DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
V. E. McKELVEY, DIRECTOR

PREPARED IN COOPERATION WITH
THE COMMONWEALTH OF KENTUCKY, UNIVERSITY OF KENTUCKY
KENTUCKY GEOLOGICAL SURVEY
WALLACE W. HAGAN, DIRECTOR AND STATE GEOLOGIST

MISCELLANEOUS GEOLOGIC INVESTIGATIONS
MAP I-954

Base from U.S. Geological Survey, 1959. Revised 1976

The Carter Coordinate System letters and numbers used to designate five-minute divisions of latitude and longitude are shown along the margins; tick marks indicate one-minute divisions

SCALE 1:24 000

1 ½ 0 1 MILE

KENTUCKY
QUADRANGLE LOCATION

Compilation based on drill-hole data available as of Jan. 1, 1973, on projection into subsurface of geologic data shown by Palmer (1976), on data from Walker (1957), from Butts (1925), and from Gallaher (1964); and on Ky. Dept. of Highway borings near Ohio River bridge. Interpretation in Illinois based largely on data supplied by M. E. Hopkins and W. H. Smith, Illinois State Geological Survey

## EXPLANATION

Alluviated area
ca, *subcrop of Carthage Limestone Member of Sturgis Formation (Upper Pennsylvanian)*
m, *subcrop of Madisonville Limestone Member of Sturgis Formation*
*Ticks show side of subcrop line on which limestone member has been removed by erosion. Subcrops shown in Kentucky part only*
*The alluviated valleys are filled with as much as 185 feet of unconsolidated material. Alluvium, lacustrine deposits, and Pennsylvanian rocks described by Palmer (1976)*

Non-alluviated area
*In Grove Center quadrangle, from map by Palmer (1976). In Shawneetown quadrangle, after Butts (1925)*

Buried fault
*Bar and ball on downthrown side*

Buried reverse fault
R, *upthrown side*

Faults from map by Palmer (1976); shown in Kentucky part only

Topographic contours on buried bedrock surface
*Datum is mean sea level. Contours above 340 feet not shown. Contour interval 20 feet*

Ancient stream course
*Major stream and tributaries*

314 307
Drill hole from which data used in map compilation were obtained. Subsurface data from logs and records of oil and gas tests, core holes, water wells and other borings. Figures indicate bedrock elevation in feet above mean sea level; italicized where highly interpretive (includes most rotary-drilled oil and gas test wells.)

AREA COVERED BY THIS REPORT

### REFERENCES CITED


Butts, Charles, 1925, Geology and mineral resources of the Equality-Shawneetown area (parts of Gallatin and Saline Counties): Illinois State Geol. Survey Bull. 47.
Gallaher, J. T., 1964, Geology and hydrology of alluvial deposits along the Ohio River between the Uniontown area and Wickliffe, Kentucky: U.S. Geol. Survey Hydrol. Inv. Atlas HA-129.
Palmer, J. E., 1976, Geologic map of the Grove Center quadrangle, Kentucky-Illinois and part of the Shawneetown quadrangle, Kentucky: U.S. Geol. Survey Geol. Quad. Map GQ-1314.
Walker, E. H., 1957, The deep channel and alluvial deposits of the Ohio Valley in Kentucky: U.S. Geol. Survey Water-Supply Paper 1411.


# MAP SHOWING BEDROCK TOPOGRAPHY AND SUBCROP OF SELECTED BEDS BENEATH ALLUVIAL DEPOSITS OF THE GROVE CENTER QUADRANGLE AND PART OF THE SHAWNEETOWN QUADRANGLE, KENTUCKY-ILLINOIS


By
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1976