

Integrated Field Development Planning

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Introduction

Integrated Field Development Planning is a cornerstone in the oil and gas industry, helping professionals identify the most effective ways to develop oil and gas fields while managing complex challenges. This training course will give participants insight into how multi-disciplinary teams, consisting of geoscientists, engineers, and commercial specialists, work together to create robust plans for field development. These teams must navigate large investments and uncertainty, ensuring every decision is well-informed and optimized for success.

This course is designed for early- to mid-career professionals in geosciences, engineering, and commercial disciplines, preparing them to work effectively within integrated teams on international field development projects and providing the tools to step into leadership roles in the oil and gas industry.

Course Objectives

- Understanding Integrated Field Development Planning: Participants will gain a deep understanding of the collaborative process involved in integrated field development planning for international oil and gas projects.
- Develop Practical Skills: Participants will learn tools and techniques directly applicable to their future roles in field development, enhancing their ability to manage complex projects.
- Grasp the Scientific Background: The course will cover the fundamental science behind oil and gas formation, providing a strong foundation for understanding field development processes.
- Making Effective Early Planning Decisions: Emphasis will be placed on the importance of early-stage decisions, including concept selection and front-end loading, in delivering successful projects that manage large investments and risks.

Course Outlines

Day 1: Field Development Planning - Industry Context & Team Roles

- Industry Context for Field Development Planning: Participants will understand the upstream oil and gas industry from different perspectives, including asset lifecycle, value chains, key players, and the industry's role in society.
- The Role of Integrated Teams: Explore how geophysics, petrophysics, reservoir engineering, well engineering, and facilities engineering form the backbone of decision-making in integrated teams.
- Field Development Planning Workflow: Learn the science, culture, and challenges involved in field development planning, particularly in managing incomplete information and uncertainty.

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Day 2: Integrated Field Development Planning & Economics

- Collaborative Field Development Planning: Understand how integrated teams—comprising commercial, scientific, and engineering professionals—collaborate to develop a field.
- Petroleum Economics: Learn how economics influences development planning, including cash flow analysis, time value of money, and investment metrics.
- Field Development Planning Workshop: Apply the concepts of planning and economics through practical exercises focused on decision-making and resource allocation.

Day 3: Decision-Making in Field Development Planning

- Decision Analysis: Learn decision-making tools such as expected value, sensitivity analysis, decision trees, and Monte Carlo simulation, to ensure rational and efficient investment decisions.
- Field Development Planning Workshop: Work through practical decision-making scenarios in oil and gas field development projects.

Day 4: Production Contracts & Petroleum Resources Management

- Production Contracts & Licenses: Understand the legal, fiscal, and contractual conditions that govern oil and gas production rights and how wealth is shared with host countries.
- Petroleum Resources Management: Learn how oil and gas reserves and resources are calculated, classified, and reported for management, regulatory, and investment purposes.
- Field Development Planning Workshop: Apply knowledge in practical scenarios related to production contracts and resource management.

Day 5: Safety & Environmental Considerations in Field Development Planning

- Corporate Responsibility: Discover how oil and gas projects are executed safely, sustainably, and responsibly, with respect for the environment and local communities.
- Field Development Planning Workshop: Finalize the field development plan while considering safety, environmental impacts, and community relations.

Why Attend This Course: Wins & Losses!

- Master Strategic Decision-Making: Learn to use advanced tools like sensitivity analysis and Monte Carlo simulations to make well-informed decisions that maximize the value of oil and gas projects.
- Collaborate in Integrated Teams: Gain essential skills for working with diverse professionals from engineering, geosciences, and commercial sectors, fostering collaboration and teamwork.
- Understand Industry and Economic Context: This course will equip you with the knowledge of how economic factors influence development planning, enabling you to make financially sound decisions.
- Hands-On Practical Application: Through workshops and exercises, participants will gain real-world experience in developing integrated field development plans, resource management, and economic assessments.

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Conclusion

The Integrated Field Development Planning course offers a unique opportunity for professionals in the oil and gas industry to develop key skills for handling complex field development challenges. By mastering the science, economics, and strategic decision-making processes behind field development, participants will be well-equipped to contribute to successful projects and advance into leadership roles. This training is an essential step for those aiming to excel in integrated field solutions and make a lasting impact on the energy sector.

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