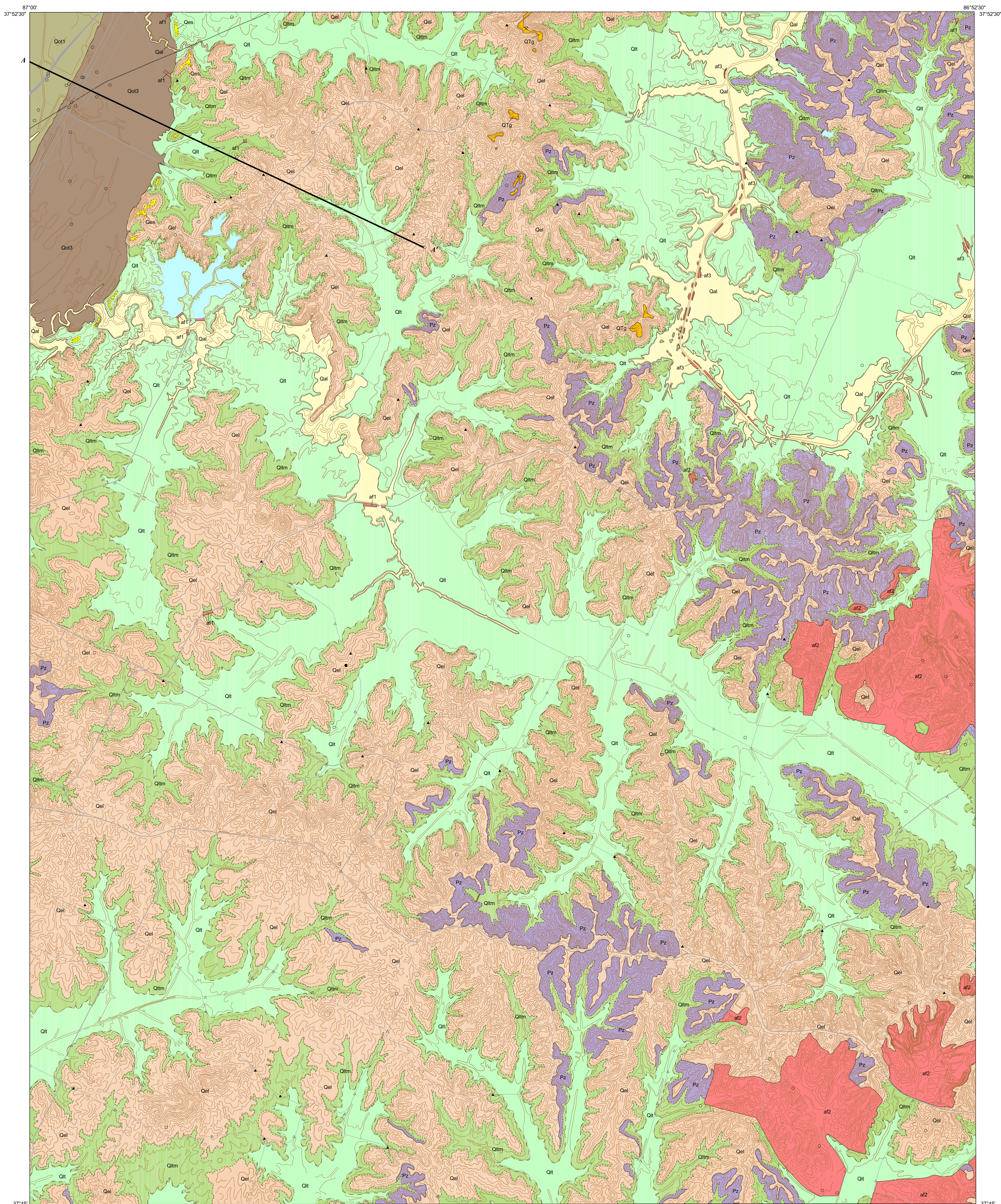
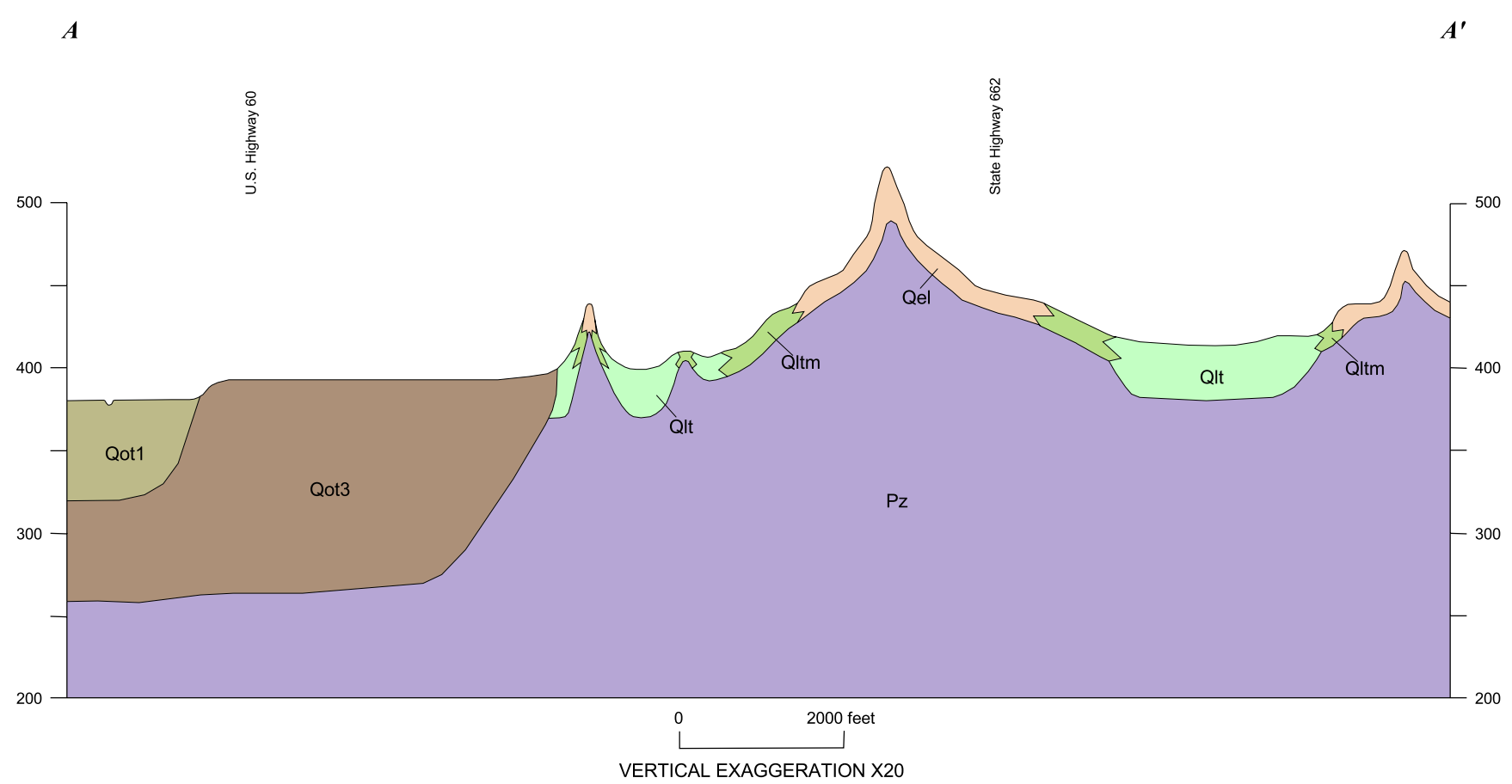
