PRODUCTION ENHANCEMENT & WELL INTERVENTION

BASIC SLICKLINE

Réf : OAG_BASL_11

English training ressources

5 Days

The Basic Slickline course introduces the techniques and technologies involved in working with slickline. The attendee will learn the function and use of a wide range of slickline tools and sub-surface flow control devices.

Prerequisites

Participants should have some oil and gas experience

Program

Day 1

Welcome and Introduction to Slick line Slick line Safety
Basic Course

Day 2

- Pressure Awareness L1
- PCE
- Slick line Tool string
- Downhole Tools
- Unit & Power Pack

Day 3

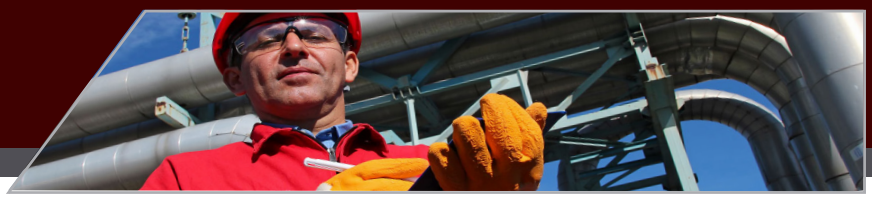
- Rig up/Rig Down Theory
- Pulling tools
- Downhole memories gauges
- Rig up/Rig Down Practical

Day 4

- Wire/Testing/Spooling The Well "Completion" Workshop
- Practical Flange & Christmas tree WHM Theory & Practical

Day 5

- HLanding Nipples & Plugs
- Fishing
- Workshop “ practical”
- Course Review
- Exam



ADVANCED SLICKLINE TRAINING

Réf : OAG_AS_12

English training ressources

5 Days

This course will provide a full understanding of slickline operations and highlight the critical aspects of slickline and surface and sub-surface pressure control.
The course covers wireline jars and jarring operations, surface equipment, basic wireline tools, and applications specific to gas lift operations.

Prerequisites

Attendance should have completed the Slickline Basic course.

Program

Day 1

- Welcome & Introductions
- Nipples
- Plugs “Otis & Baker”
- Grease Injection
- Braided Cable PCE
- Braided Operation
- Swabbing

Day 2

- Fishing
- Overview
- Process
- Broken wire
- Lost Jar Scenarios
- Fishing Operation
- Broken Wire Calculation
- EX. Calculate TOW
- Tool string Configuration
- Tools to be used

Day 3

- Gas lift
- Introduction
- Principles of Gas Lift
- Unloading sequence
- KickoverTools
- Running Tools
- Pulling Tools
- Spacer Bars
- CamcoSPM
- MerlaSPM
- Latches
- 1” –1½” &Integral
- Penning Procedure
- Pulling Procedure
- KKT sequence

Day 4

- Pressure
- Calculation
- Workshop
- Remedial Equipment
- Introduction
- Perforating
- Otis A Perforator
- Tool preparation
- Operation
- Operating Precautions
- Collar Stop
- Junk Basket

Day 5

- Workshop
- Practical session

Surface well testing

Réf : OAG_SWT_13

Support de formation en français

7 jours

Objectifs

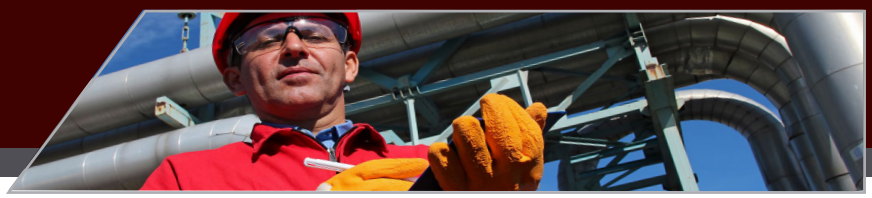
- Maitriser le processus de fonctionnement du séparateur
- Connaissance parfaite des équipements qui compose le séparateur horizontale et verticale

Public

- Les opérateurs, techniciens, superviseurs qui manipulent et supervise les séparateurs

