



Arkansas Geological Survey  
Bekki White, State Geologist and Director

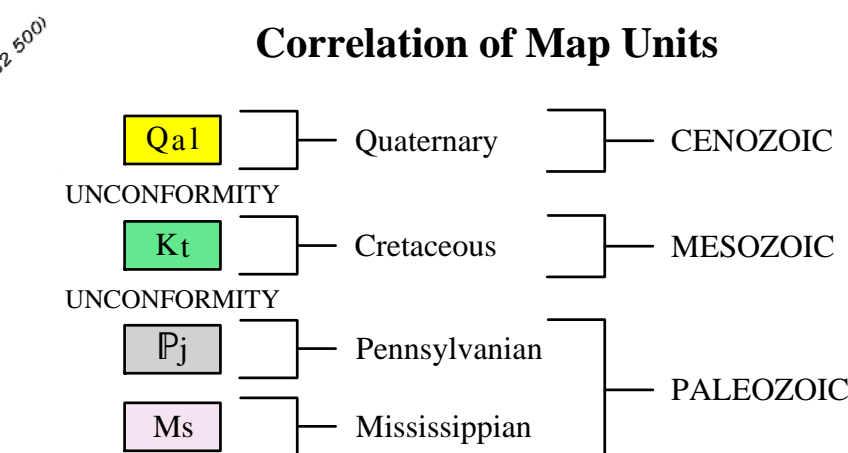
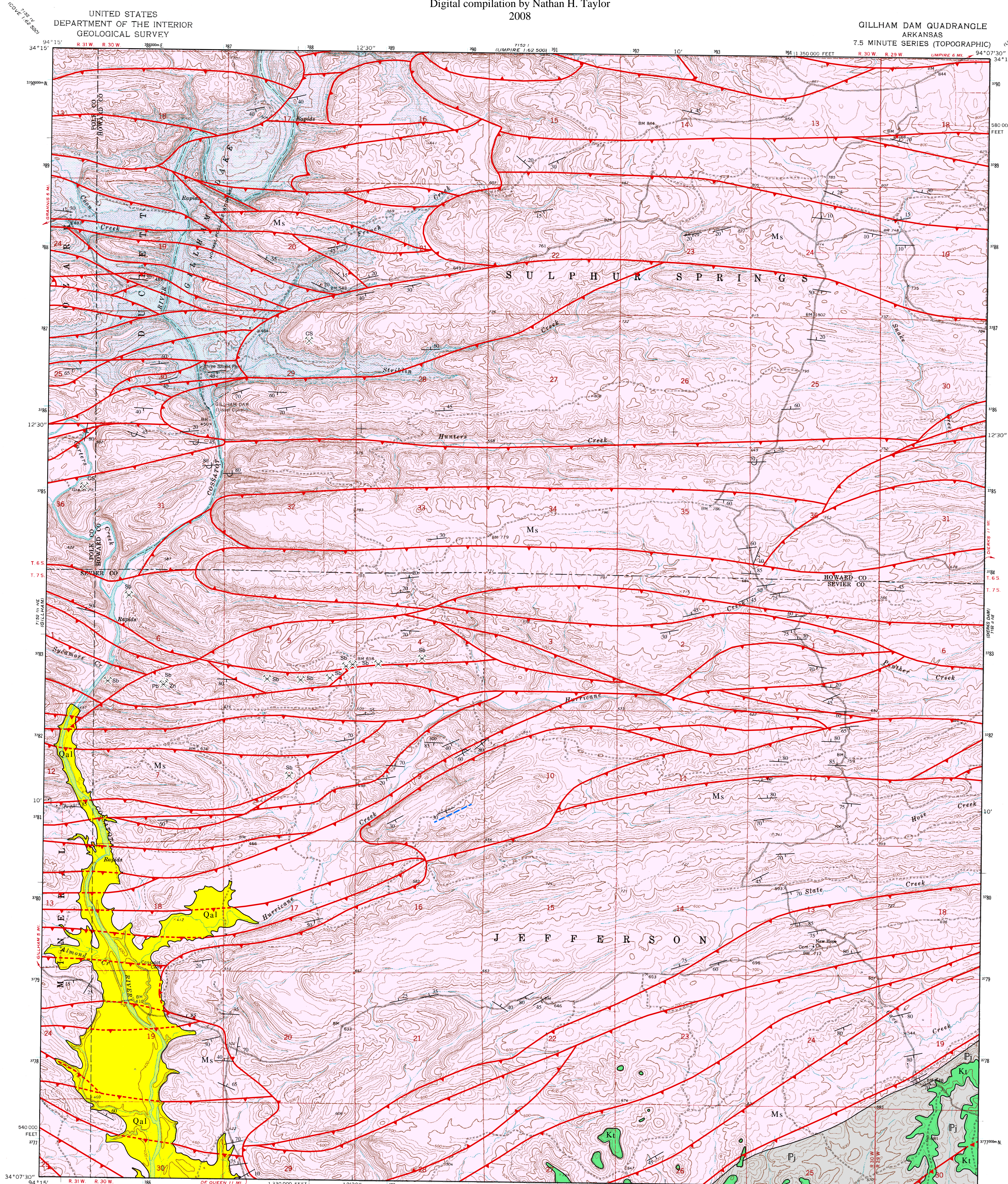
DIGITAL GEOLOGIC QUADRANGLE MAP  
GILLHAM DAM QUADRANGLE, ARKANSAS  
DGM-AR-0032

