

Well Testing and Pressure Transient Analysis

Kigali (Rwanda)

2 - 6 June 2025

UK Training

PARTNER



Well Testing and Pressure Transient Analysis

Code: OG28 From: 2 - 6 June 2025 City: Kigali (Rwanda) Fees: 4000 Pound

Introduction

The course first introduces the purpose of well testing and the basic methodology. The theory and fundamental equations, as well as various understanding analytical solutions are covered before introducing specific analysis techniques for homogeneous oil and gas reservoirs. Non-homogeneous situations and more advanced topics are also covered. Assumptions made in deriving equations and solutions and models used in test interpretation are stressed. Operational aspects are covered in terms of test design and use of specialised testing equipment. The course covers well test objectives and concepts; fluid flow equations and fundamental solutions; classical methods for drawdown and build-up analysis, bounded reservoirs, gas well testing, dual-porosity, hydraulic fractures, interference and pulse testing, test design.

Course Objectives

- Participants will learn various techniques of pressure transient analysis, part of the reservoir engineering discipline. The course will be based on a mathematical foundation of partial differential equations.
- Participants will use real field data and will gain the understanding of how such data is obtained in the field, including accuracy and limitations.
- The benefit of interdisciplinary team work at the work place is stressed.
- Participants will learn about well test design and the modern hardware used in the field.
- A number of technical papers will be handed out involving case histories and Participants will get an appreciation that the learning process never stops.
- Some of the case histories will point out risks involved in well testing and how best engineering practice will minimise such risks.

Course Outlines

Day 1: Well Testing Course Outline and Course Conduct

- Introduction.
- Overview.
- Theoretical Foundation.
- Derivation of Radial Diffusivity Equation: Group Exercise.

Day 2: Well and Near Well Effects

- Infinite Acting Reservoirs and Analysis.
- Infinite Acting Examples.
- Analysis of Pressure Build-up: Infinite Acting Reservoirs.
- Build-up Analysis: Tutorial - Problem 1.



Day 3: Superposition Theory

- Theory for Bounded Reservoirs.
- Analysis for Bounded Reservoirs.
- Field Examples - Dai Hung and Timor Sea.
- Interference Test Analysis: Exercise 2 - Problem 2.

Day 4: Gas Well Test Formulation

- Gas Well Test Analysis.
- Well Test Design and Operations.
- Naturally Fractured Reservoirs Dual Porosity.
- Gas Well Test Analysis: Exercise 3 - Problem 3.
- Discussion on Testing Data, Reporting and Safety.

Day 5: Naturally Fractured Reservoirs: Examples

- Computer-aided Analysis.
- Layered Reservoirs.
- Hydraulically Fractured Wells.
- Start Assessment Tasks.
- Hydraulically Fractured Gas Wells: Examples.
- Introduction to Horizontal Well Tests.
- Introduction to Interference and Pulse Testing.



Blackbird Training Cities

Europe



Malaga (Spain)



Sarajevo (Bosnia and Herzegovina)



Oporto (Portugal)



Glasgow (Scotland)



Edinburgh (UK)



Oslo (Norway)



Anney (France)



Bordeaux (France)



Copenhagen (Denmark)



Birmingham (UK)



Lyon (France)



Moscow (Russia)



Stockholm (Sweden)
(Netherlands)



Podgorica (Montenegro)



Batumi (Georgia)



London (UK)



Istanbul (Turkey)



Amsterdam



Düsseldorf (Germany)



Paris (France)



Barcelona (Spain)



Munich (Germany)



Geneva (Switzerland)



Prague (Czech)



Vienna (Austria)



Rome (Italy)



Brussels (Belgium)



Madrid (Spain)



Berlin (Germany)



Lisbon (Portugal)



Zurich (Switzerland)



Manchester (UK)



Milan (Italy)



Blackbird Training Cities

USA & Canada



Los Angeles (USA)



Orlando, Florida (USA)



Online



Phoenix, Arizona (USA)



Houston, Texas (USA)



Boston, MA (USA)



Washington (USA)



Miami, Florida (USA)



New York City (USA)



Seattle, Washington (USA)



Washington DC (USA)



In House



Jersey, New Jersey (USA)



Toronto (Canada)

Africa



Baku (Azerbaijan)
(Thailand)



Maldives (Maldives)



Doha (Qatar)



Manila (Philippines)



Bali (Indonesia)



Bangkok



Beijing (China)



Singapore (Singapore)



Sydney (Australia)



Tokyo (Japan)



Jeddah (KSA)



Riyadh (KSA)



Dubai (UAE)



Kuala Lumpur (Malaysia)



Kuwait City (Kuwait)



Pulau Ujong (Singapore)



Jakarta (Indonesia)



Amman (Jordan)



Beirut (Lebanon)

UK Training
PARTNER



Blackbird Training Cities

Asia



Kigali (Rwanda)



Cape Town (South Africa)



Accra (Ghana)



Lagos (Nigeria)



Marrakesh (Morocco)



Nairobi (Kenya)



Zanzibar (Tanzania)



Tangier (Morocco)



Cairo (Egypt)



Sharm El-Sheikh (Egypt)



Casablanca (Morocco)



Tunis (Tunisia)



Blackbird Training Clients



UK Training
PARTNER



Blackbird Training Categories

Management & Admin

Professional Skills
Finance, Accounting, Budgeting
Media & Public Relations
Project Management
Human Resources
Audit & Quality Assurance
Marketing, Sales, Customer Service
Secretary & Admin
Supply Chain & Logistics
Management & Leadership
Agile and Elevation


Technical Courses

Hospital Management
Public Sector
Special Workshops
Oil & Gas Engineering
Telecom Engineering
IT & IT Engineering
Health & Safety
Law and Contract Management
Customs & Safety
Aviation
C-Suite Training



BLACKBIRD
FOR TRAINING

 International House 185 Tower Bridge
Road London SE1 2UF United Kingdom

 +44 7401 1773 35
+44 7480 775526

 Sales@blackbird-training.com

 www.blackbird-training.com

UK Training
PARTNER

