International Association of Drilling Contractors (IADC)

The Changing Face of Well Control Training

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IADC History

75 Years: 1940-2015



ODC Logo, 1940-1959 American Association of Oilwell Drilling Contractors



AAODC Logo, 1959-1972 American Association of Oilwell Drilling Contractors



IADC Logo, 1972-2014 International Association of Drilling Contractors



IADC Logo, 2014-Present International Association of Drilling Contractors





75 YEARS

IADC 75th Anniversary Logo, 2015

International Association of Drilling Contractors



Founded as the American Association of Oilwell Drilling Contractors in 1940 by a small group of Drilling Contractors meeting in Chicago, Illinois.

The period from 1940 to 1972 was characterized by independent-minded businessmen focused on advancing the art and science of drilling.

- In 1972, the AAODC became the International Association of Drilling Contractors.
- In 2014 the logo was changed.
- Today, IADC represents drilling contractors, oil and gas producing companies and manufacturing and service companies worldwide and is truly a multinational organization.

IADC Initiatives

There have been dramatic changes in our industry over the past 5 years with the development of US unconventional (shale) oil and gas, and in responding to the Macondo incident. To deal with the underlying drivers of change, IADC operates in four specific ways:

- By giving leadership in drilling's core functions and standards;
- By providing reliable stewardship of the industry's core values;
- By influencing political thinking to inform sensible government policy making; and
- By advocating better regulation to secure more constructive oversight by regulators.



IADC Initiatives

As the leading body in the drilling sector, IADC conducts itself with integrity and supports the industry at all levels through its operational programs and through its advocacy. The Association works closely with all key organizations to magnify impact and increase leverage – for example with API, IOGP and IRF. The key distinction of IADC, worth repeating, is that IADC is wholly of the drilling industry and whomsoever that encompasses; no other organization possesses that character and the obligations that stem from it.

The objectives that drive IADC's advocacy, strategy and programs are:

- Fitness to Operate
- Drilling as a High Reliability Industry
- Drilling Without Frontiers



Nothing is more important than ensuring the safety of our people.
.....Closely followed by our commitment to environmental

