

GEOLOGIC MAP OF THE LODI QUADRANGLE, MONTGOMERY AND PIKE COUNTIES, ARKANSAS

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Edited by William D. Hanson

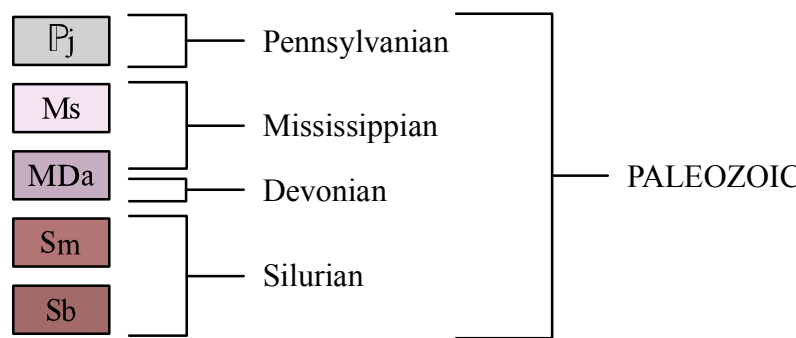
Arkansas Geological Commission, Bekki White, State Geologist
Digital Compilation by Nathan H. Taylor

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF ARKANSAS
GEOLOGICAL COMMISSION
LITTLE ROCK

LODI QUADRANGLE
ARKANSAS
7.5 MINUTE SERIES (TOPOGRAPHIC,
SW 4 GLENWOOD 15' QUADRANGLE)

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. Toward the north of its outcrop area the shale units of the lower and middle Jackfork take up more of the section and the sandstones are more lenticular, often occurring as chaotic masses in the 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. The formation is generally between 3500 to 6000 feet in thickness.
- 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. Weathered shale is olive-gray, and the sandstone is generally more porous and brown. Interbedded layers of thin black siliceous shale and chert are present and are used to subdivide the formation in other areas. Cone-in-cone and calcareous silty concretions are present in the shale. Most of the Stanley is Late Mississippian (Chesterian) as indicated by the presence of conodonts and plant fossils. The formation is a deep-water marine turbidite sequence, derived primarily from a landmass (Llanoria) that existed along the southern margins of the Ouachita trough.
- MDa Arkansas Novaculite (Mississippian-Devonian)** - Three Divisions of the Arkansas Novaculite are recognized. 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.
- 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 and is about 300 feet thick.
- 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 thickness of the unit ranges from 5 feet to as much as 1200 feet, and was deposited in a deep marine environment.

Symbols

- Contact
- Thrust Fault
- Tear Fault
- Strike and Dip
- Abandoned Mine
Mn - Manganese
- Abandoned Pit
CS - Crushed Stone
SI - Slate

