

- QUATERNARY SYSTEM**
- HOLOCENE**
- Ha** **Holocene undifferentiated alluvium**—Undifferentiated deposits of small upland streams; alluvial deposits of minor streams and creeks of varying textures, filling valleys incised into older deposits.
  - Hsm** **Small River meander belt deposits**—Point bar deposits underlying the meander belts of small streams.
  - Hb** **Backswamp deposits**—Fine-grained Holocene deposits of rivers, underlying the flood basins between meander belts.
  - Hrm** **Red River meander-belt deposits**—Point bar deposits underlying meander belts of the Red River.
  - Hrl** **Red River natural levee deposits**—deposits forming low natural levees flanking the meander belts of the Red River.

- PLEISTOCENE**
- PRAIRIE ALLOGROUP**
- Ppl** **Upper Prairie Allogroup**—Late Pleistocene alluvial deposits of the younger of the Prairie Allogroup temporal phases of the Red River valley. Where observed in the area northwest of Shreveport, the unit consists of grayish clayey very fine sand, with red mottles in places, weathering yellowish to yellowish brown.

- TERTIARY SYSTEM**
- EOCENE**
- CLAIBORNE GROUP**
- Ewc** **Carrizo Formation**—Well rounded, very fine to medium, glauconitic quartzose sand, commonly cross bedded, in places feldspathic and/or containing petrified wood (Andersen 1993, p.73; Andersen 1960, p.84). Where exposed in the area northwest of Shreveport, it contains abundant quartz granules and consists of sandy granule conglomerate in places. Ranges from reddish orange to, in more weathered outcrops, a deep maroon ironstone sand containing abundant ironstone.

- PALEOCENE-EOCENE**
- WILCOX GROUP**
- PEw** **Wilcox Group, undifferentiated**—Grayish very fine to fine sand, typically clayey, rarely with sparse granules; in places with silty or silty clay interstratifications and/or channel cutouts. Typically of gray or light gray coloration with yellow-brown to red mottles in places, ranging to very pale brown with dark yellowish brown mottles; includes gray weathering to strong brown, pale yellow weathering to olive yellow, and pale brown weathering to dark yellowish brown hues. In places contains carbonaceous beds, petrified wood, and ironstone, with ironstone concretions up to 25 cm in diameter. A reddish or grayish to brownish weathering mantle up to 2 m thick is developed locally.

- Open Water, Inundated Area, Wetland**
- Fault, Inferred**—Identity and existence inferred, location accurate. Ball and bar on downthrown block. Faults in Caddo Parish mapped by Smith (1970) are shown dashed in this compilation because those in two 7.5-minute quadrangles in the southwestern portion of the map area could not be corroborated with specific indications of faulting in the accompanying investigation of surface geology at 1:24,000 scale (McCulloh and Heinrich, 2006a and 2006b).
- Fault, Inferred, Concealed**—Identity and existence certain, location concealed. Ball and bar on downthrown block.
- Contact**—includes inferred contacts.
- Streams**
- Topographic Contours**

- Sources:**
- Durham, C. O., Jr., and C. R. Smith, 1958, Louisiana Midway-Wilcox correlation problems: Louisiana Department of Conservation, Louisiana Geological Survey, Geological Pamphlet no. 5, 17 p.
- Albertson, P. E., and J. B. Dunbar, 1993, Geomorphic investigation of Shreveport to Daingerfield Navigation Project: U.S. Army Corps of Engineers Waterway Experiment Station, Vicksburg, Mississippi, Technical Report no. GL-93-31, 148p.
- Smith, C. R. (1970), (Geologic Map of Caddo Parish, Louisiana): Unpublished map, Louisiana Geological Survey, Baton Rouge, Louisiana, scale 1:62,500.

- References:**
- Andersen, H. V., 1993, Geology of Natchitoches Parish: Louisiana Geological Survey, Geological bulletin no. 44, 227 p., plus plates (includes one 1:62,500-scale geologic map).
- Andersen, H. V., 1960, Geology of Sabine Parish: Louisiana Department of Conservation, Louisiana Geological Survey, Geological bulletin no. 34, 164 p., plus plates (includes one 1:62,500-scale geologic map).

Produced and published by the Louisiana Geological Survey  
3079 Energy, Coast & Environment Building, Louisiana State University  
Baton Rouge, LA 70803 • 225/578-5320 • www.lgs.lsu.edu

This geologic map was funded in part by the USGS National  
Cooperative Geologic Mapping Program under STATEMAP award  
number 05HQAG0027 (2005).

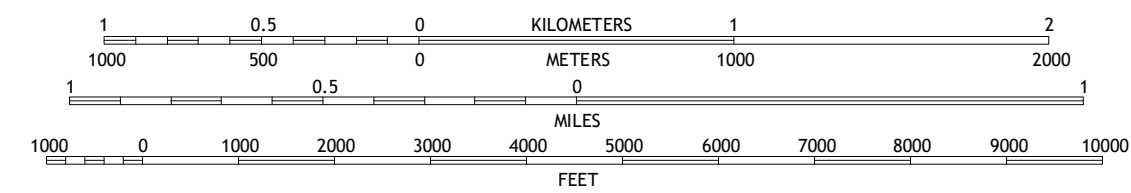
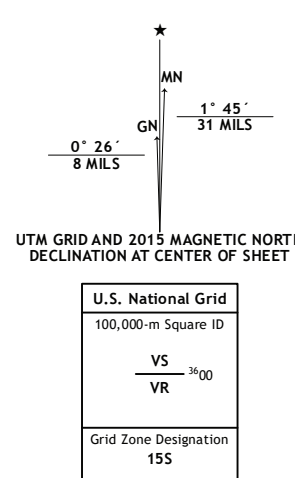
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SCALE 1:24,000  
CONTOUR INTERVAL 5 FEET  
NORTH AMERICAN DATUM OF 1983 (NAD 83)  
WORLD GEODETIC SYSTEM 1984 (WGS 84)  
UNIVERSAL TRANSVERSE MERCATOR PROJECTION, ZONE 15  
NORTH AMERICAN VERTICAL DATUM OF 1988



QUADRANGLE LOCATION

1	2	3
4	5	6
7	8	9

ADJOINING QUADRANGLES

- 1 Mooringsport
- 2 Benton
- 3 Blanchard
- 4 Bossier City
- 5 Greenwood
- 6 Shreveport West
- 7 Shreveport East
- 8 Shreveport East

- ROAD CLASSIFICATION**
- Expressway
  - Secondary Hwy
  - Ramp
  - Local Connector
  - Local Road
  - Railroad
  - Interstate Route
  - US Route
  - State Route

- Base Map.....United States Geological Survey, 2020  
Boundaries.....LADOTD, 2007  
Contours.....National Elevation Dataset, 2008 - 2011  
Hydrography.....National Hydrography Dataset, 2002 - 2017  
Names.....GNIS, 1980 - 2017  
Roads.....U.S. Census Bureau, 2017  
Wetlands.....FWS National Wetlands Inventory 2021

This research is supported by the U. S. Geological Survey, National Cooperative Geologic Mapping Program. 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 U. S. Government or the state of Louisiana. This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.

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**Geologic Map of the North Highlands 7.5 Minute Quadrangle  
Caddo and Bossier Parishes, Louisiana**