

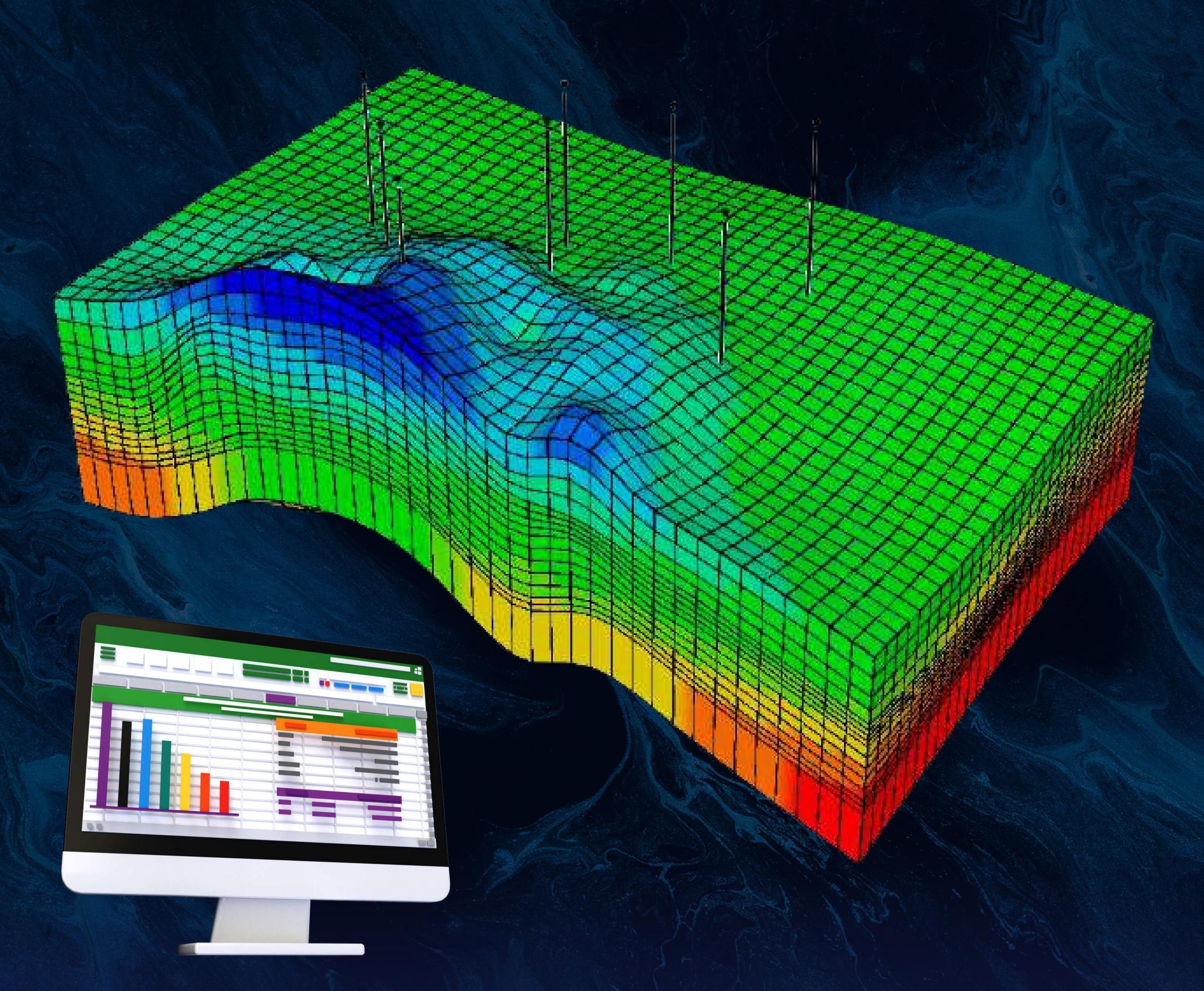








# 8 WEEKS LONG PRACTICAL TRAINING ON ADVANCED RESERVOIR ENGINEERING USING MS-EXCEL



















#### INTRODUCTION:

Welcome to our comprehensive 8-week online practical training on reservoir engineering utilizing MS Excel.

Designed to equip professionals with practical skills and knowledge essential for success in the field, this training offers a dynamic learning experience tailored to meet the demands of modern reservoir engineering.

#### BENEFITS OF JOINING:

- Practical Learning Experience
- Flexibility and Convenience
- Expert Guidance
- Enhanced Career Prospects
- Networking Opportunities

#### WHY TO JOIN?

- Unlock Your Potential
- Practical Application
- Cost-Effective Learning
- **Continuous Support**
- Future-Proof Your Career















#### WEEK-1 INTRODUCTION TO RESERVOIR ENGINEERING

#### Overview of Reservoir Engineering:

Definition, importance, and role in the oil and gas industry.

