

LEESVILLE, LOUISIANA/TEXAS
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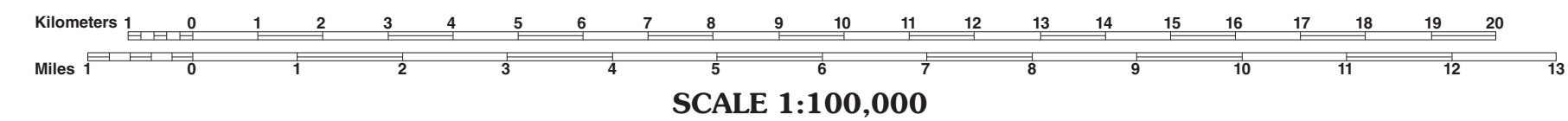
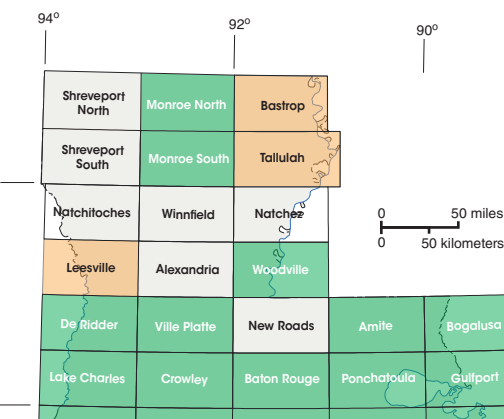
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SCALE 1:100,000

Base map from U.S. Geological Survey 1:100,000 Digital Line Graphs (100K DLG)
Universal Transverse Mercator Projection, Zone 15
North American Datum 1927 (NAD 27)
Contour Interval 10 meters
National Geodetic Vertical Datum 1929

