

# 1 Week Online Training On Advanced Reservoir Economics: Data Analytics, Dashboarding, and Economic Interpretation



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## INTRODUCTION

- Welcome to the Advanced Reservoir Economics training program! This intensive course will immerse you in the world of reservoir economics, equipping you with the knowledge and skills to make informed decisions about the economic viability of reservoirs. You will gain a comprehensive understanding of reservoir economics principles and their practical applications.
- Our hands-on approach will provide you with the opportunity to perform economic calculations, construct financial models, and analyze key economic indicators using Excel.

## DESCRIPTION

This 7-day program explores reservoir economics, equipping participants with the knowledge and skills to assess the economic viability of reservoirs. Participants will gain practical expertise in leveraging Excel for data analytics, dashboarding, and interpreting economic data. The program features hands-on exercises, enabling attendees to make data-driven decisions based on key economic indicators.

## OBJECTIVES

By the end of this training program, participants will be able to:

- Assess the economic viability of reservoirs.
- Understand key economic principles and their application to reservoir management.
- Utilize advanced data analytics and dashboarding techniques.
- Perform economic calculations and construct financial models.
- Evaluate and manage risk and uncertainty using various techniques.
- Forecast gas material balance, production decline curves, and inflow performance relations.
- Optimize reservoir management strategies to enhance efficiency and drive better economic outcomes.



## Course Benefits:

- Enhanced Decision-Making Skills
- Practical Expertise in Data Analytics
- Comprehensive Understanding of Reservoir Economics
- Improved Financial Analysis Capabilities
- Risk and Uncertainty Management
- Forecasting and Performance Evaluation
- Networking Opportunities

## Who Should Attend:

This program is ideal for professionals in the oil and gas industry who are involved in, or aspire to be involved in, the economic evaluation and decision-making processes related to reservoir management. The course is suitable for individuals from various disciplines, including:

- Reservoir Engineers
- Petroleum Engineers
- Chemical Engineers
- Geologists
- Project Managers
- Financial Analysts
- Data Analysts
- Energy Economists





## **AGENDA**

- This comprehensive seven-day program offers an in-depth exploration of reservoir economics, a critical component of the oil and gas industry. The course is designed to equip participants with the knowledge and skills needed to assess the economic viability of reservoirs and make well-informed decisions regarding exploration, development, and production activities.
- Participants will gain an extensive understanding of reservoir economics principles and practical expertise in leveraging Excel for data analytics, dashboarding, and interpreting economic data. The program features hands-on exercises that enable attendees to perform a wide range of economic calculations, construct financial models, and make data-driven decisions based on key economic indicators.
- By the end of this immersive program, participants will be proficient in using advanced data analytics tools and techniques, allowing them to effectively analyze and interpret reservoir economic data. This expertise will empower them to optimize reservoir management strategies, enhance operational efficiency, and drive better economic outcomes in their projects.

## **COURSE SCHEDULE:**

### **Day 1: Introduction to Reservoir Economics**

- Productivity Index
- Payback Period
- Explicit and Implicit Costs
- Relationship Between Average and Marginal Cost
- Opportunity Cost Estimation

### **Day 2: Economic Analysis Techniques**

- Elasticity of Price and Demand
- Discounted Cash Flow Analysis
- Net Present Value
- Internal Rate of Return

## **Day 3: Data Analytics and Scenario Management**

- Sensitivity Analysis
- Break-Even Analysis
- Goal Seek
- Data Table
- Scenario Manager

## **Day 4: Forecasting and Dashboarding Methods**

- Gas Material Balance Forecast
- P/z Method
- Bg Method
- Pressure Build-Up Forecast
- Deconvolution

## **Day 5: Risk Assessment and Simulation**

- Risk and Uncertainty Assessment
- Decision Making through Monte Carlo Simulation
- Forecasting Material Balance Estimations

## **Day 6: Performance and Flow Estimation**

- Inflow Performance Relation
- Estimation for Economic Stabilized Flow
- Back Pressure Test
- Estimation of AOF

## **Day 7: Decline Curve Analysis and Economic Limits**

- Production Decline Curve Analysis (DCA) Types
- Prognostication of Reserves through DCA
- Initial Decline Rate ( $D_i$ )
- Iteration of B as DCA Exponent
- Economic Limit Estimation