



# Survey QAQC Update

Phil Harbidge

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## **Phil Harbidge**

Survey Management | Sperry Drilling Norway

27 years fighting magnetic interference

Well Placement • CA • Survey QA/QC

ISCWSA Board | Webmaster | Survey QAQC Sub-Committee Chair

Work : **Halliburton :**      **Wellplacement, Software Development, Survey Management,  
Advanced Survey Corrections, Software Development,  
Database Audits, Training and more**

Worked :

**Sperry-Sun, Baker Hughes INTEQ and Schlumberger PathControl: DD Service Companies  
Marine Surveyor and Civil Engineer and the Planetary Space Science Research Institute**





# Agenda

 **E-book chapter bi weekly meetings (long form API RP-78)**

 **Collision Avoidance – Data Integrity & Automation Work Shop #1 April 15**

 **Well Database QAQC Presentation Automation Workshop #2 April 15**

 **Ongoing Projects**



# E-book online meetings H1 2026

- MWD Wed 29<sup>th</sup> April 2026 – tidy and send to tech writer
- Gyro Wed 13<sup>th</sup> May 2026 – tidy and send to tech writer
- Drilling Survey Record Wed 27<sup>th</sup> May 2026 – tidy and send to tech writer
- Depth
  - **Intro** for Depth to write tidy and send to tech writer 10<sup>th</sup> Jun 2026
- Tech Writer Final Draft
  - Draft Publish 24<sup>th</sup> July 2026



# Projects

- Collision Avoidance Automation QAQC MOM workshop 2026
- Survey Database automation QAQC workshop 2026
- Roll out of new **ISCWSA Rev 5.0 / 5.1\* PUMs are we managing QAQC - feedback**
- Rotation surveys recommended practice for environmental changes ROP, RPM, Calliper, Vibration data, WOB workflows to supplement ROT Survey QC and inclusion
- **Minimum directional survey data set needed to quality control and quality assure**
- ISCWSA MultiStation Analysis workshop - **MWD magnetic survey data in the MSA instability zone or SC no go zone, enough surveys, HSTF change, more Workshop on good practice work flow**



## Further Projects Ongoing

QAQC Parameters Survey Related to New WPTS Error Model (s) interval term

FAC related to positional uncertainty model – guidance on gross errors captured, not capturing all

*Validation methods for different levels Accuracy of Corrections as per claimed accuracy for PUM used, IFR1+MSA, IFR2+MSA*

New generation of MEMS sensor packages, high definition survey micro dogleg correction, (Dual Inc) and Well Depth – MicroGuide..



# Bugbear planning tool – permissions to use HAL / Shell Excel Calculator / API web app..

- Industry DI Calculator - combined with Az error (uncertainty) Calculator - multistation analysis stability calculator for SF XY & dbz correction tool – ISCWSA API roll out
- Dipe, BTe, survey Interval, Geomagnetic field BGGM / IFR1 / IFR2 / ZOE - Angle X RSS MTF to GTF switch over and SC No Go Zone
- Record of the plan and actual Uncertainties planned for vs actual (BTe Dipe), geomag ref, tool reliability BG miss, Ref Geomag, Gravity Ref. **Add term to ISCWSA model EM SC**
- Proposal for SW Providers to facilitate auto generation of a recommended template with required data integrated
- Action Phil & Wout Kjoutis to meet Q2 2026



- **When to run IFR2 and when not to run IFR2 Paragraph in Ebook Dr. C Beggan**
- **eBook Volunteers / tech writer and publishing costs – Tech writer Sponsor HAL**
- **Project suggestions from the group Feedback**
- **Wrap up - actions**



## Thanks to

Manufacturer & Calibration Experts: BenchTree, Scientific Drilling, Halliburton, Gyrodata, Schlumberger, Baker Hughes, Weatherford, JAE and Icefield Tools

Operator Experts: Chevron, Oxy, ConocoPhillips, BP, Devon Energy, ExxonMobil, Shell, TotalEnergies, AkerBP, Vår Energi, Equinor

Service Company Experts: Baker Hughes, IceField Tools, Halliburton + Landmark, Depth Solutions, Schlumberger, Weatherford, Gyrodata, Scientific Drilling, Mostar Drilling, SuperiorQC, Independent Consultants, EOG Resources, PathControl, Pacesetter Directional, IPM Magnetics, XnDrilling, roundLAB, Leomagnetics, British Geological Survey....



