

GEOLOGIC MAP OF THE ACORN QUADRANGLE, POLK AND SCOTT COUNTIES, ARKANSAS



Geology by Boyd R. Haley and Charles G. Stone
1994

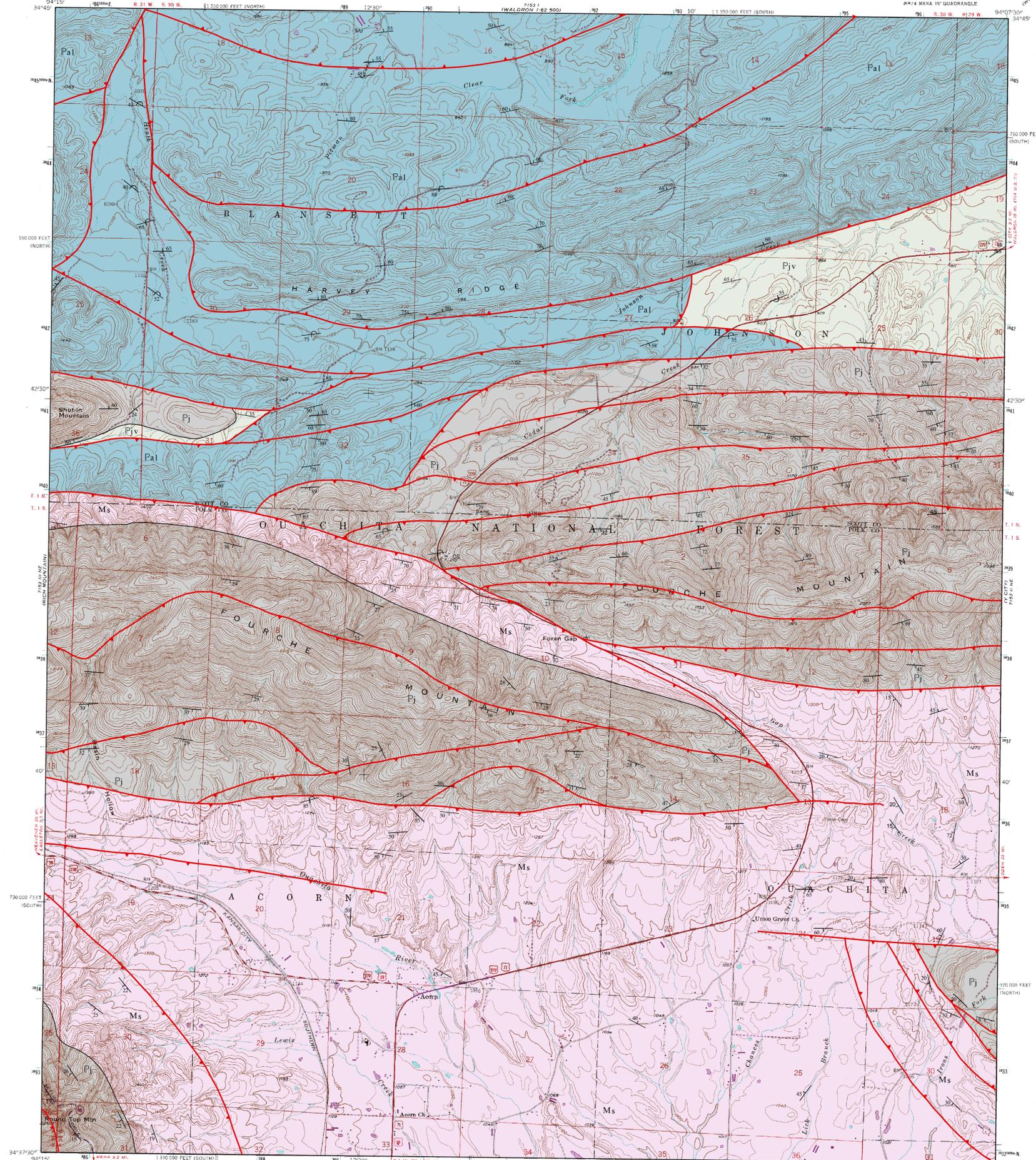
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2007

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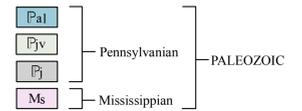


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

ACORN QUADRANGLE
ARKANSAS
7.5 MINUTE SERIES (TOPOGRAPHIC)
NW 4 MENA 15' QUADRANGLE



Correlation of Map Units



Description of Map Units

- Pa1** **Atoka formation lower (Pennsylvanian)** - The lower Atoka is a sequence of marine, mostly tan to gray silty sandstones and grayish-black shales. Some rare calcareous beds and siliceous shales are known. This unit has the largest areal extent of any of the Paleozoic formations in the state.
- Pjv** **Johns Valley Formation (Pennsylvanian)** - The Johns Valley Formation consists of black shale with numerous intervals of brownish sandstone. Also, small amounts of gray-black siliceous shale and chert have been noted. In the frontal Ouachita Mountains large quantities of erratic masses are common. The erratic masses consist of limestone, dolostone, cherts, and others. This unit was deposited in a deep marine environment and is about 500 to 1500 feet thick.
- Pj** **Jackfork Formation (Pennsylvanian)** - The Jackfork is thin to massive-bedded, fine to coarse-grained, brown, tan, or bluish-gray quartzitic sandstone with subordinate brown silty sandstones and gray-black shale. Minor conglomerates composed of quartz, chert, and metaquartzite occur notably in the southern exposures of the formation. The Jackfork rests conformably on the Stanley and was deposited in a deep marine environment.
- 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 shales are 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.

Symbols

- Contact
- Thrust Fault
- Strike and Dip
- Overturned Strike and Dip
- Abandoned Quarry

Mineral Commodities

- CS Crushed Stone

References

- Haley, B. R., and Stone, C. G., 1976, Geologic Worksheet of the Mena Quadrangle Arkansas: Arkansas Geological Commission, Open-file report, scale 1:62,500.
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- McFarland, J. D., 2004, Stratigraphic Summary of Arkansas: Arkansas Geological Commission Information Circular 36, 39p.
- Miser, H. D., and Purdue, A. H., 1929 Geology of the DeQueen and Caddo Gap Quadrangles, Arkansas: U.S. Geological Survey, Bulletin 808, 195p., scale 1:125,000.

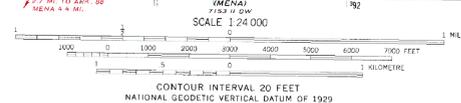
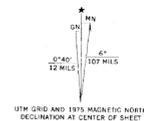
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Control by USGS and USC&GS
Topography from aerial photographs by multiplex methods
Aerial photographs taken 1955. Field check 1958
Polyconic projection, 1927 North American datum
10,000-foot grids based on Arkansas coordinate system,
north and south zones.
1000-metre Universal Transverse Mercator grid ticks,
zone 15, shown in blue
Unchecked elevations are shown in brown
Revisions shown in purple compiled from aerial photographs
taken 1975. This information not field checked



ROAD CLASSIFICATION

- Heavy-duty
- Medium-duty
- Light duty
- Unimproved dirt
- U.S. Route
- State Route



QUADRANGLE LOCATION

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
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A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

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ACORN, ARK.
NW 4 MENA 15' QUADRANGLE
N 3437.5 - W 9407.5 / 7.5
1958
PHOTO REVISSED 1975
AMS 7153 H NW - SERIES 1884