



W011: North Sea Reservoirs Series - New Perspectives on North Sea Plays

Instructor(s): Dave Quirk & Co-Instructor

2 Days

Competence Level:
Skilled



Virtual Course

Summary

Business Impact: The North Sea still presents many opportunities for major oil companies, smaller operators, and new entrants alike. This series of webinars have been designed to deliver overviews of classic North Sea plays and their constituent reservoirs through short but high impact learning experiences. Through exposure to all of the North Sea's key plays, participants on this course will be able to add value immediately upon return to the office.

This play-based overview spans the entire spectrum of North Sea plays. Fundamental knowledge regarding the stratigraphic and structural setting of each play will be transferred using standard subsurface datasets (seismic, wireline and core) as well as a new angle using historical statistics (success rates, discovery sizes and area yield). Although the plays are defined through the lens of reservoir geology, other elements of the petroleum system will also be discussed (seal, traps, source, charge and timing).

Learning Outcomes

Participants will learn to:

1. Appreciate the importance of the North Sea Basin in global terms.
2. Generate North Sea play comparisons using play exploration statistics.
3. Recognise of each play type on seismic, on well logs, and in core.
4. Characterise the structural style, trap configuration, and gross depositional environment of each play type.
5. Assess each play in a petroleum systems context (reservoirs, seal, traps, source, charge and timing).
6. Analyse historical success rates and discovered resources through time.
7. Integrate analogues to illustrate and support technical interpretations, including development and production issues associated with the specific reservoir.

Duration and Training Method

This course is delivered in four webinar sessions over a two-day period and comprises lectures, discussion, case studies, and practical exercises.

Who Should Attend

This course will benefit any subsurface professional working in the North Sea. The course is aimed primarily at geologists but geophysicists, reservoir engineers, team leaders and managers will also benefit from a deeper understanding of the classic play types.

Course Content

The course will cover

- The importance of the North Sea Basin in global terms
- North Sea regions and play comparisons using exploration statistics
- Play by play overview
- Structural and stratigraphic overview of each play type.
 - Structural style and trap configurations.



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- Gross depositional environments at both regional and field scale.
- Each play in a petroleum systems context.
 - Reservoirs, seal, traps, source, charge and timing.
 - Main causes of prospect failure.
- Statistical summary of the play.
 - Play extent.
 - Historical success rates and discovered resources through time.
 - Resource yield per unit area.
- How to recognise each play type on seismic, on well logs and in core.
- The use of analogues to illustrate and support technical interpretations, including development and production issues associated with the specific reservoir. What do the play statistics tell us about the future of the North Sea?

The two-day webinar format will be divided into four sessions, as below.

Session 1: Introduction to the North Sea Plays, play analysis and play-based statistical methods

Session 2: Devonian, Carboniferous, Permian, Triassic

Session 3: Jurassic, Cretaceous,

Session 4: Tertiary, discussion session, conclusions, take home messages and a look to the future.