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

CBTH Annual Sponsors Meeting
The CBTH Annual Sponsors Meeting will be held on Friday, September 30, 2016 at the main campus of the University of Houston. Presentations at the meeting will cover progress made during Phase IV, Year 2 along with plans for Year 3 that will start on September 1, 2016. Visit our website for more details on the agenda of the meeting.

New CBTH hire
Nawaz Bugti was hired as a researcher with the CBTH project in March 2016. Nawaz was formerly with Schlumberger and brings a wealth of experience with Petrel and database construction. Nawaz will be coordinating the GIS database at UH including supervising the CBTH undergraduate data base work force.

Updates to CBTH Geomapper
CBTH Geomapper is now back online! The application is accessible through the Sponsor Login page for participating sponsors. For questions contact Nawaz at: s.bugti@gmail.com
What's New

CBTH annual luncheon and poster presentations at AAPG 2016

The CBTH project will host its annual luncheon during the AAPG Convention in Calgary on Monday, June 20th at Embarcadero Wine & Oyster Bar at 12 noon. Sponsors, prospective sponsors, and colleagues can RSVP for the luncheon by e-mailing cbthproject@gmail.com. Seating may be limited.

Four of the 15 students selected internationally from over 100 abstracts for the AAPG student poster competition this year are UH PhD students working with the CBTH project. A list of all CBTH students in the poster competition and other poster sessions at the meeting are indicated on the complete list of CBTH presentations at AAPG 2016 featured below.

- L. Carvajal-Arenas, L. Torrado, P. Mann - Integrated Basin and Play Assessment of Undiscovered Oil and Gas Resources in the Miskito Platform, Verolania Basin and Los Cayos Basin — Western Caribbean Sea (selected for AAPG student poster competition)
- N. Dowla, P. Mann, D. Bird - Gravity and Magnetic Investigation of the South-Central Atlantic Margin of the USA (Offshore Florida to South Carolina) and its West African Conjugate Margins (The Gambia to Mauritania) (Selected for AAPG student poster competition)
- S. Gomez, P. Mann, D. Bird - Deep Crustal Structure and Tectonostratigraphy at the Leading Edge of the Caribbean in Basins Offshore Barbados and Tobago: New Insights From 2-D Gravity Modeling and 2-D Seismic Data (selected for AAPG student poster competition)
- P. Loureiro, P. Mann - How Well Do Asymmetrical Rift Models for the Conjugate Margins of Brazil and Angola Compare to Deep-Penetration Seismic Reflection Data?
- P. Mann, R. Padilla - Geologic and Geophysical Evidence for a Pacific Origin for Seawater Filling the Cretaceous Gulf of Mexico Evaporite Basin
- C. J. Sanchez, P. Mann, R. Bernal-Olaya - Unconventional Resource Potential of Cretaceous Source Rocks in the Onshore Cesar-Rancheria Basin, Northern Colombia
- L. Torrado, P. Mann - Seismic Characterization of Early Cretaceous Fluvial-Deltaic Sandstones, Middle to Late Cretaceous Turbidites and Late Cretaceous Channelized Features in the Foz do Amazonas Basin, Northern Brazil (Selected for AAPG student poster competition)

For more information on CBTH presentations at AAPG 2016, check out the technical program for the meeting posted online.
What’s New

CBTH student Pin Lin receives AAPG grant-in-aid
PhD student Pin Lin recently received an AAPG grant-in-aid that will fund her study of source rock maturity in the South Florida basin. This summer, she will travel to the Florida State Geological Survey core facility in Tallahassee to sample cores. Analysis will be conducted at the UH Petroleum Geochemistry Lab. For more information on AAPG awards to UH students in 2016, click here.

