DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

MISCELLANEOUS FIELD STUDIES
MAP MF-1011
SHEET 1 OF 2

EXPLANATION

Q ALLUVIUM (HOLOCENE AND PLEISTOCENE)--Most of this unit is comprised of sand, silt, and clay and is saturated with water; strong ground motion from earthquakes is likely to cause widespread liquification

Qt UNDIFFERENTIATED QUATERNARY AND TERTIARY SEDIMENTARY ROCKS--Includes loess of late Pleistocene age, gravel and sand of Pliocene and Pleistocene age, and sand and clay in the Jackson Claiborne and Wilcox Formations (or Groups) and Midway Group of Tertiary age

pT UNDIFFERENTIATED PRE-TERTIARY SEDIMENTARY ROCKS--Most are carbonates and clastics of Paleozoic age. Includes minor amount of sand of Cretaceous age. Includes granitic and rhyolitic rocks of Precambrian age in the St. Francois Mountains, Mo.

PRECAMBRIAN TO TERTIARY INTRUSIVE MAFIC ROCKS

Large outcrop area

Isolated outcrop of intrusive peridotite

OUTCROP OF MAFIC ALKALIC DIKE SHOWING TREND

DRILL HOLE PENETRATING MAFIC ALKALIC ROCK

X DIATREME

AREA OF SAND BLOWS--Inferred to be related to the 1811-1812 earthquakes

EPICENTERS

Earthquakes with modified Mercalli intensity 3.0--Data from Nuttli (1974) for period 1833-1972. Large circle indicates locations of epicenters are less certain than those of the more recent earthquakes shown below

Earthquakes--Data from Stauder and others (written commun., 1975-76) for period July 1975-June 1976. Magnitude of more recent earthquakes are not distinguished to avoid clutter

FAULT--Solid line where known or approximately located; long dash where inferred. X, location on fault where rocks of Tertiary or Quaternary age are offset. Youngest offsets are Pliocene and Pleistocene; all other faults of pre-Tertiary age. Bar and ball on downthrown side where known and where cartographic clarity permits

THRUST FAULT--Symbol on upper plate

(s) (i) POSSIBLE OR HYPOTHETICAL FAULT--Based upon interpretation of subsurface data (s), or exceptionally strong lineaments on aerial photos (i)

TOPOGRAPHIC SCARP

PRELIMINARY SEISMOTECTONIC MAP OF THE CENTRAL MISSISSIPPI VALLEY AND ENVIRONS

By
A. V. Heyl and F. A. McKeown
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