



N624: Heavy-Oil Recovery Processes 1: Cold Production, CHOPS, and Flooding

Instructor(s): Patrick Collins

1 Day

Competence Level:
Awareness



Classroom Course

Summary

This stand-alone, one-day course provides technical professionals with an overview of current upstream heavy-oil production technologies and introduces new upstream production technologies that have been developed in the last several years. This course focuses on cold primary recovery processes such as Cold Production and CHOPS, plus some aspects of flooding. Technology screening guidelines will be outlined and informative assessments of the various approaches will be provided.

Part II is a separate course that address other recovery processes: thermal (CSS, SAGD, steam flooding), solvents, electromagnetics, and in situ combustion.

Learning Outcomes

Participants will learn to

1. Examine specific recovery processes such as Cold Production, CHOPS (Cold Heavy-Oil Production with Sand), and Flooding, that do not rely on heat or solvents
2. Provide a broad overview of heavy-oil recovery processes, for context and comparison
3. Review the properties of heavy oil and its current status in the world
4. Examine the various drive mechanisms required for heavy-oil recovery, such as foamy-oil drive
5. Describe the geomechanics and implications of sand production
6. Describe CHOPS' implementation, completions, and workovers

Duration and Training Method

One classroom day providing 0.8 CEU (Continuing Education Credits) or 8 PDH (Professional Development Hours)

Who Should Attend

Anyone involved in heavy oil and bitumen recovery would find this course educational and instructional, but it is of particular interest to:

- reservoir engineers, geologists, geophysicists
- site personnel, engineering managers, facilities engineers
- environmentalists, regulators

Prerequisites and Linking Courses

Heavy-Oil Recovery Processes 2: Thermal (CSS, SAGD), Solvents, and Innovations

Course Content

1. Introduction - Outline
2. Our World and Heavy Oil
3. Overview of Heavy-Oil Recovery Processes
4. Drive Mechanisms and Foamy-oil Drive
5. Cold Production (CP) - no sand



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6. Sand Control vs. Sand Management
 7. Cold Heavy-Oil Production with Sand (CHOPS)
 8. Geomechanics of Sand Production
 9. Implementation and Workovers
 10. Performance Comparison: CP vs CHOPS
 11. Production and completion engineering aspects of CP and CHOPS
 12. CHOPS in Horizontal Wells
 13. Flooding