Mature Field Management

The course is designed to give participants an appreciation of the evaluation and planning activities associated mature oil and gas field management.

Mature fields differ from green field developments in that major infrastructure is in place, static reservoir data has accumulated from development drilling and a growing volume of production and processing performance data has become available. Decisions therefore relate to incremental projects, which may be small in scope and are often economically marginal. A firm understanding of the technical fundamentals associated with reservoir, wells and surface facilities is therefore required to make quality decisions in this environment, supported by realistic uncertainty ranges, and consistent application of incremental project economics and risk analysis. Various strategies may be considered to manage the mature asset, from harvest to divest, and the selected incremental activities should support a clear chosen strategy.

This course takes groups through these issues, fills any knowledge gaps in the essential technical fundamentals required for mature field development planning in support of a chosen strategy. Course content follows a red-thread TRACS case study, based on real field data, and if requested, the client's specific field data can be adopted to create an asset focused event.

COURSE CONTENT

- Contrasting approaches to green and brown field development
- Overview of strategic options for mature field management
- Evaluation methods - Workflows, overview of tools
- Field activity to date - review of reservoir, wells and facilities performance; forecasting the no further activity production profile
- Managing the base production profile
- Locating the remaining oil (LTRO) in the reservoir - surveillance mapping; reservoir modelling (analytical, numerical)
- Improving reservoir recovery - infill drilling, management of sweep efficiency; enhanced oil recovery (EOR)
- Improving well performance - well interventions, recompletions and workovers
- Identifying options to improve surface facilities performance - debottlenecking; flow assurance
- Feeding the hopper with incremental project opportunities
- Dealing with uncertainty and risk - cost, resource and market uncertainty ; human bias in uncertainty estimation; applying risk management tools
- Economic evaluation of the incremental activity opportunities
- Building production skins on to the base production profile
- Making asset management decisions to support the strategy

Duration

Full day | 3 to 5 days

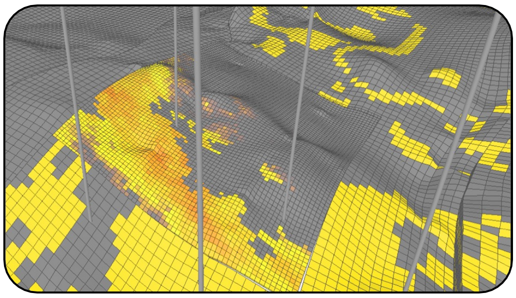
3-5 days in classroom or split into half-day sessions for virtual instructor-led training (VILT)

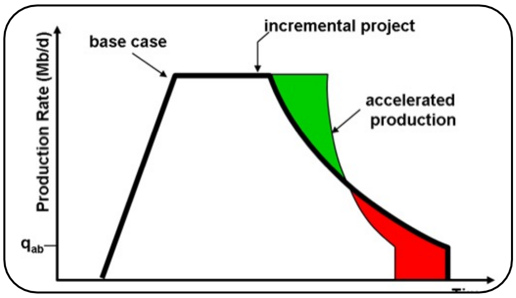
Learning Level

Skills	●○○
Knowledge	●●●
Awareness	●●●

Designed for:

The course is designed for petroleum engineers, geoscientists, facilities engineers, commercial staff and other disciplines who expect to play a part in evaluating, screening and maturing oil and gas field development opportunities. The course is most effective when delivered to a mixed discipline group.





Course Tutors

Mark Cook BSc, MBA
40+ years - reservoir engineering, economics and risk analysis
Mark develops and runs courses in Early Development, Business & Risk and Reservoir Engineering series. A career background at Shell, TRACS (Director), and AGR (VP). Author of 'Petroleum Economics and Risk Analysis' and co-author of 'Hydrocarbon Exploration and Production', an SPE distinguished lecturer, and guest lecturer at Heriot-Watt University.

Jerry Hadwin BSc, MEng
35+ years - reservoir engineering
Jerry mainly tutors courses in the Reservoir, Early Development, and Open Air Series. He has a career background at Shell, TRACS and AGR. Jerry is co-author of 'Adventure Trekking in Oman'.

Energy Transition | Early Development | E&P Overview | Reservoir | Wells | Business | Uncertainty and Risk | Open Air

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