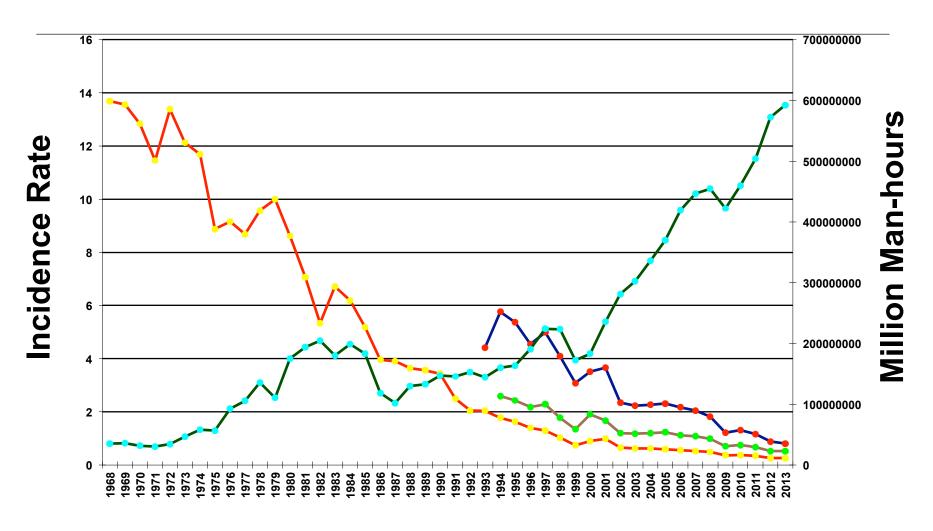
stewardship



Industry LTI Rates: 1968-2013

--LTI Rate

-- Rec. Rate

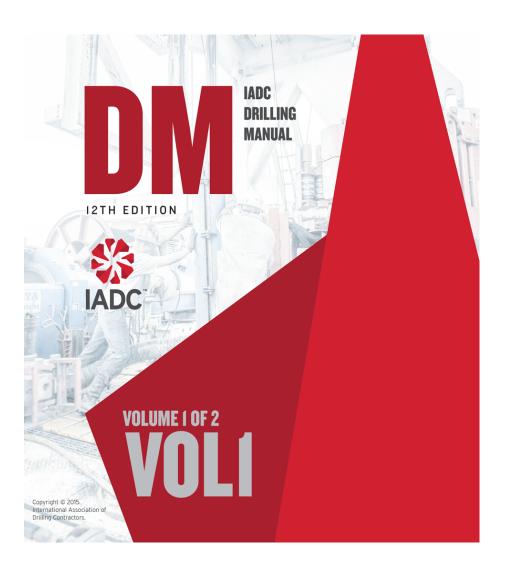


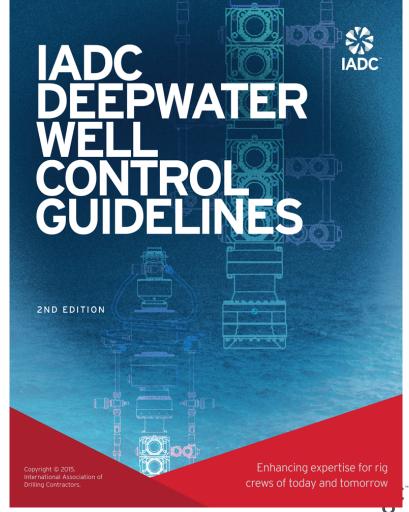
→ DART Rate

-- Man-hours



IADC Deepwater Well Control Guidelines IADC Drilling Manual





WellSharp™

Why the Change

- Industry stakeholders saw a clear need for:
 - Improved technical knowledge and skill
 - Improved and consistent human behaviors
 - Improved process integrity
- Respond to OGP 476





Response

Industry demanded more effective training

- Courses focused on what employees need to know
- Develop training for all employees with well control responsibilities
- •Improve the integrity of the knowledge assessment
 - Implement independent proctoring
- Increase focus on auditing
 - Eliminate certificate mills



New Training Courses

WellCAP		WellSharp	
X		Awareness	
Introductory	Becomes	Introductory	
Fundamental		Driller	
Supervisor		Supervisor	
X		Engineer	



Course Requirements

Course	Recommended / Required		
Awareness	Recommended		
Introductory	Recommended		
Driller	Required		
Supervisor	Required		
Engineer	Required		



Course Length & Recertification

Course	Length	Recertification
Awareness	4 hrs	None
Introductory	16 hrs	5 years
Driller-Surface	24hrs	2 years
Driller-Subsea	24hrs	2 years
Driller-Combined	29 hrs	2 years



Course Length & Recertification

Course	Length	Recertification
Supervisor-Surface	24 hrs	2 years
Supervisor-Subsea	24 hrs	2 years
Supervisor-Combined	29hrs	2 years
Engineer-Surface	24 hrs	5 years
Engineer-Subsea	24hrs	5 years
Engineer-Combined	29 hrs	5 years



- Training designed for specific job and well control responsibilities
 - Drillers attend Driller course
 - Can take Supervisor course after Driller course is passed
 - Supervisors attend Supervisor course
- Driller and Supervisor courses taught separately



- Electronic knowledge testing system
 - Online testing
 - Offline e-testing
 - Centralized and controlled question database
 - Questions randomized and answers shuffled
 - Pass/fail safety-critical questions
 - Surveys
 - Metrics



What's Next?

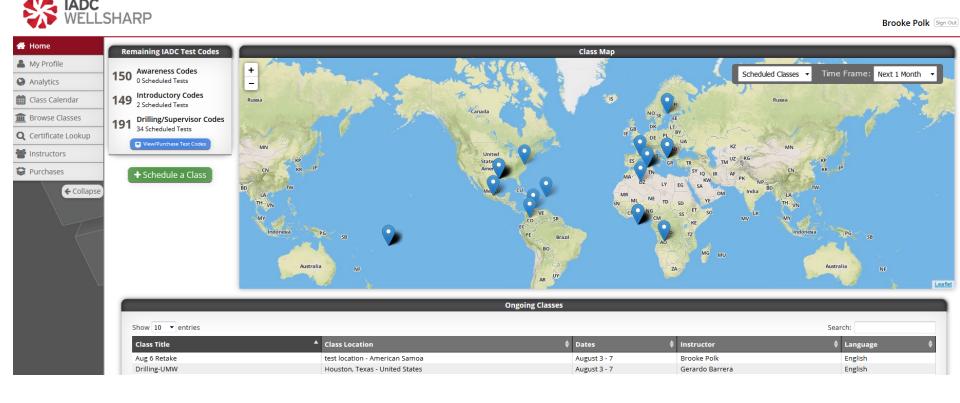
- Develop WellSharp curricula for:
 - Engineering course
 - Workover and Completion
 - Coiled tubing
 - Snubbing
 - Wireline, etc.
- Human Factors 'In progress'
- Continuous learning



