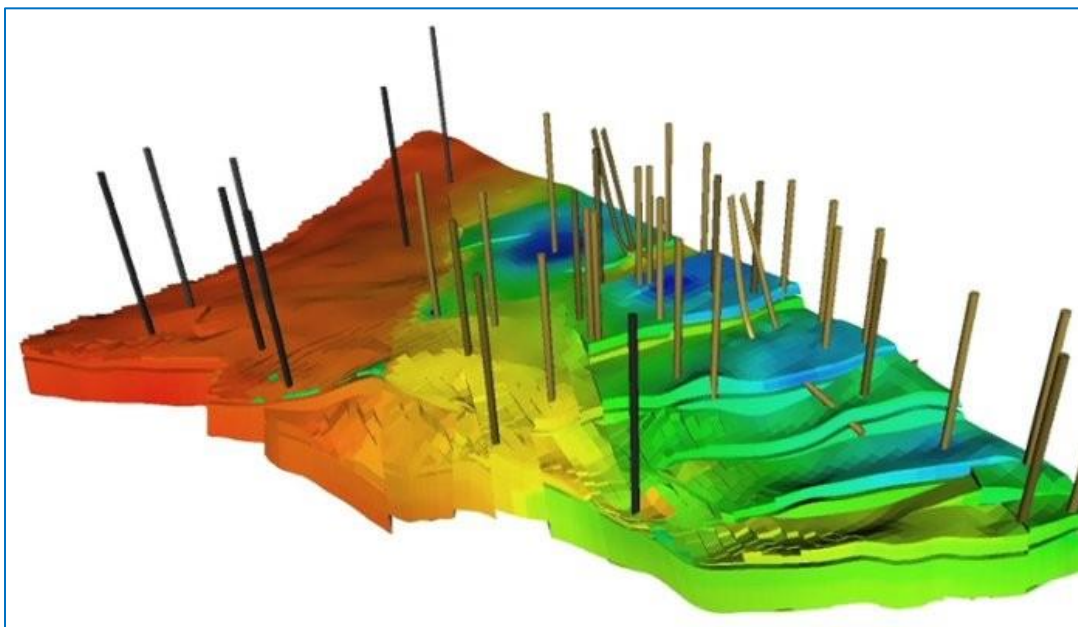




DE321: Reservoir Characterization and Modelling Workshop

Training Description:

This training course is a practical about the design and construction of static reservoir models. It translates theoretical background into practical model construction using commercial modelling software. Constructing a reservoir model includes the difficult task to integrate data from very different sources like seismic, well, core and wireline information as well as sedimentological concepts and facies interpretations. This training course will show how modern reservoir modelling practice handles such different viewpoints from geoscience and engineering.

Throughout the course a reservoir will be characterised in terms of structure, sedimentology and related petrophysical properties and develops these into static reservoir models. Geostatistics and data integration across the key disciplines will set the baseline.

This training course will focus on state-of-the-art concepts, practical fundamentals and common pitfalls when using applications in integrated computer-based modelling. It aims to provide a complete picture in reservoir modelling which starts already at the grid design. The bulk of the course will be used to convey detailed univariate and multivariate statistics, geostatistics and their applications. The modelling part will include variogram based and non-variogram based deterministic and stochastic techniques and show how to apply these for populating facies and properties like porosity, permeability or saturation.

During this training course, participants will construct a static geomodel, which is ready to be initialised as simulation model.

Training Objectives:

By the end of the training, participants will have confidence on setting up a reservoir modelling strategy and operating a reservoir modelling software package through all steps of model building. Participants will gain an in-depth understanding of:

- ✓ Showing the methods and benefits of integrating geological, geophysical, petrophysical and engineering data into static reservoir models
- ✓ Introducing state of the art deterministic and stochastic modelling techniques, demonstrating their application and outcomes
- ✓ Gaining skills on making realistic assumptions of reservoir parameters and the associated spread of model uncertainties
- ✓ Discussing the full workflow from data input and analysis through modelling and upscaling results into a model ready for flow simulation

Training Designed for:

This course is intended for geologists, geophysicists or petroleum engineers seeking to gain an understanding and practical knowledge in reservoir characterisation, geostatistics and modelling.

Training Requirement:

“Hand’s on practical sessions, equipment and software will be applied during the course if required and as per the client’s request.” (This hands-on, highly-interactive training includes simulator, real-life case studies and exercises).

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client's learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Program:

FIVE DAYS:

- ❖ Introduction to reservoir characterisation
- ❖ Reservoir metrics and related variable types
- ❖ Generation of a reservoir model
- ❖ Grid design and structure determination
- ❖ Structure model exercise
- ❖ Geostatistics and spatial data analysis
- ❖ Statistics exercise
- ❖ Variograms, Kriging basics and methods, Co-kriging
- ❖ Kriging exercise
- ❖ Stochastic simulation methods for discrete variables (indicator simulation, TGS, Boolean, MPS, etc.)
- ❖ Simulation methods for continuous variables (SGS, GRFS, bivariate, etc.)
- ❖ Facies, properties and fracture modelling strategies
- ❖ Exercise on stochastic simulation
- ❖ Volume estimates and uncertainty assessment
- ❖ Upscaling to coarse grid models
- ❖ Exercise on volumes and upscaling
- ❖ Course Conclusion
- ❖ POST-TEST and EVALUATION

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions
- Pre and Post Test

Training Certificate(s):

CMCT Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

TBA as per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:

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