



Advanced Wellbore Modelling Course (REVEAL)

Target Audience:

This course is targeted to those engineers that have (i) attended the *Standard IPM* course previously, and (ii) want to understand how **REVEAL** can be used to capture more complex well and reservoir behaviour. This course will assume a base level of familiarity of the tools, and is intended promote the features available in creating physics based field realisations in the **IPM** tools.

Overall Objectives:

- 1/ Develop dexterity in using **REVEAL**
 - 2/ Understand the physics of different phenomena which affect reservoir performance
 - 3/ Understand principles behind models and hence their limitations
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Course Agenda

Day 1:

- Introduction to Integrated Modelling
- Description of well modelling, concepts of nodal analysis
- Multiphase Flow, Importance of PVT
- Inflow modelling, applicability and limitations

Day 2:

- Introduction to **REVEAL**
- Building models and comparing with the analytical solutions of IPRs
- Extending wells to horizontal, including water injectors
- Importance of thermal modelling on injectivity

Day 3:

- Rock Mechanics
- Thermal induced fractures
- Advanced well models
 - ICD modelling – Equalizers

Day 4:

- Advanced well models
 - Complex wellbore completions - Gas Lift cross-over well
- EOR Techniques
 - Polymer modelling

Day 5:

- Unconventional modelling
 - Introduction to physical mechanisms driving production
 - Building tight models with fractures
 - Converting simulation results to analytical models
- Advanced well models
 - ICV modelling
 - Controlling water injection using ICVs