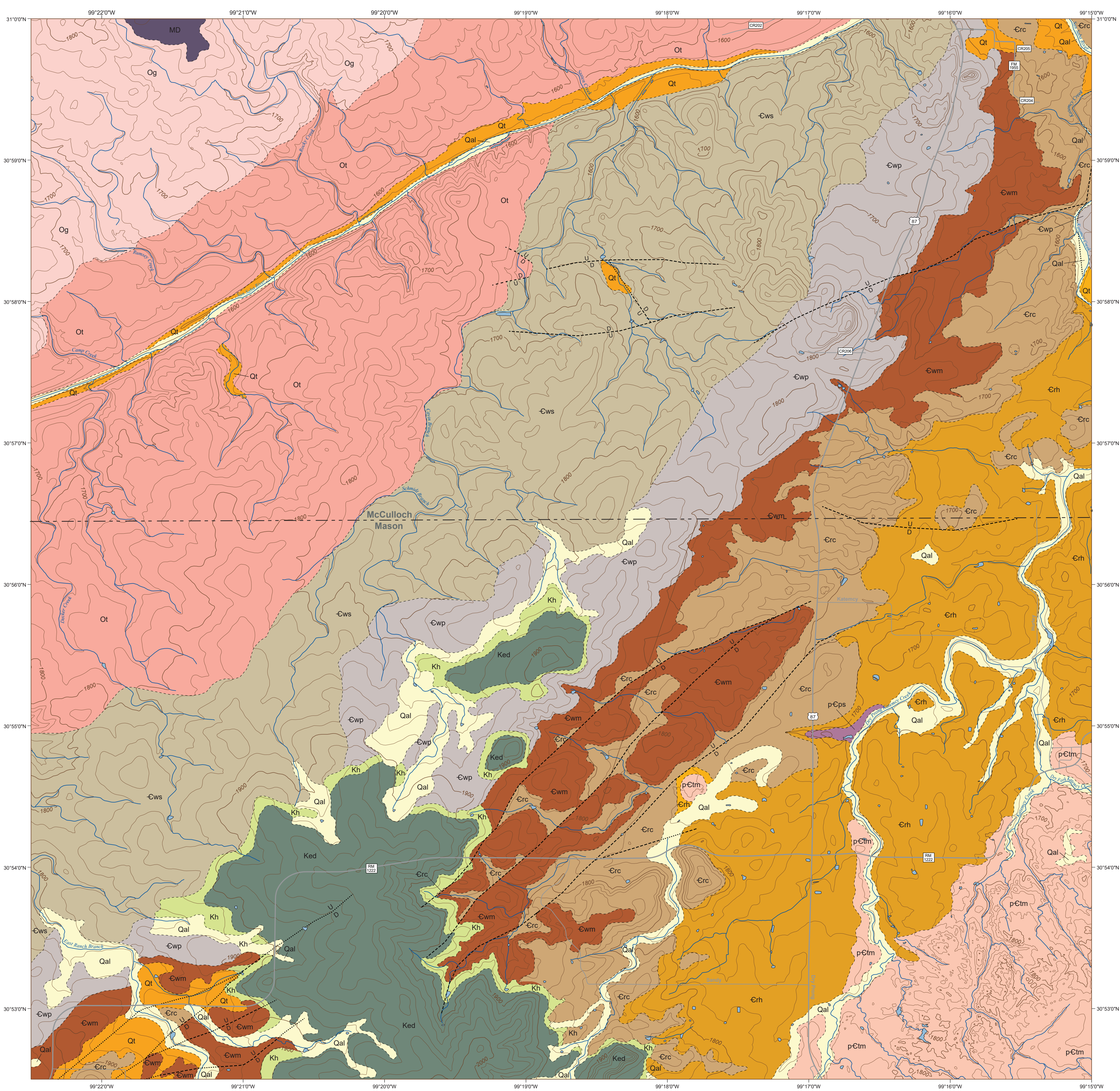




Explanation

QUATERNARY

- Qal** **Alluvium**—River and stream floodplain deposits, silty sand, mud, channel gravel, rounded pebbles, and cobbles.
- Qt** **Fluvialite terrace deposits**—Gravel, silt, sand, and clay; increasing amounts of granite grus and sand around the Town Mountain Granite and Hickory Sandstone formations. These deposits are mostly flood level along entrenched streams and accumulations of granite grus in low-lying drainage areas. Fluvialite characteristics such as point bars, oxbows, and abandoned-channel segments are well preserved.