The Game Changer

(Centralized Electronic Testing)

WellSharp Test Database Administrator Access & Features





WellSharp Test Database Administrator Access & Features

Class Management



Class Management

Class Details Manage Roster





WellSharp Test Database Instructor Access & Features

Class Dashboard



Class Details

Scores & Reports





WellSharp Test Database Student Feedback



Print/ Sav

Knowledge Assessment Report

Assessment: Drilling Operations, Supervisor, Surface/Subsea

Stack: Both Stacks

Assessment Date: May 17, 2015 2:27 PM

Score: 83%

Instructions

Thank you for completing the IADC Well Control Knowledge Assessment for the course. You scored 83 percent on this knowledge assessment and, therefore, passed the course. You will be given your Certificate of Completion by your instructor, who will also review your missed questions with you.

After your instructor reviews your exam results with you, you may choose to return to your computer to review each test question you missed on today's exam. To launch the review feature, log in using the same code you used at the beginning of the exam.

Once you complete your review and you have received your Certificate, you are to log out of the testing system and may leave the testing center.

Your company will be notified of your test results and be sent a copy of your Certificate of Completion

Topics for Review

Kick Prevention during Drilling, Casing, & Cementing Operations: Ballooning, Riser Margin

Pre-Recorded Data: Slow Circulating Rates

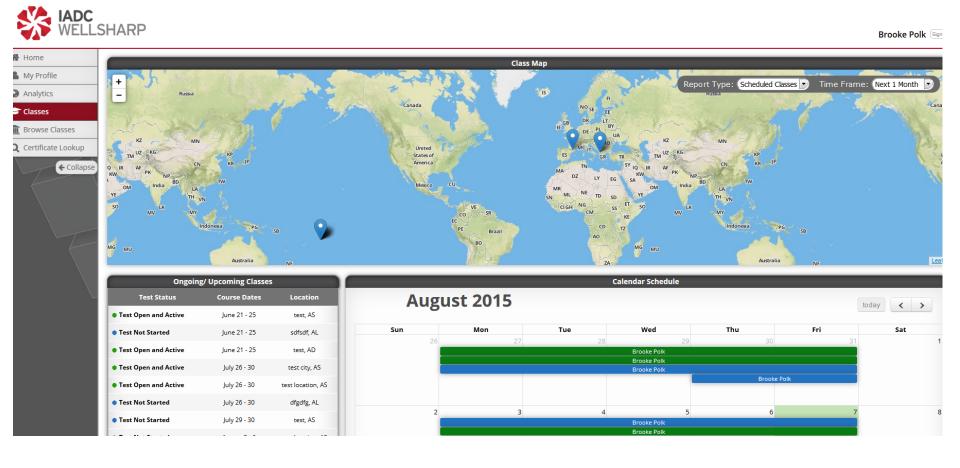
Well Control Methods: Stripping

Missed Questions

What information from the well can help you to decide if the well is ballooning?

