

#### In this issue...

What's New1
Graduating & New Students4
Recent & Upcoming Meetings8
Recent & Upcoming Publications12
Awards14

Sponsors.....15

http://cbth.uh.edu/

#### Contacts:

Dr. Paul Mann pmann@uh.edu

Dr. Alejandro Escalona alejandro.escalona@uis.no

cbthproject@gmail.com

Edited by: Jeff Storms jeffstormswork@gmail.com

#### Mailing Address:

312 Science and Research Bldg. 1 Houston, TX 77204 (712) 893-1731



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



(left) Lucia Torrado wins 1st place in the student poster session at the AAPG. annual convention. (right) The UH IBA team wins 1st place in the International competition at the AAPG annual convention.

#### CBTH student wins 1st place at AAPG Student Poster Competition

Congratulations to CBTH PhD student Lucia Torrado, who placed 1st in the student poster competition at this year's AAPG annual convention for her presentation titled "Similarities and Differences Between the Late Cretaceous Fan Complex and the Overlying Neogene Amazon Cone in the Foz do Amazonas Basin, Northern Brazil – Implications for Future Hydrocarbon Exploration". **Click here** to read more about Lucia's win in AAPG Explorer. Lucia has also revised and resubmitted her paper for AAPG Bulletin on the paleogeography of the Nicaraguan Rise using all available well and seismic data.

#### UH Imperial Barrel Award (IBA) team wins big at Gulf Coast and International competitions

Congratulations to the 2017 UH Imperial Barrel team, who won 1st place in both the Gulf Coast competition and the international competition at the AAPG Annual Convention in Houston. Two of the five time members are CBTH-supported graduate students: Eric Lunn (captain) and Andrew Steier. **Click here** to read more about their win in AAPG explorer.



## What's New

### Redefining the scope of the CBTH project and its name and logo change

As discussed at our sponsor's meeting in September 2016, the current phase IV of CBTH will terminate the study called "Caribbean Basins, Tectonics, and Hydrocarbons" which began back in 2005 at the University of Texas at Austin. This CBTH project evolved from: 1) a pre-2005, UT-based consortium "DM2") led by Lesli Wood and Paul Mann that focused on the offshore Trinidad area; 2) an expansion of studies in offshore Trinidad and onland basins in Venezuela (Phase I); 3) an expansion of the project into onland and offshore basins in Colombia and the Nicaraguan Rise (Phases II, III); 4) an expansion of the project into Mexico, the Gulf of Mexico, the Nicaraguan Rise, and the Greater Antilles (Phase III), and, finally, 5) continuation of the studies in these areas and expansion of the study into Brazil, Guyana, northwest Africa, and west Africa (Phase IV). While we continue studies in all of the above areas as more data comes available, our plan for the coming phase starting on September 1, 2017 is to increase emphasis on conjugate margin studies of the Gulf of Mexico and Central and South Atlantic. For this reason, the project name will change from "Caribbean Basins, Tectonics, and Hydrocarbons" to "Conjugate Basins, Tectonics, and Hydrocarbons"; the acronym will remain the same: "CBTH ".



## GIS compilation of Big Data

As we finish Phase IV, we have focused additional resources on updating our GIS database for all the regions mentioned above and now have a total of nine University of Houston undergrads and one University of Stavanger graduate working on adding additional georeferenced data to the database. The grad students and principal investigators have provided them with key, selected information from the various study areas shown on the map of all the study areas. Categories of data additions that focus on offshore areas include: maps, cross sections, stratigraphic columns, oil and gas seeps, volcanic vs. non-volcanic margins, wells, and cores. We have also added: radiometric ages, detrital zircon ages, and fission track ages for the entire region both in map and table form. After 12 years of careful compilation, we now have over 4 TB of georeferenced information relevant to exploration in our internal database across an area including the GOM, Caribbean, and Atlantic margins.



