

E-451

▲ Who should attend?

Participants attending the course "Drilling and completion engineering" or a part of it.

▲ Duration

5 days

▲ Dates & Location

March 16-20, 2009
Rueil-Malmaison (Paris)

French session: F-451

▲ Registration

Fees: € 1,920

Contact:
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▲ Course Coordinator

Denis PERRIN

Ref. **PRO / BACFPE**

COMMON FUNDAMENTALS FOR DRILLING AND COMPLETION

OBJECTIVES

On completion of the course, participants have:

- the necessary fundamentals to follow the different modules of the "Drilling and completion engineering" course,
- an overview allowing them to situate the different modules in the global implementation of the well and to understand interactions.

COURSE CONTENT

PETROLEUM GEOLOGY

1 day

Earth structure, main rock components
Sedimentary rocks: origin, structure, classification
Sedimentation, tectonics and stratigraphy
Hydrocarbons: origin, formation, migration, traps

DRILLING FUNDAMENTALS

1 day

Principle of drilling, functions of the drilling fluid
Drilling and casing programme, casing cementing
Wellhead and safety

HYDRODYNAMIC APPLIED TO WELL

0.5 day

Study of bottomhole pressure in the well:
- static
- dynamic

NECESSARY FUNDAMENTALS OF RESERVOIR ENGINEERING FOR COMPLETION

0.75 day

Main parameters about the couple rock-fluid: porosity, permeability, saturation
Means of reservoir knowledge: core, logging, well test
PVT study: PV diagram, PT diagram, terminology (bubble point, dew point, Rs, Bo, Bg, GOR, WOR,...)
Drainage mechanisms: primary, secondary and enhanced recovery

COMPLETION FUNDAMENTALS

1.75 days

Completion: operations involved, main phases
Main factors influencing completion design
Overall approach of the well flow capacity:
- main parameters, PI and global skin
- study of the BHP from the downstream side: in the case of an oil well and in the case of a gas well
- Inflow and outflow performance curves and analysis
Completion configurations:
- basics requirements
- main reservoir-wellbore interface configurations (open hole, cased hole)
- main producing string(s) configurations
Reservoir-wellbore interface implementation (out of treatments):
- problems linked to drilling the pay zone and cementing
- perforation: main techniques, main parameters for productivity

Included in "Drilling and Completion Engineering", course number E-412.