



Welcome to the 45th Meeting of the ISCWSA

March 17, 2017

45th General Meeting
March 17th, 2017
The Hague, The Netherlands

Wellbore Positioning Technical Section

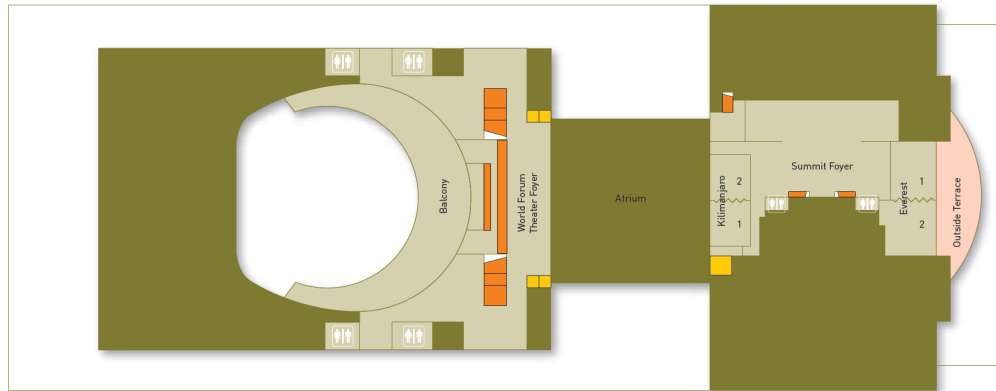


The Industry Steering Committee on Wellbore
Survey Accuracy (ISCWSA)

SAFETY & LOGISTICS BRIEFING

world forum 

 2 MOUNTAINS



- Exits
- Alarms
- I.C.E. – In Case of Emergency
- Medical
- Muster Area
- Restrooms
- Lunch Location

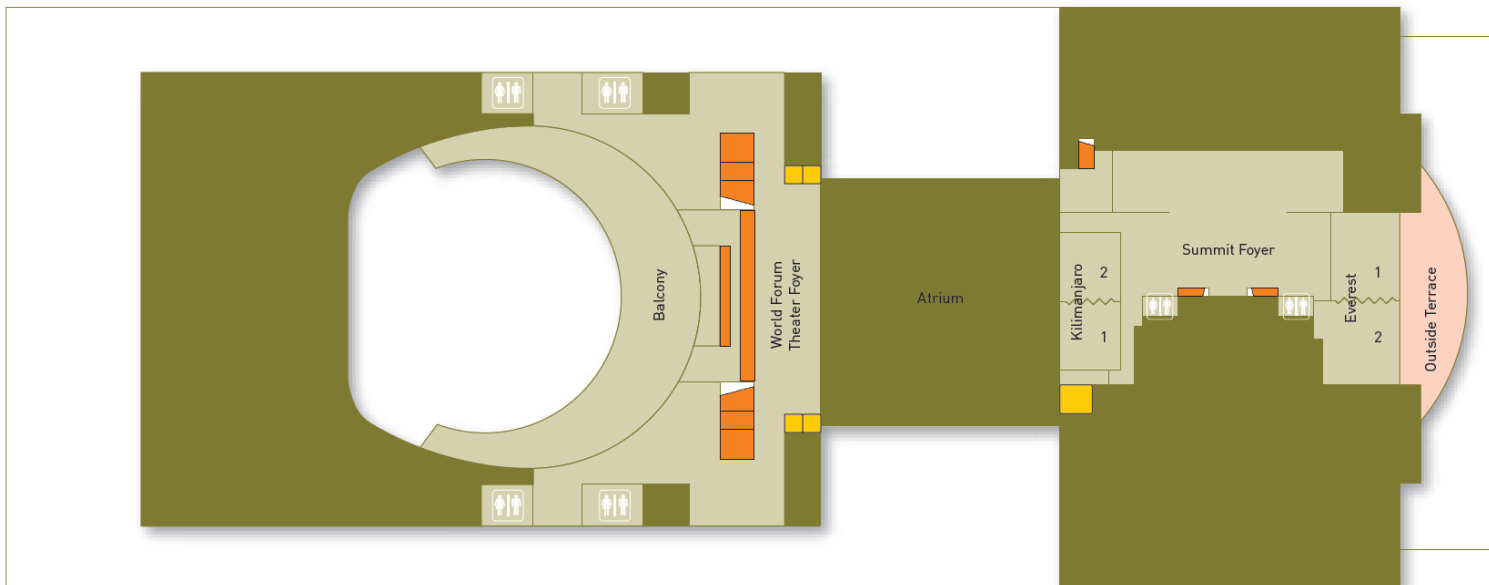
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world forum 



