Gain a better understanding of petroleum phase behavior by learning the theory and methods behind Calsep’s versatile PVT simulation software.

CALSEP OFFERS CUSTOMIZED COURSES:

- ✔ Building a Field-wide Common EoS model
- ✔ PVT Simulation for Gas Injection and Enhanced Oil Recovery
- ✔ Open Structure course to build customized solutions

A MIX OF THEORY & HANDS-ON

HIGHLY EXPERIENCED TEACHERS

Visit www.calsep.com/all-courses for course dates and registration information, or contact us at:

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HOUSTON | COPENHAGEN | DUBAI | KUALA LUMPUR

Every Calsep course includes a mix of theory and hands-on exercises appropriate for a range of backgrounds including those just getting started in using PVTsim as well as the more experienced users interested in learning advanced concepts and techniques for successful EoS modeling.

Courses are taught by Calsep’s senior engineers who use PVTsim in their daily work. Our engineers also help develop PVTsim and have the most in-depth knowledge about the capabilities and best practices for EoS modeling with PVTsim.
Learn how to prepare a robust EoS model for a variety of reservoir engineering tasks. Participants will gain insight into how the lab measures data, how to select the right data for modeling, and how to enter that data in PVTsim. The course will teach participants Calsep’s recommended workflow for EoS modeling, including quality checking sampling data, fluid characterization and PVT data regression. The course will also cover oil-based mud contamination and gas injection modeling.

Who Should Participate?
Engineers engaged in reservoir simulations, production operations and handling of experimental PVT data.

COURSE TOPICS

- Fluid Sampling and PVT report
  - Bottom-hole sample vs separator sample
  - Compositional analyses performed by the lab
  - Navigation through a PVT report and understanding data inconsistencies
  - Identifying the appropriate data to input in PVTsim
- Fluid Handling
  - Quality check of fluid compositions
  - Equation of State Fundamentals
  - C7+ characterization, lumping and recombination
- PVT modeling and Application:
  - Cleaning oil-based-mud contaminated samples
  - Regression to routine PVT data, viscosity data and EOR data
  - Single fluid EoS model and Common EoS (Field Wide EoS) model for multiple fluids
  - Compositional variation with depth
  - Input to external simulators
- PVTism Nova Apps:
  - Automated QC and EoS, Open Structure, Separation App
5-DAY PVT SIMULATION COURSE FOR FLOW ASSURANCE ENGINEERS

This course gives a comprehensive overview of PVT and fluid phase handling for systems where solids may form. This course will introduce equilibrium modeling for two phase systems (gas/liquid) and then expand to multiphase systems where water and solids are present in addition to gas and oil. It will cover gas-water mutual solubility simulations using the polar component models CPA and Huron & Vidal. The course participants will also learn simulation of transport of wax forming fluids in multiphase oil and gas pipelines.

Who Should Participate?
Engineers working with petroleum fluids for process and pipeline modeling where aqueous phase and solids (hydrate, wax, asphaltene) formation are studied.

COURSE TOPICS

- Fluid Sampling and PVT report
  - Bottom-hole sample vs separator sample
  - Compositional analyses performed by the lab
  - Navigation through a PVT report and understanding data inconsistencies
  - Identifying the appropriate data to input in PVTsim
- Fluid Handling
  - Quality check of fluid compositions
  - Equation of State Fundamentals
  - C7+ characterization, lumping and recombination
- Multiphase modeling and Application:
  - Regression to PVT data and Viscosity data. Common EoS models
  - Polar component models (CPA and Huron & Vidal)
  - Water and gas mutual solubility
  - Modeling of hydrate, asphaltene and wax
  - Compositional wax deposition simulation
  - Input to external simulators
- PVTism Nova Apps:
  - Automated QC and EoS, Open Structure, Separation App
CALSEP OFFERS CUSTOMIZED COURSES

Training industry personnel on PVT and phase behavior of petroleum fluids has been an important part of Calsep’s activities over the past 30 years. Calsep offers open courses as well as custom in-house courses and can cover a wide range of engineering disciplines relevant for reservoir engineers, process engineers, engineers dealing with flow assurance or multiphase flow metering, laboratory staff and others needing to apply PVT simulation software in their work. Examples of customized courses include:

✔ Building a Field-wide Common EoS model
✔ PVT Simulation for Gas Injection and Enhanced Oil Recovery
✔ Open Structure course to build customized solutions

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