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<http://cbth.uh.edu/>

**Contacts:**

Dr. Paul Mann pman-  
n@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**

**Coronavirus and impact on CBTH**

Along with the rest of the University of Houston, our work area on the UH campus has been closed since mid-March as a result of coronavirus. Despite the shutdown the CBTH group has remained productive as we can remotely login to server and work from home. Moreover, we can teleconference between ourselves and with our sponsors using either Zoom or Microsoft Teams. Each Friday we have a two-hour group meeting where each student reviews their progress by sharing slides on Teams. We will continue to adapt as the situation evolves and wish all our sponsors and colleagues the best during this difficult time.

**Spring 2020 conferences with CBTH Sponsors and data providers**

Over the past several months we have provided progress and planning meetings with our sponsors and data providers either in person or as a teleconference. Prior to mid-March we had met in person with the following sponsors and provided them slide sets of the presentations:

- o CNOOC Intl (Houston): February 11, 2020
- o PGS (Houston): February 26, 2020
- o Hess (Houston): March 6, 2020
- o Petrobras (Rio de Janeiro – virtual): March 18, 2020
- o Occidental (Houston – virtual): March 19, 2020
- o ExxonMobil (The Woodlands): March 20, 2020
- o Total (Houston – virtual): April 9, 2020
- o ION (Houston – virtual): April 17, 2020
- o Shell (Houston – virtual) – Part 1: GOM, Caribbean: April 29, 2020
- o Shell (Houston – virtual) – Part 2: Atlantic margins: April 30, 2020
- o Equinor (Stavanger – virtual): May 13, 2020
- o Total (Pau, France - virtual): May 20, 2020
- o Hess (Houston – virtual): May 21, 2020

**Invoices for Phase VI**

Following on these progress reports, we are currently invoicing the sponsors for Phase VI of the CBTH project. In our meetings, we outlined the direction of the project, current and planned studies, and the access and use of our newly upgraded web-based data portal.



## What's New



*CBTH students and researchers present at CNOOC International on February 11, 2020*

### **CBTH Annual Sponsors Meeting 2020**

The CBTH Annual Sponsors Meeting will be held on Friday, September 25, 2020, where we will provide updates on research from Phase V, Year 3 and introduce future studies for Phase VI. As the meeting date approaches, we will provide more updates on timing and the location of the meeting. If we are unable to host the meeting in-person on the UH Campus due to ongoing issues with the Coronavirus, we plan to host the meeting online to allow sponsors to remotely view each presentation. Stay tuned for more details.

### **CBTH MS student organizes exploration software bootcamp**

Congrats to CBTH MS student and SEG Wavelets president Matthew Storey for organizing the four-day exploration software bootcamp during the pre-class period in early January 2020. [Click here](#) for more information

### **CBTH students beginning full-time jobs in 2020**

Congrats to Marcus Zinecker (PhD), who has accepted an offer at BP, to Jack Kenning (PhD), who has accepted an offer at ConocoPhillips, and to Malik Alam (MS), who is now working with Halliburton.

### **UiS plans geochemical sampling and analysis**

CBTH PhD student Andres Cedeño and researchers at UiS are currently planning geochemical sampling and analysis on oil seeps in Jamaica and on the offshore Guyana Basin in Suriname. Stay tuned for more updates.



## What's New

### CBTH summer internships

Congrats to CBTH students Maddie Bishop (MS), Jacob Miller (MS), and Trevor Russell (MS) for their 2020 summer internships. Maddie Bishop will intern at Arena Energy, Jacob Miller will intern at BP, and Trevor Russell will intern at QED.

### Paul Mann wins award from AAPG

Congrats to Paul Mann for receiving the Grover E. Murray Distinguished Educator Award from AAPG. [Click here](#) for more information.

### PhD graduate Kyle Reuber and Paul Mann wins Best Paper award

Congrats to Kyle Reuber (PhD, 2017) and Paul Mann for their Best Paper award for papers published in the journal Interpretation during 2019. The paper is titled "Control of Precambrian-to-Paleozoic orogenic trends on along-strike variations in Early Cretaceous continental rifts of the South Atlantic Ocean." Thanks to ION for providing the data used in the paper.

### UH IBA team places 2nd

Congrats to the five-student UH Imperial Barrel Award team that placed second in the Gulf Coast AAPG section. [Click here](#) for more information.



