



Dear Colleagues,

The annual review meeting of the CSL – Center for Carbonate Research will be held **October 14–15, 2013** in Miami at the Rosenstiel School of Marine and Atmospheric Science on Virginia Key. During the annual review, we will report on the projects outlined in the prospectus and that are listed in the attached tentative program.

This year's post-meeting **fieldtrip** will be to the windward margin along the **Exuma Cays, Bahamas**, and focuses on the stratigraphic complexity in the Holocene and Pleistocene deposits that is caused by antecedent topography and oscillations of sea level during the last sea-level highstand. In addition, the Exumas are the only place with open marine stromatolites in a high-energy environment. The description of the fieldtrip is attached. The cost of the fieldtrip is \$3900.-.

ANNUAL REVIEW MEETING

October 14-15, 2013

Please arrive in Miami by the evening of October 13th. We have reserved a block of rooms for the nights of October 13th & 14th at the University of Miami rate of \$159.00 single/double occupancy at the Sonesta Bayfront Hotel Coconut Grove, 2889 McFarlane Rd, Coconut Grove 33133.

We have only reserved a block of rooms – **YOU MUST MAKE YOUR OWN RESERVATION.** You may make your reservation online using the group code:

- To book online reservations please go to <https://www.sonesta.com/coconutgrove/>
- Select the dates and number of guests on left-hand side of screen
- Click 'Promotional/Group Code'
- Under 'Group' enter code: **1014RSMASC**
- Click 'check availability & rates' and choose room/suite type and rates.

- If you prefer to call in your reservation; you may do so by calling **1-800-SONESTA** and:
 - Make reference to the **UM - RSMAS - CSL - Annual Review Meeting**
 - Guests must let the reservations agent know the Group Code: 1014RSMASC

The deadline for making your reservation is Tuesday, October 1, 2013 before 5:00 PM. After Tuesday, October 1st, all rooms that have not been reserved will be returned to the hotel's general inventory and will be accepted on a space and rate available basis. There will be a daily service fee of \$5.00 per person, per night, which includes hotel housemaid and bellman services. This fee is separate and distinct from the room rate and taxes. Accommodations will be available at 3:00 pm on arrival day and reserved until 12:00 pm on departure day.

The meeting will begin at 8:30 AM on Monday, October 14th in the seminar room at the University of Miami's Rosenstiel School of Marine & Atmospheric Science (RSMAS), 4600 Rickenbacker Causeway. The seminar room is in the Science/Administration Bldg., Rm. 103 (follow signs). **We will not be providing transportation to the meeting.** The taxi ride from the hotel to RSMAS is about 15 minutes. For taxi/car pooling please meet in the lobby of the Hotel at 8:00 AM. The review meeting will end around noon on Tuesday, October 15th. For those remaining in Miami after lunch, you are welcome to join us for an informal examination of a new core boring from the prograding Plio-Pleistocene reef margin of the southern Dominican Republic.

The field trip participants will fly to Nassau, Bahamas, Tuesday afternoon (October 15th) and meet at the British Colonial Hilton Hotel in downtown Nassau. On the morning of October 16th, the participants will board the R/V Coral Reef II and depart for the Exumas. There is limited space on the boat and we are in the process of chartering an additional boat to accommodate as many participants from the various companies.

The fieldtrip will end around noon October 19th in Nassau. Participants will board mid-afternoon flights to Miami and connecting flights from there.

Registration:

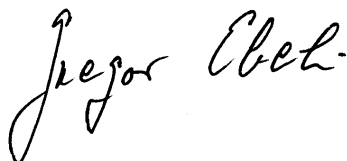
Please register for the meeting and the fieldtrip by e-mail or phone as soon as possible to Karen Neher. Her email address is kneher@rsmas.miami.edu and her phone number is (305)421-4684. By registering for the field trip you agree to pay the field trip fee.

Registration deadline for the fieldtrip is September 11, 2013.

Registration and hotel deadline for the meeting is October 1, 2013.

We hope to see many of you at the meeting.

Best regards,

A handwritten signature in black ink that reads "Gregor Ebel". The signature is written in a cursive style with a large initial 'G' and a long horizontal stroke at the end.

ANNUAL REVIEW TOPICS

Unconventional Reservoir Projects

Outcrop Analogs for the Quintuco - Vaca Muerta System – Guidelines for Conventional and Unconventional Exploration

Michael Zeller, Ralf J. Weger, Jose L. Massaferro, and Gregor P. Eberli

Sequence Stratigraphic Control on the Source Rock Quality in the Vaca Muerta System, Neuquén Basin, Argentina

Max Tenaglia, Michael Zeller, Gregor P. Eberli, and Peter K. Swart

Forward Modeling Acoustic Properties from Unconventional Mineral Combinations

Ralf J. Weger, Michael Zeller, and Gregor P. Eberli

Carbonate Systems and Reservoir Characterization

A) Deep-Water Carbonates

Morphology and Sedimentation Processes on the Slope of Great Bahama Bank - A Multi-Institutional Research Effort

