

(5) Production Optimization of an Oil Reservoir

WHO SHOULD ATTEND

- Engineers (well completion engineer, production engineers, reservoir engineer and field engineer), and well-site geologist, and other staffs from an operating and/or service and/or consultant and/or engineering company involved in petroleum production operation process.
- Engineers and technical personnel involving with appraisal or field development project, and/or reservoir management team intending to enhance their technical skills and level of confidence in decision making by identifying well problems issues, causes of production anomalies; various operational constraints etc.
- Engineers from an operating and/or service and/or consultant and/or engineering company requires improving their technical skills with high level of confidence to adapt appropriate technology to optimize the production performance and better reservoir management.
- Surface facility engineers from an operating and/or service and/or consultant and/or engineering company getting necessary knowledge to design or operate the equipments and facilities.
- Technical, project and commercial managers, staff responsible in the production development, evaluation and field operation for oil and gas facilities operation

COURSE OBJECTIVES

- Well inflow performance and its impact on processing facilities
- About oil, gas, and water compositions and properties needed for equipment selection and sizing
- How to select and evaluate processes and equipment used to meet sales or disposal specifications
- How to apply physical and thermodynamic property correlations and principles to the design and evaluation of oil production and processing facilities
- How to perform equipment sizing calculations for major production facility separation equipment
- How to evaluate processing configurations for different applications
- How to recognize and develop solutions to operating problems in oil/water processing facilities

CONTENT

Overview of upstream oil and gas production operations; Fluid properties and phase behaviour; Overview of artificial lift; Processing configurations; Phase separation of gas, oil, and water; Emulsions; Sand, wax, and asphaltenes; Oil treating; Field desalting; Crude stabilization and sweetening; Crude oil storage and vapour recovery; Measurement and transportation of crude oil; Produced water treating; Compressors; Water injection systems; Relief and flare systems; Overview of solution gas processing (Sweetening, Dehydration, NGL Recovery)

INTENDED FOR

The emphasis of this course is on production optimization – from the reservoir to the wellhead. Both onshore and offshore facilities will be discussed. 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 asphaltenes, etc. The course covers onshore and offshore production, their technical components and systems will be described together with examples. Current safety and environmental issues will also be addressed. Case studies are presented throughout the course to provide the participants with a full view of the total field development and optimization activity.