*The UH Imperial Barrel Award Team from left to right: Michael Fonseca (M.S. student, geology); Brook Runyon (B.S. student, geology), Maddie Bishop (team captain, M.S. student, geology), Mei Liu (Ph.D. student, geology), and Benjamin Miller (M.S. student, geophysics).*



## Graduating Students at UH

**TAREK GALHOM** joined the CBTH Project in Fall 2019, was supported as a Fulbright scholar from Egypt and completed his two-year MS study, titled “Structural restoration and basin modeling of the Tarfaya Dakhla basin of the Atlantic passive margin of southern Morocco,” in May 2020. He has returned to Egypt where he will work for the Khalda-Apache Petroleum Company where he was previously employed.



**JACK KENNING** joined the CBTH Project in 2019 and completed his three-year PhD study, titled “Mesozoic-Cenozoic tectonic controls on basin formation and hydrocarbon potential of the deep-water Mexican sector of the Gulf of Mexico Basin,” in May 2020. Jack has accepted a full-time offer at ConocoPhillips and is scheduled to begin work in June 2020.

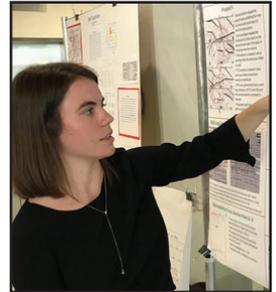
**MATTHEW STOREY** joined the CBTH Project in May 2019 and completed his two-year MS study, titled “Tectonic setting, structure, and seismic stratigraphy of the Apalachicola Rift and its overlying sag basin in the northeastern Gulf of Mexico,” in May 2020. He is completing his one year term as president of the SEG Wavelets student group at UH. In the spring of 2020, Matthew participated in the SEG EVOLVE program which is a team-based class in exploration methods.





## New Students at UH

**MADDIE BISHOP** is an MS student and research assistant who joined the CBTH project in Fall 2019. She received her BS in General Geology in the spring of 2019 from The University of Texas. Her MS project involves seismic interpretation, stratigraphy, and petroleum system evaluation in the Sandino Forearc Basin, Nicaragua and Costa Rica. For spring 2020, she was the captain of the UH IBA team that placed second behind UL-Lafayette in the Gulf Coast regional competition, which was held online due to the Coronavirus.



**MARCO GUAJARDO** is an undergraduate Geology major at the University of Houston-Downtown with a concentration in petroleum geotechnology. He joined the CBTH Project in December 2019 to assist with the GIS database. His research topic is the geologic and geomorphic evolution of the “Old Tennessee River” and its relation to the Cenozoic uplift of the southern Appalachian Mountains.

**MICHAEL MARTINEZ** is a 2019 geology BS graduate from Texas A&M University. He will begin his MS study with the CBTH Project starting in Fall 2020. His project will focus on developing a database for superbasins and more “stranded” giant oil and gas fields in the CBTH area and using this information for understanding the habitats of undiscovered giants. He plans to work closely with Charles Sternbach, who is working on superbasins worldwide.

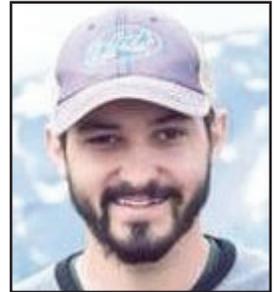


**SARAH K. MEYER** completed a BS in Geology from the University of Houston in December 2019 and will start an MS on the Permian basin at the University of Texas Bureau of Economic Geology in the fall of 2020. She joined the CBTH group in February 2020 and assists in managing and updating the GIS database and is working on gravity and magnetic methods to identify seaward-dipping reflectors on South Atlantic conjugate margins.



## New Students at UH

**BENJAMIN MILLER** completed two BS degrees in Geology and Geophysics at the University of Houston in 2017 and worked in the Finance Department for the City of Bellaire, Texas. He joined the CBTH project as a research assistant in September 2019 and has assisted in managing the reference database as well as compiling stratigraphy, wells, and outcrops for the GIS database. His research is a subsurface study of Saba Bank in the northeastern Caribbean Sea using vintage seismic and well data provided by the government of Curacao that administers the Saba Bank, which is now a national park. He was a member of the 2020 UH IBA team.



**BRYAN MOORE** joined the CBTH project as an undergraduate research assistant in January 2019 and has assisted in managing the reference database as well as the stratigraphy, wells, and outcrops portions of the GIS database. His post-bacc research with CBTH used satellite gravity data to improve the mapping of the continent-ocean boundary and seaward-dipping magmatic provinces along the conjugate margins of the Gulf of Mexico and Atlantic Ocean. In Fall 2020, Bryan will begin an MS study with the CBTH Project that will focus on the Barbados accretionary prism.

**BROOK RUNYON** is a recent UH undergraduate who joined CBTH in May 2020. Her research is a mapping study of the Moroccan margin. She was a member of the 2020 UH IBA team.