Programme

- Installation de surface
- Tete de puits et manifold
- ESDV ,data header,piping,
- Chiksans et type de connection
- Les instruments de mesures des parameters suivants: la pression; temperature; debit Salinité ;BSW ;SG; PH
- Notion de base de calcul débit gas et liquide
- Leséparateur et sescorposants
- Les types de separateur ;avantage et inconvenient
- Notion sur separateur VX et domaine de son utilisation
- La vanne regulatrice de gaz et ses differents composants
- Processus de regulation de la pression de separation
- La vanne regulatrice d'huile et ses differents composants
- Processus de regulation de niveau
- La vanne regulatrice d'Eau et ses differents composants
- Processus de regulation de niveau
- Verification et test du séparateur
- Start up du séparateur
- La régularisation de niveau et pression du séparateur
- Le contrôle de parametres du separateur et puits
- Problemes et solution
- Exercice pratique



Production de surface et mesures

Réf : O&G_PSM_23

Support de formation en français

5 jours

Objectifs

Connaître les installations de surface, les processus de séparation et de stockage, et savoirs mesurer les déférentes paramètres (débit, niveau, pression..)

Public

Ce cours est bénéfique pour les opérateurs, techniciens, superviseurs, producteurs

Prérequis

Ce cours est destiné pour les personnes qui travaillent dans les installations de surface du puits

Programme

Jour 1
- Tête de puits et manifold

Jour 2
- Les accessoires de tête de puits et collecte

Jour 3
- Protection réseaux collecte contre la corrosion

Jour 4
- Traitement normal d'huile

Jour 5
- Mesures et contrôle des paramètres
- Problèmes et solutions

La completion du puits

Réf : OAG_CP_15

Support de formation en français

7 jours

Objectifs

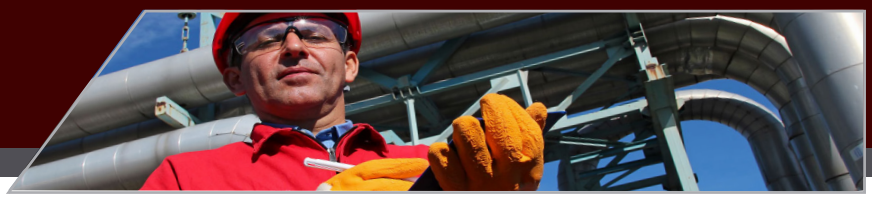
Connaitre comment équiper le puits de manière à faire monter les hydrocarbures trouvés dans le réservoir jusqu'en surface, en tenant compte des problèmes d'exploitation futurs (déplétion, production d'effluents indésirables, diminution des débits...).

Public

Les opérateurs, techniciens, superviseurs, producteurs débutant qui n'ont pas une connaissance approfondie

Programme

- Equipements des puits éruptifs
- La tête de puits et ses composants
- La colonne de production
- Packer et type
- Les accessoires et vannes de sécurité
- Siege; Storm choke; TRSSV, SSD, vanne de circulation ; olive de suspension
- La perforation avant et après descente complétion
- Les méthodes de complétion
- Mise en place de la complétion
- Ancrage Packer et descente complétion
- Mise du puits en sécurité
- Problèmes et solutions



DST le test en cours de forage

Réf : OAG_DST_16

Support de formation en français

7 jours

Objectifs

Maitriser les équipements utilisés pendant DST ainsi que les séquences de test et les résultats attendus

Public

Tous les producteurs et foreurs

Program

- Les notions de base de la productivité et les paramètres qui entre dans l'analyse du potentiel d'un puits.
- Les notions et typedes diagraphies
- Définition et objectifs de DST
- Installation de surface
- 1-tete de DST 2-ESD -3-data header 3-chocke manifold 4-separateur et ses composants 5-differents instruments de mesures
- Processus de séparation
- Processus de clean up
- Définition de la liaison couche trou
- Définition de well test de surface
- Définition équipement de DST
  Tige et drill collar de forage - Vanne de circulation inverse - Vanne de test - Équaliseur by pass -les coulisses - Les éléments de prélèvements des échantillons de fond et les paramètres de pression et de température du fond - sefty joint - packer
- Préparation opération DST
- Préparation opération installation de surface
- Définition de la liaison couche trou
- Déroulement de dst
- Descente train et ancrage packer
- First flow
- Second flow
- Fin test
- Désencrage et remontée train du DST
- Interprétation de résultats
- Problèmes scenarios et solutions -cas pratiques-

