LDI TRAINING
"Leading Edge Courses for Professionals" ™

An LDI Training Course

BASIC PETROLEUM ENGINEERING

by

Prof. Dr. Ing.- Ir. Bonar Tua Halomoan Marbun

INTRODUCTION

This course introduces to the participants the basic concepts and applications of petroleum engineering. Participants will learn how oil and gas are explored, drilled, and produced.

This course is useful to engineers and oilfield personnel who have no petroleum engineering background.

In this course, participants will learn:

- Petroleum geology and systems
- Exploration methods
- Rock properties
- Fluid properties
- Different types of petroleum reservoirs
- Reservoir drive mechanisms
- Reserve calculation
- Drilling rigs and equipment
- Drilling practices
- Well testing
- Well completion
- Artificial lifts
- Oil and gas processing and facilities

COURSE CONTENT

I. Petroleum Industry

- Petroleum Industry Overview
- Oil and Gas Business Characteristic
- Exploration activity
- Production activity

II. Basic Petroleum Geology and Exploration

- Geological Mapping
- Geophysics Exploration
- Structure and Stratigraphy Trap

III. Petroleum System

- Petroleum Geologists Activity
  - Exploration Geologist
  - Production Geologist

IV. Reservoir Engineering

- Physical Rock and Fluid Properties
- Physical Rock Properties
  - Porosity
  - Saturation
  - Permeability
  - Wettability
- Fluid Properties
  - Density and API Gravity
  - Viscosity
  - Pour Point, Dew Point, Flash Point
- Type of Reservoirs (Gas, Condensate, Oil)
- Drive Mechanism and Performance Reservoir
- Reservoir Reserve (Volumetric, Material Balance, Decline Curve)

V. Drilling Engineering

- Drilling Rigs
- Drilling equipment
- Drilling Operations
- Well construction

VI. Production Engineering

- Well Testing
- Flowing Well
- Artificial Lift (Gas Lift, Sucker Rod Pump, ESP)
- Surface Facility
  - Flowline,
  - Pump and Compressor,

- Manifold,
- Separator,
- Gas Processing Plant,
- Tank Storage
- Production Operation

TARGET AUDIENCE

This is a useful course for professionals working in the oil and gas industry such as:

- Engineers with no petroleum engineering background
- New engineers
- Drilling supervisors
- Geologists and geophysicists
- Production supervisors
- Production technicians
- Anyone who wants to understand how oil and gas are explored, drilled, and produced.

ABOUT THE INSTRUCTOR

Prof. Dr.Ing.- Ir. Bonar Tua Halomoan Marbun

Associate Professor
Head of Petroleum Engineering Study Program Institut Teknologi Bandung

Education:
Petroleum Engineering Bachelor Degree Bandung Institute of Technology, Institute of Petroleum Engineering, Bandung, Indonesia.

Petroleum Engineering Diplom Ingenieur Degree Clausthal University of Technology, Institute of Petroleum Engineering, Clausthal-Zellerfeld, Germany.

Dr.-Ingenieur in the field of Material Engineering and Science Clausthal University of Technology, Institute of Non-Metallic Materials, Clausthal-Zellerfeld, Germany.

Professional Experience
Member of Oil and Gas Independent Team Safety Control, General Directory of Oil and Gas, Ministry of Energy and Mineral Resources of Republic of Indonesia

Head of Petroleum Engineering Study Program, Institut Teknologi Bandung

He is currently holding the position of a Senior Trainer of LDI Training and he certified to conduct its courses.

Training Confirmation

LDI Training will provide a Confirmation Letter after we receive registration according to the required quota.

For course registration and more information please email to

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