

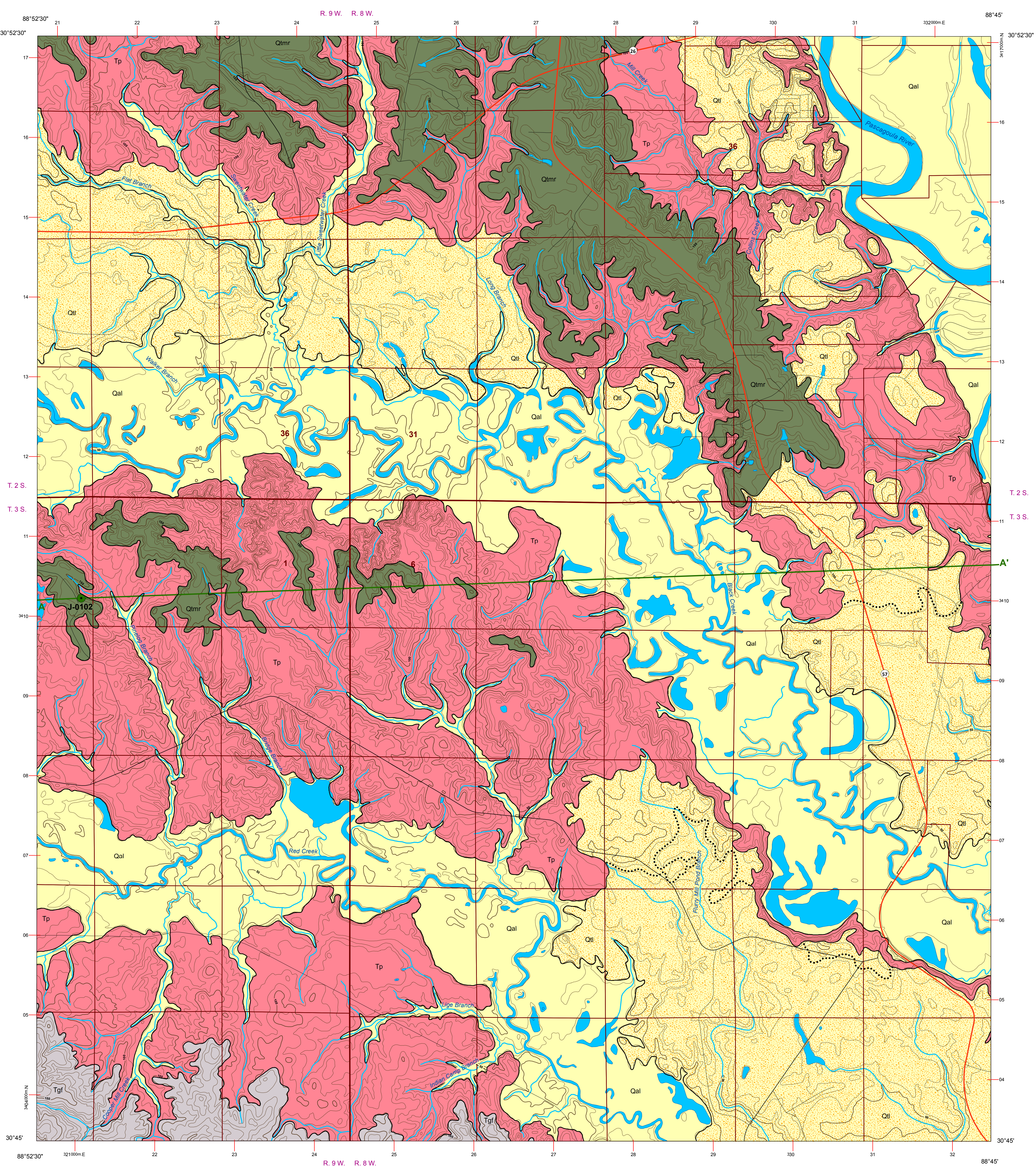
GEOLOGIC MAP
of the
BENDDALE QUADRANGLE
George County, Mississippi



