

PVT and Phase Behaviour of Petroleum Reservoir Fluids

Description

This 5-day course has been designed to assist in the development and application of reservoir fluid information in reservoir studies, production operation and recovery processes.

Target audience

Reservoir and production engineers, and those involved in reservoir fluid sampling, testing and modelling.

Course requirement

Petroleum engineering background or some experience in measurements and modelling of reservoir fluid properties.

Content

Fundamentals

- Reservoir fluid composition.
- Basic concepts of phase behaviour.
- Classification of reservoir fluids.

Fluid sampling

- Well stabilisation, and optimum production rate.
- Multi-phase sampling.
- Oil based mud filtrate contamination sample evaluation and adjustment compositional grading.

PVT tests and correlations

- Compositional analysis by gas chromatography and distillation.

- Conventional PVT tests.
- Gas recycling, well inflow, pressure build-up, and gas injection tests.
- PVT report, its evaluation, and data processing.
- Application of PVT test results.
- Determination of PVT properties using black oil correlations.

PVT analysis by compositional methods

- Empirical equilibrium ratio correlations and their application.
- Phase behaviour modelling by equation of state.
- Simulation of PVT tests and data generation using fluid composition.
- Evaluation of PVT experimental data using compositional models.

Applications in reservoir simulation

- Pseudo components and grouping.
- Optimum fluid characterisation for compositional reservoir simulation.
- Tuning of equation of state and data requirement.
- Measurement and prediction of interfacial tension.
- Viscosity correlations and prediction by compositional methods.
- Gas injection and multi-contact miscibility.

Instructor

This course is presented by Prof. Bahman Tohidi.

Booking

If you are interested in attending this course please email Hydrafact at info@hydrafact.com