



PROSPER FOR ESP AND HIGH CO₂ CONTENT FLUIDS MODELING

Workshop Description

With the increase in the efforts to sequester CO₂ from various sources like power plants, refineries, etc. there is an increase in the CO₂ injection projects around the world.

This workshop will provide participants the knowledge of modeling the CO₂ injection wells using Petroleum Experts' PROSPER software. The workshop starts with a detailed introduction of PROSPER and procedure for modeling a well. Various aspects of PROSPER, including Inflow Performance (IPR) curves, Vertical Lift Performance (VLP) curves, etc. are also discussed. Modeling of wells with artificial lift like ESPs, gas lift and jet pumps are also discussed. After attending this workshop the attendees should be able to model wells injecting or producing high CO₂ content fluids.

This workshop can be customized further to meet the needs of our clients.

Duration and Scope

This high-level workshop is of three (3) days duration and it involves a discussion of modeling high CO₂ content wells with Petroleum Experts' PROSPER software. The workshop discusses Nodal Analysis using PROSPER. Various component of modeling including PVT data matching, wellbore description, etc. are also discussed in this workshop. The workshop also describes the process of generating VLP and IPR curves for external simulation packages. The methodology of enthalpy balance heat transfer and well test matching to develop a more accurate well model is also discussed. Several class problems are included in the workshop to provide attendees hands-on training in using PROSPER.

WORKSHOP CONTENT

- Introduction to PROSPER
- Matching PVT for High CO₂ Content Fluids
- Down-hole Data Description
- Wellbore Hydraulics
- Gradient Calculation
- Inflow Performance Models
- Enthalpy Balance Heat Transfer
- Natural Flow Well Test Matching
- Nodal Analysis Sensitivity Calculations
- CO₂ Injection Well Modeling
- Modeling ESPs with PROSPER
- Modeling Gas Lift with PROSPER
- Modeling Jet Pumps with PROSPER

Who Should Attend

This three (3) days workshop is custom–designed for managers, engineers, and other professionals involved in fields with high CO₂ content artificial lift wells and interested in modeling the high CO₂ wells using PROSPER.

Workshop Requirements

Since this workshop will utilize Petroleum Experts' PROSPER, this workshop should be held in clients' offices, and it will be the clients' responsibility to provide, during the duration of this workshop, Petroleum Experts' PROSPER license to each workshop attendee (student), and to workshop instructors, to work on the class problems. Class rooms should be equipped with power strips for attendees to plug in their notebook computers and a projector for instructors to project their PowerPoint slides.

Workshop Manual

Each workshop attendee will be provided a workbook (in English) containing copies of the instructors' presentation slides and solutions to the class problem.

Workshop Instructors

This custom designed workshop will be conducted by our high–level and seasoned consultants, with extensive knowledge and experience in the subject matter as well as in conducting training programs around the world.

Language of Instructions

This workshop will be conducted in English. However, if desired by the client, one of our bi–lingual consultants can be present throughout the workshop for the benefit of those attendees who are not fluent in English.