



Course Description:	Phase Behaviour and PVT Properties of Petroleum Reservoir Fluids
Course Location	In client offices worldwide
Course Description	Inadequate knowledge of the pressure, volume and temperature (PVT) properties and phase behaviour of petroleum reservoir fluids means dealing with a black box as far as the reservoir is concerned. This course comprehensively covers PVT and phase behaviour of petroleum reservoir fluids in a logical manner. This uniquely structured course, a rich blend of the Instructor’s sound theoretical foundation and practical experience augmented by a number of case studies and example exercises as well as his way of involving participants in discussions facilitates your learning. You will gain valuable knowledge that is necessary to tackle/deal with petroleum engineering calculations that require PVT properties and phase behaviour of reservoir fluids.
Who Should Attend	Reservoir engineers, PVT laboratory personnel, surface facilities engineers, production engineers, geoscientists, reservoir fluid samplers and anybody with a technical background working in energy and petroleum business and interested in petroleum reservoir fluids for engineering studies and reservoir simulations.
Course Length	3 days
Course Materials	Copies of the slides and a certificate of participation
Course Contacts	Please email us at info@hydrafact.com
Course Director	Abhijit Dandekar is currently the professor and chair of petroleum engineering at the University of Alaska Fairbanks (UAF), where he has taught since January 2001. Before joining UAF, he was an assistant research professor at the Technical University of Denmark. In the summer of 2002 he also worked as visiting faculty at the University of Petroleum Beijing, P.R.C. He has also been a visiting professor at the African University of Science and Technology (AUST) in Abuja, Nigeria. He holds a B.Tech degree in chemical engineering from Nagpur University, India and a Ph.D. degree in petroleum engineering from Heriot-Watt University, Edinburgh, UK. Abhijit Dandekar is an active member of SPE and the author or co-author of over 30 peer-reviewed technical papers, over 45 technical conference papers in the petroleum literature and numerous research reports, in areas as diverse as special core analysis, PVT and phase behaviour, gas-to-liquids, gas hydrates, viscous oils, wettability alteration and CO2 sequestration. He is also the author of the CRC Press book Petroleum Reservoir Rock and Fluid Properties.



Course Content

Day 1:

- General reservoir fluid properties – an introduction
- Basic chemistry of petroleum reservoir fluids
- Basic characterization/classification of petroleum reservoir fluids
- Introduction to phase behavior
- Phase behavior of reservoir fluids
- Sampling of petroleum reservoir fluids

Day 2:

- Compositional analysis and recombination of petroleum reservoir fluids
- Characterization of plus fractions and their effects on PVT and phase behavior calculations
- Laboratory PVT analysis and other exotic PVT experiments
- PVT correlations
- Reservoir engineering properties of petroleum reservoir fluids

Day 3:

- Properties of formation waters
- Concepts of pressure-temperature flash
- Concepts of equilibrium ratios and convergence pressure
- Low-pressure flash calculations using ideal gas law concepts
- Equations-of-state (EOS) models and their use in simulation of PVT and phase behavior modeling

Exercises: The course notes end with twenty four exercise problems related to the material covered in the course notes. Time permitting, some or all of these exercise problems will be solved interactively (for effective learning) during the course.