

Well Control Committee Meeting

7 am – 12 pm

IADC 10370 Richmond Ave., Suite 760 Houston, TX 77042

<u>Minutes</u>

	DRILLING CONTRACTORS' FOCUS MEETING This session is open to drilling contractor members ONLY!		
7:00 – 8:00	 Mike Garvin, Patterson-UTI, Chairman Discussion Topics: What keeps you awake at night? What can the Well Control Committee do to help? What topics would you want to see on the next agenda? 		
	WELL CONTROL COMMITTEE (All members)		
8:00 – 8:05	Welcome Mike Garvin, Patterson UTI, Committee Chairman Mike Garvin offered his thoughts about what is really lasting in this life: The influence we have on other people. Patterson UTI recently lost (to a heart attack) a very effective toolpusher who had trained many people in his 24 years in the oilfield.		
8:05 – 8:10	Facility Orientation/Safety and IADC Antitrust Guidelines & Policies IADC staff Brenda Kelly discussed IADC's facility safety information and antitrust policy.		
8:10 - 8:20	Attendee Introductions Mike Garvin		

	Lessons Learned
8:20 – 8:30	Several members discussed very recent incidents that resulted in a "lost" rig (drilling into a gas pocket) and an injury (broken leg due to dropped pipe).
	Mr. Garvin presented the idea that "rig cultures," driven by shared experiences, can lead to complacency because, in some regions, they have no experience with the hazards that can be prevalent in other regions. When an employee moves from one location to another, that employee may not fully recognize the hazards that can occur and, therefore, may not be prepared. Training alone will not be enough. Training transfer can be an issue in some cultures.
	The group discussed how culture and leadership affects training transfer in the field. They explored ways this committee can influence these factors. One member said, in addition to differences in the safety culture between land and offshore, there is a difference between drilling and workover personnel. The Texas Railroad Commission will soon be enforcing a new rule regarding the need for workover crews to be trained and to use safety-related best practices.
	The group agreed that a realistic training experience leads to greater training transfer. IADC cannot regulate any of these efforts; our member companies are responsible for regulating themselves. Each organization has to decide it is important. Leadership must drive the effort and real accountability needs to be implemented.
	Review of Action Items Mike Garvin
	The new co-chair (Jason Morganelli) has been nominated but is not present today because he is meeting with BSEE in New Orleans.
	We will table the action item about submitting names for the WellCAP Advisory Panel.
8:30 – 8:45	Action Item: Mr. Garvin and Dr. Kelly will meet with Fran Kennedy- Ellis to see if there is still time for the WCC members to review the Deepwater Well Control Guidelines.
	Action Item: The Resources tab on the WCC webpage will contain Andy Frazelle's document regarding API's Standard 53.
	Some members believe it would benefit us to get the HSE Committee involved in our well control efforts. There is some work toward getting the HSE people to focus on process safety on the rigsite. Mr. Garvin asserted that training the HSE personnel to involve themselves in operations leads to their being viewed less as the police and more as valuable members of the team (the operations group). Other members agree that including the HSE personnel in additional efforts better integrates them into the team at a rigsite. Managing risk actually requires a comprehensive understanding of well control and other operations information, such

	as maintenance of equipment. If the HSE person can teach people at	
	the rigsite, their value increases.	
	Action Item: Dr. Kelly suggests providing the HSE Committee with a speaker on well control. Several members agreed that Mike Garvin should speak to that committee on behalf of the WCC.	
	Action Item: Patty Tydings will create a list of drilling contractors we could invite to this committee, Brenda Kelly will draft a letter, and the letter will go out (through Holly) from Mike Garvin. Another participant suggested that the attendees provide IADC (Patty Tydings) with a list of their contacts that are not in attendance and could be invited to the next meeting.	
	The group discussed having this meeting at another location (e.g., Lafayette or Midland). The primary concern is that we would lose consistency of participants. One member suggested surveying members about where they would prefer to meet, and another member offered to host a meeting in Victoria.	
	Andy Frazelle is not in attendance today and cannot report on the action item to set up a workgroup to compare WCI and IWCF and determine what the best features are of each organization. <u>Remove this action item</u> .	
	Note: The group briefly discussed the new train-the-trainer (TtT) requirement for well control instructors.	
	Action Item: One member (from Chevron) volunteered to provide an incident case study at the next meeting. Then, we will recruit a volunteer for the following meeting at that point.	
	Action Item: Dr. Kelly will contact Andy Frazelle about being on the agenda for the next meeting to discuss the previous action item [see action item list].	
	Members would like to add more time to the WCI report in every agenda.	
	Opposite Sides of the Same Coin: Thoughts on the Critical Role of Human Decision Making in Well Control Dave Hofmann, University of North Carolina	
8:45 — 9:45	Dave Hofmann (Business School at U. of North Carolina) presented practical applications regarding behavioral science. Dr. Hofmann helped to develop the Organizational Culture Diagnostic Inventory used by Behavioral Science Technology, Inc., which some members have already used at their companies.	
	Dr. Hofmann presented an illustration involving three numbers (2, 4, 6) and asked the group to discover the rule defining the inter- relationships between the three numbers (i.e., that they are in ascending order). The point is that we need to seek out data to confirm but not falsify the rule. He used this to illustrate the	

