



DRILLING, WELLS AND RESERVOIR ENGINEERING

Gas and Gas Condensate Reservoir Engineering

5 day course

Classroom, online or in-house

Course overview

When pressure in a gas condensate reservoir drops below the dew point, liquid drops out near the wellbore, choking productivity and leaving the most valuable components behind in the rock. Dry gas fields bring their own pitfalls. Delegates begin with gas properties, real gas behaviour and the z factor, then estimate gas in place by volumetric and p/z methods, including abnormally pressured and water drive cases. Deliverability testing and backpressure equations follow. Condensate behaviour is then treated in depth: retrograde condensation, condensate banking, velocity stripping and compositional simulation. Gas cycling and pressure maintenance are covered as recovery strategies, with relevance to developments such as those offshore Mozambique and Tanzania. Delegates leave able to estimate gas reserves, forecast deliverability and manage condensate dropout.

What you will learn

- Calculate gas properties including z factor, formation volume factor and viscosity
- Estimate gas in place with volumetric and p/z material balance methods
- Recognise water drive and overpressure effects on gas material balance
- Analyse deliverability tests using backpressure and laminar inertial methods
- Explain retrograde condensation and condensate banking
- Evaluate strategies such as gas cycling to limit liquid dropout
- Forecast gas and condensate production for contract planning

Who should attend

- Reservoir engineers working gas fields
- Gas field development planners
- Production engineers
- Gas marketing and contracts staff needing deliverability forecasts
- Regulators of gas resources

Course outline

- 01 Natural gas properties
- 02 Gas in place estimation
- 03 Gas material balance
- 04 Water drive and abnormal pressure
- 05 Deliverability testing
- 06 Gas condensate phase behaviour
- 07 Condensate banking near the wellbore
- 08 Gas cycling and pressure maintenance
- 09 Forecasting for gas sales

Upcoming dates



Dates	Venue	Format	Fee per delegate
2 to 6 November 2026	Kampala, Uganda	Classroom	USD 1,325
16 to 20 November 2026	Gaborone, Botswana	Classroom	R19,950
21 to 25 December 2026	Johannesburg, South Africa	Classroom	R19,950
28 December 2026 to 1 January 2027	Online	Online	R8,500

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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