CBTH at UH Research Day 2016
15 CBTH graduate and undergraduate student researchers presented at the 2016 Research Day and Industry Open House hosted by the UH Dept. of Earth and Atmospheric Sciences on the main UH campus on April 29, 2016. PhD student Pin Lin received the 2nd place award in the First Year MS/PhD category for her poster on the structure of the SE GOM, PhD student Kyle Reuber received the 3rd place award in the Advanced PhD category on his study the Uruguay-Namibia margin, and CBTH undergraduates Matthew Copley, Andrew Steier, and David Lankford-Bravo all received Honorable Mention citations in the undergraduate category for their studies of the Somali basin, South Atlantic, and Mexican Ridges, respectively. For more information on the 2016 Research Day activities at UH, click here to visit our website.
What’s New

UH Imperial Barrel Award (IBA) Team places 2nd in AAPG Gulf Coast competition
Congratulations to the 2016 University of Houston Imperial Barrel Award (IBA) team who placed second in a field of 12 Gulf Coast universities on April 15, 2016, for this study of the Sogn graben in the Norwegian sector of the North Sea. Team members included Shenelle Gomez (Team captain and CBTH-supported PhD student), David Mora, Jing Hua, Lingfei Mao, and Jordan Dickinson. The UH AAPG student chapter received $2000 in prize money from AAPG. For more information on the IBA program at UH, click here.

CBTH undergrad participates in ExxonMobil Field School
Undergrad Sabrina Martinez was selected to participate in the ExxonMobil Field School in West Texas and New Mexico in April. She was also selected as a recipient of a Marathon undergraduate scholarship for the fall and spring semesters of her senior year in 2016-17. In an undergrad research project she is constructing geomorphic indices of Puerto Rico to better understand the mechanisms of its present-day uplift. For more information on her field camp experience, click here.

GIS Updates to the CBTH Database
On Feb. 29, we provided an updated GIS database for our sponsors covering on- and offshore Mexico, as well as a compilation map of continent-ocean boundaries in the CBTH study area. We have several undergrads working on improving the database for the GOM, NE South American margin, and conjugate margins of the Central and South Atlantic and Somali basin of East Africa. Sponsors can access these files via our secure FTP.

CBTH Personnel Available for Office Visits
Students and researchers at the CBTH Project are available for office visits in the greater Houston-Woodlands area to current and prospective sponsors in order to present recent and upcoming research. For sponsors located in areas outside of Houston we can arrange video conferences. Please contact Dr. Paul Mann if you are interested in scheduling a presentation time. Members of the group have presented to six Houston-based companies since February 2016.

Sponsor Invoices
Invoices for the forthcoming year of the CBTH Project (beginning September 1, 2016) were mailed to company representatives in March. Payments for continuing sponsors should be received by August 31, 2016.
Graduating Students

MUDUSSAR AHMED will complete his MS at UiS in June. He thesis is focused on the tectonostratigraphic evolution of the Barbados accretionary prism and Tobago basin using MCG 2D seismic regional data.

CAROLINA MEJIA-HERNANDEZ, who completed her MS in December 2015 with the CBTH project at UH, is now working as a seismic interpreter with Dynamic Data Systems in Houston.

LOURDES RODRIGUEZ will complete her MS in August with the CBTH project at UH and will begin working full-time for Sanchez Energy in Houston. As an MS student, she has been working part-time for Sanchez as a geophysicist for the past year.

LUAN NGUYEN, who was supported by the UH CBTH project as an undergrad and later as a researcher, will be starting a PhD study at Rice University, working with Dr. Dale Sawyer on the 3D seismic dataset from the Iberian margin.
Graduating Students

**MATT COLEY**, a CBTH-supported undergrad, was accepted into the MS program at Colorado School of Mines for August of 2016 to work with their industry-supported reservoir consortium. He will join former CBTH undergrads Alex Cheney and Kherlen Batbayar who are now second year MS students at CSM.

![MATT COLEY](image)

**SARAH DAILEY**, a CBTH-supported undergrad, was accepted into the MS program at LSU to work with Dr. Peter Clift on SE Asian basins.

![SARAH DAILEY](image)

**CALLUM BYERS**, a CBTH undergrad, was accepted into the Environmental Engineering MS program at UH starting in August of 2016.

