

SOCIETY OF PETROLEUM ENGINEERS
CONSTITUTION of the Society of Petroleum Engineers (SPE)
Wellbore Positioning Technical Section (WPTS)

Article I – Section Name

The name of this section is the Wellbore Positioning Technical Section (WPTS) of the Society of Petroleum Engineers (SPE), Inc. in association with the Industry Steering Committee on Wellbore Survey Accuracy (ISCWSA)

Article II – Section Purpose

The purpose of this section shall be to further the objectives of the Society in the free discussion of matters relating to the domain, to both propose new and establish consensus on current industry proven engineering practices and to promote those practices widely.

The Wellbore Positioning Technical Section shall be self-governing within the limitations of the SPE Bylaws and the policies established by the SPE Board of Directors.

Mission Statement - "The primary aim of this group is to produce and maintain standards for the industry relating to wellbore survey accuracy, set standards for terminology and accuracy specifications and establish a standard framework for modelling and validation of tool performance. The goal is to raise the awareness and understanding of wellbore survey accuracy issues across the industry."

Article III – Section Jurisdiction

The jurisdiction of this section will encompass the subject of wellbore positional survey measurement, accuracy and technical boundaries including but not limited to the associated topics described below:

- *Borehole Surveying while drilling and post-drill surveying including but not limited to downhole magnetic and gyroscopic measurement while drilling (MWD), cased- and open-hole continuous surveying of borehole trajectory data using survey, tools, logging tools, gyroscopes and inertial measurement systems*
- *Advanced Survey Corrections (i.e. Magnetic, SAG, Axial, basic and advanced Multi-Station Analysis (MSA), In-Field-Referencing (IFR1 & IFR2), Synthetic Simulated Survey Methods (based on steered intervals and equipment steering yield)*
- *Well Intercept, Relief Wells Drilling and Ranging Technologies*
- *Wellbore and Well Origin Location Position Uncertainty*
- *Collision Avoidance, Planning, Operations and Practices*
- *Directional Drilling Advisory Systems including but not limited to Automated or Continuous Surveying, and Advanced Borehole Positioning Corrections*
- *Geomagnetic Reference Models including In-Field Reference Systems*
- *Probability of Collision with respect to Well Separation*
- *Geodesy, Datums and Coordinate Reference Systems (Vertical & Horizontal CRS) related to Well Origin*
- *Gyroscopes, Measurement While Drilling and Directional Drilling Related Downhole Equipment, Sensors and Systems including traditional MWD sensors, gyroscopes and MEMS Sensors*
- *Data redundancy quality methods including Chi squared testing, survey redundancy, bench mark check shot comparisons*
- *Wellbore survey, trajectory steering and borehole quality metrics and associated measures including but not limited to dogleg severity, tortuosity, torsion, undulation indexes and all other related wellbore trajectory quality metrics and key performance indicators related to wellbore positioning*
- *Education with Respect to Wellbore Positioning (all topics listed above)*

Article IV – Membership

All Members, Associate Members and Student Members of the Society of Petroleum Engineers, who are in good standing, are qualified as Voting Members of the Section. SPE members wishing to join the Section will self-register via the SPE web site's Technical Section page. When a vote on an issue is taken, only SPE members may vote and the total votes by members of any one organization are restricted to three or less.

Article V – Organization

Any member or student member of the Society of Petroleum Engineers in good standing with interest in the subject may be a member of the WPTS. The member must initiate and complete the membership process. Any non SPE member may also join the WPTS by contacting the WPTS Committee Membership Chair directly.

Section I - Officers

The officers of this section shall be a Chairperson, a Program Chairperson, an Administrative Chairperson, a Treasurer, a Membership Chairperson, and a Webmaster, who shall each be elected for a two-year term, subject to the following constraints:

- *All officers must be Members of SPE, Inc., in good standing with the Society at the time of their election.*
- *The Chairperson will not be directly elected; instead, the Program Chairperson will succeed automatically to the position of Chairperson.*

To maintain continuity, the election of the Program Chairperson will take place in the year intervening between the elections for the other officers. A vacancy in any office occurring between elections shall be filled by appointment of the remaining office bearers, pending the holding of an election at the next annual meeting of the Section.

Section II - Board

A section board of directors shall be composed of the forenamed officers plus four other members of the section.

Section III - Elections and Appointments

Six months before the term of any officer is due to end, the four (4) non-officiating members of the board shall constitute a nominating committee and begin to canvass the members of the section to determine those willing and qualified to serve as officers. The nominating committee shall present the name of at least one candidate for each office at the Annual Meeting of the section. Additional nominations may be made from the floor. It is acceptable for incumbent officers to stand for re-election.