Les Séparateurs Classification, Sélection et Design

Réf : O&G_SCSD_29

Support de formation en français

5 jours

Objectifs

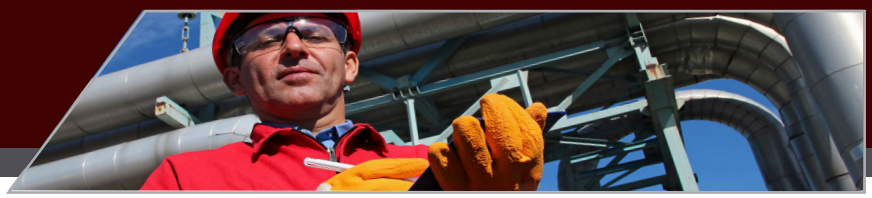
Permettre aux participants de connaitre:
1. Connaitre les buts et objectifs de la séparation
2. Le principe de la séparation
3. Les types de séparateurs
4. Dimensionnement des séparateurs
5. Constitution Générale des séparateurs

Public

Aux Ingenieurs,Techniciens, superviseurs Well tests, et Operateurs servicing.

Programme

- Introduction
- Buts et Objectifs de la séparation
- Principe de la séparation
- Les types de séparateurs
- Dimensionnement des séparateurs
- Constitution Générale des séparateurs



Workover

Réf : O&G_WO_24

Support de formation en français

5 jours

Objectifs

Connaître et maitriser les équipements utilisés pendant WORKOVER ainsi que les séquences de test et les résultats attendus.

Public

Ce cours est bénéfique pour les opérateurs, techniciens, superviseurs, producteurs

Prérequis

Ce cours est destiné pour les personnes qui travaillent dans Le forage/production ; opérateurs et techniciens.

Programme

Jour 1
- Les différentes interventions sur puits.

Jour 2
- Définition du workover et son domaine d'utilisation.

Jour 3
- Les Séquences du workover.
- L'instrumentalisation en workover.

Jour 4
- HSE en workover.

Jour 5
- Problèmes ; scenarios et solutions.

Coiled Tubing et ses applications

Réf : O&G_COT_25

Support de formation en français

5 jours

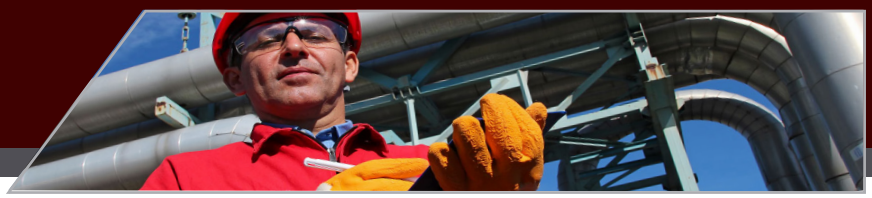
Objectifs

A l'issu de cette formation, l'apprenant sera en mesure de :

- Identifier les déférents équipements de surface et les équipements de CT
- Maitriser le calcule hydraulique avec le coiled tubing
- Distinguer entre les différentes techniques de stimulation
- Démontrer une connaissance des avantages de l'utilisation deCT.
- Différencier entre les opérations avec l'unité de CT et un petit RIGWO
- Démontrer une connaissance des avantages et inconvénients de CT VS WL et snubbing
- Connaitre les déférents outils de fonds
- Connaitre l'avantage de forage en slim hole avec le CT vs unrig
- Démontrer une connaissance des applications de CT.

Programme

- Introduction au Coiled Tubing
- CT Injector Head
- CT Reel
- Coiled Tubing Well Control Equipment
- CT Manufacturing & Limitations
- CT Downhole tool
- Calculs hydraulique de fond de puits
- Introduction au Applications de CT
- Coiled Tubing Fill clean-out
- Coiled Tubing Matrix Acidizing
- Coiled Tubing Logging.
- Coiled Tubing Cementing
- Coiled Tubing Cement Packer Repair
- Nitrogen Lifting avec Coiled Tubing
- Coiled Tubing Fishing Operations
- Les complétions avec Coiled Tubing
- Coiled Tubing drillingCoiled Tubing Fracturing



STIMULATION DES RESERVOIRS Fracturation & Acidification

Réf : O&G_SRFA_26

Support de formation en français

30 Heures

Objectifs

Ce cours traite les problèmes d'endommagement de formation rencontrées et les remèdes de utilisés pour les atténuer, l'origine et les types d'endommagement de la formation sont d'abord discutés. Les Techniques de stimulations utilisées pour éliminer les endommagements constitués principalement du traitement matriciel (acidification) et la fracturation hydraulique sont ensuite traitées.

