Training - PVT Modeling

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

This course provides an extensive and practical understanding for analyzing PVT reports, handling data and defining PVT models for use in compositional and black oil simulations

Level

Knowledge

Public

Reservoir engineers and petroleum engineers willing to acquire advanced knowledge about PVT modeling

Objectives

Attendees will be able to implement the following skills:

- Analyze PVT reports and discuss and handle PVT data
- Build a PVT model in order to represent fluid behavior with respect to available and validated PVT data
- Match a PVT model

Pedagogical & technical resources

- Interactive courses and exercises
- Hands-on practices using dedicated modeling software BEST™ or PVTi™ or PVTFlow™
- Mini-project
- Software used during workshops: with courtesy of Beicip-Franlab and Schlumberger

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

FLUID PROPERTIES & THERMODYNAMIC MODELING — 2 days

Fluid properties:

- PVT properties of pure components and mixtures.
- Functions and variables.
- Properties of reservoir fluids.

Introduction to PVT modeling software.
Thermodynamic models and equilibrium:

- Functions and variables.
- EOS and algorithms.
- Component properties and lumping.
- Liquid-vapor thermodynamic equilibrium.

RESERVOIR, FIELD CASES & PROJECT — 3 days

Measurements:

- Sampling.
- Analysis.
- Standardization of data.
- PVT experiments.
- Gas injection specific data.

Fluid modeling:

- PVT compositional modeling.
- Matching of experimental data.
- Physical consistency.
- Gravitational segregation.
- Miscibility.

Field cases:

- Compartmentalization.
- Non-classical GOR profile.
- Reservoir stripping.

Data for reservoir simulation:

- Compositional.
- Black oil (standard, extended).

Project and exercises:

- From the PVT Report do the PVT model.
- Quality check of the data.
- Oil fitting.
- Gas fitting.
- Discussions and conclusions.

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