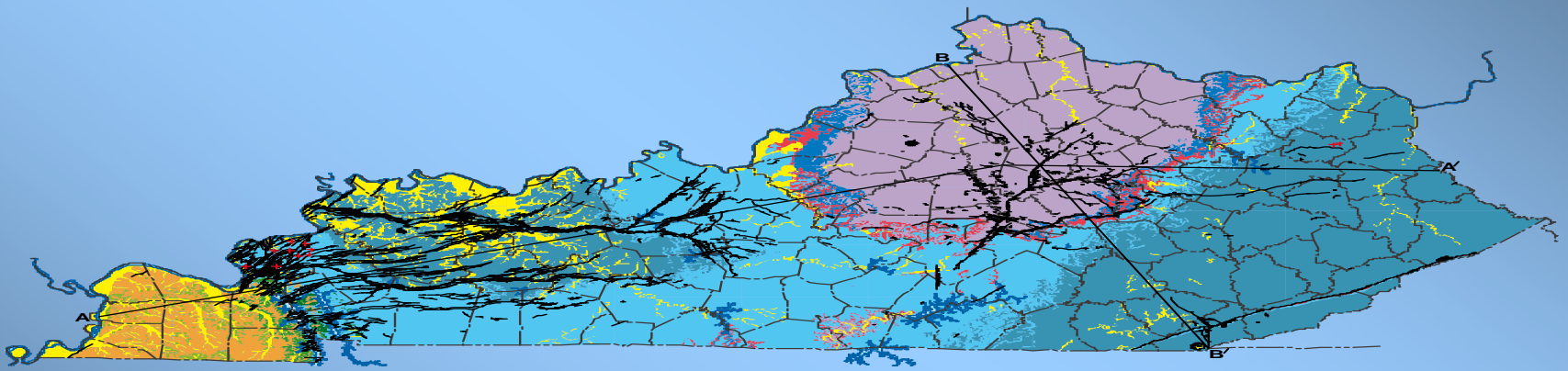
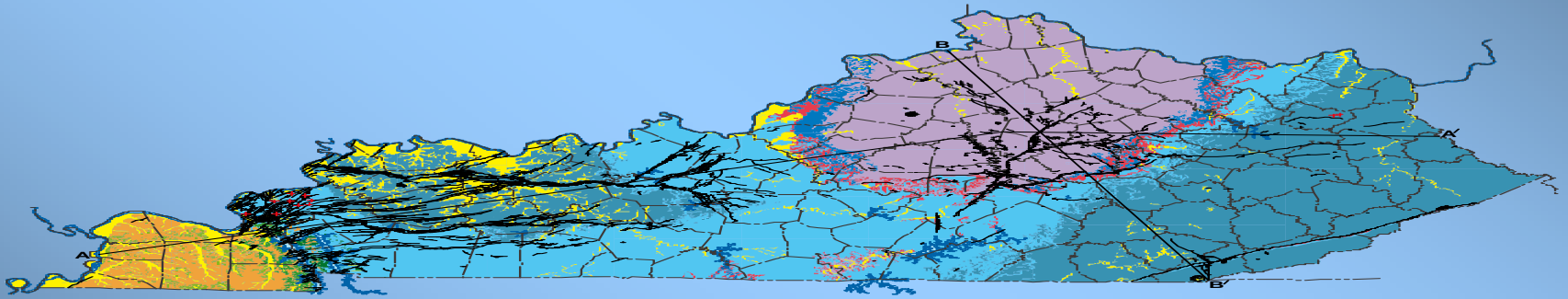
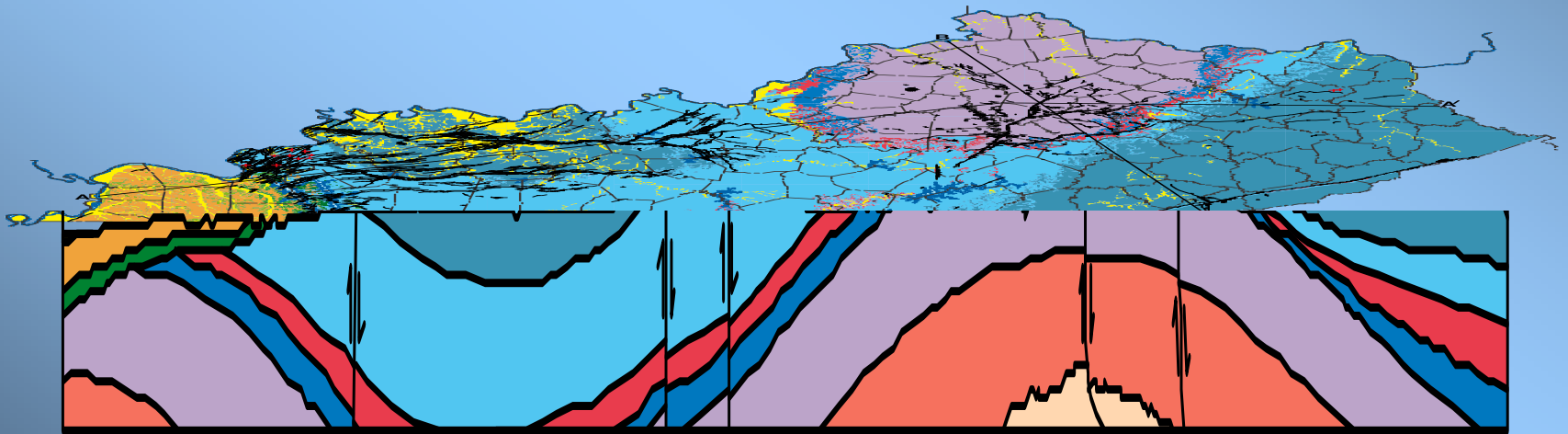


