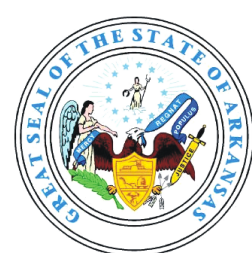


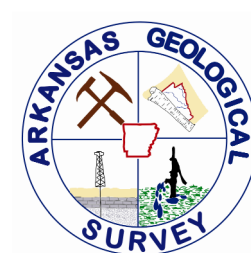
# GEOLOGIC MAP OF THE RICH MOUNTAIN QUADRANGLE, POLK AND SCOTT COUNTIES, ARKANSAS



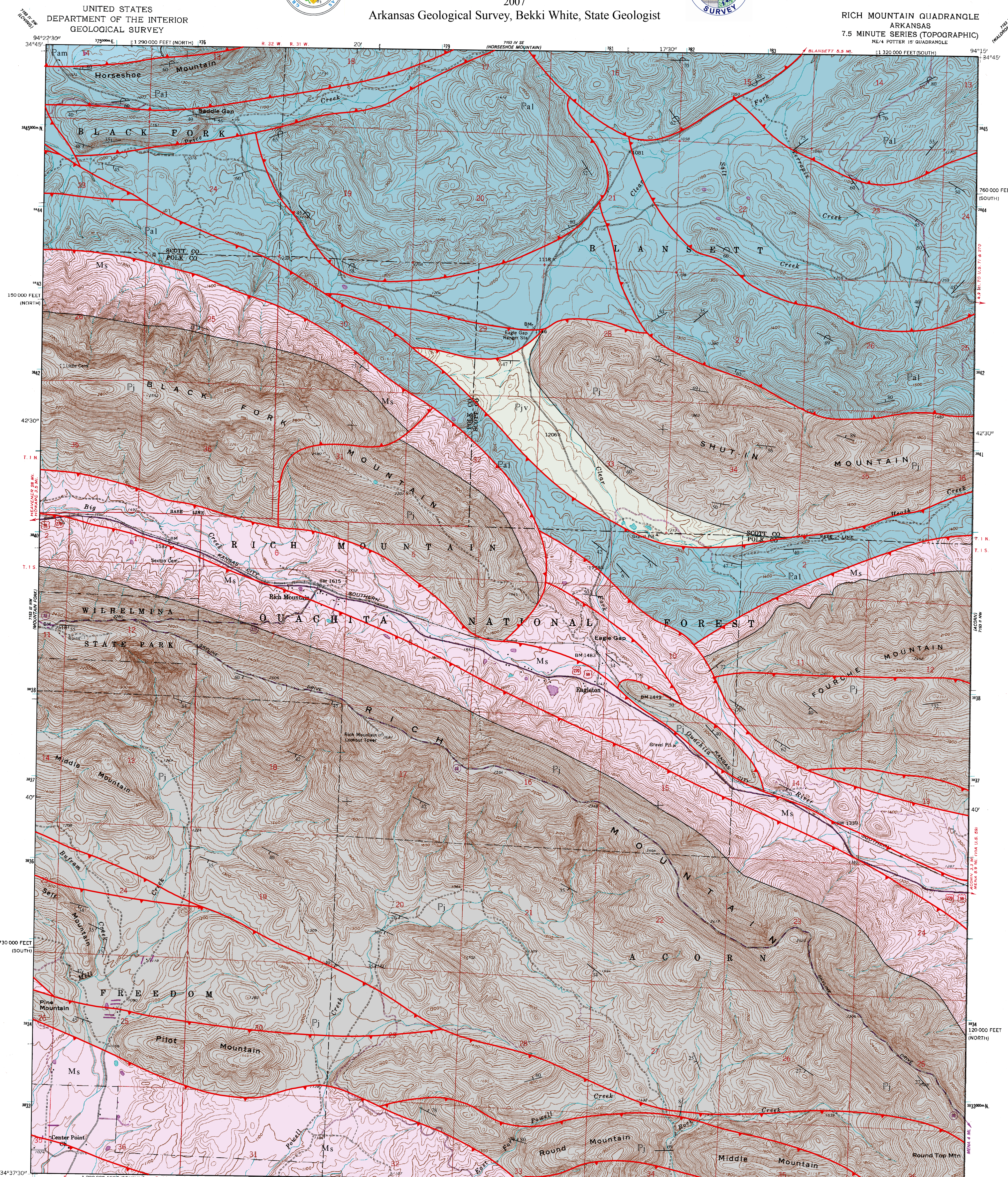
Geology by Boyd R. Haley and Charles G. Stone  
 1994

