PetroSkills

Well Completions Fundamentals

MODULE

About the Skill Module

This skill module covers five sections, including well completion equipment, packers, landing nipple and lock mandrel systems, safety valves, and circulation devices.

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:

- Identify the functionality linked to downhole equipment
- Recognize the full suite of equipment to be further covered in this module
- Describe the difference between wellheads and Christmas trees
- Describe the functions of a wellhead
- Analyze a video of a wellhead, identifying the various annuli and various seals
- Describe the function of a Christmas tree
- Analyze a video of a Christmas tree video, and identify the various valves and their functions
- Identify the appropriate API standards to reference
- Identify the various characteristics of a tubing string, including weight/internal diameter, outside diameter, metallurgy, and associated properties
- Describe the main differences between API connections and premium connections
- Explain the results from a torque/turn chart
- Describe tubing and connection selection criteria
- Identify the primary function of a packer
- Identify the significant mechanical components of packers
- Describe one method of categorizing packers
- Describe several packer setting methods
- Explain the main options for connecting the tubing to the packer
- Describe the physical basis for tubing length changes
- Calculate a simple tubing length change
- Describe the components of a landing nipple and lock mandrel system and explain why this system is used

- Identify the primary function of a safety valve
- Differentiate between a surface controlled and a subsurface controlled valve
- Describe the conditions where a safety valve should be placed in the well
- Describe the operation of a typical sliding side door
- Explain reasons for including a circulating device
- Differentiate between circulating points for liquid and those for gas
- Describe common completion accessories, including wireline re-entry guides, blast joints, and flow couplings
- Demonstrate uptake of the skill modules that have been covered up to this point
- Identify areas requiring review
- Design a completion, incorporating equipment, reservoir data, fluid data, etc.

Product Details

Categories: Upstream

Disciplines: Production and Completions Engineering

Levels: Foundation

Product Type: Individual Skill Module

Format: On-Demand

Duration: 9 hours (approx.)

$795.00