

SAND MANAGEMENT & CONTROL

PRD052

COURSE DESCRIPTION

Integrated Sand Management is essential to safe operation of oil and gas fields. In addition, an integrated approach to sand management will deliver better productivity of the wells, minimize costs and ensure safe and steady operations of the wells and facilities. Sand management is concerned with sand, proppant and other associated solids from oil and gas wells. In the past, the standard approach was to install downhole sand control to stop sand from coming to surface. However, this has led to lower production from wells and higher well completion costs.

Nowadays, a holistic approach is required where the pros and cons of downhole sand control need to be balanced with managing safe levels of sand production to surface. Typically, this approach leads to significantly higher production and lower costs, while maintaining the safety and integrity of the wells and facilities. This informant and intensive training course will address how sand can be managed downhole, at surface or with a combination of the two. We look how you can develop a sand management strategy and plan, which will give the optimum result for your field.

This training course will highlight:

- What is Integrated Sand Management
- Basic design & operation considerations for sand control completions
- How to select the preferred downhole sand control technique
- Surface sand management options
- Sand management strategy and plan

COURSE GOAL

To enhance the participants' knowledge, skills, and abilities necessary for managing and controlling sand downhole and at surface.

COURSE OBJECTIVES

By the end of this training course, participants will learn to:

- Explain what Integrated Sand Management is.
- Describe basic design & operation considerations for both cased and open hole sand control completions
- Prepare a decision tree to select the preferred sand control technique
- Describe surface sand management options
- Explain how to prepare a sand management strategy and plan

WHO SHOULD ATTEND

- Petroleum engineers.
- Process engineers.

COURSE DURATION

5 Working Days

COURSE OUTLINES

1. Sand Failure Prediction and Sand Control Options

- 1st day quiz
- Revision of Geomechanics basics
- Rock strength from core and log data
- In situ stress and stresses around a wellbore
- Rock failure mechanisms
- Approaches to sand production prediction
- Overview of sand production issues and sand management options
- Discussion of sand production risk

2. Sand Prevention and sieve analysis

- Proper Drilling and Completion practices
- Prevention phase and decision based on technical information
- General Methods to control sand production
- Laboratory test for sand control
- Successful design conditions and factors
- Sieve analysis and interpretation
- Use the results from the Sieve analysis to select Gravel, Slotted Liners and Screens

3. Gravel Packing and Cased Hole Sand Control

- Gravel Packing
- Gravel Sizing exercise
- Expandable Sand Screens in Cased Hole
- Cased Hole Sand Control Completions (frack & pack, high rate water pack)

4. Open Hole Sand Control

- Frac Packing in cased completions
- Fracturing Fluid Systems

- Sand Control in Open-hole Completions
- Fluids related to drill-in (fluid loss control)
- Deviated Well Problems and Solutions

5. Chemical consolidation and standalone screen

- Chemical Consolidation Methods
- Combination packing/consolidation systems
- New approach to standalone screen
- Last day quiz
- Round table

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