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# The 2018 USGS Assessment of Undiscovered Oil and Gas Resources in the Eagle Ford Shale and Associated Cenomanian-Turonian Strata, Texas

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## ABSTRACT

There has been a significant increase in new geologic and production data in the Gulf Coast region since 2010, when the U.S. Geological Survey (USGS) last assessed undiscovered, technically recoverable oil and gas resources in the Cenomanian-Turonian Eagle Ford Shale. This new information necessitated an updated assessment of undiscovered continuous oil and gas resources in the Eagle Ford Shale and associated Cenomanian-Turonian strata.

USGS research data and literature sources were used to define the geologic models for the AUs. The Eagle Ford Shale self-sourced reservoir interval is comprised of organic-rich marl with mainly Type II kerogen and interbedded brittle limestone. The Cenomanian-Turonian self-sourced reservoir interval is comprised of organic-rich siliciclastic mudstone with mixed Type II and Type III kerogen, and interbedded siltstone and sandstone.

The USGS defined six continuous assessment units (AUs) within the Eagle Ford Shale: (1) Eagle Ford Continuous Oil AU; (2) Eagle Ford Continuous Gas AU; (3) Submarine Plateau–Karnes Trough Continuous Oil AU; (4) Submarine Plateau–Karnes Trough Continuous Gas AU; (5) Cenomanian-Turonian Continuous Oil AU; and (6) Cenomanian-Turonian Continuous Gas AU. The AU boundaries were defined by stratigraphic thickness, lithologic variations, thermal maturity boundaries, regional geologic features, and the spatial distribution of productive fairways. Strata in and around the Brazos Basin are referred to as Cenomanian-Turonian because of uncertainty about the age(s) of organic-rich mudstone in this part of the assessment area.