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Wellbore Positioning Technical Section

45th Meeting Chair

- Jonathan Lightfoot
- ISCWSA / SPE WPTS Program Chair (2016-2017)
- Occidental Oil & Gas Corporation
 - Global Directional Drilling Specialist (Role)
 - Performance Drilling Community of Practice Leader (Job)
 - Sr. Engineering Consultant (Official Title)

Technical Program



Sub-Committee Meetings

Day 1 - OWSG & Collision Avoidance Meeting
Wednesday
March 15, 2017

Day 2 - Sub-Committee Meetings for Collision Avoidance, Error Model Maintenance, Well Intercept and Education - Thursday
March 16, 2016

ISCWSA
45th General Meeting
Friday
March 17, 2017

Introduction, Keynote & AC Rules Committee Update
8:30 am to 10:00 am

SME Industry Talks & Well Intercept Committee Update
10:20 am to 11:40 am

Group Lunch 11:40 am - 12:40 pm
GARM 2013 Announcement

Guest Speaker - Jon Curtis - SPE Drilling Uncertainty Prediction TS
12:40 pm - 1:40 pm
Technical Talks, Error Model Maint. & OWSG/API RP78 Update
1:40 pm to 2:50 pm

Technical Talk & Officer/Committee Updates - Education, Website, Treasury & Secretary
Closing Comments
3:10 pm to 5:00 pm

Room A

Room A

Room B

Operator's Wellbore Survey Group (OWSG) Meeting
10:30 am - 11:45 pm

Collision Avoidance
8:30 am - 11:45 am

Well Intercept
8:30 am - 11:45 am

Lunch 11:45 am - 1:00 pm

Lunch 11:45 am - 1:00 pm

ISCWSA Group Lunch
11:45 am - 1:00 pm

Collision Avoidance
1:15 pm - 5:00 pm

Error Model Maintenance
1:15 pm - 5:00 pm

Education
1:15 pm - 5:00 pm

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General Meeting Program

Activity	Presenter(s)	Title	From	To
Introduction	Jonathan Lightfoot (Occidental Oil & Gas Corp.) ISCWSA Program Chair	Welcome, & Introduction	8:30	8:35
Program Agenda		Schedule and Program Review	8:35	8:40
Keynote Presentation	Steve Sawaryn (Consultant)	Collision Avoidance Management Principles, SPE 184730 Review	8:40	9:40
Sub-Committee Update	Steve Sawaryn (Consultant)	Sub-Committee Activity Report: Collision Avoidance	9:40	10:00
Coffee Break & Technical Posters			10:00	10:20
Technical Presentation	Harald Bolt (ICT Europe Ltd.)	What Depth? Review of wireline and drill pipe derived along-hole depth determination and how this relates to API RP-78 Depth QA-QC report. Introduction of a proposed method for driller's depth measurement improvement.	10:20	10:50
Technical Presentation	Marc Willerth (Magnetic Variation Services LLC)	Correcting stationary MWD surveys using high-resolution inclination measurements	10:50	11:20
Sub-Committee Update	Chad Hanak, (Superior QC)	Sub-Committee Activity Report: Well Intercept	11:20	11:40
Lunch & Technical Posters			11:40	12:40
			<u>Lunch Sponsored by Petrolink</u>	
Technical Poster Session	Manoj Nair, A. Chulliat, A. Woods, P. Alken, B. Meyer, R. Saltus - NOAA's National Centers for Environmental Information, CIRES and University of Boulder Benny Poedjono - Oilfield Services, Houston, TX	Quantifying the Uncertainty of High-Resolution Geomagnetic Reference Models	10:00 - 10:20 12:00 - 12:40 14:50 - 15:10	

