



Interpretation of Logs and Their Uses in Hydrocarbon Evaluation

تفسير المجسات واستخدامها لتقييم الاحتمالات النفطية

PR1

Objectives : Develop participants knowledge , theoretically and practically in logging application to evaluate the oil reserves

Who Should Attend

- Senior petroleum engineer .
- Senior drilling engineer.
- Tool-pushers
- Drillers

Contents

- Type of logs and uses .
- Rocks and liquids properties .
- Determination of porosity from different logs .
- Basic equations in logs interpretation .
- Logs interpretation in barefoot wells
- Logs interpretation in cased wells .
- Perforation as production log .
- Cement caliper bond log interpretation (CCBL) .
- Formation thickness measuring log .
- Production logs .
- Calculation of water saturation in hydrocarbon reservoirs .
- Integration of geological , geophysical and reservoir data .
- Course evaluation .

Duration

6 days

Venue

Baghdad , Amman , Beirut , Cairo, Istanbul, or any place suitable for client



Calculation of Oil and Gas Reserves (advanced)

حساب المخزون النفطي والغازي (متقدمة)

PR2

Objectives :The participants will get accounted with liquids properties and its calculations and to reservoir studies . The participants also will be taught how to evaluate precisely the oil and gas reserves .

Who Should Attend

- petroleum engineer .
- Reservoir Engineers
- Geologists

Contents

- The objective of gas reserves calculation
- Methods of oil gas reserves calculation .
- Volumetric method / practical example .
- Simulation method
- Static method
- Usage of oil and gas production data .
- Oil and gas recovery factors

Duration

12 days

Venue

Baghdad , Amman , Beirut , Cairo, Istanbul, or any place suitable for client .



Enhanced oil recovery (EOR)

استخلاص النفط المدعم

PR3

Objectives :To develop participants knowledge and skills with methods and new developments applied to enhance oil recovery .

Who Should Attend

- Reservoir Engineers
- petroleum engineer
- Geologists .

Contents

- Basics of geology .
- Physical properties of rocks .
- Liquids properties (oil , gas and water) .
- Methods of enhancing oil recovery .
- Water injection technology
- Miscible gas drive
- Co₂ injection .
- Thermal methods .
- Chemical methods
- Technological development / selection of suitable method .
- Economics of enhance oil recovery methods / application , forecasting , design of suitable method , evaluation , economical evaluation , reservoir simulation , evaluation of reservoir performance , injection wells distribution .

Duration

6 days

Venue

Baghdad , Amman , Beirut , Cairo , Istanbul , or any place suitable for client .



Methods of Carbonate Reservoirs Stimulation

اساليب انعاش المكامن الكلسية

PR4

Objectives : Acquainting the participants with different methods used in stimulation of carbonate reservoirs of complex characteristics .

Who Should Attend

- Reservoir Engineers
- petroleum engineer .
- Geologists .
- Drilling Engine .

Contents

- Review different carbonate rocks .
- Permeability damage in oil wells
- Studying the characteristics of damaged area
- Type of perforation operation used .
- Acidization of wells .
- Acid concentration selection and additives .
- Steps of stimulation program .
- Production tests program for oil a gas wells .
- Interpretation of production tests .
- Diverting techniques .
- Practical examples .

Duration

6 days

Venue

Baghdad , Amman , Beirut , Cairo, Istanbul, or any place suitable for client .



Reservoir Simulation

تمثيل المكامن

PR5

Objectives

To enhance knowledge and skills of participants in applying the specialized software in the reservoir studies .

Who Should Attend

- Reservoir Engineers
- petroleum engineer .
- Geologists .

Contents

- Reservoir Simulation
- Mathematical Modeling of oil reservoir
- Fundamentals flow equation and discretisation
- Solution of the simulation equations
- IMPES method
- SS method
- Dimensional of the models
- History matching
- Grid construction
- Initialization
- Aquifer models
- Treatment of reservoir simulation
- Calculation of average pressure
- Determination Of OWC

Duration

6 days

Venue

Baghdad , Amman , Beirut , Cairo, Istanbul, or any place suitable for client .



Hydrocarbon Resource Assessment

تقييم الثروات الهيدروكربونية

PR6

Objectives : To develop participants knowledge about applying the methods used in hydrocarbon reserve assessment and software relating to that .

Who Should Attend

- petroleum engineer .
- Geologists .

Contents

- Resource Estimation Methods
- Reservoir simulation
- Quantifying risk and uncertainty
- Deterministic and probabilities assessments
- Synchronizing volume and value .
- Managing the resource .
- Management process .
- Reservoir management principles

Duration

6 days

Venue

Baghdad , Amman , Beirut , Cairo, Istanbul, or any place suitable for client .



Reservoir Management

ادارة المكامن النفطية

PR7

Objectives : To enhance knowledge of participants theoretically and practically in reservoir management

Who Should Attend

- Reservoir Engineers
- Senior petroleum Engineers
- Production Engineers

Contents

- Definition of reservoir management
- Planning , implementing , monitoring and evaluation reservoir performance .
- Field development and field operation plan to optimize profitability .
- Efficient monitoring of reservoir performance .
- Minimizing drilling of unnecessary wells .
- Well bore and surface systems.
- Well testing and production system
- Maximizing economic recovery
- Minimizing capital investment .
- Timing of field implementation of reservoir management plan .
- Case histories and analysis .
- Importance of reservoir characterization and drilling and operation plans .
- Primary recovery , pressure maintenance and secondary and tertiary recovery .
- Responsibilities for team members .

