TRAINING TITLE

PRESSURE-VOLUME-TEMPERATURE (PVT) FUNDAMENTALS, MEASUREMENTS AND SYNTHESIS

Training Duration

5 days

Training Venue and Dates

DE385	**Pressure-Volume-Temperature (PVT) Fundamentals, Measurements and Synthesis**	**5**	**26-30 May 2025**	**$5,500**	**DUBAI, UAE**

In any of the 4 or 5-star hotels. The exact venue will be informed later.

Training Fees

- **$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch**

Training Certificate

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

TRAINING DESCRIPTION

This course provides a deep dive into the fundamentals of Pressure-Volume-Temperature (PVT) relationships and their significance in reservoir engineering and fluid behavior analysis. Participants will learn about the methods used to measure PVT properties, the importance of these measurements in reservoir management, and how to synthesize and interpret PVT data for practical applications in the petroleum industry.

TRAINING OBJECTIVES

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

- Understand the key concepts of Pressure-Volume-Temperature (PVT) relationships and their relevance to fluid behavior.
- Perform and interpret PVT measurements and laboratory data.
- Understand the process of synthesizing PVT data for reservoir simulation and modeling.
- Apply PVT data in making informed decisions related to reservoir management and production optimization.
- Identify and overcome common challenges in PVT data interpretation and analysis.

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WHO SHOULD ATTEND?

- Reservoir engineers and geologists
- Production engineers and technicians
- Petroleum engineers involved in reservoir characterization and management
- Students and professionals seeking to understand PVT data and its applications

TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work& Practical Exercises
- 20% Videos& General Discussions

COURSE PROGRAM:

Day 1: Introduction to PVT Fundamentals

- Overview of the PVT concept and its importance in the petroleum industry
- The relationship between pressure, volume, and temperature in fluid systems
- Types of fluids in reservoirs (oil, gas, and water) and their PVT properties
- Basic thermodynamics and equations of state relevant to PVT

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Day 2: PVT Laboratory Measurements

- Techniques for measuring PVT properties in the lab
- Measurement of bubble point, dew point, and formation volume factor
- Understanding oil and gas phase behavior in relation to PVT data
- Tools and equipment used in PVT laboratory testing

Day 3: Analyzing PVT Data

- Methods for interpreting and analyzing PVT data from laboratory experiments

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- The use of empirical correlations and equations of state for fluid modeling
- Understanding the role of temperature, pressure, and composition in fluid behavior
- Identifying errors and inconsistencies in PVT data

Day 4: Synthesis of PVT Data for Reservoir Modeling

- Integrating PVT data into reservoir simulation models
- Using PVT data for pressure-volume relationships and fluid flow predictions
- Role of PVT data in reservoir management, production forecasting, and enhanced oil recovery (EOR) techniques
- PVT data validation and calibration with real-field data

Day 5: Applications and Challenges in PVT Analysis

- Practical applications of PVT in reservoir engineering and production optimization
- Highlighting the role of PVT in addressing production challenges
- Common challenges in obtaining and interpreting PVT data
- Emerging trends and technologies in PVT measurement and analysis

NOTE:
Pre-& Post Tests will be conducted.
Case Studies, Group Exercises, Group Discussions, Last Day reviews, and assessments will be carried out.

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