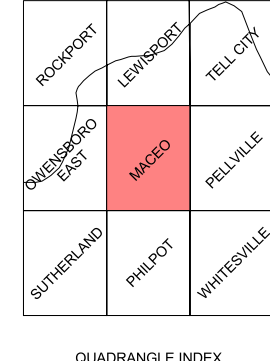
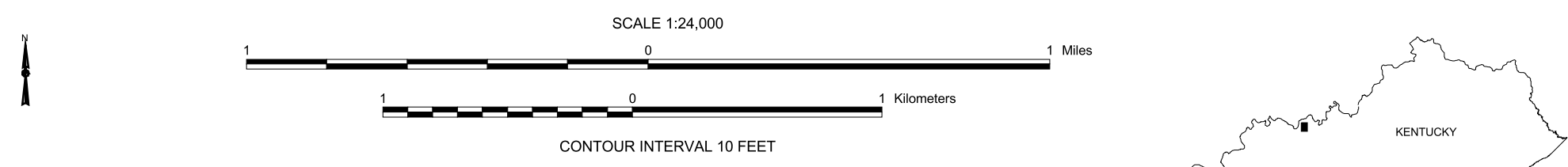
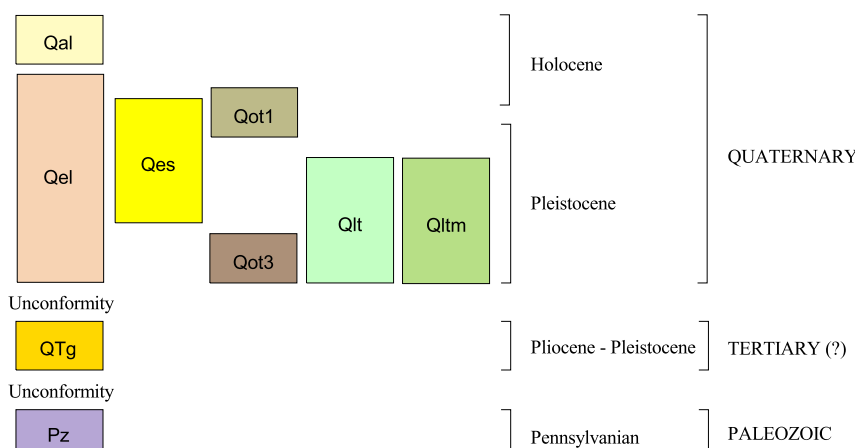