## What's New

### Annual Sponsors Meeting and End of Phase IV

The CBTH project will host its annual sponsors meeting on Friday, October 6 from 7:30 a.m. to 4:00 p.m. (lunch included). For more information, including the schedule and meeting location, **click here** to visit our website.

## Atlas delivery for end of CBTH Phase IV

As this is the third and final year of Phase IV, we will deliver an atlas with synoptic maps for the entire Caribbean-GOM-Atlantic region in the forthcoming weeks. Synoptic maps will include: 1) summary maps from online resources including plate reconstructions, bathymetry, gravity, magnetics, modern stress, active faults, earthquakes, oil seeps, source rocks including oceanic anoxic intervals; 2) key surfaces and fault maps from out studies areas in the Caribbean, GOM, and Atlantic margins; and 3) compilation maps including upper and lower plate maps for conjugate margins and extent of volcanic margins.

### Three CBTH graduate students complete PhDs

Congratulations to Kyle Reuber, Luis Carlos Carvajal, Patrick Loureiro, who all completed their PhD studies with the CBTH Project during summer 2017. Since graduating, Kyle will continue to work full-time for Ion on multiclient studies along Atlantic margins, Luis Carlos will continue working the CBTH Project a post-PhD, basin modeling study on the Colombian and Venezuelan basins, and Patrick has begun a full-time job with Hess in Houston working with the Eastern Canada offshore exploration group.

### Barbados sampling and Llanos Basin modelling

CBTH researchers led by Alejandro Escalona at UiS have recently sampled outcrops and wells in Barbados. Geochemical analysis has been performed with interesting results that are presented in the Cedeno 2017 thesis. In addition, basin modelling of possible Paleozoic source rocks in the southern Llanos basin has also been performed and is part of the same thesis. Results will be presented in the annual meeting.



## **Graduating Students - UH**



**LUIS CARLOS CARVAJAL** has been with the CBTH project as a PhD student since 2012 and has worked on the crustal structure, seismic stratigraphy, and petroleum potential. He completed a summer internship with Statoil in Stavanger, Norway, in the summer of 2016 and completed his PhD in May 2017.

**PATRICK LOUREIRO** joined the CBTH project in 2014 as an MS student working on the topic of the tectonic origin of the Virgin Islands basin, northeast Caribbean. He completed the MS study in 2014 and started working on his PhD topic on deep structure beneath the Campos-Santos basin of Brazil and implications for pre-rift reconstructions. He was a member of the 2013 UH AAPG Imperial Barrel Award Team. He completed his PhD in July 2017 and now works in the Eastern Canada exploration group of Hess Corporation in Houston.





**KYLE REUBER** has been with the CBTH project as a PhD student since 2012 and has concurrently worked as a full-time seismic interpreter at ION. His topic is rift processes in volcanic margins of the Equatorial and South Atlantic. Kyle completed his PhD in May 2017 and continues to work for ION.

# **Graduating Students - UiS**

**ANDRES FELIPE CEDENO MOTTA** completed his MS study at UiS in July 2017. His thesis is titled "Geochemical analysis of oil from Barbados and basin modeling of Paleozoic units in the southern Llanos Basin, Colombia." He will continue as a student assistant at UiS until December working on the LoCRA consortium in geochemistry and supporting the geochemistry studies of the CBTH Project.





## **Graduating Students - Senior Undergraduates**



**RASHEED AJALA** worked as an undergraduate geophysics and geology major at the University of Houston who joined the CBTH project in 2016. He worked on the GIS database and an undergraduate senior thesis on flexural modeling of large deltas (Niger, Amazon, and Mississippi) and comparing model predictions to geologic observations. Rasheed completed his BS and honors thesis in May 2017, and has begun field work related to his PhD study at LSU under the supervision of Dr. Patricia Persaud on the crustal structure of southern California.