# Webmaster Update

Phil Harbidge

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# Activity


TOP 5 PAGES	
Pages	30-Day Traffic
	2971
<a href="#">Error Model Documentation</a>	621
<a href="#">eBOOKs</a>	432
<a href="#">About The Industry Steering Committee on Wellbore Survey Accuracy</a>	337
<a href="#">The ISCWSA Wellbore Positioning Course</a>	244
<a href="#">Video Library</a>	230

TOP 5 EVENTS	
Events	30-Day Traffic
	4630
<a href="#">ISCWSA #63 General Meeting, Frankfurt, Germany</a>	1201
<a href="#">ISCWSA #62 General Meeting Anchorage, Alaska</a>	139
<a href="#">ISCWSA #60 - New Orleans, Louisiana, USA</a>	74
<a href="#">ISCWSA #57 - Stavanger, Norway</a>	73
<a href="#">ISCWSA #58 - San Antonio, Texas</a>	66

### MEMBERS

579 Active | 0 Expire in 30 days

Last 30 days  
New: 14  
Pending: 0  
Expired: 0



Category	Count
New	14
Pending	0
Expired	0

- ### 14 MEMBERSHIPS IN THE PAST 30 DAYS
- [Mohamed Ali Abubakr Abdelrahman](#)
  - [Knut Ness](#)
  - [Danill Chertkov](#)
  - [Sean Hodgson](#)
  - [HAO LI](#)
- [More new memberships.](#)

# MEMBERSHIP APPLICATION

Thank you for your interest in joining our organization!

## Member Information

First Name\*

Last Name\*

Salutation

Phone

Email\*

Country

Display Name

Mailing Name

Company

URL

Department

Position Title

Primary Practice

How Long In Practice

Areas of Expertise

Referral Source

Username

Password

Confirm password

Notes

Hide In Search

Hide In Search

Hide Email

Hide Phone

## Membership Type

Membership Type\*  Basic Membership - \$0.00

## Join a Subcommittee

- User Groups**
- Collision Avoidance Sub-Committee
  - Drilling Data Quality and Uncertainty Description Sub-Committee
  - Education Sub-Committee
  - Error Model Sub-Committee
  - Operational Wellbore Survey Group Sub-Committee
  - Survey QA/QC Sub-Committee
  - Well Intercept Sub-Committee
- I would like to sponsor ISCWSA
- I would like more information on becoming a sponsor for the ISCWSA!

## Industry

Industry

## Region

Region

**SUBMIT**



# Files

580 Results

Clicks	Type	File Name	Actions
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<a href="#">182</a>		<a href="#">well-intercept-sub-committee-ebook-version-3-2021-.pdf</a> Created Dec. 18, 2020, 4:39 a.m.	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">150</a>		<a href="#">toolgroup-owsg-a-rev-5-1-08-oct-2020-produced-23-sep-2022.xlsx</a> Created Sept. 23, 2022, 8:31 a.m.	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">145</a>		<a href="#">current-common-practice-in-collision-avoidance-calculations-2011-chinese.pdf</a> Created July 11, 2019, 10:06 a.m.	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">129</a>		<a href="#">introduction-to-wellbore-positioning-ebook-v9-10-2017.pdf</a> Created Oct. 10, 2021, 11:12 p.m.	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">127</a>		<a href="#">mahmoud-elgizawy.jfif</a> Created March 9, 2020, 2:11 a.m.	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">127</a>		<a href="#">isc-t50-additional-tool-models.pdf</a> Created April 9, 2021, 11:16 a.m.	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">124</a>		<a href="#">api-rp-78-directionalsurveyrecords-2020-05-06-version10-not-final.docx</a> Created May 8, 2020, 10:26 a.m.	<a href="#">Edit</a> <a href="#">Delete</a>
<a href="#">114</a>		<a href="#">details-of-iscwsa-mwd-error-models-to-rev4-05-jun-2015-excel.xlsx</a> Created July 11, 2019, 1:57 p.m.	<a href="#">Edit</a> <a href="#">Delete</a>
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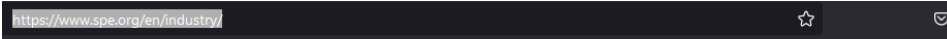
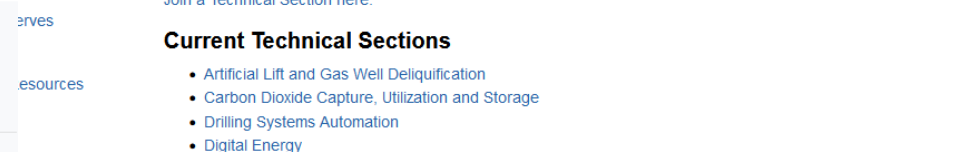
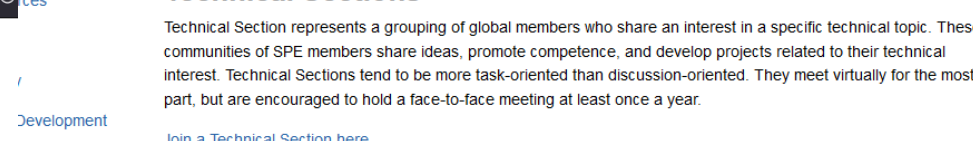
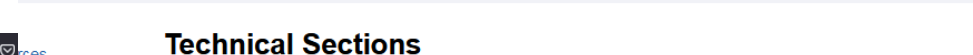
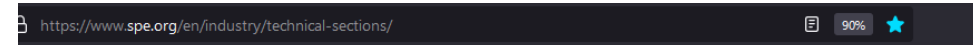
# Website Enhancements

