Training - Well Testing and Well Test Analysis

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

This course provides a comprehensive and practical understanding about performing set-up, design and analysis of well tests

Level
Skilled

Public
Newly-hired and 2- to 3-year experienced reservoir engineers willing to deepen their knowledge in well test analysis; geoscientists, petroleum engineers and production engineers moving towards reservoir engineering

Objectives
Attendees will be able to implement the following skills:

- Discuss the theory of well test analysis
- Identify main flow regimes and models
- Carry out simple well test analysis
- Define or recommend a well test design

Pedagogical & technical resources

- Interactive lectures and exercises
- Hands-on practice based on synthetic and real data using hand and spreadsheet calculations and SAPHIR™ dedicated industrial software
- Software used during workshops: with courtesy of Kappa Engineering

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 TO WELL TESTING, BASIC EQUATIONS & METHODS — 1 day

Objective of well testing.
Practical well test operations: types of tests, equipment, safety and environmental issues.
Definitions and typical flow regimes: radial flow, fractured reservoirs, limited reservoirs and closed reservoirs.

© IFPTraining

Productivity Index (PI), radius of investigation.
Darcy's law and the diffusivity equation.
Time superposition, multirate testing.
Space superposition, boundary effect.
Pressure curves analysis.
Pressure derivative curves analysis.

WELLBORE CONDITIONS — 0.5 day

Wellbore storage and skin effects.
Infinite and finite conductivity vertical fracture.
Well in partial penetration.
Horizontal well.
Skin factors, geometrical skin and well deliverability.

RESERVOIR HETEROGENEITIES — 1 day

Double porosity models: pseudo-steady state and transient state models.
Double permeability models.
Composite reservoir models.

BOUNDARY MODELS — 1 day

One sealing fault model.
Two parallel sealing faults model/two intersecting sealing faults model.
Closed system model and reservoir limits testing.
Constant pressure boundary model.

TEST DESIGN - HANDS-ON SESSION — 1 day

Rate history definition.
Time and pressure error.
Interpretation procedure.
From the initial diagnosis to the final consistency check of the results.
Reporting and presentation of results.
Examples of test response.

GAS WELLS: REVIEW & APPLICATIONS — 0.5 day

Hypothesis for gas wells testing. Darcy and non-Darcy flow.
Pseudo-pressure and inertial effects.
Gas wells deliverability:

- Absolute open flow potential.
- Houpert method.
- Back pressure tests. Isochronal tests. Modified isochronal tests.

Sessions

Rueil-Malmaison - From 10/12/2026 to 10/16/2026 — **3790 €/HT**

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

© IFPTraining