**MARIE KOUASSI** is a senior geology major who joined the project in 2016. She has compiled all detrital zircon data from the GOM, Caribbean, and Atlantic margins and for her senior report is using software developed by EAS professor Joel Saylor to statistically link source areas. She graduated in May 2017 and is continuing her compilation on detrital zircons as a Research Assistant for the CBTH Project.





**DAVID LANKFORD-BRAVO** is a UH Geology BS graduate who worked on maintaining the CBTH references and literature compilation database. David joined the project in 2014 and completed a senior honors thesis on passive margin fold belts of the deepwater area of Mexico in the Perdido and Mexican border region. He is currently a Geology PhD student at the University of Texas at El Paso (UTEP) and working on mapping salt diapirs in the Paradox basin of Utah.

**SABRINA MARTINEZ** joined the project in 2015 and assisted with the GIS database. She completed a research project on using tectonic geomorphology to constrain the uplift mechanism of the island of Puerto Rico. Sabrina completed her BS in May 2017 and is a summer intern at the Lunar and Planetary Institute of NASA working on remote sensing of the planet Venus. She will start a MS program at Tulane University on tectonic geomorphology in the fall of 2017.





**LILI ZHANG** is a post-baccalaureate geology major at the University of Houston who joined the CBTH project in 2016. She completed her BS in May 2017 and also completed a senior honors thesis on using a regional compilation of thermochronological and well subsidence data to constrain the rifting and passive margin history of the conjugate margins of the South Atlantic Ocean.



## Visiting Scientists at UH & UiS



**DR. MARVIN BACQUERO** from Venezuela was a visiting scientist with the CBTH Project at UH from May 1 to August 15, 2017. During his visit he used the UH lab facilities for preparing new basement and detrital samples from Venezuela for U-Pb dating that was completed at the thermochronology lab at UT Austin. This project is attempting to better locate the South America-Caribbean arc suture and better understand the evolution of clastic source rocks along the Colombia-Venezuela-Trinidad margin

**FERNANDO MAZUERA is** a current PhD student for the Universidad Central de Venezuela who is visiting the University of Stavanger and will be collaborating with CBTH for the next 6 months on recent refraction studies in NW Venezuela performed by Funvisis.



## **New Graduate Students**



**RENN CHANG** completed her Bachelor's in Earth Sciences from National Central University, Taiwan in 2015. After graduating from university, Renn worked for one year as a research assistant whose main role was seismic data acquisition and processing. Renn currently enrolled in the Professional Master's Program in Subsurface Geoscience at Rice University and joined CBTH project as an intern in 2017. She is interested in geophysical exploration methods such as seismic and potential field methods. Renn's internship with CBTH Lab is assisting the compilation of igneous and metamorphic rocks age information from the Gulf of Mexico and the Caribbean region by ArcGIS to make the Atlas for CBTH Phase IV. Also, she is researching the Bahamas-Hispaniola region by using 3D gravity inversion method and magnetic method in order to clarify the crustal type underneath the Bahamas carbonate platform and better understand its tectonic origin.

**JACK KENNING is** a PhD student and research assistant who joined the CBTH project in 2017. He received his BS in geology from the University of Manchester and a MS in Petroleum Geoscience from Royal Holloway, University of London in the United Kingdom. He has also worked as a geologist for Anadarko Petroleum. This summer hew worked on a study of the subsurface structure, stratigraphy and petroleum systems potential of the Namibian margin, focusing on the Lüderitz Basin.





## **New Students**

**PRESLY CARR** is a UH geology major working on the database and a senior thesis compiling information on Cretaceous oceanic anoxic events from the GOM, Caribbean and Atlantic margins. She graduates in May 2018.





**ANDREA DIGIRALAMO** is a UH undergraduate geology student at the University of Houston. She joined the CBTH team in May 2017 and is currently working on updating geological data on the GIS database. For her senior honors thesis she is collaborating with Dr. Marvin Bacquero on a statistical study of detrital zircon populations from Venezuela and Colombia that make use of some of the new dates by Marvin during his visit to UH in the summer of 2017.