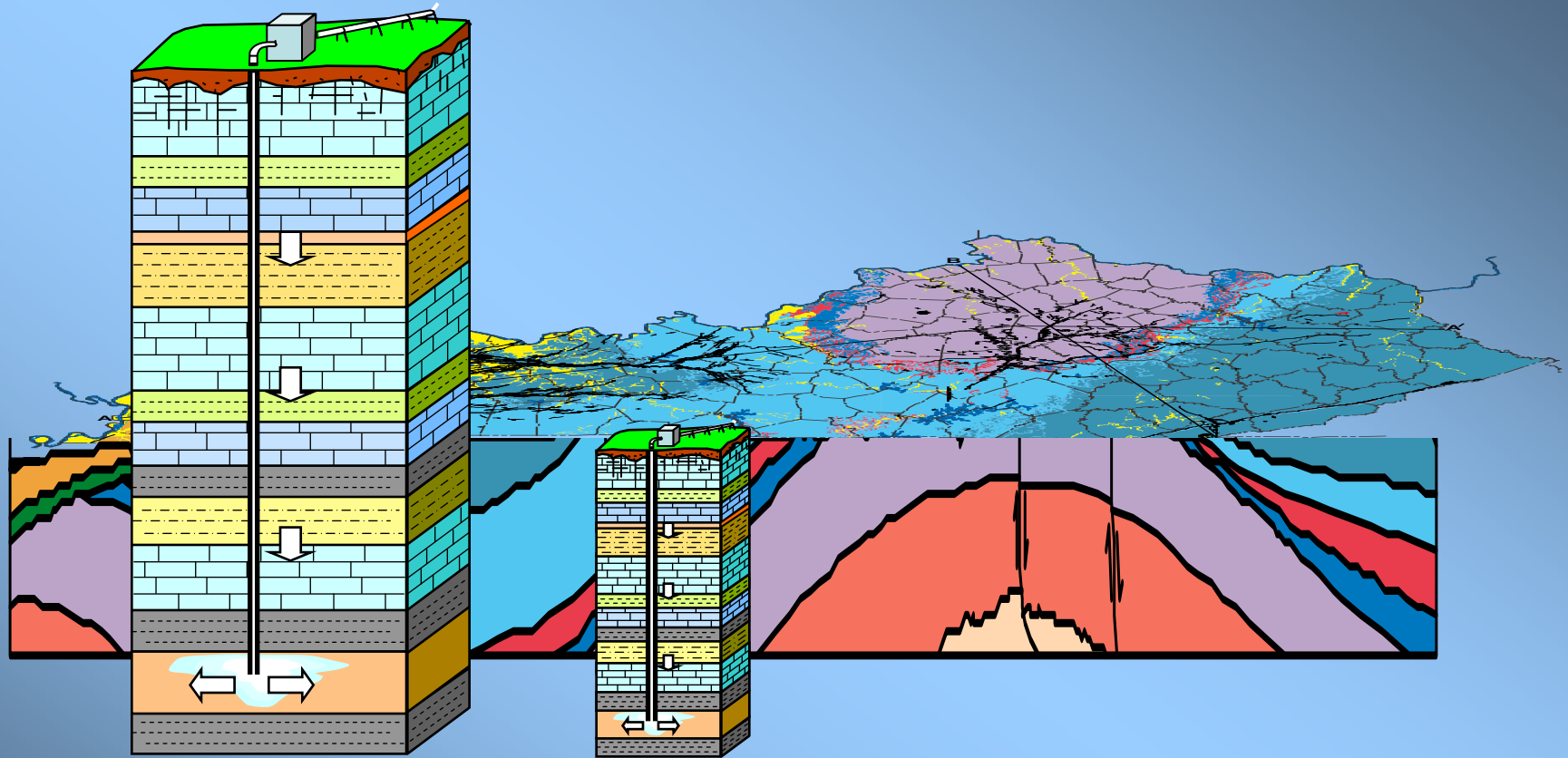
*Governor's Office of Energy Policy*



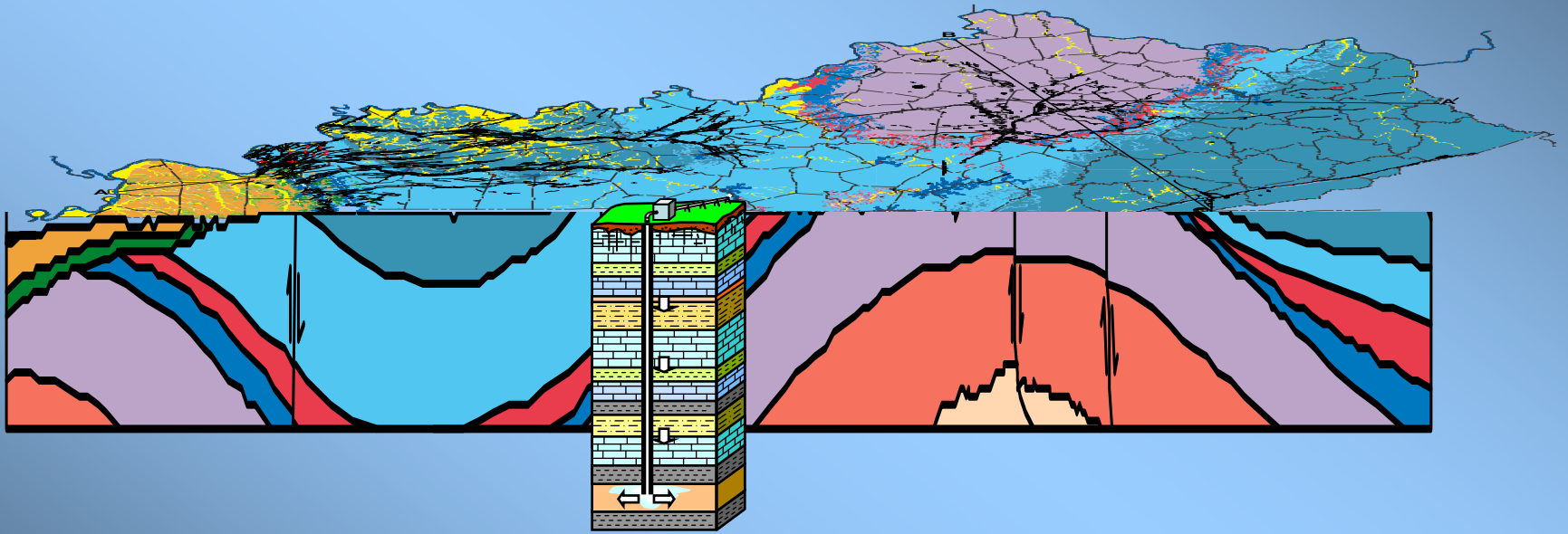




