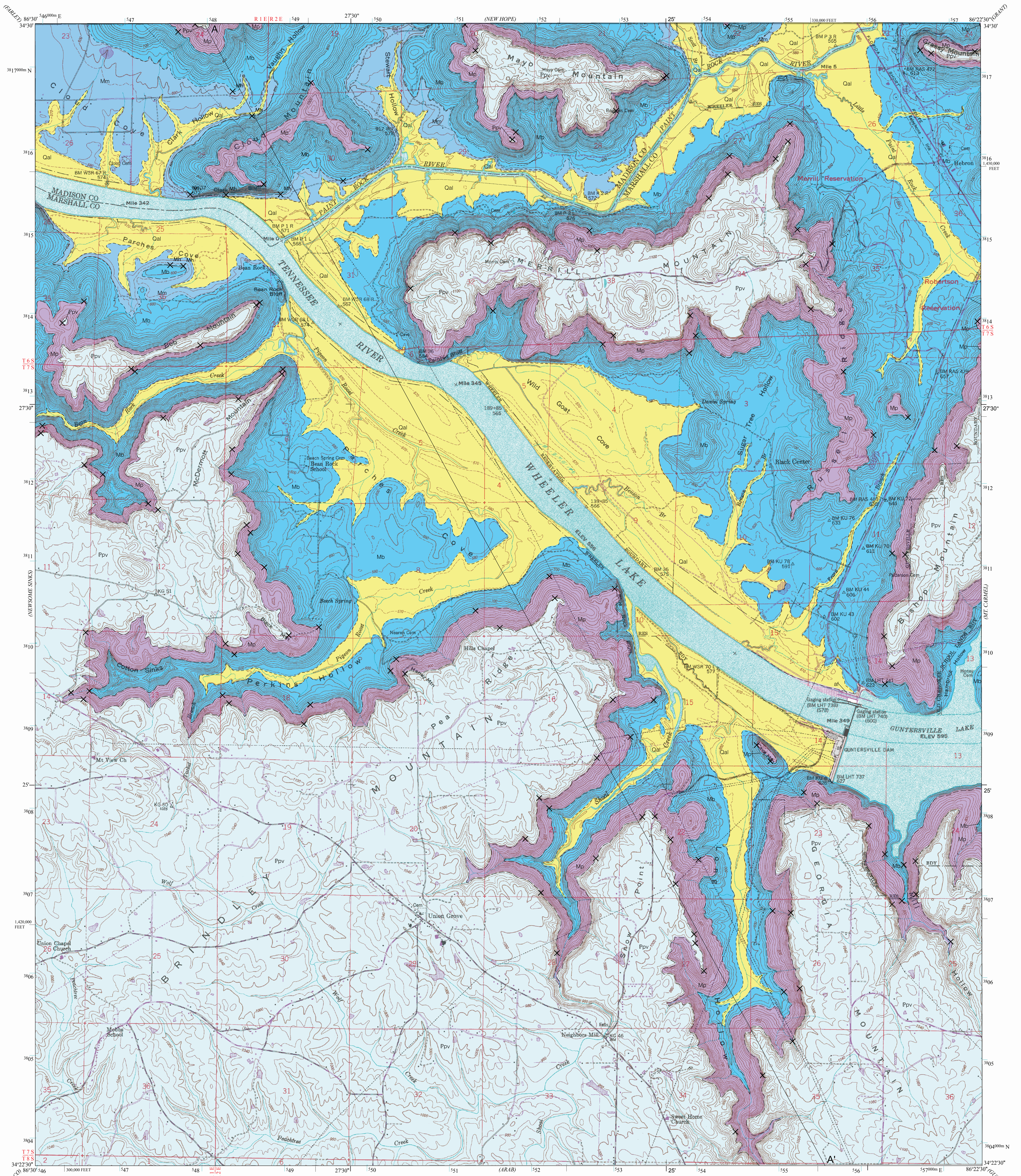


Base topographic map U.S. Geological Survey 1948 (Photorevised 1970)

Produced in cooperation with the U.S. Geological Survey, National Cooperative Geologic Mapping Program, Cooperative Agreement 08HQAG0109

Polyconic projection. 1927 North American datum
10,000-foot grid based on Alabama (East) rectangular coordinate system