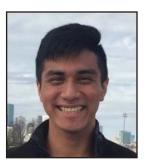
**AMANDA PASCALI** is an undergraduate Geology major and Italian Studies minor at the University of Houston. She joined the CBTH research group during the summer of 2017 and has compiled oil and gas seep information for the GIS database for the Caribbean Basin. She expects to graduate in May 2020.





**EMILY STIBBE** is a UH geology major working on the database and a senior thesis comparing the subsidence histories of the eastern margin of North America and the western margin of Europe. She graduates in May 2018.

**OMAR ZAVALA** is a UH undergrad geophysics major working on the GIS database and a senior thesis on comparing the subsidence histories from NE South America and its conjugate margin in west Africa. He graduates in May 2018.





## **Recent Meetings**

#### **HGS International Dinner**

CBTH PhD student Shenelle Gomez presented at the Houston Geological Society International Dinner at the Westchase Hilton on Monday, February 20, 2017, on her CBTH-supported dissertation topic of "Tectonostratigraphic evolution of the Barbados accretionary prism and its controls on hydrocarbon prospectivity in offshore Barbados."

### 51st Annual Geological Society of America (GSA) South-Central Section Meeting

CBTH undergraduate students David Lankford-Bravo and Sabrina Martinez presented at the GSA South-Central Meeting in San Antonio on March 13-14, 2017.

o Lankford-Bravo, D. and P. Mann – Detailed mapping of the junction of the late Jurassic "step-up" continent-ocean boundary of the northern U.S. GOM within the continent-ocean transform along the east coast of Mexico

o Martinez, S. – Active tectonics within Puerto Rico: Identifying areas of active uplift using regional geomorphic indices



### AAPG Annual Convention & Exhibition 2017

The American Association of Petroleum Geologists held its annual convention and exhibition at the George R. Brown Convention Center in Houston, Texas on April 2-5, 2017. This year, CBTH PhD student Lucia Torrado placed 1st in the student poster competition. Below, you will find a full list of CBTH presentations and talks at the meeting.

o Posters (AAPG student poster competition)

o Bugti, M. N. and P. Mann - Effects of convergent, radial-gliding "corner" geometry on petroleum charge, Port Isabel passive-margin foldbelt, northwestern Gulf of Mexico. o Torrado, L., and P. Mann - Similarities and differences between the Late Cretaceous fan complex and the overlying Neogene Amazon cone in the Foz do Amazonas basin, northern Brazil – Implications for future hydrocarbon exploration. \*\*\*FIRST PLACE WINNER



## **Recent Meetings**

### AAPG Annual Convention & Exhibition 2017 (continued)

o Posters (not in student competition)

o Nguyen,, L.C. and P. Mann - Two-phase, full-fit, Triassic-Mesozoic reconstruction of the Gulf of Mexico basin, its continental margins and twin salt basins.

o Saunders, M., L. Geiger, and A. Steier – Mapping the Jurassic Norphlet sandstone along the northern margin of the Yucatan Peninsula

#### o Oral Presentations

o Reuber, K., P. Mann, and J. Pindell - Asymmetrical conjugate margins of the South Atlantic: Effects of variable basement architecture and magmatic additions on the continental rifting process and petroleum systems.

o Mann, P., L. Nguyen, M. Kouassi, and M. Almatrood - Early Paleozoic to Recent plate animation of Gulf of Mexico evolution as a framework for understanding its diverse hydro carbon resources.



### **CBTH Luncheon at AAPG Annual Convention & Exhibition**

During this year's AAPG convention in Houston, the CBTH Project hosted its annual sponsors luncheon on Monday, April 3rd at The Grove in Houston. Thanks to all who attended!

#### UH Earth and Atmospheric Sciences Student Research Day and Industry/Alumni Open House

CBTH students and researchers presented at the UH EAS Student Research Day / Industry Alumni Open House on April 28, 2017. For more information, including a full list of presentations, **click here**.



