

All meetings must have a written agenda that is circulated prior to the meeting. Attendees must strictly follow the agenda. Topics not on the agenda must be deferred until the next meeting. An attendee shall be assigned to record and distribute the minutes of each meeting. The minutes shall include a record of who attended the meeting.



# Well Control Committee Meeting

## 13 November 2013

**Host: IADC**

10370 Richmond Ave., Suite 760, Crown Center 1-2  
Houston, Texas 77042

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### MINUTES

	<b>DRILLING CONTRACTORS' FOCUS MEETING</b> <i>This session is open to drilling contractor members ONLY!</i>
<b>7:00 – 8:00</b>	<p><i>Dan Munoz, Transocean, Chairman</i></p> <ul style="list-style-type: none"><li>• Discussion Topics:<ul style="list-style-type: none"><li>○ What keeps you awake at night?</li><li>○ What can the Well Control Committee do to help?</li><li>○ What topics would you want to see on the next agenda?</li></ul></li></ul> <p>No official notes will be submitted.</p>
	<b>WELL CONTROL COMMITTEE (All members)</b>
<b>8:00 – 8:05</b>	<p><b>Welcome</b> <i>Dan Munoz, Transocean, Committee Chairman</i></p> <p>There are many volunteer opportunities coming up. Dan may be calling on members to participate.</p>
<b>8:05 – 8:10</b>	<p><b>Facility Orientation/Safety and IADC Antitrust Guidelines &amp; Policies</b> <i>IADC staff (Brenda Kelly)</i></p> <p>Note: The IADC Lexicon is now live. Go to <a href="http://www.iadc.org">http://www.iadc.org</a> to view.</p>
<b>8:10 – 8:20</b>	<p><b>Attendee Introductions</b> <i>Dan Munoz</i></p> <p>All members introduced themselves.</p>

## Lessons Learned

*Gary Nance, Chevron*

Gary Nance presented information about a task force formed by OLF (Norwegian Oil and Gas Association) to “reduce the number and potential severity of well control events on the NCS.” In one case study, a blowout occurred (including loss of 1,500 bbl of mud). The lesson was that the crew should have carried out “dummy connections” and should have had a better understand of the physics of the situation.

Note from Gary Nance: Dummy connections allow the crew to pick up to the height at which they would normally make a connection, turn the rotary and pump off, then go back to drilling (turning rotary and pump back on). Then the crew can circulate bottoms up (BU) to see if they get a spike in the gas readings from making the “dummy connection.” It is important to shut in and circulate the well through a choke while applying a few hundred PSI, thereby controlling back pressure.

In this situation, the crew should have compared connection gas and background gas levels, assessed the risks of fracturing and losses and the risk of ballooning, and they should have been more careful when drilling through zones of increasing pore pressure. Most importantly, they should have realized the following:

- Gas from TD should always be considered after circulating after a short trip.
- Under these conditions, Bottoms Up should always be circulated through the choke with the BOP closed.
- Possible gas in the riser should always be diverted overboard. Free gas to the drill floor is not an option.

During the question period following Gary’s presentation, a member made the rebuttal comment that, although he does not necessary disagree, he believes it may have been premature to accept the conclusion that possible gas in the riser should always be diverted overboard. The group was reminded of the current, ongoing activity of an IADC workgroup (the Gas in Marine Riser Workgroup) that is discussing exactly this issue (among others) at the behest of the WCC. The result of the workgroup activity is expected to address this specific issue and will be presented to the WCC when this work has been completed.

### Gas Solubility

The solubility of a gas/liquid mixture may be expressed as the amount of free gas. (Contact Gary Nance for more information about his presentation.)

Gary also provided a handout called “Methane Solubility in NAF.” The handout illustrates why it is so important to close the BOP and controlling the back pressure. These case studies provide good information to use in teaching well control. Sometimes you cannot react to an event because it happens too quickly; you must prevent it altogether. It is key to prepare toolpushers and other supervisors to make a choice about where the pressure is and how fast they can circulate this mixture. Do they know what their unit can handle (unit design limitations)?

