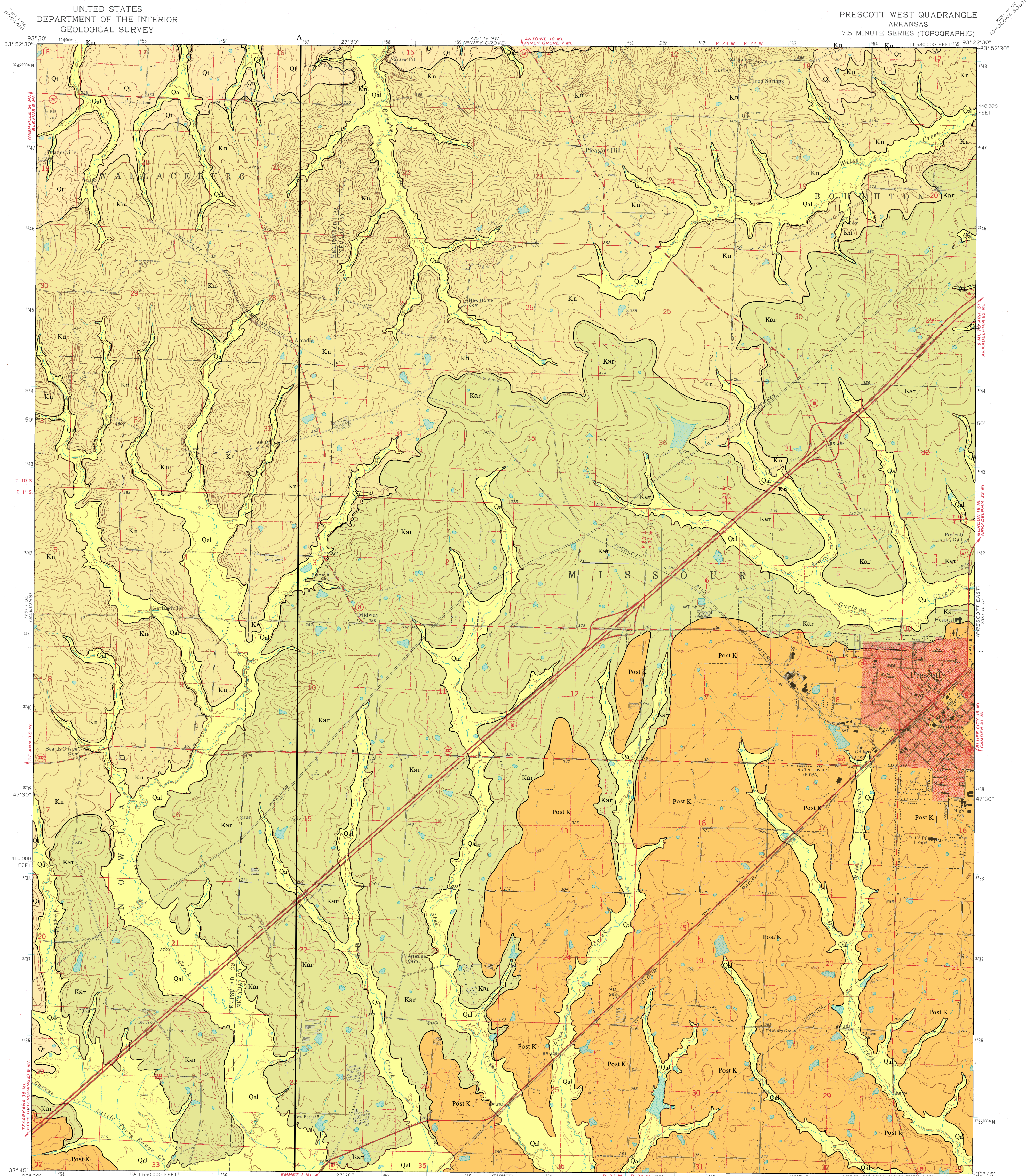
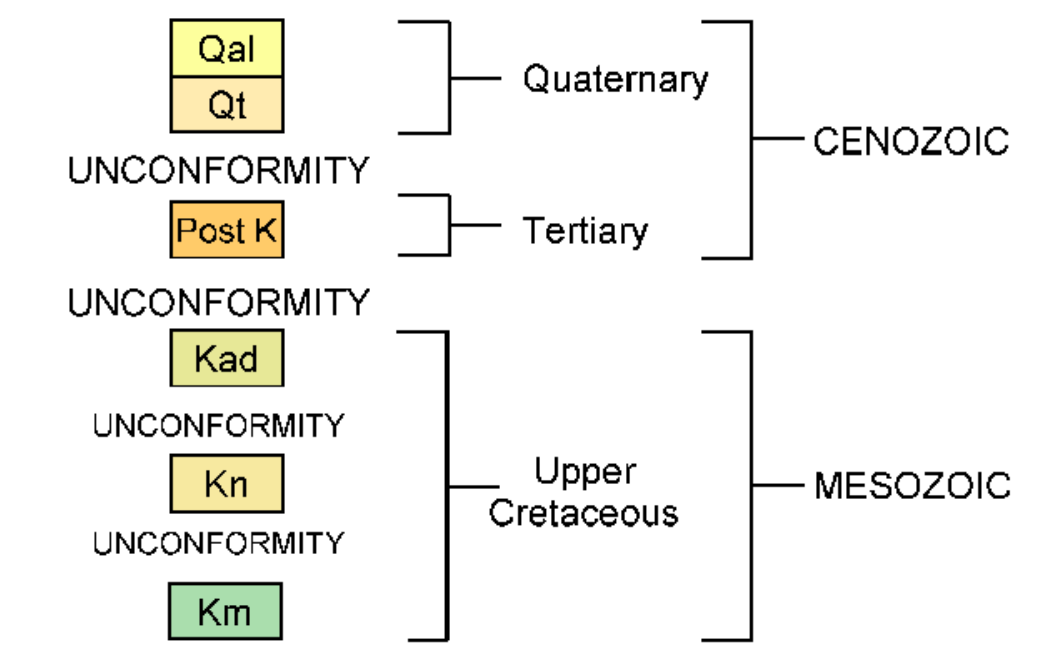


