



Deepwater Well Engineering - DWE

COURSE

About the Course

This is a five-day course designed to promote understanding of well design and engineering capabilities unique to the deep water environment. Participants are actively engaged in the skills and activities required to deliver a cost-effective well plan, while also gaining valuable perspective on the role of a DW drilling engineer as a project manager. Suggested course prerequisites include 3+ years' experience in drilling and 2+ years in a well planning role for onshore or shallow water applications.

"Overall a very good course. Instructor was very insightful." - Vice President Engineering, United States

"I really enjoy the teaching approach. Also I really enjoyed the practical teamwork." - Well Operations Engineer, Canada

Target Audience

Experienced drilling engineers, drilling supervisors, and other petroleum professionals that are new to deep water (DW) who will become involved or responsible for DW well planning or oversight of non-operated DW wells. The ten day, Well Design and Engineering (WDE) course, or its equivalent, is highly recommended as a pre-requisite.

You Will Learn

Participants will learn how to:

- Understand and manage technologies, practices, and design methodologies unique to the DW environment
- Analyze and utilize offset well data important for DW planning and well design
- Identify key issues and risks related to floating operations and rig selection
- Manage challenging logistics and unique equipment/supply chain issues
- Clarify the potential impact of geohazards, such as shallow gas and water flows, hydrates, salt, and tar
- Identify well control constraints and calculate kick tolerance
- Develop specific casing design skills, including impact of metocean environmental conditions on structural pipe design, casing point selection, annular pressure buildup design strategies, and use of US GOM Well Containment Screening Tool
- Assess DW cementing technologies and make appropriate choices for a DW well
- Develop designs for DW drill strings, BHAs, and landing strings

- Clarify well design issues for both riserless and post-riser phases of well construction
- Define drilling fluids for a DW well; assess and address any unique issues
- Compile risks to well delivery; develop mitigations and contingency plans
- Consider abandonment requirements in well design

Course Content

- Floating drilling rigs and equipment
- Unique challenges of deepwater
- Shallow hazards
- Deepwater planning cycle
- Subsea BOP equipment
- Subsea well control issues
- Structural pipe design for bending
- Riserless drilling
- Casing shoe depth considerations in DW
- Annular pressure buildup in casing strings
- Regulatory requirements
- Subsea cementing process
- Subsea wellheads and trees
- Hydrates
- Drilling fluid issues in DW
- Slip crushing for drillstring design
- Landing string design
- Salt drilling
- Relief well planning for DW
- DW risks
- Abandonment of subsea wells
- Awareness of the basics of Managed Pressure Drilling and other emerging technologies

Product Details

Categories: [Upstream](#)

Disciplines: [Well Construction/Drilling](#) [Offshore & Subsea](#)

Levels: [Intermediate](#)

Product Type: [Course](#)

Formats Available: [In-Classroom](#) [Virtual](#)

Instructors: [PetroSkills Specialist](#) [Peter Aird](#) [George Armistead](#)

