PETROFLOW
INTEGRATED CONSULTANTS

PetroFlow Training Program

KNOWLEDGE. EXPERIENCE. PERFORMANCE.

PetroFlow is delighted to present our suite of training courses, designed to build capability and drive performance across the oil and gas industry.

COURSE FEATURES

1 – 5 DAY COURSES
Flexible course durations to suit your needs

DESIGNED TO BUILD TECHNICAL CAPACITY
Practical, relevant, and industry-focused content

EQUIP YOUR WORKFORCE
Helps teams deliver successful oil and gas projects

DELIVERED YOUR WAY
In-person or online – we come to you or connect virtually

REAL-WORLD CASE STUDIES
Selected to reflect our clients' asset types and operations

PROVEN TRACK-RECORD

in the provision of Sub-surface, Pipeline & Facilities Consultancy, Training, & Operations Support

Our instructors have world-class experience built on excellent academic backgrounds in their respective disciplines.

ABERDEEN: Westpoint House, Prospect Rd, Westhill, Aberdeen AB32 6FJ, United Kingdom — Tel: +44 1224 270342

DOHA: Regus – Doha, The Pearl, Drive QQ05A, Piazza Level, Doha, Qatar — Tel: +974-7137-3097

LAGOS: 8th Floor, Octagon Building, 13a AJ Mourinho Drive, Victoria Island, Lagos, Nigeria

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CO_2 Transportation – Pipeline System Design & Operations

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Proven track record in the provision of CO_2 Transport, Pipeline Flow Modelling & Operations

PetroFlow is pleased to present our CO_2 Transportation course, which combines existing and emerging knowledge in CO_2 fluid modelling, pipeline design and operations.
The course will touch on the key elements of CO_2 transport via pipeline and the design considerations and operation of such systems.

Course PFA-005a Outline

DAY 1 – Introduction, CO_2 Transport & Input to Design

- Introduction to CCS Operations
- CO_2 Fluids Modelling
- CO_2 Pipeline Sizing
- Wall thickness Calculations / Installation
- Pressure Surge Analysis
- Pipeline Material Selection & Corrosion Prevention
- Design Models
- Interface with Process Facilities Design

DAY 2 – Input to Operations

- Safety Considerations & Emergency Response
- Pipeline Shutdown Operations
- Pipeline Depressurisation Operations
- Pipeline Start-up Operations
- Well Instability & Other Operation Considerations
- Pipeline Pigging Operations
- Course overview and wrap-up

Course case studies and exercises will be provided based on real CCS injection systems

Who Should Attend:

- Pipeline engineers
- Process Engineers
- Project Managers
- Pipeline operation professionals
- Those involved in CO_2 transportation

Learning Outcomes:

- Good knowledge of CCS operation
- CO_2 fluid behaviour
- Design Considerations
- Safety considerations
- Modelling workflows

Our instructors have world-class experience built on excellent academic backgrounds in the principles of flow assurance.

Jamie Burnett; BEng (Hons; 1st Class) CEng; MIChemE
24 years of experience in the upstream oil and gas industry, covering all design stages, from concept through to detailed design phases, including operational support, in the UK and overseas.

Worked for large multi-national engineering, procurement and installation contractors and some of the industry's leading oil and gas consultancies. Executed work scopes for various national and international clients in process engineering, project management and flow assurance roles.

Dr Bishop Falope; B.Sc., M.Sc., PhD (UCL, London)
24 years oil & gas experience built on a strong academic background and extensive project-based engineering experience

Experience extends across oil and gas project development cycle from concept selection, FEED, Detailed Design, construction, commissioning/start-up, operations support and optimisation of production performance. Performed over 250 pipeline studies and authored/co-authored over 300 technical reports for clients internationally.

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Economic Evaluation of Oil & Gas Projects

PETROFLOW
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Practical economics for upstream decision making
Hands-on Excel-based workflows for project screening, value drivers, and uncertainty

PetroFlow is pleased to present our Economic Evaluation of Oil and Gas Projects course, combining core petroleum economics with practical, Excel-based evaluation workflows used for screening, sanction decisions, and investment ranking.
The course covers the key economic concepts, evaluation gates, and profitability indicators used across the upstream lifecycle, with structured hands-on exercises, including sensitivity analysis using spider plots.

