

# Carbon Capture and Storage: An Industry Primer

## Instructor Biographies

**Dr. Trey Meckel**, Monteverde Energy, Australia, has more than 30 years of experience at the forefront of the global energy sector, including significant experience in decarbonized energy solutions, petroleum E&P and R&D. Presently, Trey leads two geothermal exploration companies, including Australia's only listed 'pure play' geothermal company. Through his consultancy, Monteverde Energy, he is the SME for geothermal projects in Australia. From 2021-2023, Trey worked at CO2CRC/CO2Tech, Australia's leading CCUS research and technical services organization. As Carbon Storage Program Manager, he collaborated with internationally respected industry, academic and government partners to deliver commercially viable, technically rigorous, low emission technology solutions, including Australia's first offshore Declaration of Storage. **Dr. Tip Meckel**, Gulf Coast Carbon Center of Bureau of Economic Geology, at UT-Austin. Dr Tip Meckel is a globally renowned expert with almost 20 years of experience in CCS. He joined the Gulf Coast Carbon Center (GCCC) at the Bureau of Economic Geology in 2006. Presently, he is a Senior Research Scientist at the GCCC. His recent research has been focused on assessing the critical success factors of geologic carbon sequestration and the suitability of geologic formations in the Gulf of Mexico for permanent carbon storage, focusing on capacity assessment, geologic characterization, structural geology, monitoring technologies and design, and pressure evolution for CO2 injections.

**Professional Development Hours (PDH) = 6**

## Course Description

This one-day short course provides technical professionals, managers, and executives at various stages in their career an in-depth overview of Carbon Capture and Storage (CCS), one of the most rapidly emerging sectors in the energy industry and a critically necessary component of all credible low emissions and decarbonization scenarios and plans. CCS is a safe, reliable, and proven method to remove carbon dioxide safely and effectively from the atmosphere. Under the right conditions, CO2 stored in subsurface geologic formations is permanently isolated.

Many of the aspects of CCS that we will cover as topics and themes on the course will be familiar to participants with experience in oil and gas, but we will focus on how to leverage skills and experience to maximum benefit.

- CCS in the context of Net Zero and the Energy Transition
- Existing and emerging technologies to capture, transport, store, and monitor injected CO2
- Sources of CO2 emissions
- Distribution networks: Pipelines and flow assurance
- Characterizing and selecting potential storage sites
  - Onshore vs offshore
  - Depleted fields and saline aquifers
  - A forensic look at seal integrity
- Risk and uncertainty
- Reservoir surveillance
  - Migration
  - Measuring, monitoring, and verifying
- Permitting, Regulatory, and Policy issues
- Establishing and building successful partnerships
- Project management
- Financing, incentives and cost considerations
- Stakeholder engagement
- Critical success factors for technical and commercial viability

The course will draw on the instructors' decades of first-hand experience on successful (and not so successful) USA and International commercial and technology research projects, including their learnings from applied case studies, a review of the status of current and planned global projects, projections for future growth, and thoughts on how to build a sustainable and rewarding career in the 21st century energy industry.

27th Annual Gulf of Mexico  
**Deepwater**  
Technical Symposium



# Introduction to Western and Central Gulf of Mexico Environmental

## Instructor

Brian Boyer, BTGap L.L.C.

**Professional Development Hours (PDH) = 6**

## Course Description

Introduction to Western and Central Gulf of Mexico Environmental Regulations training class is a must-attend event for new and experienced engineers, geologists, operations, support and HSE professionals who want an introductory class on environmental regulations. The workshop is designed to enhance your skills and knowledge of environmental regulations affecting oil and gas operations in the Western and Central Gulf of Mexico. The schedule includes topics such as air quality, water quality, waste management, spill reporting, and safety and environmental monitoring program (SEMP).

## Topics Covered

### Air Quality

- BOEM air quality regulations
- BOEM OCS air quality system reporting
- EPA greenhouse gas emission reporting
- Methane fee

### Water Quality

- GMG290000 permit
- Discharge Monitoring Reports (DMRs)
- Waste Management
- Hazardous waste
- Nonhazardous solid waste
- Spill Reporting
- Safety and Environmental Monitoring Program (SEMP)



# Professional Geoscientist Exam (ASBOG®) Preparatory Course

## Instructor

William H. Schramm (BA, MS, LAPG334), Chair of Ethics Committee & Subject Matter Expert for National Association of State Boards of Geology (ASBOG)

## Instructor Biography

William H. Schramm is a 28-year retired veteran of the Louisiana Department of Environmental Quality. As a Geologist in remediation, he worked closely with industry, consultants, regulators, and private citizens. As Geologist Supervisor, he managed a staff of 16 Geologists and staff. He served as Adjunct Instructor on the staff of the Department of Geology at the University of Louisiana-Lafayette and served on numerous Graduate Thesis Committees. After retirement from the state in 2017, Governor John Bel Edwards appointed Mr. Schramm to the Louisiana Board of Professional Geoscientists where he was elected Treasurer (2018), then Chair of the board (2021). Concurrently he was selected to the Council of Examiners as a Subject Matter Expert with the National Association of State Boards of Geology (ASBOG®) and also serves as the Chair of the Ethics Committee. He holds a BA and MS in Geology and a Teaching Certification for K-12 in Science and Earth Science as well as Louisiana Professional Geoscientist License 334. He now consults part time as Senior Geologist with Losonsky and Associates.

Professional Development Hours (PDH) = 3.0

## Course Description

The Licensing Exams for Professional Licensure as required by the Louisiana Board of Professional Geoscientist is administered twice a year by the National Association of State Boards of Geologists through computer-based testing. I will discuss the reasoning for professional licensing, the statute, requirements of the board, the process of applying for a license, and specifically the exams.

I will explain how these exams are scientifically constructed to the highest psychometric standards and then individually graded by a council of examiners, comprised of numerous subject matter experts and the psychometrician.

We will discuss the test topics for both the Fundamental and Professional tests as well as how these topics were chosen, the “blueprint,” based on the task analysis, and how the tests are scored. I hope to encourage a discussion of topics and typical types of questions and develop a strategy for taking the tests. We will also partake of sample questions as provided by ASBOG®. A list of study materials and sources will be provided.



# Observing Maturing Source Rocks on Seismic Data

## Instructor

Dr. Tim Matava, Geological and Geophysical Integrated Modeling, Inc. (GGIM)

**Professional Development Hours (PDH) = 3.0**

**Course Duration:** ½ Day

## Course Description

Over the last several years we have made several observations indicating that it is to observe maturing source rocks on seismic data in margins. In this half day course, we will develop this emerging technology and show how to de-risk the presence of a maturing source with amplitude extractions from seismic data and maturity models from integrated basin simulators. The workflow is interdisciplinary, so it requires both geologists and geophysicists and is developed to better understand the source and timing risk elements of plays and prospects. The workflow is particularly powerful when source and trap are proximal such as in deepwater settings.