Programme

- L'ENDOMMAGEMENT DE LA FORMATION
- LA STIMULATION – ACIDIFICATION et AUTRES TRAITEMENTS MATRICIELS
- LA STIMULATION – FRACTURATION HYDRAULIQUE

Diagraphie (Logging)

Réf : O&G_D_27

Support de formation en français

5 jours

Objectifs

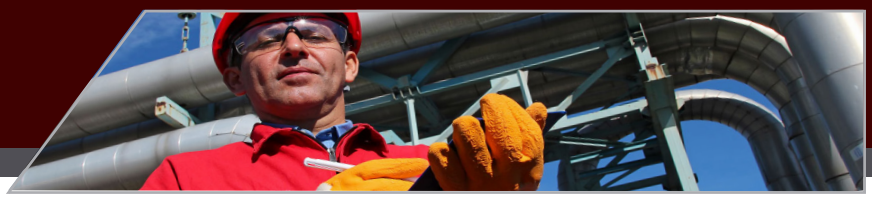
Permettre aux participants:
1. de connaitre les objectifs de la diagraphie.
2. De comprendre l'intérêt de la diagraphie et sa contribution dans le domaine pétrolier.
3. De connaitre les types de diagraphie

Public

Aux ingénieurs toutes spécialités, Data Engineer & Mud Logger, foreurs, Techniciens, opérateurs.

Programme

- Généralités
- But des Diagraphies
- Moyens Utilisés
- Diagraphies en Trou Ouvert (Open Hole)
- Principaux types de diagraphie
- Diagraphie instantanée
- Diagraphie différée
- Types de diagraphies
- Electrique
- Nucléaire
- Acoustique
- Diagraphie de production



Principe & Interprétations de Tests de Formation

Réf : O&G_PITF_28

Support de formation en français

5 jours

Objectifs

Permettre aux participants de connaitre:
1. De connaitre les Buts et objectifs des tests de formation.
2. Comment programmer et réaliser un design de test de formation.
3. De connaitre le principe des tests de formation.
4. De déterminer un Skin
5. De connaitre les types de tests de formation.
6. De connaitre les méthodes d'interprétations de test de formation

Public

Aux ingénieurs, well testing, foreurs & Techniciens.

Programme

- Objectifs et Principe d'un test de formation.
- Principes des programmes de tests de formation.
- Loi de Darcy et Skin Effect.
- Principales équations utilisées avec les unités pratiques sur chantier
- Méthodes d'interprétation
- Exemples.

ADVANCED PRODUCTION DATA ANALYSIS AND NODAL ANALYSIS

Réf : O&G_APDANA | English training ressources | **5 jours**

In this course, attendees will learn how to predict theoretical well production rates using well measurements and how to identify constraints that impact performance in the reservoir, completion, and wellbore system. The attendees will also learn how to analyze production data to find permeability, skin factor, and drainage area and to forecast future performance based on historical production trends and known reservoir properties.

Audiance

Reservoir and production engineers involved in improving field performance through Identification and remediation of underperforming wells.

Prerequisites

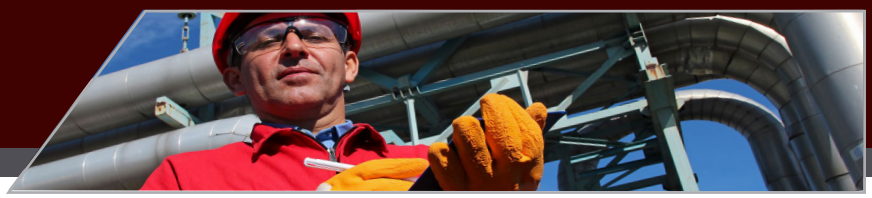
Solid understanding of steady state and pseudo steady-state forms of Darcy's law;
Basic understanding of well test analysis, including ability to identify the early and middle time regions on a log-log plot; Horner graph analysis.

Program

- Inflow performance in oil wells
- Transient inflow performance relationship curves
- Pressure drop across the completion
- Systems analysis graph
- Production data analysis
- Material balance for various reservoirs
- Transient versus steady-state flow
- Estimates of skin factor and permeability from transient flow
- Estimates of drainage area from pseudo steady-state flow

Course Materials

Hard copies of slides and course supporting materials, including; references and other useful documents.



Applied Reservoir Simulation

Réf : O&G_ARS

English training ressources

5 jours

This course provides a full understanding of the concepts and equations in reservoir simulation.

Audiance

Process, Reservoir, Petroleum and Drilling Engineers.

