

## Production Geochemistry (3 days)

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### Business context:

Geochemical methods can help to optimise field development plans, and solve problems related to production of oil and gas fields.

Production allocation to separate stacked reservoirs produced via a co-mingled production string can be done cost-effectively by geochemical methods, without the need for production logging (PLT). In compartmentalized fields the different compartments can be distinguished based on compositional difference between the fluids (mainly oil) in the compartments, next to e.g. pressure difference or production behaviour. These differences often are very subtle, requiring detailed geochemical analyses.

Aging fields often suffer from down-hole corrosion. Geochemical methods can help to detect and analyse the nature of these problems, for example in wells with multiple completions.

Wax precipitation can be modelled and predicted based on detailed analysis of the oil present in the reservoir. Therefore, geochemistry helps to optimise reservoir models, field maintenance and field development strategies.

### Who should attend:

Petroleum geologists, reservoir engineers, and well technologists involved with production of hydrocarbons.

### Content of the program:

- Fundamentals of petroleum geochemistry
- Using bulk parameters of oil
- Using data from gas chromatographic oil analysis
- Oil-oil correlations
- Filling history of fields
- Gas geochemistry
- Production allocation
- Recognising down-hole corrosion
- Recognising compartmentalisation
- Wax precipitation.
- Pay analysis
- Sampling strategies & artefacts

### Learning, methods and tools:

At the end of the 3-day course participants will have gained insight into production geochemical concepts.

Exercises are used to reinforcing the acquired knowledge in a practical context. The participants will be able to apply basic geochemical tools, and will be in position to define and manage production geochemical projects.