

# <u>Training Title</u> RESERVOIR MANAGEMENT FOR UNCONVENTIONAL RESERVOIRS

<u>Training Duration</u> 5 days

#### **Training Venue and Dates**

Neservoir Management Joh512-16 February, 2024\$6,750London, UK.Unconventional Reservoirs5
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Trainings will be conducted in any of the 5 star hotels.

## **Training Fees**

• 6,750 US\$ per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Buffet Lunch.

## Training Certificate

Prolific Consultants FZE Certificate of Course Completion will be issued to all attendees.

## TRAINING OVERVIEW

### **COURSE DESCRIPTION**

The principles of sound reservoir management are presented with emphasis on practical applications. Actual case histories are used to study both successes and failures. An interdisciplinary synergistic approach to efficient gas reservoir management is detailed with the goal of optimized profitability. The significance of each component and the importance of timing and cost/benefit analysis are emphasized.

Reservoir management models for optimum field development and field operating plans are analyzed. The interdisciplinary reservoir management approach shows how each technology or function contributes to the plan and how checks and balances are developed.

### COURSE OBJECTIVE:

- ✓ Optimize production from gas reservoir
- ✓ Apply the principles of sound reservoir management
- ✓ Use the interdisciplinary synergistic approach to efficient reservoir management
- ✓ Include each reservoir management component and the importance of timing and cost/benefit analysis

### SUITABLE FOR:

Reservoir, production and operations engineers; geologists; geophysicists; managers; experienced technicians; and service company personnel responsible for improving the performance of gas reservoirs

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### TRAINING METHODOLOGY:

A highly interactive combination of lecture and discussion sessions will be managed to maximize the amount and quality of information, knowledge and experience transfer. The sessions will start by raising the most relevant questions, and motivate everybody finding the right answers. The attendants will also be encouraged to raise more of their own questions and to share developing the right answers using their own analysis and experience.

All presentations are made in excellent colorful power point. Very useful Course Materials will be given.

## DAY WISE COURSE OUTLINE:

## <u>Day 1</u>

- Gas properties:
  - Real gas behavior equations of state
  - Phase behavior of different types of gas
  - Flash calculations
  - Classification of gas reservoirs,
  - Gas condensate sampling
  - Understanding laboratory reports
- Reservoir Gas Flow
  - Flow Regime Characteristics
    - Steady-State Flow
    - Unsteady-State Flow
    - Pseudosteady-State Flow
  - Flow Equations
- Steady-State Flow
- Pseudosteady-State Flow
- Unsteady-State Flow
- Noncircular Reservoirs

## <u>Day 2</u>

- *Reserve calculations:* 
  - P/Z plots,
  - Energy plots,
  - Water influx,
  - Abnormal pressure effects;
  - Diagnostic testing based on production data
- Gas Reservoir Performance:
  - Gas well testing
- Flow after flow test,
- o Isochronal test,

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• Modified Isochronal Test.

- Stabilized inflow performance;
  - Turbulence and skin effects;
  - Perforation effects;
  - Tight well analysis;
  - Horizontal wells;
  - Hydraulically fractured wells
- Prediction of future performance and ultimate recovery:
  - Decline curves,
  - Coupled material balance and deliverability techniques,
  - Reservoir simulation,
  - Gas well spacing and infill drilling

### <u>Day3</u>

- Field operations problems:
- Pressure-Cumulative Production Plots
  - p/Z versus Gp Plots
  - Energy Plots
  - Rate Versus Time Plots
- Hydrate Formation
  - Causes, Occurrence, and Prediction
  - Hydrate Formation in the Flow String and Surface Lines
  - Hydrate Formation in Flow Provers, Orifices, and Back-Pressure Regulators
  - Hydrate control
- Corrosion control with inhibitors
  - The Short Batch Method of Application
  - The Tubing Displacement Method
  - Methods of Inhibitor Application Using Nitrogen Gas
  - Method of Continuous Treatment with Inhibitors
  - Formation Squeeze
- Sulfur Deposition
- Definition of reservoir management: an integrated, interdisciplinary team effort
- Goal setting, planning, implementing, monitoring, and evaluating reservoir performance
- Field development and field operating plans to optimize profitability

### <u>Day 4</u>

- Efficient monitoring of reservoir performance
- Minimizing drilling of unnecessary wells
- Wellbore and surface systems
- Well testing and automated production systems
- Economic impact of operating plans

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o Identifying and acquiring critical data, data acquisition, and analysis

#### <u>Day 5</u>

- Maximizing economic recovery and minimizing capital investment, risk and operating expenses
- Timing of field implementation of reservoir management plan
- Case histories and analysis
- Importance of reservoir characterization and drilling and operating plans
- Primary recovery, pressure maintenance, and secondary and tertiary recovery
- Responsibilities for team members

<u>Case Studies, Role Plays, Videos, Discussions, Last Day Review & Assessments will be carried</u> <u>out.</u>

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