developed, but there is no news to report at this time.
- 4) WellCAP Audits to be scheduled for 2010: Columbia, Egypt, Libya, Saudi Arabia, Singapore, United Arab Emirates, and United States (LA, TX, OK, and NM). If a Committee member will be traveling to any of these locations in 2010 and would have time available to conduct a WellCAP audit, please contact Brenda Kelly at IADC.
- 3) Two well control conferences are scheduled for 2010: Aberdeen (13-14 April 2010) and Bahrain (29-30 November 2010).

Steve Kropla of IADC gave an overview of celebration events planned for IADC's 70th anniversary in 2010. IADC will also be celebrating the 20th year of hosting well control conferences.

Open Discussion

The Well Control Committee should consider planning special events that could be held in conjunction with IADC conferences.

The potential for WellCAP courses to be more modularized to accommodate E-learning delivery was discussed.

The date of the next Well Control Committee meeting will be announced at a later time.

The meeting was adjourned at approximately 13:30 pm.

Action Items:

- Invite David Dykes to speak at the next Well Control Committee meeting.
- Provide Steve Vorenkamp feedback on what knowledge of simulators should be required for WellCAP instructors.
- Committee members are urged in the strongest possible terms to ask the appropriate person in their organizations to complete this important, landmark survey. The link to the survey is: <http://www.surveymonkey.com/s/SBY26Q2>.

Future Meeting Topics:

- Automated choke – potential speaker Greg (?) Duhé, MI Swaco (Rick deBuys recommended topic)

Attendance:

Name		Company Name
Kenny	Jordan	Association of Energy Service Companies
Ron	Crotzer	Bladestone
Mark	Mazzella	BP
Glenn	Henninger	Chevron
Dan	Javonovic	Chevron
Travis	Webre	Chevron
Goran	Andersson	Chevron
Earle	Findley	Consultant
Brandy	Harrington	Consultant
David	Chavez	CS Inc.
Steve	Carr	Cudd Energy Services
Petar	Radulovic	Diamond Offshore
Clive	Battisby	Drilling Systems (UK) Ltd.
Bob	Burnett	Hercules Offshore
Don	Hickman	Hickman Sales & Service Inc.
Brenda	Kelly	IADC
Steve	Kropla	IADC
Marlene	Diaz	IADC

Hal	Kendall	Kenda Enterprises
Jim	Kulis	Nabors Well Services
Benny	Mason	Occidental Oil & Gas
K. Cheryl	Francis	Occidental Oil & Gas
Bernardo B.	Navarro	PETEX
Fran	Kennedy-Ellis	PETEX
Dale	Oveson	Tesco Corporation
Glen	Wanzer	University of Oklahoma
Barry J.	Cooper	Well Control School
Matt	Vorenkamp	Wild Well Control
Steve	Vorenkamp	Wild Well Control