

## Well Testing and Pressure Transient Analysis

*Washington (USA)*

*19 - 23 January 2025*

UK Training

# PARTNER



# Well Testing and Pressure Transient Analysis

Code: OG28 From: 19 - 23 January 2025 City: Washington (USA) Fees: 5700 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 of Well Testing and Pressure Transient Analysis

- 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.

## Well Testing and Pressure Transient Analysis 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



Podgorica (Montenegro)



Stockholm (Sweden)



Lyon (France)



Copenhagen (Denmark)



Bordeaux (France)



Annecy (France)



Oslo (Norway)



Edinburgh (UK)



Glasgow (Scotland)



Malaga (Spain)



London (UK)



Istanbul (Turkey)



Amsterdam (Netherlands)  
(Switzerland)



Düsseldorf (Germany)



Paris (France)



Barcelona (Spain)



Munich (Germany)



Geneva



Prague (Czech)



Vienna (Austria)



Rome (Italy)



Brussels (Belgium)



Madrid (Spain)



Berlin (Germany)



Lisbon (Portugal)



Manchester (UK)



Milan (Italy)

## USA & Canada



Los Angeles (USA)



Florida (USA)



Online



Boston (USA)



Washington (USA)



Miami(USA)



New York (USA)



Toronto (Canada)



## Blackbird Training Cities

### Asia



Baku (Azerbaijan)



Maldives (Maldives)



Manila (Philippines)



Bali (Indonesia )



Bangkok (Tailand)



Beijing (China)



Moscow (Russia )  
(Malaysia)



Singapore (Singapore )



Sydney (Australia)



Tokyo (Japan)



Dubai (UAE)



Kuala Lumpur



Jakarta (Indonesia)

### Africa



Kigali (Rwanda)



Cape Town (South Africa)



Accra (Ghana)



Lagos (Nigeria)



Marrakesh (Marocco)



Nairobi (Kenya)



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 Refinement

### 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



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

 +44 7401 1773 35  
+44 7480 775526

 [training@blackbird-training.com](mailto:training@blackbird-training.com)

 [www.blackbird-training.com](http://www.blackbird-training.com)

UK Training  
**PARTNER**

