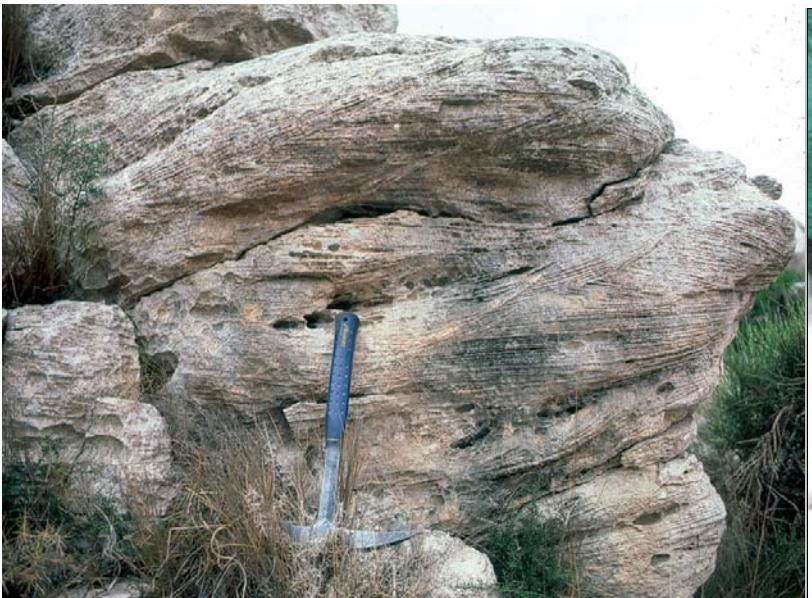
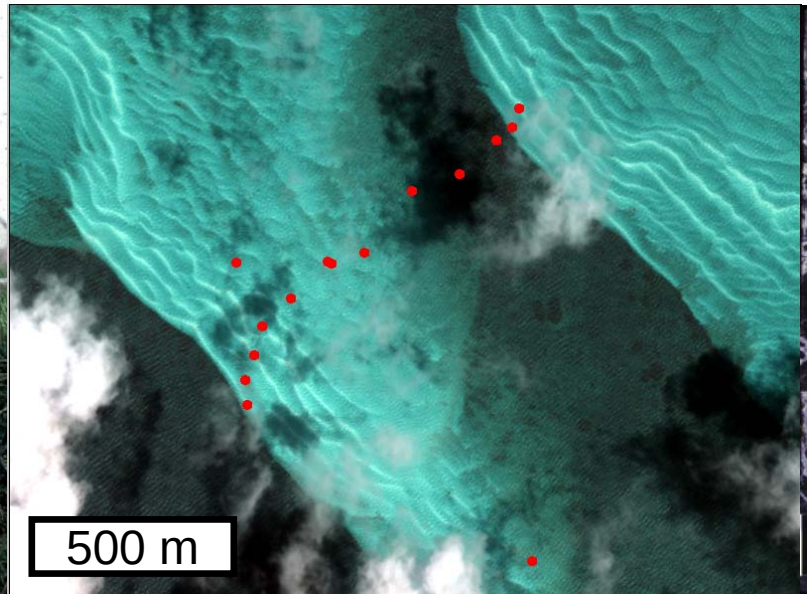
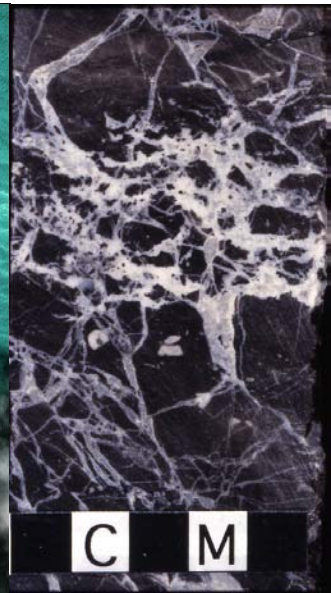
KICC

Kansas Interdisciplinary Carbonates Consortium

- A research and training program specializing in carbonate sediments, rocks, and oil and gas reservoirs.