The officers of the section shall be elected at the Annual meeting. Election shall be by majority vote of SPE members. The vote will normally be taken amongst those present at the Annual meeting, but may be carried out electronically prior to the meeting, with a voting deadline no earlier than 10 days prior to the meeting. Officers shall take office immediately following the meeting at which they are elected.

Election of the non-officiating members of the board of directors shall be held every two years, at the same meeting as the election of the Program Chairperson.

Section IV - Duties of Officers

I. Chairperson

The Chairperson promotes the well-being of the section, the society, and the profession. He/she performs all duties that pertain to the direction of the technical section including, but not limited to:

- *Understanding the global mission of SPE*
- *Possessing good leadership, motivation, and communication skills and the ability to work with various personalities*

Understanding the technical section's role in relation to the SPE International Board

Chairperson Responsibilities:

- *Preside over all meetings of the technical section and its board of directors.*
- *Oversee the election of officers (outlined in the Sample Governance Model) and the appointment of workgroup and subcommittee member positions.*
- *Understands the principle behind the technical sections and contributes to technical section's ideas.*
- *Ensure the technical section is global in applicability and participation.*
- *Inform the nominating committee that the technical section board should maintain regionally geographic diversity and cross-company representation.*
- *Keep the staff liaison informed regarding plans, needs, or challenges.*

- *Ensure that an officer communicates with technical section members at least 4 times per year via Informz email broadcast platform or SPEConnect.*
- *Ensure the technical section complies with all SPE Guidelines and Policies, including that all officers be members of the technical section in good standing.*
- *Submit an Annual Report (hyperlink to forms) by 1 June.*
- *Hold a minimum of six (6) board meetings/conference calls per year, and at least (1) face-to-face meeting of the membership to be held in conjunction with ATCE, OTC or other SPE event.*

II. Program Chairperson

The Program Chairperson shall be responsible for the arrangement of programs, promotion of programs, entertainment, and incidental details relating to meetings, events and webinars (if applicable). In the absence of the Chairperson, he/she shall serve as Chairperson.

Program Chairperson Responsibilities:

- *Establish goals for programming based on technical needs of technical section members.*
- *Set and execute objectives, including budget and attendance targets and track revenue and expense.*
- *Contact and secure speakers.*
- *Ensure appropriate marketing.*
- *Ensure adherence to all SPE Policies.*

III. Administrative Chairperson

The Administrative Chairperson shall record, store and distribute minutes from technical section board meetings. In addition, they shall record proceedings of the meetings of the section and attend to all correspondence, and issue all calls and announcements of meetings.

Administrative Responsibilities:

- *Record meeting minutes*
- *Distribute Board meeting announcements*
- *Maintain technical section Governance Model*
- *Maintain list of technical section officers*

IV. Treasurer

The Treasurer will maintain an account of, receive, and disburse funds. The Treasurer will ensure that all direct costs for the event are covered by sponsorships or ticket sales, in cooperation with the Program Chairperson. In addition, the Treasurer will set budget and attendance targets and track revenue and expense, in cooperation with the Program Chairperson.

Treasurer Responsibilities:

- *Collect and disburse section funds as approved*
- *Submit financial statement to the staff liaison or to technicalsections@spe.org with a copy to the Chairperson by 1 June*
- *Provide financial reports to the technical section board and make recommendations on the management of the technical section's finances*
- *Establish, balance, and maintain all accounting records for the technical section's bank account, including deposits, income from events and payments*
- *Reconcile the bank account to the monthly bank statement*
- *Audit Financial Records*
- *Process Charitable Contributions (If Applicable)*

V. Webmaster

The Online Community Webmaster will administer and maintain the technical section's online community site on connect.spe.org. This worksite is the primary information source for the technical section.

Webmaster Responsibilities:

- *Promote collaboration, post announcements, and initiate discussions on connect.spe.org.*
- *Periodically update the site to ensure it remains relevant to technical section members.*
- *Maintain officer listing on the site.*
- *Manage all related online websites, content and related resources including the iscwsa.net website and any social media online pages or groups.*
- *Recognize and adhere to SPE brand standards when applicable.*

VI. Membership Chairperson

Manage and maintain the WPTS SPE Informz membership distribution list and provide a report on the WPTS membership every meeting.

- *Review data and lists provided via Membership Builder, and report membership statistics to the technical section board.*
- *Maintain a comprehensive list of members*
- *Organize and implement methods to increase technical section membership*
- *Encourage members to volunteer and engage in technical section activities*
- *Ensure the technical section is global in participation*

Article VI – Meetings

The Annual Meeting of the section shall be held close to or coincident with the main SPE ATCE. Other ordinary meetings of the section shall be held regularly as required by the membership, typically this will be one meeting held approximately 6 months after the annual meeting.