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confirming evidence heuristic from behavioral economics. The confirming evidence heuristics states that we frequently seek out data to confirm our hypotheses, but not falsify them.
In practical illustration of the confirming evidence heuristic, he discussed research by Dov Eden with the Israeli Army. In the army, troops are assigned to leaders randomly during basic training. If one leader is convinced that he or she has been assigned an amazingly outstanding group of potential soldiers, the group believed to be outstanding always outperforms the other groups. When we put people in a bucket (i.e., "pigeon-hole" them, or make a judgment about them), it is very difficult for them to get out of that bucket. Likewise, if employees believe their leader is a "loser," they will reinforce the potential for that leader to fail. If one employee tries to defend the leader using an example, the others will say it was just a fluke. Mistakes and successes are explained differently depending on the perception of the people around them. The opposite also is true (if the initial impression of the leaders is positive, then their positive actions are focus on and their mistakes are explained away). These judgments become a self-fulfilling prophecy.
In the Deepwater Horizon disaster, the tests were explained away as a fluke. This disaster is a good example of "anchored thinking."
Resources (books): <i>Blink, Sources of Power, and The Power of Intuition.</i> These books are all about how individuals working in complex, dynamic situations can often use their intuition to positive effect.
Heuristics: Experience-based techniques for problem solving (e.g., a rule of thumb).
 Fast, Efficient, and Sometimes Dangerous: Anchoring: Rough estimates, uncertain projections, last year's budget and similar situations become anchors. [Reminds me of the Overton Window.] Availability: We approach problems from our own perspective, which is our own perspective. (What we see more, we believe actually happens more.) Our experiences determine what we believe to be true even if our experiences are not representative. Confirming Evidence: We develop hypotheses and hunches and seek out evidence to confirm not disconfirm we also accentuate confirming and explain away disconfirming evidence. Framing: When things are framed as a gain, we tend to be risk adverse. When things are framed as a loss, we tend to be risk seeking. The broader point is that all decisions have nested within them some sort of implicit frame of reference that causes individuals to think about the situation a certain way (and, by definition, not another way).
 Experience is a Blessing and a Curse: Experience creates rules/heuristics. Look for signals to trigger. Surface signals, fast trigger "I know what this is" snap judgment. (80% right but 20% wrong)

S (i c T p	elf-Reinforcing: ituational cues, external pressure -> develop hypothesis availability). Once you develop a hypothesis, you seek out onfirming evidence and explain away any disconfirming evidence. hen you frame the conversation as an argument to win, not a roblem to solve (i.e., I already know what is going on and here is he answer).
R tr u	hink about: eflect on how many times you have observed people get into the ouble because they stick with initial diagnosis too long. There is nderlying psychology involved because we get anchored to certain pinions, perceptions, decisions.
c	witching Cognitive Gears: We have to build the capacity to switch ognitive gears from intuitive judgments to more thoughtful diagnosis when things don't seem right:: Humility
•	 You will be wrong. Listen to counter-signals. Pull people together diverse individuals, present situation, and listen. Stop and get people to look at the problem with new eyes. Reconsider all the evidence, which can only be done by letting go of original perceptions.
	Complicated by: Minor breaches of safety protocol. 20 years of research variance. Cycle of "drifting into failure."
tr T h	Vhat keeps us awake at night should be all those micro-decisions hat are made every day when senior management is not around. This is when safety culture is enacted in real time, every day. In all o is research, he has found significant variability in the priority with which frontline managers give to safety.
т	hese decisions anchor the thinking and can lead to drift.
s	ee book called Drifting into Failure.
	 What to Do (re: well control training): Know and internalize decision-making tendencies. Own broad safety roles (Hofmann et al. 2003). Clear signals, processes, and roles for safety communication by contractors (Hofmann <i>et al.</i>, 2011). Build broad situational awareness.
d d	When do people define the "extra stuff" (safety best practices) as a uty or obligation. Thinks that are considered discretionary are ropped quickly when under pressure. We need to get people to onsider safety to be a duty/obligation.