Course PFA-003a Outline

DAY 1 – Fundamentals & Model Building

- Industry context and why economic evaluation is required
- Project stage gates and where economics fits
- Core concepts: CAPEX, OPEX, revenue, cash flow, discounting
- Key metrics: NPV, IRR, payback, profitability index, breakeven
- **Hands-on Excel 1:** build a simple cash flow model and calculate indicators

DAY 2 – Decision Support, Risk & Sensitivities

- Comparing and ranking projects, value drivers, and decision framing
- Risk and uncertainty: scenarios and key assumptions
- **Hands-on Excel 2:** sensitivity analysis and **spider plot** (plus interpretation)
- Wrap-up and Q&A

Course exercises will be provided based on real oil and gas projects

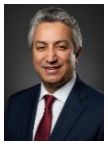
Who Should Attend

- Subsurface and production engineers involved in development planning
- Project and asset teams supporting stage gate decisions
- Commercial, BD, reserves, and FDP professionals
- Early career staff needing practical petroleum economics fundamentals

Learning Outcomes

- Apply economic evaluation at key project stage gates
- Build and QA/QC an Excel cash flow model
- Calculate and interpret NPV, IRR, payback, and related metrics
- Identify key value drivers and uncertainties
- Run sensitivity analysis and produce a spider plot
- Present results clearly with assumptions and limitations

Our instructors have world-class experience built on excellent academic backgrounds in the principles of economic evaluation.



Dr Babak Moradi; B.Sc., M.Sc., PhD (IFP-France); DBA

20 years of oil and gas experience, combining a strong academic background with extensive project-based delivery in upstream subsurface and field development planning.
Experience spans the full project cycle from early concept screening and stage-gate decision support through to FDP execution and production optimisation, with a strong focus on economic evaluation and value-based ranking of oil and gas projects. Delivered cash flow-based evaluations, value driver analysis, risk and uncertainty framing, and Excel-based decision models to support robust investment decisions and maximise asset value.

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The Complete Flow Assurance Overview

for Oil & Gas Field Development, Design and Operations

PETROFLOW
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Proven track-record in the provision of Flow Assurance Consultancy, Training, & Operations Support

PetroFlow presents part of our Flow Assurance Training Package suited for personnel involved in field development, design and oil & gas asset operations. The course presents a comprehensive overview of flow assurance considerations that must be made to ensure asset delivery through robust design and sound operating philosophy

Course PFA-001a Outline

Design Considerations

Hydraulic Assessment

- Principles of Multiphase flow in pipes
- Pressure drop calculation/Line sizing
- Integrated System Hydraulics – Well, flowline & risers

Thermal Assessment

- Principles of Heat transfer
- Thermal performance specification
- Insulation types /application & Thermal Modelling

Fluids & Production Chemistry

Fluids Handling

- Lab measurements
- Fluid Characterisation & property prediction

Solids Handling

- Hydrate prediction and management
- Wax prediction and management
- Produced water analysis & Scale Management
- Sand erosion calculations

Operational Issues

Slugging & Transient Operations

- Types of slugging, slug prediction & mitigation
- Production Shutdown/Cooldown
- Pipeline Depressurisation
- Production Start-up/Restart
- Pigging operations

Design & Operations Interfaces

Integrated into Design & Operations

- Input to Mechanical Design & Materials Selection
- Input to Process Facilities Design
- Input to Subsea Equipment Design and Specifications
- Input to Operations Support
- Input to Production Enhancement/Optimisation

Course Duration: 2 days

Course case studies and exercises include gas condensate systems, deepwater developments, subsea tie-backs, pipeline network systems, water and chemical injection systems and more

Who Should Attend:

- Subsea Project & Development Engineers
- Process/Facilities Engineers of subsea fields
- Field Development Personnel
- Those seeking to perform flow assurance studies

A mixture of lectures, exercises and case studies will be provided to help the candidates understand the flow assurance challenges and considerations that must be made at the concept and design stages of development.

Our instructors have world-class experience built on excellent academic backgrounds in the principles of flow assurance.

Jamie Burnett; BEng (Hons; 1st Class) CEng; MIChemE

24 years of experience in the upstream oil and gas industry, covering all design stages, from concept through to detailed design phases, including operational support, in the UK and overseas.

Worked for large multi-national engineering, procurement and installation contractors and some of the industry's leading oil and gas consultancies. Executed work scopes for various national and international clients in process engineering, project management and flow assurance roles. His technical experience includes leading multi / mono-discipline teams executing brownfield and greenfield projects for both onshore and offshore processing facilities.