# GEOLOGIC MAP OF THE PRESCOTT WEST QUADRANGLE, HEMPSTEAD AND NEVADA COUNTIES, ARKANSAS

Geology by William D. Hanson, Benjamin F. Clardy, and Jennifer R. Perkins  
 Digital compilation by William D. Hanson, Jennifer R. Perkins, and Daniel K. Smith  
 2001  
 Arkansas Geological Commission, William V. Bush, State Geologist



### CORRELATION OF MAP UNITS



### DESCRIPTION OF MAP UNITS

- Qal** **Alluvium (Quaternary)** - Variably sized gravel overlain by unconsolidated sand, silt, and clay comprises this 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. Thickness varies from 0 to 25 feet. Areas of alluvium are presently receiving sediment deposition.
- Qt** **Terrace Deposits (Quaternary)** - Terrace deposits generally grade from basal gravel to silt and clay at the top. Gravels, primarily novaculite, originated in the Ouachita Mountain region and from local Cretaceous formations. Thicknesses are generally less than 50 feet. Terraces are topographic features which are former floodplains of nearby streams and/or rivers. The sediments form a rich loamy soil. The basal gravel is sometimes utilized for water-well production and gravel-mining operations.
- Post K** **Post Cretaceous (Tertiary)** - Undifferentiated units of post Cretaceous age.
- Kad** **Arkadelphia Marl (Upper Cretaceous)** - The Arkadelphia Marl is a dark-gray to black marl or marly clay. It contains some limy, gray sandstone, gray sandy clay, sandy limestone, concretionary limestone, and white to light brown impure chalk. The sandy marls and limestones are found near the base of the unit, while the impure chalks are found near the top of the unit. The Arkadelphia Marl is approximately 150 feet thick in the mapped area. The unit strikes to the northeast and has a dip of approximately 80 feet per mile to the southeast in this quadrangle. Fossils present in the Arkadelphia Marl include corals, bivalves, gastropods, cephalopods, shark teeth, and various microfossils. The unit was deposited in a nearshore marine environment and rests unconformably on top of the Nacatoch Sand.
- Kn** **Nacatoch Sand (Upper Cretaceous)** - The Nacatoch Sand is composed of unconsolidated, cross-bedded, yellowish and gray fine quartz sand, hard fossiliferous sandy limestone, coarse highly glauconitic sand, fine argillaceous blue-black sand, and bedded light-gray clay and marl. Hard fossiliferous limestones are found near the base of the unit. Near the middle of the unit a coarse, highly glauconitic lens is observed. The lens appears black on outcrop and may be 30 to 60 feet thick. Thin bedded gray clay is interbedded with fine sands at the top of the unit. The Nacatoch Sand is approximately 300 feet thick in the mapped area. The unit strikes to the northeast and has a dip of approximately 80 feet per mile to the southeast in this quadrangle. Fossils present in the unit include corals, echinoderms, bryozoa, annelids, bivalves, gastropods, cephalopods, crab remains, and shark teeth. The Nacatoch Sand was deposited in a nearshore marine environment and rests unconformably on top of the Saratoga Chalk.
- Km** **Marlbrook Marl (Upper Cretaceous)** - The Marlbrook Marl is a uniform chalky marl that is blue-gray when freshly exposed and weathers white to light brown. The unit is moderately fossiliferous in the upper part and slightly fossiliferous in the lower part. The unit strikes to the northeast and has a dip of approximately 80 feet per mile to the southeast. Notable fossils include *Exogyra*, *Gryphaea*, and *Ostrea* oyster species and reptile remains. The Marlbrook Marl was deposited in a nearshore marine environment and rests unconformably on top of the Ozan formation (Upper Cretaceous).

