

# **DRILLING & COMPLETION ESSENTIALS FOR NEW ENGINEERS & NON-TECHNICAL PROFESSIONALS**

**Wednesday 21<sup>st</sup> - Friday 23<sup>rd</sup> August, 2019**

## Course Overview

This course is designed to provide participants with basic understanding of activities that relate to the drilling and completion of oil and gas wells. The course covers the entire drilling engineering process from the well planning phase to rig site operations. Insight is also provided into drilling problems and reasons for well intervention after the well is put on production. This course will equip you, whether in a managerial or supporting role, to contribute significantly towards ensuring that well project delivery targets are met, within the approved Authorization For Expenditure (AFE) and with minimal Non Productive Time (NPT).

## WHO SHOULD ATTEND

New engineers and executives in the following fields who are interested in enhancing their knowledge and awareness of the drilling & completion process for increased contribution to the well delivery:

- Accounting & Commercial
- Business Development
- Human Resources
- Legal
- Finance & Administration
- Estimation & Proposal
- Planning & Budgeting
- IT Support
- Procurement & Supply Chain
- Tenders & Contracts
- Joint Ventures
- Logistics & HSE

### *What you will gain:*

- An overview of Well Planning & Design
- Drilling Cost Considerations
- Types of Onshore & Offshore Rigs and the Drilling Rig Systems
- The role of key Drilling Personnel and Service Providers
- The Drilling and Completion Sequence
- Common Challenges in Drilling Operations

### *Learning Outcomes*

- Describe the well planning process and appreciate each element in the planning process.
- Understand major cost components of drilling operations and its impact for better project planning and management
- Describe the basic sequence for onshore & offshore drilling and completion
- Identify drilling rigs and major equipment; understand their functions to promote a deeper understanding of technical and logistical considerations

## Training Venue



3, Adekola Balogun Street,  
Maruwa Round About B/Stop  
Lekki, Lagos

## Contact Information



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# Course Outline

*This course will be delivered through multi-media presentations, case studies, exercises and discussions. A detailed reference manual would be provided for continuous learning and sharing. The class size would ensure effective interaction.*

## OVERVIEW OF OIL AND GAS EXPLORATION

- Brief History of Drilling Practices
- Reservoir rocks
- Petroleum Formation & Accumulation
- Hydrocarbon Prospecting
- The Exploration and Production Lifecycle
- Oil & Gas Licensing Permits
- The role of E&P Professionals

## WELL PLANNING AND DESIGN

- Different Well Operations – Drilling, Completions & Well Interventions
- The Well Proposal
- Formation Pressures – Basic Calculations
- Overview of the Well Design Process
  - Well Trajectory Design - Vertical; deviated; horizontal; Multilaterals
  - Directional Drilling Considerations
  - Bottom Hole Assembly & Drilling Bit Selection
  - Torque, Drag & Hydraulics Modeling
  - Drilling Fluid Specifications
  - Formation Evaluation Considerations
  - Casing & Cementing Specifications
  - Completion Considerations
  - Long Lead Equipment
- The Well Programme
- Location Preparation
- Drilling Rig Selection

## TYPES OF RIGS

- Drilling on land – basic land rigs
- Offshore Rigs
  - Floating rigs and fixed platforms
  - Semisubmersibles, Drill ships, Tender assisted rigs
  - Jack-ups and steel platforms.
  - Tension leg platforms, Spars

## WELL PLANNING AND DESIGN

- The derrick, the hoisting system: Crown block, traveling block, drilling line
- The power system
- The rotating system: Kelly Drive, Top drive
- The circulating system: Mud pump, shale shaker, desander, desilter
- Well control system, BOP

## THE DRILLING SEQUENCE

- Drilling Personnel Organization at the rigsite (Onshore/Offshore)
- The Role of Client Representatives and Service Contractors
- Drill Well on Paper (DWOP)
- Rig Mobilization; Rig Move and Rig-up
- The XKC Project
- Pre-spud Operations e.g. Stove pipe pilling
- Top Hole Section Operations
- What happens on the drill floor? (Mouse hole connection, racking stands of drill pipe)
- Mud Logging
- Casing & Cementing Operations
- BOP Operations
- Intermediate Section Operations
- Gyro/MWD/LWD/DD
- Production Section Operations
- Formation Evaluation
- Well head Operations
- Plan vs. Actual – Drilling Problems / NPT; Reporting

## WELL COMPLETIONS

- Types of Completions
- Wellbore Cleanout
- Brine Filtration
- Perforating
- Running Completions
- Christmas Tree Installation

## WELL INTERVENTION

- Fishing
- Overview of Rigless Operations

## Course Instructor

Eyitayo Mumuney is a Drilling, Well completions and Project Supervisor with vast experience in the oil and gas industry. He spent the early years of his career with Total E & P as a drilling and completions engineer where he actively participated and later supervised the drilling and completions of several wells both onshore and offshore Nigeria. A track record of excellent project, operational delivery, analytical and problem solving skills and strong knack for safety and cost effectiveness.

In the past 6 years, He have supervised and managed a series of Drilling, Well re-entry, Well re-completions and Well intervention operations in the Niger Delta region of Nigeria. He is currently serving as a Project Manager in one of the marginal fields operators here in Nigeria.



## Registration

# Price: N150,000

Registration is complete upon payment

### Included in the price:

Tuition, course materials, lunches and refreshments

- Group discount for delegates from the same company: 6 for the price of 5.

### 4 easy ways to register:

1. Tel: 08034636098 | 08069098110
2. Email: [info@havilahenergy.com](mailto:info@havilahenergy.com)
3. Mail: Havilah Hydrocarbon Resources Mgt. (Nig). Ltd. 3, Adekola Balogu Street, Maruwa Roundabout B/Stop, Lekki, Lagos.

### 2 easy ways to pay:

1. Bank transfer
2. Cheque

Payment can be made to the details below;

ACCOUNT NAME: HAVILAH HYDROCARBON RESOURCES MANAGEMENT NIGERIA LIMITED

BANK NAME: DIAMOND BANK PLC,

ACCOUNT NUMBER: 0063618735

### Cancellation Policy

Cancellation made minimum of 30days prior to scheduled date attracts 90% refund. Between 15 and 29 to the scheduled date attracts 75%, between 5 to 14 days attracts 50%. Cancellation made less than 5days to programme attracts no refund but such amount is transferable as a set-off against future training cost. Havilah Hydrocarbon Resources Mgt. (Nig.) Ltd is not liable for any costs incurred by delegates in the unfortunate event that the course is cancelled. Delegates are responsible for arranging their own travel and accommodation and associated costs. Havilah Hydrocarbon Resources Mgt. (Nig.) Ltd reserves the right to change or cancel any part of the published programme due to unforeseen circumstances