Prerequisites

Previous experience in process engineering or flow assurance issues, familiarity with computers and a basic understanding of chemistry, thermodynamics and general physics would be helpful.

Program

- What's reservoirsimulation
- Fundamental reservoir engineering concepts requirements for better under-standing of reservoirsimulation
- Fundamental mathematicalconcepts
- Fundamental equations for single phaseflow
- Finite difference approximation to linear flowequations
- Wellrepresentation
- Solution of linear differenceequations
- Numerical solution of single phase flowequations
- Multiphase flow simulation inreservoirs
- Practical aspects of reservoirsimulation
- Relationships between numerical reservoir simulation and reservoir engineering

Course Materials

Hard copies of slides and course supporting materials, including; references and other useful documents.

Continuous Gas Lift Design, Diagnosis And Optimization

Réf : O&G_CGLDDO

English training ressources

5 jours

Continuous Gas Lift is one of the most popular methods used around the world. It is considered as an extension of natural flow. The technique consists to inject gas at the deepest point possible inside the annulus with the objective to reduce liquid density and minimize the weight of the fluid column above the formation, increasing the flow rate. Because the system have few moving parts, it is considered a reliable and safe method. Continuous gas lift is usually more efficient and less expensive for wells producing at high flow rates.

Audiance

Production engineers, field supervisors, reservoir or related areas, responsible not only for surveillance and control of production operations from oil wells, but also for the design, performance and monitoring of gas lift installations.

Prerequisites

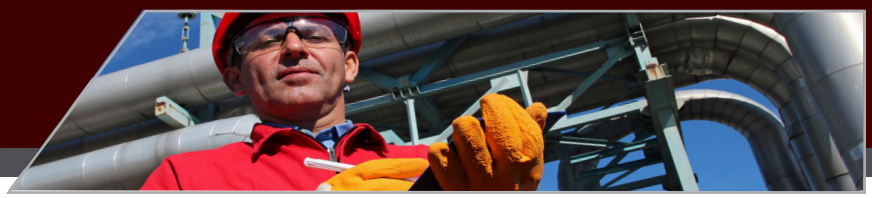
Knowledge of the basic principles of nodal analysis and basic computer skills are required.

Program

- Principle of Application
- Advantages and Disadvantages of the Method
- Well Performance and Multiphase Flow
- Description of the Gas Lift Surface and Downhole Equipment
- Principle of Operation
- Classification of Gas Lift Valves
- Opening and Closing Forces of Gas Lift Valves
- Valve Calibration in the Shop
- Determination of the Gas Lift Seat Size
- Visit to the Artificial Lift Inverurie Gas Lift Workshop
- What's new in the Gas Lift world (ISO and API standards)
- Temperature effect on unloading gas lift valves
- Preliminary Calculations
- Design Procedure
- Discharge Process

Course Materials

Hard copies of slides and course supporting materials, including; references and other useful documents.



Gathering System And Network

Réf : O&G_GSN

English training ressources

5 jours

The goal of this course is to provide participants with an integrated vision of the Oil and gas production during the life cycle of the asset. With this vision, along With knowledge of the properties and flow of fluids provided, participants will be Able to understand the behavior of fluids in the gathering system during its life Cycle. This 5-day course strongly emphasizes the calculation of fluid properties and Phase behavior from the reservoir to the gathering network. This knowledge will be Necessary for surface facility engineers designing and operating the equipment and Facilities. Specific topics that will be covered during this course include integrated Production systems, hydrocarbon properties, flow of fluid basic concepts, pressure Drop for gas or liquid, and flow pattern correlations for horizontal pipes.

Audiance

Surface facility design engineers, surface facility operations engineers, production Managers and field production operations managers.

Prerequisites

Awareness of surface facilities production system.

Program

- Production systems overview
- Basic concepts of fluid flow
- Single and multiphase flow
- Pipeline fundamentals
- Onshore, offshore, and subsea manifolds
- Water injection systems ERINGS IMMERSIVE LEARNINGMPETEANAGEMENT
- Gathering and distribution systems design criteria
- Backpressure, pressure drop, and erosion velocities criteria
- Erosion velocities calculations
- Network simulation
- Using PIPESIM to build network models
- Pipeline and gathering workshop simulation
- Using PIPESIM to simulate gathering network
- Company cases

Course Materials

Hard copies of slides and course supporting materials, including; references and other useful documents.

