Training - Basic Hydraulic Fracturing

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

This course provides a comprehensive overview of hydraulic fracturing operations

Level

Knowledge

Public

Drilling, completion or production engineers, supervisors, laboratory staff, not specialized in wellbore treatment

Objectives

Attendees will be able to implement the following skills:

- understand the reasons to use hydraulic fracturing
- identify the impact of fracturing parameters on well productivity
- design hydraulic fracturing operations: materials, equipment and procedures used for fracturing
- supervise the hydraulic fracturing operations
- assess and measure the success of these operations

Pedagogical & technical resources

- Numerous videos and animations
- Practical exercises

Assessment of achievements

- Les stagiaires sont évalués au long de la formation au travers de phases applicatives et d'échanges avec le formateur
- Une évaluation à chaud peut également être effectuée en fin de formation et/ou en fin de module par des tests visant à vérifier la compréhension et l'intégration par les apprenants des connaissances correspondant aux objectifs de la formation

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 HYDRAULIC FRACTURING — 0.5 day

Productivity index, skin effect, flow efficiency.
Damage in the formation and in the pack.
Candidate selection.

DESCRIPTION OF THE PROCESS — 0.5 day

In situ stress, fracture orientation and fracture propagation.

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Different types of pressures: net pressure, tortuosity, friction.
Fluid leak-off, slurry efficiency, dimensionless fracture conductivity.

FRACTURING FLUIDS, PROPPANTS & FRACTURE CONDUCTIVITY — 1 day

Types of fracturing fluids.
Types of proppants.
Fluid and proppant selection.

INPUT & FRACTURE DESIGN — 1 day

Requirement for fracture design.
Fracture growth analysis.
Hydraulic fracturing models.

EQUIPMENT & PLACEMENT TECHNIQUES — 1 day

Surface pumping equipment.
Placement techniques in vertical and horizontal wells.
Planning and executing operation.

FLOW BACK, FRACTURE MAPPING & POST-JOB ANALYSIS — 0.75 day

Flow back techniques: wellhead isolation tool, frac valve.
Mapping: well test, tracer and micro-seismic.
Post-job evaluation.
Environmental considerations

CONCLUSION, ASSESSMENT & FEEDBACK — 0.25 day

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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