

Basics of PVT Analysis (3 days)

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Business context:

PVT (pressure, volume temperature) analysis enables the reservoir engineer to relate the production at surface to the changes in the reservoir by providing the following data:

- Reservoir Fluids Properties
- Phase Behavior
- Relationship Between Bottomhole and Surface Parameters

Content of the program:

- General overview
 - Scope
 - Reservoir fluids properties
 - Phase Behavior
- Sampling
 - Well conditioning
 - Bottomhole sampling
 - Separator Sampling
- Samples Validation
 - Opening pressures, volume measurement, free water/mud checks
 - Compositional analysis
 - Bubble point/dew point measurements
- Samples Recombination
 - Separator parameters corrected for lab conditions
- Selection of PVT analyses to perform
 - Fluids description - liquid content, GOR, API
- Flash Separation
 - Ambient and elevated temperature flash
 - Mathematical recombination of flashed fractions
- Reservoir Conditions Analysis
 - Constant Composition Expansion
 - Differential Vaporisation
 - Constant Volume Depletion
 - Single and Multistage Separator Tests
 - "Live" Viscosity Measurements
 - Bubble point/dew point measurements
- Physical Properties Measurements
 - Density
 - Mole Weights
 - Gas Composition
 - Liquid Composition

Who should attend:

The course is intended for petroleum engineers, fluids analysts and chemists that are using reservoir fluids data.

Learning methods and tools:

The 3-day course will cover typical PVT analysis performed on black oil and gas condensate wells. Upon the completion of the course, the participants will have a better understanding of PVT analysis and the usefulness of the fluids data in improving the overall efficiency of the oil and gas production.