#### Types of Reservoirs:

Understanding different reservoir types and their characteristics.

#### Reservoir Properties:

Introduction to porosity, permeability, saturation, and their significance.

#### Phase Behaviour:

Review of hydrocarbon phases and phase diagrams.

### WEEK-2

#### RESERVOIR ROCK PROPERTIES AND FLUID FLOW FUNDAMENTALS

#### **Rock Properties:**

Detailed discussion on porosity, permeability, and capillary pressure.

#### Fluid Flow in Porous Media:

Understanding Darcy's Law, pressure gradients, and fluid mobility.

#### Reservoir Rock Classification:

Examination of rock types and their impact on fluid flow.















### RESERVOIR FLUID PROPERTIES AND PVT ANALYSIS

#### Reservoir Fluids:

Properties of crude oil, natural gas, and water in reservoirs.

#### **PVT Analysis:**

Introduction to Pressure-Volume-Temperature (PVT) analysis and its importance in reservoir characterization.

#### **PVT Equations of State:**

Understanding the application of equations of state for fluid behaviour prediction.



### RESERVOIR DRIVE MECHANISMS AND RECOVERY METHODS

#### Reservoir Drive Mechanisms:

Study of natural, gas, and water drive mechanisms affecting hydrocarbon recovery.

#### Reservoir Performance:

Evaluating reservoir performance through production data analysis.

#### **Primary Recovery Methods:**

Introduction to natural depletion, water flooding, and gas injection methods.













#### **EOR Overview:**

Explanation of various Enhanced Oil Recovery techniques.

#### Thermal EOR:

In-depth discussion of steam injection and in-situ combustion processes.

#### **Chemical EOR:**

Understanding polymer, surfactant, and alkaline flooding methods.



### RESERVOIR SIMULATION AND NUMERICAL MODELLING

#### Reservoir Simulation:

Introduction to numerical modelling and its application in reservoir engineering.

#### Grid Design and Discretization:

Creating reservoir simulation grids for accurate representation.

#### **Numerical Solution Methods:**

Understanding finite difference and finite element methods.















### WELL TESTING AND PRESSURE TRANSIENT ANALYSIS

#### Well Testing Fundamentals:

Overview of well testing, pressure buildup, and drawdown tests.

#### Pressure Transient Analysis:

Analysing well test data to estimate reservoir properties.

#### **Pressure Transient Models:**

Application of various models for pressure transient analysis.

### WEEK-8

#### ADVANCED RESERVOIR ENGINEERING TOPICS

#### Reservoir Management:

Strategies for effective reservoir management and maximizing recovery.

#### **Reserves Estimation:**

Techniques for estimating reserves and resources.
Unconventional Reservoirs: Study of shale gas and tight oil reservoirs.

#### Reservoir Surveillance:

Introduction to monitoring and surveillance techniques.













#### WHY CHOOSE THIS TRAINING?

- This training provides a comprehensive introduction to reservoir engineering, leveraging the widespread tool of MS Excel to enhance understanding and application.
- Covering fundamental concepts such as reservoir properties, fluid behavior, drive mechanisms, and recovery methods, participants gain a solid foundation essential for a career in the oil and gas industry.
- Moreover, the inclusion of advanced topics like reservoir simulation and well testing equips interns with the breadth of knowledge needed to tackle real-world challenges.
- With hands-on exercises and guidance, this training offers a unique opportunity to develop hands-on skills that are directly transferable to the industry, making it an invaluable choice for aspiring reservoir engineers.





















#### DESIGNED IF YOU ARE?

- Petroleum Engineers
- Reservoir Engineers
- Geologists
- Geophysicists
- Chemical Engineers
- Petroleum Engineering Students and graduates
- Petroleum Research scholars
- Preparing for petroleum engineering competitive exams.
- Planning to do academic projects in reservoir engineering.













## BENEFITS FROM ATTENDING THE TRAINING?

Attending this training offers several key benefits. Firstly, participants gain a thorough understanding of reservoir engineering fundamentals, providing a solid foundation for a career in the oil and gas industry. Additionally, the practical application of MS Excel enhances proficiency in data analysis and modelling, essential skills in reservoir management. Moreover, exposure to advanced topics like reservoir simulation and pressure transient analysis equips attendees with specialized knowledge highly valued in the industry. Furthermore, interaction with experienced professionals and hands-on exercises fosters practical skills development, enhancing employability and career prospects. Overall, this training provides a comprehensive learning experience that combines theoretical knowledge with practical applications, offering attendees a competitive edge in the field of reservoir engineering.

Don't miss this opportunity to take your reservoir engineering skills to the next level. Join us for an enriching learning experience that combines practical insights, expert guidance, and unparalleled convenience. Register now and embark on a journey towards professional excellence in reservoir engineering.