10:00 — 10:30	Well Control Training Standard Update Brenda Kelly, IADC Dr. Kelly has been reviewing and editing the curricula and the	
9:45 - 10:00	Break	
	Contact <u>dhofmann@unc.edu</u> with questions or comments. Is there an opportunity to build into our training some content about "thinking about thinking"?	
	They want to take what they have determined in their research and would like to bring their ideas out into the field to test their hypotheses. They are already working toward this in medical and aviation industries and would like to do so with the oil and gas industry. You have to look at decisions in context (cognitive, psychological, distance, time, anchors, goals, stress, etc.).	
	 Psychological distance and construal level. His team is interested in partnering with the oil and gas industry. 	
	 Among other research, Dr. Hofmann and his team are working in the following areas: How people conceptualize risk in light of competing goals physical vs. operational risk. 	
	Question: What is Dr. Hofmann's definition of experience? Answer: What you get when you don't get what you want. But seriously, experience is equated with learning, updating your own personal database, or schemas, constantly. How rich and various are the scenarios you have internalized? Experience also requires some reflection to establish consciously what we have learned through an experience.	
	People who have extremely deep domain experience CAN have valuable and reliable intuition when making decisions and offering opinions, but perhaps most people are making assumptions that should be tested before being written in stone. There are some people who live the same year 20 years in a row and others who have 20 years of experience.	
	Root Cause Analysis (RCA) is extremely important and can be enhanced through some established interviewing techniques.	
	Mr. Garvin discussed embedding a root cause process into an organization and teaching people how to interview people effectively to avoid the anchoring of opinions. He teaches them to NOT start when the event happened but in much earlier. It's important to start early on in the day of an incident to find out everything that happened that day, even if it seems irrelevant. It breaks people out of their frame of reference.	
	One of Dr. Hofmann's goals in training is to get people to remove themselves from a decision that has been made in order to fully reconsider it by reviewing the data with no prejudice.	

standard.
The Introductory, Driller, and Supervisory training levels will be released soon, along with information about delivery and class hours.
The new well control training standard has received many public comments that are undergoing internal staff review to address the big-issue comments. This document will go back to the standards workgroup. (Dr. Kelly will communicate with them to set up a 1-day meeting in mid-September to respond to and address the comments, revising the standard as needed.) The new draft of the standard will be released in mid-September, as well as the transition timeline.
IADC's staff is also looking at the entire transition process that includes timelines for training providers and instructors who are transitioning into the new system.
The next major effort will involve the testing database. Malcolm Lodge explained that the new well control training program has employed Veriforce to create the testing database. There are several issues identified to work out before allowing the training providers to test the database. At that point, perhaps a month from now, the Training Providers will be sent information to access the database for testing. The "questions" included at that point will not be the actual questions but will allow the Training Providers to see how the administrative aspect of the system will work.
One member mentioned a previous discussion about which browser the system will be able to work in. At this point, it is recommended to use the system on Google Chrome, FireFox, and Internet Explorer. (Most of the testing has been in Chrome.) They are testing it in the Mac environment right now, and Mr. Lodge will alert everyone on this progress.
Mr. Lodge currently has about 1,000 questions that have been submitted, and he is categorizing them. A few gaps he has already identified are barriers and casing/cementing systems. He will request questions on these topics in the near future. Then, he will form a workgroup to look at some of the questions that may need to be assessed and perhaps reworded. Mr. Lodge is also looking at ways to "grade" the English in the question to determine the level of language and the ability to translate this material into other languages or be easier for those who speak English as a second language. The test questions will be translated into several other languages. One quote for oilfield translation came from a company called OMNI. These questions will need to be vetted. (One member mentioned a good Portuguese translator named Marcia Buckley. Brian Maness will send the information to IADC.)
There has been some discussion about what to do for trainees who must be assessed in areas that have poor Internet connectivity. There is a "SkillStick" available on which tests can be stored, provided to the trainees, and then reloaded when the stick's content can be reloaded into the system. A system for this will be developed

