



## **Fundamentals Of Petroleum**

### **COURSE AGENDA 2016**

#### **DAY ONE**

- 08:30 – 12:00 INTRODUCTION & COURSE DESCRIPTION  
HISTORY OF THE PETROLEUM INDUSTRY  
**“Where we were and where we’re going.”**  
Where did it start? Who started it?  
Types of Companies Involved  
Some Oil Terms and Commonly Used Abbreviations  
PETROLEUM GEOLOGY **“What are we drilling?”**  
Plate Tectonics  
Geologic Structures  
Types of Rocks  
Origins and Accumulation of Hydrocarbons  
Migration and Entrapment  
RESERVOIRS **“What does that big lake of oil look like down there?”**  
Reservoir Rock Properties  
Pressures (Normal, Abnormal)  
Reservoirs Fluids  
Reservoir Characteristics  
Drive Mechanisms
- 12:00 – 13:00 LUNCH
- 13:00 – 16:30 EXPLORATION **“How we go about finding oil and gas”**  
Geophysical Surveys  
Magnetic and Electromagnetic Gravity Surveys  
Seismic  
Offset E-Log Analysis  
Correlation and Maps  
Land Rights  
Land Ownership and Leases **“Who owns what?”**  
Understanding Pressure  
**Video Making Hole**

#### **DAY TWO**

- DRILLING **“All about how we drill for oil and gas on land and offshore.”**  
A History of the Drilling Industry  
Drilling Rig Types  
Rig Components and Systems  
Routine Drilling Operations & the Drilling Sequence  
DRILLING ELEMENTS  
Drilling Fluids (Mud)  
Casing & Cementing **“Protecting the hole we drill.”**
- 12:00 – 13:00 LUNCH
- 13:00 – 16:30 Drill Bits



INTERNATIONAL & DOMESTIC  
PETROLEUM ENGINEERING  
PROJECT MANAGEMENT

Formation Evaluation ***“How do we know what’s there?”***

Some Common Drilling Problems (Discussion)

Lost Circulation

Well Control

Directional Drilling – ***“How a hole is drilled at an angle.”***

COMPLETIONS / PRODUCTION ***“How we get the oil and gas out of the hole.”***

Early Production Methods

Types of Completions

Production Casing and Tubing

Handling Well Fluids at the Surface

## **DAY THREE (1/2 Day)**

08:30 ~ 12:30 **FIELD TRIP**

NOTE: Agenda subject to minor modification during the course depending on time available and interest of students.

## **FORMAT & MATERIALS**

2-1/2 Day Instruction

720 Page Reference Manual

Signa Hardcopy Note Manual and companion CD with digital manual in PDF format

Breakfast and Lunch Provided

Cost of the 2-1/2 day school is \$1,500 USD per student. For more information contact Randal O’Bryant at 281.774.1024 or [robryant@signa.net](mailto:robryant@signa.net)