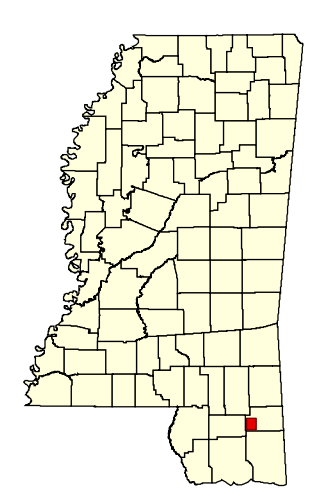
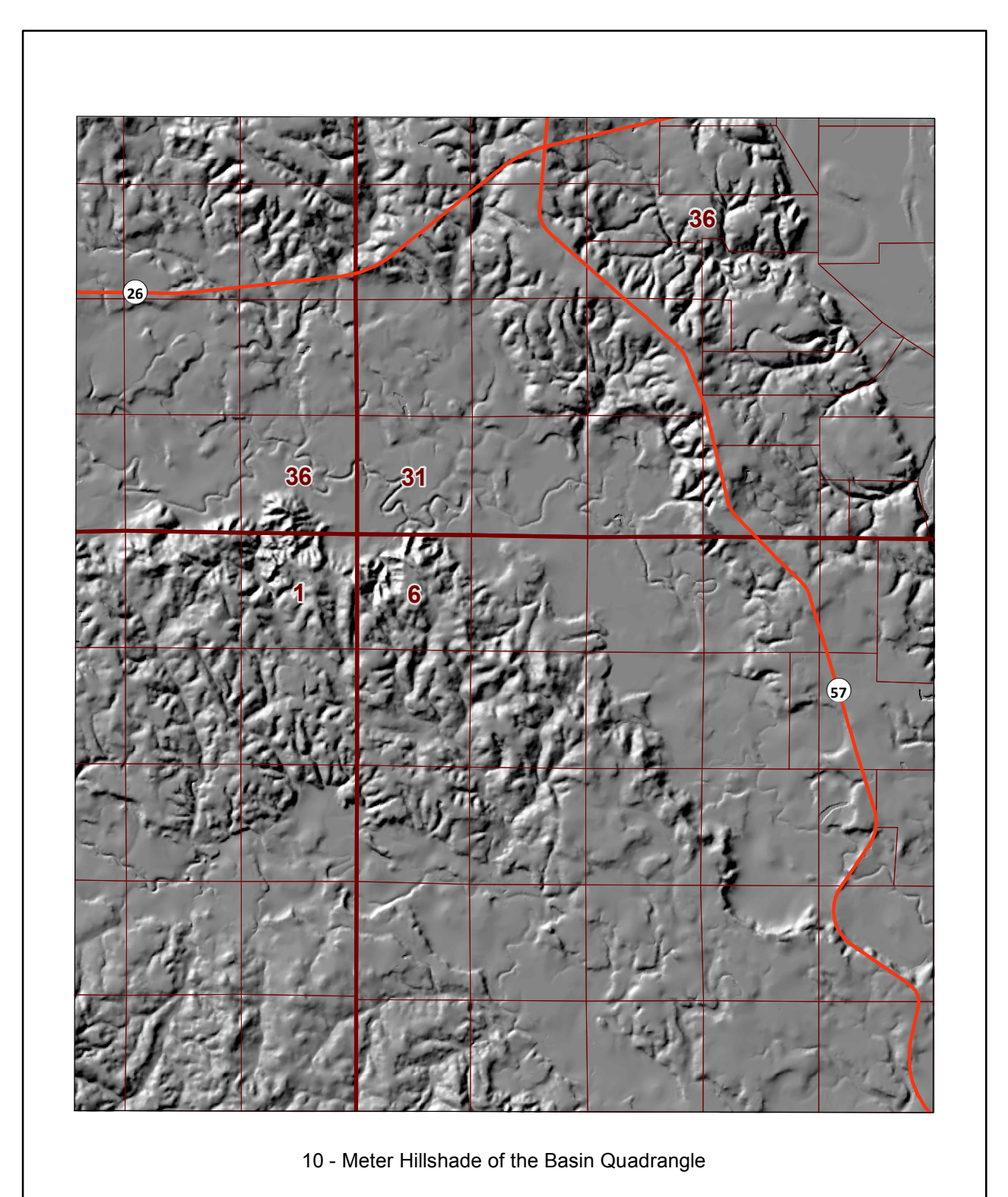
Geology by James E. Starnes, RP
and R. Tyler Berry, RPG



