



Integrated Field Development Analysis, Optimisation and Forecasting Unconventional Systems

Target Audience:

This course is intended for those that have (i) recently started working in the production domain and need to become familiar with production tools/analysis, (ii) attended the course already some time ago, and require a refresher, or (iii) unrelated disciplines trying to understand the production context (e.g. accountants, project managers, etc..).

Overall Objectives:

- 1/ Developing dexterity in using the **IPM** suite
- 2/ Basic understanding of the physics
- 3/ Understanding the limitation of the methods and techniques used

Course Agenda

- Day 1** Introduction to integrated production system and why an overall approach is necessary
Introduction to PROSPER - philosophy and methodology
Pressure loss in the wellbore - gravity and friction terms, slip, holdup
Importance of PVT
VLP flow correlations theory. Important parameters
Workshop - building a wellbore model, matching PVT and flow correlations, running sensitivities,
- Day 2** Introduction to inflow performance models.
Gas lift introduction –design and diagnostics using “Quicklook” for gas lifted wells
Inflow performance models – Steady state modelling
Introduction to RESOLVE and REVEAL – Transient Inflow modelling, PdTd modelling
- Day 3** Unconventional IPR modelling
Importance of production history
PVT transformation
Calculation of FBHP from measured data
- Day 4** Introduction to **GAP** - theory and capabilities
Building a surface network model - linking to PROSPER well models
Generation of VLP and IPR curves
Linking PROSPER, PdTd and GAP for full field optimisation and forecasting
Gas Lift optimisation
Well Cycling
- Day 5** Integrated modelling
Workshop