

TRAINING TITLE

OPERATIONS GEOLOGY

Training Duration

5 days

Training Venue and Dates

Ref. No. DE119	OPERATIONS GEOLOGY	5	13-17 Jan. 2025	\$5,500	Dubai, UAE
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In any of the 4 or 5-star hotels. The exact venue will be informed later.

Training Fees

- \$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch

Training Certificate

Define Management Consultants Certificate of course completion will be issued to all attendees.

TRAINING DESCRIPTION

This course provides a complete overview of wellsite operations from the perspective of the Operations Geologist and the Wellsite Geologist. The focus is on being able to understand the job functions that are typically performed at the wellsite, and what use is made of the large amounts of data collected. The course will also provide an overview of essential drilling operations that have a direct bearing on these disciplines.

Wellsite geologists study rock cuttings from oil and gas wells to determine what rock formations are being drilled into and how drilling should proceed. They identify critical strata from core samples and rock-cutting data and build up knowledge of the structure being drilled. They are experienced geologists, deciding when specialized tests should be carried out and, ultimately, when to stop drilling. They send reports and logs of completed drilling to the operations geologist and offer geological advice to oil company representatives. They also incorporate health and safety requirements in daily geological operations. Wellsite geologists also liaise with drilling engineers, petroleum engineers and mudloggers during the course of projects.

TRAINING OBJECTIVES

Participants will learn the techniques used by wellsite geologists in formation evaluation through a combination of lectures and exercises that can typically be done at the wellsite. At the end of the course, the participants should have a good understanding and knowledge of the requirements of both Operations and Wellsite Geology.

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The course will blend classroom instruction with several practical exercise sessions. If location permits, a visit to a wellsite can be arranged.

WHO SHOULD ATTEND?

- Geologists
- Exploration Geologists
- Operations Geologists
- Mining Geologists
- Petroleum Engineers
- Mining Engineers
- Environmental Scientists and Engineers
- Hydrogeologists
- Geotechnical Engineers
- Geology Students or Recent Graduates
- Field Technicians and Geology Assistants
- Project Managers in Mining or Oil & Gas
- Consultants and Contractors

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 motivating everybody to 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

COURSE PROGRAM www.definettraining.com

Day 1

- Introduction
- What is an Operations and Wellsite Geologist?
- Exploration and Drilling Programs – Risk assessment, regional analysis, pre-drill data acquisition.
- Components of a prospect
- Overview of Petroleum Geology
- The Petroleum system – elements & processes
- The Reservoir – Sedimentary Environments
- The Trap – Structure & Stratigraphy

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- Mapping and Cross-Sections
- Pore Systems and Flow Units
- Reserves and Resources – classification and categories
- Data Types and Management
- Wireline Data – open and cased hole, testing, LWD and MWD
- Mud Logging Data – geological, drilling, pressure
- Core Data – whole core and sidewall core

Day 2

- Drilling Operations
- The drilling team – who does what?
- Types of Drilling rigs
- Rig Sub-systems – power, hoisting, rotary, circulating, well control
- Drilling tools and components – including drilling fluid
- Well control – kicks causes – basic calculations – safety equipment – kill methods
- Well costs
- Planning a Well
- Well Design
- Directional Drilling – methods and calculations
- Geosteering
- Mud Logging
- The Logging unit – components and functions
- Services – monitoring, sampling, analysis
- Cuttings analysis and description
- The mud log
- Safety considerations – monitoring, overpressure, downtime

Day 3

- Mud Logging (continued)
- Gas detection and analysis – types of gas – gas shows – equipment and methods
- Pore Pressure and Wellbore Stability
- Overburden and compaction
- Pore pressure generation – estimation – normal and abnormal pressure
- Detection from Seismic – pre-drill prediction
- Stress and Strain – wellbore failure – lost circulation

Day 4

- Wellsite Geologist Responsibilities
- Sampling – types and preservation
- Quality control of acquired wellsite data
- Coring and Core Analysis
- Coring methods and equipment

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- Whole Core and Sidewall Core
- Core handling and preservation
- Basic calculations – core-log integration

Day 5

- Wireline Logging Tools and Measurements
- Review of basic logging tools for lithology, porosity, saturation
- Resistivity and Invasion
- Wireline Log Interpretation
- Basic concepts – quicklook workflow
- Determination of lithology
- Shale – calculation of shale volume - effects and corrections
- Determination of porosity
- Determination of water saturation – resistivity effects – formation water
- Analysis techniques - crossplots

NOTE:

Pre & Post Tests will be conducted.

Case Studies, Group Exercises, Group Discussions, Last Day Review, and assessments will be carried out.

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