Map rotated 0.3 degrees clockwise for display

MN GN
3°15′ 57 MILS
0°23′ 7 MILS
UTM Grid and 2009 Magnetic North Declination at Center of Sheet

SCALE 1:24,000
1 1/2 0 1 MILE
1 1/2 0 1 KILOMETER
CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ILL. KENTUCKY VA MO TENNESSEE N.C. MISS ALA GA S.C.
QUADRANGLE LOCATION

Digital database by Philip Dinterman

CORRELATION OF GEOLOGIC MAP UNITS

- Qal — Quaternary — CENOZOIC
- unconformity
- Ppv — Pennsylvanian — PALEOZOIC
- unconformity
- Mp, Mb, Mh, Mm — Mississippian — PALEOZOIC

DESCRIPTION OF MAP UNITS

af **Artificial fill**—Construction materials, primarily limestone riprap.

Qal **Alluvium (Quaternary)**—Unconsolidated sand, silt, clay, and angular to rounded gravel.

Ppv **Pottsville Formation (Lower Pennsylvanian)**—Light-gray, medium- to coarse-grained, quartzose sandstone locally containing scattered to abundant well-rounded quartz pebbles; quartz pebbles and/or claystone conglomerate are common. Interbeds and intervals of dark-gray shale and mudstone and wavy- to lenticular-bedded sandstone and shale locally present.

Mp **Pennington Formation (Upper Mississippian)**—Lower part dominated by medium- to dark-gray, conchoidally fractured dolomicrite containing nodules and stringers of dark-gray chert and thin interbeds of dark-gray, olive-green, and maroon shale and mudstone. Upper part includes variably gray, bioclastic limestone; cherty argillaceous and bioclastic limestone; oolitic limestone; limey dolomite; and dolomite containing intervals of maroon and olive-green mudstone. The stratigraphy of the uppermost part is variable depending on the level of the pre-Pottsville truncation.

Mb **Bangor Limestone (Upper Mississippian)**—Predominantly light- to locally dark-gray, bioclastic and oolitic limestone. Medium- to dark-gray shale containing thin to discontinuous interbeds of medium-dark-gray, fossiliferous limestone common at base. Lower part includes medium-gray peloidal and fenestral limestone, light-gray dolomicrite, and thin interbeds of light-olive-green shale. Uppermost part includes interbeds of cherty limestone, olive-green and maroon mudstone, and grayish-yellow dolomicrite.

Mh **Hartselle Sandstone (Upper Mississippian)**—Light-brownish-gray, very fine to fine-grained, thin- to medium-bedded, quartzose sandstone containing brachiopod molds and burrows. Sedimentary structures include ripple laminations, small crossbeds, horizontal laminations, and hummocky beds. The Hartselle outcrop is too thin to display and exposures are shown as control points.

Mm **Monteagle Limestone (Upper Mississippian)**—Light- to locally medium-gray, oolitic and bioclastic limestone; nodules and stringers of dark-gray, fossiliferous chert rarely present in upper part.

SYMBOLS FOR GEOLOGIC MAP

Contact, long dash where located approximately, showing location of control point (contact exposed or closely located)

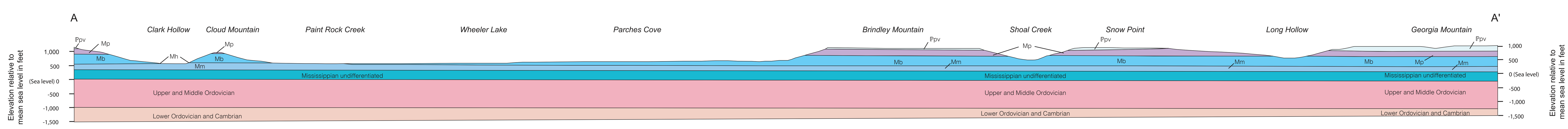
Contact, dashed where located very approximately

Contact, concealed beneath mapped units

Water boundary

SYMBOLS FOR CROSS SECTION A-A'

Stratigraphic contact



GEOLOGIC MAP OF THE GUNTERSVILLE DAM 7.5-MINUTE QUADRANGLE, MADISON AND MARSHALL COUNTIES, ALABAMA

by
W. Edward Osborne and Willard E. Ward, II

2010

Berry H. (Nick) Tew, Jr.
State Geologist