Datastat Research
Building Capacity in Training and Research

DATASTAT TRAINING IN

OFFICIAL COURSE PROSPECTUS

Center for Advanced Research & Professional Development

Nairobi Training Center • Global Virtual Academy • Corporate On-Site

OIL AND GAS

Asphaltene Deposition and Control Training Course

Comprehensive Course Syllabus, Practical Modules & Upcoming Schedules

PROGRAM SPECIFICATIONS & HIGHLIGHTS

DURATION
5 Days Practical Hands-on

DELIVERY MODES
In-Person Class & Live Virtual

CERTIFICATION
Accredited Certificate of Completion

INTAKES / DATES
Multiple Cohort Schedules Included

PREPARED FOR:

Valued Participant

Email: training@datastatresearch.org | Issued: November 22, 2026

Academic & Professional Training Year: 2026

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Asphaltene Deposition and Control Training Course

Oil and Gas • 5 Days Intensive • Accredited Certification

Course Overview

Asphaltene Deposition and Control Training Course is designed to equip oil and gas professionals with advanced knowledge and practical skills for identifying, predicting, preventing, and mitigating asphaltene deposition in upstream and downstream petroleum operations.

Key Skills & Software Tools Covered

Asphaltene Control • Flow Assurance • Production Optimization • Chemical Treatment

Upcoming Training Schedules

Confirmed cohort intakes and venues. Both physical in-person classroom and live virtual online seats are available.

TRAINING DATES	LOCATION / VENUE	FORMAT / DURATION	INVESTMENT (FEE)
12 Oct 2026 – 16 Oct 2026	Nairobi	Classroom / 5d	$1,500 USD / KES 110,000
12 Oct 2026 – 16 Oct 2026	Kigali	Classroom / 5d	$3,000 USD / KES 110,000
12 Oct 2026 – 16 Oct 2026	Dubai	Classroom / 5d	$5,000 USD / KES 110,000
12 Oct 2026 – 16 Oct 2026	Cape Town	Classroom / 5d	$4,500 USD / KES 110,000
12 Oct 2026 – 16 Oct 2026	Addis Ababa	Classroom / 5d	$3,000 USD / KES 110,000
12 Oct 2026 – 16 Oct 2026	Singapore	Classroom / 5d	$5,000 USD / KES 110,000
12 Oct 2026 – 16 Oct 2026	Istanbul	Classroom / 5d	$5,000 USD / KES 110,000
12 Oct 2026 – 16 Oct 2026	Bangkok	Classroom / 5d	$5,000 USD / KES 110,000
12 Oct 2026 – 16 Oct 2026	Accra	Classroom / 5d	$4,000 USD / KES 110,000
19 Oct 2026 – 23 Oct 2026	Nairobi	Classroom / 5d	$1,500 USD / KES 110,000
19 Oct 2026 – 23 Oct 2026	Kigali	Classroom / 5d	$3,000 USD / KES 110,000
19 Oct 2026 – 23 Oct 2026	Dubai	Classroom / 5d	$5,000 USD / KES 110,000

* Corporate discounts and customized cohort scheduling are available for teams of 3 or more participants.

Course Curriculum & Modules

Asphaltene Deposition and Control Training Course

Introduction

Asphaltene Deposition and Control Training Course is designed to equip oil and gas professionals with advanced knowledge and practical skills for identifying, predicting, preventing, and mitigating asphaltene deposition in upstream and downstream petroleum operations. This training course explores the fundamental principles of asphaltene chemistry, crude oil characterization, precipitation mechanisms, thermodynamic modeling, reservoir fluid behavior, and deposit formation across production systems. Participants will learn to evaluate asphaltene stability, onset pressure, live-oil behavior, phase equilibria, and deposition risks using industry-relevant analytical methods and petroleum production case studies.

The course also focuses on modern asphaltene mitigation strategies, chemical inhibition, solvent treatment, production optimization, predictive analytics, and flow assurance management to support reliable hydrocarbon recovery and asset integrity. Participants will develop practical competencies in diagnosing deposition-related production problems, selecting suitable treatment technologies, interpreting laboratory test results, and designing cost-effective prevention and remediation programs. By the end of the program, participants will be better prepared to implement sustainable asphaltene deposition control solutions, optimize flow assurance performance, and improve the safety, reliability, and economic performance of petroleum production systems.

Course Duration

5 Days

Course Objectives

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

- Explain the chemical composition, molecular structure, and physicochemical properties of asphaltenes in crude oil systems.
- Identify the principal causes of asphaltene precipitation, flocculation, aggregation, and deposition during hydrocarbon production.
- Analyze the effects of pressure, temperature, and crude oil composition on asphaltene stability and phase behavior.
- Evaluate asphaltene onset conditions using laboratory testing, pressure-volume-temperature (PVT) analysis, and fluid characterization.
- Apply thermodynamic principles and predictive models to assess asphaltene precipitation and deposition risks.
- Diagnose asphaltene-related flow assurance problems in reservoirs, wellbores, tubing, pipelines, and processing facilities.
- Interpret crude oil compatibility tests and identify operational conditions that increase deposition potential.
- Select appropriate chemical inhibitors, dispersants, solvents, and remediation technologies for specific field conditions.
- Develop preventive maintenance strategies that minimize asphaltene accumulation and production interruptions.
- Assess the effectiveness of solvent soaking, chemical treatment, and mechanical remediation techniques.
- Integrate production surveillance data and predictive analytics into early-warning systems for deposition management.
- Conduct risk-based assessments of asphaltene-related production losses, intervention costs, and asset integrity threats.
- Design an integrated asphaltene management program that improves production reliability, operational efficiency, and lifecycle cost performance.

