

Drilling Essentials

For New Engineers & Non-Technical Professionals

Gain a beginning to end view of the entire process & activities around the rig and well planning to enhance team efficiency and productivity

16 – 17 January 2012 KL Malaysia



Your Expert Trainer: Franz Hartstein

International industry veteran with over 30 years of field and business experience in upstream Oil & Gas. Franz has gained his near thirty year experience in the Oil and Gas Drilling Industry around onshore and off shore facilities in Australia, the North Sea, Middle East, USA, Europe & Asia. He has experience in nearly every position around the rigs, including; roustabout, roughneck, derrick man, assistant driller to barge captain

Gain an overview of drilling procedures, the terminology used, its cost components and the latest technological developments driving this activity

By attending this 2-day industry fundamentals training course, you will better able to:

- ⊗ Understand drilling terminology & drilling processes for completing onshore & offshore wells
- ⊗ Appreciate major cost components of drilling operations and its impact for better project planning and management
- ⊗ Better visualise major drilling equipment and their technical functions to promote a deeper understanding of the logistical and technical considerations
- ⊗ Gain valuable insights on the drilling industry with a synopsis of recent technology developments that impact the drilling process

UNIQUE FEATURES of this training course:

- ⊗ Multi-media presentation methodology to enable better understanding and appreciation technical jargon and equipment applied in the field
- ⊗ A pre-course questionnaire to help us focus on your key learning objectives
- ⊗ Detailed reference manual for continuous learning and sharing
- ⊗ Limited class size to ensure one to one interactivity

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ABOUT THE COURSE

Time is money in the oil business. Drilling time is big money. Whether in a technical, managerial or supporting role, you are a valuable asset to ensuring that project delivery targets are met and profits are realised. As drilling activities continue to increase, professionals like you must grasp the language and technology of drilling operations in order to maximise expenditures throughout the producing life of a well.

Drilling equipment and procedures have a unique language that must be conquered for maximum benefit. Clear and understandable explanations of drilling rig equipment, procedures, and their complex interactions provide an excellent foundation for smooth communication and increased efficiency in inter-department project team efforts.

Drilling Essentials will help you de-mystify activities around the rig and well planning. It will explain the fundamentals of drilling with an emphasis on key areas such as logistical considerations, costing, and analysis of drilling contracts. Understand the urgency of drilling requests, know more about the cost implications of drilling-related problems, and understand the risks involved in a drilling contract. With Franz's drilling knowledge and skills, this is your opportunity to explore and understand important drilling concepts, principles, and technology which are presented in a reader-friendly format and illustrated with examples. As a non-drilling professional, you too can grow with the drilling industry with a deeper understanding of the critical role you play in contributing to its success!

Course registration begins at 8:30am on Day 1. The course will commence at 9am on both days. There will be breaks for mid-morning refreshments, lunch, and mid-afternoon refreshments. The course will end by 5pm on both days.

DAY ONE

Overview of Oil and Gas Exploration

- ◆ Video clip – Industry overview
- ◆ Unique characteristics of the Oil Industry
- ◆ The colour of oil
- ◆ Brief History
- ◆ Whale Oil
- ◆ Cable tool rig
- ◆ Drilling practices. A look at the drilling history
- ◆ The Barrel
- ◆ Today's utilization of a barrel of crude

Source of Petroleum

- ◆ Sedimentary rocks, types of sediment
- ◆ Reservoir rocks and formation of oil and gas
- ◆ Video clip – origin of oil and gas, seismic and drilling

Coffee /Tea Break

- ◆ Examples of traps
- ◆ Types of pressure
- ◆ Predicting over-pressures
- ◆ Planning stage, before drilling the well
- ◆ While drilling

The E& P process

- ◆ Upstream and down stream
- ◆ Exploration, Appraisal, and Development Drilling,
- ◆ Scenario and Environment
- ◆ Location

Mobilize and transport drilling equipment, basic and critical equipment used

- ◆ Drilling on land – basic land rigs
- ◆ Video clip-drilling on land

Offshore rigs

- ◆ video clip-drilling offshore
- ◆ floating rigs and fixed platforms
- ◆ Semisubmersibles, Drill ships, Tender assisted rigs
- ◆ Jackups and steel platforms.
- ◆ Video clip-jackup.
- ◆ Tension leg platforms, spars

Lunch

Drilling rig and its facilities

- ◆ Components
- ◆ Rig Schematic

Coffee / Tea Break

A drilling rig consists of five main systems

1. The derrick, the hoisting system; crown block, traveling block, drilling line
2. The power system
3. The rotating system
 - ◆ Kelly Drive, Top drive
4. The circulating system
 - ◆ Mud pump, shale shaker, desander, desilter
5. Well control system, BOP
 - ◆ Kicks, their causes and prevention
 - ◆ video clip - Well control

Drilling fluid-mud, different types, benefits and disadvantages

Problems caused by poor waste management

- ◆ Disposal of cuttings and drilling fluid

Drill Bits and their function

DAY TWO

Drill string design and BHA Drill pipe

- ♦ Types of drill string failures and their causes
- ♦ Regular drill pipe inspections

Drilling sequence

a. What happens on the drill floor?

