

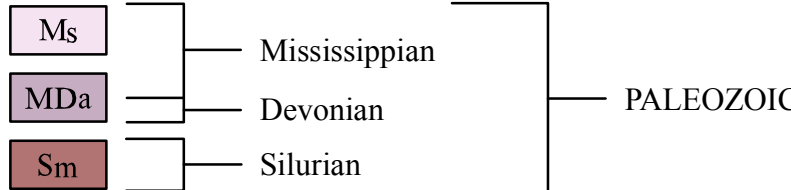
# GEOLOGIC MAP OF THE VANDERVOORT QUADRANGLE, POLK COUNTY, ARKANSAS

Geology By Boyd R. Haley and Charles G. Stone  
Edited by William D. Hanson  
1994

Arkansas Geological Survey, Bekki White, State Geologist  
Digital Compilation by Nathan H. Taylor, 2007

VANDERVOORT QUADRANGLE  
ARKANSAS-POLK CO.  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
NE4 COVE 15' QUADRANGLE

## Correlation of Map Units



## Description of Map Units

- 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 bluish. 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.

## Symbols

- Contact  
— Thrust Fault  
— Tear Fault  
— Strike and Dip  
× Pit  
× Abandoned Pit  
× Reclaimed Pit  
SG - Sand & Gravel

## References

- Haley, B. R., and Stone, C. G., 1972, Geologic Map of the Cove Quadrangle, Arkansas Geological Commission, scale 1:62,500.
- 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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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY



Mapped, edited and published by the Geological Survey  
Control by USGS and NOS/NOAA  
Topography by photogrammetric methods from aerial photographs taken 1962. Field checked 1984. Map edited 1984  
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 7 meters south and 19 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  
Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is uncheck

SCALE 1:24,000  
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100  
CONTOUR INTERVAL 20 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1929



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VANDERVOORT, ARK.  
NE4 COVE 15' QUADRANGLE  
34094-03-TF-024  
1984  
DMA 7152 IV NE-SERIES V884