Target Audience

- Petroleum engineers and reservoir engineers.
- Production engineers and well performance specialists.
- Flow assurance engineers and specialists.
- Drilling, completion, and well intervention engineers.
- Chemical engineers working in oil and gas production.
- Laboratory analysts and petroleum fluid characterization specialists.
- Asset integrity, operations, and production optimization professionals.
- Oilfield chemical specialists, technical consultants, and petroleum operations managers.

Course Modules

Module 1: Fundamentals of Asphaltene Chemistry and Crude Oil Properties

- Definition, classification, and molecular characteristics of asphaltenes.
- Asphaltenes, resins, aromatics, and saturates in crude oil systems.
- Colloidal models and molecular interactions affecting asphaltene stability.
- Effects of crude oil composition on solubility and aggregation behavior.
- Introduction to asphaltene characterization and analytical techniques.
- Case Study: Investigating differences in asphaltene stability between two crude oil samples and determining how composition influences their deposition potential.

Module 2: Asphaltene Precipitation, Flocculation, and Deposition Mechanisms

- Thermodynamic principles governing asphaltene precipitation.
- Mechanisms of flocculation, aggregation, adhesion, and deposit formation.
- Effects of pressure depletion and temperature variation on precipitation.
- Influence of gas injection, blending, and crude oil incompatibility.
- Distinguishing precipitation from deposition and identifying their operational consequences.
- Case Study: An offshore production well experiences declining productivity after a pressure change.

Module 3: Laboratory Testing and Asphaltene Characterization

- Crude oil sampling, preservation, and preparation for laboratory analysis.
- Asphaltene content measurement using standardized separation methods.
- Onset detection using optical methods, microscopy, and pressure-dependent testing.
- Crude oil compatibility testing and solvent screening.
- Interpretation of laboratory results for production engineering decisions.
- Case Study: A production facility reports recurring deposits despite routine chemical treatment.

Module 4: Thermodynamic Modeling and Deposition Risk Prediction

- Fundamentals of asphaltene phase behavior and phase envelope interpretation.
- Pressure-volume-temperature analysis and fluid characterization.
- Evaluation of asphaltene onset pressure and precipitation envelopes.
- Introduction to thermodynamic models and their practical limitations.
- Sensitivity analysis for pressure, temperature, composition, and gas injection.
- Case Study: Engineers evaluate a reservoir undergoing pressure depletion and compare modeled asphaltene onset conditions with available production data to identify potentially high-risk operating conditions.

Module 5: Asphaltene Deposition in Reservoirs, Wells, and Pipelines

- Mechanisms of asphaltene retention and formation damage in porous media.
- Deposition in perforations, completion equipment, tubing, and wellbores.
- Pipeline deposition, flow restrictions, and pressure-drop development.
- Effects on artificial lift systems, production equipment, and separation facilities.
- Diagnostic methods for distinguishing asphaltene deposition from other production problems.
- Case Study: A mature oilfield experiences increasing wellhead pressure and declining production rates.

Module 6: Chemical Inhibition, Solvents, and Remediation Technologies

- Types and operating principles of asphaltene inhibitors and dispersants.
- Chemical compatibility, screening, dosage selection, and treatment placement.
- Solvent selection based on deposit composition and fluid compatibility.
- Evaluation of well stimulation, solvent soaking, and mechanical removal options.
- Treatment safety, environmental considerations, and chemical handling practices.
- Case Study: A field operator must select a remediation method for a restricted production well.

Module 7: Production Optimization, Surveillance, and Predictive Analytics

- Monitoring production rates, pressure differentials, and temperature profiles.
- Identifying early indicators of asphaltene-related production deterioration.
- Integrating laboratory findings with well testing and production surveillance.
- Applying trend analysis and predictive analytics to deposition risk management.
- Developing key performance indicators for treatment effectiveness and flow assurance.
- Case Study: Participants analyze a simulated production dataset showing gradual flow-rate decline and increasing pressure differential.

Module 8: Integrated Asphaltene Management and Field Optimization

- Developing field-specific asphaltene prevention and mitigation strategies.
- Establishing risk-based inspection, surveillance, and intervention plans.
- Evaluating treatment performance through production and cost indicators.
- Coordinating reservoir, production, laboratory, chemical, and operations teams.
- Preparing an integrated asphaltene management plan for long-term asset reliability.
- Case Study: A multiwell asset faces repeated asphaltene-related interventions and escalating operating expenses.

Training Methodology

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@datastatresearch.org or call +254724527104

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to DATASTAT CONSULTANCY LTD account, as indicated in the invoice so as to enable us prepare better for you.

Certification & Learning Methodology

- Hands-on practical delivery with real-world datasets, case studies, and lab exercises.
- Post-training mentorship, access to class resources, and customized follow-up support.
- Participants who successfully complete the course receive an accredited Datastat Certificate of Completion.

How to Enroll & Reserve Your Seat

1. Online Registration: Visit https://datastatresearch.org/courses/asphaltene-deposition-and-control-training-course to register online.
2. Email Booking: Send participant details to training@datastatresearch.org for official invoice & reservation.
3. Support & Assistance: Inquire via phone +254 724 527 104 | +254 734 969 612.