

**Training Title:**

**SUBSURFACE PRODUCTION OPERATIONS**

**Training Venue and Dates**

REF	Subsurface Production Operations		31 May - 4 June		
OP021		5	2020	\$4,500	Dubai, UAE

In any of the 5 star hotel. Exact venue will be informed soon.

**Training Fees**

- 4,500 US\$ per participant for Public Training including Course Materials/Handouts, Tea/Coffee, Refreshments & International Buffet Lunch.

**Training Certificate**

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

**TRAINING DESCRIPTION**

This course covers the production subsurface operations. It provides information and concentrate on the proper selection, operation and maintenance of subsurface operation. The course gives structure geology review and covers rock properties, fluid properties and well analysis tools

**GOAL**

To enhance the participants' knowledge, skills, and attitudes necessary to understand production subsurface operations

**TRAINING OBJECTIVES**

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

- To improve understanding and awareness of rocky & fluid properties and well analysis tools.
- Be familiar with geology structure.
- Be familiar with rock properties.
- Understand fluid properties.
- Understand and employ well analysis tools
- To improve understanding and awareness of rocky & fluid properties and well analysis tools.
- Subsurface production operations
- Inflow and outflow performances completion systems & tubing selection, design & installation
- Perforation methods, formation damage , matrix acidizing & hydraulic fracturing

DMCT/OL/9/18(Rev3Dt:23/9/18)

- Well production problems such as toxic material production, inorganic scale formation, corrosion etc
- Artificial lift selection, ESP systems selections & performance calculations & design gas lift systems.
- Hydraulic pumping oil wells, progress cavity pumping design gas lift systems & evaluation & installation of downhole plunger equipment well head & plunger surface equipment.

### WHO SHOULD ATTEND?

For all engineers working in oil and gas fields: Reservoir Engineers, Production Technology Engineers, Production Operation Engineers, and Production Managers

### 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. The delegates will also be encouraged to raise their own questions and to share in the development of the right answers using their own analysis and experiences.

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

### COURSE OUTLINE

#### 1<sup>st</sup> Day

- Introduction.
- Structure geology review.
  - Structure.
  - Faulting.
  - Types & formation of structure.
  - Rock properties
  - Porosity and permeability
- Inflow & out flow performance relationship.
- Drive mechanism types :
  - Water drive, gas cap & gas dissolved.

#### 2<sup>nd</sup> Day

- ❖ Well completion types

DMCT/OL/9/18(Rev3Dt:23/9/18)

- Casing & tubing types
- Completion equipment and design practices
- Packers types and applications
- Down hole completion
- Seating nipples
- Sliding sleeves
- Blast joints and flow couplings
- Subsurface safety valve (SSSVS)

### 3<sup>rd</sup> Day

#### Perforations:

- Under balance and over balance
- Stimulations
- Hydraulic fracturing
- Equations and calculations
- Fracturing fluids and additives
- Water base and oil base fluid
- Applications
- Oil well performance curves.
- Gas well performance curves.
- Injection well performance curves.

### 4<sup>th</sup> Day

#### Production problems and its solutions

- Corrosion , paraffin , foams
- Asphaltenic, scales.....
- Inhibitors avoiding this problems
- Artificial lift methods
- Objectives
- Decreasing BHP and increase rate
- Popular lift types
- Choice of artificial lift

### 5<sup>th</sup> Day

- Gas lift advantages and disadvantages
- Gas lift valves applications
- Beam pumping
- Description surface beam
- Down hole pump chamber
- Up stroke and down stroke

DMCT/OL/9/18(Rev3Dt:23/9/18)

- Electrical submersible pumps ( ESP)
- Surface and subsurface equipments
- Design electrical motor and multistage pumps
- Advantages and disadvantages

- ❖ Progressive cavity pump (PCP)  
Heavy oil using  
Descriptions and applications

- ❖ Hydraulic jet pump  
Descriptions and applications

**Note:**

**Pre & Post Tests will be conducted**

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

[www.definettraining.com](http://www.definettraining.com)

DMCT/OL/9/18(Rev3Dt:23/9/18)

P.O BOX 45304  
ABU DHABI, U.A.E

T +971 2 6264455  
F +971 2 6275344

[www.definettraining.com](http://www.definettraining.com)