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General Meeting Program

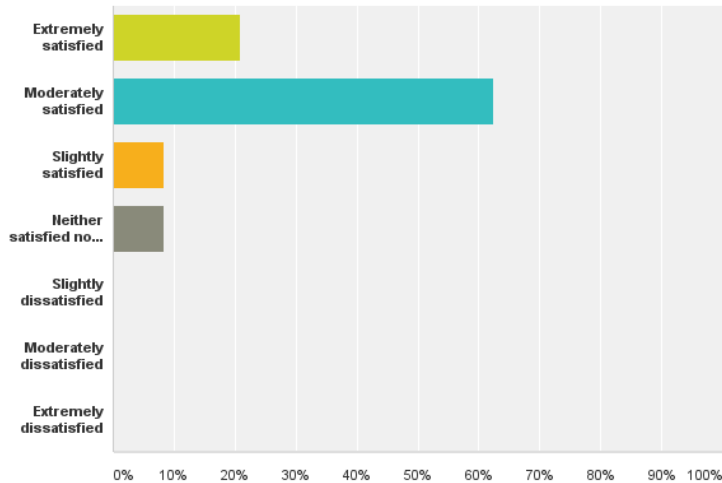
Guest Speaker	Jon Curtis Chair of the Drilling Uncertainty Prediction Technical Section (DUPTS)	SPE Technical Section Chair to provide a Drilling Uncertainty Prediction Technical Section Overview and Update	12:40	13:40
Sub-Committee Update	Steve Grindrod (Copsegrove Developments Ltd)	Sub-committee activity Report: Error Model Maintenance	13:40	14:00
Technical Presentation	Ross Lowden (Schlumberger)	MEMS GWD System Field Test Comparisons	14:00	14:30
Sub-Committee Update	Pete Clark (Chevron)	Sub-Committee Activity Report: Operator Wellbore Survey Group (OWSG) & Update on API RP78	14:30	14:50
Coffee Break & Technical Posters			14:50	15:10
Sub-Committee Update	Carol Mann (Dynamic Graphics, Inc.)	Sub-committee Activity Report: Education	15:10	15:30
Technical Presentation	Jon Bang (Gyrodatta)	Quantification of Wellbore Collision Probability by Novel Analytic Methods	15:30	16:00
Administration	Phil Harbidge (Schlumberger)	Webmaster's Report	16:00	16:20
Administration	Robert Wylie (Consultant)	Treasurer's Report	16:20	16:40
Administration	Chad Hanak (Superior QC)	Secretary's Report	16:40	16:50
Administration	Jonathan Lightfoot (Occidental Oil & Gas Corp.)	Closing Statement from the Chair	16:50	17:00
Meeting Adjourn / Wrap-up			17:00	

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Recent Survey Results

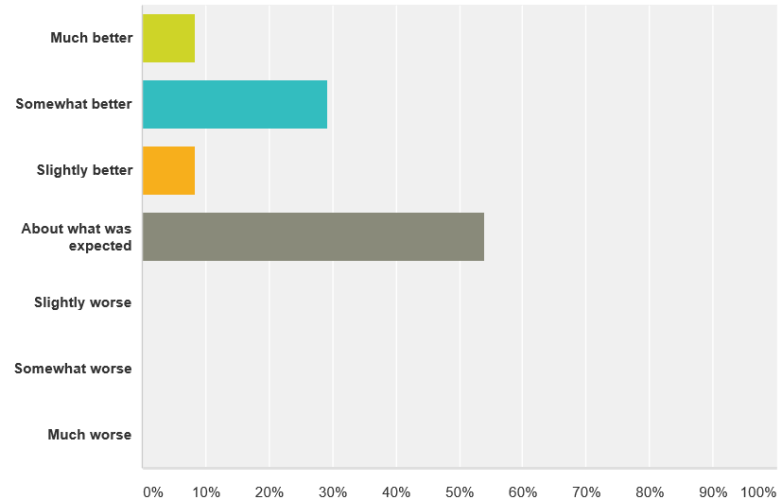
Q12 Overall, were you satisfied with the event, neither satisfied nor dissatisfied with it, or dissatisfied with it?

Answered: 24 Skipped: 18



Was the event better than what you expected, worse than what you expected, or about what you expected?

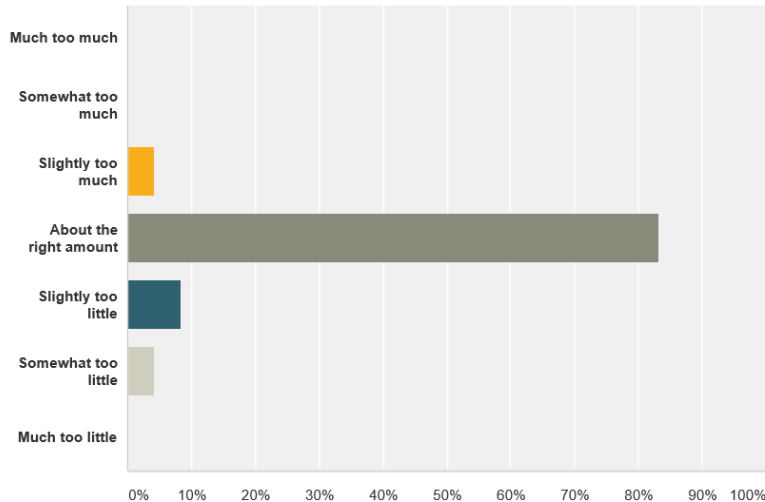
Answered: 24 Skipped: 18



Recent Survey Results

Was too much information covered at the event, too little information covered, or about the right amount of information covered?

