Training - Geological Modeling Workshop for Integrated Reservoir Studies

GEOMOD-EN-P | Face-to-face only | 5 days

This course provides a highly practical introduction to the reservoir characterization and modeling workflow, with a full week dedicated primarily to hands-on software discovery and guided exercises using a case study. The workshop emphasis learning by doing — applying key concepts directly in Petrel™ — to build a static geological model

Level

Awareness

Public

Geoscientists and reservoir engineers involved in multidisciplinary teams, willing to widen their knowledge in reservoir modeling

Objectives

Attendees will be able to implement the following skills:

- Provide a clear understanding of techniques and challenges related to geological modeling.
- Build a reliable static model.
- Compute volumes and assess uncertainties.

Pedagogical & technical resources

The course focuses on practical, step by step work in Petrel™, where participants learn to build a 3D geological model through guided exercises on a case study.

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

INTRODUCTION AND SOFTWARE DISCOVERY — 0.5 day

Principles of 3D modeling.
Working with scale.
Overview of the geomodeling workflow.
Introduction to the Petrel™ interface

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SRUCTURAL MODELING — 1 day

Structural modeling concepts and gridding techniques.
Building the fault network.
Defining the structural grid:

- Pillar gridding.
- Volume based modeling.

Modeling horizons.

PROPERTY MODELING: DATA PREPARATION AND ANALYSIS — 0.5 day

Checking data distribution.
Blocking well data to the grid.
Creating VPCs and trend resources.
Building variogram models.

PROPERTY MODELING: DETERMINISTIC AND STOCHASTIC METHODS — 1 day

Review of deterministic methods.
Comparing kriging options.
Removing sampling effects.
Simulation vs estimation.

PROPERTY MODELING: DISCRETE AND CONTINUOUS PROPERTY MODELING — 1 day

Facies modeling.
Fault seal analysis.
Petrophysical property modeling.

VOLUMETRICS & UPSCALING — 0.5 day

Volume calculation.
Upscaling to the reservoir simulation grid.

UNCERTAINTY ANALYSIS — 0.5 day

Conducting uncertainty analysis.

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCO about potential funding.
Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com

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