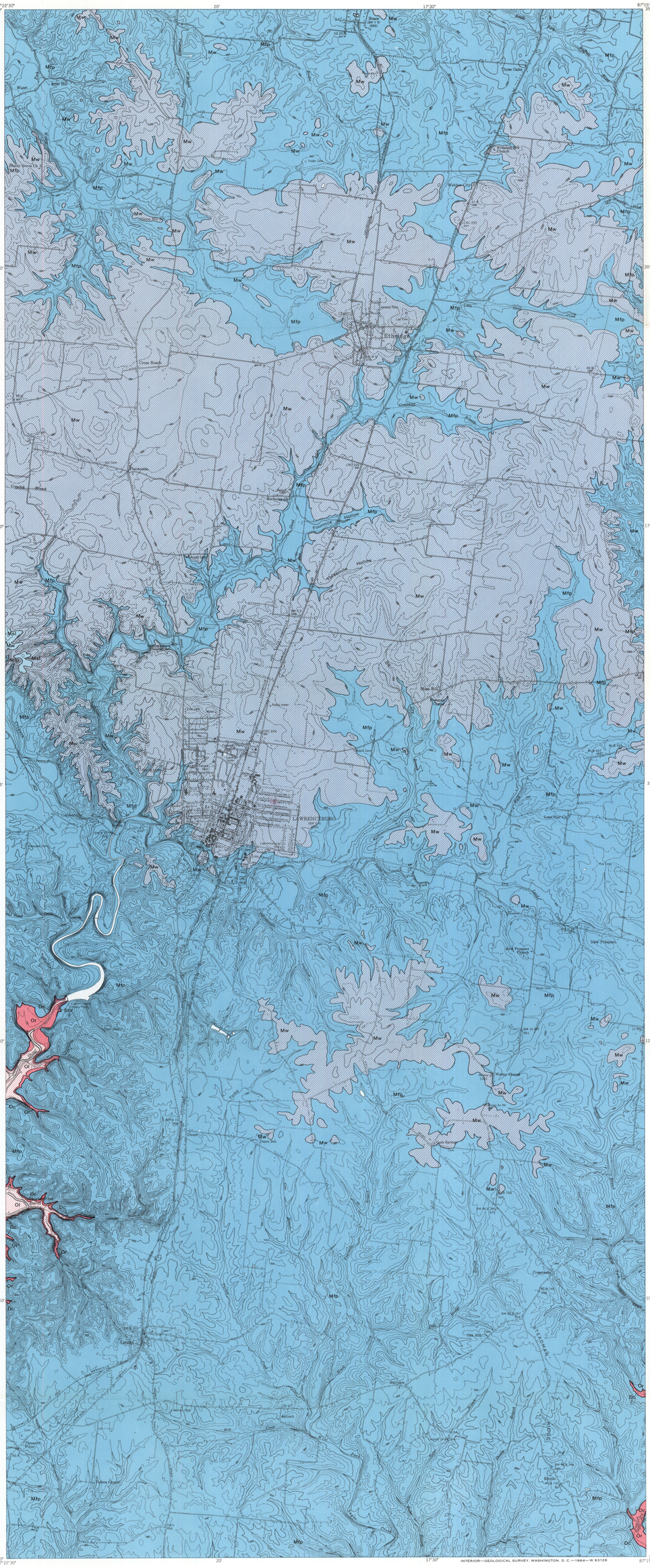


## EXPLANATION

**Msl** — St. Louis Limestone
*Represented only by residual chert and soil as much as 40 feet thick. Residuum consists of angular and nodular fragments of dense light-colored chert containing* Lithostrotion. *Not known to yield water*

**Mw** — Warsaw Limestone
*Represented only by residuum as much as 100 feet thick. Residuum consists of large blocks of porous fossiliferous chert in a dark-red clayey soil. Chert zones and gravel stringers in the residuum yield small amounts of water*

**Mfp** — Fort Payne Chert
*Includes Maury Formation at base. Maury Formation consists of 1-2 feet of shaly grayish-green siltstone containing phosphatic nodules. Fort Payne Chert consists principally of layers of dense chert 1-8 inches thick interbedded with highly siliceous, calcareous shaly siltstone. Grades laterally into very rough, irregular platy chert in a calcareous silty matrix. Lower part of formation contains massive beds of medium- to coarse-grained fossil-fragmental limestone associated with green-hued calcareous shale. Total thickness approximately 350 feet. Yields small to moderate quantities of water to wells. Numerous springs that discharge as much as 1,000 gpm occur in the lower half of the formation*

Upper Mississippian — Lower Mississippian — MISSISSIPPIAN — CARBONIFEROUS

**Dc** — Chattanooga Shale
*Consists of fissile grayish-black shale and a basal fine-grained sandstone. Thickness is about 4½ feet. Not known to yield water*

Upper Devonian — DEVONIAN

**Sbr** — Brassfield Limestone
*Massive-bedded medium-grained gray glauconitic limestone about 5 feet thick. Not known to yield water*

Lower Silurian — SILURIAN

**Or** — Richmond Group undivided
*Mannie Shale: Principally dark-bluish-gray silty shale about 20 feet thick*
*Fernvale Limestone: Massive-bedded very coarse grained tan to red-hued limestone about 8 feet thick*
*Sequatchie Formation: Massive-bedded bluish-green mudstone as much as 8 feet thick*
*None of the formations in the Richmond Group are known to yield water*

**Ol** — Leipers Limestone
*Massive-bedded coarse-grained blue-hued silty limestone and thin- to medium-bedded nodular shaly limestone as much as 25 feet thick. Not known to yield water*

Upper Ordovician — ORDOVICIAN

Contact

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1964—W 63128

Topography mapped and edited by Tennessee Valley Authority; published by U.S. Geological Survey, 1951

Geology by R. E. Lounsbury and M. V. Marcher, U.S. Geological Survey, 1959

# GEOLOGIC MAP OF THE LAWRENCEBURG AREA WESTERN HIGHLAND RIM, TENNESSEE

SCALE 1:31 680

1 ½ 0 1 MILE

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
DASHED LINES REPRESENT HALF-INTERVAL CONTOURS
DATUM IS MEAN SEA LEVEL

TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1964