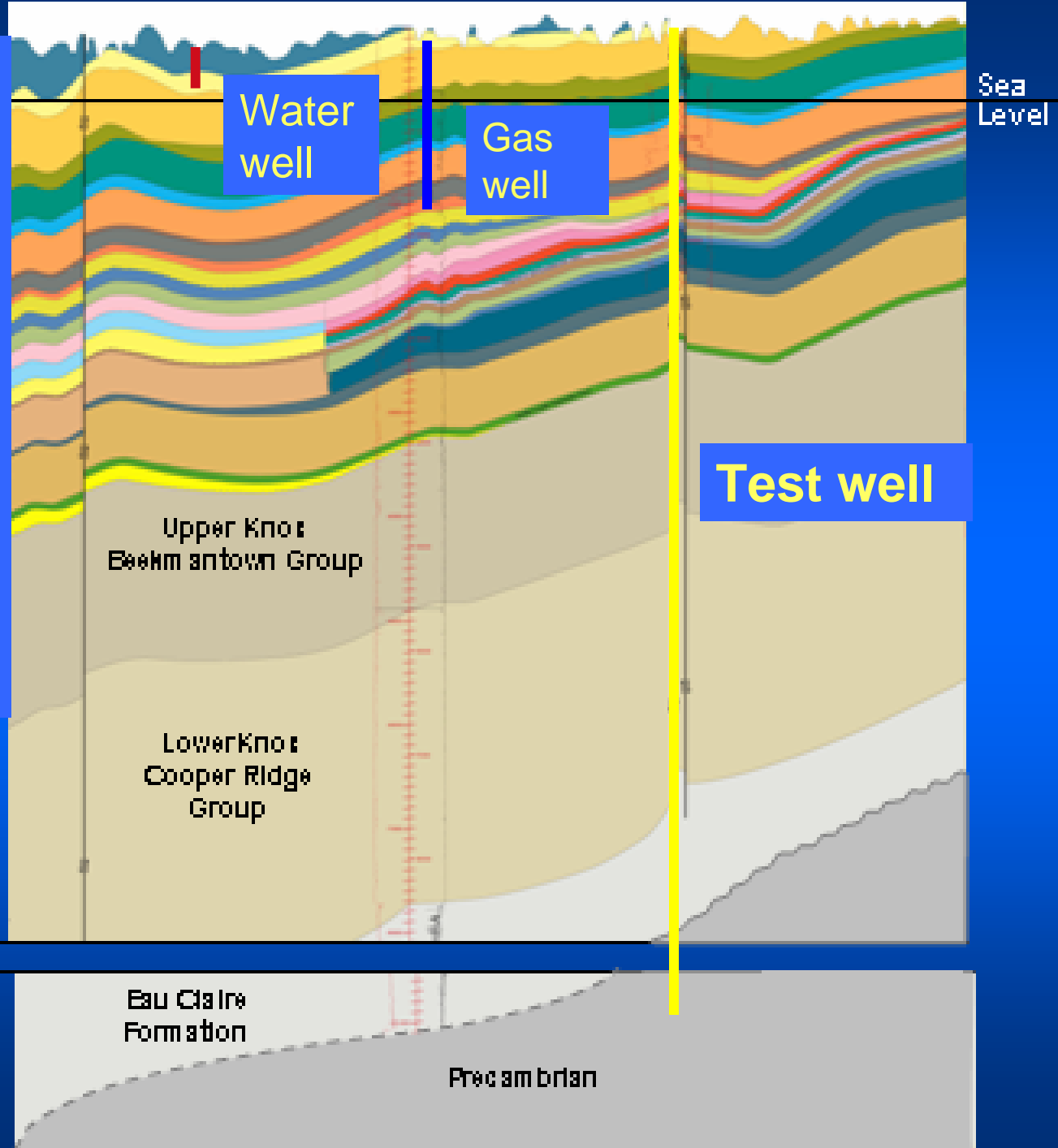








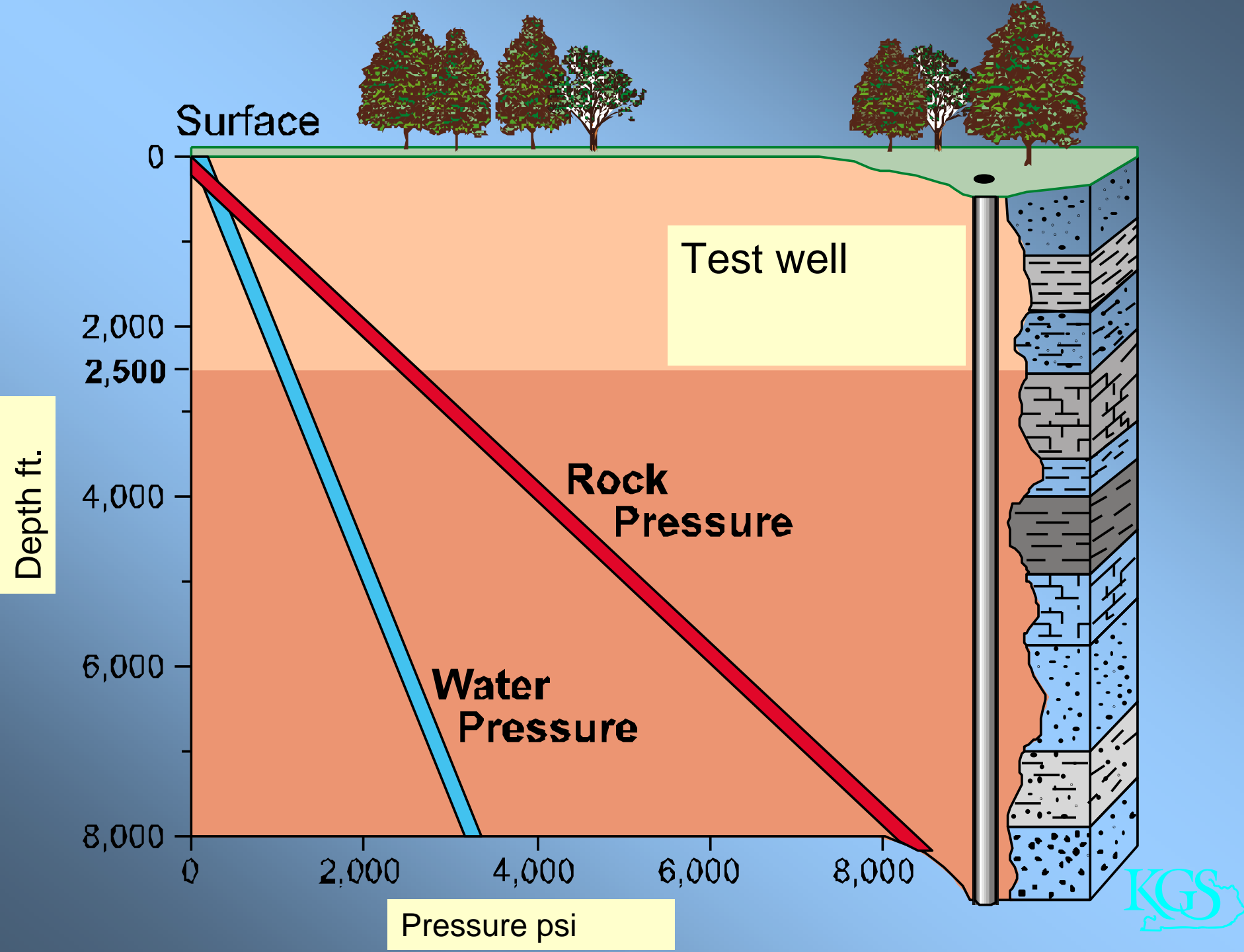
