

- ### DESCRIPTION OF MAP UNITS
- Qal Alluvium, modern (Holocene)**  
Silty clay and sandy silt with minor sand and sparse gravel, found along banks of Ohio River and in floodplains along streams tributary to the Ohio River; deposit is inset into adjacent map units; contact with adjacent units varies from sharp to poorly defined; mapped on the basis of topographic expression.
  - Qafp Alluvium, Ohio River floodplain (Holocene)**  
Sand, silt, fine gravel, and clay; surface mantled by silty clay and sandy silt; surface forms the lowest well-developed terrace along the Ohio River; 30 to 45 feet (10 to 15 m) thick, overlies sand and gravel deposits of older outwash deposits; contact is sharp, drawn at scarp of next higher terrace.
  - Qot1 Outwash, low terrace (Pleistocene-Holocene)**  
Fine to coarse sand and gravel, with local lenses of silt and clay; gravel includes chert, quartzite, sandstone, siltstone, igneous and metamorphic rocks, limestone, and coal; lithologically similar to adjacent outwash terraces; deposited as glacial outwash; surface forms well-developed, low-relief terrace along Ohio River valley; surface mantled with silty sand and sandy silt; contact is sharp, drawn at scarp of next higher terrace or upland.
  - Qot2 Outwash, intermediate terrace (Pleistocene)**  
Fine to coarse sand and gravel, with local lenses of silt and clay; gravel includes chert, quartzite, sandstone, siltstone, igneous and metamorphic rocks, limestone, and coal; lithologically similar to adjacent outwash terraces; deposited as glacial outwash; surface forms terrace intermediate between low and high terraces, and may be related to Green River paleochannel; surface mantled with silty sand and sandy silt; contact is sharp, drawn at scarp of next higher terrace.
  - Qes Sand dunes (Pleistocene)**  
Very fine to fine sand, deposited by wind in long, linear ridges; locally contains lenses of clayey silt; mantled by loess up to 15 ft (5 m) thick; base not observed, thickness uncertain.
  - Qel Loess (Pleistocene-Holocene)**  
Silt, clayey silt, and fine sand deposited by wind; typically massive, mantling upland and older landforms, including lacustrine and high outwash terraces; unit thickest (up to 40 ft, 12 m) near Ohio River valley and thins gradually to the south; new radiocarbon and thermo-luminescence dates in adjacent Owensboro West quadrangle suggest an age of 22,500 to less than 11,000 ybp (Newell and others, in prep.).
  - Qitg Upland gravel (Pliocene?)**  
Silty sand, clayey silt and silty clay with minor chert gravel; fills paleovalley inset into and overlying deposits of adjacent high outwash terrace and lacustrine terraces; includes Beds at Hubert Court of Ray (1965); contact is sharp, drawn at scarp of adjacent high outwash or lacustrine terrace; wood from about 40 feet deep has been radiocarbon dated to 23,150 ± 500 ybp (Rubin and Suss, 1956, sample W-260).
  - Qot3 High outwash terrace (Pleistocene)**  
Fine to coarse sand and gravel, with local lenses of silt and clay; gravel includes chert, quartzite, sandstone, siltstone, igneous and metamorphic rocks, limestone, and coal; lithologically indistinguishable from adjacent outwash terraces; deposited as glacial outwash; forms well-developed, dissected terrace along Ohio River valley; surface mantled with silty sand and sandy silt; contact is sharp, drawn at scarp of lacustrine terrace or upland.
  - Qit Lacustrine terrace, Ohio River valley (Pleistocene)**  
Clayey silt, 30 to 45 feet (10 to 15 m) thick, thicker in tributary valleys, overlying complex deposits of sand, silt, clay and minor gravel; locally mantled by loess; unit deposited in lacustrine and slackwater environments associated with alluviation of the Ohio River valley by glacial outwash and resulting impoundment of tributary valleys; underlying material is of apparent mixed fluvial and fluvi-lacustrine origin; new radiocarbon dates of 22,430 ± 90 and 22,060 ± 80 ybp in adjacent Owensboro West quadrangle (Newell and others, in prep.) are consistent with previous dates of 18,520 ± 500 and 19,940 ± 300 (Rubin and Alexander, 1960, samples W-520 and W-645).
  - Qitm Lacustrine margin (Pleistocene)**  
Clayey silt, silt, and fine sand; represents complex transition between lacustrine deposits and loess mantling upland; contacts obscure, mapped on the basis of topographic expression.
  - Pz Bedrock (Pennsylvanian)**  
Consolidated shale, sandstone, coal, and overlying poorly sorted regolith, comprising the core of the uplands in the study area; includes areas of loess thinner than 3 ft (1 m).
  - af1 Artificial fill (Modern)**  
Engineered fill used in the construction of roads and buildings. Railroads (not shown) are typically underlain by artificial fill.