APPROXIMATE MEAN
DECLINATION 2015

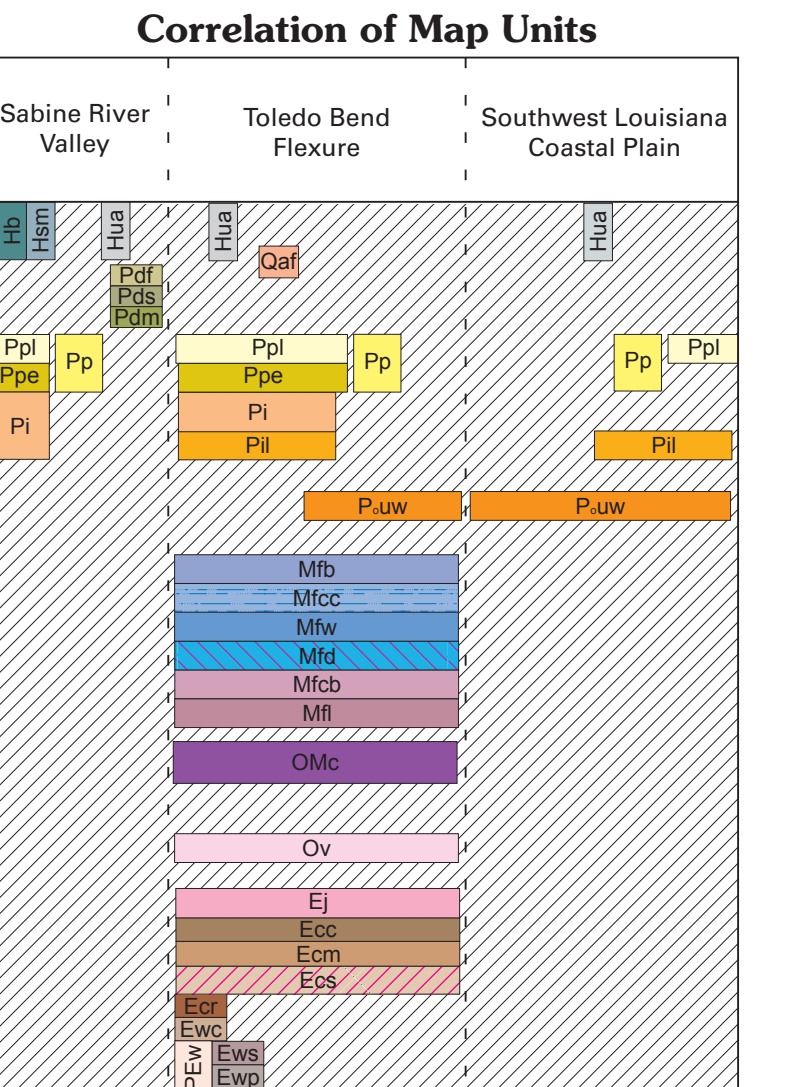


Chadco J. John
Director & State Geologist

Leesville 30 x 60 Minute Geologic Quadrangle 2015

Description of Map Units

QUATERNARY SYSTEM	
HOLOCENE	
Hua	Holocene undifferentiated alluvium —undifferentiated deposits of small upland streams, accumulated along dry or minor streams and creeks filling valleys incised into older deposits, with textures varying from gravelly sand to sandy mud.
Hb	Backswamp deposits —fine-grained Holocene deposits of rivers, accumulated in the flood basins between meander belts. Primarily unconsolidated mud and fine sand.
Hem	Small river meander-belt deposits —point bar deposits underlying the meander belts of small rivers.
QUATERNARY UNDIFFERENTIATED	
Quaternary alluvial fan deposits—unsorted alluvial fan deposits.	
PLEISTOCENE	
DEWEYVILLE ALLOGROUP	
Pdf	Fredonia alluviation —orange alluviation underlying the topographically lowest surface of the Deweyville Allotop along the Sabine River. The surface lies near the level of the Sabine River flood plain and is mostly buried by it.
Pdm	Sandwich alluviation —alluviation of the Deweyville Allotop along the Sabine River that is intermediate in age and topographic position between the Marysville and Fredonia alluviations. Deweyville, Texas lies on the surface of the Sandwich alluviation.
Pdm	Marysville alluviation —oldest alluviation underlying the topographically highest surface of the Deweyville Allotop along the Sabine River. The surface of the Marysville alluviation lies on the Louisiana side of the Sabine River valley directly across from Deweyville, Texas.
PRAIRIE ALLOGROUP	
Pp	Prairie Allotop, undifferentiated —down depositional sequence of deposits of the Mississippi River, its tributaries, and coastal plain streams, includes terrace fluvial (meander belt, backswamp) and bedded stream, cultural, alluvial, deltaic, and marine units deposited during the Wisconsin to Sangamon interval of the late Pleistocene. Multiple levels along alluvial valleys and coast-parallel terraces are grouped into two principal temporal phases. The Prairie Allotop is undifferentiated where flood terrace remnants lack headward portions of stream courses.
Ppl	Upper Prairie Allotop —upper of Prairie Allotop temporal phases, consisting of alluvial deposits of ancestral late Pleistocene streams. Grayish-white to reddish-white and light red to medium sand to silt, clay, is sandy mud, in places including beds of gravelly sand and sandy gravel of chert and well sorted. Weathers to yellow, orange, and/or brownish-tan base.
Ppe	Lower Prairie Allotop —older Prairie Allotop deposit, equivalent to the Beaumont Formation of southeastern Texas and Entero Terrace of southwestern Louisiana. Downward depositional sequence of flood-plain, meander-belt, and backswamp deposits of middle to late Pleistocene ancestral Mississippi and Red rivers, their tributaries, and coastal plain streams.
INTERMEDIATE ALLOGROUP	
Pi	Intermediate allotop, undifferentiated —fluvial deposits of the Mississippi River, its tributaries, and coastal plain streams, equivalent to units designated elsewhere as Montgomery, Elizabeth, and Bentley. Included are broad areas of mid-Pleistocene cultural and slope deposits, locally derived from Tertiary formations.
Pil	Liasie alluviation, undifferentiated —dissected alluvial deposits of early Pleistocene streams. The unit is bounded up by the Wilks surface and down by younger alluvial units of the Intermediate Allotop.
TERTIARY SYSTEM	
PLIOCENE	
UPLAND ALLOGROUP	
Pjw	Wilks Formation, undifferentiated —deeply dissected alluvial sediments deposited by Pliocene ancestral Mississippi and Red rivers, their tributaries, and coastal plain streams. The unit is bounded up by the Wilks surface and down by younger alluvial units of the Intermediate Allotop.
MIOCENE	
FLEMING GROUP	
Mfb	Blounts Creek Formation —a relatively nondescript series of gravelly clayey and silty very fine to fine sand, silty and very fine to fine sandy clay, and clayey silts. The principal sedimentary structures comprise low lensoidal and low-angle cross lamination.
Mfc	Castor Creek Formation —silty to very fine sandy, gravelly clay, with reddish mottles in places. Comprises calcareous clay, with scattered irregular calcareous nodules up to several centimeters long, or numerous localities. May weather to black soil.