CRETACEOUS

- Ked** **Edwards Limestone**—Fine-grained, argillaceous, locally siliceous, thin-bedded to nodular and massive, light-gray to light-brown limestone with marine miliolid, gastropod, and rudistid fossils. Some dolomite and chert nodules are present, with a total unit thickness between 10 and 40 m.
- Kh** **Hensel Sand**—Fine- to very fine grained, tan-yellow, orange and red, locally coarse-grained, argillaceous, massive, locally cross-bedded and ripple-marked sandstone. Sandstone contains interbeds of sandy, silty, calcareous claystone and sandy, caliche-cemented conglomerate with pebbles of chert and quartz, and basal granite grus gravel.

MISSISSIPPIAN AND DEVONIAN

- MD** **Mississippian and Devonian Rocks, undivided**—Dark brown to black shale, locally asphaltic, with thin beds of limestone, coquina, and microgranular limestone concretions, overlying fine- to coarse-grained, grey, brownish to pink, typically less than 1 m thick beds of limestone with scattered pelmatozoan columnals; Hoy Formation can sometimes form a thin phosphatic member, with black shale and thin basal chert breccia. The Mississippian and Devonian rocks, altogether, are less than 15 m thick.

ORDOVICIAN

- Og** **Gorman Formation**—Fine- to very fine-grained, light gray to yellow- brown-gray, sometimes shades of pink, thick- to thin-bedded, often massive and micritic, limestone, and dolomite. Locally cherty, rarely fossiliferous, and grading westward into predominantly limestone, with Archaeoscyphia structures commonly preserved in cherty nodules. Thickness is about 200 m, thinning westward.
- Ot** **Tanyard Formation**—Fine- to medium-grained, light-gray to brown-gray, thick- to thin-bedded limestone and dolomitic limestone. Locally cherty and grading westward into predominantly limestone, with gastropod, cephalopod, and trilobite fossils preserved in cherty areas. Thickness is about 200 m, thinning westward.

CAMBRIAN

Wilberns Formation

- Cws** **San Saba Member (undivided)**—Thick- to thin-bedded, occasionally cherty or glauconitic, fine- to very fine grained, gray to dark-gray limestone and dolomite. Thickness is about 100 m, becoming more granular and limestone-dominant westward.
- Cwp** **Point Peak Member**—Thinly bedded, gray to brown-gray siltstone containing abundant authigenic feldspar with interbeds of fine-grained stromatolitic limestone; intraformational conglomerate, and thin, silty, gray-green shale beds. Thickness is about 40 m, thinning westward.
- Cwm** **Morgan Creek Limestone Member**—Granular, glauconitic, thick- to thin-bedded, brown to gray-brown limestone with thin interbeds of siltstone. Fossils include trilobites, calcareous brachiopods, and aphanitic stromatolite in upper sections. Thickness is about 30 to 40 m.

Riley Formation

- Crc** **Cap Mountain Limestone Member**—Granular, thick-bedded, occasionally glauconitic or oolitic, green-gray to yellow-brown limestone grading into calcareous sandstone and siltstone at the base. Limestone is about 50 to 75 m thick and thins northward.
- Crh** **Hickory Sandstone Member**—Upper: medium- to coarse-grained, exceptionally well-rounded, hematite-cemented, orange and red to red-brown, <10-m-thick sandstone; Middle: fine- to medium-grained argillaceous, silty, thin-bedded, orange to red, crossbedded, <30-m-thick sandstone; Lower: forming most of the Hickory Sandstone in the map area, fine- to coarse-grained, poorly sorted, yellow-gray to yellow, crossbedded, 30 to 80-m-thick sandstone with coarse sand and gravel base in contact with nonconformable Precambrian rocks.

PROTEROZOIC

- pCps** **Packsaddle Schist**—Alternating layers of hornblende-bearing biotite schist and quartz-feldspar-mica schist, with prevalent pygmatic leucosomes and recumbent folding. Quartz veins and leucocratic fine-grained quartz-feldspar layers are common and form local migmatization.
- pCtm** **Town Mountain Granite**—Coarse-grained, massive, homogenous, pink, quartz-plagioclase-microcline, biotite-bearing, porphyritic, K-feldspar megacrystic granite.

