

Education Subcommittee Activity Report

1

**Industry Steering Committee on
Wellbore Survey Accuracy
Wellbore Positioning Technical Section**

Carol Eve Mann

47th General Meeting
April 11th, 2018
Inverness, Scotland



Speaker Bio: Carol Mann

- WellArchitect® Software Product Manager
- Dynamic Graphics, Inc
 - 30 years in Oil and Gas Multi-disciplinary Software Solutions
 - BS Geology, Lafayette College
 - MS Geophysics, Stanford University
 - 15 years in Directional Drilling Software
 - 12 years with the ISCWSA

Education Subcommittee

What We Are...

- An Advisory, Awareness Committee

What We Do...

- Raise Awareness through Workshops, Webinars, and....

What We're Not...

- In the business of running a school

- 2018 Distinguished Lecturer: Steve Sawaryn 4
- 2019 Distinguished Lecturer nomination: Steve Grindrod
- Suggestions? Email Peter@Wellpro.com or Data@Management.Everyone.com
“Should Know”



Distinguished Lecturer

Each year, SPE selects a group of professionals, nominated by their peers, to share their knowledge and expertise with SPE members through visits to local sections.

- Webinars

- March 2018 – Wellbore Ranging Technologies, Intercept, Applications and Best Practices
- 2-3 2018
 - Reprise of 2016 “Estimating the Economic Impact of Wellbore Positioning Errors on Reservoir Recovery (MagVary)”
 - RP78 late 2018 / early 2019 (Pete Clark)
- Suggestions? Email carol@dgi.com or chad@superiorqc.com



Benny Poedjono
Schlumberger Petro-Technical Expert



Chad Hanak
President, Superior QC



Pete Schiermeier
Global Technical Advisor, Survey Management/Survey/Ranging, Halliburton



Roger Spivey
SME/Well Placement Technical Specialist, BP GWO

- Topical Luncheons
 - 2017: SPE ATCE San Antonio
 - Sold out!
 - Varied Audience
 - 2018:
 - ~~September: SPE ATCE Dallas~~
 - November: ADIPEC Abu Dhabi

- SPE ATCE ½ Day Special Session (Tues pm)
- Joint initiative: DSATS, WBPTS, DETS, OGDQ

7

The Automation of Well Placement

Automated well placement is a key, high-value milestone achieving improved well quality for lower life-cycle cost. Success requires a cross-discipline solution...

- Moderators: Jeff Moss, ExxonMobil / Ford Brett, Petroskills
- Panel Speakers:
 - Shauna Noonan, Oxy – completions/production
 - Stefan Wessling, BHGE – geoscience/geosteering/inversion
 - Geoff Downton, Schlumberger – drilling and automation
 - Adrián Ledroz, Gyrodata – wellbore positioning and accuracy
 - Ed Stockhausen, Chevron – subsurface

8

- Applied Technology Workshops (ATWs) 9
 - Previously: Four “Hits and Misses”
 - Next up:
 - Targeting cross-disciplinary
 - How considering wellbore positioning impacts the bottom line
 - Small sub-group tasked with working towards making this happen: 2019/2020



- PowerPoint Slides
- Signature

<http://www.iscwsa.net/> (ISCWSA -- Industry Steering Committee on Wellbore Survey Accuracy -- website)
<https://www.uhi.ac.uk/en/wellbore-positioning-download> (UHI Wellbore Positioning eBook -- an ISCWSA initiative)
<http://www.iscwsa.net/download/4762c0a8-fa59-11e7-8fc6-258dc249882c> (Wellbore Ranging / Intercepts eBook)

- Logo
- Looking for volunteer(s)

Contact:

carol@dgi.com / chad@superiorqc.com

What is ISCWSA?

