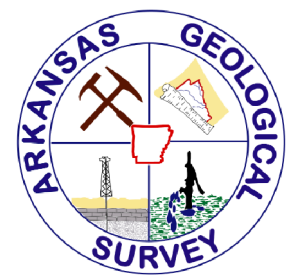


# GEOLOGIC MAP OF THE BISMARCK QUADRANGLE, CLARK AND HOT SPRING COUNTIES, ARKANSAS



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

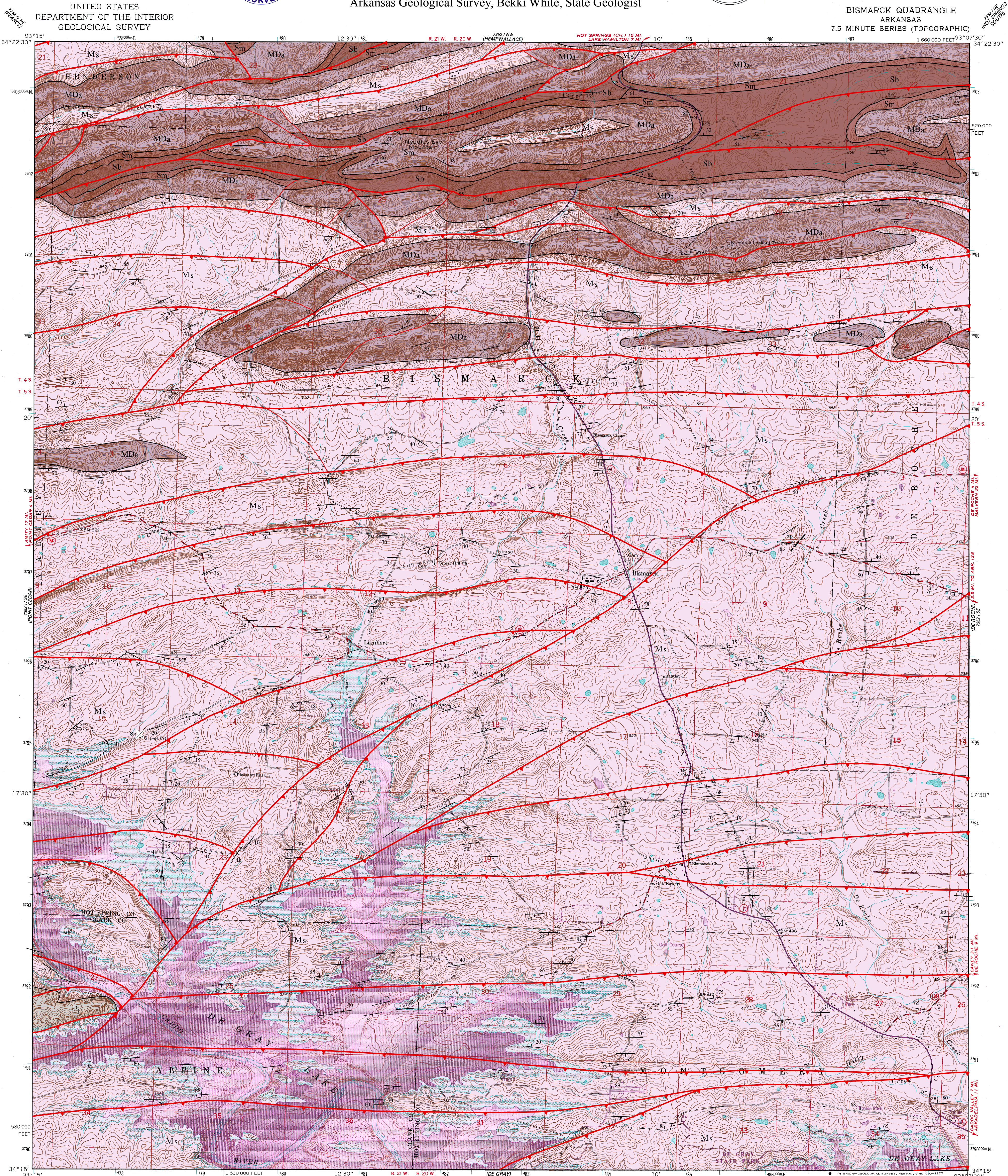
Edited by William D. Hanson  
Digital Compilation by Nathan H. Taylor  
2007



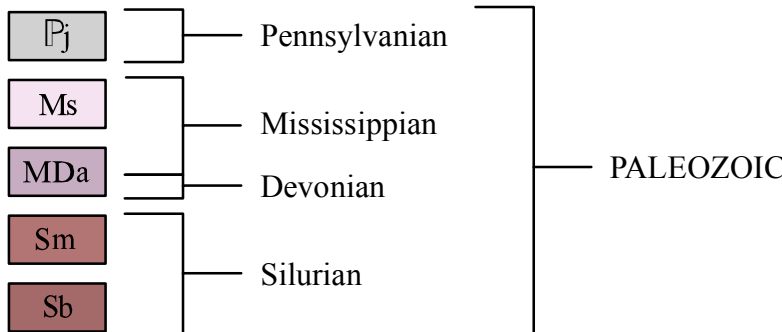
Arkansas Geological Survey, Bekki White, State Geologist

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

BISMARCK QUADRANGLE  
ARKANSAS  
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 found in 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  
x Pit

## Mineral Commodities

Sh Shale

## References

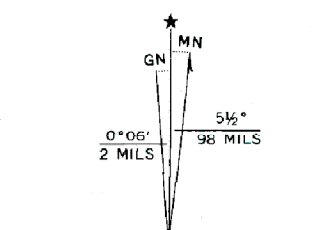
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Mapped, edited, and published by the Geological Survey  
Control by USGS and USC&GS  
Topography by photogrammetric methods from aerial photographs taken 1953. Field checked 1966  
Polyconic projection. 1927 North American datum  
10,000-foot grid based on Arkansas coordinate system, south zone  
1000-meter Universal Transverse Mercator grid ticks, zone 15, shown in blue  
Areas covered by dashed light blue pattern are subject to controlled inundation  
Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked  
Revisions shown in purple compiled from aerial photographs taken 1976. This information not field checked



SCALE 1:24 000  
CONTOUR INTERVAL 10 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
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AND ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARKANSAS 72204  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

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the COGEO Map Project

ROAD CLASSIFICATION  
Heavy-duty ——— Light-duty ———  
Medium-duty ——— Unimproved dirt ———  
Interstate Route — U.S. Route — State Route —  
BISMARCK, ARK.  
N 3415—W 9307.5/7.5  
1966  
PHOTOREVISED 1976  
AMS 7352 1 SW—SERIES V884