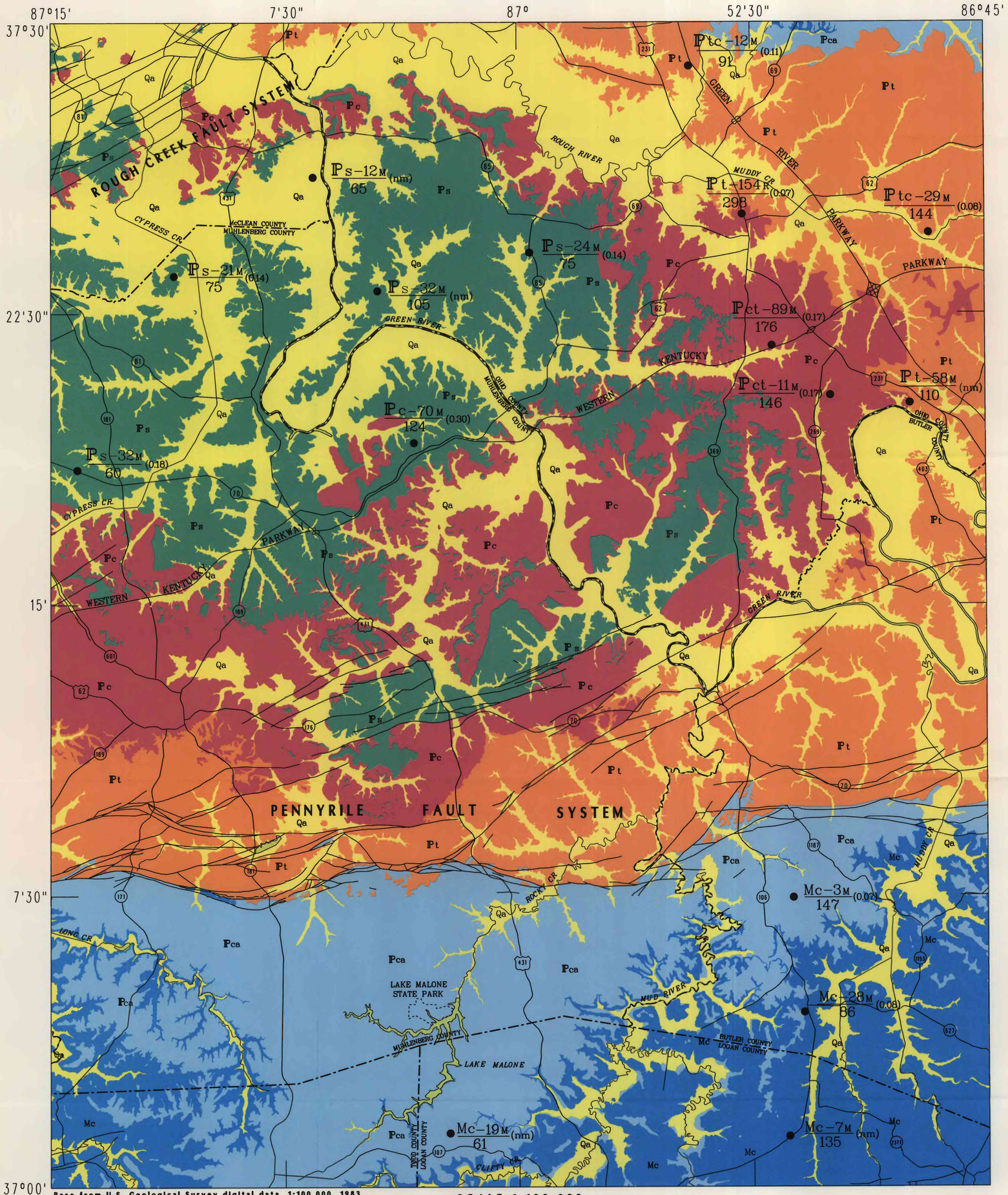
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Prepared in cooperation with the
KENTUCKY DIVISION OF WATER
and the
UNIVERSITY OF LOUISVILLE

WATER-RESOURCES INVESTIGATIONS
REPORT 93-4077, PLATE 1



Base from U.S. Geological Survey digital data, 1:100,000, 1983
Universal Transverse Mercator projection, Zone 16
Geology modified from 1:24,000 and 1:250,000 maps

SCALE 1:100,000

1 0 1 2 3 4 5 MILES

1 0 1 2 3 4 5 KILOMETERS

EXPLANATION

CORRELATION OF MAP UNITS

Qa	Alluvial Deposits	QUATERNARY
Unconformity		
Ps	Sturgis Formation	PENNSYLVANIAN
Pc	Carbondale Formation	PENNSYLVANIAN
Pt	Tradewater Formation	PENNSYLVANIAN
Pca	Caseyville Formation	PENNSYLVANIAN
Unconformity		
Mc	Chesterian Series	MISSISSIPPIAN

DESCRIPTION OF MAP UNITS

Qa — **Alluvial Deposits (Holocene and Pleistocene)**- Sand, silt, gravel, and clay: Includes Pleistocene slackwater and terrace deposits in Green River Valley and tributaries.

Ps — **Sturgis Formation (Upper Pennsylvanian)**- Interbedded sandstone, siltstone, shale, limestone, and coal.

Pc — **Carbondale Formation (Middle Pennsylvanian)**- Interbedded siltstone, shale, limestone and coal, with minor sandstone.

Pt — **Tradewater Formation (Middle Pennsylvanian)**- Interbedded sandstone, siltstone, and shale, with some limestone and coal.

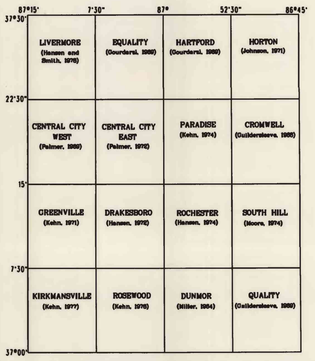
Pca — **Caseyville Formation (Lower Pennsylvanian)**- Quartzose sandstone and conglomerate, with shale, limestone, and coal.

Mc — **Chesterian Series (Upper Mississippian)**- Limestone with interbedded sandstone and shale.

—— Fault

Pt-154R (0.07) / 298

- Map unit (aquifer code)
- Water level, in feet below land surface
- M (Measured), R (Reported)
- Specific capacity, in gallons per minute per foot of water-level drawdown (nm) not measurable
- Total depth, in feet below land surface



Geologic quadrangles used in the study

SURFACE GEOLOGY AND SPECIFIC CAPACITY FOR WELLS AT SELECTED SITES IN PARTS OF MUHLENBERG, OHIO, BUTLER, McLEAN, TODD AND LOGAN COUNTIES, KENTUCKY

By
J.Jeffrey Starn, Robert W. Forbes, Charles J. Taylor, and Martin F. Rose

1993

Starn,J.J.,Forbes,R.W.,Taylor,C.J.,Rose,M.F., 1993, Geohydrology in Parts of Muhlenberg, Ohio, Butler McLean, Todd, and Logan Counties, Kentucky: U.S. Geological Survey Water-Resources Investigations Report 93-4077