



DRILLING, WELLS AND RESERVOIR ENGINEERING

Geothermal Well Drilling

5 day course

Classroom, online or in-house

Course overview

The East African Rift has made geothermal drilling a growing part of the continent's well activity, and those wells punish oilfield habits: hard fractured volcanic rock, temperatures that can exceed 300 degrees Celsius, total losses and steam kicks. Delegates study geothermal resource types and well objectives, then the design consequences: large diameter casing programmes, thermal stress and casing buckling, full length cementing and wellhead growth. Drilling practice covers aerated fluids and drilling blind through total losses, bit and BHA selection in basalt and rhyolite, and cooling and temperature limits on tools. Well control for steam and hot water kicks, quenching and the hazards of H₂S are addressed. Completion with slotted liners, discharge testing and scaling close the course. Delegates leave able to plan and supervise geothermal drilling.

What you will learn

- Describe geothermal resource types and their implications for well design
- Design large diameter casing programmes for thermal loading
- Plan full length cementing that tolerates thermal cycling
- Select aerated fluids and procedures for drilling with total losses
- Choose bits and BHAs for hard fractured volcanic formations
- Apply well control methods suited to steam and hot water kicks
- Manage H₂S, scaling and high temperature hazards at the wellsite
- Plan slotted liner completion and initial discharge testing

Who should attend

- Drilling engineers in geothermal development companies
- Oil and gas drilling staff moving into geothermal projects
- Geothermal reservoir and resource engineers
- Drilling supervisors on geothermal rigs
- Power utility project engineers overseeing drilling campaigns

Course outline

- 01 Geothermal systems and well objectives
- 02 Casing design for thermal loads
- 03 Cementing for high temperature service
- 04 Drilling fluids and total loss circulation
- 05 Bits and BHAs in volcanic rock
- 06 Steam kicks and geothermal well control
- 07 H₂S, scaling and temperature hazards
- 08 Completion and discharge testing

Upcoming dates

Dates	Venue	Format	Fee per delegate
19 to 23 October 2026	Windhoek, Namibia	Classroom	R19,950
30 November to 4 December 2026	Cape Town, South Africa	Classroom	R19,950
4 to 8 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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