



Dr. Tip Meckel spent the last 15 years as senior research scientist investigating geologic carbon storage (carbon capture and storage, CCS) for the Bureau of Economic Geology at The University of Texas at Austin. During his time with the Gulf Coast Carbon Center he led applied CCS research focusing on geologic characterization, seismic interpretation, monitoring design, capacity estimation, and pressure evolution for CO₂ injections. He has been directly involved with many large-scale field demonstration projects funded through the Department of Energy-NETL Regional Carbon Sequestration Partnerships. After early participation during the first-of-a-kind FRIO injection tests east of Houston in 2006, he co-directed the 10-year research program for the SECARB CO₂ storage demonstration project in Cranfield Mississippi. Beginning in 2009, he initiated and led the DOE and TX-GLO funded research initiative to identify offshore sequestration potential in the Gulf of Mexico (GoM) with focus on regional seismic and geologic interpretation, capacity assessment, and high-resolution 3D marine seismic monitoring technologies. Meckel operates the only academic high-resolution marine 3D seismic system (HR3D, valued at \$5M) in the United States and has deployed the system 3 times for CCs applications in the GoM. Tip has been the primary research thesis supervisor for 10 MS theses focused on CCS in the near offshore Gulf of Mexico, comprising over 1200 pages of technical assessment of topics ranging from regional characterization to seal performance and reservoir characterization with fluid flow simulation. He was also a lead contributor and editor for a regional CO₂ storage atlas for the Texas State Waters. Many of his students are now working on CCS for companies like Exxon Mobil and Repsol, both active in CCS in the Gulf of Mexico.

Beyond the Gulf of Mexico, Dr. Meckel has worked closely with offshore CCS developments in Japan and the North Sea. In Japan he deployed the HR3D seismic system to monitor the Tomakomai offshore CO₂ injection site. He has been an international member of a scientific advisory committee for the early stages of Norway's Northern Lights Project. During his time as a researcher, Meckel has participated in and helped organize hundreds of CCS national and international conferences and meetings, and is a recognized global expert on CCS. This involvement has generated an impressive CCS contact network.

Meckel was a technical contributor to parts of the 2019 *National Petroleum Council* study on CCUS provided to the Secretary of Energy, and participated in the formation of the Society of Petroleum Engineer's *Storage Resource Management System* (SRMS) – a method for providing transparent CO₂ storage capacity estimates for SEC compliance. Tip has published over 100 articles on CCS topics, and has been Pi or Co-PI on CCS projects with over \$75M in total funding since 2006.

As a CCS project developer, Meckel has compiled continuous 3D seismic interpretation over 2000 square miles in the Texas State Waters, and has consulted for multiple energy and IT companies on CCS project development. Tip was the primary technical expert in working with the Texas General Land Office for opening offshore acreage for leasing for commercial CCS projects.

Tip's prior work experience includes teaching undergraduate geology (Colby College, ME), Post-doctoral Mendenhall Research Fellow with the *United States Geological Survey*, and a temporary assignment as an exploration geologist in the Gulf of Mexico with ExxonMobil. PhD - UT Austin: Geology and Geophysics; MS - Univ. Montana: Geology and Geophysics; BA – Colby College: Geology, Phi Beta Kappa.