Geologic Map of the Fairfield Bay Quadrangle, Van Buren County, Arkansas

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2014

Introduction

This page shows the lithologic and vertical zoning of the Fairfield Bay 1:24,000 quadrangle. The page also includes a geologic cross-section line, a Rose diagram of strike frequency of joints, and a geologic map of the Fairfield Bay quadrangle. The page is based on the USGS Digital Geologic Quadrangle Map DGM-AR-00276, 1 sheet, 1:24,000. The map is available on our website in Portable Document Format at:

http://www.geology.ar.gov/geologic_maps/dgm24k.htm

Acknowledgments:

Special thanks to the private landowners who cooperated in this cooperative geologic mapping project. A mass of rock and debris that has moved downward. Failure of this type is triggered by the weight of the debris on the slope. The contact of the debris with the underlying bedrock can be used to determine the depth of the failure.

The geology of the Fairfield Bay quadrangle was mapped circa 1973 by E. E. Glick for the 1:500,000 scale Arkansas Geological Survey (AGS) Geologic Map of the Arkansas. This map builds on previous mapping efforts. The geology of the Fairfield Bay quadrangle was later revised in 1981 by Richard S. Hutto and Daniel S. Rains. The revised map is shown on the page.

The map straddles the boundary between the southernmost Ozark Plateau and the Arkansas River Valley. The Arkansas River Valley is typified by broad, east-west trending terraces created in the St. Francois Mountains of southeast Missouri by the convergence of the Mississippi and Missouri rivers. The terraces are separated by broad, west-northwest to east-southeast trending valleys. The Arkansas River Valley is typified by narrow, east-northeast trending valleys.

This is a complex map with many different lithologies and structures. The map shows the contact of different rock units and the orientation of joints and other structures.

Symbols

- Contact
- Indurated sedimentary rock
- Indurated conglomerate
- Cross-stratified sandstone
- Boudinage

References


Limitations:

This page contains information from the USGS Digital Geologic Map DGM-AR-00276. The map is based on field observations and published literature. The map is intended for use in planning and engineering applications and should not be used for legal purposes or for making construction decisions.

For the latest information, please visit the USGS website at:

http://www.geology.ar.gov/geologic_maps/dgm24k.htm

Map and cross-section digitized by Brian Scherer.