- Sub-committee Chairs and member Call for Website new functionality ideas?
- Improvements Meeting with Tendenci circa 2025 :
  - Sub-committee e-mail account – **Done Georgy**
  - Voting functionality – **in progress**
  - Controlled document storage **Done**
    - **sub-committee projects, e-books and group documents**
  - Blog functionality for Main Page & EM, CA, WI, QAQC and EDU Sub-committee pages **in progress**
  - **Search file capability – Darren, Georgy, Phil Ongoing**
  - **ODSU GITHUB for EM data and CA data Keith Rickey**



# How to Join the WPTS

<https://www.spe.org/en/industry/technical-sections/>



Comprehensive, SPE-managed online knowledge bases covering all aspects of E&P.

## Resources by Topic

R&D and TECHNICAL	BY FOCUS	CAREER DEVELOPMENT
Research and Development	SPE Disciplines	Continuing Ed, Training and Certification
The 5 Grand Challenges	SPE Journals and Books	SPE Industry Job Board
Petroleum Reserves Definitions	Gaia Sustainability Program	Mentor Program
Reserves Committee	Faculty	
CO <sub>2</sub> Storage Resources Management System	Students	<b>FEATURED RESOURCE</b>
Technical Papers and Research	Senior Professionals	<b>Members in Transition Toolkit</b>
<b>Technical Sections</b>	Young Professionals	Support, advice and resources for members during the downturn.
	Diversity and Inclusion in O&G	

## Technical Sections

Technical Section represents a grouping of global members who share an interest in a specific technical topic. These communities of SPE members share ideas, promote competence, and develop projects related to their technical interest. Technical Sections tend to be more task-oriented than discussion-oriented. They meet virtually for the most part, but are encouraged to hold a face-to-face meeting at least once a year.

Join a Technical Section here.

## Current Technical Sections

- Artificial Lift and Gas Well Deliquification
- Carbon Dioxide Capture, Utilization and Storage
- Drilling Systems Automation
- Digital Energy
- Drilling Uncertainty Prediction
- Flow Assurance
- Flow Measurement
- Geomechanics
- Human Factors
- Hydraulic Fracturing
- Petroleum Data-Driven Analytics (PD<sup>2</sup>A)
- Research and Development
- Separations Technology
- Sustainable Development
- Unmanned Systems
- Water Life Cycle and Strategy
- **Wellbore Positioning**
- Well Integrity



# Other ISCWSA Social Media

[Click here for the ISCWSA LinkedIn page](#)

2062 Members with a very small 6 months  
**increase in membership of 12!**

The screenshot shows the LinkedIn profile for the 'ISCWSA Petroleum Industry Steering Committee on Wellbore Survey Accuracy'. The group is private and has 2,062 members. The analytics section shows a 34% increase in active members to 575, 12 new members, a 100% increase in posts to 12, and a 74% increase in post views to 1,694. A 'Your comments matter to group members' notification is also visible.

Metric	Value	Change
Members	2,062	-
Active members	575	▲ 34%
New members	1	● 0%
Posts	12	▲ 100%
Post views	1,694	▲ 74%

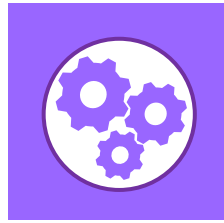


## Thanks to

- ISCWSA Committee
- Sub-Committee Chairs
- All Members feedback and support on the website
- Tendenci
- Robert Wylie & Georgy for extra support

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# Questions?