Caribbean Basins, Tectonics, and Hydrocarbons Phase III Principal Investigators: Paul Mann, University of Houston, USA & Alejandro Escalona, University of Stavanger, Norway http://cbth.uh.edu

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What's New with the CBTH Project in Houston, Texas and Stavanger, Norway

2013 has been a productive year for the CBTH project which now supports 27 staff and students at the University of Houston and 7 staff and students at the University of Stavanger in Norway.



CBTH students, staff, and sponsors at the 2013 CBTH Year-End Meeting.

CBTH Year-End Meeting

The CBTH project held its annual sponsor meeting on Friday, September 20, 2013 at the University of Houston to report on progress for Year 3, Phase III (Sept 1, 2013-August 31, 2014). We'd like to thank our sponsors and attendees who made this year's meeting a success. Participants included 19 members of the UH CBTH project, 3 members of UiS CBTH project in Stavanger, and 38 representatives from 14 sponsoring companies. In case you missed the event, the program of talks presented is provided at this link: http://cbth.uh.edu/2013YEM.php



New sponsoring companies of the CBTH consortium

We would like to welcome the newest sponsoring companies to CBTH group: Murphy Oil (sponsor no. 18) and Premier Oil (sponsor no. 19).

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What's New

Earth Magazine article on Vargas and Mann tectonics research in Colombia

The November 2013 issue of Earth Magazine features an article on Vargas and Mann's recent BSSA paper regarding Colombian earthquakes. To read the article, visit http://www.earthmagazine.org/article/slab-tear-explains-perplexing-colombian-earthquake-activity

Targeted Internships for Summer 2014

During the summer, we encourage our CBTH graduate students to seek out targeted internships in the oil and gas industry focusing on their Master's or Doctoral study areas. This type of internship is beneficial both for the student by expediting their progress towards graduation, improving the quality of their thesis research through increased exposure to industry-based mentors, and to the company by taking full advantage of the CBTH knowledge database. If your company would be interested in coordinating a targeted internship with a CBTH student, please contact Dr. Paul Mann (pmann@uh.edu) in Houston or Dr. Alejandro Escalona (alejandro.escalona@uis.no) in Stavanger. Examples of past targeted summer internships sponsored by CBTH member companies:

o **Repsol**: Rocio Bernal, Lower Magdalena basin o **Chevron**: Luis Carlos Carvajal, Nicaraguan Rise o **Shell**: Javier Sanchez, Offshore Colombia o **Statoil**: Alex Dale, Bahamas platform

Data Providers

We thank the following CBTH sponsors and affiliated companies who are providing data to CBTH student research projects during 2013:

o Pacific Rubiales (Colombia): Orietta Mata

o ANH, Nicaraguan Energy Ministry, Spectrum (Nicaraguan Rise): Luis Carlos Carvajal

o Trinidad Ministry of Energy, ION (Trinidad offshore): Tricia Alvarez

o Dynamic Data Services (GOM): Murad Hasan

o ANH, ION (Colombia): Rocio Bernal o ANH, ION (Colombia): Javier Sanchez o PGS (Offshore Honduras): Javier Sanchez o BP, ICP-Ecopetrol (Colombia): Carolina Mejia

o Maersk Oil, Univ. Aarhus (Virgin Islands): Patrick Loureiro

o PGS, Spectrum, NSF Marine Seismic Data Ctr. (Nicaraguan Rise): Bryan Ott

o Statoil (Bahamas): Alex Dale

o Pacific Rubiales, Shell (Colombia): Lucia Torrado

o **Spectrum, ION (Brazil)**: Kyle Reuber

o La Cortez Energy (Colombia): Luis Pachon

o Spectrum, ANH (offshore Colombia): Steve Leslie

What's New

CBTH papers on most-read list in AAPG Bulletin

The CBTH project has two of the 50 most read papers in AAPG Bulletin for the period 2001-2013. Most-read rankings are based on full-text and pdf views and are updated monthly:

2/50.

