

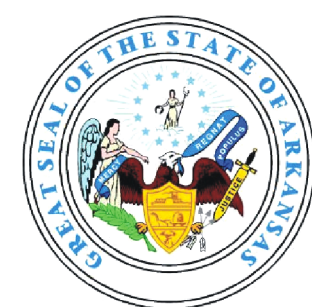
GEOLOGIC MAP OF THE DE ROCHE QUADRANGLE, HOT SPRING COUNTY, ARKANSAS



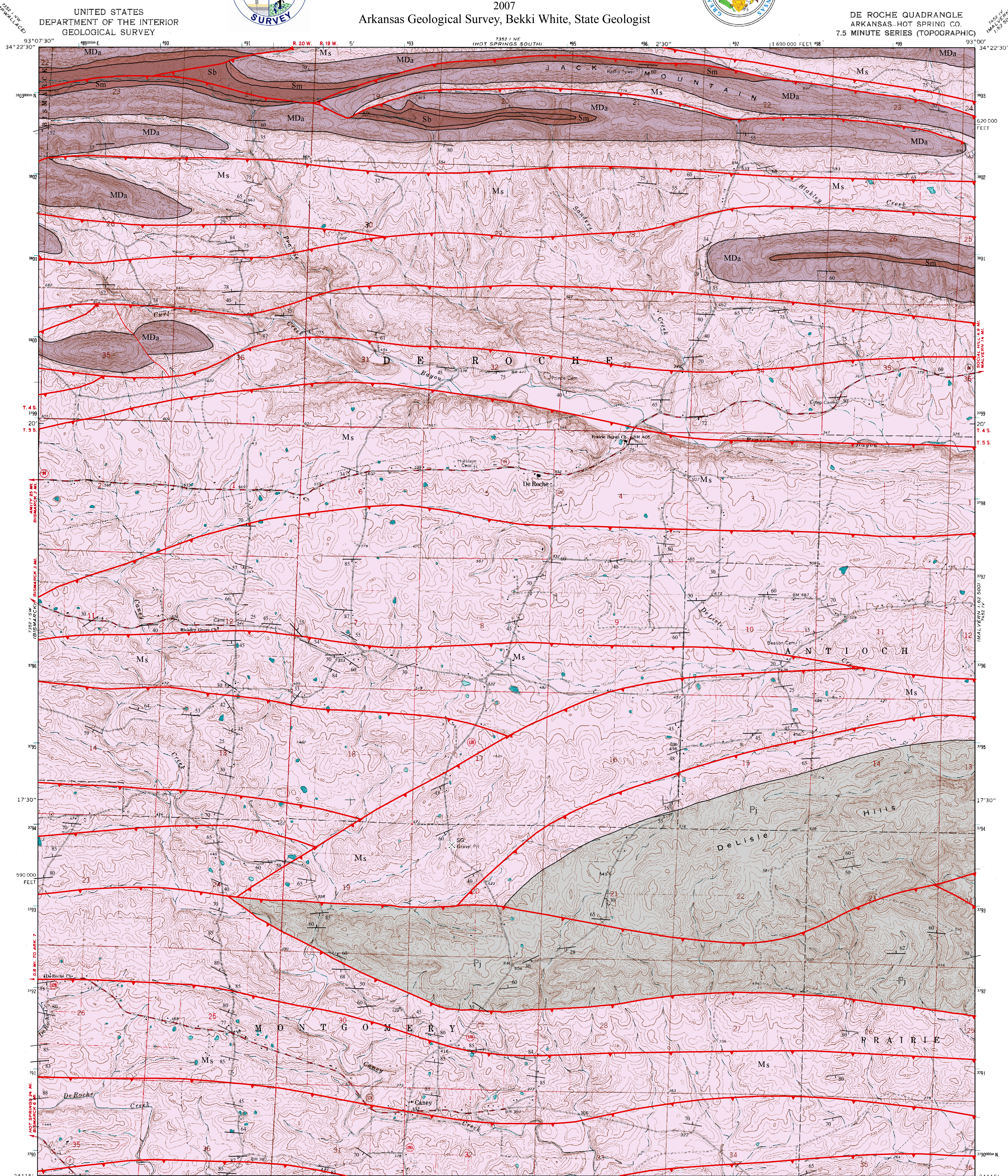
Geology by Boyd R. Haley and Charles G. Stone
1994