**MARCO URDANETA** is a UH undergraduate geology student who joined CBTH in January 2020. He is assisting in maintaining and updating the GIS database. His research focused on the controls of orogenic rift fabrics on the rifting style of the central Atlantic Ocean. He was elected president of undergraduate geology club (Geosociety) for the 2020-21 academic year.



## Recent Meetings

### IMOG 2019

The International Meeting of Organic Geochemistry (IMOG) hosted its 2019 meeting in Gothenburg, Sweden on September 1-6. See below for a list of CBTH presentations at the meeting.

- o Andres Cedeno, Sverre Ohm, Alejandro Escalona, and Eshita Narain – Petroleum system(s?) in the Guyana-Suriname Basin: Insights from a geochemical study onshore Suriname

### AAPG Annual Student Expo

The American Association of Petroleum Geologists hosted its Annual Student Expo on September 5-6, 2019 at the George R. Brown Convention Center in Houston. This event featured short courses, workshops, poster sessions, technical seminars, resume reviews, and more in an effort to bring students, recruiters, and industry professionals together. For more information, [click here](#).

- o Nikola Bjelica – Paleogeographic controls on the thickness and organic content of Cretaceous OAE2 black shale horizons documented in wells from the Guyana-Suriname Basin and the Demerara Rise
- o Nawaz Bugti – Structural evolution of Port Isabel passive margin foldbelt, northwestern Gulf of Mexico: results from kinematic restorations
- o Jack Kenning – Tectonic, depositional, and morphological controls of shale-rich Mass Transport Deposits (MTDs) on the structural development of the overlying Mexican Ridges fold-thrust belt, Western Gulf of Mexico
- o Marie Kouassi – Velocity model building to improve subsalt imaging of 2D seismic data in GOM deep-water
- o Mei Liu - Crustal structure of Mesozoic rifting in the northeastern Gulf of Mexico from integration of seismic and potential –fields data
- o Sean Romito – Caribbean basement terranes: sedimentary thickness, regional controls on hydrocarbon source rocks, oil seeps, and shows
- o Hualing Zhang – Integration of gravity modeling, sedimentary facies and subsidence analysis to understand the tectonic stages of the Paleozoic to recent Permian Basin, West Texas

### SEG 2019

The Society of Exploration Geophysicists hosted its 89th annual meeting and international exposition in San Antonio, TX on September 15-20, 2019. See below for a list of CBTH-supported presentations. [Click here](#) for more information.

- o Sharon Cornelius and Pete Emmet- Depth to the top of overpressure in the deepwater Gulf of Mexico: Garden Banks, Green Canyon, Keathley Canyon, and Walker Ridge



## Recent Meetings

### CBTH Annual Sponsor Meeting 2019

The CBTH Annual Sponsors Meeting was held on Friday, September 27, 2019 at on the University of Houston main campus. Deliverables from this meeting are available to our sponsors on our website, via FTP, and on Geopost. For more information, including the meeting schedule, [click here](#).



*CBTH students, researchers, and sponsors at the CBTH Annual Sponsor Meeting 2019*

### GeoGulf 2019

The Gulf Coast Association of Geological Societies and the Gulf Coast Section of SEPM hosted GeoGulf19, its 69th Annual Convention, on October 23-25, 2019 at the Houston Westchase Marriott. See below for a full list of CBTH presentations at the meeting. For more information, [click here](#).

- o Malik Muhammad Alam - Structural comparison of 27 passive margin fold-belts from the margins of the Gulf of Mexico, South Atlantic, and Africa
- o Sharon Cornelius – Relationship between geothermal and geopressure gradients in the deepwater Gulf of Mexico: Garden Banks, Green Canyon, Keathley Canyon, and Walker Ridge
- o Jack Kenning – Structural and stratigraphic controls on Mesozoic source rock maturity and hydrocarbon play prospectivity of the deepwater Yucatan and Campeche margins, southern Gulf of Mexico
- o Marie Kouassi - Velocity model building to improve subsalt imaging of 2D seismic data in the Green Canyon and Walker Ridge areas
- o Mei Liu - Crustal architecture of the Late Jurassic, short ridge-long-fracture-zone spreading center and its flanking oceanic crust in the western Gulf of Mexico

