

**Training Title**

**OIL PRODUCTION & PROCESSING FACILITIES**

**Duration**

5 days

**Training Venue and Dates**

REF PE063	Oil Production & Processing Facilities	5	05 – 09 January, 2020	\$4,000	Dubai, UAE
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In any of 5 star hotel. Exact venue will be informed later.

**Training Fees**

- 4,000 US\$ per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Buffet Lunch.

**Training Certificate**

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

Language: English

**TRAINING OVERVIEW**

**TRAINING DESCRIPTION**

With 70% of world oil assets in the mature phase, and world energy demand expected to increase at an annual rate of 1- 2% over the next 15 years. Reaching an annual demand of 107 million barrels per day by 2020, the need for effective Production Operations to meet this demand is evident.

This workshop covers the basic concepts and techniques necessary to design, specify and manage oil field surface production facilities. It provides a clear understanding of the equipment and processes used in common separation and oil and water treating systems as well as the selection of piping and pumping systems. The gathering, separation and final treatment systems for crude oil, before transport to refinery are discussed. The concepts of export quality crude, field and fiscal measurements error is explained. Hydrocarbon reconciliation and allocation of produced fluids to the contributing reservoirs are explained. Exercises are used to cement the learning of the various topics treated.

This workshop will enable participant to develop a “feel” for the important parameters of designing and operating a production facility. The participant will understand the

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uncertainties and assumptions inherent in designing and using the equipment in these systems and the limitations, advantages and disadvantages associated with their use.

As some of workshop participants may have no background in production facility design other than what they have learned in the introductory petroleum engineering workshops, the workshop will start with an overview explaining the goals of the facility with pictures of the equipment. Then the instructor will discuss how the equipment is put together into a process system before explaining process calculations and equipment designing procedures.

The instructor will assign a project at the start of the workshop and have the participants take it another step forward as each day is completed. As there are many correct answers in facility process and equipment design, no two projects will be identical, but the participant should be able to defend his/her selection in an oral presentation at the last day of the workshop

### TRAINING OBJECTIVES

You will learn how to:

- Apply physical and thermodynamic property correlations and principles to the design and evaluation of oil production and processing facilities.
- Evaluate processing configurations for different applications.
- Recognize and develop solutions to operating problems in oil production facilities.

Solution gas handling processes and equipment will be discussed as well, though at a relatively high level. In addition to the engineering aspects of oil production facilities, practical operating problems will also be covered including emulsion treatment, sand handling, dealing with wax and asphalt ness, etc

### WHO SHOULD ATTEND?

Newly engaged Production Engineers and Petroleum Engineers. Technical and operations staff from other disciplines, which require a cross-training to or a basic understanding of surface production operations

### 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 motivate everybody 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.

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Very useful Course Materials will be given.

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

**DAILY OUTLINE**

- Overview of upstream oil and gas production operations
- Fluid properties & phase behavior
- Overview of artificial lift
- Processing configurations (example PFD's)
- Phase separation of gas, oil, and water
- Emulsions
- Sand, wax, & asphalt ness
- Oil treating
- Field desalting
- Crude stabilization & sweetening
- Crude oil storage & vapor recovery
- Measurement of crude oil
- Transportation of crude oil
- Produced water treating
- Water injection systems
- Overview of solution gas processing
  - Compressors
  - Sweetening
  - Dehydration
  - NGL recovery
  - Relief & flare systems

**NOTE:**

**Pre & Post Tests will be conducted**  
**Case Studies, Group Exercises, Group Discussions, Last Day Review & Assessments will be carried out.**

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