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# 3 Day Offshore & Deep-Water Drilling





# **0&G Knowledge Sharing Platform**

Enhancing Return on Investment in Oil & Gas Training

www.OGKnowledgeShare.com

This 3-Day course provides comprehensive, hands-on workshop on the fundamentals of offshore drilling. If you're new to offshore drilling, and looking for a comprehensive overview of how it all really works, this brandnew 3 Day Course Offshore Drilling is designed with you in mind.

This hands-on training course will walk you through offshore drilling operations, technology and costs, as well as taking you through issues such as health and safety and environmental concerns.

#### What will this course cover?

Difference between onshore and offshore drilling, drilling cost analysis, components of drilling rig, reasons for directional drilling, tools used for directional drilling, how to optimize parameters (such as bit selection, mud design, casing design and so on), HSE and logistics requirements during offshore drilling.

## What will you learn?

On completion of this course you will be able to fully understand the following:

- Get to grips with the fundamentals of offshore drilling and find out how it differs from land drilling
- Learn all you need to know about the drilling rig, basic well design, drilling bits, routine drilling operations, and much more
- Find out how to carry out a drilling cost analysis
- Discover how to estimate drilling costs, calculate the daily rig rate, and account for variable costs
- Consider the reasons for directional drilling, as well as looking at the tools and measurements involved
- Find out how to select and evaluate a drilling bit, as well as optimizing your drilling hydraulics
- Learn all about the role of weather conditions, supply vessels and sea port facilities
- Explore health, safety and security in the offshore drilling environment

### Who will benefit?

The following oil and gas company personnel will benefit from the knowledge shared in this course:

- Drilling engineers
- Drilling superintendents and foremen
- Reservoir Engineers
- Petrophysists
- Geoscientists
- Economists and planners
- Facilities planning engineers
- Accountants
- Mid-level management

## BIG PICTURE OF THE OIL & GAS INDUSTRY

- Meaning of petroleum
- Typical oil and gas company objectives
- Industry streams
- · World reserves and production
- · Peak oil
- Production management
- Quotas and capacities (OPEC/Non-OPEC)
- Market distribution and dynamics
- Role of IOCs, NOCs and regulatory bodies
- · Glossary of terms

#### **FUNDAMENTALS OF DRILLING**

- The drilling rig: types and components
- · The drilling team
- Drilling fluids (mud) and circulating system
- · Basic well design
- Drilling bits
- · Directional and horizontal drilling
- · Routine drilling operations
- Well monitoring
- · Well control
- Wellbore problems and preventions
- Special drilling operations (coring, fishing, etc.)

#### **CASE STUDIES**

 Mud weight window, rig horse-power and drilling depth

#### OFFSHORE DRILLING

- Differences between land and offshore
- Water depth and rig types (deep water MODUs – Mobile Offshore Drilling Units)
- · Sea bed preparation
- · Fixed platform
- · Floating drilling and station keeping
- Motion compensation
- Conductor casing (jetting/riserless drilling)
- Subsea BOP stack
- Marine/production riser for various deep-water applications
- Slip joint
- Rotating head & ROVs

#### **DRILLING COST ANALYSIS**

- Drilling cost estimation
- Authorization for Expenditure (AFE)
- Daily rig rate
- Fixed operating costs
- · Variable costs
- Drilling contingencies
- Non-productive time
- Drilling performance and optimization

#### **CASE STUDIES**

Cost per foot, bit performance

## DIRECTIONAL/HORIZONTAL DRILLING

- · Reasons for directional drilling
- Definitions
- Directional tools
- Well trajectories
- Directional drilling measurements
- Hole cleaning
- Extended reach wells (case study)

#### **DRILLING BITS**

- Types of bits
- Rock failure mechanisms
- Bit selection and evaluation
- Factors affecting rate of penetration

#### **DRILLING HYDRAULICS**

- Hydrostatic pressure
- Buoyancy
- Rheological models
- Bit nozzle size selection
- Drilling hydraulic optimization
- Hole cleaning/cutting transport

#### DRILLING FLUIDS (MUD)

- · Functions of drilling fluids
- Mud properties
- Water-based muds
- Oil-based muds
- Logistic Support and Services
- Weather conditions
- · Supply vessels
- Helicopter
- Land base
- Sea port facility

# HEALTH, SAFETY, ENVIRONMENT AND SECURITY

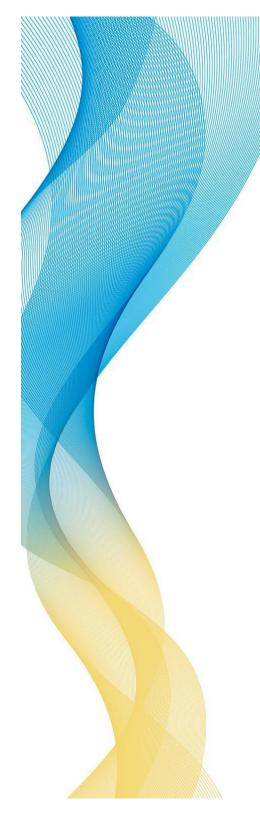
- Health, safety, environment and security
- Elements of drilling/production safety and regulations
- Think of unthinkable (scenario planning)
- Minimal operational requirements
- · Learning from disasters
- Oil spill prevention and response
- First responders and emergency equipment

**U-TURN**: work through your own problems and walk away with real solutions to your workplace challenges!

## WELL COMPLETION AND PRODUCTION

- Near wellbore formation damage
- Evaluating a well, logging, MWD and LWD
- Types of completions
- Perforating a well
- Well testing
- Reservoir stimulation
- Completion equipment, concepts and techniques
- Multizone completions
- Artificial lift technique
- Workover operations
- DW field development costs
- FPSO/subsea schemes instead of floating platforms

#### CASE STUDIES







Dr. Sharif is a petroleum engineering specialist with Saudi Aramco. He has over 35 years of practical experience in the oil and gas industry, including academia. He has diversified background in drilling, workover and completion operations, research, technology development and implementation, field development planning, well cost estimation, contracts and contracting strategy for oil and gas operations. He started his career on a steam-powered rig as a trainee drilling engineer in 1980. He worked as Assistant driller, driller and tour pusher on offshore drilling rigs in Abu-Dhabi, U.A.E.