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## Recent Meetings

### GeoGulf 2019 (continued)

- o Paul Mann, Jack Kenning, Mei Liu – Restoring the conjugate margins of the Gulf of Mexico: Implications for pre-, syn-, and post-rift exploration fairways
- o Paul Mann, Javier Sanchez, Luis C. Carvajal, Lucia Torrado, and Bryan Ott – Cretaceous to recent tectonic history and controls on hydrocarbons in the western Caribbean Sea
- o Sean Romito - Cataloguing seven offshore basement terranes of the Caribbean Sea and their linkage history from integration of geophysical datasets, well logs, and dredged seafloor samples
- o Emily Stibbe - Correlation of active faults and ancient terrane boundaries within and around the Caribbean Plate
- o Lei Sun - Tectonic geomorphology reveals areas of active transpression on the island of Hispaniola (Haiti and the Dominican Republic)
- o Geraldine Tijerina - Correlation of exhumation peaks from onshore, low-temperature, thermochronological ages in northwest Africa and eastern North America with pulses of rapid, oceanic spreading in the Central Atlantic Ocean
- o Hualing Zhang – Integration of subsidence analysis and gravity modeling in the Permian Basin, west Texas

### HGS/EAGE Conference on Latin America

The Houston Geological Society and the European Association of Geoscientists and Engineers hosted the First HGS/EAGE Conference on Latin America: South & Central Petroleum Plays for the Third Millennium on November 19-20, 2019. See below for a full list of CBTH presentations. For more information, [click here](#).

- o Lila M. Bishop – Tectonic and stratigraphic stages of hydrocarbon prospectivity of the Sandino forearc basin of Nicaragua and Costa Rica inferred from seismic mapping, seismic facies analysis, and 2D basin modeling
- o Weston Charles – Regional flexure of the Caribbean intraplate area as a result of its subduction beneath the northern South America margin
- o Christian Montes – Determining the amount of left-lateral displacement along the Santa Marta-Bucaramanga fault, Colombia
- o Bryan Moore – Mapping the continent-ocean boundary along the Gulf of Mexico and circum-Atlantic conjugate margins using marine satellite gravity data
- o Sean Romito – Caribbean basement terranes: boundaries, sedimentary thickness, subsidence histories, and regional controls on hydrocarbon source rocks, oil seeps, and shows
- o Lei Sun – Tectonic geomorphology and gravity modeling reveal the crustal structure of Hispaniola and impact on its prospectivity



## Recent Meetings

### AGU 2019

The American Geophysical Union hosted its Fall Meeting on December 9-13 in San Francisco. Paul Mann co-convoked a special session with French colleagues entitled “Crustal structure, deformation, and amalgamation of the Caribbean plate.” See below for a full list of CBTH presentations at AGU 2019. For more information, [click here](#).

- o Weston Charles, Lei Sun, Sean Romito, and Paul Mann - Regional flexural effects of the Caribbean plate produced by its active subduction beneath northern South America
- o Mei Liu, Dale Bird, and Paul Mann - Geophysical framework of the extinct Jurassic spreading center in the Gulf of Mexico: an integration of marine seismic reflection, refraction, and gravity data
- o Jacob Miller and Paul Mann - Did the Grenada and Tobago Basins originate as a single forearc basin that was sub-divided by the intrusion of the Lesser Antilles Volcanic Arc?
- o Bryan Moore and Paul Mann - Insights on oceanic core complex formation derived from quantitative structural restorations of examples from the Atlantic and Indian Oceans
- o Sean Romito and Paul Mann - Caribbean basement terranes: Boundaries, sedimentary thickness, and subsidence histories
- o Lei Sun, Paul Mann, and Dale Bird - Integration of tectonic geomorphology and crustal structure across the Bahamas-Hispaniola Collisional Zone, Northeastern Caribbean

*CBTH post-doctoral researcher Lei Sun and students Jacob Miller and Mei Liu attend a field trip at AGU 2019 in San Francisco*



### Western Geco/Schlumberger

CBTH PhD student Jack Kenning presented two invited seminars at Western Geco/Schlumberger on January 29, 2020 and April 15, 2020. His presentations were titled “Regional thermal maturity modelling, risk, and play potential of the Florida-conjugate, deep-water Yucatan margin” and “Tectonic controls on the structural and stratigraphic development of the Mexican Ridges and Lamprea fold-belts,” respectively.

