



PETROLEUM GEOSCIENCE AND PETROPHYSICS

Open Hole Log Interpretation and Formation Evaluation

5 day course

Classroom, online or in-house

Course overview

Bypassed pay is usually found years later in logs that were run, paid for and read too quickly. Careful open hole interpretation is the cheapest way to avoid leaving oil behind a casing string. Delegates begin with the borehole environment and mud filtrate invasion, then learn the physics and quick look use of gamma ray, spontaneous potential, resistivity, density, neutron, sonic and photoelectric tools. Porosity determination, water resistivity from SP and Pickett plots, and Archie water saturation come next, followed by lithology identification from crossplots. Formation pressure testers, fluid sampling and nuclear magnetic resonance are added to locate contacts and moveable fluids. The programme closes on net pay cut offs and a complete clean sand evaluation. Delegates leave able to run a full quick look and detailed interpretation and to defend their pay calls.

What you will learn

- Explain the borehole environment, invasion profile and its effect on readings
- Interpret gamma ray, SP, resistivity, density, neutron and sonic logs
- Calculate porosity from single and combined porosity tools
- Determine formation water resistivity and Archie water saturation
- Identify lithology using neutron density and other crossplots
- Locate fluid contacts with pressure gradients and resistivity
- Apply net pay cut offs and summarise a clean reservoir evaluation
- Plan an open hole logging programme for an exploration well

Who should attend

- Junior petrophysicists
- Geologists and wellsite geologists
- Reservoir and production engineers
- Logging company field engineers
- Petroleum agency staff reviewing well completion reports

Course outline

- 01 Borehole environment and invasion
- 02 Gamma ray and SP
- 03 Resistivity tools
- 04 Density, neutron and sonic porosity
- 05 Lithology crossplots
- 06 Water saturation and Archie's equation
- 07 Pressure testing and fluid contacts
- 08 Nuclear magnetic resonance
- 09 Net pay and quick look evaluation

Upcoming dates



Dates	Venue	Format	Fee per delegate
12 to 16 October 2026	Lagos, Nigeria	Classroom	USD 1,325
9 to 13 November 2026	Johannesburg, South Africa	Classroom	R19,950
30 November to 4 December 2026	Online	Online	R8,500
18 to 22 January 2027	Maputo, Mozambique	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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