Duration

6 days

Venue

Baghdad , Amman , Beirut , Cairo, Istanbul, or any place suitable for client .



Gas Reservoir Engineering

هندسة مكامن الغاز

PR8

Objectives : To give participants better understanding about gas reservoir behavior to analyze the future performance of these reservoirs .

Who Should Attend

- Geologists
- Reservoir engineers .
- Production engineers .
- Technicians working on as production with minimum of 3 years experience

Contents

- Calculation of gas in place by volumetric method
- Calculation of gas in – place by material balance method .
- Calculation of gas reserves .
- Gas production by water drive .
- Gas production by gas solution drive .
- Productivity test of gas wells .
- Developing of gas reservoirs .
- The influence of gas production rate on optimum recovery .

Duration

6 days

Venue

Baghdad , Amman , Beirut , Cairo, Istanbul, or any place suitable for client .



Water Flood Design , Management , Monitoring

تصميم وادارة ومراقبة حقن الماء

PR9

Objective: To acquaint participants with water flood process optimization minimizing oil recovery .

Who should attend

Reservoir , production , facilities , research and development , and operation engineers who are involved with some aspects of a new or existing water flood project ; geoscientists and professionals who want to get a better feel for the entire process of planning , development , management , and recovery optimization of water flood project

Contents :

- Introduction to water flood .
- Reservoir engineering fundamentals .
- Analytical models for water flooding analysis .
- Well completion for water flooding .
- Water flood surveillance .
- Overview of water flood facilities .

Duration

6 days

Venue

Baghdad , Amman , Beirut , Cairo, Istanbul, or any place suitable for client .



Subsurface Mapping

خرائط الطبقات التحتية

PR10

Objective : To acquaint participants with the technique of generating subsurface a\mapping .

Who Should attend

Geologists,Petroleum engineers and geophysicists involved with the development of oil and gas reservoirs

Contents:

- Introduction hydrocarbon basins/plays
- Seismic and reservoir property data
- Structural styles,maps and sections (different types of maps)
- Merging Seismic and Geologic data
- Cross section construction
- Volumetric calculations
- Faults,fault seals and rift basins
- Structural quality-control techniques

• **Duration**

6 days

Venue

Baghdad , Amman , Beirut , Cairo, Istanbul, or any place suitable for client .



NMR Petrophysics using Software
الرنين النووي المغناطيسي في فيزياء النفط
PR11

Objective : The utilization of NMR petrophysics for the interpretation of
(porosity ,permeability ,capillarity ...etc)

Who Should attend

Petrophysicists, Geoscientists ,Mixed levels of reservoir .

Contents:

- Introduction to reservoir petrophysics/capillarity for refreshment.
- Physics of NMR
- Basic NMR petrophysics and fluid properties
- NMR logging tools (comparison)
- NMR data acquisition and job planning
- NMR data evaluation & interpretation
 - ✓ Pore size distribution.
 - ✓ Fluids saturation & distribution
 - ✓ Reservoir fluid characterizations
 - ✓ Density magnetic resonance porosity method (DMRP)
 - ✓ Permeability models
 - ✓ Reservoir capillarity from NMR
 - ✓ Core data integration

Duration

6 days

Venue

Baghdad , Amman , Beirut , Cairo, Istanbul, or any place suitable for client .



Clastic Reservoirs Geology

جيولوجيا المكامن الفتاتية (الكلاستية)

PR12

Objective : To provide understanding of the geometry and hydrocarbon potential of clastic depositional system .

Who Should attend

Geologists ,geophysicists

,reservoir engineers, reservoir simulation engineers; other asset team members

Contents:

- Introduction to sandstone reservoirs
- Fundamentals of sedimentology
- Genetic stratigraphic analysis
- Depositional architecture
- Fluvial and Deltaic Depositional Environments
- Shallow marine environments
- Deep marine environments
- Analysis of clastic depositional systems
- Lateral continuity and quality of seals
- Sedimentary controls on porosity, permeability, saturation

Duration

6 days

Venue

Baghdad , Amman , Beirut , Cairo, Istanbul, or any place suitable for client



Hydraulic Fracturing

التشقق الهيدروليكي

PR13

Objective:

To introduce the fracturing concepts and practices in reservoir engineering

Who Should attend

Production and completion engineers, field operation staff with basic to moderate knowledge or experience in designing, pumping or evaluating hydraulic fracture treatments

Contents:

- Introduction to the fracturing process and mechanics
- Practical fracture design
- Pre-frac injection test analysis
- Fracture closure
- Fracture monitoring and fracture measurement
- Fluid leak-off
- Fracturing fluid and its additives
- Strengths and limitations of fracturing applications
- Acid fracturing VS. proppant fracturing
- Frac packs
- Water-fracs
- Fracturing in horizontal wells
- QA/QC of fracturing treatments
- Post-frac treatments
- Post-frac evaluation
- Re-fracturing considerations

Duration

6 days

Venue

Baghdad , Amman , Beirut , Cairo, Istanbul, or any place suitable for client .