Edited by William D. Hanson
Digital Compilation by Nathan H. Taylor
2007

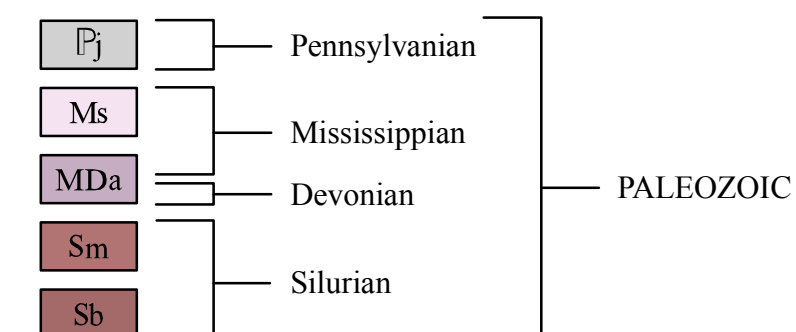
Arkansas Geological Survey, Bekki White, State Geologist



DE ROCHE QUADRANGLE
ARKANSAS, HOT SPRING CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



Correlation of Map Units



Description of Map Units

- 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 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.

Symbols

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

Mineral Commodities

- sg Sand and Gravel

References

- Haley, B. R., and Stone, C. G., 1976, Geologic Worksheet of the DeRoche Quadrangle, Arkansas: Arkansas Geological Commission, Open-file Report, scale 1:24,000.
- Howard, J. M., 2007, Arkansas Mineral Commodity Database, In-house data: Arkansas Geological Survey.
- 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.

DISCLAIMER

Although this map was compiled from digital data that was successfully processed on a computer system using ESRI ArcGIS 9.2 software at the Arkansas Geological Survey (AGS), no warranty, expressed or implied, is made by AGS regarding the quality of the data on any other system, nor shall the act of distribution constitute any such warranty. AGS does not guarantee this map or digital data to be free of errors or liability for interpretations from this map or digital data, or decisions based thereon.

The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the Arkansas Geological Survey.

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

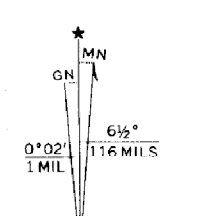
Topography by photogrammetric methods from aerial photographs taken 1963. Field checked 1966

Polyconic projection. 1927 North American datum

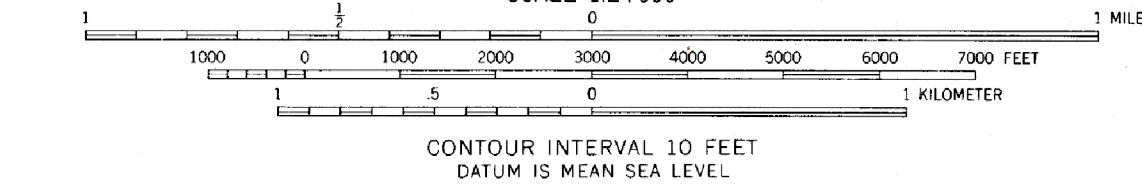
10,000-foot grid based on Arkansas coordinate system, south zone

1000-meter Universal Transverse Mercator grid ticks, zone 15, shown in blue

Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked



17° 00' 00" AND 1986 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

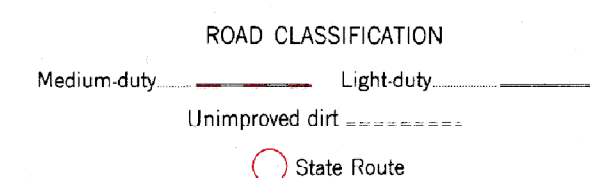


CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D. C. 20242
AND BY THE ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARKANSAS 72201
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



Funded by the United States Geological Survey in cooperation with the Arkansas Geological Commission, under the COGEO Map Project



ROAD CLASSIFICATION

- Medium-duty
- Light-duty
- Unimproved dirt
- State Route

DE ROCHE, ARK.
N3415—W9300/7.5

1966

AMS 1352 1 SE—SERIES V684