History Matching And Reservoir Optimization

Réf : O&G_HMRP

English training ressources

5 jours

Production data are incorporated into high-resolution reservoir models through conventional and fast flow simulation techniques such as streamline models. In this course, attendees will learn different history-matching workflows and their merits, including assisted and automatic history matching, in addition to exploring the many forms of production data, pressure transient test, tracer test, multiphase production history, and interpreted 4D seismic information. Field examples illustrate the advantages and limitations of these techniques.

Audiance

Practicing geoscientists and engineers, especially those involved in reservoirsimulation.

Prerequisites

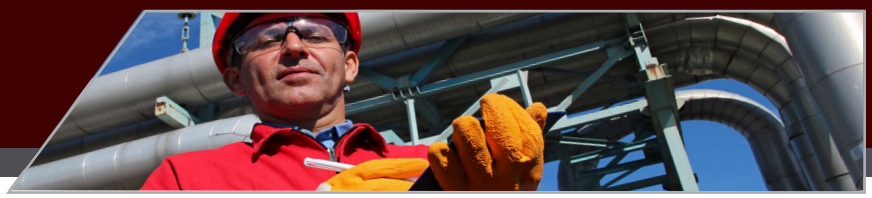
Knowledge of basic mathematics, petroleum geology, reservoir engineering, and petro physics, plus elemental software skills.

Program

- History matching: broad perspectives and current status
- History-matching workflows
- Production data integration: background and theory
- Flow simulation through geologic models: streamline approach
- Streamline-based production data integration
- Assisted history matching and inverse modeling with finite-difference models
- History matching: field applications
- Experimental design: background and applications.

Course Materials

Hard copies of slides and course supporting materials, including; references and other useful documents.



Introduction To Cased-Hole Evaluations

Réf : O&G_ICHE

English training ressources

5 jours

YOU WILL LEARN HOW TO:

- Determine adequacy of PNC capture vs. C/O logging methods for saturation calculation, especially through complicated well bores and in complex formations
- Calculate water and steam saturations from Pulsed Neutron Capture (PNC) Logs
- Correct petrophysical calculations for the influence of shaliness
- Distinguishgas/steamfromliquids
- Compute oil saturation directly from Carbon/Oxygen technique
- Locate water entry and judge zonal communication
- Judge where specialty methods, such as Log-Inject-Log to estimate remaining oil vs. residual oil saturation, pseudo-density, etc., may not work
- Makeappropriatetoolchoices
- Perform interpretation QC and plan logging jobs

Audiance

Geologists, formation evaluations specialists, completion, reservoir and production engineers, and managers who may be making technology- and tool-choice decisions.

Prerequisites

Knowledge of the basic principles of nodal analysis and basic computer skills are required.

Program

- Basics and application of nuclear logging in general (briefly) and cased-hole logging in particular
- Attributes of various modern dual-detector and emerging multi-detector cased-hole logging tools used in the industry
- Cased-hole application of pulsed neutron capture (PNC) methods in clean and shaly formations, carbon/oxygen logging in low or variable salinity conditions in water and steam floods where PNC methods do not work, and direct neutron (PNN) methods to Locate oil/water, gas/liquid, or steam/liquid contacts
- Compute water, oil and gas/steam saturation (in steam floods), and residual saturation using log-inject-log methods.
- Estimate pseudo-density and porosity (special cases)
- Make informed tool and measurements choices
- Makeoperationsdecisions.
- Application of above in open-hole completions
- Differences in saturation interpretation methods across vendors
- Oxygen activation to locate water entry
- Job planning and best practice parameters for successful monitoring.

PVT - Simulation For Gas Injection Enhanced Oil Recovery

Réf : O&G_PVT

English training ressources

5 jours

SCOPE OF TRAINING:

- eservoir fluid analysis provides key data to the petroleum engineer.
- Quality of the testing is important to ensure realistic values used in design.
- Sample quality is the first quality issue.

Program

PVT ANALYSIS

Provides data for field evaluation and design

- Reservoir calculations
- Well flow calculations
- Surface facilities
- Correlation between pressure and volume at reservoir temperature.
- Various physical constants in reservoir calculations; viscosity, density, compressibility.
- Effect of separator conditions on Bo & GOR. etc.
- Chemical composition of the volatile components.
- Sampling
- Equipment for PVT Analysis
- Main PVT Tests
- Summary of results provided by an oil sample PVT test.
- Example PVT Report.

Course Materials

Hard copies of slides and course supporting materials, including; references and other useful documents.