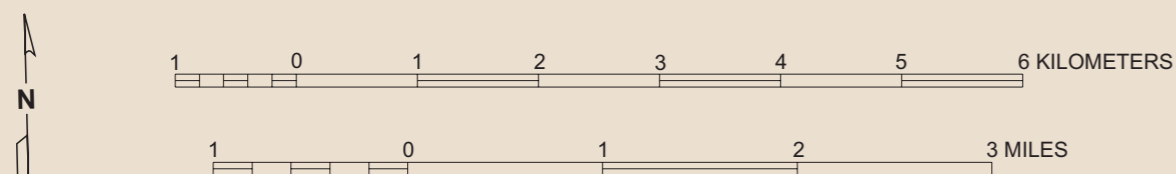
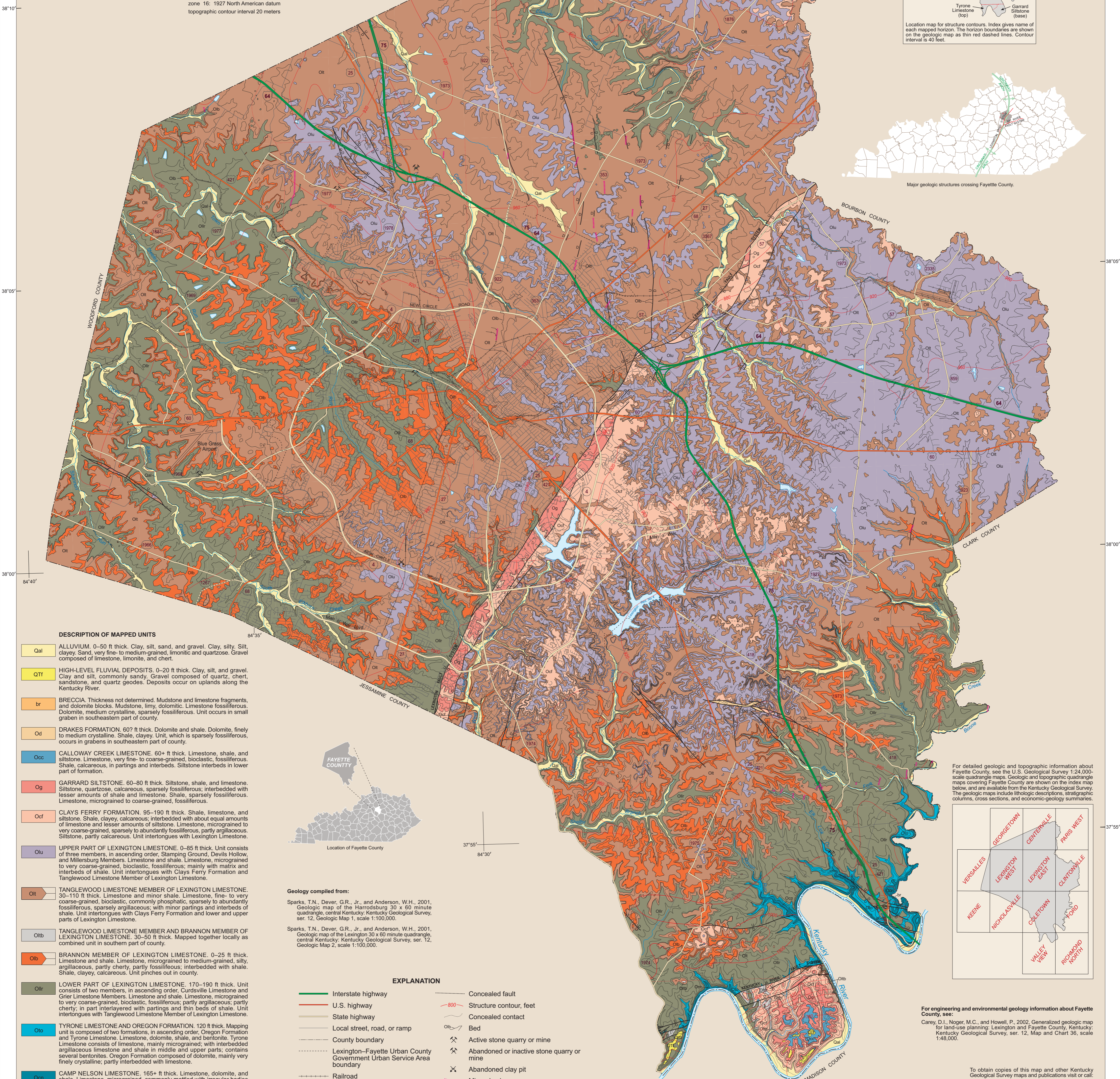