Alejandro Escalona and Paul Mann

Sequence-stratigraphic analysis of Eocene clastic foreland basin deposits in central Lake Maracaibo using high-resolution well correlation and 3-D seismic data

AAPG Bulletin, April 2006, v. 90, p. 581-623, doi:10.1306/10130505037

33/50.

Lisa Bingham, Raúl Zurita-Milla, and Alejandro Escalona

Geographic information system—based fuzzy-logic analysis for petroleum exploration with a case study of northern South America

AAPG Bulletin, November 2012, v. 96, p. 2121-2142, doi:10.1306/04251212009

Roles of CBTH Sponsor Representatives

CBTH Sponsor Representatives serve as the primary point of contact with each company to streamline management of project communications, maintaining password integrity, keeping each company informed of CBTH products, receiving invoices in April of each year, and ensuring that the payment is made by the deadline on August 15, 2014. We also ask that you help us to arrange "targeted internships" and find data for student projects as your company sees fit. We ask that this role be limited to one person rather than a large group to avoid confusion, and please keep us informed if the sponsor representative at your company changes at any time over the course of the year.

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Graduating CBTH Students



Tricia is completing her regional PhD study of the Trinidad offshore region based on seismic tomography and analysis of a regional grid of deep-penetrating seismic lines and wells. Her PhD is a regional synthesis of linkages between tectonics and sedimentation in the SE Caribbean. She is completing her PhD at the UT Bureau of Economic Geology with financial support of CBTH and under the co-supervision of Dr. Lesli Wood at UT and Paul Mann at UH. She will begin a job with ConocoPhillips in May 2014.

Tricia Alvarez

Rocio is completing her PhD study on the Lower Magdalena basin of Colombia in May 2014. Her research included a complete crust to mantle description of the Lower Magdalena basin and the underlying Caribbean subducted slab using earthquake information, gravity, and seismic reflection data. She also integrated information from earthquake seismology to document the Caribbean slab underlying the basin which she mapped in detail. She completed a fall internship with ConocoPhillips in December 2013, and is starting a full-time job with ConocoPhillips in June 2014.



Rocio Bernal

CBTH Undergraduates graduating in Summer 2014











Ian Ambrosius

Kherlen Batbayar Dane Brodsgaard

Naila Dowla Marie de los Santos

From May 2013, this group has made a huge impact on expanding the CBTH database. Most will be continuing their education in graduate programs. Former CBTH undergrad Johnathon Osmond is now an MS student at UT Austin where he is working on carbon sequestration at the UT BEG. Marie de los Santos won the best UH undergraduate poster award for her senior thesis work at the UH-HGS Sheriff Lecture meeting. Out of 58 UH presentations at the Fall AGU meeting, CBTH students Naila Dowla and Kherlen Batibayar were the only two undergrad first author presenters from UH. Three of these undergrads - Batbayar, Dowla, and de los Santos - are working on journal publications related to their undergrad research.

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New CBTH Students at UH and UiS



Steve Leslie

Steve Leslie is joining the project in January 2014, as a new PhD student. He completed his MS degree at the University of Hawaii on seismic data processing and interpretation and has also completed an MBA degree with the University of Texas at Austin. His MS thesis resulted in three publications on the seismic stratigraphy of the moat surrounding the Hawaiian Islands. He will be starting a project on the offshore Colombian margin using Spectrum data.

Patrick is an MS student who joined CBTH in August of 2013. He graduated with his BS in Geology from the University of Wisconsin in 2011. His project will attempt to constrain the tectonic origins of the Virgin Islands Basin, located between Puerto Rico and St. Croix, integrating seismic reflection, earthquake and GPS data from the region. Patrick was a member of the 2013 UH AAPG Imperial Barrel Award Team.