![CALLUM BYERS](image)

**ANDREW STEIER** a CBTH undergrad, will continue his work on South Atlantic conjugate margins and plate reconstructions as a MS student with the CBTH project in the fall of 2016.

![ANDREW STEIER](image)
New Students

ELIZABETH “LILY” HORNE is a new CBTH PhD student and May 2016, MS grad from Colorado School of Mines where she worked with Dr. Bruce Trudgill on a combined surface and subsurface mapping of supra-salt fault systems in Utah. In the summer of 2015 she was an intern with ConocoPhillips working on deep-water GOM prospects. In the summer of 2016 she is a teaching assistant at the University of Indiana field camp in Montana.

ERIC LUNN is a new CBTH PhD student who is a 2015 honors graduate from the University of Massachusetts/Amherst. He has worked for one year as an environmental geologist in Massachusetts. His honors thesis was modeling the formation of strike-slip faults and restraining bends. He spent one semester on a research project at the University of Arizona.

ROCIO NAVAS RAMIREZ will start her MS at UiS in summer 2016. Her project will focus on the tectonostratigraphic evolution of the Gulf of Venezuela, using PDVSA data. The Gulf of Venezuela is the area of the Las Perlas giant gas discovery.

ANDREINA GARCIA is a PhD student at the Commission for the Geological Map of the World and is collaborating with CBTH-UiS on marine and aerial magnetic anomalies in the Gulf of Mexico and the Caribbean.

MARIE KOUASSI is an undergrad geology major at UH working on a compilation of Caribbean and South American radiometric ages for the CBTH database.

RASHEED AJALA is an undergrad geophysics major working on the CBTH database and modeling the flexure related to the loading of the Amazon and Niger deltas.

CBTH Summer 2016 Interns

LUIS CARLOS CARVAJAL is working as a summer intern with the Latin American group of Statoil in Stavanger, Norway, on the petroleum geology of the western Caribbean and Central America, which overlaps with his dissertation topic in this same region. Luis will be graduating in December of this year.

PATRICK LOUREIRO is working as a summer intern with Hess in Houston on the northwestern Africa margin.

NAILA DOWLA is working as a summer intern with Kosmos in Dallas on the northwestern Africa margin which overlaps with her dissertation topic on the same region.
Recent Meetings

SEG Annual Meeting, New Orleans
On November 19, 2015, Paul Mann presented an invited luncheon talk for the Latin American section of SEG on the opening of the GOM.

Offshore Technology Conference, Houston
On May 3, 2016, Paul Mann presented an invited talk and participated in a panel discussion in a session called: “Mexico Energy Reform: Changes to the Service Sector and First Look at New Deepwater Plays Seen in New Multiclient Exploration Data”.

Houston Geological Society Northsiders Luncheon
On May 18, 2016, Paul Mann presented a talk on the evolution of the GOM.

Geophysical Society of Houston SIG Dinner
CBTH student Luan Nguyen presented at the Geophysical Society of Houston: Potential fields SIG Dinner on Monday, May 19th. His talk was titled "Full-fit reconstruction of the Gulf of Mexico continental margins."

Upcoming Meetings

American Association of Petroleum Geologists Annual Convention
The following CBTH students and researchers will be presenting at upcoming AAPG Annual Convention in Calgary on June 19-22, 2016:
  - L. Carvajal-Arenas, L. Torrado, P. Mann - Integrated Basin and Play Assessment of Undiscovered Oil and Gas Resources in the Miskito Platform, Verolania Basin and Los Cayos Basin — Western Caribbean Sea (selected for AAPG student poster competition)
  - N. Dowla, P. Mann, D. Bird - Gravity and Magnetic Investigation of the South-Central Atlantic Margin of the USA (Offshore Florida to South Carolina) and its West African Conjugate Margins (The Gambia to Mauritania) (Selected for AAPG student poster competition)
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Upcoming Meetings