during the testing phase of the database when we are able to see what kinds of connectivity issues exist and where they are. One issue that we can resolve is to have the content constantly saved into the system in order to avoid losing material. Dr. Kelly explained that IADC is aware of traveling schools and will know who needs to use the SkillStick. Mr. Lodge explained how the SkillStick will work. For example, it will have all the information and the program on it for testing each student. There will be a separate SkillStick for each student. These sticks are reusable. One participant said there are some options for having more than one test on each stick. Another member said his challenge will be to carry the needed laptops into the country where the course will be held in order to test the students. Some TPs are considering using Chrome Books just for this purpose.
IADC is looking at how the new well control training program can identify test proctors internationally. There is an organization that actually identifies these people. We are building a database of these people and can connect the training providers with the contact information for these people, or can arrange for the proctor to be on location for the test.
There was a discussion about rolling out the curriculum in advance of the testing database.
Action Item: Dr. Kelly or Mrs. Tydings will form a workgroup to review the test questions. Dr. Kelly captured the names of volunteers (DODI, NOMAC, maybe ENSCO, Chevron, ConocoPhillips, BP, Wild Well, etc.). This work will begin in November. Chevron has some internal translators who can vet the questions after they are translated.
Mr. Lodge explained more about the TtT requirements. Current trainers will not be required to take this course, but it is recommended. Mr. Lodge has facilitated the creation of a Simulator Grading Sheet/Model (through Benny Mason's Simulator Subcommittee). This model will not be required, but the content must be included in whatever system the training providers are using.
Mr. Lodge has created a transition matrix. All current WellCAP instructors will be "grandfathered" into the new system. These instructors will not have to do anything new. Only new instructors will be required to meet the new requirements. Currently, all instructors have a 2-year tenure. This will stay in place until the instructor will be required to renew. At that point, the instructor will be required to meet new requirements but will then have a 5-year renewal.
The new instructor test should be available for instructors (new and current) to have the option of taking this test rather than going back to the WellCAP school.
One member asked about the qualifications required for new instructors. Based on reviews received on the standard, we are revising it to be more clear. A person who has been in the industry for 30 years but not as a driller could still be approved as an

	instructor. The standard will state something similar to "driller or equivalent" and will allow for a person to move up in the levels the can teach. There will now be a system in place to advance new instructors up through the system. There is no cap on what they o teach.			
	A member asked about retesting on the simulator. If there is a pass/fail question that is failed, the system will immediately retest the trainee. "Three strikes you're out." There was also some discussion about what can be done in the system if a student fails the standardized assessment. Should the trainee have to wait before retesting, or be allowed to retest immediately. Can they be retested just on the modules they had failed. Trainees who come back just to retest will not be counted as members of the class that is currently testing for the first time. Many trainees will fail in the first round of testing. We cannot cave to their complaints because we are raising the standard and expect them to take the course seriously.			
	Industry Groups Update (Reports presented as need arises for the following industry activities)			
10:30 – 11:00	<u>API Subcommittee 16</u> —Alex Sas-Jaworsky (SAS Industries) API Spec 16A Specification on Drill-Through Equipment (TG-			
	 3) API Spec 16C Specification on Choke and Kill Systems (TC 1) 			
	 API Spec 16D Specification on Drilling Well Control System and Equipment (TG-2) 			
	 API Spec 16RCD Specification on Rotating Control Devices (TG-6) 			
	 API RP 16ST Recommended Practice for Coiled Tubing Well Control Equipment Systems (TG-5) 			
	 API RP 16AR Repair & Remanufacture of Drill-Through Equipment (TG-7) 			
	<u>API RP 59</u> (Well Control Operations): TBD			
	 <u>API RP 64</u> (Diverter Systems Equipment & Operations): Alex Sas-Jaworsky (Sas Industries) 			
	 <u>API_RP</u> 75 (Offshore Safety and Environmental Management Program): Julia Swindle (IADC) 			
	<u>API RP 96</u> (Deepwater Well Design and Construction): Scott Randall (PlusAlpha Risk)			
	<u>BSEE</u> : Julia Swindle (IADC)			
	<u>Center for Offshore Safety</u> : Julia Swindle (IADC)			
	International: Cason Swindle, WCI			
	API RP-75 revision process started Feb 2013. Participation in that effort has dropped tremendously over the past 18 months. All our			