Gregor P. Eberli, Mark Grasmueck, Deniz Kula, Dierk Hebbeln, Christian Betzler, Thierry Mulder, Paul Wintersteller, Jara S.D. Schnyder, Thomas Lüdman, Emmanuelle Ducassou, and shipboard participants

Anatomy of Slope Channels, Debris Fields and Slope Scars: Great Bahama Bank

Gregor P. Eberli, Paul Wintersteller, Dierk Hebbeln, Deniz Kula, and Jara S.D. Schnyder

Current Influence on Slope and Basin Sedimentation

Christian Betzler, Thomas Lüdman, Gregor P. Eberli, and shipboard participants

Tsunami Generation along the Western Great Bahama Bank by Submarine Slope Failures

Jara S.D. Schnyder, James T. Kirby, Fengyan Shi, Babak Tehranirad, Gregor P. Eberli, Thierry Mulder, and Emmanuelle Ducassou

Slope to Basin Geomorphology and Processes along Southwestern Great Bahama Bank

Andrew Jo, Gregor P. Eberli, Donald F. McNeill, and Mark Grasmueck

B) Shallow-water Carbonates

Characterization and 3D Geo-Cellular Modeling of Meso-Scale Heterogeneities of the Miami Limestone: A potential analog for Carbonate Reservoirs

Marcelo Blauth, Gregor P. Eberli, Mark Grasmueck, Donald F. McNeill, Francisco E. Cruz, and Rosely de A. Marcal

Great Bahama Bank – Evaluating Water-Depth Variation and Mapping Depositional Facies on a “Flat-Topped” Isolated Carbonate Platform

Paul M. (Mitch) Harris, Sam J. Purkis, James Ellis, and Peter K. Swart

Fertilization of the Bahamas by African Dust: A New Mechanism Driving Carbonate Precipitation

Peter K. Swart, Amanda Oehlert, Greta MacKenzie and Gregor P. Eberli

Suborbital Sea-Level Oscillations during the Last Interglacial Highstand (MIS 5e): Evidence from the Bahamas

Kelly L. Jackson, Gregor P. Eberli, Donald F. McNeill, and Paul M. Harris

Depositional and Diagenetic Controls on Fluid Flow Properties of Plio-Pleistocene Shallow-Water Carbonates of the Dominican Republic

Viviana Díaz, Donald F. McNeill, James S. Klaus, Peter K. Swart, and Gregor P. Eberli

First Results of Facies, Ages and Paleoecology of Cores through the Pleistocene Reefal Limestones of the Dominican Republic Project:

James S. Klaus, Donald F. McNeill, Viviana Díaz, Peter K. Swart, and Gregor P. Eberli

Geochemical Projects

Understanding Dolomitization in the Arab-D Using Clumped Isotopes

Peter K. Swart, Monica M. Arienzo, Sean T. Murray, and Deniz Atasoy

New Insights into Dolomitization Using Clumped Isotopes

Sean T. Murray, Monica M. Arienzo, and Peter K. Swart

Speleothems as a Model System for the Study of Clumped Isotopes and Fluid Inclusions

Monica M. Arienzo, Peter K. Swart, Hubert B. Vonhof, and Sean T. Murray

Geochemical Evidence of a Mississippian Anoxic Event from Carbon and Sulfur Isotopes?

Amanda M. Oehlert, Peter K. Swart, Gregor P. Eberli, Samantha Evans, and Dave Katz

Site Characterization and Post-CO₂ Injection Analysis at Teapot Dome, WY

Caitlin Augustin and Peter K. Swart

Geochemical Monitoring of Active CO₂ Injection for Enhanced Oil Recovery

Ben Galfond, Peter K. Swart, Dan Riemer

Microbial Signatures in Ooids from the Bahamas

Mara R. Diaz, Peter K. Swart, Quinn Devlin, Amanda M. Oehlert, Amel Saied, and James S. Klaus

Microbial and Geochemical Characterization of Carbonate Mud Islands from Florida Bay

Alan M. Piggot, James S. Klaus, and Peter K. Swart

Petrophysics and (Near-Surface) Geophysics

The Impact of High-Density Spatial Sampling versus Antenna Orientation on 3D GPR Fracture Imaging

Pierpaolo Marchesini and Mark Grasmueck

Facies Geometry and Regional Correlation of Pleistocene Reefal Limestones: A Low Frequency 2D GPR Survey on Rough Terrain

Mark Grasmueck, Donald F. McNeill, Viviana Díaz, James S. Klaus, and Gregor P. Eberli

Pore Size Distributions and Electrical Resistivity in Carbonates and Shales

Jan H. Norbistrath, Ben Laurich, Guillaume Desbois, Janos Urai, Gregor P. Eberli, Ralf J. Weger, and Klaas Verwer

Petrophysical Properties and Pore Structures of Microbialites (Stromatolites, Travertine and Tufa)

Gregor P. Eberli, Ralf J. Weger, Jan Norbistrath, Giovanna della Porta, and Pedro Robledo