To encourage the ethos of open technology transfer, the section specifically encourages participation by non- section and non-SPE members in its meetings. The Administrative Chairperson shall notify, by e-mail or other convenient means, each member in good standing and other interested parties of forthcoming meetings.

Special decision-making meetings or meetings of the officers to consider important business or to hear technical papers or discussions that cannot be scheduled at regular meetings may be called by the Chairperson.

Technical section events should be self-sufficient and budgeted to break even. Identification of potential sponsors and collection of funds is the responsibility of the technical section's board.

Each technical section will receive an allowance of up to \$5,000 per fiscal year, for all expenses related to audio-visual requirements. The allowance will apply to any technical section board meeting and / or special event held in conjunction with an SPE conference [e.g. Annual Technical Conference and Exhibition (ATCE), Drilling Conference, etc.] If these costs exceed the \$5,000 allotment, additional sponsorship may need to be obtained.

Sponsors are required to sign a Sponsorship Agreement, which lists the benefits offered to the sponsoring company. If funds are not received within six (6) weeks of the event date, the event will be cancelled. For additional guidance, contact your staff liaison.

Article VII – Technical Decisions and Recommendations

Sub-Committees, Special Interest Groups and Volunteer Work Groups will report their findings and recommendations at Section meetings, for discussion by the membership. Decisions to endorse findings and adopt recommendations will be determined by the votes of the members present at the meeting. In general, sub-committee meetings are held directly prior to WPTS General Meetings at the same or close to the main meeting venue.

Sub-Committees

1. Collision Avoidance

Mission Statement - Develop and describe good practice in collision avoidance management, and promote its adoption in the well construction industry.

2. Education

Mission Statement - Since inception, the sub-committee has been primarily focused on organizing SPE Applied Technology Workshops as a method of raising awareness of wellbore positioning issues to the broader industry.

3. Error Model

Mission Statement - The role of the ISCWSA Error Model Maintenance Group is to define the mathematical framework for modelling the uncertainty in wellbore surveying. This allows different companies to implement a consistent set of algorithms for error modelling.

4. Operator Wellbore Survey Group

Mission Statement - To promote practices that provide confidence that reported wellbore positions are within their stated uncertainty.

5. Well Intercept

Mission statement - Develop good practice in well intercept scenarios and promote its adoption in the well construction industry.

6. Survey QA/QC

Mission Statement - To define practices that promote the task of defining the required data which may be used to validate and potentially enhance a wellbores' position and uncertainty.

Article VIII – Governing Rules

SPE WPTS shall act in accordance with the governing rules of the Society of Petroleum Engineers (SPE). In circumstances where the governing rules are not clear, the Chair of WPTS shall seek advice and guidance from the relevant representative of SPE. The Chair shall make a recommendation to the (Board of) Directors for a vote on such guidance.

Article IX – Funds

This Section will maintain a bank account (the General Fund) and receive or disburse from the General Fund as necessary, under the direction of the Treasurer with approval of the Section Officers and Board of Directors. Expenditure of funds from the General Fund must be approved by a majority vote of the Officers and the Board of Directors for amounts in excess of \$2,000. Amounts less than this, if they are considered costs associated with normal operations of the section, can be approved jointly by the Chair and the Treasurer, or the Deputy-Chair and Treasurer in the Chair's absence, and must be reported at the next committee meeting. Normal operations of the section shall include planning and conducting meetings, such as WPTS general meetings, seminars and workshops.

The Section may also maintain individual bank accounts for specifically funded initiatives such as sub-committees, Joint Industry Project (JIP's), Special Interest Group (SIG's) Projects and similar needs that are maintained separate from the WPTS General Fund. Payments on behalf of these funded initiatives are subject to the rules under which these initiatives were established and the terms under which they invoiced for the funds.

Article X - Officer Approval and Authority to Proceed

We, the elected officers, have reviewed and hereby approve the revised constitution as described above, and authorize the officers and members of the Technical Section to operate and proceed as described.

<i>Name</i>	<i>Title</i>	<i>Date</i>
<i>Jonathan Lightfoot</i>	<i>Chairperson</i>	
<i>Ross Lowdon</i>	<i>Program Chairperson</i>	
<i>Ryan Kirby</i>	<i>Administrative Chairperson</i>	
<i>Robert Wylie</i>	<i>Treasurer</i>	
<i>Phil Harbidge</i>	<i>Webmaster</i>	
<i>TBD</i>	<i>Membership Chairperson</i>	
<i>Heather Vannoy</i>	<i>Director at Large (1)</i>	
<i>Adrian Ledroz</i>	<i>Director at Large (2)</i>	
<i>Chad Hanak</i>	<i>Director at Large (3)</i>	
<i>AnaS Sikal</i>	<i>Director at Large (4)</i>	

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