Patrick Loureiro



Jhon Muñoz-Barrera

Jhon Muñoz-Barrera began the MS Program at UiS in August 2013. Jhon received a BS in geology from Universidad Nacional de Colombia at 2004. After that, he worked as an exploration geologist in different basins of Colombia and Panama. His research project will be developed in the eastern foothills of the Eastern Cordillera of Colombia, between the El Yopal and Canare rivers. The objective is to define the types of structural traps related to the Yopal-Borde Llanero fault system. It will allow improving the geological knowledge of the area, providing new ideas, concepts and the possible identification of areas with hydrocarbon prospectivity.

Recent Meetings



AAPG ICE Fall 2013 Meeting

The American Association of Petroleum Geologist and its Latin America Region hosted the AAPG International Conference and Exhibition in Cartagena on September 8-11, 2013. CBTH students Joan Blanco, Luis Carlos Carvajal, Karilys Castillo, and CBTH graduate Lucia Torrado presented their work. To view their abstracts, visit the following page: http://cbth.uh.edu/AAPGICE2013.php

University of Utah sheared margins conference

Paul Mann presented an invited talk on sheared margins in the CBTH area at this meeting organized by ESRI at Snowbird, Utah, on September 30-October 1, 2013. Many of the presentations were focused on the conjugate margin basins of the equatorial Atlantic.

PaleoGIS and Paleoclimate Meeting

Paul Mann and Kyle Reuber of the CBTH project presented at the 3rd Annual PaleoGIS and Paleoclimate meeting, Houston, Texas on November 14, 2013. We appreciate their providing the CBTH project access to their plate reconstruction software, PaleoGIS. Click here for an agenda and a list of abstracts.

European Petroleum User Group Meeting

ESRI held its annual European Petroleum User Group meeting in London, England, November 14-15. Lisa Bingham presented "Geographic information system-based fuzzy-logic analysis for petroleum exploration with a case study of northern South America". This published AAPG Bulletin paper is currently the 33rd most viewed paper in AAPG Bulletin: see listing of most viewed papers here.



American Geophysical Union Fall Meeting, 2013, San Francisco, California

American Geophysical Union fall meeting, 2014, San Francisco, California —Paul Mann, Javier Sanchez, Kherlen Batibayar, Rocio Bernal, Tricia Alvarez, and Bryan Ott presented one talk and five posters on various CBTH topics at this meeting. Click here for a complete list of UH talks: http://www.geosc.uh.edu/news-events/assoc-meetings/AGU/index.php



Upcoming Meetings





AAPG 2014 in Houston, TX

The CBTH group will be presenting at the upcoming American Association of Petroleum Geologists Annual Convention and Exhibition in Houston, Texas on April 6-9, 2014. CBTH students Bryan Ott, Kyle Reuber, Javier Sanchez, Luis Carlos Carvajal, graduate Rocio Bernal, and staff members Murad Hasan and Paul Mann will present their research in poster and oral presentation sessions. Paul Mann and UH collaborators John Castagna and Don van Nieuwenhuise are presenting in the special session on the Mexican GOM organized by former CBTH MS student, Anthony Rodriguez and Claudio Bartolini, who are both at Repsol. CBTH will organize its annual luncheon to bring sponsors up to date on what we are presenting at the meeting along with other project development. To view a list of CBTH abstracts at AAPG 2014, visit the following webpage: http://cbth.uh.edu/AAPG2014.php

Petroleum User Group Meeting

ESRI will hold its annual Petroleum User Group meeting in Houston, Texas, from April 23-25, 2014.



EAGE Annual Conference

Suhail Ahmad, Elisabeth Johansen, and Bereke Kairanov submitted abstracts to present their research at the EAGE conference in Amsterdam, The Netherlands, June 16-19. Acceptance determinations will be announced in the spring.



Thanks to our current sponsors!

As we continue into Phase III of the CBTH project, we would like to thank our company sponsors for their ongoing support in providing data, software, funding, and knowledge to further student research in Caribbean geology. Your support has provided many opportunities for CBTH students to pursue research projects in the region and your efforts are truly appreciated.

