6TH – 10TH APRIL 2015
ADVANCE RESERVOIR SIMULATION TECHNOLOGIES

Dynamic reservoir models are important when investigating reservoir behaviour, optimizing reservoir performance, designing complex wells, estimating uncertainties and providing the basis for risk management. New developments, such as unstructured gridding, combined with new simulation techniques, eliminate most of the drawbacks of conventional simulation methods and make prediction more reliable.

This 5 days course on **Advance Reservoir Simulation Technologies** will cover various subjects in reservoir simulation, including structural modelling, gridding, well design, history matching and uncertainty analysis. It will equip you with knowledge of how these tools are very essential in reservoir managements and future development decisions.

Unique features of this training:
Participants will learn about various algorithms, concepts and possible uses of reservoir simulators. With an emphasis on practical application, you will learn how to derive fluid flow equations, selecting numerical methods and solve the equations. Practical examples and case studies that show how to make a field scale simulation models will also be shown.

Register Now!
For full details on the programme principal facilitator and to register, do not hesitate to contact us.

E-mail: enquiry@petro1.com.my
Tel: +603-7727-3952
www.petro1.com.my

PETRO1
TECHNICAL CONSULTANCY FOR OIL & GAS INDUSTRY

Reservoir Division

Topic Outline

- History and classification of reservoir simulators
- Review of fluid properties for simulation, black oil properties, equation of state modelling, modified black oil models
- Rock properties and saturation functions
- Upgridding and upscaling
- General purpose formulation and discretisation methods used for black-oil and EOS compositional simulators
- Gridding- structured and unstructured gridding approaches, cartesian grids, corner point grids and voronoi grids
- Modeling structural elements in simulation, vertical and sloping faults, channels, etc
- Representing wells in the reservoir simulation model
- History matching
- Compositional reservoir simulation
- Simulation of fractured reservoir, numerical model, matrix-fracture exchange, recovery processes
- Geo-statistic and reservoir simulation
- How to make a simple simulator?
- Case studies: synthetic simulation models
- Case studies: field scale simulations

Exercises:

- Example for an oil reservoir (black oil simulation model)
- Example for dry gas reservoir (black oil simulation)
- Example for gas condensate reservoir (compositional simulation)
- Example for a fractured reservoir (dual porosity- dual permeability simulation)