# GEOLOGIC MAP OF THE GILLHAM DAM QUADRANGLE, HOWARD, POLK, AND SEVIER COUNTIES, ARKANSAS

Geology by B.R. Haley, C.G. Stone, W.D. Hanson, and B.F. Clardy  
1994  
Digital compilation by Nathan H. Taylor  
2008

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

GILLHAM DAM QUADRANGLE  
ARKANSAS  
7.5 MINUTE SERIES (TOPOGRAPHIC)



- ### Description of Map Units
- Qal** **Alluvium (Quaternary)** - Variably sized gravel overlain by unconsolidated sand, silt, and clay comprises the unit. This unit occurs in the floodplains of streams and rivers. The sediments form a rich loam and are excellent for agriculture. Gravels, primarily novaculite, originated in the Ouachita Mountain region and from local Cretaceous formations. Areas of alluvium are presently receiving sediment deposition.
  - Kt** **Trinity Group (Lower Cretaceous)** - The Trinity is comprised of sand, gravel, clay, limestone, asphalt, and evaporite deposits. The upper part of the Trinity Group is mostly fine-grained, cross-bedded sand, usually weathered to reddish color. Marginal marine fossils are noted from the Trinity Group. Members exposed include the Pike Gravel and the Dierks Limestone Lentic. The Pike Gravel, the basal member of the Trinity Group, is a bedded gravel deposit approximately 100 feet thick. The base of the Trinity rests unconformably on a surface of upturned and eroded Paleozoic rocks.
  - 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.

- ### Symbols
- Contact
  - Thrust Fault
  - Thrust Fault, inferred
  - Igneous Dike, approximately located
  - Strike and Dip
  - Overtaken Strike and Dip
  - Mine/Quarry, active
  - Mine/Quarry, abandoned

- ### Mineral Commodities
- Sb Antimony
  - CS Crushed Stone
  - Pb Lead
  - Zn Zinc

### References

Haley, B.R., and Stone, C.G., 1976, Geologic Worksheet of the Gillham Dam Quadrangle, Arkansas: Arkansas Geological Commission, Open-file report, scale 1:24,000.

Howard, J.M., 2008, 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.

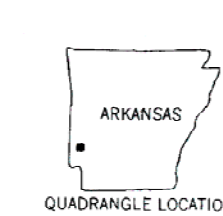
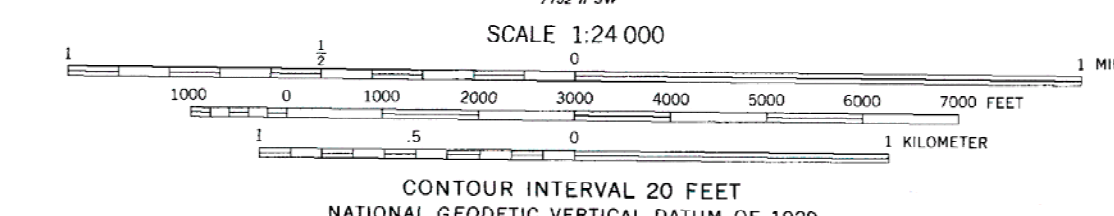
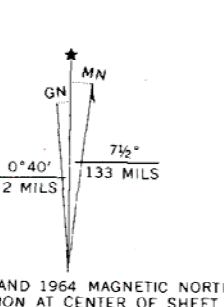
Miser, H.D., and Purdue, A.H., 1929, Geology of the De Queen and Caddo Gap Quadrangles, Arkansas: U.S. Geological Survey, Bulletin 808, 195p, scale 1:125,000.

**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, USCGS, and USCF  
Topography by photogrammetric methods from aerial photographs taken 1961. Field checked 1964.  
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  
Blue hatching indicates areas to be submerged by Gillham Lake  
Areas covered dashed light-blue pattern are subject to controlled inundation  
Find red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked



ROAD CLASSIFICATION  
Light-duty Unimproved dirt

GILLHAM DAM, ARK.  
N3407.5-W9407.5/7.5  
1964  
DMA 1192 II NW-SERIES Y884

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

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