- ♦ Mouse hole connection
- ♦ Making a round trip
- ♦ Racking stands of drill pipe

Video- work on the rig floor

Drilling with stands

- ♦ Mud buckets

Well plan, drilling time/ depth curve

Coffee / Tea Break

Running casing

- ♦ Casing types and casing design
- ♦ How the different casing sizes are installed
- ♦ Running casing in detail
- ♦ Cementing casing

Well heads

Evaluation and completing the well

- ♦ Types of evaluation methods,
- ♦ Mud logging, wireline logging tools,
- ♦ Drillstem testing
- ♦ MWD& LWD

- ♦ Lunch

Well completions

- ♦ Rotary steering
- ♦ Directional, horizontal, extended reach, multilateral drilling and intelligent wells.
- ♦ Video -directional drilling
- ♦ Types of well completions
- ♦ Primary and secondary recovery

The Drilling Organisation

- ♦ Workover, Well Interventions
- ♦ Side track, whipstock
- ♦ Video c – side track
- ♦ Introduction to coiled tubing

Coffee / Tea Break

Newer drilling techniques

Overcoming different challenges and complications in drilling operations

- ♦ Challenges on the drill floor
- ♦ Iron roughnecks
- ♦ Automatic stabbing arms
- ♦ Stabbing guides
- ♦ Second mouse hole
- ♦ Automated pipe handling systems and bridge cranes
- ♦ Casing running tools
 - i. Casing fill-up tool
 - ii. Fully automatic pipe running equipment, casing and drill pipe
 - iii. Challenges and complications in drilling operations down hole

Fishing

Video -fishing

Drilling cost calculation – well costing

- ♦ Overview of the well construction process
- ♦ Reporting cost from the rig in the morning report

Logistical considerations for onshore and offshore operations.

Market forces affecting the drilling industry

Oil and Gas Pricing

End of Course



THE REGION'S MOST
ESTABLISHED COURSE,
OVER 500
PARTICIPANTS TRAINED

Who Should Attend

New engineers and forward-looking executives in the following fields who are interested in enhancing their knowledge and awareness of the drilling process for increased productivity & contribution to the team they're supporting:

Accounting – Administration - Business Development – Commercial - Drilling Fluids - E&P IT - Estimation & Proposal - Finance and Administration - Finance – Reservoir - General management – HSE - Joint Ventures - Legal – Logistics - Materials Planning – Planning & Budgeting- Procurement – Sourcing - Supply Chain - Tender/ Contract - Training

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About Your Expert Trainer: Franz Hartstein



Franz Hartstein has gained his near thirty year experience in the Oil and Gas Drilling Industry around onshore and off shore facilities in Australia, the North Sea, Middle East, USA, Europe & Asia. He has experience in nearly every position around the rigs, including; roustabout, roughneck, derrick man, assistant driller, barge captain.

As a Drilling Engineer since 1967, Franz is thoroughly familiar with the drilling operations, has sound understanding of the engineering principles involved and gained substantial hands on knowledge of related well services. After studying Drilling Engineering at the Deutsche Bohrmeisterschule, Celle, Germany, he went on to work as an engineer around rigs in Europe, the Middle and Far East, for Weatherford, Agip, Nioc, Siri in Iran, Aramco in Saudi Arabia, Adnoc, Conoco being some of the clients.

Gravitating towards the Oil and Gas Service side, he spent time on business development for Weatherford in the USA, and transferred to Singapore as M.D. for Weatherford in Asia. As an MD for Weatherford, he was responsible for all aspects of Company management, business development, training, customer relations and client consulting. Franz then became a partner in Borneo Oil Tool Pte Ltd in Singapore. He was responsible for the operation, business development and expansion of the company within the Industry. The company was an agent representing various products for the Oil & Gas clients. He was also involved in the design of completion tools, fabricating equipment and operating the equipment on clients' rigs around Asia. He was also responsible in designing & development of the training and introduction manual for the technical products. He personally delivered the training to various Oil & Gas personnel in the region, including Conoco, Phillips, Total, Arco, Amerada Hess, Mobil. With more than 30 years in the upstream Oil & Gas industry, he is familiar with the entire phase of exploration and production, with global experience including, Middle East, USA, Europe & Asia. He has gained unique global insights into the teaching fundamentals of exploration and production through numerous presentations to various Oil & Gas companies globally.

Hear what previous participants have said about this course:

"Eye opener, concise, well-structured" **Talisman Malaysia Limited**

"Excellent coverage necessary to work effectively with drilling operations" **Sarawak Shell Berhad**

"Knowledgeable trainer, great handouts" **Murphy Oil Co. Ltd**

"Well organised, knowledgeable and experience speaker" **SapuraCrest Petroleum**

"A good insight into the overview of drilling and its technicalities" **CPOC**

"The training was very informative and Franz, as trainer, did his job excellently" **SapuraCrest Petroleum**

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petroEDGE competency based courses specify new and essential skills engineers need to have to perform their duties efficiently. This enables engineers to apply themselves immediately in the workplace after attending our courses hence creating value for the organisation. Learn more through www.petroedgeasia.net

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REGISTRATION FORM

16 – 17 January 2012 KL Malaysia	Early Bird Price	✓	Normal Price	✓	TEAM DISCOUNTS PetroEdge recognises the value of learning in teams. Group bookings at the same time from the same company receive the following: 3 or more at 5% off 5 or more at 7% off 8 or more at 10% off The early bird discount is exclusive of the team discounts
2- day Drilling Essentials for New Engineers and Non - Technical Oil & Gas Professionals	SGD 2,599		SGD 2,799		
Petroedge In-house Solutions { } Yes, I would like to organise this training on-site and save over 20% of total course fees! For further information about On-site Solutions, please call +65 6741 9927 or email info@asiaedge.net					

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Mr Mrs Ms Dr Other

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Job Title: _____

Department: _____

Email: _____

Delegate 2:

Mr Mrs Ms Dr Other

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Job Title: _____

Department: _____

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Head of Department: _____

Company: _____

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Attn Invoice to: _____

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Please note:

- indicate if you have already registered by Phone Fax Email Web
- if you have not received an acknowledgement before the training course, please call us to confirm your booking.
- photocopy this form to register multiple delegates.

Payment Methods:

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