PetroSkills

Completion Design Fundamentals

MODULE

About the Skill Module

This skill module will take you through multiple facets of completion design Fundamentals. The topics that are covered in this module include an extensive look at conduits, circulating and killing wells, inflow and outflow along with well barriers and well servicing fluids, and a few more.

Target Audience

Graduates or engineers with experience, engaged in drilling operations, production operations, workover, and completions; petroleum engineering in both the service and operating sectors.

You Will Learn

Participants will learn how to:

- Recognize the various design concepts which will be covered throughout the module
- Identify the most common sandface completion options
- Explain the advantages and disadvantages of each option
- Describe the different conduit options
- Explain the benefits or disadvantages of each option
- Differentiate between “killing” and “offloading” the well
- Explain the various options for displacement or circulating in a completion
- Describe the difference between bullheading and circulating
- Describe where to locate the primary circulating device
- Differentiate between the various circulating path options
- Explain the relationship between inflow and outflow
- Explain how this relationship impacts completion design
- Describe the most common method of determining inflow – Darcy’s law
- Define a barrier
- Explain why barriers are critical to well operations
- State the normal industry practice for the number of barriers required during an operation
- Determine a hydrostatic barrier density requirement
- Describe the functions of well intervention fluids
- List the main types of completion fluids
- Describe common additives
- Differentiate between completion fluids, packer fluids, kill fluids, perforating fluids, and others

- Explain several of the most important interface points between drilling and completions
- Describe primary cementing and the impact on the completion
- Production casing size and the impact on the completion
- Drill-in fluids, and their impact on the completion
- Identify and explain trajectories
- Explain the typical spacing of many oilfield components used in a completion
- Identify common symbols used for oilfield components in a well sketch
- Critique a well sketch
- Describe the potential failure mechanisms for metal components
- Explain the basic principles of corrosion
- Use a sample metal selection chart to select metals for well conditions
- Describe selection criteria for elastomers

Product Details

Categories: Upstream

Disciplines: Production and Completions Engineering

Levels: Foundation

Product Type: Individual Skill Module

Format: On-Demand

Duration: 10 hours (approx.)

$795.00