After working 11 years in operations he joined graduate school and earned his MS and PhD in Petroleum Engineering from Texas A&M University, College Station, Texas. He has a unique blend of hands-on field operations and academic knowledge. He worked with Shell International Exploration and Production (SIEP) in Houston and was a recipient of the Shell President Award for premier performance for design and implementation of multi-string steam injection well design at Bakersfield, California.

Dr. Sharif has been involved in new joint ventures startup, product line development, commercialization strategy for Enventure GT, an Expandable Tubular Company (a JV between Shell and Halliburton). He deployed the first expandable casing, downhole.

He worked with Shell Nigeria, Farcodus Yokri Project, Warri and reduced well completion time by more than 50% for dual completions. He has expertise in developing novel ideas and transforming them into robust and practical solutions. He has been teaching stuck pipe prevention and lost time reduction course and conducted an awareness campaign for offshore drilling department. He has been involved in teaching undergraduate and graduate courses at King Fahd University of Petroleum and Minerals (KFUPM), Petroleum Engineering Department, Dhahran, Saudi Arabia. He brings out the best in his students.

He served as Curriculum Advisor - Well Construction discipline, representing Saudi Aramco with PetroSkills.

#### **EDUCATION**

 B.Sc Mining Engineering, M. Sc Petroleum Engineering, Texas A&M University, USA & PhD Petroleum Engineering, Texas A&M University, USA

#### **PORTFOLIO OF COURSES**

- Offshore and Deep-Water Drilling
- Drilling Operations
- Stuck Pipe Prevention
- Drilling Operations Optimization
- Advanced Drilling Engineering
- Drilling Hydraulics Design

#### **PUBLICATIONS**

- Fiber Glass Lined Tubular as completion string for corrosion protection
- Application of Drilling-with-Casing (DwC) Technology
- Meeting Economic Challenges of Deepwater Drilling With Expandable Tubular Technology
- Strategic Cost Leadership reduction of completion time by more than fifty
- Probability of getting stuck while drilling and probability of freeing the pipe
- Unconventional Methods for Shallow Water Flow Conductor Installation
- Carbonated Water Imbibition Flooding for fractured reservoirs

#### **COURSES DELIVERED IN**

Cambodia, Australia, Singapore, Kuala Lumpur, Dubai, London, Houston, Mexico, Paki

Please complete the following Form and e-mail it to <a href="mianma@OGKnowledgeShare.com">mianma@OGKnowledgeShare.com</a> OR Submit the same details via the <b>Event Registration</b> on the website <a href="www.OGKnowledgeShare.com">www.OGKnowledgeShare.com</a> . We will then send you additional course details along with a detailed course registration Form.				
Course Name				
Course Venue		Course Date		
Company				
First Name		Last Name		
Title				
Email		Phone		
Address				
City		State		
Postal Code		Country		

Full payment is due within 14 days from date of invoice and before the course commences. Delegates will not be allowed entry to the course if any payments are outstanding. A confirmation letter and invoice will be sent to you on receipt of your booking.

You may substitute delegates at any time as long as reasonable advance notice is given to O&G Knowledge Sharing Platform. For any cancellation received in writing not less than twenty (20) working days prior to the date of the training course, you will receive a full refund less US\$ 150 administration fee and any related bank or credit card charges.

Delegates who cancel the registration less than twenty (20) working days of the date of training course, or who do not attend the course, are liable to pay the full course fee and no refunds will be granted.

In the event that KSP cancels or postpones the course for any reason, the delegates will be given choice to (a) request full refund less applicable credit card or bank charges, (b) attend the same course at the rescheduled date at the same or other venue or (c) receive credit note to be used by any employee of the same company for any other course offered by KSP, which must occur within one year from the date of postponement.

#### **COMPANY GAURANTEE**

If Company Payment is selected as the Billing Method, an official letter from the company, signed by HR or responsible Management, stating names of the delegates who will attend the course and the total course fee payment guaranteed by the company to be paid within 30 days upon receipt of invoice from KSP shall be submitted ten (10) working days before the start date of the course.

#### **CHARGES AND FEES**

- 1. For Payment by Direct Telegraphic Transfer, client has to bear both local and oversea bank charges.
- 2. For credit card payment, there is additional 4% credit card processing fee, which shall be added to the course fee.

## **COURSE FEES & VENUE**

Middle East - US\$ 2,500

All Other Locations – US\$ 2,950

The fees is per participant. Hotel accommodation and travel costs are not included in the fees. The Fees includes refreshments, lunch and course material. Course is held preferably in a 5-star hotel. The final venue selection will depend upon the number of delegates attending the course and availability of the venue. All delegates will be informed about the venue two weeks before the course start date.