companies are affected by this. Next meeting is 9 Sept. 2014 (9-3) in NOLA at the Hilton Airport Hotel. Members of this committee need to get the right person to represent their companies at this meeting. Contact Julia Swindle at julia.swindle@iadc.org. You do not have to be a member to participate in this process, but you cannot vote unless you have participated in the review process before the vote occurs. We want to have some input if BSEE decides to adopt the regulation.
Doug Morris, sent a measured, practical letter to the Head of BSEE about SEMS audits. They were disappointed in the variety of responses to these SEMS audits because they wanted more of the positive findings rather than all negative ones.
The COS (founded as result of SEMS) has a subcommittee working on developing safety performance indicators around well kicks. Ms. Swindle is only reporting on this process, but only members can participate. When the SPIs come out, they will be distributed through their single points of contact. Steve Kropla is the IADC point of contact, and Ms. Swindle represents IADC and its members on nine committees.
SEMS Contractor Audit Guidance:
SEMS Contractor Audit Guidance: COS developed a protocol for SEMS audits for the ease of use for the operators. There is an effort to take that protocol and make suggestions for how it can be used by contractors and service companies. For example, an operator must same 15% of their facilities; however, contractors and service companies do not have comparable facilities, so they will need to have a similar way to do that. There are no contractors participating in this effort. Ms. Swindle represents them but wants contractors to get involved. The COS goal is to help contractor et al. be able to use their COS/SEMS certificate as evidence of compliance to operators. This will ease the burden for contractors and even more so for service companies.
Mr. Garvin said we need contractor representation in API's RP-59. Alan Spackman explained that IADC will designate staff members to assess drilling contractor participation and then seek additional participation. If the contractors want technical representation, they must get involved. There may be a similar approach in recruiting contractors for the ISO efforts.
The Federal Government wants to be more involved in managing what we do, and they are looking for guidance. If we don't provide that guidance, we may not like the outcome and requirements.
 Update on WCC Subcommittees & Workgroups (Reports presented as need arises for the following activities) Curriculum Subcommittee – Gary Nance, Chevron The Curriculum Subcommittee has been working to redesign the curriculum according to new well control

	 requirements. Simulator Subcommittee – Benny Mason, Rig QA <u>No</u> report. Gas in Riser Workgroup – Paul Sonnemann, SafeKio <u>No report</u>. Barriers Workgroup – Scott Randall, PlusAlpha Risk <u>No report</u>. 	
	 IADC News Brenda Kelly, IADC Well Control Conference 2014 Other news 	
	We need a new operator member for the WellCAP Review Panel. It is a great deal of work (as much as 8 hours per week for one person). Gary Nance (Chevron) offered to fill this position in the interim—until a permanent member can be identified.	
11:30 – 12:00	Dr. Kelly alerted the members that IADC has had some problems with the emailed notices sent out through the new Odyssey system by Holly Shock. Some members have unintentionally erased their names from the system and must opt back in to receive any emails from IADC. Contact Dr. Kelly (brenda.kelly@iadc.org) if you are a member of this committee and are not receiving the official notices.	
	The Well Control Conference will be held in Aberdeen on 2-3 December 2014. A Well Control Committee event will take place the day before. Information about that event will go out when it has been planned. Such a meeting would be built around the WCI rollout. Dr. Kelly has been investigating how to provide teleconferencing capability for a meeting there. Chevron has the ability to do this, so Dr. Kelly will contact someone at Chevron who knows more about this and if it would be feasible.	
12:00	ADJOURNMENT	

Attendees:

Name		Company Name
Victor	Castro	ABSOLUTE CONTROL
Jiun-Yin	Jian	ATKINS
Jason	Sasarak	BP AMERICA
Lei	Zhou	BP AMERICA
Michael	Schulenberg	CHECK-6 TRAINING SYSTEMS
Scott	Schafer	CHEVRON
Todd	Regalado	CONOCOPHILLIPS

Petar	Radulovic	DIAMOND OFFSHORE DRILLING, INC
Brian	Maness	DIAMOND OFFSHORE DRILLING, INC.
Eliot	Doyle	ENSCO PLC
Tom	Proehl	ENSCO PLC
Mick	Stormonth	ERM
Robert	Burnett	HERCULES OFFSHORE
Shane	Mendel	HERCULES OFFSHORE
Brenda	Kelly	IADC
Patty	Tydings	IADC
Kris	Wilson	INTERTEK CONSULTING & TRAINING
William (Bill)	Murchison	MURCHISON DRILLING SCHOOLS, INC.
John	Bottrell	NOMAC DRILLING CORPORATION
Scott	Cooper	OCCIDENTAL OIL & GAS CORPORATION
Mike	Garvin	PATTERSON UTI
Frank	Klepper	PETROLEUM COLLEGE INTERNATIONAL
Raymond	Hortness	PRECISION DRILLING OILFIELD SERVICES CORPORATION
Chad	Lyon	SEVENTY SEVEN ENERGY
Eric	Wright	SEVENTY SEVEN ENERGY
Larry	Schmermund	SMITH MASON & COMPANY, LLC
Marcus	Mason	SMITH MASON & COMPANY, LLC
Randy	Smith	SMITH MASON & COMPANY, LLC
Kathleen	Francis	STATOIL
H (Elton)	Cherry	TRANSOCEAN INC.
Bob	Rooney	WELL CONTROL SCHOOL
Brian	Fowler	WILD WELL CONTROL INC.
Glenn	Shurtz	WILD WELL CONTROL INC.