# Comparison of water wells, gas wells and the new test well in Hancock County



Break ~2,000 ft

Eau Claire Formation

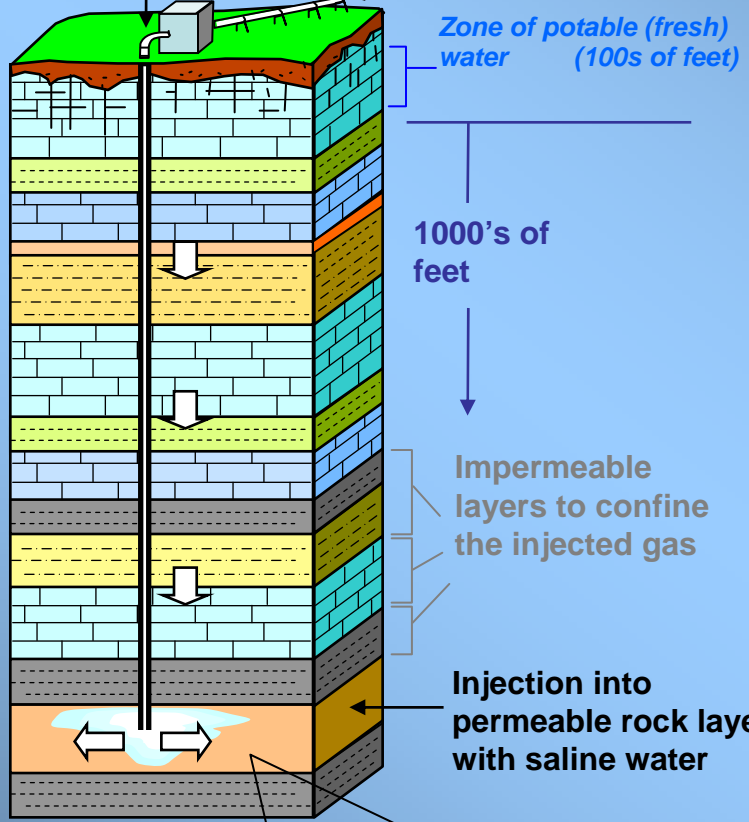
Precambrian



Captured gas is compressed (pressurized)

