Integrated Reservoir Modeling - GRD

COURSE

About the Course

As the oil companies define business units and asset teams, it is becoming increasingly important that all the team members understand the workflow in developing integrated reservoir description for that asset. A proper development of reservoir description is helpful in managing daily operations of the asset, as well as long-term planning. Integration involves using all the available information about the reservoir to develop better understanding of the reservoir. This process is inherently interdisciplinary and requires understanding of all the disciplines. Although soft skills are important in working in an interdisciplinary team, this course concentrates on the hard skills required to develop a realistic reservoir description.

Starting with collecting information and assessing the need for additional data, the course will cover all the topics from structural and geological modeling, estimation of reservoir petrophysical properties using geostatistical tools, upscaling to simulator model and finally, proper history matching and future predictions in the presence of uncertainties.

This course is important to reservoir modelers involved in any phase of the description work. This is intended to expose various geoscientists and engineers to the entire process of integrated reservoir description and the geostatistical tools that can be used to achieve the goals. The course will develop improved appreciation of the other disciplines' needs as well as the necessity of the feedback during the integration process. The instructor of this course is willing to accept examples from your company for analysis in the class as one of the demonstration exercises. Please contact PetroSkills for a list of the information and support data required, as well as the necessary lead-time.

This course covers both conventional and unconventional reservoirs.

"The course was very well taught. I though the explanations were clear and the reviews helpful to retain what I've learned." - Team Lead - Engineering, Canada

"The professor gave theories together with practical examples using commercial software. I got basic understanding of static and dynamic modeling. I feel very satisfied." - Petroleum Geologist, South Korea

Target Audience

Geologists, geophysicists, engineers, petrophysicists or others involved in reservoir modeling.

You Will Learn

Participants will learn how to:

- Develop the work flow in the reservoir integration process
- Evaluate and quantify uncertainties in various sources of data
- Build a geo-cellular model using geostatistical tools and upscale it to capture essential heterogeneities
- Develop criterion for objective history matching
- Utilize seismic data in different phases of reservoir description and integrate them using geostatistics
- Use various description tools in a judicious manner
- Use public domain software to apply many of the techniques discussed in class

Course Content

- Basic statistical principles
- Spatial modeling
- Structural modeling
- Estimation of properties at well locations
- Conditional simulation
- Facies/rock type modeling
- Petrophysical properties simulation
- Ranking of realizations
- Construction of simulator input model
- History matching
- Future predictions and quantification of uncertainty

Product Details

Categories: Upstream

Disciplines: Reservoir Engineering

Levels: Intermediate

Product Type: Course

Formats Available: In-Classroom

Instructors: PetroSkills Specialist Asnul Bahar Mohan Kelkar

In-Classroom Format

9 Dec '24 13 Dec '24 - | Course | In-Classroom (in Houston) $4,810.00
