

FUNDAMENTALS IN OIL AND GAS EXPLORATION AND PRODUCTION

29 Sep - 2 Oct 2015 / Jakarta, Indonesia

A highly comprehensive four day course that will cover a wide range of subject matters providing you with a broad understanding of the E&P process. Applicable to new entrants to the industry, non-technical professionals, and anyone dealing directly or indirectly with the E&P industry who needs to be equipped with the essentials in the world of E&P.

"All you need to know about E&P in 4 days"

"Gives you an overall framework of E&P job functions"



KEY ISSUES TO BE COVERED

Petroleum Industry Overview • Upstream and Downstream Industries • Introduction to the Oilfield Cycle • E&P Geology Fundamentals • Geophysics and Geochemistry Applications • Distribution and Quantification of "conventional" and "non-conventional" oil and gas reserves • Reservoir Engineering Basics • Drilling Rigs & Open Hole Wells • Drilling parameters & Down-hole Hydraulics • Casing design fundamentals • Cementing • Production Wellbore Components; Completions • Connecting the Wellbore to the Reservoir; Perforating • Reservoir Evaluation; Petrophysics Fundamentals • Bringing Oil and Gas from the Reservoir to Surface Facilities; Oil and Gas Production • Oil and Gas Processing Field Surface Facilities • New E&P Frontiers - Deep Water Exploration and Production, FPSOs and production platforms, seabed production systems, Shale Oil & Gas • HSE

WHO SHOULD ATTEND?

This course has been designed for a broad audience - technical and non-technical. New entrants into Oil & Gas / E&P industry, junior level staff, non-engineering and non-technical staff, midcareer supervisors and managers looking to move across E&P segments from...

- Oil & Gas companies
- Oil & Gas service companies and contractors
- Investment banks, financial institutions
- Consulting firms
- Governmental organizations
- Environmental agencies and...
- Other companies that require an understanding of the E&P business

This intensive course will get new employees up to speed with industry knowledge and practices in the shortest possible time.

At the end of the course you will:

- Have an overview of the intricacies of the E&P business.
- Be able to understand basic industry practices and principles and to gain an overview of the whole E&P industry technology.
- Gain an understanding of the processes involved in the formation of oil and gas fields and its global distribution
- Become familiar with: E&P operators and field service companies, measurement units and most commonly used industry terms.
- Have practical knowledge of the technical aspects of hydrocarbons reserves, geology, geophysics, drilling rigs, oil and gas production, surface facilities, etc.
- Be able to understand and analyze public domain technical articles issued by the Oil & Gas upstream industry, companies, agencies, magazines and press media in general.
- Understand the structure of the E&P business cycle and where different professionals fit in.
- Have a scope of the new E&P technology frontiers.
- Be aware of the main HSE risks and prevention procedures within the E&P industry.

Course level:

Foundation

(No prior knowledge in petroleum technology or engineering is necessary)

FEE	1 PAX	3 PAX OR MORE
Per Person	USD 2595.00	USD 2395.00
Early bird discount - Pay Online with Credit Card by 29th July to SAVE USD 200.00 per person		



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Course Agenda: The course is organized in 14 modules which cover the basics of the entire E&P industry.

DAY 1

Introduction and Opening Remarks

- Presenter and delegates' introduction.
- QHSE recommendations
- Overview of the course, Course road map
- Training objectives
- Training methodologies
- Trainees' assessments

Module I: Oil/Gas E&P, Business & oilfield cycle

- Overview of the Petroleum Industry and its importance in the Energy equation
- Basic concepts and description of upstream and downstream Oil & Gas industry
- Brief description of what E&P involves and the basic processes and techniques associated
- Introduction to the "oilfield" language
- E&P business cycle concept and the oilfield life cycle
- Worldwide hydrocarbons reserves, Oil & Gas private and public companies
- The crucial role of Field Service Companies in the E&P industry

Module II: What is oil and gas and where to look for it E&P Geology fundamentals

- E&P basic geology concepts
- Classification of rocks
- Definitions of what oil/gas is, basics how it is generated and what is a source rock
- Oil and gas accumulation process
- Geologic trap and geological structures associated with oil and gas conventional reservoirs
- Exploration success criteria

Module III: Underground fluids and reservoir properties Reservoir Engineering

- Oil and gas reservoir concept
- Oil and gas reservoir rock properties - Porosity and Permeability
- Darcy's Law, radial and horizontal flow equations
- Reservoir fluid typical composition and gravity separation
- Reservoir water saturation
- Main types of reservoir drive mechanisms. Reservoir pressure gradient. Fluid production.