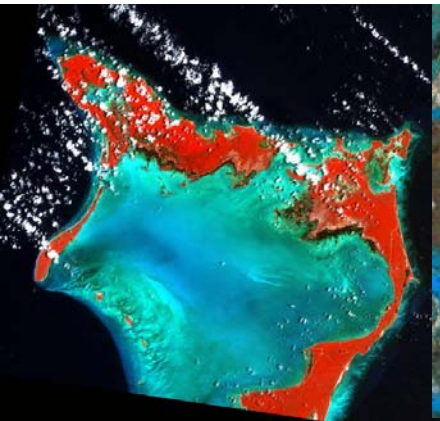


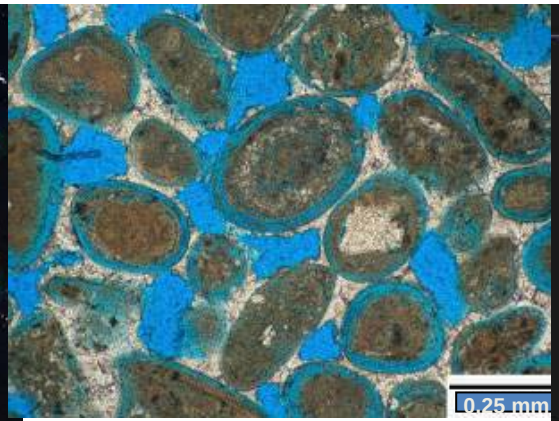
Carbonate Rocks

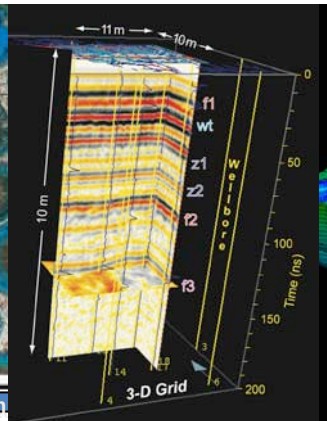
- Hold more than 60% of the world's oil and 40% of the world's gas
- Hold more that 75% of the oil and gas in Kansas
- The KICC research program:
  - fundamental and applied research of interest to the oil and gas industry
  - 16 professional geologists, reservoir engineers, geophysicists, geochemists, and geobiologists + ~26 graduate students (spans Dept. Geol., TORP, and KGS)
  - trains the next generation of scientists (recruiting by ExxonMobil, Chevron, ConocoPhillips, Chesapeake, Devon, EnCana, Oxy, Samson, Marathon, Schlumberger and others)

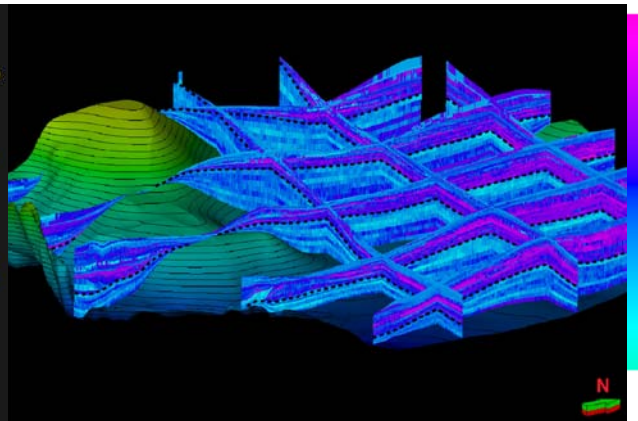
RESEARCH FOCUS

- modern marine environments where carbonate sediments are deposited
- chemical alteration of the rock that produces or destroys the pore systems in which oil and gas resides
- studies of ancient successions of rock to evaluate what controls the distribution of layers of reservoir rock
- geophysical techniques to characterize the rock/pore systems, image the generation of fractures and determine how fluid flows through fractures
- carbonate rocks of fine grain size (what we commonly call unconventional oil or gas shales; requiring horizontal drilling and hydrofrac: Mississippian lime; Niobrara)
- enhanced oil recovery and simulations of how fluid flows through pore systems to improve recovery of subsurface resources
- research dealing with what we need to know about CO_2 sequestration in carbonate rocks