## **Recent Meetings**

#### 6th Geological Conference of the Geological Society of Trinidad and Tobago

The Geological Society of Trinidad and Tobago (GSTT) hosed its 6th Geological Conference in Port-of-Spain, Trinidad on May 21-24, 2017. See below for a list of CBTH presentations at the meeting.

o Gomez, S. – Three structural trends within the Barbados accretionary prism and their tectonic significance



o Alvarez, T. (now Asst. Professor, Dept. of Petroleum Engineering, University of Trinidad and Tobago) - Lithospheric Flexure at the Southeastern Caribbean Transitional Tectonic Margin; Implications for Source Rock Burial and Maturity

o One day, pre-conference short course on Sunday, May 21, hosted by Tricia Alvarez, Dept. of Petroleum Engineering, UTT, and Paul Mann, UH - Recent developments in understanding the regional tectonics and petroleum potential of offshore Trinidad, Tobago Basin, Grenada Basin, Barbados Ridge and Orinoco Delta



#### 79th EAGE Conference & Exhibition

The European Association of Geoscientists and Engineers (EAGE) hosted annual meeting on June 12-15, 2017 in Porte de Versaille, Paris, France. At this meeting, CBTH MSc student Andres Cedeno presented his poster titled "Hydro-carbon potential evaluation of the southern Llanos basin and the western margin of the Barbados accretionary prism, Caribbean region." **Click here** for more details.



# **Upcoming Meetings**

### 16th African E&P Conference hosted by PESGB

The Petroleum Exploration Society of Great Britain (PESGB) will host its annual conference on August 31-September 1, 2017 in London. For more information, visit http://www.pesgb.org.uk/events/event-338/

#### **CBTH Annual Sponsor Meeting**

The CBTH annual sponsors meeting is scheduled for October 6, 2017 in Cemo Hall on the UH campus. The meeting will last from 7:30 a.m. through 4 p.m and will include a continental breakfast and boxed lunch. **Click here** to visit our website for more details, including the meeting schedule, directions, and more.

#### 3P Arctic 2017 Conference and Exhibition

3P Arctic will form part of the AAPG SEG 2017 International Conference & Exhibition in London on October 15-18, 2017. For more information, visit http://www.3parctic.com/

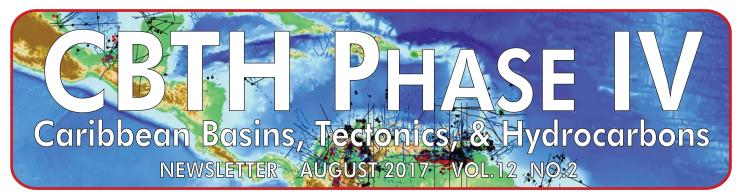
#### GCAGS 2017

The Gulf Coast Association of Geological Societies will hold its annual meeting on November 1-3, 2017 in San Antonio, Texas. A complete list of CBTH presentations will be available on our website as the meeting approaches. For more information, visit http://www.gcags2017.org/



### AGU 2017

CBTH students and researchers have submitted abstracts for the upcoming 2017 Fall AGU Meeting in New Orleans. **Click here** to view a list of submitted presentations.



