

**DRILLING, WELLS AND RESERVOIR ENGINEERING**

Heavy Oil Production and Thermal Recovery

5 day course

Classroom, online or in-house

Course overview

Heavy oil can be as viscous as cold syrup at reservoir temperature, so it barely moves toward a well unless that viscosity is reduced, usually with heat. The challenge is delivering that heat economically. Delegates start with heavy oil and bitumen properties, viscosity temperature relationships and the reservoir settings in which they occur, Madagascar among them. Cold methods, including production with sand and polymer assistance, are compared. Thermal methods take the core of the programme: cyclic steam stimulation, steamflooding, steam assisted gravity drainage and in situ combustion, each with its heat balance, steam oil ratio and operational issues. Steam generation, water handling, thermal well integrity and emissions are treated as practical limits. Delegates leave able to screen heavy oil reservoirs and select and design a thermal recovery scheme.

What you will learn

- Describe heavy oil and bitumen properties and viscosity temperature behaviour
- Screen reservoirs for cold and thermal recovery methods
- Evaluate cyclic steam stimulation and steamflooding performance
- Explain steam assisted gravity drainage mechanisms and design parameters
- Assess in situ combustion as a recovery option
- Calculate heat losses and steam oil ratio for a thermal project
- Identify steam generation, water treatment and emissions constraints

Who should attend

- Reservoir engineers working heavy oil
- Production engineers
- Thermal project engineers
- Field development planners
- Technical regulators

Course outline

- 01** Heavy oil and bitumen characteristics
- 02** Reservoir settings and screening
- 03** Cold production methods
- 04** Heat transfer and thermal principles
- 05** Cyclic steam stimulation
- 06** Steamflooding
- 07** Steam assisted gravity drainage
- 08** In situ combustion
- 09** Steam supply, water and emissions

Upcoming dates



Dates	Venue	Format	Fee per delegate
26 to 30 October 2026	Cape Town, South Africa	Classroom	R19,950
2 to 6 November 2026	Kampala, Uganda	Classroom	USD 1,325
9 to 13 November 2026	Online	Online	R8,500
30 November to 4 December 2026	Durban, South Africa	Classroom	R19,950

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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