



DRILLING, WELLS AND RESERVOIR ENGINEERING

Formation Damage Control and Sand Management

5 day course

Classroom, online or in-house

Course overview

Productivity is often lost long before the first barrel: fines migration triggered by an incompatible brine, clay swelling from a drill in fluid, emulsions from oil based filtrate, or sand that erodes a choke within weeks of start up. Delegates study damage mechanisms through drilling, cementing, completion and production, and the laboratory core flood and compatibility tests that predict them. Prevention through fluid design and the reading of skin from production data follow. Sand management makes up the second half: predicting sand failure from rock strength and drawdown, choosing between passive management and exclusion, and designing standalone screens, gravel packs and frac packs. Sand detection, erosion limits and surface handling complete the course. Delegates leave able to protect near wellbore permeability and keep sand under control.

What you will learn

- Identify formation damage mechanisms at each stage of a well's life
- Design laboratory tests that screen fluids for compatibility with the reservoir
- Select drill in and completion fluids that minimise damage
- Estimate damage skin from production and test data
- Predict sand production onset from rock strength and drawdown
- Choose between sand exclusion and sand management strategies
- Design standalone screen, gravel pack and frac pack completions
- Set sand detection and erosion monitoring limits

Who should attend

- Production and completion engineers
- Petroleum engineers in sandstone reservoirs
- Drilling fluids and completion fluids specialists
- Laboratory and core analysis staff
- Facilities engineers dealing with sand at surface

Course outline

- 01 How formation damage occurs
- 02 Fines migration, clays and incompatible fluids
- 03 Laboratory testing and core floods
- 04 Damage prevention through fluid design
- 05 Sand failure mechanisms and prediction
- 06 Sand management versus exclusion
- 07 Screens, gravel packs and frac packs
- 08 Sand monitoring and erosion control

Upcoming dates

Dates	Venue	Format	Fee per delegate
26 to 30 October 2026	Accra, Ghana	Classroom	USD 1,325
28 December 2026 to 1 January 2027	Harare, Zimbabwe	Classroom	USD 1,325
18 to 22 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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