

This course can be adapted to virtual classroom mode

Well Control - Level 3 or 4

IWCF certification: "Combined Surface/Subsea BOP" - Certified IWCF training center

5 days

FPE3-4-EN-A

Overview

LEVEL

Skilled

PURPOSE

This training is intended to raise the participants' awareness on the problems and consequences of a blow out and to enable them to understand the causes of a kick and also to control a kick correctly with a good knowledge of well control methods.

LEARNING OBJECTIVES

At the end of this training, participants will be able to:
identify and calculate the different pressures in a well,
understand the causes of the kicks,
recognize/analyze the signs of a kick to shut in the well with the minimum volume of gain,
know the well control methods and demonstrate the ability to shut in the well (driller) and killing the well (supervisor),
detect possible incidents during the well control and react correctly,
to be certified IWCF Level 3 or 4 on well control.

WAYS AND MEANS

Course material (PPT, PDF, Word).
Exercise book.
Practice on simulator.
Certified IWCF instructor.

LEARNING ASSESSMENT

IWCF Level 3 or 4 examination tests.
Practical assessment on simulator at driller or supervisor level.

PREREQUISITES

The certification Level 2 is recommended for a first IWCF certification.
A period of 10 days minimum is prescribed by IWCF before any registration.

MORE INFO

Validity of Level 3 or 4 certificate is 2 years.

Agenda

INITIAL TEST ON WELL CONTROL

0.25 d

PRESSURE ANALYSIS & KICK CONTROL

0.75 d

Reminder on hydrostatic and hydrodynamic pressures.
Relationship between various pressures in the well.
Definition of gas law and migration.
Causes and signs of abnormal pore pressure.
Frac pressure and MAASP (LOT and FIT).
Causes and signs of a kick, impact of WBM or NABM.
Precautions to be taken to avoid kicks.

WELL CONTROL

1.75 d

Procedures to follow in case of a kick while drilling or tripping (surge and swab).
Well shut-in methods: hard and soft methods.
Observation and evolution of pressures after shut in and selection of the stabilized pressures.
Exercises on "Kill sheet".
Well control methods to control a kick:
Driller's method.
Wait and weight method.
Comparison/differences between each method (advantages and drawbacks).

PARTICULAR CASES

0.25 d

Incidents during circulation.
Shallow gas.
Volumetric method.
MAASP.
Deviated well.
Kick while running casing or during cement jobs.

SURFACE WELL CONTROL EQUIPMENT

0.5 d

BOP stack: types, annular BOP, BOP rams, etc.
Diverter.
BOP control unit ("Koomey" unit).
Choke-manifold and remote choke control panel.
Mud-gas separators.
Function tests and pressure tests.

EXERCISES

0.25 d

Practice on simulator as requested by IWCF.
Exercises on: principles and procedures, kill sheet and well control equipment.

SUBSEA SPECIFICITIES

0.25 d

Difference between surface and subsea BOP.
Specific equipment between seabed and rig floor.
Well control with a subsea BOP (friction losses in choke line).
Riser margin.
Subsea BOP control unit.

IWCF CERTIFICATION

1 d

Test on principles and procedures.
Test on well control equipment.
Practical assessment on simulator.