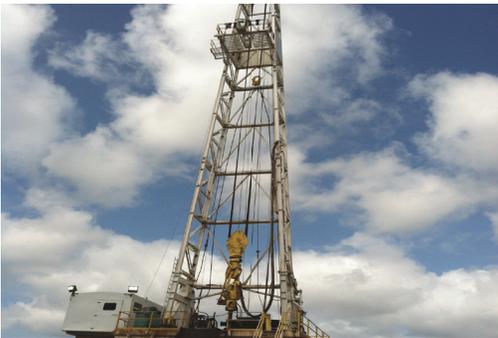


Carbon Sequestration

Geologic characterization of the South Georgia Rift Basin for Source Proximal CO₂ storage



South Carolina CO₂ Partners

Department of Energy (NETL), Department of Earth and Ocean Sciences (USC), South Carolina Department of Natural Resources, South Carolina Geological Survey, Illinois State Geological Survey, Weatherford Labs, Bay Geophysical, Schlumberger Carbon Services, Southern Company, and SECARB.



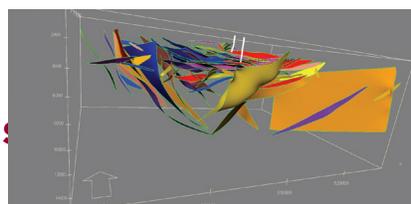
The Earth Sciences and Resources Institute (ESRI-SC) was created in 1973 to conduct applied research and service in petroleum exploration, environmental geosciences, engineering and computer applications. ESRI-SC is composed of highly experienced professionals who can solve technical energy problems using an integrated team approach.

Carbon Sequestration

Carbon Capture and Storage is the removal of CO₂ from the atmosphere into carbon storage areas such as subsurface rock layers. CCS is also referred to as “carbon capture and sequestration” but when added to an enhanced fuel recovery component, is referred to as carbon capture, utilization and storage, or CCUS.

ESRI-SC’s Role

ESRI-SC has been the principal investigator in a U.S. Department of Energy, National Energy Technology Laboratory (DOE/NETL) funded project valued at \$9.9 million aimed at increasing scientific understanding about the potential of promising geologic formations to safely and permanently store carbon dioxide in South Carolina.



ESRI-SC and partners have been evaluating the feasibility of CO₂ storage in the Jurassic/Triassic (J/TR) saline formations of the buried South Georgia Rift Basin (SGR) in order to provide data and analyses to the NATCARB database. ESRI-SC assembled an experienced research team of researchers and students and developed a three phase characterization approach: (1) preliminary geologic storage assessment based on existing data and analyses, (2) regional seismic characterization of target CO₂ storage formation, and (3) site-specific characterization via drilling, coring, and logging a geotechnical test hole.

Initiatives

ESRI-SC is seeking partnerships in building a large research consortium to expand our study area in the SE US, a region with a significant number of CO₂ sources and substantial potential for CO₂ storage. This consortium of academic institutions and industrial partners will develop new methodologies for short/ long-term injection and monitoring of CO₂ plumes and advanced methodologies for efficient carbon capture and utilization leading to new strategies for safe CCUS in an ever increasing CO₂ regulatory environment.

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