

DESCRIPTION OF MAP UNITS

Qatp Alluvium, modern (Holocene)
Silty clay and sandy silt, with minor sand and sparse gravel, found in floodplains along streams to the Ohio River, and inset into adjacent main units; mostly used sparse gravel along the banks of the Ohio River; contact with adjacent units varies from sharp to poorly defined, and is mapped on the basis of field observations and topographic expression.

Qat Alluvium, Ohio River floodplain (Holocene)
Sand, silt, fine gravel and clay, surface modified by silty clay and sandy silt. Forms lowest well-developed terrace along the Ohio River; approximately 50 feet thick, and overlies sand and gravel deposits of older cutwash deposits; contact is sharp, drawn at scarp of next higher terrace.

Qat1 Alluvium, natural levee (Holocene)
Sand and silt deposited in natural levees or oxbowbank deposits on the Ohio River floodplain and low cutwash terraces typically underlain by adjacent floodplain deposits, and is mapped based on field observations and topographic expression.

Qd3 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 in glacial outwash; forms well-developed, distinct terrace along Ohio River valley; surface modified with silty sand and sandy silt; contact is sharp, drawn at scarp of next higher terrace or upland.

Qd2 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 in glacial outwash; forms well-developed, distinct terrace along Ohio River valley; surface modified with silty sand and sandy silt; contact is sharp, drawn at scarp of lacustrine terrace or upland.

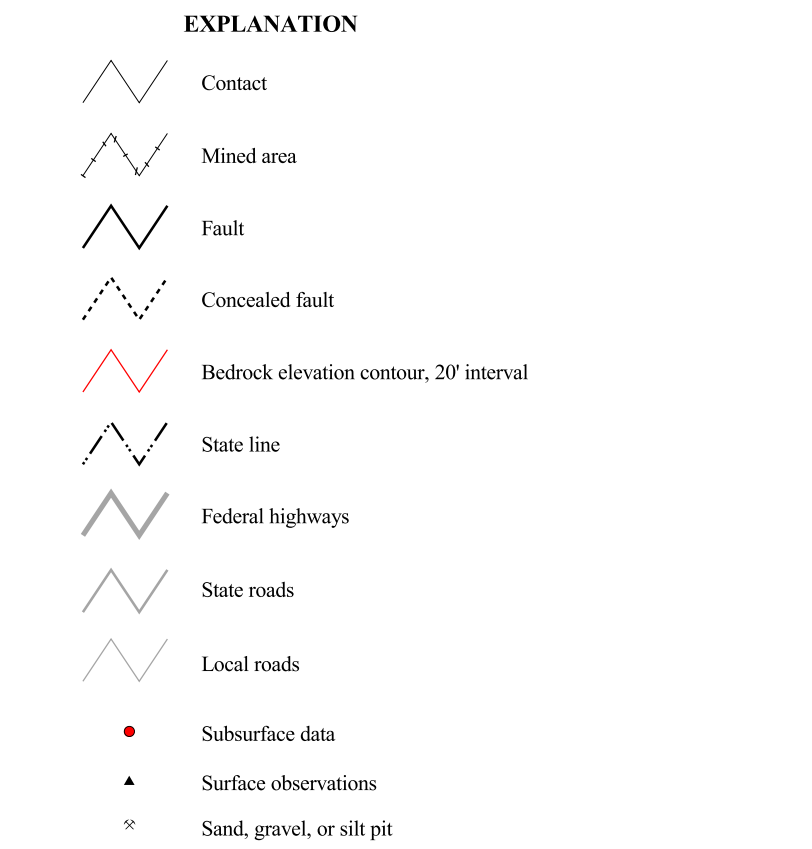
Qd1 Lacustrine, terrace (Pleistocene)
Clayey silt, 30 to 45 feet thick, overlying complex deposits of sand, silt, clay, and minor gravel; locally modified by loess upper part of unit deposited in lacustrine and shallow marine environments associated with alluviation of the Ohio River valley by glacial outwash; lower part of unit of apparent mixed fluvial and fluvio-lacustrine origin; unit includes margin of complex transition between lacustrine deposits and loess capping upland; new radiocarbon dates of 22,430 and 22,060 ybp to Oxbowbank Wisconsin quadrangle (Newell et al., in press) are consistent with previous dates of 18,520 and 19,940 ybp (Rubin and Alexander, 1996).

Qtr Upland gravel (Pleistocene-Pleistocene)
Gravel and medium to coarse sand; pebbles include brown, peena chert, quartz, and silicified fossils; locally covered by thin loess; unit found on uplands, covered by loess and poorly exposed; comparable to the Last Glacial of Ray (1963).

Pz Bedrock (Pennsylvanian)
Consolidated shaly, sandstone, coal, and overlying poorly sorted gravels, comprising the core of the upland area; includes areas of less than 3 ft (1 m).

a1 artificial fill (engineered fill)
Engineered fill for construction of roads, railroads, dams, floodwalls, and foundations.

a2 artificial fill (mine spoil)
Mine spoil associated with disturbed bedrock material.



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