CO<sub>2</sub> is injected in a well

Pipeline from plant



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

1000's of feet

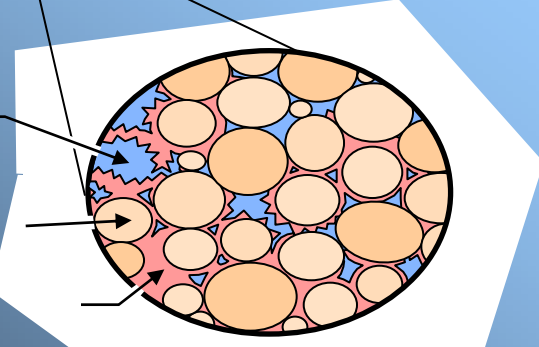
Impermeable layers to confine the injected gas

Injection into permeable rock layer with saline water

CO<sub>2</sub> displaces or dissolves in saline water in pore spaces

Mineral grains

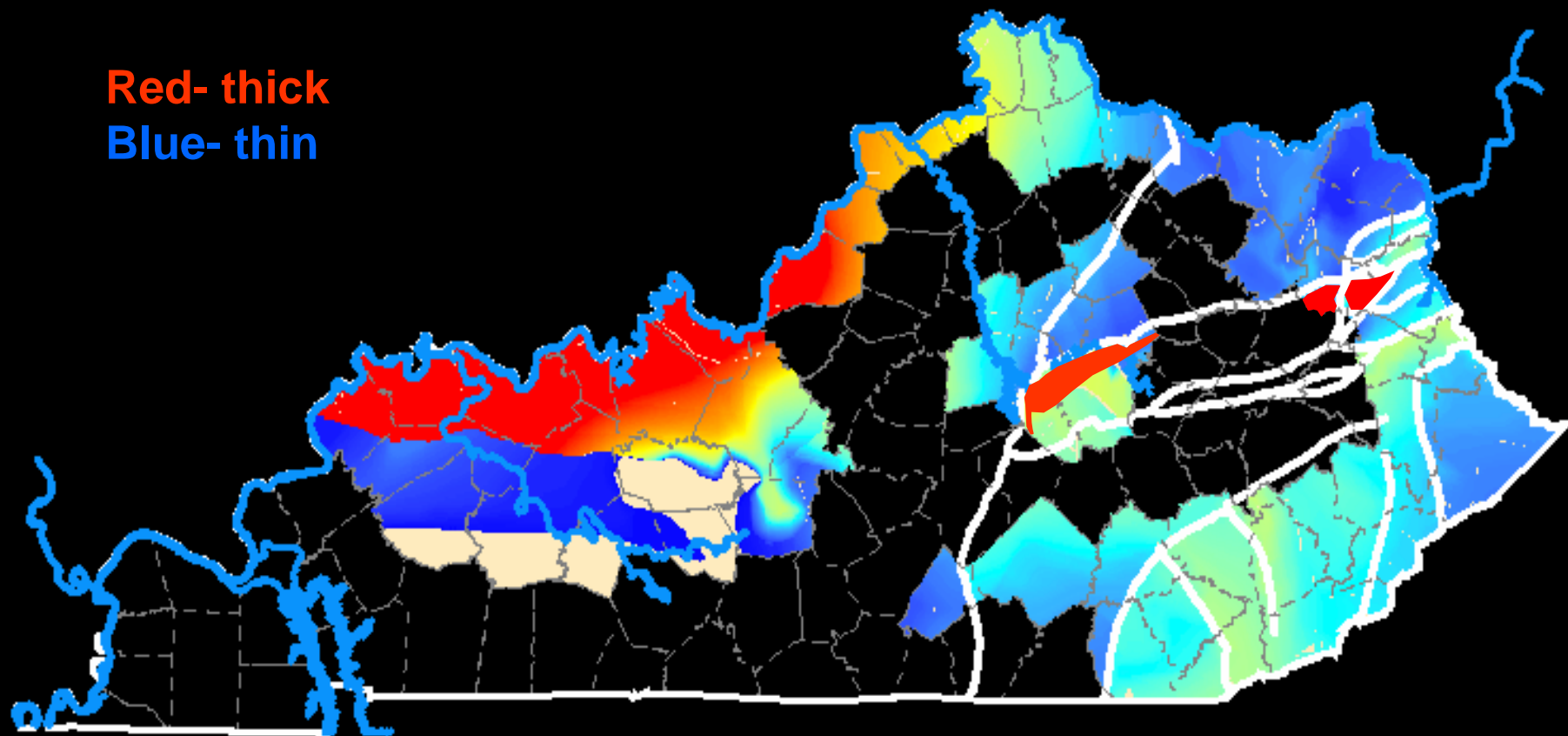
Mineral cement



Microscopic view of permeable rock (field of view 0.5 to 1.0 mm)