OLF website provides case studies available at no charge to the public. Go to:

<http://www.norskoljeoggass.no/en/>

Use this link for an article about OLF: <http://www.norskoljeoggass.no/en/News/OLF-becomes-Norwegian-Oil-and-Gas1/>

8:20 –  
8:30

<p><b>8:30 – 8:45</b></p>	<p><b>WCI Update</b>  <i>Cason Swindle, Noble Drilling, and Malcolm Lodge, Consultant</i></p> <p>The IADC Executive Committee met last week and reviewed and approved the scope of the WCI and the WCI's relationship to IADC. WCI will govern the new standard and IADC will provide administrative support. There is a great interest in bringing together all stakeholders of the well control process to discuss and set the bar for well control safety. That has increased the scope of the WCI. As Colville has traveled around the world to talk with company leaders, he has encountered a great deal of support for the plans for WCI. Governance will include a Board of Directors comprising 18 representatives and an Advisory Panel consisting of 24 members. This will allow them the option of splitting into sub-groups. Voting will require a supermajority to prevent any one group of stakeholders from driving all decisions. The Advisory Panel will be reformed and increased in size to include more of the stakeholders. The Panel's Recommendations document has been completed. Malcolm Lodge has been appointed the WCI's Training and Assessment Director.</p> <p>Gene Wilson expressed some interest in getting the IWCF back on board with WCI and this Standard. We have been very open to their participation and still hope to engage them. How we get to the single Standard will require some diplomacy.</p> <p>The Board of Directors is not in place yet; however, some names have been submitted for consideration (senior-level people at the bigger companies). The Panel will work very closely with the WCC to further develop the Standard.</p> <p>A question was submitted about the testing and how it will be delivered to the testing centers and training providers. The details have not yet been determined. A few options have been discussed.</p> <p>The WCI does have a domain for a website, but the content has not been developed. As soon as the website is created, the link will be provided to all WCC members. The IADC marketing team has begun creating the materials and the communication plan. IWCF has already been involved in considerable marketing efforts. However, we anticipate some changes in their rollout schedule. The faster we can start communicating our efforts, the better. We believe that it will become clear that our recommendations are more robust than those of the IWCF. Ultimately, it will come down to what is required in the contracts between operators and drilling contractors. Currently, the percentage of certificates between IADC and IWCF is probably about 60% to their 40% (our 44,000 to their 22,000 certificates).</p> <p>Within the next few weeks, Dan M. will select a small group from the WCC to work with Malcolm on further developing the Standard from the Recommendations document. This group will work intensively and will require a serious commitment. We do feel some pressure to get this moving forward quickly. The Standard currently includes high-level recommendations, and the details of the curriculum will begin to be built by this small group and then will be sent back to the Panel for their input. The full WCC will then be able to review and provide feedback.</p>
<p><b>9:15 – 9:30</b></p>	<p><b>Break</b></p>

## **Review of Action Items**

*Dan Munoz*

Julia Swindle received some volunteers for the API RP 75 group.

Paul Sonnemann forming a Gas-in-Riser Workgroup is meeting regularly and progressing toward accomplishing the workgroup's objectives.

Patty Tydings made corrections to the agenda regarding differences between API Recommended Practice, Standard, and Bulletin.

Note: One member mentioned that the minutes from the last meeting were not on the WCC webpage as of 2 weeks ago; however, they are there now.

The Well Control Survey has been created and will be linked to the IADC website for WCC Members and nonmembers may provide input. We are asking for the topics for which you consider yourself an expert, the type of experience, etc. It will also be distributed to WCC members through email. What type of experience do we want to ask for (e.g., well control incidents)? If anyone has an opinion on this, tell Brenda today to get it on the survey before distribution.

The Curriculum Subcommittee has been greatly expanded (18 people at present).

No one has volunteered to help with the Marine and Technical Maintenance KSA groups. Brooke Polk still needs more volunteers. Keep on the action items list.

Mike Killalea is not present to report on members who have volunteered to help with the Drilling Manual; however, at least one person from this committee indicated he joined that effort.

We have not received any nominations for a new committee co-chair from the offshore community. BK is meeting with the North Sea chapter in Scotland next week and will speak with them about expanding this committee internationally.

Dan Munoz set up a panel for this meeting (see Mud/Gas Separators below).

Chevron simulator assessment guidelines can be provided to the Simulator Subcommittee. Gary Nance will communicate with Benny Mason about this. (Keep as an action item.)

**8:45 –  
9:15**

**Panel: Mud/Gas Separators—Avoiding Unpleasant Surprises**

*Paul Sonnemann, SafeKick, Moderator*

- Gene Wilson, Aberdeen Drilling Schools
- Ron Crotzer

Crotzer reported that the people on the rigs do not understand how the mud/gas separators equipment works. If we want this equipment to work in the field, we have to explain how it works to the people in the field. Companies need to send out to the field someone who can educate these guys. They are capable of understanding this and just need some instruction. We have built some models to illustrate this phenomenon to them.

