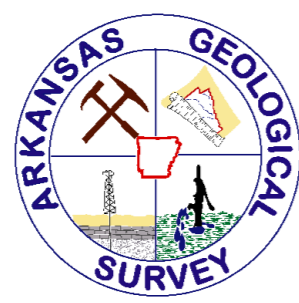
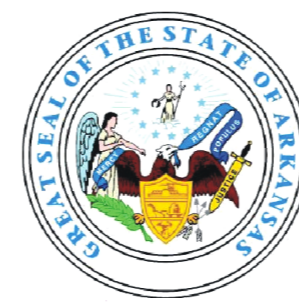


GEOLOGIC MAP OF THE NICHOLS MOUNTAIN QUADRANGLE, POLK COUNTY, ARKANSAS

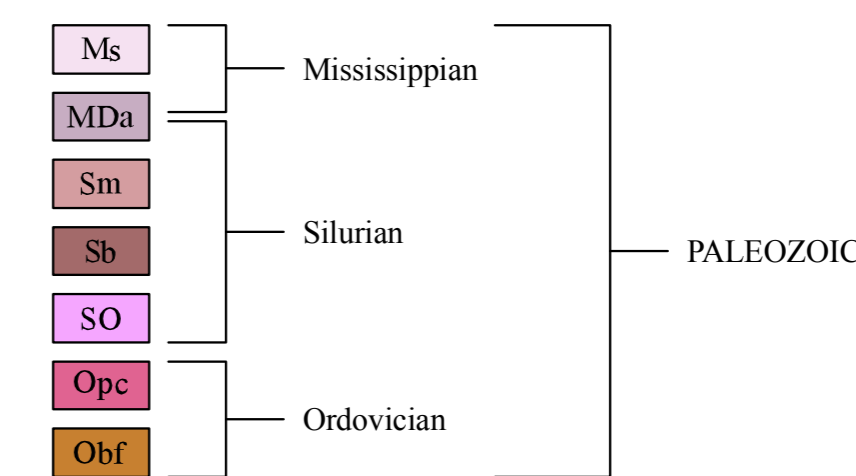


Geology by Boyd R. Haley and Charles G. Stone
1994
Edited by William D. Hanson
Digital Compilation by Nathan H. Taylor
2007



Arkansas Geological Survey, Bekki White, State Geologist

Correlation of Map Units



Description of Map Units

- Ms** **Stanley Formation (Mississippian)** - The Stanley is composed predominantly of grayish-black to brownish-gray shale, with lesser amounts of thin to massive-bedded, fine-grained, gray to brownish-gray feldspathic sandstone and black chert. Weathered shale is olive-gray, and the sandstone is generally more porous and brown. Most of the Stanley is Late Mississippian (Chesterian) as indicated by conodonts and plant fossils. The formation was deposited in a deep marine environment.
- MDa** **Arkansas Novaculite (Mississippian-Devonian)** - Three divisions of the novaculite are recognized in the state. The Lower Division is white massive-bedded novaculite with some interbedded gray shales near its base. The Middle Division is greenish to dark-gray shales interbedded with many thin beds of dark novaculite. The Upper Division is white, thick-bedded, and often calcareous. The formation was deposited in a deep marine environment.
- Sm** **Missouri Mountain Formation (Silurian)** - The Missouri Mountain consists of shale interbedded with conglomerate, novaculite, and sandstone. Few identifiable fossils have been recovered from this unit. The unit was deposited in a deep marine environment.
- Sb** **Blaylock Formation (Silurian)** - The Blaylock consists of tan to gray, fine to medium sandstone interbedded with black fissile shale. Graptolite and trace fossils may be found, but are rare. The unit was deposited in a deep marine environment.
- SO** **Missouri Mountain Shale-Polk Creek Shale (Silurian-Ordovician)** - Includes Missouri Mountain Shale which is dark gray shale that weathers green to maroon in color or with a few thin-beds of dark gray chert near the top of the formation. The Polk Creek Shale is dark gray to grayish-black shale some of which is slaty and siliceous.
- Opc** **Polk Creek Formation (Ordovician)** - The Polk Creek rocks are black, sooty, fissile, shale with minor black chert traces of gray quartzite and limestone. Graptolites are common in most of the shales in the formation.
- Obf** **Bigfork Formation (Ordovician)** - The Bigfork consists of thin bedded, dark gray, cryptocrystalline chert interbedded with varying amounts of black siliceous shale, calcareous siltstone, and dense, bluish-gray limestone. Fossils are rare.