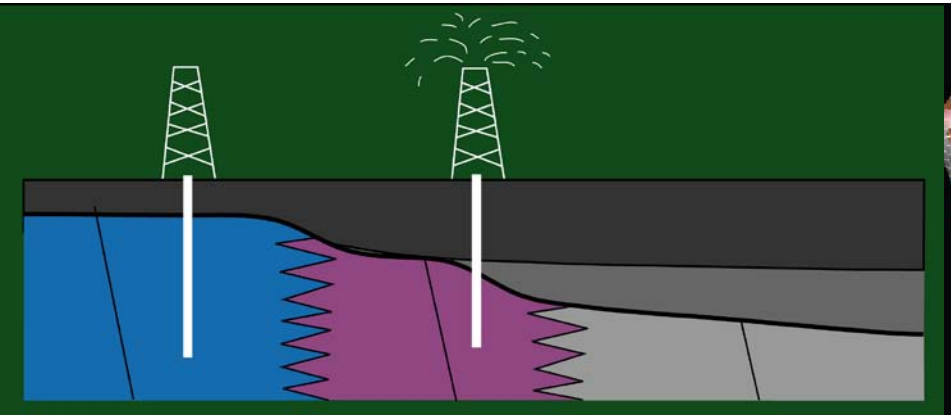


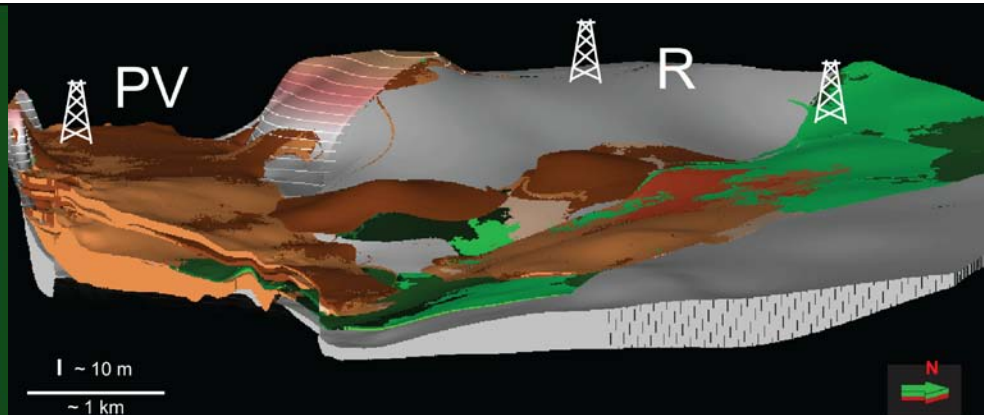




Now that seven companies have agreed to join, how do we benefit?

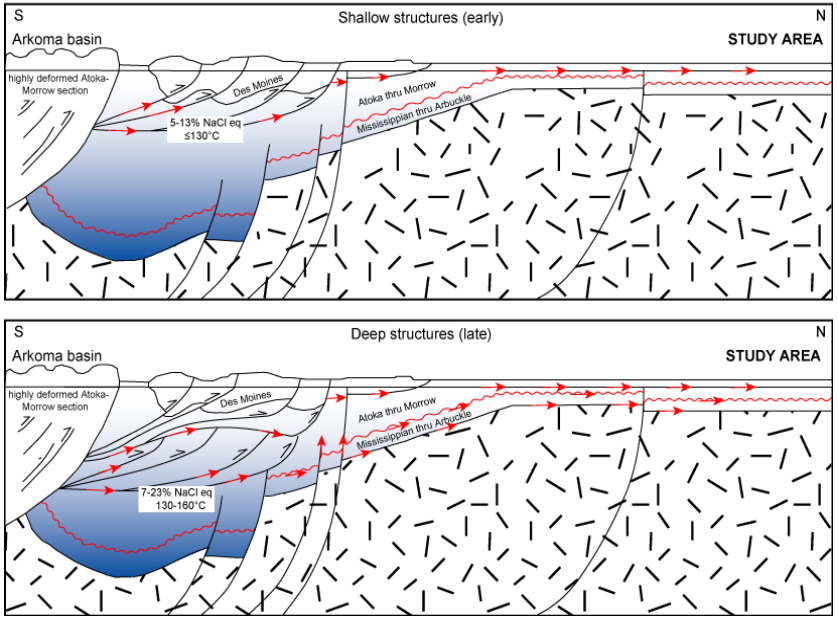
- $45,000 per company per year invested in outreach, and seed and bridge funds for research
- Exceptional training for students; producing the next generation of scientists capable of producing oil and gas in Kansas and around the world; and solving environmental problems related to it
- Connections that lead to jobs for those students
- Networking with private industry to improve our research and make it more relevant to practical needs
- Interactions with industry to lead to further research funding





What do the corporate sponsors get out of this?

- Outreach and training opportunities for their employees
- Experts to help them with problems they are facing
- Research results that they can use to improve their ability to find and produce oil and gas in carbonates
- A bit of an inside track on recruiting great young scientists



Model for porosity in the Mississippian lime play in Kansas (KU student, Erin Young)

KICC

Kansas Interdisciplinary Carbonates Consortium