Dr Bishop Falope; B.Sc., M.Sc., PhD (UCL, London)

24 years oil & gas experience built on a strong academic background and extensive project-based engineering experience

Experience extends across oil and gas project development cycle from concept selection, FEED, Detailed Design, construction, commissioning/start-up, operations support and optimisation of production performance. Performed over 250 flow assurance studies and authored/co-authored over 300 technical reports for clients internationally. Held the position of Flow Assurance Head in Petronas (Malaysia), PetroFlow Consultants (Global), Total CLOV Project (Paris), Repsol Sinopec Resources UK and Xodus Group, both in Aberdeen. Bishop is a certified OLGA instructor

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Estimation and Classification of Reserves and Resources

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Reserves and Resources Estimation based on SPE-PRMS

PetroFlow is pleased to present our Estimation and Classification of Reserves and Resources course, providing a practical, project-based understanding of PRMS, ARPR reporting, and the main estimation workflows used to support robust reserves and resources booking.
The course blends PRMS principles and definitions with worked examples, concluding with commerciality and project economics concepts such as the Economic Limit Test (ELT) and price scenarios

Course PFA-006a Outline

DAY 1 – PRMS foundations and reporting

1. Introduction to PRMS – Golden rules, classification history, inappropriate terms; Why we prepare Petroleum Resources reports; Definitions and guidelines used in practice
2. PRMS and Annual Reporting of Petroleum Resources – What ARPR is, main elements, outcomes
3. PRMS governance and assurance expectations
4. PRMS major principles overview – Definitions, classification and categorisation; Range of uncertainty and why it matters; Defining a project and project-based classification

DAY 2 – Classification logic and project maturity

1. Resources classification transitions and discovery status
2. Commerciality requirements and chance of commerciality
3. Project maturity sub-classes and practical interpretation
4. Reserves classification – Proved, probable, possible; Developed vs undeveloped, sub-classes; Worked examples
5. Contingent resources – Definitions, maturity, sub-classes; Worked examples

DAY 3 – Prospective Resources & Estimation Methods

1 Prospective resources – Definitions, maturity, risk assessment, defining a discovery; Worked examples

2 Categorisation and estimation approaches – Deterministic, probabilistic, integrated approaches; Selecting the right method for the decision and data maturity

3 Evaluation methods overview – Available tools and when to use them; Analogy-based assessment: methodology and example

DAY 4 – Estimation Workflows, EUR, and Project Economics

1. Volumetric-based assessment – Volumetric parameters: static, dynamic, recovery efficiency, Volumetrics application example
2. Performance-based methods – Material balance: workflow and example; Reservoir simulation: where it fits and how it supports classification; Decline curve analysis (DCA): workflow and example
3. EUR and technically recoverable resources
4. Project economics links to PRMS – Project feasibility, ELT, price scenarios
5. Wrap-up, integrated classification examples, Q&A

Course exercises will be provided based on oil and gas project case studies and reporting style examples

Who Should Attend:

- Reservoir, production, and subsurface teams involved in PRMS booking
- Geoscientists supporting volumetrics and discovery assessment
- Asset evaluation, commercial, planning, and reserves assurance staff
- Early career professionals needing a practical PRMS foundation

Learning Outcomes:

- Apply PRMS and ARPR reporting consistently
- Classify reserves, contingent, and prospective resources (incl. maturity and transitions)
- Choose appropriate estimation methods (analogy, volumetrics, material balance, DCA) and define uncertainty ranges
- Link commerciality and project economics (feasibility, ELT, price scenarios) to PRMS decisions
- Present defensible results with clear assumptions and risks

Our instructors have world-class experience built on excellent academic backgrounds in the principles of reserve estimation.

Dr Babak Moradi; B.Sc., M.Sc., PhD (IFP-France); DBA

20 years oil and gas experience, combining strong academic background with extensive project-based delivery in upstream subsurface and field development planning. Experience spans the full project cycle from early concept screening and stage gate decision support through to FDP execution and production optimisation, with a strong focus on economic evaluation and value-based ranking of oil and gas projects. Delivered cash flow-based evaluations, value driver analysis, risk and uncertainty framing, and Excel-based decision models to support robust investment decisions and maximise asset value.

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Flow Assurance for Carbon Capture and Storage

for CCS System Design and Operations

PETROFLOW
INTEGRATED CONSULTANTS
Experts in Integrated Modelling & Flow Assurance

Proven track-record in the provision of Flow Assurance Consultancy, Training & Operations Support

PetroFlow is pleased to present our Flow Assurance for CCS Course, which combines existing and emerging knowledge in CO_2 fluid modelling and characterisation, pipeline transportation/injection and operations. The course will touch on the entire flow assurance workflow for CCS operations, including the design and operation of such systems.