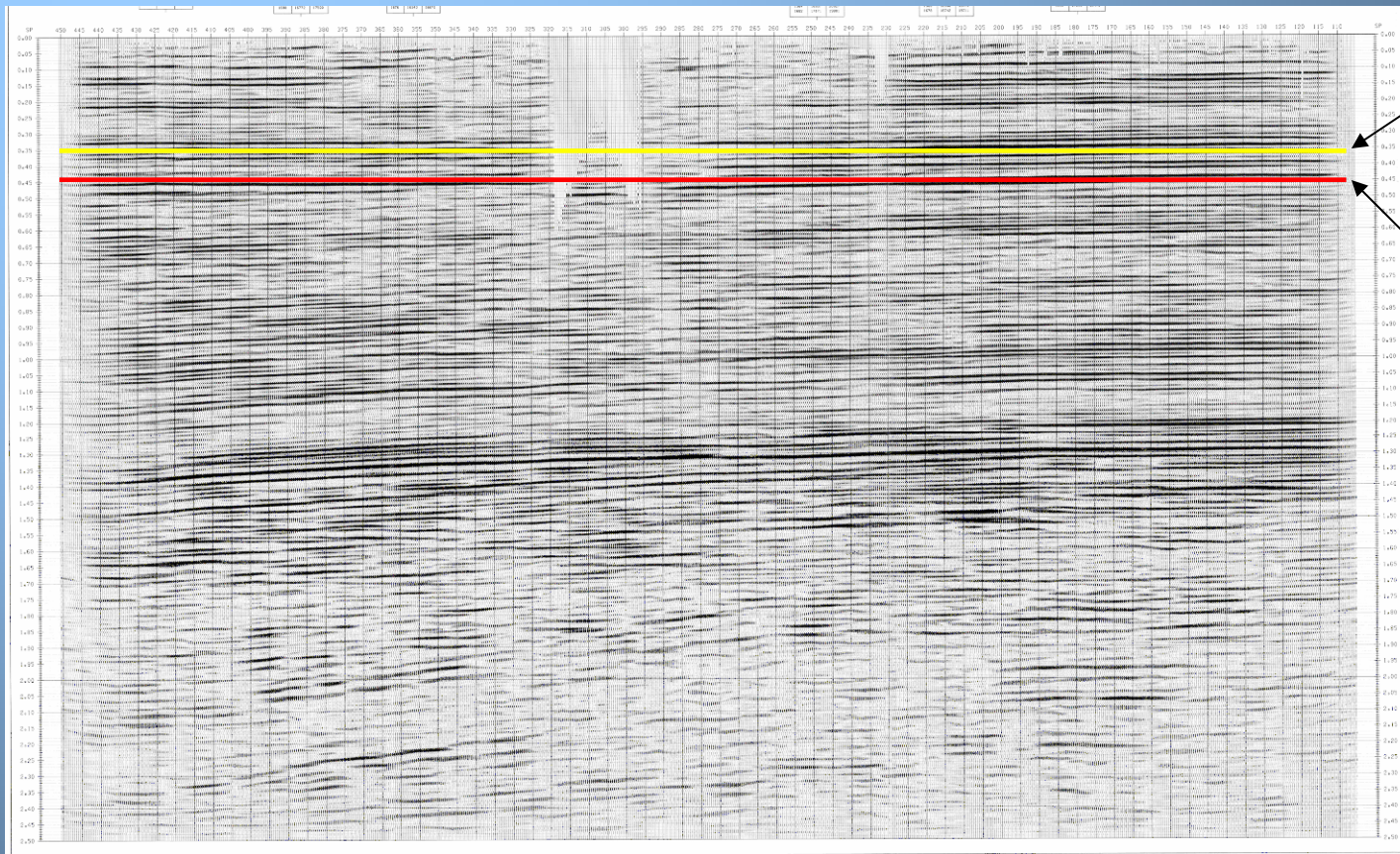
# Kentucky deep saline reservoirs

Red- thick  
Blue- thin



south

north



Eau Claire

Pre-Cambrian

The Mount Simon (target reservoir) and Eau Claire (primary seal) appear continuous on both sections