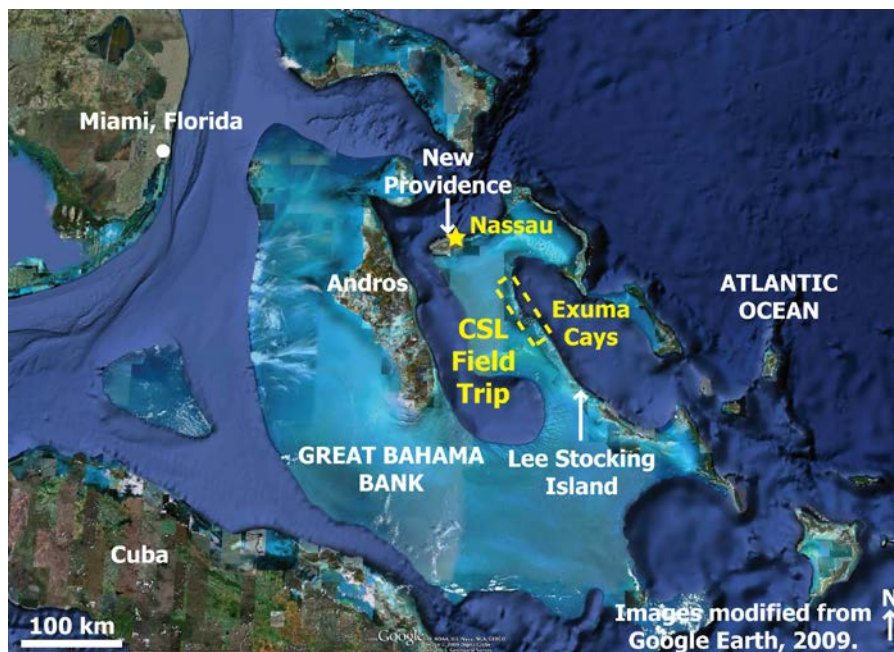
POST MEETING FIELD TRIP

Stratigraphic Complexity of Bank Margin Ooid Deposits, Exumas, Bahamas October 15 – 19, 2013

Why go to the Exumas?

There are three reasons to visit the windward margin of the Exumas. First, there is growing evidence that sea-level oscillations of a few thousand years duration within sea-level highstands have a dramatic impact on shallow-water carbonate deposition. The Pleistocene deposits in the Exuma Cays are an example of how this mechanism introduces stratigraphic complexity and lateral heterogeneity in high-energy marginal environments. Second, the thereby produced complex antecedent topography is partly inundated by the Holocene transgression, adding further complexity from lateral accretion of sedimentary bodies. Third, the Exumas are the only place where modern open-marine stromatolites occur in various depositional environments.

The goal of the field trip is to illustrate the geologic record of this interplay between orbital and suborbital sea-level fluctuations, antecedent topography, and the co-existence of stromatolites and corals in bank margins deposits. To reach this goal we will examine short cores that were drilled along the Exuma Cays and visit key outcrops along the margin.



Logistics:

Participants fly to Nassau on Tuesday afternoon. Participants are responsible for booking their own roundtrip ticket from Miami to Nassau. Bahamas Air or American are the two options. Together they have three flights leaving between 4–6 pm. Please take a taxi to the British Colonial Hilton, where the participants will stay overnight. We negotiated a special rate of \$139.00 that will total \$191.40 after taxes

and fees. We will make the reservations for you but you will be responsible for paying the bill at checkout.

The fieldtrip ends on Saturday October 19, 2013, at the Nassau International Airport at 12:30pm. You will clear US customs and immigration in the Bahamas at check-in. Thus you will need a bit more time than usual boarding the plane but save time for immigration in Miami. Please book your return ticket accordingly.

Costs:

Field trip costs are \$3900.-. This includes all ground transportation, boat, snorkel equipment, shipboard accommodations and meals, and course notes. Not included in the fieldtrip costs are the flights to and from Nassau, Bahamas, and dinner and hotel (British Colonial Hilton) in Nassau.

Itinerary and field trip stops:

Tuesday

PM Flight to Nassau

Wednesday

AM Transit from Nassau to Exuma Cays Land and Sea Park

PM Rock Dundas: Pleistocene (MIS 5e) Reef and Cave of MIS 9/11

Bell Island: MIS 5e exposure of beach, back beach storm ridges, and dunes

Thursday

AM Cambridge Cay: Holocene transgression

Little Halls Pond: Stromatolites or Aquarium Reef (tide dependent)

PM O'Brien's Cay: Pleistocene MIS 5e eolianite and transition to older Pleistocene (Core OB1)

MIS 5e/MIS 1 sequence boundary

Retreating Holocene dune

Friday

AM Warderick Well's South Anchorage: stromatolites

Warderick Well's Island: overview of margin

PM Shroud Cay: tidal delta

Saturday

AM New Providence Platform, Clifton Pier: MIS 5e subtidal to beach transition and elevation of last interglacial sea level

Frank Watson Road: Caliche separating two MIS 5e subtidal units

PM Field trip ends at 1 pm at Nassau International airport