DAY 2

Module IV: Sciences & Techniques to find potential Oil & Gas Reservoirs Exploration Geophysics & Geochemistry

- Using Geophysics to find underground oil and gas trap structures
- Geophysics and geochemistry rock properties
- Seismic, Gravimetric, Electro-Magnetics surveys, Satellites surveys
- Estimate reservoir position, size and what is going on during production phase. 2D, 3D and 4D seismic
- Geochemistry techniques to identify source rocks and estimate the amount of oil and gas in situ

Module V: Reaching the oil and gas reservoir Open Hole (OH) Wells & drilling Rigs

- Well type classifications
- Drilling principles
- Drilling systems, rigs types, drilling environments and drill bits
- Basics of drilling fluids and circulations systems
- Most common problems while drilling an oil or gas exploration well
- Well control fundamentals
- HSE Basic & PPE on drilling and production rigs
- Rig organization

Module VI: Drilling parameters & Down-hole hydraulics

- Temperature gradient
- Fluid density and gradient
- Hydrostatic pressure basic calculations and Safety margin
- ROP
- Weight of drilling components

Module VII: Making the OH well stable Casing design

- Casing strings
- Casing components
- Basic description of Casing design

Day 2 Evaluation

- Short individual quizzes
- Oil & Gas companies press articles analysis

DAY 3

Module VIII: Isolating production underground layers Cementing

- Cementing purpose
- Cementing principles and procedures basics
- Cement additives fundamentals
- Well preparation
- Cementing equipment and hardware

Module IX: Production wellbore components Completions

- Oil and gas well completion purpose. Definitions and process
- Fundamental Completions Requirements
- Basic Completion design factors
- Tubing selection basic guidelines
- Xmas trees and tubing hangers

Module X: Connecting the wellbore to the reservoir Perforating

- Fundamentals of Perforating
- Basic of down-hole perforating guns
- Guns deployment options; Wireline and TCP guns; Firings heads
- Perforating for productivity
- Guns Safety hazards

Day 3 Evaluation

- Review of previous days training, trainees questions
- Oral quizzes (multi-choice questions)
- Group exercises, reading technical articles

DAY 4

Module XI: Reservoir Evaluation Petrophysics

- Basic on Reservoir Evaluation techniques
- Fundamentals of electrical wireline logging
- Well testing, Surface and Down-hole tests
- PVT analysis, oil & gas fluid properties fundamentals
- Inflow performance definitions

Module XII: Bringing oil and gas from the reservoir to surface facilities Hydrocarbon production

- Oil well natural flow
- Productivity index (PI)
- Artificial lift fundamentals and basic description of the different methods
- Fundamentals of Managing the oil & gas production decline

Module XIII: Processing the raw oil and gas up to commercial specifications; Surface facilities

- Surface land production systems and surface facilities.
- Offshore production installations.

Module XIV: New frontiers on E&P today, HSE concerns (Awareness level):

- Deep water production systems, FPSOs and Production platforms
- Seabed production systems
- Shale Oil & Gas, non-conventional reservoir production
- HSE concerns in Oil & Gas E&P
- Supplier boats and helicopters

Day 4 Evaluation

- Closing the course
- Questions
- Course evaluation form

Delivery Methodology

- Lectures & slides presentations
- Analysis of technical magazine articles and Oil & Gas companies' press & media releases
- Group exercises and discussions
- Individual quizzes during the course to assess trainees' acquired knowledge and reinforce understanding

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ABOUT THE TRAINER

Octavio Horacio Parravicini

Octavio Horacio Parravicini is presently consultant in the Oil & Gas upstream industry specializing in training & organizational development for the oil field service sector.

He has accumulated over 40 years' experience starting in 1974 in Comodoro Rivadavia, Argentina with CIGSA Schlumberger, subsidiary of Schlumberger Oil Field Services Ltd (SLB).

In the following years he had field assignments in Latin America as Technical Support Supervisor (1979-1990); Africa as Division Technical Support Supervisor (1990-1997); Europe as Technical Support Consultant (1990 & 1997); Russia & CIS as Unit Technical Support Coordinator (1997-1999); China & Mongolia Country Technical Support Supervisor (1999-2000).

His technical responsibilities included the field introduction of leading edge technology oilfield equipment and advanced maintenance engineering techniques. In addition he was in charge of recruitment, training and development of technical support personnel and crew operators and to act as District Engineer (DE) and QHSE leader for several field projects. In several opportunities in charge of customer support and training specially for Pemex, YPF and Ancap.

In 2000-2006, Octavio was promoted to Worldwide Technical Support Supervisor for Reda Oil Production Services based in Dubai and later at Schlumberger WCP based in the headquarters in France.

In these roles, he undertook international assignments supervising and training the ESP field service technicians, supporting the introduction of new field technology and equipment, designing and delivering ESP Power&Control schools for customers and SLB field engineers, project manager for the ESP Remote Monitoring & Control.

His contributions greatly improved the quality of field service and saw huge improvements in the qualifications and competencies of technicians and engineers worldwide.



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