- ### EXPLANATION
- Red dots: Bedrock elevation data
  - Red lines: Bedrock topography contour, elevations in feet
  - Black triangles: Surface observations
  - Blue squares: Lithologic descriptions
  - Blue dashed lines: Fault (concealed)
  - Blue shaded areas: Areas of island erosion or dredging since topographic mapping
  - Black X: Active sand and gravel pit
  - Black circle: Abandoned sand, gravel, or clay pit
  - Red lines: Roads
  - Blue lines: Federal highway or state parkway
  - Yellow lines: State highway
  - Green lines: County road
  - Grey lines: County road - gravel
  - Black lines: City street

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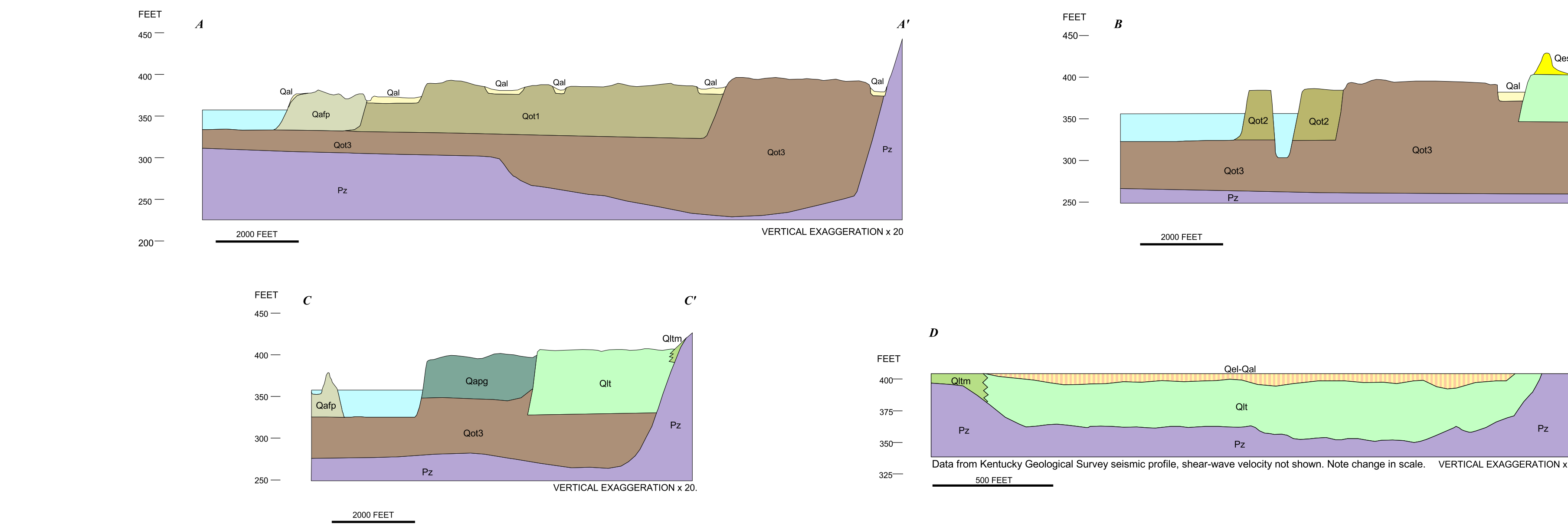
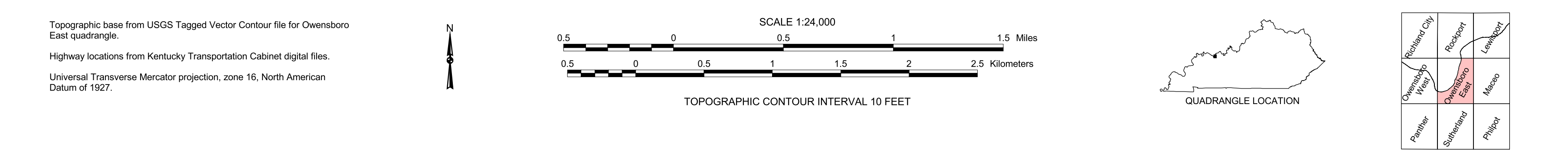
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