



CSL – Center for
Carbonate Research

2. Field Seminar

HETEROGENEITY OF BANK-MARGIN OOID SANDS Depositional Models and Reservoir Analogs Exumas, Bahamas

June 24 – June 29, 2012

Leaders: Donald F. McNeill, Gregor P. Eberli, and Paul M. (Mitch) Harris

Location: Exuma Cays along the western margin of Exuma Sound, Bahamas. This windward margin offers the opportunity to examine the facies relationships and heterogeneity of a grainstone dominated, high-energy carbonate platform margin. We will visit by boat 14 different settings illustrating the various environments. The seminar begins and ends **Nassau** on New Providence Island, **Bahamas**.

Objectives:

- 1) **illustrate the dimension of the large-scale exploration-scale facies belts** of a windward margin, and
- 2) **examine the smaller, reservoir-scale heterogeneity** within these grainstone facies.

Who should attend: Exploration and production geoscientists and reservoir engineers working in grainstone reservoirs or on platform margin settings.

Seminar Content: The seminar will illustrate the exploration-scale facies relationships and dimensions as well as reservoir-scale features in a high-energy platform margin including the spatial distribution of the sub-environments, unconformities, sub-aerial exposure horizons.

This windward margin is a complicated arrangement of sediments surrounding the Pleistocene and Holocene islands. Cores through the Pleistocene strata document the vertical juxtaposition of bank-margin lithofacies that is controlled by oscillations of sea level within the latest highstand. We will discuss the implications for reservoir heterogeneity of these sub-orbital sea-level fluctuations. The modern environment displays the sedimentary products that are produced by the physical and biological processes along the bank margin. In particular, we will study the accumulation of sand in tidal channel and tidal deltas and examine the various sub-environments with differing grain-composition and sedimentary structures. Karstified eolian islands, dunes, and Pleistocene outcrops will illustrate the influence of meteoric diagenesis on the bank margin deposits. The islands will also serve as overview points for viewing the dimensions of the various environments. Corals and stromatolites in normal, open marine environments and tidal channels will display the location of the reef building communities in these high-energy environments.



Fowl Cay tidal inlet between Pleistocene islands

Costs: \$3,900.-, Includes all ground transportation, boat, meals, and course notes with virtual field seminar CD.

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