American Association of Petroleum Geologists Annual Convention (continued)
- P. Loureiro, P. Mann - How Well Do Asymmetrical Rift Models for the Conjugate Margins of Brazil and Angola Compare to Deep-Penetration Seismic Reflection Data?
- P. Mann, R. Padilla - Geologic and Geophysical Evidence for a Pacific Origin for Seawater Filling the Callovian Gulf of Mexico Evaporite Basin
- C. J. Sanchez, P. Mann, R. Bernal-Olaya - Unconventional Resource Potential of Cretaceous Source Rocks in the Onshore Cesar-Rancheria Basin, Northern Colombia
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15th Houston Geological Society (HGS) - Petroleum Exploration Society of Great Britain (PESGB) Conference on African E&P

CBTH students Naila Dowla, Matthew Copley, and Andrew Steier will be presenting at the 15th Conference on Africa E&P hosted by HGS/PESGB on September 12-14, 2016. CBTH PhD student Patrick Loureiro is on the meeting organizing committee and is co-chairing the student poster session. Details on presentation times and more are available on our website.

Student Posters:
- Ajala, R. - Gravity modeling of the flexural response of loading of the Niger and Amazon deltas onto their underlying thinned continental and oceanic crust
- Copley, M. - Crustal structure and subsidence history of the East-Africa-Madagascar conjugate margins: Implications for source rock maturity in underexplored offshore basins
- Dowla, N. - Width of the rifted zones of the Northwest Africa-Southeast USA conjugate margins as a constraint on an Africa-North America closed fit reconstruction
- Reuber, K. - South Atlantic Conjugate Margins: The Significance of Pre-Rift Western Gondwanan Orogenic Domains on Syn-rift Infill
- Steier, A. - Fine Tuning Quantitative, Plate-Tectonic Reconstructions of South Atlantic Conjugate Margins using a GIS Compilation of Geologic and Geophysical Information

Talks:
- Nguyen, L. - Full-Fit reconstruction of the East Africa and Antarctica Continental Margins
Upcoming Meetings

2016 Gulf Coast Association of Geological Societies (GCAGS) Annual Convention
CBTH students and researchers will be presenting at the upcoming Gulf Coast Association of Geological Societies Annual Convention in Corpus Christi on September 18-20, 2016. Presenters and talk titles are listed below. Visit our website for updates on extended abstracts, talk times, and more.

- P. Mann and A. Steier, 2016, Tweaking Pangea’s breakup: Triassic to present plate tectonic reconstructions integrating recent geologic, geophysical, and hydrocarbon data from the Atlantic and Gulf of Mexico conjugate margins
- D. Lankford-Bravo, et al - Documentation of isolated lenses of high velocity, Eocene to Miocene limestone within clastic rocks above and below allochthonous salt bodies, northcentral Gulf of Mexico
- M. Nawaz Bugti and P. Mann - What is the limiting factor for hydrocarbon prospects of the Port Isabel Passive Margin Foldbelt, Northwest Gulf of Mexico?
- D. Lankford-Bravo and P. Mann - Improved mapping of the sub-salt, continent-ocean boundary in the US Gulf of Mexico and implications for the structural relief for overlying folds of the passive margin fold-thrust belt
- P. Lin and P. Mann - Kinematics of Jurassic rifting and oceanic spreading between the continental blocks of western Florida and the Yucatan peninsula
- L. Nguyen and P. Mann - Mesozoic stretching amounts of the continental margins of the Gulf of Mexico basin derived from 3D gravity inversion and depth to basement mapping
- S. Cornelius and P. Emmet - A Geological 3D Velocity Model in Keathley Canyon and Walker Ridge, Gulf of Mexico
Recent Publications

**Theses & Dissertations**

Mejía-Hernández, M.C., 2015, Sequence of folding and thrusting of the Piedemonte oil and gas filed, eastern foothills of the Colombian Cordillera Oriental: constraints from integration of balanced cross sections and thermal maturation data: MSc thesis, University of Houston, 73 p.


Sanchez, C.J., 2015, Comparison of Late Cretaceous-Cenozoic deformation and basin formation along the northwestern Caribbean plate boundary on the Honduran borderlands-Nicaraguan Rise and southeastern Caribbean plate boundary in Colombia: PhD Dissertation, University of Houston, 229 p.