The Industry Steering Committee on Wellbore Survey Accuracy
(UHI Wellbore Positioning eBook -- an ISCWSA initiative)
SPE WPTS – Wellbore Positioning Technical Section

Primary aim is:

- Produce and maintain standards relating to wellbore survey accuracy
- Set terminology and accuracy specification standards



- ISCWSA Website
 - “Pub Quiz” online
 - Categorize previous talks
 - 200+ presentations
 - Keywords

1	Full Name
2	ISCWSA meeting 46
3	ISCWSA meeting 45
4	ISCWSA meeting 44
5	ISCWSA meeting 43
6	ISCWSA meeting 42
7	ISCWSA meeting 41
8	ISCWSA meeting 40
9	ISCWSA meeting 39
10	ISCWSA meeting 38
11	ISCWSA meeting 37
12	ISCWSA meeting 36
13	ISCWSA meeting 35
14	ISCWSA meeting 34
15	ISCWSA meeting 33
16	ISCWSA meeting 32
17	ISCWSA meeting 31 - A
18	ISCWSA meeting 30 - N

The screenshot shows the ISCWSA website's 'Meeting Minutes' page. At the top is the ISCWSA logo. Below it is a navigation menu with links for Home, About Us, What's New, Meeting Minutes (which is highlighted), Sub-Committees, and Docs and Publications. The main heading is 'Meeting Minutes'. Below this, there is a list of meeting entries, each in a blue box with a right-pointing arrow. The entries are: 'ISCWSA Meeting 47 - Inverness, Scotland - 11-Apr-2018', 'ISCWSA meeting 46 - San Antonio, Texas, USA - 12-Oct-2017', 'ISCWSA meeting 45 - The Hague, Netherlands - 17th March 2017', 'ISCWSA meeting 44 - Glasgow, Scotland UK - 22nd September 2016', 'ISCWSA meeting 43 - Fort Worth, Texas, USA, 4th March 2016', and 'ISCWSA meeting 42 - Houston, Texas USA 1st October 2015'.

Raising E-book Awareness

- Intro to Wellbore Positioning
 - Spanish version coming
 - Offer to translate to Chinese
- Wellbore Ranging Technologies, Intercept Applications, and Best Practices
- Postcards
- Student Outreach
- JPT Article

University of the Highlands and Islands
Oilthigh na Gàidhealtachd agus nan Eilean

INTRODUCTION TO WELLBORE POSITIONING

h (Ellipsoid height) = distance along ellipsoid normal
N (Geoid height) = distance along ellipsoid normal
H (Orthometric height) = distance along plum line

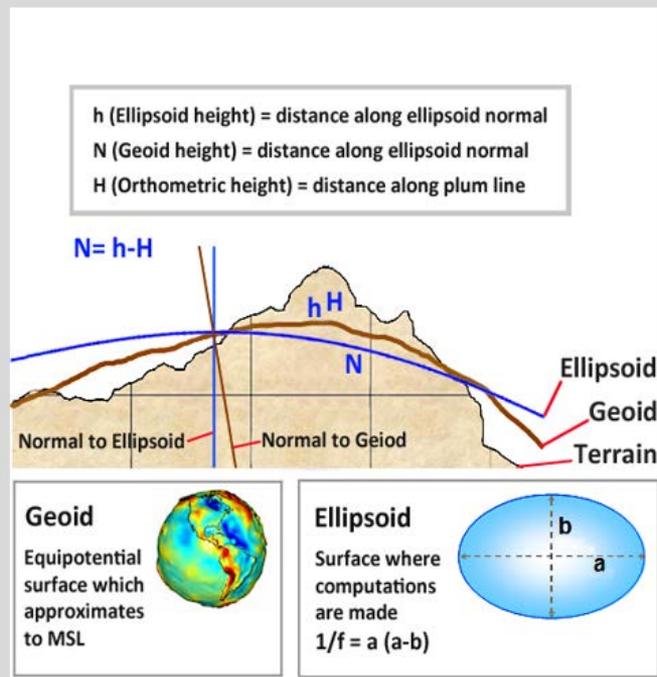
$N = h - H$

Normal to Ellipsoid Normal to Geoid

Ellipsoid
Geoid
Terrain

Geoid
Equipotential surface which approximates to MSL

Ellipsoid
Surface where computations are made
 $1/f = a - b$



- UHI Wellbore Surveying Competency Certification
 - 100 Students
 - At least 3 Operators now have in-house tutors
- UHI Hands-on School
 - Expected for Autumn 2018

13



The Education Subcommittee

- Coming regularly? Interested in making a difference?
 - Please join the Education Subcommittee!
- Special Thanks to:
 - All who volunteered...
Your names are written down....
 - Mike Long
 - The Entire Education Committee

• **Thank you!**