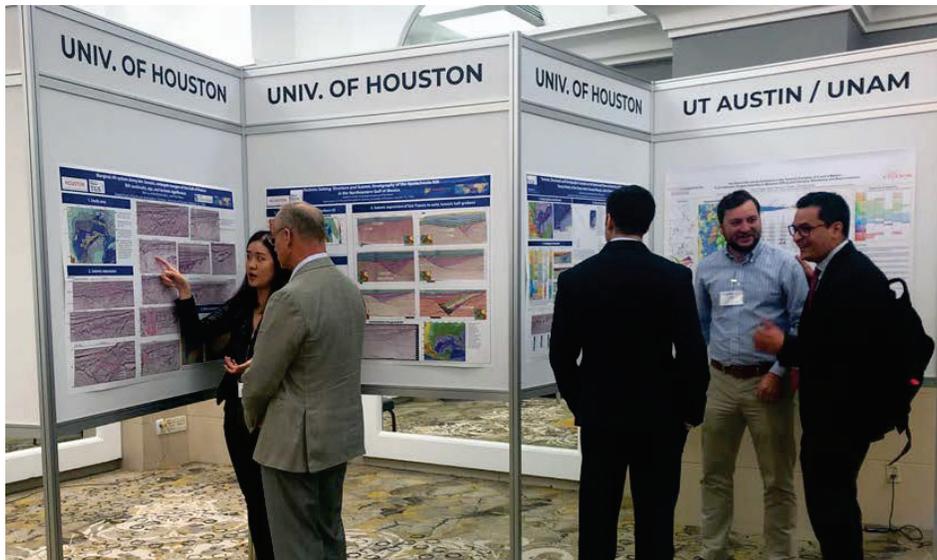


## Recent Meetings

### AAPG Hedberg Conference: Geology and Hydrocarbon Potential of the Circum-Gulf of Mexico Pre-Salt Section

AAPG hosted a Hedberg Research Conference on the Geology and Hydrocarbon Potential of the Circum-Gulf of Mexico Pre-salt section on February 5-7, 2020 in Mexico City, Mexico. A full list of CBTH presentations at the meeting can be found below. We thank the meeting organizers for subsidizing the registration costs for these three students. For more information, [click here](#).

- o Jack Kenning and Paul Mann - Tectonic, structural, and stratigraphic controls on the burial and thermal maturity of Mesozoic source rocks of the deep-water Yucatan Margin, Gulf of Mexico
- o Mei Liu and Paul Mann - Marginal rift system along Late Jurassic conjugate margins of the Gulf of Mexico: Rift continuity, age, and tectonic significance
- o Matthew Storey, Paul Mann, and Mei Liu - Tectonic setting and structure of pre-salt, Mesozoic rift basins in the northeastern Gulf of Mexico



*CBTH PhD students Mei Liu and Jack Kenning present at the 2020 AAPG Hedberg Research Conference on the Geology and Hydrocarbon Potential of the Circum-Gulf of Mexico Pre-Salt Section in Mexico City*

### HGS International Dinner

CBTH PhD student Jack Kenning recently presented in invited talk at the HGS International Dinner on February 24, 2020. His talk was entitled “Tectonic evolution, hydrocarbon potential, and play prospectivity of the deep-water Yucatan margin, southern Gulf of Mexico.” [Click here](#) for more information.



## Upcoming Meetings

### AAPG 2020 Annual Convention & Exhibition

The American Association of Petroleum Geologists annual meeting was planned for June 7-10, 2020 in Houston, Texas. Unfortunately, due to coronavirus, the meeting and the CBTH presentations listed below have been postponed to a future date - possibly in the Fall of 2020. A full list of accepted CBTH presentations can be found below. For more information, [click here](#).

- o Sharon Cornelius - Geothermal Gradients in the Deep-Water Gulf of Mexico and their Relationship to Overpressure: Garden Banks, Green Canyon, Keathley Canyon, and Walker Ridge
- o Nahid Hasan - Explaining Differing Styles of Salt Deformation in the Campeche and Yucatan Salt Basins, Southern Gulf of Mexico
- o Mei Liu - Regional Extent and Tectonic Origin of the Mesozoic Marginal Rift System of the Deep-Water Gulf of Mexico Basin
- o Matthew Storey - Tectonic Setting, Structure, and Hydrocarbon Potential of Pre-Salt, Mesozoic Rift Basins in the Northeastern Gulf of Mexico
- o Hualing Zhang - Integration of Structural Analysis and Gravity Modeling in the Permian Basin, West Texas

### 21st Caribbean Geological Conference

UiS PhD student Andres Cedeño was scheduled to present at the 21st Caribbean Geological Conference, which was set take place in Kingston, Jamaica July 20-23, 2020. Due to coronavirus, this meeting has been postponed to a later date. For more information, [click here](#).



### GeoGulf 2020 Annual Convention & Exposition

GeoGulf 2020, the 70th GCAGS/GCSSEPM Convention and Exposition, will be held on September 30 – October 2, 2020 in Lafayette, LA. For more information, [click here](#). Sharon Cornelius will present and co-chair a session on GOM overpressured areas. Nahid Hasan will present on the Campeche salt province.



