

Peter Gutteridge, PhD, FGS

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Career Outline

- Employment:**
- 1990 – present: Cambridge Carbonates Ltd., UK:** Consultant sedimentologist and director, working on proprietary and multi-client projects in the oil and geothermal industries.
 - 1985 – 1990: Thames Polytechnic:** Senior lecturer in sedimentology, stratigraphy and petroleum geology.
 - 1983 – 1985: Britoil, UK:** Production geologist; wellsite geologist; regional exploration.
- Core skills:**
- Carbonate sedimentology, sequence stratigraphic and diagenetic expertise.
 - Regional knowledge of Mediterranean, Middle East, Mexican, south Atlantic margins and SE Asia carbonate reservoirs.
 - Key experience in Palaeozoic carbonates and evaporite systems.
 - Skilled interpreter of karst, breccia and fracture systems in carbonates.
- Education:**
- 1979 – 1983:** Ph.D.: Sedimentology of the Eyam Limestone Formation (Dinantian), Derbyshire and the origin of carbonate mud mounds. (*Manchester University*).
 - 1976 – 1979:** B.Sc. (Hons.) Geological Sciences (*Leeds University*)

Professional Experience

1990 – present: Geologist and Director, Cambridge Carbonates Ltd., UK.

- Director responsible for scoping, costing and project management carbonate studies applied to exploration and reservoir characterisation programs involving sequence stratigraphy, core logging, microfacies and diagenetic studies and external training.
- Experience in Petrel and CoreCAD software.
- Carbonate exploration studies: Exploration experience covers the whole range of Palaeozoic, Mesozoic and Tertiary carbonate systems using thin section, core, wireline log, outcrop, to seismic-scale data. These studies have been aimed at assessing new venture opportunities, the assessment of acreage using outcrop and sub-surface data and the study of outcrops as play analogues to analyse different elements of geological risk in play types. Experience includes:
 - Regional studies using sedimentological data, log-based sequence stratigraphy, biostratigraphic and seismic data to incorporate new data into regional geological models. Studies include Pre-Cambrian, Palaeozoic, Mesozoic and Tertiary carbonates from the Arabian plate, Norwegian and Russian Barents Shelf, geothermal potential of the Netherlands and the UKCS.
 - Studies of a wide variety of karst plays and reservoirs using core, log response, drilling data and outcrop. These are aimed at recognising and characterising karst reservoirs and plays in carbonates. Karst systems studied include late Palaeozoic carbonates of the UKCS, Netherlands and the Barents Shelf. Cretaceous karst systems in the Middle East, Mesozoic carbonates in Mexico. Also quantitative studies on outcropping Cretaceous karst systems in Italy and sub-surface Palaeozoic karst in the Ukraine.

- Pre-salt and other lacustrine carbonate systems: extensive microfacies analysis of pre-salt carbonates from Brazil and African sides of the south Atlantic margins including the development of sedimentary facies and diagenetic models for lacustrine carbonates.
- Carbonate – salt systems: including a regional study of SE Mexico to evaluate the interaction between mobile salt systems and carbonate reservoirs in Jurassic dolomite and Cretaceous carbonate breccias and platform carbonates. Controls on sedimentology, cyclicity and reservoir development by syn-depositional salt movement and mixed clastic-carbonate systems, offshore Congo. Distribution and controls on the reservoir quality of carbonates associated with salt withdrawal and rafted carbonates from North Sea Basin and Oman.
- Carbonate reservoir studies: Projects undertaken range from advising on production-sharing and farm-in opportunities to fully integrated reservoir studies that produce static and dynamic models and to solve production problems including:
 - Diagenetic and sedimentological studies of Jurassic oolitic fields of the Tabasco Litoral and Tampico-Misantla basins to build static models for field re-activation, placement of development wells and water injection.
 - Description of karst and brecciated Cretaceous carbonate reservoirs of the Cantarell and other fields in offshore and onshore SE Mexico. In these studies, were used to determine conditions of porosity preservation and oil migration within the reservoir. Macro- and matrix pore systems were characterised by image analysis and mapped to produce unit cell data for modelling.
 - Description of carbonate breccia reservoirs including Zechstein collapse breccias in the Argyll field (North Sea) for the Ardmore re-development using core, thin section and wireline log data and information on drilling behaviour, mud losses and production data.
 - Using diagenetic studies such as fluid inclusions, isotopic studies to solve production problems.
 - Defining reservoir flow units and their architecture in collapse, karst breccia and fractured carbonate systems by integrating outcrop, subsurface and production data. E.g. Mesozoic carbonate breccias and hydrothermally fractured Jurassic dolomite of SE Mexico, Zechstein collapse breccia reservoirs, karstic reservoirs in southern Italy, karst and hydrofractures from the Dinantian of Holland and fractured carbonate – evaporite gas reservoirs in the Middle East.
 - Assessment and reservoir description for farm-in purposes including Tertiary and Cretaceous carbonates in the Arabian plate and Tertiary carbonates on the Mumbai High. Based mainly on information supplied in datarooms with input from real data including core, logs and seismic.

1985 – 1990 Senior Lecturer, Thames Polytechnic

- Taught first degree and MSc courses on sedimentology, petroleum geology and stratigraphy.
- Research on Dinantian carbonate platforms their sequence stratigraphy and carbonate facies.

1983 – 1985 Geologist and Sedimentologist Britoil

- Production geology of the Thistle and Etrick Fields and exploration of West of Shetlands.
- Well site geologist of exploration and appraisal wells in the North Sea and West of Shetlands.

Professional Affiliations

- Geological Society of London
 - American Association of Petroleum Geologists
 - Institute of Directors
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Other relevant skills

Basic Spanish.