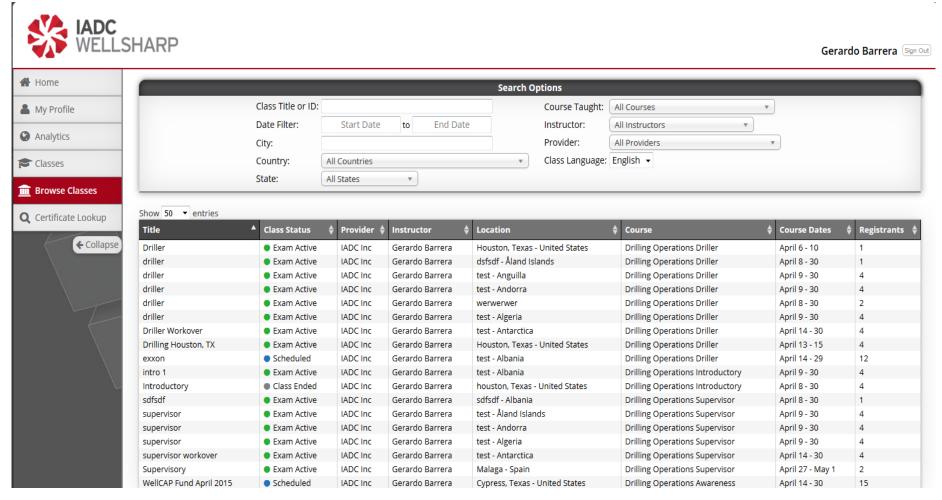


WellSharp Test Database Instructor Access & Features



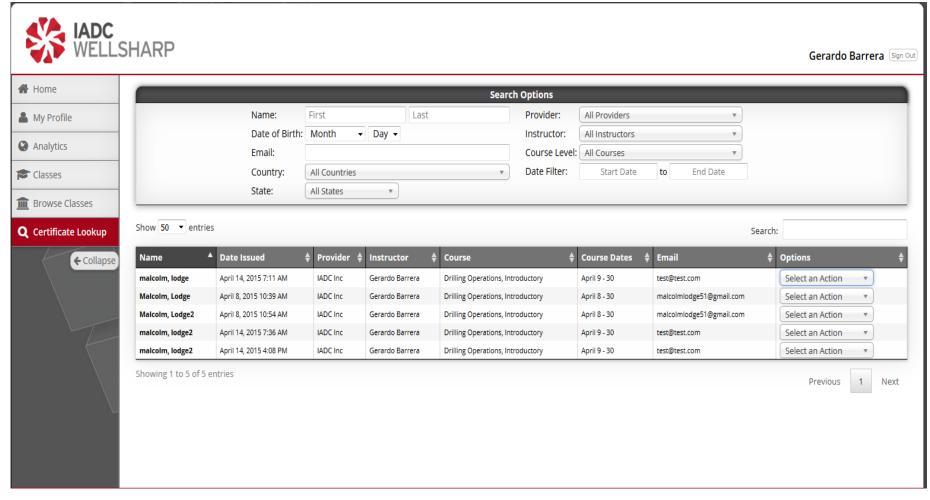


WellSharp Test Database Instructor Access



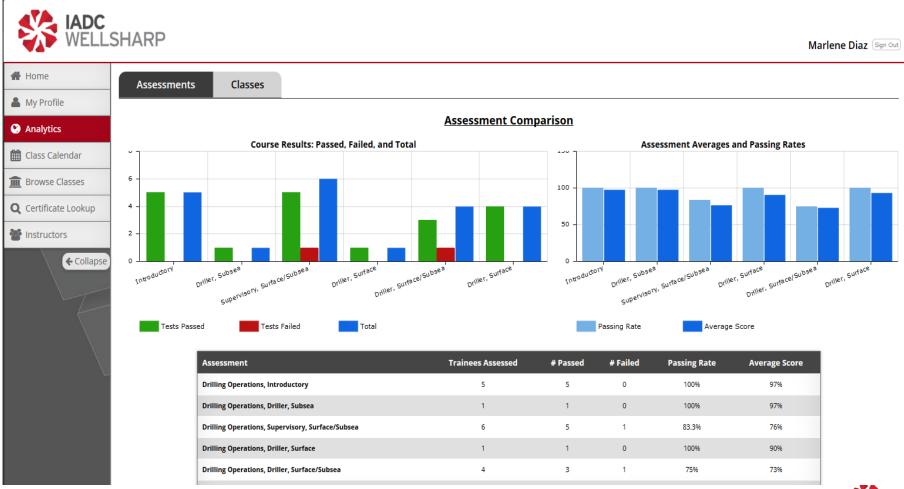


WellSharp Test Database Instructor Access





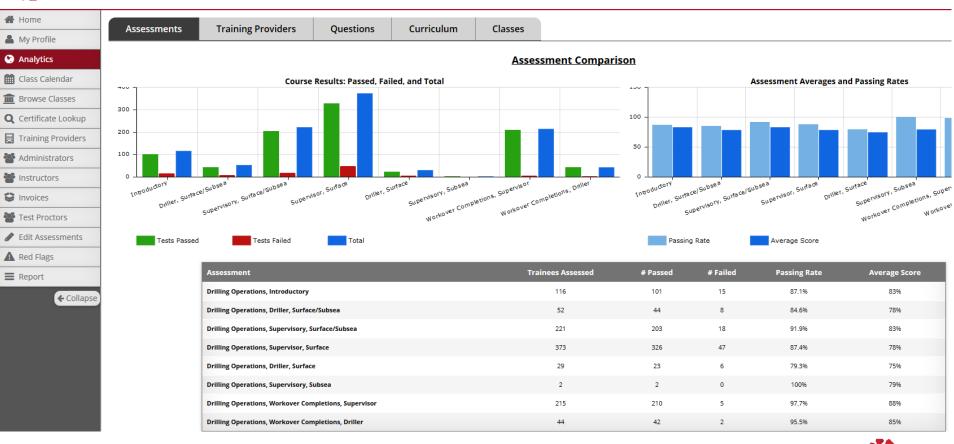
WellSharp Test Database Training Provider Analytics