Answered: 24 Skipped: 18






Rank	Topic	Total Score
1	New Wellbore Surveying Technologies	310
2	Advanced MWD Corrections (MS / IFR1 / IFR2)	305
3	Error Model Development & Management	305
4	Continuous MWD Surveying to improve TVD Uncertainty and Wellbore Position	302.5
5	Collision Avoidance Management Principles	297.5
6	Case Study - Root Cause and Corrective Action for a Well Collision	292.5
7	Continuous MWD Surveying to improve Azimuth Uncertainty and Wellbore Position	287.5
8	Overview of MWD Corrections during and after the drilling process	285
9	Combined Surveys to Reduce Uncertainty	285
10	Depth Corrections & Quality Control	277.5
11	Well Intercept Practices (Relief, P&A, Avoid Twin)	275
12	Education & Industry Outreach	272.5

Rank	Topic	Total Score	Very Important Topic –	Good Topic –	Topic OK, Low Interest –	Not a good topic –	Total Respondents –
1	New Wellbore Surveying Technologies	310	19	16	0	1	36
2	Advanced MWD Corrections (MS / IFR1 / IFR2)	305	18	14	4	0	36
3	Error Model Development & Management	305	17	16	3	0	36
4	Continuous MWD Surveying to improve TVD Uncertainty and Wellbore Position	302.5	20	11	4	1	36
5	Collision Avoidance Management Principles	297.5	17	15	3	1	36
6	Case Study - Root Cause and Corrective Action for a Well Collision	292.5	16	15	4	1	36
7	Continuous MWD Surveying to improve Azimuth Uncertainty and Wellbore Position	287.5	16	13	6	1	36
8	Overview of MWD Corrections during and after the drilling process	285	14	16	5	1	36
9	Combined Surveys to Reduce Uncertainty	285	12	20	3	1	36
10	Depth Corrections & Quality Control	277.5	14	13	8	1	36
11	Well Intercept Practices (Relief, P&A, Avoid Twin)	275	12	16	7	1	36
12	Education & Industry Outreach	272.5	11	17	7	2	36
	Wellbore Positioning Software Developments	267.5	8	21	6	1	36
	Inclination-Only Practices and Wells with No Surveys	260	10	12	14	1	36
	Geodesy & Surface Location Uncertainty	260	8	18	9	1	36
	Using Data Analytics for Synthetic Modeled Surveys	260	10	18	5	3	36
	Survey Database and Records	257.5	8	17	10	1	36
	Geomagnetic Model Technology	255	7	16	13	1	36
	East / West Laterals Uncertainty	252.5	7	17	11	1	36
	Risk Management & Management of Change	250	9	12	14	1	36
	In-Field Referencing	245	5	20	9	2	36
	MEMS Gyro Surveying	242.5	6	17	11	2	36
	Earth-Rate Gyro Surveying	240	5	16	14	1	36
	Unmanned MWD Surveying	227.5	3	19	11	3	36
	In-Hole Referencing	225	3	18	12	3	36

Distinguished Service Award

44th Meeting – Glasgow, UK

Dave McRobbie	
<p>Sperry Sun International Incorporated Tech 21</p> <p>ISCWSA Distinguished Member Award</p> <p><small>Distinguished Membership: Established in 2016, the Distinguished Member award recognizes Industry Steering Committee on Wellbore Survey Accuracy (ISCWSA) members who achieve distinction deemed worthy of special recognition. This award acknowledges members who have attained eminence in the petroleum industry or the academic community, or who have made significant contributions to ISCWSA. Dave McRobbie is the first member to be officially recognized as a Distinguished Member. Future ISCWSA meetings will include special recognition for new members to be awarded the status of a Distinguished Member.</small></p>	
<p><small>44th General Meeting September 22nd, 2016 Glasgow, Scotland, UK</small></p>	 <p style="text-align: center;">Wellbore Positioning Technical Section</p>
 <p style="text-align: center;"><small>The Industry Steering Committee on Wellbore Survey Accuracy (ISCWSA)</small></p>	



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The Industry Steering Committee on Wellbore Survey Accuracy (ISCWSA)

