Plate 4.7.
Kentucky River cross section.
Chapter 4: Geologic Carbon Storage (Sequestration) Potential in Kentucky

Northwest D — Southeast D'

Depth relative to sea level (ft)

Owen Co. | Henry Co. | Franklin Co. | Woodford Co. | Jessamine Co. | Madison Co. | Clark Co. | Estill Co. | Powell Co. | Estill Co. | Lee Co. | Wolfe Co. | Breathitt Co. | Perry Co. | Leslie Co.

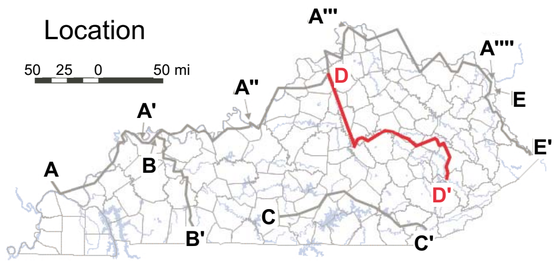
16052 <39.73 mi> 18552 <21.30 mi> 11181 <3.64 mi> 11179 <4.86 mi> 12859 <14.84 mi> 3422 <6.83 mi> 3434 <7.28 mi> 113873 <7.23 mi> 16453 <7.92 mi> 38871 <15.02 mi> 115584 <0.54 mi> 120185 <6.27 mi> 18530 <3.80 mi> 18535 <12.60 mi> 2414 <7.86 mi> 112282 <4.92 mi> 68179 <6.12 mi> 120858

0
–1,000
–2,000
–3,000
–4,000
–5,000
–6,000
–7,000
–8,000
–9,000
–10,000

Middle–Upper Ordovician carbonates
Trenton Limestone
Pencil Cave bentonite
High Bridge Group
Wells Creek Dolomite
Knox Group
Upper Knox (Beekmantown Dolomite)
Lower Knox (Copper Ridge Dolomite)
Approximate 2,500-ft depth projected beneath river
Eau Claire Formation
Mount Simon Sandstone
Precambrian Middle Run Formation
Cincinnati Arch
Lexington Fault System
basal sand
Kentucky River Fault System
Complex faulting (more than shown)
Grenville Front
Precambrian basement
Maynardsville Limestone
Nolichucky Shale
Maryville Limestone
Conasauga Group
Irvine–Paint Creek Fault System
Upper Rome Formation
Middle Rome Formation
Lower Rome Formation
Rome Formation
Shady Dolomite
Rome Trough
Rockcastle River Fault System
Rogersville Shale
Rutledge Limestone
Pumpkin Valley Shale
Pennington Formation
Pennsylvanian
Mississippian
Little Lime
Big Lime
Borden Formation
Sunbury Shale
Bedford Sandstone/ Berea Shale
Ohio Shale
Devonian shale
Big Six
Clinton shale
Ordovician shales
Rose Run Sandstone

The rock unit intervals correlated in this cross section are described in the accompanying report. Correlations represent interpretations of approximate depths and thicknesses of the units based on available data. Actual depths and thicknesses may vary, especially in faulted areas. It is also important to understand that an interval described as a potential saline reservoir will not have characteristics that allow injection and carbon storage across the entire thickness shown. Potential storage will only be possible in much smaller zones of those intervals, as discussed in the accompanying report.

Location



EXPLANATION

Correlation lines (dashed where inferred):
- Regional unconformity
- Sequestration interval
- Formation level
- Member and bed level
- Undiscussed correlation

Faults
- Arrow on downthrown side.

Gamma-ray log intensity
0 — 400

No horizontal scale