## **Recent Publications**

#### 2017 student thesis studies supported by the CBTH project (8)

- Ajala R., 2017, Gravity-based study of flexure and crustal structure at the Niger and Mississippi deltas: BS senior honors thesis, University of Houston, 37 p.
- Carvajal, L.C., 2017, Hydrocarbon prospectivity of the Nicaraguan Rise and Colombia basin, Western Caribbean Sea: PhD dissertation, University of Houston, 387 p
- Cedeno, A.F., 2017, Geochemical analysis of oil from Barbados and basin modeling of Paleozoic units in the southern Llanos Basin, Colombia: MS thesis, University of Stavanger, 137 p.
- Lankford-Bravo, D., 2017, Effect of the changing strike of the step-up fault marking the continent-ocean boundary on the structure of the overlying fold belts in the northwestern Gulf of Mexico: BS senior honors thesis, University of Houston, 41 p.
- Loureiro, P., 2017, Early Cretaceous tectonostratigraphic evolution of rift and sag basins of the Campos and Santos basins, southeastern Brazil, using potential fields, seismic reflection, and well data: PhD dissertation, University of Houston, 158 p.
- Kouassi, M., 2017, Paleozoic and Mesozoic evolution of the central Pangea region prior to the opening of the Gulf of Mexico: Evidence from compilation of U-Pb detrital zircons ages: BS senior report, University of Houston, 48 p.
- Reuber, K., 2017, Crustal structure and Mesozoic tectonic evolution of conjugate volcanic passive margins of the south-central and South Atlantic Oceans: PhD dissertation, University of Houston, 207 p.
- Zhang, L., 2017, Tithonian to recent, post-rift cooling and subsidence history of the southeastern margin of Brazil and correlation to Late Cretaceous-Cenozoic phases of the Andean orogeny: BS senior honors thesis, University of Houston, 46 p.



## **Upcoming Publications**

- Carvajal, L.C. and Mann, P., 2017, Western Caribbean intraplate deformation, 2: Defining a continuous and active microplate boundary along the San Andres rift and Hess escarpment, in P. Mann, ed., Geologic and geophysical synthesis of the Nicaraguan Rise and western Caribbean: A framework for understanding its petroleum potential: AAPG Bulletin Special Issue, in revision.
- Gomez, S., Mann, P., and Bird, D., 2017, Deep crustal structure and tectonic origin of the Tobago-Barbados ridge, Lesser Antilles arc, in revision for Interpretation.
- Lin, P., Bird, D., and Mann, P., Structure of eastern Gulf of Mexico extinct spreading ridge and adjacent Jurassic oceanic crust: revised and resubmitted to Geophysical Research Letters.
- Ott, B. and Mann, P., 2017, Tectonostratigraphic evolution and hydrocarbon prospectivity of Jamaica and its offshore basins from regional integration of potential field, seismic reflection, well, and outcrop data: AAPG Bulletin Special Issue, in review.
- Ott, B., Mann, P., Carvajal, L.C., 2017, Identifying active inter- and intraplate fault zones in the western Caribbean Plate from seismic reflection data and the significance of the intraplate Pedro Bank fault zone in the tectonic history of the Nicaraguan Rise., in P. Mann, ed., Geologic and geophysical synthesis of the Nicaraguan Rise and western Caribbean: A framework for understanding its petroleum potential: AAPG Bulletin Special Issue, in review.
- Ott, B., Mann, P., Sanchez, J., Carvajal, L.C., 2017, Crustal provinces of the Nicaraguan Rise, Caribbean Sea, based on integration of gravity, refraction, seismic reflection, and well data, in P. Mann, ed., Geologic and geophysical synthesis of the Nicaraguan Rise and western Caribbean: A framework for understanding its petroleum potential: AAPG Bulletin Special Issue, in review.
- Sanchez, J., Mann, P., Carvajal, L.C., Bernal, R., 2017, A 1600-km-long structural-geophysical transect across the western Caribbean to illustrate its structural styles, fault kinematics, plate tectonic history, and petroleum potential, in P. Mann, ed., Geologic and geophysical synthesis of the Nicaraguan Rise and western Caribbean: A framework for understanding its petroleum potential: AAPG Bulletin Special Issue, revised and resubmitted.
- Torrado, L., Carvajal, L.C., Sanchez, J., Mann, P., 2017, Cretaceous-Cenozoic paleogeographic controls on major source rocks, reservoirs, seals, and traps of the western Nicaraguan Rise (offshore Honduras and Nicaragua), in P. Mann, ed., Geologic and geophysical synthesis of the Nicaraguan Rise and western Caribbean: A framework for understanding its petroleum potential: AAPG Bulletin Special Issue, accepted and in revision.
- Torrado, L., Gomez, S., Mocardelli, L., Mann, P., 2017, Seismic characterization of Cenozoic mass transport deposits in the deep-water Foz do Amazonas Basin, Northern Brazil: Implications for future hydrocarbon exploration, submitted to Geological Society of London special volume on mass transport deposits.
- Wang, J., Mann, P., Stewart, R., 2017, Late Holocene structural style and seismicity of highly transpressional faults in southern Haiti, submitted to Nature Geosciences.



