

**Training Title**

**DRILLING PROBLEMS AND OPTIMIZATION TRAINING**

**Training Duration**

5 days

**Training Venue & Dates**

Ref No	Training Title	Days	Dates	Price	Training Location
DE030	DRILLING PROBLEMS AND OPTIMIZATION	5	19 <sup>th</sup> - 23 <sup>rd</sup> Feb	\$6000	Kuala Lumpur, Malaysia

Venue: JW Marriott Hotel Kuala Lumpur - 183, Jln Bukit Bintang, Bukit Bintang, 55100 Kuala Lumpur, Wilayah Persekutuan Kuala Lumpur, Malaysia.

OR In any of the 5 star hotels. The exact venue will be informed later.

**Training Fees**

- \$6000 US\$ per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Buffet Lunch.

**Training Certificate**

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees

Language: English

Material Language : English

**TRAINING DESCRIPTION:**

Today's drilling personnel must have a working knowledge of all the required disciplines in order to effectively drill a well. This Drilling Problems and Optimization training seminar provides all the fundamentals necessary to drill a well whether it is a shallow well or a complex, high pressure well.

This training course is also designed for engineers and field personnel involved in the planning and implementation of drilling programs. This covers all aspects of drilling problems, emphasizing prevention and optimizing planning and implementation of all drilling parameters.

This training builds a firm foundation in the principles and practices of drilling and well planning, drilling fluid, drill string design, hydraulic optimization and drilling hole

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problems. Participants will learn the components of drilling string and how to use each in optimum ways, how to evaluate the WOB and select the proper size of drill collar. Participants will also be able to apply the practical solution for analyzing the performance of drill string design for both vertical and direction holes.

**TRAINING OBJECTIVES:**

By the end of this training seminar, participants will be able to:

- Drill a well cost effectively and maximize penetration rate & Evaluate stuck pipe problems and avoid potential problems by optimizing hole cleaning and ROP
- Design, drill string and BOP / wellheads & Design and implement bit and hydraulics programs BHA design for proper deviation, directional and horizontal drilling control & Recognize and evaluate well control problems by effectively using Mud Logging principles and techniques

**WHO SHOULD ATTEND?**

This training seminar is suitable to a wide range of professionals but will greatly benefit:

- Drilling Engineers
- Well Site Supervisors
- Drilling Contractors
- Drilling Supervisors
- Trainee Drillers
- Rig Engineers

**TRAINING METHODOLOGY:**

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions, and motivate everybody find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work& Practical Exercises
- 20% Videos& General Discussions

This Drilling Problems and Optimization training will utilize several learning techniques to ensure maximum understanding, comprehension and retention of the information

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presented. The daily workshops will be highly interactive and participative. The following advantages would be achieved:

- Avoid or minimize the operational daily drilling problems
- Reduction in the cost of the well and avoiding the risk
- Enhancing the overall well performance
- Extending the well life and control it
- Ensuring the well integrity
- Obtain integrating knowledge to mitigate and eliminate the drilling problems
- Proper well control, in addition, how to predict and analyzing all the warning signs to eliminate all kinds of problems

### TRAINING DAILY OUTLINE

#### DAY 1

- Drilling Hole Problems and Solutions
- Hole Problems (stuck pipe, lost circulation)
- Impact of Hole Cleaning on Hole Problems
- Stuck Pipe Types
- Formation and Problems Related
- Preventive Measurements
- Fishing Tools and Impact on Stuck Pipe
- Lost Circulation and Types
- How to Solve the Problem?
- Exercise

#### DAY 2

- Preventing Wash out and Twist Off
- How do you analyze the true pressure loss of a Washout?
- Bit Selection and Hydraulics Application, including Nozzle Selection
- Bit Types
- Rolling Cutter Bits
- Polycrystalline Diamond Bits
- Standard Classification of Bits
- Breaking the Bits
- Optimising Drilling Performance
- Drill String Dynamic / Vibration
- Factors related to Bit Run Termination
- Bit Hydraulic
- BHA and Drill String Design

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- Drill Strings design
- Functions of Drill Pipe, Drill Collars and BHA selection
- Grades of Drill Pipe and strength properties
- Basic Design Calculations
- Exercise

### DAY 3

- Drilling Fluids Planning and Control
- Lifting capacity of Drilling Fluids, Pressure losses in the Circulating System and ECD
- Functions of the Drilling Fluids, Impact of Hydraulic on the Drilling Optimization
- Parameters affecting on the Drilling Penetrations
- Drilling Fluid Properties, Functions of Drilling Fluid
- Mud Properties and Problems related to Mud Properties
- Exercise

### DAY 4

- Well Control operation
- Well Control Kill Sheet
- BOP Equipment functions
- Hydro-dynamic Pressure
- Equivalent Circulating Density
- Mud Weight Maintenance
- Kicks and Detection
- Causes of Kicks while Drilling
- Indication of Induced Kicks
- Best Kill Procedure for Kick Type
- Causes of Kicks while Tripping
- Diverter Guidelines while Tripping
- Underground Blowout
- Indication of Underground Blowout
- Exercise

### DAY 5

#### Planning Including Mud Logging Requirements

- Shale instability
- Modern Mud Logging Unit
- Gas Analysis

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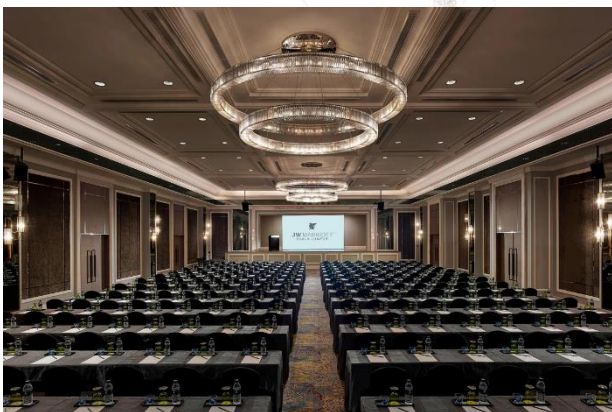
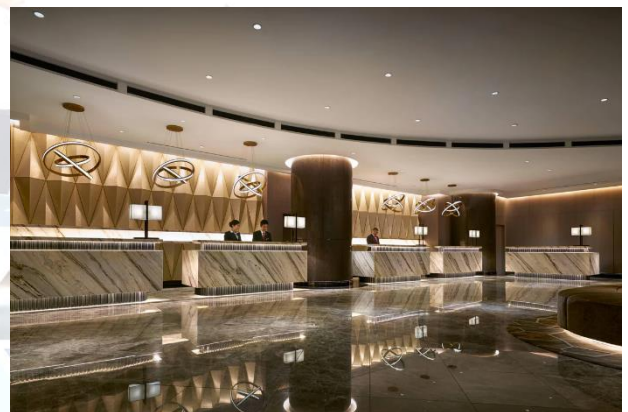
- Cutting Evaluation
- Shale Bulk Density
- Problems Prevention
- Exercise

**NOTE:**

**Pre & Post Tests will be conducted**

**Case Studies, Group Exercises, Group Discussions, Last Day Review & Assessments will be carried out.**

**VENUE PICTURES:**



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