## Recent Theses and Dissertations

### 2019-2020 completed student thesis studies and proposals supported by the CBTH project at UH (4)

- Galthom, T., 2020, Structural restoration and basin modeling of the Tarfaya Dakhla basin of the Atlantic passive margin of southern Morocco, MS thesis, University of Houston, 86 p.
- Kenning, J., 2020, Mesozoic-Cenozoic tectonic controls on basin formation and hydrocarbon potential of the deep-water Mexican sector of the Gulf of Mexico Basin, PhD dissertation, University of Houston, 270 p.
- Lunn, E., 2019, 3D gravity modeling of the Barreirinhas and Ceara basins of northeastern Brazil, MS thesis, University of Houston, 103 p.
- Storey, M., 2020, Tectonic setting, structure, and seismic stratigraphy of the Apalachicola Rift and its overlying sag basin in the northeastern Gulf of Mexico, MS thesis, University of Houston, 102 p.

### 2020 upcoming student thesis studies supported by the CBTH project at UH (2)

- Zinecker, M., 2020, From early continental rifting to conjugate passive margins: Examples from the Gulf of Mexico and the central Atlantic, PhD proposal presented and approved on April 24, 2019, will graduate in August 2020. (Zinecker will start at BP in Houston on August 1, 2020)
- Leslie, S., 2020, Giant mass transport deposits, fold and thrust belt evolution, and petroleum system analysis of the northern Colombian Caribbean margin, will graduate in August 2020. (Leslie works full-time for the Repsol Mexican GOM group in The Woodlands)

## Recent & Upcoming Publications

*(Previously-supported CBTH students are marked by an asterisk\*)*

- Alvarez, T.\*, Mann, P., Vargas, C.A., and Wood, L.J., 2020, Gravity, seismic reflection and tomographic constraints on the subduction to strike-slip transition; southeastern Caribbean Plate boundary zone, Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems (C. Bartolini, editor), in press.
- Alvarez, T.\*, Mann, P., and Wood, L.J., 2020, Tectonics and evolution of sedimentary basins along the arcuate southeastern margin of the Caribbean plate, Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems (C. Bartolini, editor), in press.
- Blanco, J.M.\* and Mann, P., 2020, Subsurface geology of La Vela Basin, offshore Venezuela: Examples of basement and carbonate-hosted, liquid and gas hydrocarbon reservoirs, Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems (C. Bartolini, editor), in press.
- Carvajal-Arenas, L.C.\* and Mann, P., 2018, Western Caribbean intraplate deformation, 2: Defining a continuous and active microplate boundary along the San Andres rift and Hess escarpment, Colombian Caribbean Sea, AAPG Bulletin, v. 102, n. 8, p. 1523-1563. doi:10.1306/12081717221



## Recent & Upcoming Publications (cont.)

- Castillo, K. \*, and Mann, P., 2020, Structure, stratigraphy and petroleum potential of the easternmost part of the Eastern Venezuelan foreland basin, Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems (C. Bartolini, editor), in press.
- Cedeno, A. \*, Ahmed, M. \*, Escalona, A., and Abrahamson, P., 2020, Tectonostratigraphic evolution of the western Barbados accretionary prism and the eastern Tobago forearc basin: Implications for petroleum systems, Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems (C. Bartolini, editor), in press.
- Cedeno, A. \*, Ohm, S., and Escalona, A., 2020, Barbados petroleum and its role in understanding distribution of Cretaceous source rocks in the southeastern Caribbean margin: Insights from an organic geochemistry study, Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems (C. Bartolini, editor), in press.
- Cedeno, A. \*, Ohm, S., Escalona, A., Narain, E., and Jager, J., 2020, Source rocks in the Guyana-Suriname basin: Insights from geochemical investigations of 15 heavy oils from onshore Suriname, Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems (C. Bartolini, editor), in press.
- Cornelius, S. and Castagna, J.P., 2018, Variation in salt-body interval velocities in the deepwater Gulf of Mexico: Keathley Canyon and Walker Ridge area, Interpretation, v. 6, n. 1, p. T15-T27. doi:10.1190/INT-2017-0069.1
- Cornelius, S. And Emmet, P., 2020, Relationship between geothermal and geopressure gradients in the deepwater Gulf of Mexico: Garden Banks, Green Canyon, Keathley Canyon and Walker Ridge, Interpretation, in press.
- Escalona, A., Norton, I., Lawver, L., and Gahagan, L., 2020, Quantitative plate tectonic reconstructions of the Caribbean region from Jurassic to present, Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems (C. Bartolini, editor), in press.
- Escalona, A., Watson, L., and Ahmad, M. \*, 2020, Late Cretaceous-Pliocene paleogeography of the circum-Caribbean region based on quantitative plate reconstruction and georeferenced databases, Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems (C. Bartolini, editor), in press.
- Figueira, B. \*, and Escalona, A., 2020, Overview of the Petroleum System of the Gulf of Paria, Eastern Venezuela Basin, Trinidad-Venezuela - implications from Plate to Province scale, Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems (C. Bartolini, editor), in press.
- Gomez, S. \*, Bird, D., and Mann, P., 2018, Deep crustal structure and tectonic origin of the Tobago-Barbados ridge, Interpretation, v. 6, n. 2, p. T471-T484, doi:10.1190/INT-2016-0176.1



