Online In-Service Training and Support Program

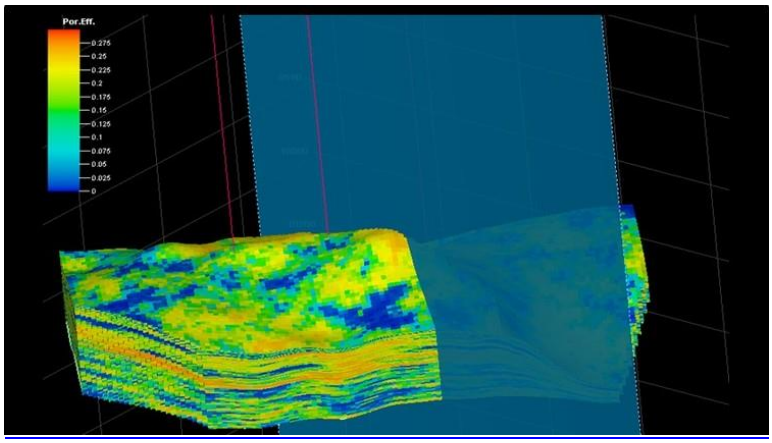
Online Short Course
@ any time @ any place

Technical presentations
Workflows - Petrel Videos
Hands on Exercises – Case Studies

3D Reservoir Modeling and Data Integration

Oil and gas reservoir 3D geological modeling techniques and methods are given step by step in this course.

Click for introductory video



Removing the geographical boundaries!

Time for a new world!
Completely out of box approach

Please contact for any inquiry: serdar@grenergyllc.com

Course Description

In this short course, concept and the methodology of data integration in geological modeling are addressed with practical applications. Integration includes incorporation of geological information, seismic, petrophysical and dynamic data. Practical methodology of the best practices and troubleshooting of 3D reservoir characterization in the light of geo-statistics are covered in each step of geo-modeling processes.

Process of data handling, importing, editing, quality controlling, quantitative analysis and constraining the results of modeling algorithms in the steps of picking, fault modeling, gridding, generating horizons, zoning, layering and property modeling are captured by using different tools and plots.

Instructor Biography

Serdar Kaya is a senior consultant with an extensive experience in reservoir modeling/characterization and various technology development. He has patented several technologies, published several journal and conference papers about innovative modeling approaches for challenging issues. He has also successfully trained, mentored and coached many geologist and engineers in reservoir modeling. He holds both MSc and BSc degrees in Petroleum Engineering. His achievements and high level of technical competence are a reflection not only his engineering knowledge but also high level of personnel commitment and drive.

Course Goal

- Data quality check and data integration
- Building structural and stratigraphic models
- Building up a complete 3D geocellular model
- Depositional and petrophysical facies modeling
- Stochastic and deterministic property modeling
- Uncertainty mitigation by generating realizations or scenario, ranking
- Although the course is designed software independent. Throughout the course Petrel (Schlumberger) materials are given

Course Content

- Section1:**Introduction of 3D geocellular modeling**

  Learn basics of 3D framework and property, understand required data for modeling steps, learn important steps of data processing
- Introduction
- Introduction to a software platform for modeling (PETREL)
- Petrel video: Initialize project, upload well head
- Data Input
- Data QC for data loading
- Petrel video: Loading log and core data
- Data Editing
- Petrel video: Loading Formation Markers
- Data Review, Data Quality Check
- Quiz: Data Input, QC, Analysis, Validation
- Section2:3D Grid - Framework Modeling

  In this section, 3D grid, framework modeling is covered. All the steps and key points from well picking up to fault modeling and gridding are given. Final step of framework modeling is grid generation
- Subzonation
- Well Correlation

- Fault Modeling
- Horizoning
- Petrel video: Surface operation, Horizoning
- Layering
- Pillar Gridding
- Petrel video: Gridding and 3D geocellular modelling
- Geometrical Modeling
- Section3:**Property Modeling**

  In this section, 3D grids are filled with properties of porosity, permeability, facies, saturation and other properties
- Facies Modeling
- Property Modeling
- QC Steps of Modeling Results
- Section4: **Volumetric Calculation, Uncertainty Analysis**

  In this section, methods of volumetric calculations and uncertainty analysis are covered.
- Volumetric Calculation
- Uncertainty Analysis
- Geomodelling Troubleshooting

***Online* In-Service Training and Support Program:**
In-Service Training Program provides high-quality training opportunities for the trainee while working and producing results for his/her organization.

Our goal is to engage trainee to the practical course material as much as possible in order to broaden their knowledge, improve their skills and attitudes in technical interaction.

Culture of continues development would flourish during this process.

Using state of the art technologies to deliver course materials and interaction with the trainee enhance the online skills.

Where and when are the classes held?

Typically online courses can be covered at any time and at any place with internet connection. Trainee can follow courses online and interact with chatting/conferencing box to the instructor.

All the courses are recorded and can be accessed later on by the attendees during registration period.

Who teaches the classes?

Our instructors are top-notch! Highly qualified individuals with a love for teaching lead each class. Instructor names and biographies are published with course outline. We reserve the right to make instructor substitutions when necessary without notification.

How does the registration process work?

Each course is announced in advance for the availability in online system. Seat requests from across the world are combined and the course material are provided after registration.

Each company can request course access as many trainee as they need, even if the total trainee number will exceed the capacity of request handling. At the end of registration period, the trainee access will be confirmed

How are classes paid for?

One Transfer Invoice is mailed to each participating company or individual at the conclusion of the registration period and asked online payment.

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