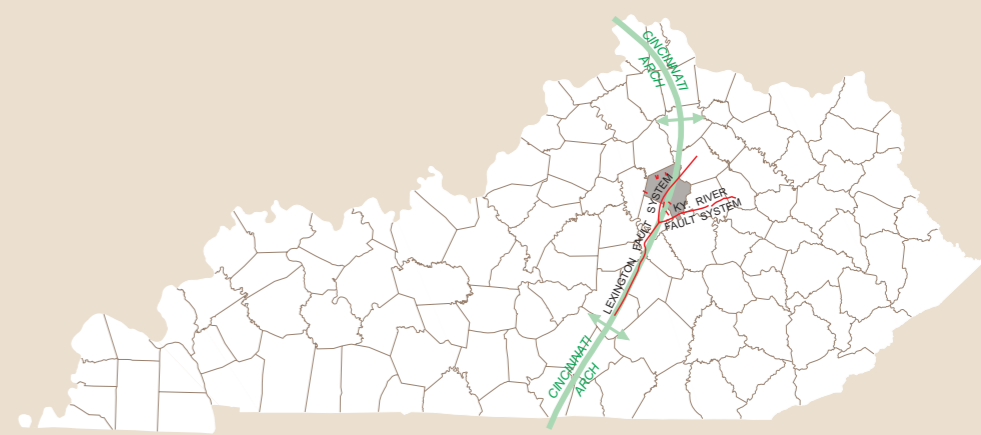
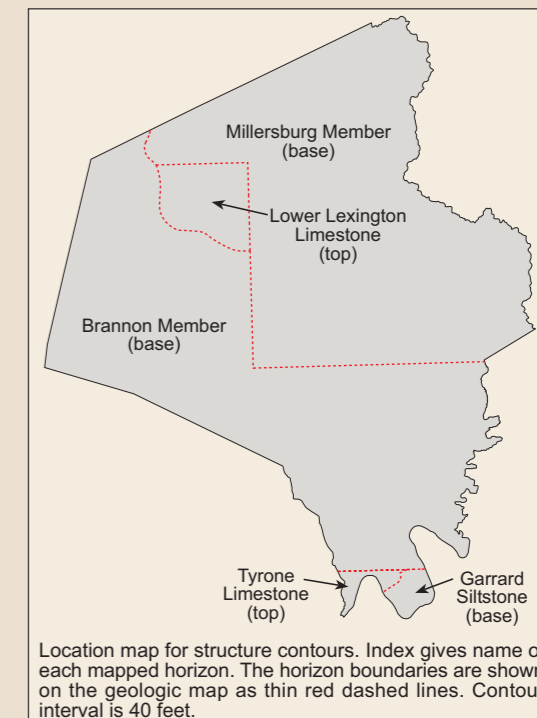