## Recent & Upcoming Publications (cont.)

- Gomez, S.\*, Mann, P., Alvarez, T.\*, and Krueger, A., 2020, Tectonostratigraphic evolution of the Barbados accretionary prism and surrounding sedimentary basins within the southeastern Caribbean- north-eastern South America arcuate, strike-slip to subduction transition zone, Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems (C. Bartolini, editor), in press.
- Hippolyte, J.C., Mann, P., and Weber, J.C., 2020, Neogene paleostress and structural evolution of Trinidad: Strain partitioning, rotation, and strike-slip reactivation of a colliding, accretionary wedge, Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems (C. Bartolini, editor), in press.
- Kenning, J.\* and Mann, P., 2020, Control of structural deformation and sedimentation by the interaction of salt and shale tectonics across the deep-water Lamprea fold-belt and Salina del Bravo salt province, western Gulf of Mexico: *Journal of Structural Geology*, to be submitted.
- Kenning, J.\* and Mann, P., 2020, Control of structural style by large, Paleogene, mass transport deposits in the Mexican Ridges foldbelt and Salina del Bravo, western Gulf of Mexico, *Marine and Petroleum Geology*, v. 115, 104254, doi:10.1016/j.marpetgeo.2020.104254.
- Kenning, J.\* and Mann, P., 2020, Regional thermal maturity modelling of hydrocarbons along the deep-water Yucatan margin, southern Gulf of Mexico: *The Geology and Hydrocarbon Potential of Mexico and the Northern Caribbean* (J. Pindell and I. Davison, editors), in press.
- Leslie, S.\* and Mann, P., 2020, Structure, stratigraphy, and petroleum potential of the deepwater Colombian Basin, offshore northern Colombia, *Interpretation*, in revision.
- Lin\*, P., Bird, D., and Mann, P., 2019, Crustal structure of an extinct, late Jurassic-to-earliest Cretaceous spreading center and its adjacent oceanic crust in the eastern Gulf of Mexico: *Marine Geophysical Research*, doi:10.1007/s1100101909379-5.
- Liu, M., Filina, I., and Mann, P., 2019, Crustal structure of Mesozoic rifting in the northeastern Gulf of Mexico from the integration of seismic and potential fields data, *Interpretation*, accepted and published online July 15, 2019, p. 1-33. doi:10.1190/INT-2018-0259.1
- Mann, P., 2020, Stratigraphy and structure of regionally-isolated hydrocarbon occurrences in the Azua basin, south-central Dominican Republic (northeastern Caribbean): *The Geology and Hydrocarbon Potential of Mexico and the Northern Caribbean* (J. Pindell and I. Davison, editors), in press.
- Mejia-Hernandez, M.\*, Mann, P., and Sanchez, J.\*, 2020, Sequence of folding and thrusting of the Piedemonte oil and gas field, eastern foothills of the Colombian Cordillera Oriental: Constraints from integration of balanced cross sections and thermal maturation data, *Interpretation*, in revision.
- Pachon Parra, L.\*, Mann, P., and Cardozo, N., 2020, Regional subsurface mapping and 3D flexural modeling of the obliquely-converging Putumayo foreland basin, southern Colombia, *Interpretation*, in revision.