Mfw	Williamson Creek Formation —very fine to very coarse sand, averaging very fine to medium overall, with overall poor sorting. Overall grain size appears coarser than in other Fleming subunits, with sands containing much more of the coarse size fractions and a larger proportion of quartz granules in places. Granules are extremely abundant locally and consist almost exclusively of quartz. In places comprising sandy gravel conglomerate. Internal features include medium-scale trough cross beds in coarse, granule-rich sand and sandy gravel conglomerate, with bedding more fine grained in places.
Mfd	Dough Hills Formation —clay, sand and sandstone, and silt and siltstone, in varying proportions. Includes calcareous clay, containing characteristic calcareous nodules, and may include in places extensive localized concentrations of fine-grained calcareous rock. May weather to black soil. Sand and sandstone are poorly sorted, range in grain size from very fine to very coarse, and contain sparse quartz granules at a number of localities.
Mtb	Caranahan Bayou Formation —texturally heterogeneous suite of generally poorly sorted sediments comprising varying proportions of sand/siltstone, with granules in places; silt/claystone, and clay/mud. Primarily clayey very fine to fine sand containing some coarse and very coarse sand with some granules. Granules and pebbles include both quartz and rock fragments, with granules comprising predominantly quartz, and pebbles and cobbles consisting mostly of rock fragments; the rock fragments comprise both light-colored clayed rip-up clasts, and in places, dark or black chert. Includes petrifaction and thin tuffaceous beds locally.
Mt	Lena Formation —texturally heterogeneous suite of generally poorly sorted sediments comprising varying proportions of sand/siltstone, with granules in places; silt/claystone, and clay/mud. Primarily clayey very fine to fine sand containing some coarse and very coarse sand with some granules. Granules and pebbles include both quartz and rock fragments, with granules comprising predominantly quartz, and pebbles and cobbles consisting mostly of rock fragments; the rock fragments comprise both light-colored clayed rip-up clasts, and in places, dark or black chert. Includes petrifaction and thin tuffaceous beds locally.
OMc	Catahoula Formation —texturally heterogeneous suite of generally poorly sorted sediments comprising primarily silt/claystone to very fine quartzite sand/siltstone, with and without clay. Overall or predominant grain size of sand/siltstone tends to average very fine to fine sand. Coarse granules may comprise quartz, chert, and/or mud clasts. Contains petrifaction and tuffaceous nodules locally. Weathers locally to produce a thick top 2 to 2 meters gray/tan loamy surface unit. A petrographic age of early late Miocene was determined for the Catahoula in its type area in eastern north Louisiana (Weiss et al. 2003), in contrast to the Oligocene age indicated by submarine-to-surface correlation in the Texas Gulf Coast (Galloway, 1977; Galloway et al. 1982).
OUGOCENE-MIOCENE	
Ov	Vicksburg Group, undifferentiated —thin bedded to laminated grayish-white, clayey very fine to medium sand to fine sandy clay, medium-scale crossbedded in places, weathers reddish-orange, with zones of clay of light grayish clayey sand, and thick-bedded maroonish-grayish silty clay. The Vicksburg is divided into two members of formation rank in Sabine Parish (Anderson, 1960)—the Sandil and Nash Creek Formations—plus a third in Natchitoches Parish, the overlying Rosfield Formation (Anderson, 1959). The lowermost formation, the Sandil, comprises sand with interbedded conglomerate containing cobbles and silt of calcareous bentonitic clay like that of the overlying Nash Creek. Based on the investigation of Ruben and Goch (1959), Anderson (1963) portrayed the Rosfield as comprising lenses of marly clay that form a marine tongue extending into Natchitoches Parish from the east and pinching out westward.
Eocene	
JACKSON GROUP	
Ej	Jackson Group, undifferentiated —light brownish gray and gray, silty and sandy clay, and clayey very fine sand, with red mottles. According to Anderson (1960) it comprises primarily clay, siltstone in its lower portions (Mudosa Branch and Yazoo formations) and Danville (lending beds), with varying amounts of sand, glauconitic, and volcanoclastic material. Locally contains petrifaction, and cobbles and boulder-sized, light greenish gray calcareous nodules (Mudosa Branch Formation). Fine-grained oolitic texture and the presence of glauconite are suggestive of deposition on a shallow shelf.



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