



*Training Course:
Gas Field Development Planning*

*15 September - 10 October 2025
Kuala Lumpur (Malaysia)
Royale Chulan Kuala Lumpur*

Training Course: Gas Field Development Planning

Training Course code: EN236158 From: 15 September - 10 October 2025 Venue: Kuala Lumpur (Malaysia) - Royale Chulan Kuala Lumpur Training Course Fees: 16250 € Euro

Introduction

Gas field development planning involves the integrated evaluation of technical, economic, environmental, and operational elements to maximize the recovery and value of natural gas reserves. This 19-day intensive training program, developed by Global Horizon Training Center, equips professionals with the multidisciplinary knowledge and tools needed to plan, assess, and implement effective gas field development projects. The course covers subsurface evaluation, surface facilities, project economics, risk analysis, environmental considerations, and field optimization strategies.

Objectives

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

- Understand the full gas field development lifecycle from discovery to abandonment.
- Evaluate reservoir characteristics and select appropriate development concepts.
- Integrate geological, engineering, and economic data into field development planning.
- Design surface facilities and infrastructure aligned with production objectives.
- Conduct risk assessments, economic analysis, and production forecasting.
- Navigate regulatory, environmental, and sustainability requirements.
- Develop full-field development plans FDP with supporting documentation.

Organizational Impact

- Enhanced capacity for technically and economically sound field planning
- Improved integration of multidisciplinary teams geoscience, engineering, finance
- Reduction in development costs through optimized planning
- Increased long-term gas recovery and monetization
- Enhanced alignment with national regulatory and sustainability frameworks

Target Audience

- Reservoir and Petroleum Engineers
- Geologists and Geophysicists
- Field Development Planners and Project Managers
- Production Engineers and Facilities Engineers
- Strategic Planners and Energy Economists
- Government and Regulatory Agency Professionals

Training Program Outline

Day 1: Overview of Gas Field Development

- Gas field lifecycle
- Stakeholders and objectives in development planning
- Field development planning workflow
- Regulatory and market context

Day 2: Geological and Geophysical Inputs

- Structure, stratigraphy, and petrophysical analysis
- Reservoir mapping and volumetrics
- Seismic interpretation for development planning
- Uncertainty in subsurface models

Day 3: Reservoir Engineering for Gas Fields

- Gas reservoir types and characteristics
- Material balance, decline curves, and volumetric calculations

- Recovery factor estimation
- Pressure maintenance and drainage strategy

Day 4: Well Planning and Drilling Considerations

- Drilling strategy: vertical, deviated, horizontal wells
- Well spacing and location optimization
- Drilling cost drivers
- Completion methods for gas wells

Day 5: Production Technology and Flow Assurance

- Tubing, casing, and artificial lift options for gas
- Multiphase flow in gas wells
- Sand, hydrate, and liquid loading challenges
- Surface choke management

Day 6: Surface Facilities Design

- Gathering systems and flowline design
- Central processing facilities CPF
- Compression systems and separation units
- Modular vs. centralized facility planning

Day 7: Gas Treatment and Processing

- Acid gas removal H_2S , CO_2
- Dehydration glycol, molecular sieve
- NGL recovery and LPG extraction
- Mercury removal and sulfur recovery

Day 8: Pipeline and Transportation Planning

- Gas pipeline routing and sizing

- Pressure drop and flow modeling
- Tie-in strategy for existing infrastructure
- LNG transportation basics

Day 9: Storage and Export Solutions

- Underground gas storage methods
- Export terminal design
- Floating vs. onshore export options
- Demand forecasting and market linkage

Day 10: Environmental and Regulatory Requirements

- EIA for gas field development
- Flaring and emissions control
- Stakeholder engagement and social impact
- Licensing, permits, and reporting

Day 11: Field Development Economics

- CAPEX and OPEX estimation
- Net present value NPV, IRR, payback period
- Cash flow models and fiscal regimes
- Break-even gas pricing and sensitivity analysis

Day 12: Risk Analysis and Decision Making

- Technical and economic risk categories
- Risk matrix and mitigation planning
- Monte Carlo simulation and decision trees
- Scenario planning and development strategy selection

Day 13: Development Concept Selection

- Standalone vs. shared infrastructure
- Phased vs. full-field development
- Technology selection e.g., offshore compression, subsea tiebacks
- Concept screening and ranking

Day 14: Integrated Reservoir and Facility Modeling

- Reservoir simulation tools and techniques
- Production forecasting and deliverability modeling
- Facility sizing based on subsurface inputs
- Use of digital twins and optimization software

Day 15: FDP Documentation and Stakeholder Approval

- Field Development Plan FDP structure
- Subsurface summary, facilities layout, economic justification
- Stakeholder alignment and presentation strategies
- National submission and approval processes

Day 16: Marginal and Small Field Development

- Economics of small and stranded fields
- Low-cost infrastructure solutions
- Innovative approaches virtual pipelines, mini-LNG
- Cluster and satellite development strategies

Day 17: Sustainability and Future-Proofing Development Plans

- Carbon capture and storage CCS integration
- Methane leak monitoring and reduction
- Renewable energy tie-ins and hybrid systems
- Long-term decommissioning planning

Day 18: Case Studies and Global Best Practices

- Review of successful gas field developments
- Lessons from failed projects
- Operator strategies in various basins onshore/offshore
- Benchmarking tools and indicators

Day 19: Build Your Own FDP

- Group assignment: design a full gas field development plan
- Teams to present subsurface strategy, facility design, economics, and risks
- Peer review and trainer feedback
- Final Q&A and wrap-up discussion

Registration form on the Training Course: Gas Field Development Planning

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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