## Recent & Upcoming Publications (cont.)

- Punnette, S.\* and Mann, P., 2020, Subsurface structure of the Hinge Line fault zone and its control on the distribution of gas fields of the North Coast Marine Area (NCMA) of offshore, northern Trinidad, Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems (C. Bartolini, editor), in press.
- Punnette, S.\*, Wood, L., and Mann, P., 2020, Late Quaternary sedimentary evolution of the North Coast Marine Area (NCMA) of northern, offshore Trinidad, Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems (C. Bartolini, editor), in press.
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- Sanchez, J.\*, Mann, P., Carvajal-Arenas, L. C.\*, and Bernal-Olaya, R.\*, 2019. Regional transect across the western Caribbean Sea based on integration of geologic, seismic reflection, and magnetic data. *AAPG Bulletin*, v. 103, p. 303-343. doi:10.1306/05111816516.
- Sanchez, J.\*, and Mann, P., 2020, Patterns of recent deformation of the western Maracaibo block, northern Colombia and western Venezuela, based on integration of geomorphic indices with regional geology, *Interpretation*, in revision.
- Steier, A.\* and Mann, P., 2019, Late Mesozoic gravity sliding and Oxfordian hydrocarbon reservoir potential of the northern Yucatan margin, *Marine and Petroleum Geology*, v. 103, p. 681-701. doi:10.1016/j.marpetgeo.2019.03.001
- Sun, L.\*, Mann, P., and Bird, D.E., 2020, Integration of tectonic geomorphology and crustal structure across the active oblique collisional zone on the island of Hispaniola, northeastern Caribbean: The Geology and Hydrocarbon Potential of Mexico and the Northern Caribbean (I. Davison, editor), in press



## Recent & Upcoming Publications (cont.)

- Tillman, T.\* and Mann, P., 2020, Regional hydrocarbon potential of the northeastern Caribbean based on integration of sediment thickness and source rock maturity data: The Geology and Hydrocarbon Potential of Mexico and the Northern Caribbean (J. Pindell and I. Davison, editors), in press.
- Torrado, L.\*, Carvajal-Arenas, L.C.\*, Mann, P., and Bhattacharya, J., 2020, Integrated seismic and well-log analysis for the exploration of stratigraphic traps in the Carbonera Formation, Llanos foreland basin of Colombia: *Journal of South American Earth Sciences*, doi:10.1016/j.jsames.2020.102607.
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- Vence, E.\*, and Mann, P., 2020, Subsurface basement, structure, stratigraphy, and timing of regional tectonic events affecting the Guajira margin of northern Colombia, *Interpretation*, in revision.
- Wang, J.\*, Mann, P., and Stewart, R. H., 2018. Late Holocene structural style and seismicity of highly compressional faults in southern Haiti. *Tectonics*, v. 37, n. 10, p. 3834-3852, doi:10.1029/2017TC004920.
- Watson, L. and Escalona, A., 2020, Creating spatial-based paleogeography from plate reconstructions: a methodology, *Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems* (C. Bartolini, editor), in press.
- Zhang, H.\*, Mann, P., and Bird, D., 2020, Integration of subsidence analysis, structural studies, and gravity modeling to understand the tectonic stages of the Permian Basin, West Texas, *Interpretation*, in press.
- Zimmerman, U., Dieset, J.\*, Watson, L., and Lapen, T., 2020, Sedimentological constraints and provenance of Eocene and Miocene successions from Barbados, *Eastern Caribbean-NE South American Boundary: Tectonic Evolution, Basin Architecture and Petroleum Systems* (C. Bartolini, editor), in press.



## Awards

- 2020 – Kyle Reuber and Paul Mann, Best Paper award for the journal Interpretation in 2019
- 2019 - Sean Romito, PhD candidate, 2nd Place Poster Presentation, Early PhD, second-year MS Category, Houston Geological Society and University of Houston Robert E. Sheriff lecture series and student poster competition
- 2019 - Mei Liu, PhD candidate, 2nd Place Poster Presentation, Student poster competition, GeoGulf (GCAGS) Annual meeting, Houston, Texas
- 2019 - Paul Mann, Principal Investigator, AAPG Grover E. Murray Distinguished Educator Award
- 2019 - Nahid Hasan, PhD Candidate, University of Houston Presidential Fellowship (2019-2021)
- 2019 - Marcus Zinecker, PhD Candidate, Houston Geological Society (HGS) Rising Star Award (2018-2019)
- 2019 - Jack Kenning, PhD candidate, 1st Place, AAPG 2019 Annual Meeting Student Poster Competition
- 2019 - Amanda Pascali, undergraduate, Scholarship for Undergraduate Field Camp, UH Research Day
- 2019 - Marcus Zinecker, PhD candidate, Scholarship for Outstanding Graduate Work in Geology, UH Research Day
- 2019 - Sean Romito, PhD candidate, Scholarship for Outstanding Graduate Work in Geology, UH Research Day
- 2019 - Jack Kenning, PhD candidate, Scholarship for Outstanding Graduate Work in Geology, UH Research Day
- 2019 - Bryan Moore, undergraduate, Scholarship for Outstanding Undergraduate Fieldwork, UH Research Day
- 2019 - Bryan Moore, undergraduate, 2nd Place Poster Presentation, Undergraduate Category, UH Research Day



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