Training - Subsurface production optimization

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

This course provides a comprehensive understanding of subsurface considerations for production optimization.

Level
Knowledge

Public
E&P technical staff involved in reservoir management or well operations. Reservoir engineers involved in field studies with productivity and artificial lift issues. Development engineers involved in conceptual design with well architecture and artificial lift.

Objectives
Attendees will be able to implement the following skills:

- Select the relevant reservoir characteristics and fluid properties related to well performance modeling
- Understand artificial lift applications and specificities
- Optimize well performance
- Analyze the impact of well completion and equipment on well performance

Pedagogical & technical resources
Interactive lectures and exercises

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
Knowledge in reservoir, completion or production engineering

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

PVT & RESERVOIR FUNDAMENTALS — 0.75 day

Oil & Gas PVT properties: bubble point, Bo, Rs, GOR, solids...
Reservoir rock and fluids: porosity, permeability, saturation, relative permeability.

RESERVOIR DRIVE MECHANISMS & RECOVERY — 1.25 days

Drive Mechanism Fundamentals.
Secondary & Tertiary Recovery.

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PRODUCTION OPTIMIZATION AT RESERVOIR-WELLBORE INTERFACE — 1.25 days

Pay zone drilling, completion (open hole, cased hole), perforating.
Wellbore treatment: sand control, stimulations (acidizing, hydraulic fracturing).

WELL PERFORMANCE — 1 day

Well deliverability nodal analysis: inflow/outflow.
Flow in the reservoir: Productivity Index (PI), empirical Inflow Performance Relationship (IPR), horizontal wells.
Back pressure equation for gas wells.
Global skin: formation damage, perforation, partial penetration, deviation.
Flow in the wellbore: pressure gradient and Vertical Lift Performance (VLP) curves.
GLR, tubing head pressure, tubing ID impact.
Monophasic vs. polyphasic flow: minimum flowrate/well loading.
Applications - Exercises.

ARTIFICIAL LIFT — 0.75 day

Gas lift: fundamentals, unloading procedure, surveillance and troubleshooting.
Electrical Submersible Pump (ESP): components, design, problems.
Rod pumping and jet pumps fundamentals.
Comparison of the artificial lift methods.

Sessions

Rueil-Malmaison - From 11/30/2026 to 12/04/2026 — **3650 €/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

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