2017 45th Meeting Distinguished Service Award



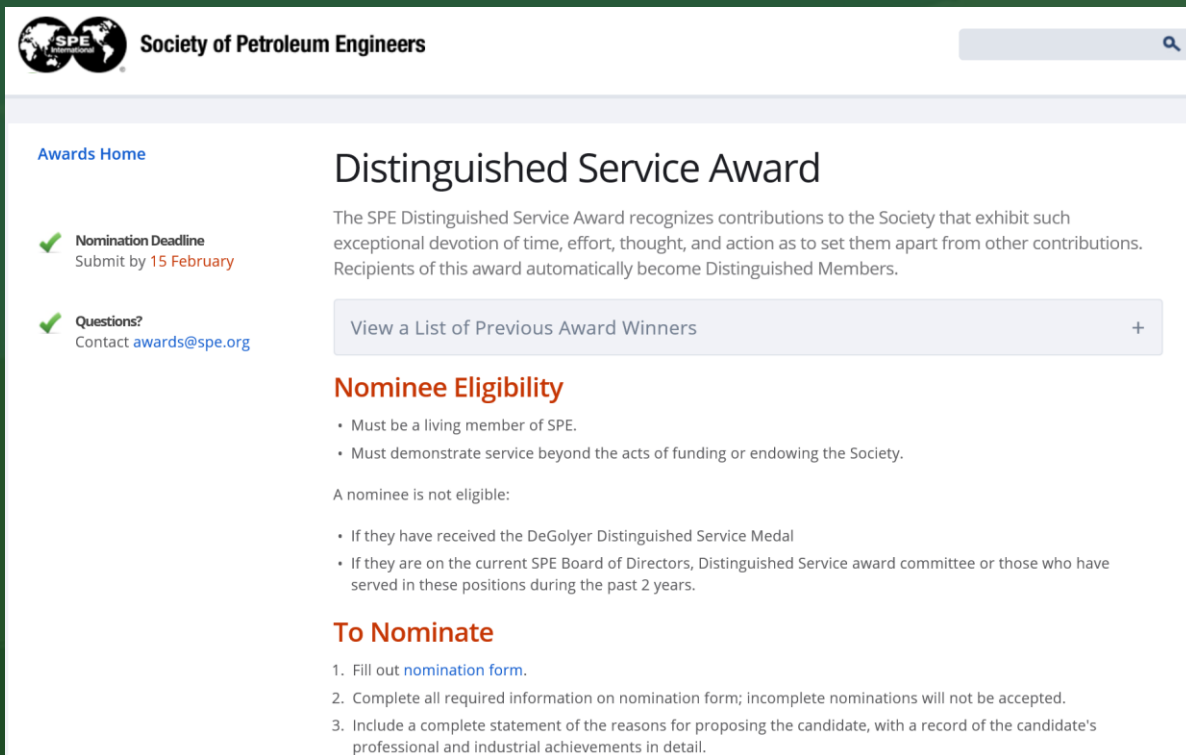
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SPE Distinguished Service Award



The screenshot shows the SPE website's page for the Distinguished Service Award. At the top left is the SPE logo and the text 'Society of Petroleum Engineers'. A search bar is on the top right. Below the header, there is a navigation link 'Awards Home'. The main heading is 'Distinguished Service Award'. A paragraph describes the award: 'The SPE Distinguished Service Award recognizes contributions to the Society that exhibit such exceptional devotion of time, effort, thought, and action as to set them apart from other contributions. Recipients of this award automatically become Distinguished Members.' Below this is a button that says 'View a List of Previous Award Winners' with a plus sign. To the left, there are two green checkmark icons. The first is labeled 'Nomination Deadline' with the text 'Submit by 15 February'. The second is labeled 'Questions?' with the text 'Contact awards@spe.org'. Below the button, there is a section titled 'Nominee Eligibility' with a bulleted list: '• Must be a living member of SPE.' and '• Must demonstrate service beyond the acts of funding or endowing the Society.' Below this list, it says 'A nominee is not eligible:' followed by another bulleted list: '• If they have received the DeGolyer Distinguished Service Medal' and '• If they are on the current SPE Board of Directors, Distinguished Service award committee or those who have served in these positions during the past 2 years.' At the bottom, there is a section titled 'To Nominate' with a numbered list: '1. Fill out nomination form.', '2. Complete all required information on nomination form; incomplete nominations will not be accepted.', and '3. Include a complete statement of the reasons for proposing the candidate, with a record of the candidate's professional and industrial achievements in detail.'

Keynote Presentation

Steve Sawaryn

Collision Avoidance Management Principles

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