Map Symbols

- Water**
- Intermittent stream, creek, river**
- Highway**
- Road/street**
- Bedding—sedimentary bedding plane showing strike and dip**
- Normal fault (concealed)**
- Normal fault (inferred)**
- Normal fault—showing sense of motion, U, upthrown block; D, downthrown block**
- County line**
- Elevation (ft); contour interval 100 ft**

Acknowledgments

This map is constructed for the study of sand resources in the region. The map shows the distribution of geologic units south of the town of Brady, in the Central Texas sand district southeast of the town of Voca, in the Katemcoy quadrangle. Geologic units were mapped and structural measurements were taken in the field; where bedrock units are covered by surficial units and vegetation, or access is limited, units were interpreted using aerial imagery, soil data, well-drilling records, and previous mapping.

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Digital elevation contour files for generalized topography were adapted from USGS topographic data obtained from TNIRIS. Digital files of roads and railroads were obtained from TNIRIS.

Topographic base map from:

U.S. Geological Survey
(Imagery NAIP August 2016)
Projection:
Universal Transverse Mercator Zone 14N

Datum:
North American Datum of 1983

Previous bedrock geologic field investigations by:

Barnes, V. E., 1981
Barnes, V. E. and Bell, W. C., 1977
Barnes, V. E. and Schofield, D. A., 1964
Kier, R. S., Brown, L. F. Jr., Harwood, P., and Goodson, J. L., 1981
Krause, S. J., 1996
Kyle, J. R. and McBride, E. F., 2012

Previous faults mapped by:

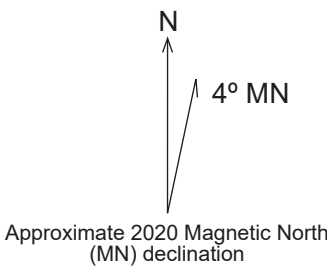
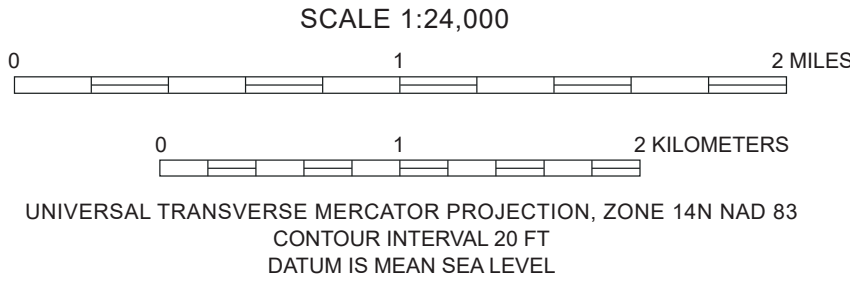
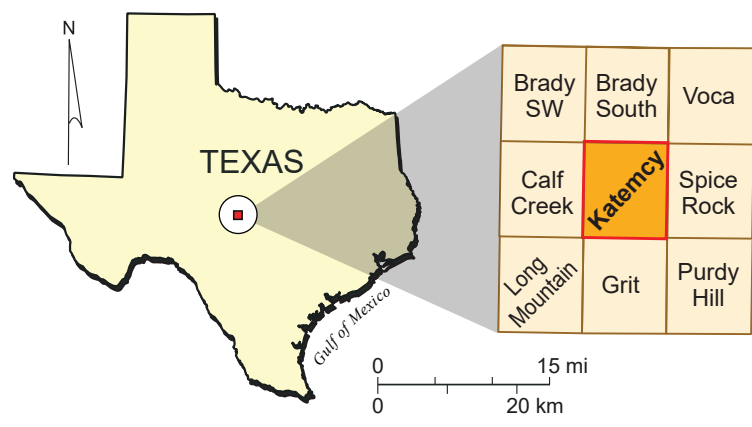
Barnes, V. E., 1981
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Brent A. Elliott

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GEOLOGIC MAP OF THE KATEMCOY QUADRANGLE

Brent A. Elliott
2020