

**DRILLING, WELLS AND RESERVOIR ENGINEERING**

PVT and Reservoir Fluid Properties

5 day course

Classroom, online or in-house

Course overview

A wrong formation volume factor or bubble point quietly corrupts every downstream calculation: in place volumes, material balance, simulation and facility design. Delegates begin with hydrocarbon chemistry and phase diagrams for black oil, volatile oil, gas condensate, wet gas and dry gas. Sampling follows, both bottomhole and surface recombination, with the checks that show whether a sample is representative. Laboratory procedures are explained: constant composition expansion, differential liberation, separator tests and constant volume depletion. Correlations for bubble point, viscosity and compressibility are compared with measured data, and equation of state characterisation and tuning are introduced for compositional work. Delegates leave able to plan a sampling programme, quality check a PVT report and produce black oil tables for engineering use.

What you will learn

- Classify reservoir fluids from phase diagrams and production data
- Plan bottomhole and surface sampling for representative fluids
- Interpret constant composition expansion, differential liberation and separator tests
- Validate PVT reports with consistency and material balance checks
- Apply empirical correlations and judge their limits
- Characterise fluids with a tuned cubic equation of state
- Generate black oil property tables for material balance and simulation

Who should attend

- Reservoir engineers
- Production and process engineers
- Laboratory PVT analysts
- Simulation engineers
- Well testing and sampling engineers

Course outline

- 01** Hydrocarbon chemistry and phase behaviour
- 02** Classification of reservoir fluids
- 03** Fluid sampling methods
- 04** Sample validation
- 05** PVT laboratory experiments
- 06** Black oil properties and correlations
- 07** Gas properties and compressibility
- 08** Equation of state modelling
- 09** Using PVT data in engineering

Upcoming dates



Dates	Venue	Format	Fee per delegate
26 to 30 October 2026	Mbabane, Eswatini	Classroom	R19,950
16 to 20 November 2026	Windhoek, Namibia	Classroom	R19,950
23 to 27 November 2026	Online	Online	R8,500
18 to 22 January 2027	Casablanca, Morocco	Classroom	USD 1,325

Fees and how to register

This 5 day course is **R8,500** per delegate online, **R19,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 1,325** in the classroom elsewhere in Africa. In-house training is quotation on request. Book 2 or more delegates on this course and save 10%.

To register or request an in-house proposal, visit www.afrisciencegroup.com, email info@afriScience.co.za, or WhatsApp us on **+27 63 479 1136**.

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