## Awards

• 2017 - Beatrice Serrano-Suarez, 3rd Place Poster Presentation, MS/PhD First Year Category, UH Student Research Day, April 2017.

• 2017 - Eric Lunn, Scholarship for Outstanding Graduate Work in Geology, EAS Department Excellence Fund, April 2017.

• 2017 - Lucia Torrado, PhD Candidate: 1st Place, AAPG 2017 Annual Meeting Student Poster Competition, April 2017.

• 2017 - Eric Lunn, PhD candidate and Team Captain, Andrew Steier, team member, UH Imperial Barrel Award Team (team co-advisor: Paul Mann): 1st Place; Gulf Coast Imperial Barrel Award Finals Competition, March 2017.

• 2017 - Eric Lunn, PhD candidate and Team Captain, Andrew Steier, team member, UH Imperial Barrel Award Team (team co-advisor: Paul Mann): 1st Place; Gulf Coast Imperial Barrel Award Regional Competition, April 2017.

• 2017 - Emily Stibbe, undergraduate, Honorable mention student poster competition, Industry-Rice Earth Science Symposia (IRESS), Rice University, January 2017.

• 2017 – Sabrina Martinez, undergraduate, selected for Lunar and Planetary Institute summer intern program, Houston, summer 2017.

• 2016 - Andrew Steier, MS student, selected for ExxonMobil Bighorn Basin Field Course, July 2017

• 2016 – Shenelle Gomez, undergraduate, Best oral presentation, Tier 1 category (Advanced PhD), Tectonics seminar, spring semester, 2016

• 2016 – Andrew Steier, MS student, Best oral presentation, Tier 2 category (Advanced MS, beginning PhD), Tectonics seminar, spring semester, 2016

• 2016 – Sabrina Martinez, undergraduate, Best oral presentation, Tier 3 category (Undergraduate), Tectonics seminar, spring semester, 2016.

• 2016 - Joan Blanco (PhD candidate), Third place (with UH team member Alexandre Silva), SEG Challenge Bowl World Finals, SEG annual meeting, Dallas, October 17, 2016

• 2016 - Andrew Steier, MS candidate, 1st place student poster competition, 15th Houston Geological Society/-Petroleum Exploration Society of Great Britain, Africa 2016 Conference

• 2016 - Rasheed Ajala, undergraduate, 2nd place student poster competition, 15th Houston Geological Society/Petroleum Exploration Society of Great Britain, Africa 2016 Conference

• 2016 - Kyle Reuber, PhD candidate, 3rd place student poster competition, 15th Houston Geological Society/Petroleum Exploration Society of Great Britain, Africa 2016 Conference

- 2016 Rasheed Ajala, Undergrad, Tectonophysics travel grant, American Geophysical Union, Fall meeting
- 2016 Eric Lunn, PhD candidate, Houston Endowment Recruitment Fellowship
- 2016 Rasheed Ajala, Undergrad: Mack Gipson Scholarship Award, National Association of Black Geologists
- 2016 Shenelle Gomez, PhD Candidate: 2nd Place, AAPG 2016 Annual Meeting Student Poster Competition
- 2016 Luis Carlos Carvajal, PhD Candidate: 3rd Place, AAPG 2016 Annual Meeting Student Poster Competition



## 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 for Phase IV ending on August 31, 2017