WellSharp Test Database IADC Analytics



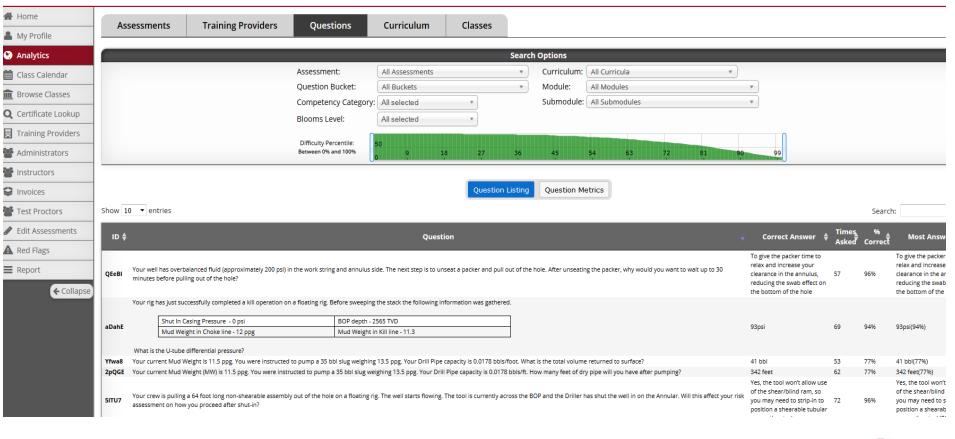




WellSharp Test Database IADC Analytics



Brooke Polk



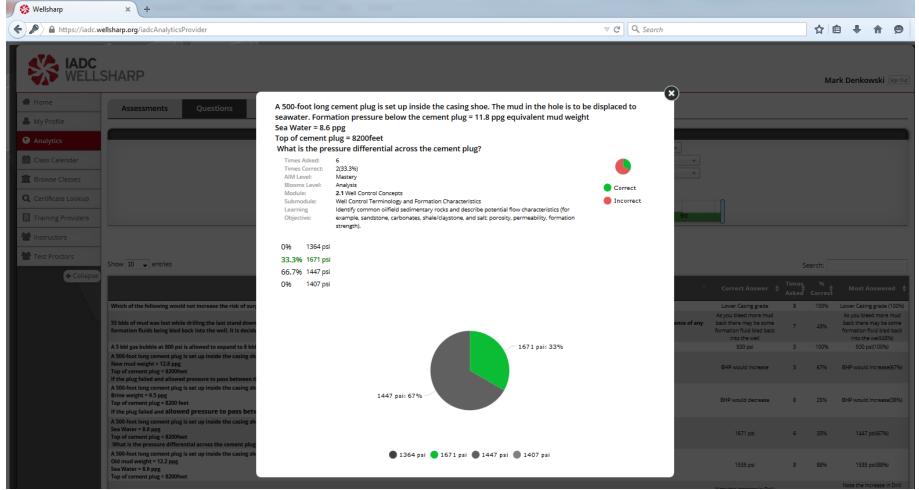


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Training Providers
Administrators
instructors
😂 Invoices
Test Proctors
▲ Emergency Codes
Edit Assessments
A Red Flags
Reports
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	Question Buckets	Assessments	Curri	iculums	Mas	ter Listing	
		Que			Qd		
				D1-1	What is the corr	rect definition of Porosity?	
					D1-1	What is the corr	rect definition of Permeability?
					D1-1	What is the fluid	d pressure within the pore spaces of the rock ${\bf k}$
	Question I	Bucket ≎	Bucket Code 🗸	Ques	D1-1	What can cause	a larger kick size and a greater Shut In Casing
	Overview & Terminology		D1-1		D1-1	What is the perc	centage of void space in a formation?
•		y			D1-1	What term mea	ns "an undesired influx of formation fluids into
					D1-1	What term mea	ns "an uncontrolled flow of formation fluids"?
•	Terminology, Pressure, importance calcs	importance of vol	D3-2		D1-1		n used to describe the highest pressure that co e well was full of formation fluid (usually assur
					D1-1	Which of the fol	llowing best describes fracture pressure?
PSI/MW/psi/ft calcs		D4-4	D4-4	D1-1	What is defined	by "the force acting on an area"?	
			D1-1	Hydrostatic Pres	ssure is:		
• U-Tube	U-Tube		D5-2		D3-2	When you shut- stabilize?	in a well, what can affect the time taken for SII
			D3-2	When you shut	in a well after a kick, it can take 5-10 minutes o		

