BASIC LOGGING INTERPRETATION & APPLICATIONS TO PETROLEUM EVALUATION

Professors :

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CV available on
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Objectives :

Basic well logs interpretation needs to be used as routine data by geologists working in the O&G industry to understand well results, to assess rough evaluation of reserves, to explain well failures and to accurately evaluate new prospects. The course cover the cutting-edge well logging principles and its application in Exploration

Who should attend :

Students at BSc or Master level, in Petroleum Geology, Geophysics and Reservoir Engineering. It will bring some industry examples and applications complements to their university academic courses.

Prerequisites :

A comprehensive background in Petroleum Geology and Geophysics is required to attend such a course

A good understanding of English is also a must, for the English version

Duration :

Five half days, or a total of 15 to 18 hours. Duration and content of the course can be adapted and customized to the participants' technical background, requirements, interests and needs.

Language :

English
Power Point slides only in English

Handouts :

One paper copy booklet (A4 size, with 4 color slides per page) in English only
No digital support provided (e.g. on CD or USB key) due to data confidentiality

Day 1-2

1. Basic Logging Interpretation & Applications to Petroleum Evaluation

- Main tools description and measures:
  - LWD/WL
  - CR
  - Caliper
  - Resistivity
  - Neutron/Density
  - Sonic
  - Dipmeter
  - RFT
- Displays, Scales and Presentations in use in the industry

Day 3

2. Qualitative and quick-look quantitative interpretation

- How to recognize a reservoir and its contents
- Assess the lithology of reservoir and non reservoir intervals
- Quick-look evaluation of the reservoir properties:
  - Porosity
  - Hydrocarbon/Water Saturation
  - Net pay
  - Fluid contacts, etc.
- Various exercises to practice

Day 4

3. Application to well results Post Mortem

- Understand the results of a well and its consequences
- Case studies

4. Application to rough Reserves Assessment

- Get a rough idea of the size of a discovery
- Extrapolation of existing well results to a field
- Case studies

Day 5

5. Application to prospects Evaluation

- How to mitigate existing well results in prospect evaluation parameters
- How to take advantage of existing well results to better mature a prospect
- Case studies

Exam : 20 multi-choice quizz questions