



## Carbonate Sedimentology

- Introduction  
Characteristic of carbonate facies and controls on their deposition
- Carbonates Rock Properties  
Texture  
Composition  
Sedimentary Structures
- Carbonate Components  
Non-skeletal and skeletal components of limestones; criteria for their identification and environmental significance
- Carbonate Rocks Classification  
Review of common carbonate classification schemes;
- Depositional Environments, Facies and Depositional Systems of Carbonates  
Typical sedimentary textures and structures and their significance for interpreting sedimentary environmental
- Carbonate Diagenesis  
Diagenetic environments; Major Diagenetic Processes, Sediment Compaction, Cement Precipitation, Dissolution of Carbonates, Dolomitization  
Controls on carbonate diagenesis;  
Porosity development/modification
- Carbonate Pore Classification  
Porosity in carbonates  
Porosity Classifications  
The Archie Classification  
The Choquette–Pray Classification  
The Lucia Classification
- Hydrocarbon Systems in Carbonates  
Carbonate Sand Plays, Organic Buildup Plays, Muddy Dolomite / Chalky Limestone Plays.

### **Learning Outcomes**

Upon completion of this course, participants will have a thorough understanding in reservoir rocks depositional systems and sediment formation and accumulation. Participants completing this course will be able to analyse the sedimentology of clastic and carbonate rocks, clastic and carbonate minerals, grain types, rock textures and the different environments in which they form. They can interpret reservoir facies, diagenetic changes and the evolution of their pore systems and potential reservoir quality. They can compare various reservoir types using selected case studies and explain the different schemes that are used to classify different reservoir rock types.

### **Who Should Attend?**

This course is specially designed for professionals involved in reservoir characterization. It is highly applicable for individuals from all subsurface disciplines. These include:

- Geophysics,
- Petrophysics,
- Geology,
- Geomodeling,
- Reservoir, and petroleum engineering