Symbols

- Contact
- Thrust Fault
- Tear Fault
- Strike and Dip
- Overturned Strike and Dip
- Abandoned Pit
- Reclaimed Pit

Mineral Commodities

- sh Shale
- sl Slate

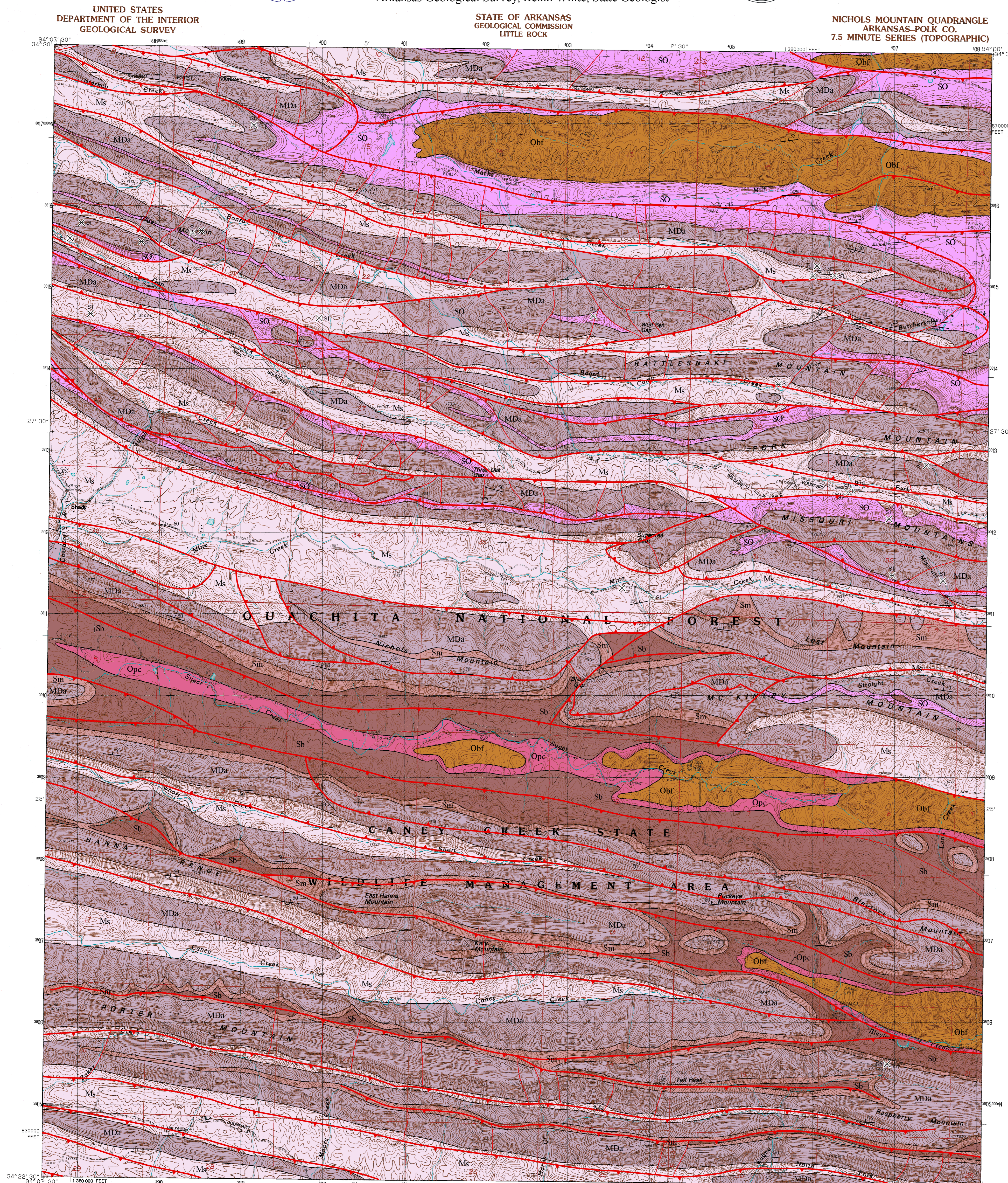
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CONTROL BY USGS AND NOS/DONNA
COMPILED FROM AERIAL PHOTOGRAPHS TAKEN 1982
FIELD CHECKED 1984 MAP EDITED 1986
PROJECTION LAMBERT CONFORMAL CONIC
GRID 100-METER UNIVERSAL TRANSVERSE MERCATOR
1000-FOOT STATE GRID TICS
UTM GRID DECLARATION 99° WEST
1983 MAGNETIC NORTH DECLINATION 99° EAST
VERTICAL DATUM NATIONAL GEODETIC VERTICAL DATUM OF 1929
HORIZONTAL DATUM 1983 NORTH AMERICAN DATUM
To place on the predicted North American Datum of 1983,
move the projection lines as shown by dashed corner ticks
(7 meters south and 18 meters east).
There may be private inholdings within the boundaries of any
Federal and State reservations shown on this map.
No distinction made between houses, barns, and other buildings.

PROVISIONAL MAP
Produced from original
manuscript drawings. Infor-
mation shown as of date of
photography.

SCALE 1:24 000
CONTOUR INTERVAL 20 FEET
CONTROL ELEVATIONS SHOWN TO THE NEAREST 0.1 FOOT
OTHER ELEVATIONS SHOWN TO THE NEAREST FOOT
To convert feet to meters multiply by 0.3048
To convert meters to feet multiply by 3.2808

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ROAD LEGEND
Improved Road
Unimproved Road
Trail
Interstate Route U.S. Route State Route

ADJOINING 7.5 QUADRANGLE NAMES
1 Mena
2 Board Camp
3 Pine Ridge
4 Eagle Mountain
5 Big Fork
6 Baker Springs
7 Empire
8 Ash Grove

NICHOLS MOUNTAIN, ARKANSAS
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