# Research on CO<sub>2</sub> 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 CO<sub>2</sub> 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.**



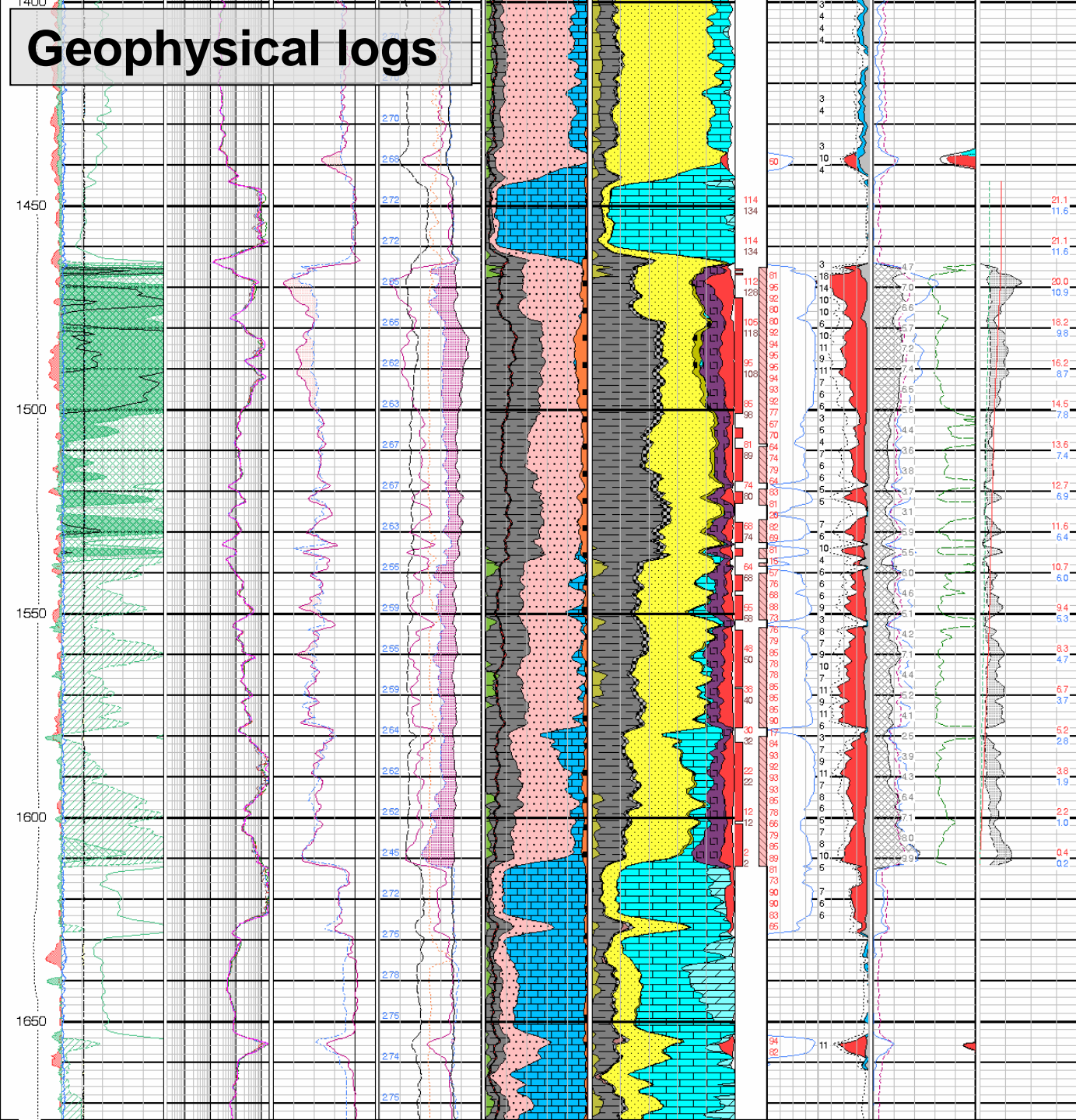
# Costs

- **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**

# Geophysical logs



Sandstone

Limestone

Devonian  
Black  
Shale

Limestone





WELLING SERVICE



25

RIG 25

WELLING SERVICE



25



# 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**