Is anyone aware of a good paper on mud/gas separators? There was a 1992 Paper titled Practical Design of Mud/gas Separators from Chevron. No one is aware of a recent paper, but there have been a few papers in the past. Equipment use needs to be introduced into the curriculum for the Engineers course.

Wilson presented from the “rig hand’s” point of view. See PPT. Wilson worked in the past as a HPHT driller. When he goes out to the field and asks the hands how the MGS (what they call a “poor boy”) works, they cannot tell him. They cannot even tell him how fast they can circulate through it. However, it works on the same principle as a toilet. The MGSs are currently an afterthought in the field, which does not work because the toolpushers will not take it seriously if it is an afterthought. The straighter the vent lines, the less the back pressure will be. The MGS is built on retention time based on the low-pressure unit and its capacity.

One of the ways to help the characteristics of these vessels is to keep the density to a higher level. We need to teach the hands to use the data available, e.g., the throughput safety factor. They do not tend to know the limits of the MGS and may be surprised by those limits. As long as we stay within the design limits of the equipment (e.g., MGS), the equipment will work, but the hands need to know ways to stay within that design (e.g., choke control). Tell the company man, do you want to take the extra time to do it right, or do you want to spend far more time correcting mistakes? We can provide operational decision points for the hands (e.g., monitoring gauges). They need to add a trend line. The MGS often needs to catch up, and the hands need to know how to accomplish that. Give the toolpushers and drillers the operating information they need to make good decisions.

Industry is rewriting the training Standard, and now is the time to get this included in the curriculum for both the Driller and Supervisor courses. This Panel could provide the training material to add to the curriculum for the Levels 2, 3, and E courses. The material does exist in the curriculum but needs to be presented for consensus on depth and detail. There does not appear to be any good data available on MGS, so we may need to investigate further.

9:30 –  
10:30

## Industry Groups Update

- API Subcommittee 16 (Specifications 16A, 16C, 16D, & Standard 16AR for Drill-Through, Choke/Kill, & Diverter Equipment): Alex Sas-Jaworsky (SAS Industries)—NO REPORT
- API Standard 53 (Blowout Prevention): Gary Nance (Chevron)

Standard 53 has been rolled out and is available. We can now remove this from the agenda for the next meeting.

- API RP 59 (Well Control Operations): Bill Rau (Chevron)—NO REPORT
- API RP 64 (Diverter Systems): Alex Sas-Jaworsky—NO REPORT
- API RP 75 (Offshore Safety and Environmental Management Program): Scott Randall  
Julia Swindle mentions this in her report below.
- API RP 96 (Deepwater Well Design and Construction): Scott Randall, Bill Rau - NO REPORT

- API Bulletin 97 (Well Construction Interface): Bill Rau—  
Will be published soon. Can be removed from the agenda.

- BSEE SEMS update: *Julia Swindle, IADC*

Round 1 of the SEMS 1 audits ends Friday (11/15/13). Everyone is eager to know BSEE's conclusions. SEMS 2 should stay on our calendars, but there is nothing to report now. The USCG put out an advanced notice of a proposed rule regarding a SEMS-type program based on RP 75. Send your comments to John Pertgen and give Julia your business card if you want more information from her. IADC is preparing an official response. Send comments to John. The comment period has been extended to 1/23/14. Center for Offshore Safety (COS) is currently just deepwater GoM, but they will be expanding to all of the continental shelf. They are creating Safety Performance Indicators (SPI). One of the SPIs has been well kicks, but this is not well defined. If anyone here is interested in participating in this this effort, contact Julia Swindle at IADC ([Julia.swindle@iadc.org](mailto:Julia.swindle@iadc.org)) and she will connect you with the leader of that group. They do need more SMEs from the drilling side.

- International: Julia Swindle, IADC

The European Union has a directive for offshore operations, and we have not been monitoring that. Action item: Julia will get more information about this to see if there is some material she can present that affects training.

International Regulator's Forum: Nothing to report on that currently.

10:30 –  
11:00

11:00 –  
11:15

### **Update on WCC Subcommittees & Workgroups**

- Curriculum Subcommittee – Gary Nance, Chevron

Gary showed the Training Module Matrix and how to provide feedback. We are meeting this afternoon about how to best make headway on this matrix and to identify curriculum for each of the training levels. We will be forming teams to divide the curriculum into the five courses: Awareness, Introductory, Driller, Supervisor, and Engineering. Gary has gone through the Fundamental curriculum to highlight material that could go into the five courses. New material will be added to the Engineers course based on new training modules identified by OGP. He hopes to have this work complete in about one month.