Universal Transverse Mercator projection, zone 16, North American Datum of 1987.
Topographic base from USGS Tagged Vector Contour file for Maceo quadrangle.
Highway locations from Kentucky Transportation Cabinet digital files.



CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

- Qal** Alluvium, modern (Holocene)
Silt, clay, and sandy silt with minor sand and sparse gravel; thickness 10 to 30 feet (3 to 10 m); found along Blackfoot and Pop Creeks, near tributaries, and in floodplains along streams tributary to the Ohio River; deposited by modern fluvial stream processes; deposit is most into adjacent map units; contact with adjacent units varies from sharp to poorly defined; mapped on the basis of field observations and topographic expression.
- Qat1** Outwash, low terrace (Pleistocene - Holocene)
Fine to coarse sand and gravel, with local lenses of silt and clay; gravel includes chert, quartzite, sandstone, schistose, gneiss and metamorphic rocks, limestone, and coal; lithologically similar to adjacent outwash terraces (Qat2, Qat3); surface mantled with alluvial silt and sandy silt; 30 to 45 feet (10 to 15 m) thick; surface forms well-developed, dissected terrace along Ohio River valley; deposited as glacial outwash reworked by post-glacial Ohio River; overlie older outwash deposits (Qat2); contact is sharp, down at scarp of next higher terrace or upland.
- Qat2** Outwash, high terrace (Pleistocene)
Fine to coarse sand and gravel, with local lenses of silt and clay; gravel includes chert, quartzite, sandstone, schistose, gneiss and metamorphic rocks, limestone, and coal; lithologically similar to adjacent outwash terraces; surface mantled with silt and alluvial silt and sandy silt; up to 120 feet (40 m) thick; surface forms well-developed, dissected terrace along Ohio River valley; deposited as glacial outwash reworked by post-glacial Ohio River; overlie older outwash deposits (Qat1); contact is sharp, down at scarp of adjacent terrace or upland; age estimated to be 10,000 to 20,000 years old.
- Qat3** Outwash, high terrace (Pleistocene)
Fine to coarse sand and gravel, with local lenses of silt and clay; gravel includes chert, quartzite, sandstone, schistose, gneiss and metamorphic rocks, limestone, and coal; lithologically similar to adjacent outwash terraces; surface mantled with silt and alluvial silt and sandy silt; up to 120 feet (40 m) thick; surface forms well-developed, dissected terrace along Ohio River valley; deposited as glacial outwash reworked by post-glacial Ohio River; overlie older outwash deposits (Qat1); contact is sharp, down at scarp of adjacent terrace or upland; age estimated to be 10,000 to 20,000 years old.
- Qm** Marginal lacustrine deposits (Pleistocene)
Recent slope and levelled upland areas mantled by lacustrine deposits (Qm); represents complex transition between lacustrine deposits (Qm) and beach (Qat) mantling upland; deposits include beach, low-angled alluvial, colluvial, lacustrine, silt and clay, and lacustrine channel deposits; contacts gradual and approximate; mapped on the basis of topographic expression.
- Ql** Lacustrine terrace (Pleistocene)
Clayey silt, silt, and fine sand; thickness uncertain; surface forms terrace; mantled by lacustrine terrace; thickness uncertain; mapped on the basis of topographic expression.
- Pz** Bedrock (Paleozoic)
Consolidated shale, sandstone, coal, and overlying poorly sorted regolith, comprising the core of the upland area; includes areas of lower thickness than 30 ft (9 m).
- a1** Artificial fill, engineered fill (Modern)
Unconsolidated material used as fill for the construction of roads, runways, buildings, and floodwalls.
- a2** Artificial fill, mine spoil (Modern)
Disturbed bedrock and regolith produced from mining operations.
- a3** Artificial fill, other (Modern)
Chaotic, unconsolidated fill material; includes material dredged from creeks to form artificial levees.

EXPLANATION

- Contact
- Approximate contact
- Inferred contact
- Concealed fault
- Federal highways
- State roads
- Local roads
- Railroads
- Surface observations
- Landform
- Landform and soil
- Subsurface data
- This study
- Ditch
- Gravel pit

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REFERENCES

- Calvert, R.H., 1966, Geologic map of the Maceo quadrangle, Davison and Hancock Counties, Kentucky: U.S. Geological Survey Geologic Quadrangle Map GQ-570, scale 1:24,000.
- Cox, F.R., Jr., 1974, Soil survey of Davison and Hancock Counties, Kentucky: U.S. Department of Agriculture, Soil Conservation Service, R-8 p.
- Solis, M.P., and Vennart, E.A., 2003, Spatial database of the Maceo quadrangle, Davison and Hancock Counties, Kentucky: Kentucky Geological Survey, ser. 12, Digitally Vectorized Geologic Quadrangle Data DVGQ-570. Adapted from Calvert, R.H., 1966, Geologic map of the Maceo quadrangle, Davison and Hancock Counties, Kentucky: U.S. Geological Survey Geologic Quadrangle Map GQ-570, scale 1:24,000.
- Ray, L.L., 1985, Geomorphology and Quaternary geology of the Owensboro quadrangle, Indiana and Kentucky: U.S. Geological Survey Professional Paper 485, 77 p.

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QUATERNARY GEOLOGIC MAP OF THE MACEO 7.5-MINUTE QUADRANGLE, WESTERN KENTUCKY

By
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2006