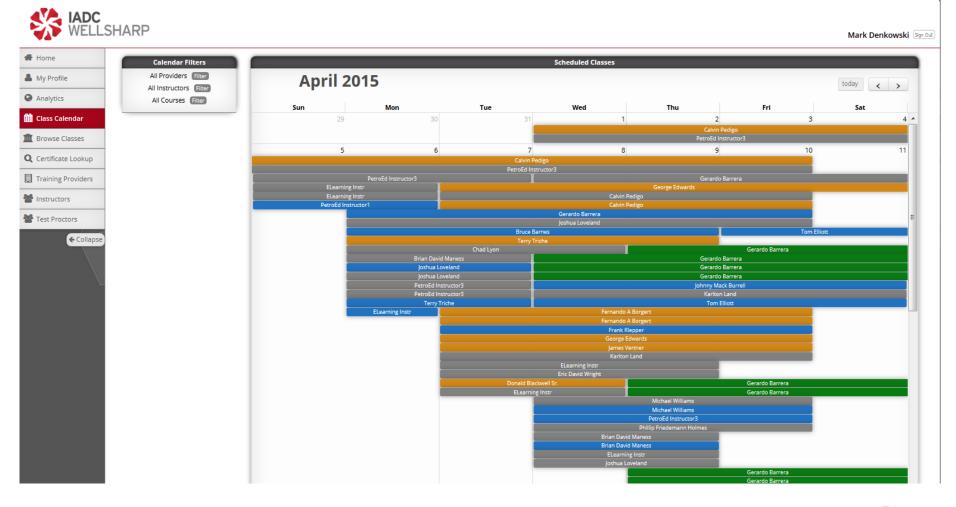


WellSharp Test Database IADC Access





WellSharp Test Database IADC Access





WellSharp Test Database IADC Access





From Testing to Learning

- IADC has ability to monitor every test around the world
- Provides barometer of success to providers, instructors, and students
- Easy identification of areas of improvement
- Real-time feedback from student surveys
- Student feedback for gap closure



WellSharp Summary

- Focus on training for all personnel involved with Well Control; ensuring training is commensurate with role & responsibilities.
- Expanded course levels in line with OGP 476 recommendation to tailor training to requirements of specific roles & responsibilities.
- Centralized electronic testing and grading to ensure integrity and international uniformity.
- Immediate test results with missed question learning objective guidance provided to Instructors for each student.
- Improved instructor qualifications.
- Continuous training to maintain currency and reduce skill fade.



WellSharp Summary

- Developed by the industry for the industry.
- Designed to address the criticisms of existing well control training programmes.
- Ability of industry to argue its case globally and effectively in twenty first century will depend on its reputational strength which, in turn, depends on operational excellence.
- WellSharp will make an important contribution to operational excellence and is a key component of the IADC's wider strategic plan to catalyze improved performance.





IADC WELLSHARP™ FORUM

13 November 2015 10:00am - 12:00pm Saxon Training Facility Perth, Australia

IADC's mission is to catalyse improved performance for the drilling industry. We provide the space for stakeholders to come together, share knowledge, tackle common problems and develop solutions to the industry's critical challenges.

The new WellSharp™ well control training and assessment program is the latest example of those solutions.

The program – created by a collaborative industry effort and owned by IADC member companies – is the industry's response to the need for improved well control performance.

We invite you to visit www.iadc.org/Perth to access more information on the topics discussed in today's forum, including brochures, media articles, videos, and a copy of the presentation.

Thank you for the opportunity to discuss the WellSharp program with you. We hope this forum provides you with useful information regarding the development of the program, transition process, and details about the enhancements that we believe will ultimately contribute to improved performance in the drilling industry.



www.iadc.org/Perth

International Association of Drilling Contractors



Thank you