- Simulator Subcommittee – Benny Mason, Rig QA

Gene Wilson reported for Benny Mason (not present). Benny sent Brenda a spreadsheet from his committee. The first round of simulator analysis has been completed and shows what can be taught on a simulator and what should be taught on them. Action item The WCC needs to look at this spreadsheet and provide input through Brenda, who will check with Benny to get the most recent version of that spreadsheet. It is important to keep in mind that they have determined what CAN be done on a simulator, but most people do not know yet how to do it. The next challenge is how to communicate to the Training Providers about how to do this. Their goal is to present instructors with templates (a snapshot) for using the simulators during instruction. They focused on what we can do with the existing systems. Also, they took the time constraints into consideration.

- Gas in Riser Workgroup – Paul Sonnemann, SafeKick

This workgroup meets monthly. Their first task was to prepare a document for the Deepwater Guideline revision. This has been accomplished. At the next workgroup meeting, Paul Sonnemann will be showing the new material. WCC members who want to see this can attend the meeting. Contact Paul if you want to be included on the distribution list. In previous meetings, they identified 10 objectives, and this is the first objective they have completed.

- Barriers Workgroup – Scott Randall, PlusAlpha Risk

Scott is not here. Gene Wilson is interested in working with Scott on this but has not heard from him yet.

## IADC & WellCAP News

- KSA project status (Brooke Comeaux Polk, IADC)

Four groups have completed the first round of work, and those KSA's are being uploaded to the database. The Technical Maintenance and Marine groups need more people to be involved to accelerate their progress. Several new groups have formed (e.g., Company Man and Crane/Rigger groups).

- Subsea Engineers Certification program (Mark Denkowski, IADC)

This group was originally informal and focused on maintenance. They identified positions that might touch the BOP. They determined the years of experience needed for coming into this position. They defined how to assure competence. Now, they are discussing how to test these individuals and who will provide the test. They are discussing the scope of the project, which needs to grow because they are not discussing some of the real issues (e.g., electronics). The group meets under the umbrella of the COS just because that is where the members were already meeting, but they want the group to operate under the WCI, which can also give the group some authority to act. This is an open meeting, so if you want to be involved see Mark and he will give you the information about meeting dates. Mark will continue to report on their progress also. Action item: Gary Nance suggests that the group look at the Training Module Matrix, which Mark can send out to committee members who have been involved in the KSA development.

- IADC Publications update: *Deepwater Well Control Guidelines* and *Drilling Manual*

Paul Sonnemann explained that members of the group are working with individual chapters. They are identifying deadlines now. The goal is to get it in a final draft stage to send to IADC for formatting and editing and for the document to be complete by the end of 2014. Some groups are reporting 70 to 80% completion, but others are not as far along. They are also identifying some new topics that were not included in the previous version and need to be added. The Drilling Manual continues to progress.

- Nominees for: 1. 2014 Vice Chairman (Offshore Drilling Contractor); 2. WellCAP Review Panel

Elton Cherry was nominated for the WellCAP Review Panel and provided a short autobiography. He has years of drilling operations experience, has managed technical and WellCAP training, and is a certified WellCAP instructor and WellCAP Plus facilitator. The group voted unanimously in favor of Elton joining the WellCAP Review Panel.

- Other News (*Brenda Kelly, IADC*)

Annual Meeting was last week. The Executive Committee was very supportive of our special projects and the WCI (e.g., KSA, WADI).

11:15 –  
11:30



<p><b>11:30 – 12:00</b></p>	<p><b>Open Discussion/Next Meeting Topics</b></p> <p>Discussion topics:</p> <ul style="list-style-type: none"> <li>• What topics, speakers do the WCC members want to see at the next WCC meeting?</li> <li>• Do other WCC members want to meet with subcommittees or focus groups at 7 a.m.?</li> <li>• Other topics</li> </ul> <p>The next meeting is in February. Meetings are generally schedule on the 3<sup>rd</sup> Wednesday of the month, and next meeting will be in February 19, 2014. We will try to synchronize with the WCI and might have to change the regularly scheduled meeting time.</p> <p>Malcolm or Cason will be reporting on the progress of WCI at every meeting.</p> <p>The COS has set up single points of contact, and Julia is the SPC for IADC. She can provide us with information at every meeting regarding the activities of COS that may affect well control.</p> <p>IADC will be contacting WCC members for help on projects and feedback of work products between now and the next meeting.</p> <p>Other groups are encouraged to meet as focus groups at 7 a.m. We may want to provide breakfast to get more participation.</p> <p>Dan Munoz explained the conversation we had at the Drilling Contractors Focus Group this morning about screening pre-hires for certain aptitudes. We are considering a survey of all drillers to identify the commonalities of the high-functioning drillers vs. the low-functioning drillers.</p> <p>Mark Denkowski showed a well blowout video (provided by Joe Hurt). The link to the video is <a href="http://www.drillingahead.com/video/video/show?id=3116006:Video:286320&amp;xgs=1&amp;xg_source=msg_share_video">http://www.drillingahead.com/video/video/show?id=3116006:Video:286320&amp;xgs=1&amp;xg_source=msg_share_video</a>.</p>
<p><b>12:00</b></p>	<p><b>ADJOURNMENT</b></p>