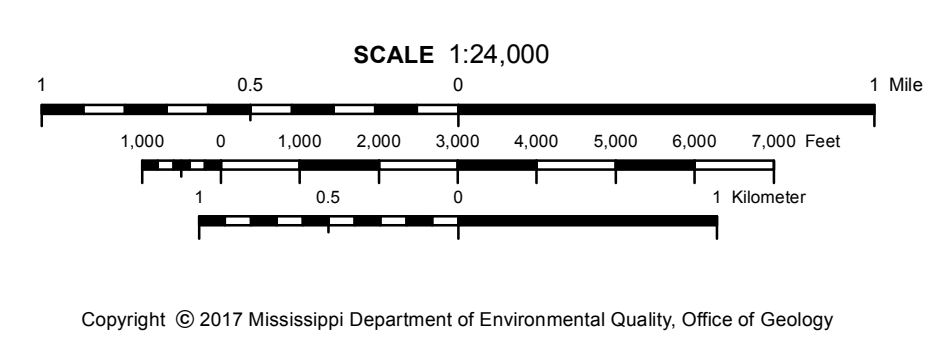
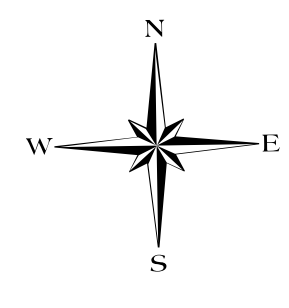
2017



QUATERNARY	HOLOCENE	ALLUVIUM	Qal	Flood plain sands, silts, gravels, and clays.
		LOW TERRACE	Qtr	Stream terrace. Sand, orange to tan colored, fine- to coarse-grained, predominantly quartzose, cross-bedded to massive; graveliferous, pea-size, predominantly chert and milky quartz; clay, kaolinitic, pink to white, generally occurring as discontinuous lenses. Two distinct terraces are delineated where Red and Black Creek valleys confluence the Pascagoula River valley.
TERTIARY	PLIOCENE	MOVELLA HIGH TERRACE	Qtrm	Sand, orange to tan colored, fine- to coarse-grained, predominantly quartzose, cross-bedded to massive; graveliferous, pea- to cobble-size, predominantly leached to chalky brown, grey, and white-colored chert and milky quartz; clay, kaolinitic, pink to white, generally occurring as discontinuous lenses. Ironstone and botryoidal pyrolusitic common in basal contact with the underlying Pascagoula Formation.
		GRAHAM FERRY FORMATION	Tgf	Sand, dark greenish-gray, yellow to tan, micaceous and glauconitic (exclusively in the fine-grained sands), fine- to coarse-grained, predominantly quartzose, cross-bedded to massive. Weathers to orange, purple, red, pink with reddish-brown colored pebbly ironstone residuum; Clay, green, gray, brown, weathers mottled purple to pink and white to reddish-brown, silty to fine-sandy, locally lignitic and contains pyrite nodules in places.
TERTIARY	MIOCENE	PASCAGOULA FORMATION	Tp	Shallow marine to intertidal and deltaic deposits. Contains the marker fossil, <i>Rangia johnsoni</i> . Clay, green, gray, brown, and white; locally lignitic, locally calcareous and fossiliferous. Weathers mottled purple to pink and white to reddish-brown, silty to fine-sandy. Sand, dark greenish-gray and glauconitic, micaceous, locally lignitic, fine- to coarse-grained, predominantly quartzose; graveliferous, pea- to small-cobble size consisting of black, brown, and grey-colored chert and milky quartz, subangular to well rounded. Silicified wood common.