GEOLOGY OF FAYETTE COUNTY, KENTUCKY

Compiled by Terry D. Hounshell and Garland R. Dever Jr.

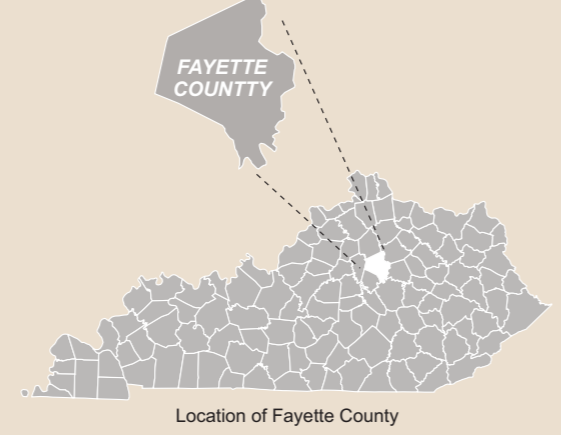


SCALE 1:62,500
universal transverse Mercator projection,
zone 16; 1927 North American datum
topographic contour interval 20 meters



DESCRIPTION OF MAPPED UNITS

- Qal** ALLUVIUM. 0-50 ft thick. Clay, silt, sand, and gravel. Clay, silty. Silt, clayey. Sand, very fine- to medium-grained, limonitic and quartzose. Gravel composed of limestone, limonite, and chert.
- QTI** HIGH-LEVEL FLUVIAL DEPOSITS. 0-20 ft thick. Clay, silt, and gravel. Clay and silt, commonly sandy. Gravel composed of quartz, chert, sandstone, and quartz geodes. Deposits occur on uplands along the Kentucky River.
- br** BRECCIA. Thickness not determined. Mudstone and limestone fragments, and dolomite. Dolomite, limy, dolomitic. Limestone fossiliferous. Dolomite, medium crystalline, sparsely fossiliferous. Unit occurs in small graben in southeastern part of county.
- Od** DRAKES FORMATION. 60? ft thick. Dolomite and shale. Dolomite, finely to medium crystalline. Shale, clayey. Unit, which is sparsely fossiliferous, occurs in grabens in southeastern part of county.
- Occ** CALLOWAY CREEK LIMESTONE. 60+ ft thick. Limestone, shale, and siltstone. Limestone, very fine- to coarse-grained, bioclastic, fossiliferous. Shale, calcareous, in partings and interbeds. Siltstone interbeds in lower part of formation.
- Og** GARRARD SILTSTONE. 60-80 ft thick. Siltstone, shale, and limestone. Siltstone, quartzose, calcareous, sparsely fossiliferous; interbedded with lesser amounts of shale and limestone. Shale, sparsely fossiliferous. Limestone, micrograined to coarse-grained, fossiliferous.
- Ocf** CLAYS FERRY FORMATION. 95-190 ft thick. Shale, limestone, and siltstone. Shale, clayey, calcareous; interbedded with about equal amounts of limestone and lesser amounts of siltstone. Limestone, micrograined to very coarse-grained, sparsely to abundantly fossiliferous, partly argillaceous. Siltstone, partly calcareous. Unit intertongues with Lexington Limestone.
- Olu** UPPER PART OF LEXINGTON LIMESTONE. 0-85 ft thick. Unit consists of three members, in ascending order, Stamping Ground, Devils Hollow, and Millersburg Members. Limestone and shale. Limestone, micrograined to very coarse-grained, bioclastic, fossiliferous; mainly with matrix and interbeds of shale. Unit intertongues with Clays Ferry Formation and Tanglewood Limestone Member of Lexington Limestone.
- Olt** TANGLEWOOD LIMESTONE MEMBER OF LEXINGTON LIMESTONE. 30-110 ft thick. Limestone and minor shale. Limestone, fine- to very coarse-grained, bioclastic, commonly phosphatic, sparsely to abundantly fossiliferous, sparsely argillaceous, with minor partings and interbeds of shale. Unit intertongues with Clays Ferry Formation and lower and upper parts of Lexington Limestone.
- Oltb** TANGLEWOOD LIMESTONE MEMBER AND BRANNON MEMBER OF LEXINGTON LIMESTONE. 30-50 ft thick. Mapped together locally as combined unit in southern part of county.
- Olb** BRANNON MEMBER OF LEXINGTON LIMESTONE. 0-25 ft thick. Limestone and shale. Limestone, micrograined to medium-grained, silty, partly cherty, partly fossiliferous; interbedded with shale. Shale, clayey, calcareous. Unit pinches out in county.
- Olr** LOWER PART OF LEXINGTON LIMESTONE. 170-180 ft thick. Unit consists of two formations, in ascending order, Oregon Formation and Grier Limestone Members. Limestone and shale. Limestone, micrograined to very coarse-grained, bioclastic, fossiliferous; partly argillaceous; partly cherty; in part interlayered with partings and thin beds of shale. Unit intertongues with Tanglewood Limestone Member of Lexington Limestone.
- Olo** TYRONE LIMESTONE AND OREGON FORMATION. 120 ft thick. Mapping unit is composed of two formations, in ascending order, Oregon Formation and Tyrone Limestone. Limestone, dolomite, shale, and bentonite. Tyrone Limestone consists of limestone, mainly micrograined; with interbedded argillaceous limestone and shale in middle and upper parts, contains several bentonites. Oregon Formation composed of dolomite, mainly very finely crystalline; partly interbedded with limestone.
- Ocn** CAMP NELSON LIMESTONE. 165+ ft thick. Limestone, dolomite, and shale. Limestone, micrograined, commonly mottled with irregular bodies of very finely crystalline dolomite; few interbeds of argillaceous limestone and calcareous shale.
- af** ARTIFICIAL FILL. Compacted rock debris from highway construction.