Edited by William D. Hanson  
 Digital Compilation by Brandy R. Rakes  
 2007

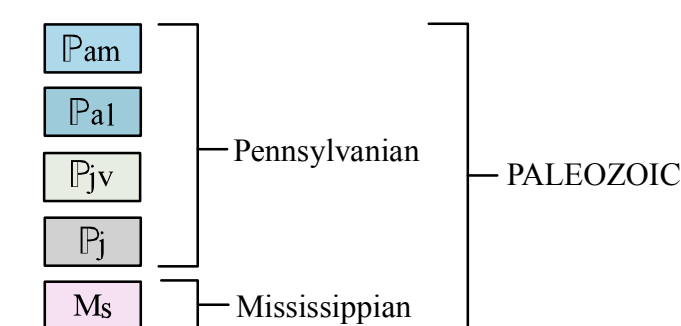
Arkansas Geological Survey, Bekki White, State Geologist



RICH MOUNTAIN QUADRANGLE  
 ARKANSAS  
 7.5 MINUTE SERIES (TOPOGRAPHIC)  
 NE/4 POTTER 18 QUADRANGLE



### Correlation of Map Units



### Description of Map Units

- Pam** **Atoka Formation middle (Pennsylvanian)** - The middle Atoka consists of marine tan to gray silty sandstone and grayish-black shale. Only in the Arkansas Valley and frontal Ouachita Mountain provinces is this formation split into the upper, middle, and lower members.
- Pal** **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 metagartzite 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.

### Symbols

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

### References

- Haley, B. R., and Stone, C. G., 1976, Geologic Worksheet of the Potter Quadrangle Arkansas: Arkansas Geological Commission, Open-file report, scale 1:62,500.
- 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.

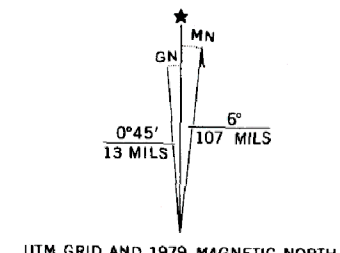
### DISCLAIMER

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 the AGS regarding the utility of the data on any other system, nor shall the act of distribution constitute any such warranty. The 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.

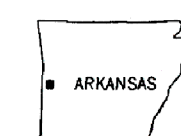
Mapped, edited, and published by the Geological Survey  
 Control by USGS and USC&GS

Topography from aerial photographs by multiple 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  
 To place on the predicted North American Datum 1983  
 move the projection lines 7 meters south and  
 19 meters east as shown by dashed corner ticks  
 1000-meter Universal Transverse Mercator grid ticks,  
 zone 15, shown in blue  
 There may be private inholdings within the boundaries of  
 the National or State reservations shown on this map  
 Unchecked elevations are shown in brown



SCALE 1:24,000  
 CONTIGUOUS INTERVAL 20 FEET  
 NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
 FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092  
 AND ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARKANSAS 72204  
 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



QUADRANGLE LOCATION  
 Revisions shown in purple compiled from aerial  
 photographs taken 1977. Map edited 1979  
 This information not field checked

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

ROAD CLASSIFICATION  
 Primary highway, hard surface  
 Secondary highway, hard surface  
 Interstate Route  
 U. S. Route  
 Light-duty road, hard or improved surface  
 Unimproved road  
 State Route

RICH MOUNTAIN, ARK.  
 NE/4 POTTER 18 QUADRANGLE  
 N3437.5—W9415/7.5  
 1958  
 PHOTOREVISED 1979  
 DMA 7153 III NE-SERIES V884