Comparison of water wells, gas wells and the new test well in Hancock County
Depth ft.

Pressure psi

Surface

Test well

Rock Pressure

Water Pressure
Captured gas is compressed (pressurized)

- CO₂ is injected in a well
- Pipeline from plant
- Impermeable layers to confine the injected gas
- Injection into permeable rock layer with saline water

CO₂ displaces or dissolves in saline water in pore spaces

Mineral grains
Mineral cement

Zone of potable (fresh) water (100s of feet)

1000’s of feet

Microscopic view of permeable rock (field of view 0.5 to 1.0 mm)
Kentucky deep saline reservoirs

Red - thick
Blue - thin
The Mount Simon (target reservoir) and Eau Claire (primary seal) appear continuous on both sections.
Research on CO$_2$ Storage in Hancock County, Kentucky

Presentation
for the Hancock County Fiscal Court

Jim Cobb
State Geologist and Director,
University of Kentucky, Kentucky Geological Survey

April 28, 2008
Purpose

Test potential for storage of CO2 in the deep subsurface as set out in HB-1.

The Hancock County test is to collect samples and data from deep salty reservoirs. It will not be a disposal well.
Costs

- Hancock County project will take three to four years to complete
- Cost could reach $7 million
- Matching funds and technical input are from university, state, and industry partners
- The site selected is southeast Hancock County
Time Table

- Select a site - current activity
- Plan well and budget - current activity
- Pre-drilling characterization - current activity
- Drilling and sampling - expected fall-winter 2008
- Testing - spring - summer 2009

Governor’s Office of Energy Policy
Project Management

James C. Cobb, Director and State Geologist
Dave Harris, KGS, supervising geologist
Dave Williams, KGS Henderson, Co-PI
Rick Bowersox, KGS, Co-PI

KYCCS.ORG