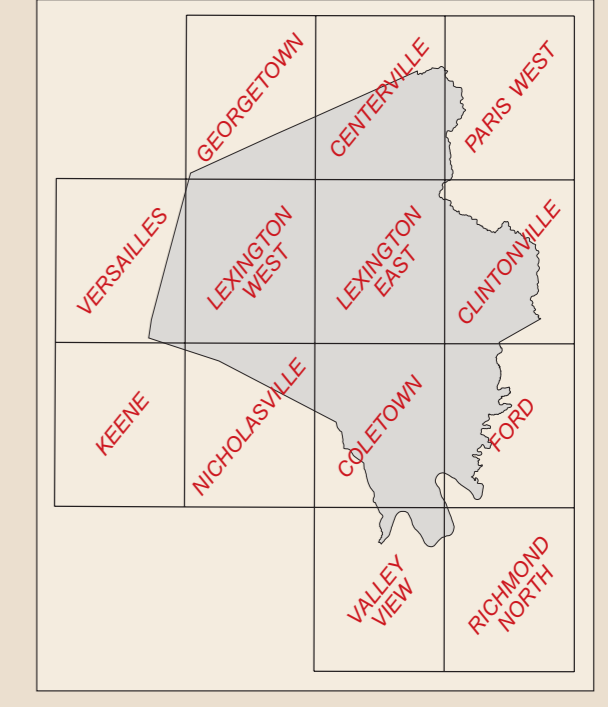


Geology compiled from:
Sparks, T.N., Dever, G.R., Jr., and Anderson, W.H., 2001. Geologic map of the Harrodsburg 30 x 60 minute quadrangle, central Kentucky. Kentucky Geological Survey, ser. 12, Geologic Map 1, scale 1:100,000.
Sparks, T.N., Dever, G.R., Jr., and Anderson, W.H., 2001. Geologic map of the Lexington 30 x 60 minute quadrangle, central Kentucky. Kentucky Geological Survey, ser. 12, Geologic Map 2, scale 1:100,000.

EXPLANATION

- Interstate highway
- U.S. highway
- State highway
- Local street, road, or ramp
- County boundary
- Lexington-Fayette Urban County Government Urban Service Area boundary
- Railroad
- Normal fault (U, upthrown side; D, downthrown side)
- Concealed fault
- Structure contour, feet
- Concealed contact
- Bed
- Active stone quarry or mine
- Abandoned or inactive stone quarry or mine
- Abandoned clay pit
- Mineral vein

For detailed geologic and topographic information about Fayette County, see the U.S. Geological Survey 1:24,000-scale quadrangle maps. Geologic and topographic quadrangle maps covering Fayette County are shown on the index map below, and are available from the Kentucky Geological Survey. The geologic maps include lithologic descriptions, stratigraphic columns, cross sections, and economic-geology summaries.



For engineering and environmental geology information about Fayette County, see:
Carey, D.I., Noger, M.C., and Howell, P., 2002. Generalized geologic map for land-use planning: Lexington and Fayette County, Kentucky. Kentucky Geological Survey, ser. 12, Map and Chart 36, scale 1:48,000.

To obtain copies of this map and other Kentucky Geological Survey maps and publications visit or call:
Public Information Center
(859) 257-3896
View the KGS World Wide Web site at www.uky.edu/kgs