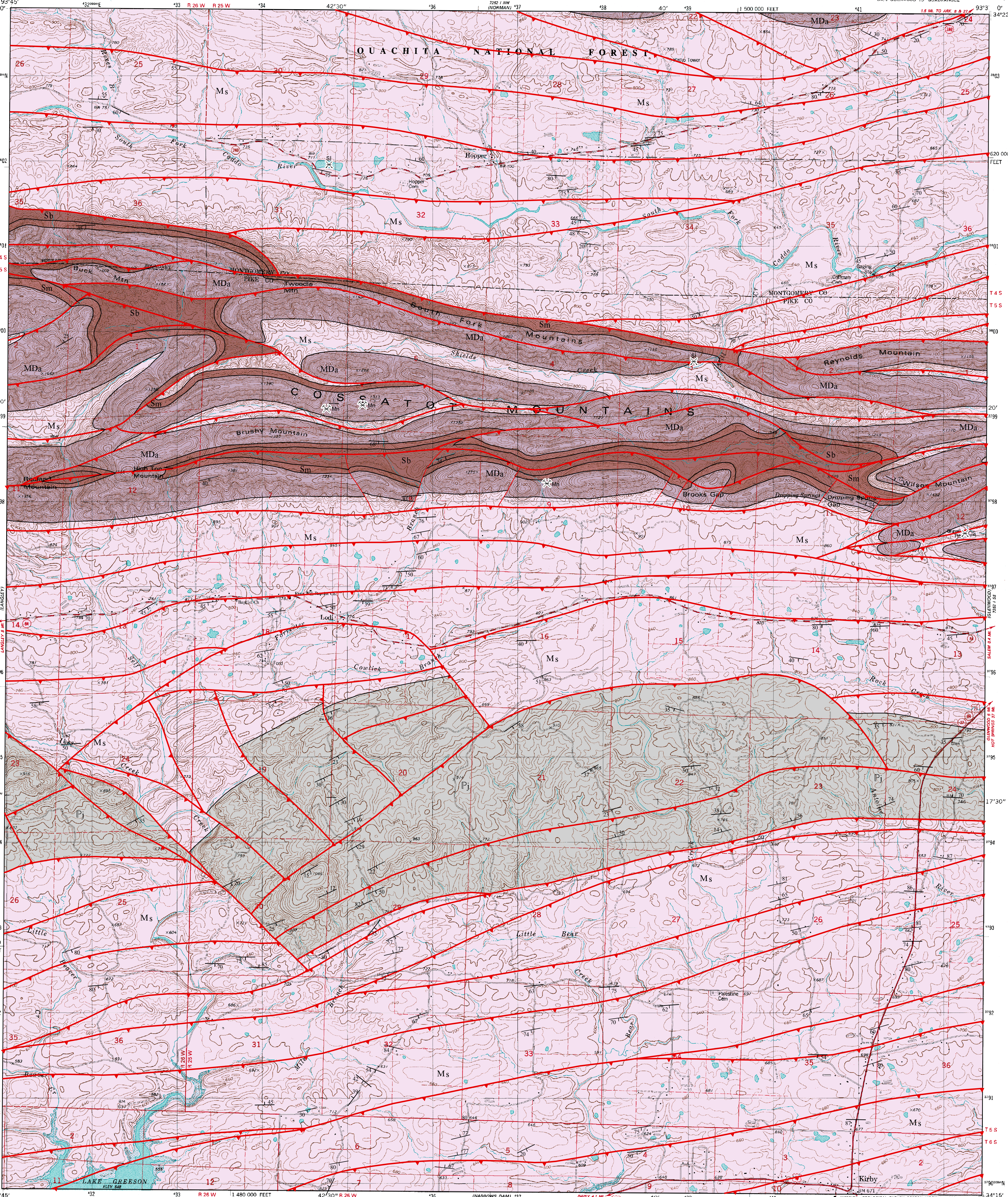
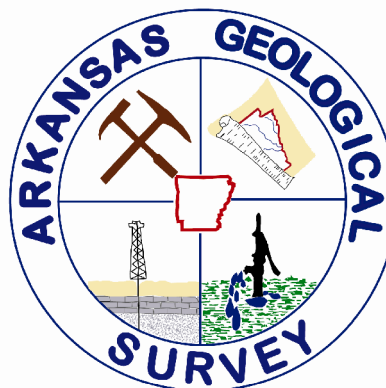
References

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- Howard, J. M., 2006, Arkansas Mineral Commodity Database, In-house data: Arkansas Geological Commission.
- 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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Mapped, edited, and published by the Geological Survey

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Topography by photogrammetric methods from aerial photographs taken 1976. Field checked 1977. Map edited 1979.

Projection and 10,000-foot grid ticks: Arkansas coordinate system, south zone (Lambert conformal conic)

1000-meter Universal Transverse Mercator grid, zone 15

1927 North American datum

To place on the predicted North American Datum 1983 move the projection lines 8 meters south and 17 meters east as shown by dashed corner ticks

There may be private inholdings within the boundaries of the National or State reservations shown on this map

Areas covered by dashed light-blue pattern are subject to controlled inundation

SCALE 1:24 000

CONTOUR INTERVAL 20 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

UTM GRID AND 1983 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RES/ION, VIRGINIA 22092

AND ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARKANSAS 72204

A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



QUADRANGLE LOCATION

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

LODI, ARK.

SW 4 GLENWOOD 15' QUADRANGLE
N3415-W5937.5/7.5

1979

DMA 7292 1 SW-SERIES VB84