## Action Items Only

#	Responsible Party	Timeline (on or before)	Action Item
1	All members	1 wk	Email B Kelly ( <a href="mailto:brenda.kelly@iadc.org">brenda.kelly@iadc.org</a> ) if you have anything to add to the Well Control Survey.
2	Kelly & Tydings	2 wks	Distribute the Well Control Survey.
3	All members	2 wks	Contact Brooke Polk ( <a href="mailto:brooke.polk@iadc.org">brooke.polk@iadc.org</a> ) if you can help on the Marine and Technical Maintenance KSA groups.
4	All members	2 wks	Contact Fran Kennedy-Ellis ( <a href="mailto:fran.kennedyellis@iadc.org">fran.kennedyellis@iadc.org</a> ) if you can help with the <i>Deepwater Well Control Guidelines</i> .
5	All members	Before next meeting	Contact B Kelly ( <a href="mailto:brenda.kelly@iadc.org">brenda.kelly@iadc.org</a> ) to nominate someone as the 2014 WCC Vice Chair.
7	Gary Nance	Before next meeting	Send Chevron's simulator assessment guidelines to BK, who will then forward materials to the Simulator subcommittee.
8	All members	Before next meeting	Contact Paul Sonnemann if you want to be included on the distribution list for the Gas-in-Riser Workgroup.
9	All members	Before next meeting	Contact Julia Swindle if you want to participate in the Safety Performance Indicators and development COS.
10	All members	Before next meeting	If you want to be involved in the Subsea Engineers Certification program, email Mark Denkowski for more information on meeting dates, etc. ( <a href="mailto:mark.denkowski@iadc.org">mark.denkowski@iadc.org</a> )
11	M Denkowski	Before next meeting	Send the Training Module Matrix to subsea KSA workgroup for feedback.
12	P. Tydings	Before next meeting	Arrange for breakfast at the next DC Focus Group.

### Attendance:

Name		Company Name
H. Gene	Wislon	<b>Aberdeen Drilling School, Ltd</b>
Bibek	Das	<b>American Bureau of Shipping (ABS)</b>
David	Hetherington	<b>Asatte Press, Inc</b>
Ron	Crotzer	<b>Bladestone</b>
Lei	Zhou	<b>BP America</b>
Randy	Witzel	<b>Chesapeake Oilfield Services</b>

Eric	Wright	<b>Chesapeake Oilfield Services</b>
John	Breidenthal	<b>Chevron</b>
Gary	Nance	<b>Chevron</b>
Ambar	Acevedo	<b>Chevron</b>
Scott	Schafer	<b>Chevron</b>
Chuck	Boyd	<b>CS Inc</b>
Seth	Rivera	<b>Drilling Systems (UK) Ltd</b>
Ian	Landgraf	<b>ExxonMobil Development Company</b>
Luis	Tellez	<b>GNE - Solutions</b>
Harry	Hawkins	<b>Helmerich &amp; Payne</b>
Brooke	Polk	<b>IADC</b>
Elfriede	Neidert	<b>IADC</b>
Brenda	Kelly	<b>IADC</b>
Marlene	Diaz	<b>IADC</b>
Mark	Denkowski	<b>IADC</b>
Julia	Swindle	<b>IADC</b>
Patty	Tydings	<b>IADC</b>
Cynthia	Montero	<b>IADC</b>
Ruchir	Shah	<b>Learn to Drill</b>
Covey	Hall	<b>Lloyd's Register</b>
Bernard	Lucas	<b>Lyons Petroleum Services</b>
Bastiaan	Liezenberg	<b>Mi-Swaco</b>
Cason	Swindle	<b>Noble Drilling Services</b>
John	Bottrell	<b>Nomac Drilling</b>
Paul	Sonnemann	<b>Safekick</b>
Deepak	Gala	<b>Shell International E&amp;P</b>
Elton	Cherry	<b>Transocean</b>
Bhavin	Patel	<b>Weatherford</b>
Malcolm	Lodge	<b>Well Control Institute</b>
Barry	Cooper	<b>Well Control School</b>