

## Reservoir Characterization

### General:

Discipline: Geoscience

Level: Intermediate

Duration: 5 days

Instructor(s): Gonzalo Ruiz, Jesús Sotomayor

### Purpose:

Understand the importance creating and appropriate of a project database and, how to management and integrate different sources of data into an integrated reservoir study. Recognize the importance of integration the quality and review of each source of data and the optimal communication with different knowledge areas to keep focus in the objective of the project. Review and apply the information delivered by each knowledge area, identify the key information and limitation when integrating this information. Learn how to assess the quality and quantitative of the information for the integrated reservoir study. Understand the limitation, risk of a reservoir characterization project, and identify the needs to improve the quality of the study.

### Designed for:

Geoscientists, reservoir engineers and other technical staff of different experience levels wanting a fundamental background of reservoir integration, using geological, geophysical, petrophysical data from the fundamental reservoir characterisation of oil and gas field development.

### You Will Learn:

How to:

- ✓ Build a project database and manage the data in an integrated reservoir study
- ✓ Create a grid, a structural model, a stratigraphic model, a lithological model
- ✓ Deal with the reservoir heterogeneities
- ✓ Integrate the rock properties and describe their properties distribution.
- ✓ Deal with the issues and methods regarding the porosity, water saturation, net pay and permeability distributions,
- ✓ Deal with the issues and methods regarding fluid properties and rock-fluid properties variations.
- ✓ Integrate the pressure analysis and the pressure data sources.
- ✓ Benefits of applying properly the material balance method.
- ✓ Benefits of applying properly the simulation method.
- ✓ Assign model input parameters
- ✓ Use history matching

### Course Content:

- Understand the importance of a project database building, and the data management in an integrated reservoir study.
- Understand and apply at a basic level the theory and operation of mayor industry tools Understand the importance of a project database building, and the data management in an integrated reservoir study. Performance indicators.
- Understand how to build a static reservoir model. Performance indicators:
- Understand how to integrate the rock properties into the model and can describe the rock properties distributions. Performance indicators:
- Understand how to build a dynamic reservoir model. Performance indicators:
- Integrated static reservoir model
- Integrating the rock properties
- Integrated dynamic reservoir model.