### SYMBOLS

- Gravel and/or sand pit
- Contact

### REFERENCES

- Bush, W. V., and Clardy, B. F., 1971, Geologic Map of the Prescott West Quadrangle, Hempstead and Nevada Counties Arkansas: Arkansas Geological Commission Open-File Report, scale 1:24,000.
- Dane, C. H., 1929, Upper Cretaceous Formations of Southwestern Arkansas: Arkansas Geological Survey Bulletin 1, 215 p.
- McFarland, John David, 1998, Stratigraphic Summary of Arkansas: Arkansas Geological Commission Information Circular 36, 39 p.

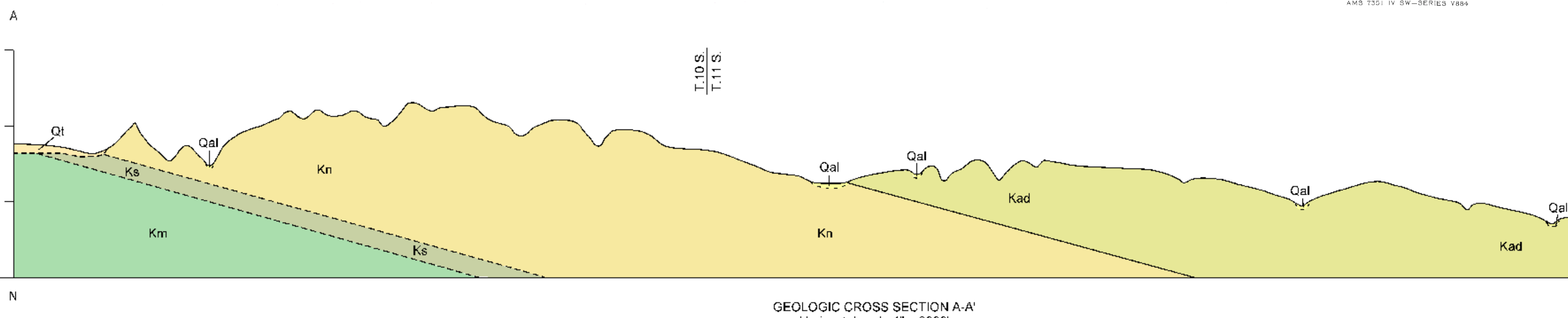
Mapped, edited, and published by the Geological Survey  
 Control by USGS and USC&GS  
 Topography by photogrammetric methods from aerial photographs taken 1965. Field checked 1970.  
 Polyconic projection, 1927 North American datum 10,000-foot grid based on the Arkansas coordinate system, south zone 1000-meter Universal Transverse Mercator grid lines, zone 15, shown in blue.  
 To place on the predicted North American Datum 1983 meet the projection lines 9 meters south and 17 meters east as shown by dashed corner ticks.  
 Red line indicates areas in which landmark buildings are shown.  
 Fine red dashed lines indicate selected fences and field lines where generally visible on aerial photographs. This information is uncheckered.

Controlled by USGS and USC&GS  
 Scale 1:24,000  
 Contour Interval 10 Feet  
 National Geologic Vertical Datum of 1929

Funded by the Arkansas Geological Commission in cooperation with the United States Geological Survey, STATEMAP Project No. 1434-84-0221

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80202, OR RESTON, VIRGINIA 22092 AND ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARKANSAS 72204. A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST.

PRESCOTT WEST, ARK.  
 N3345-W9322.5/7.5  
 1970  
 AMS 7551 IV SW-SERIES 5884



GEOLOGIC CROSS SECTION A-A'  
 Horizontal scale 1" = 2000'  
 Vertical scale 1" = 100'

Revised by: Jerry W. Clark  
 Revision Date: 4/23/2021