Tillman, T., 2015, Hydrocarbon potential of the northeastern Caribbean based on integration of sediment thickness and source rock maturity data: MSc thesis, University of Houston, 90 p.

**Publications in peer-reviewed journals and volumes**


Recent Publications

Publications (continued)


Nguyen, L. and P. Mann, 2016, Gravity and magnetic constraints on the Jurassic opening of the oceanic Gulf of Mexico and the location and tectonic history of the Western Main transform fault along the eastern continental margin of Mexico, Interpretation, v.4, v.1, SC23-SC33.


Upcoming Publications


Awards

Below is a list of recent awards for CBTH research. For a full list, please visit http://cbth.uh.edu/awards.php

- 2016 - Rasheed Ajala, Undergrad, Anadarko/SEG Scholarship, Fall 2016-Spring 2017
- 2016 - Sabrina Martinez, Undergrad, Marathon Oil Geosciences Scholarship, Fall 2016-Spring 2017
- 2016 - Rasheed Ajala, Undergrad, UH Provost’s Undergraduate Research Scholarship (PURS) for fall semester, 2016
- 2016 - Pin Lin, PhD Candidate: AAPG Foundation 2016 Grant-In-Aid
- 2016 - Pin Lin, Marathon Scholarship for Outstanding Graduate Work in Geology
- 2016 - Lucia Torrado, Marathon Scholarship for Outstanding Graduate Work in Geology
- 2016 - Sabrina Martinez, undergrad, UH Geology Field Camp Scholarship (Shell)
- 2016 - Callum Byers, Undergrad, UH Geology Field Camp Scholarship (Shell)
- 2016 - Rasheed Ajala, Undergrad, UH Geophysics Field Camp Scholarship (Leslie and Alan Wong)
- 2016 - Andrew Steier, Undergrad, John O’Leary Outstanding Junior (Chevron)
- 2016 - Matthew Copley, Undergrad, Honorable Mention Undergraduate Category, UH Student Research Day
- 2016 - Andrew Steier, Undergrad, Honorable Mention Undergraduate Category, UH Student Research Day
- 2016 - David Lankford-Bravo, Undergrad, Honorable Mention, Undergraduate Category, UH Student Research Day
- 2016 - Pin Lin, 2nd Place Poster Presentation, MS/PhD First Year Category, UH Student Research Day
- 2016 - Kyle Reuber, 3rd Place Poster Presentation, PhD Advanced Category, UH Student Research Day
- 2016 - Shenelle Gomez, PhD candidate and Team Captain, UH Imperial Barrel Award Team (team co-advisor: Paul Mann): 2nd Place; Gulf Coast Imperial Barrel Award Regional Competition
- 2015 - Sabrina Martinez, undergrad, selected for ExxonMobil Guadalupe Mountains Field Course, April 2016
- 2015 - Derek Scott, undergrad, undergraduate thesis approved and graduated with honors, December 2015
- 2015 - Sabrina Martinez, undergrad, UH Summer Undergraduate Research Fellowship (SURF)
- 2015 – Luis Carlos Carvajal, PhD candidate, 1st place, Best oral presentation, fall tectonics seminar
- 2015 – Callum Byers, undergraduate, 1st place, Tier 1 category (undergraduates), Houston Geological Society and University of Houston Robert E. Sheriff lecture series and student poster competition
- 2015 – Zachary Martindale, PhD student, 1st place, Tier 2 category (advanced MS/beginning PhD), Houston Geological Society and University of Houston Robert E. Sheriff lecture series and student poster competition
- 2015 - Andrew Steier BS Candidate: Outstanding Poster Award, Student Poster Competition, UH Undergraduate Research Day
Thanks to our sponsors!

As we continue with Phase IV of the CBTH project, we would like to thank our active and inactive company sponsors for their 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.

Active Sponsors

Inactive Sponsors

Data Sharing

Technical Support