GEOLOGIC MAP
BENDDALE QUADRANGLE
George County, Mississippi



Geology field checked in 2016 - 2017 using the 1982, Provisional Edition, United States Geological Survey (USGS) 7.5-minute topographic quadrangle, Universal Transverse Mercator projection, 1927 North American datum, contour interval 10 feet, Universal Transverse Mercator projection, 1983 North American datum, GRS80 spheroid, 1000-meter Universal Transverse Mercator 1983 datum grid blocks, zone 16, shown in red. January 2017, magnetic north declination in quadrangle center is 1°40' west of true north, ± 0'20" uncertainty, changing by 0'6" west per year.

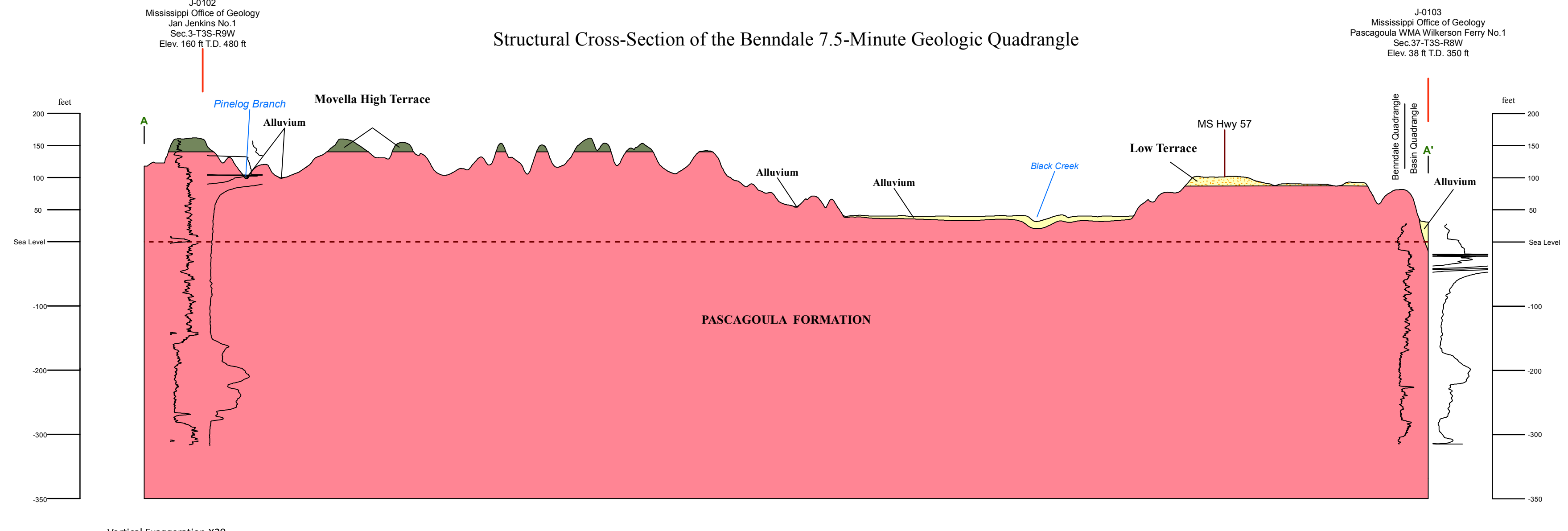
Sources: Contours derived from Mississippi Automated Resource Information System (MARIS); Public Land Survey System, 1:24,000 scale, from MARIS; water features derived from the USGS National Hydrography Dataset (NHD); road features derived from the Mississippi Department of Transportation (MDOT); road centerlines; Declination, National Oceanic and Atmospheric Administration (NOAA).

Geographic Information System by Daniel W. Morse. MDEQ does not warrant the accuracy or completeness of the source data. Geologic maps are only a guide to current understanding and do not eliminate the need for detailed investigations of specific sites for specific purposes.

This map was produced by the Mississippi Office of Geology in cooperation with the United States Geological Survey, National Cooperative Geologic Mapping Program, under STATEMAP grant #G16AC00289.

J-0102 ● Drill-hole locality and identification number

Structural Cross-Section of the Benndale 7.5-Minute Geologic Quadrangle



Vertical Exaggeration x20