Flow Assurance Course PFA-004a Outline

DAY 1 – Introduction to CCS & CO_2 Fluid Model Development

- Introduction to CCS Operations & Simulation Workflows
- Software for CO_2 Fluids Modelling
- Equations of State for CO_2 Fluid Modelling
- Effect of Impurities on Fluid Properties & Phase Behaviour
- Modelling Options & Fluid Model Development
- EXERCISES / Tips & Tricks

DAY 2 – Flow Model Development

- Flow Model Objectives & Process Design Integration
- Flow Model Construction – Model Components
- Model Application for Pipeline Sizing & Insulation Selection
- Design Considerations
- Input to Pipeline Design, Materials Selection & Process Facilities Design
- EXERCISES / Tips & Tricks

DAY 3 – Model Application for Transient Operations

- Shutdown Simulation & Operations Consideration
- Depressurisation Simulation Operations Considerations
- Start-up Simulation, Well Instability & Other Operation Considerations
- Pressure Surge Analysis
- Pigging Simulation & Operations
- Input to Operations Support
- Course overview and wrap-up

Course case studies and exercises will be provided based on real CCS injection systems

Who Should Attend:

- As this is a hands-on course, it is suited primarily for candidates keen to develop their Flow Assurance Modelling skills in application to CCS

Learning Outcomes:

- Good knowledge of CCS operation and developments over the past decade and of current gaps in our modelling techniques and areas for further development
- Hands-on modelling of integrated CCS systems

Our instructors have world-class experience built on excellent academic backgrounds in the principles of flow assurance.

Jamie Burnett; BEng (Hons; 1st Class) CEng; MIChemE

24 years of experience in the upstream oil and gas industry, covering all design stages, from concept through to detailed design phases, including operational support, in the UK and overseas.

Worked for large multi-national engineering, procurement and installation contractors and some of the industry's leading oil and gas consultancies. Executed work scopes for various national and international clients in process engineering, project management and flow assurance roles. His technical experience includes leading multi / mono-discipline teams executing brownfield and greenfield projects for both onshore and offshore processing facilities.

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No	Client Name	Course Title	Number of delegates
1	PetroTeach (Online)	Underground Carbon Storage	30
2	PetroTeach (Online)	Underground Carbon Storage	10
3	National Engineering & Technical Company (NETCO)	Flow Assurance with OLGA Course	8
4	Reservoir Solutions (Online)	Underground Carbon Storage	70
5	GaffneyCline (In-house)	Introduction to Dynamic Simulation using CMG	10
6	Chevron Agbami FPSO production operations team	OLGA Realtime	10
7	SPE London (Technical Talk)	Chemical Enhanced Oil Recovery	15
8	GaffneyCline (In-house)	Chemical Enhanced Oil Recovery	20
9	Total (Nigeria & Congo)	Flow Assurance with OLGA Course	
10	Total (Congo)	Flow Assurance with OLGA Course	15
11	Baker Hughes (In-house)	Challenges of Numerical Modelling of CO2 Storage in Aquifers using tNavigator	20
12	Top Skills (online)	Decline Curve Analysis	20
13	Top Skills (online)	Economic Evaluation of Oil and Gas Projects	20
14	Top Skills (online)	Reservoir Performance Prediction with Material Balance	25
15	Top Skills (online)	Full Field Studies & Field Development Plan (FDP)	25
16	Enovent (Online)	Full Field Studies & Field Development Plan (FDP)	30
17	Top Skills (online)	Reservoir Fluid Modeling and Analysis	30
18	Top Skills (online)	Well Modelling, Build IPR/VFP	20
19	Top Skills (online)	Well Test Analysis	10
20	Addax, SNEPCO, Cakasa (open course)	Flow Assurance with OLGA Course	
21	Exxon Mobil Nigeria	Flow Assurance with OLGA Course	
22	Petronas (In-house)	Material Balance Modelling	20
23	Petronas (In-house)	Integrated Asset Modelling (Gap-Mbal-Prosper)	20
24	Petronas (In-house)	Dynamic Reservoir Simulation using Eclipse	20
25	Petronas (In-house)	Dynamic Reservoir Simulation using tNavigator	20
26	Petronas (In-house)	Fluids Modelling Course	8
27	Petronas (In-house)	Wax deposition Modelling	6
28	NIOC	Reservoir Dynamic Simulation	20
29	NIOC	Reservoir Management Planning	25
30	NIOC	Enhanced Oil Recovery using Eclipse	20
31	ICOFC	Gas Injection for EOR	20
32	NIOC	Reserve Estimation	20
33	NIOC	Applied Reservoir Engineering	20
34	MOP (10 times)	Petroleum Engineering for Non-Petroleum Engineers	20
35	Arak Refinery	Petroleum Engineering for Non-Petroleum Engineers	20
36	POGC	Petroleum Engineering for Non-Petroleum Engineers	20
37	Shell (Malaysia)	CO2 Transportation – Pipeline System Design, Development and Operation	6
38	Gazprom	Modelling Pipeline Networks with PIPESIM-Net	12