

COURSE OBJECTIVES

To present concepts, methodologies and techniques (illustrated by examples and case studies) on geophysical methods used for field study and reservoir characterization.

On completion of the course, participants will be able to:

- list technologies used in seismic reservoir characterization,
- understand and check the data involved in these technologies,
- relate technologies to typical reservoir problems.

COURSE CONTENT

WAVE PROPAGATION AND SEISMIC REFLECTION: THEORY AND PRINCIPLES

0.5 day

Seismic Waves, Rock Velocities and Densities, Snell-Descartes Law, Reflection Coefficient, Acoustic Impedance, Seismic Signal vs Seismic Noise, Time Domain vs Frequency Domain,

2D and 3D Seismics, Land and Marine Seismics, Seismic Shots and Gathers

3D SEISMICS AND HR SEISMICS

0.5 day

Principle, Advantages, Design, Acquisition, Processing, Interpretation, Examples
Examples and Applications

SEISMIC AMPLITUDES, ATTRIBUTES AND FACIES ANALYSIS

1 day

Definitions, Principles, Examples and Applications
Direct Hydrocarbon Indicators (DHI)

BOREHOLE SEISMIC

1 day

Theory and Principles, Synthetic Seismogram and Well Tie, Vertical Seismic Profile (VSP)
Offset Seismic Profile (OSP), Walkaway, Seismic While Drilling (SWD)
Examples and Applications

SEISMIC INVERSION AND AMPLITUDE VERSUS OFFSET ANALYSIS (AVO - AVA)

1 day

Theory and Principles, Acoustic vs Elastic Inversion, Examples and Applications
AVO Sections, Examples and Applications

4 COMPONENT SEISMIC (4C) AND 4 DIMENSION SEISMIC (4D)

1 day

4C: P Wave vs S Wave, Marine vs Land Acquisition, Ocean Bottom Seismometers (OBS),
4C: Q-Marine, Examples and Applications

4D: Definitions and Principles, Methodology, Examples and Applications

▲ Who should attend?

Exploration and Development technicians and engineers: geologists, geophysicists, reservoir engineer..., involved in field exploration and field development.

▲ Duration

5 days

▲ Dates & Location

December 07-11, 2009
Rueil-Malmaison (Paris)

French session: F-300

▲ Registration

Fees: € 2,070

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▲ Course Coordinator

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Ref. RES / RESGPHY