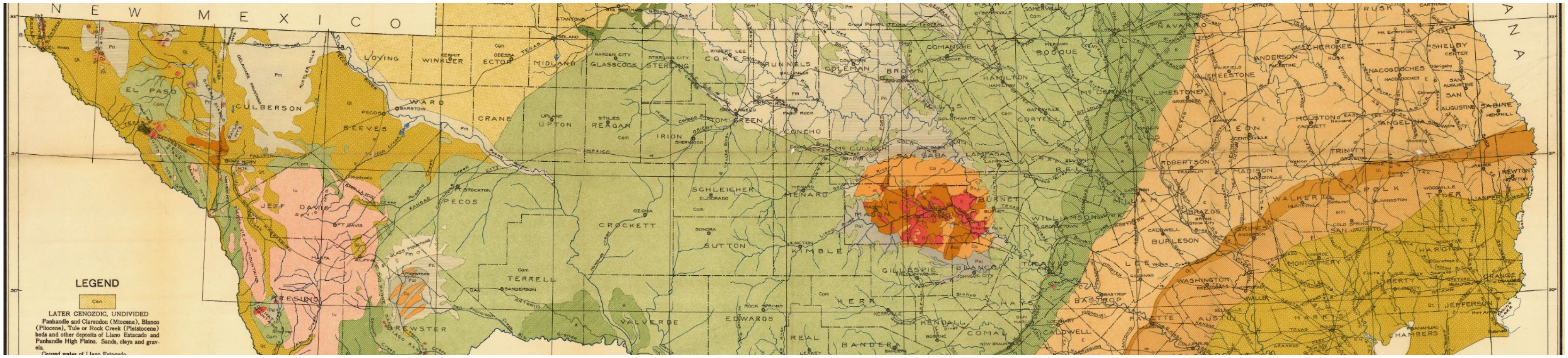

Geological Map of Texas

University of Texas, Bureau of Economic Geology Austin, 1919

Texas General Land Office Follow
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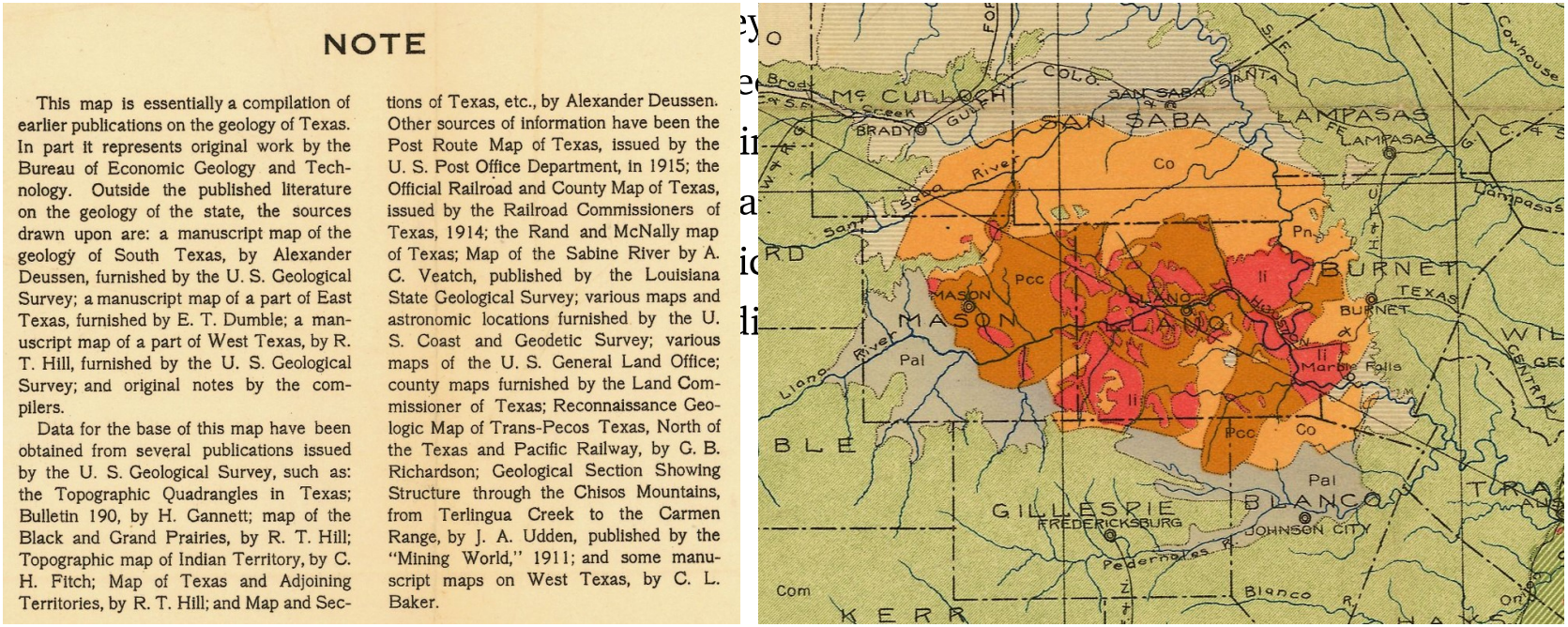
NOTE
UNIVERSITY OF TEXAS
BUREAU OF ECONOMIC GEOLOGY AND TECHNOLOGY
GEOLOGICAL MAP
OF
TEXAS
(REVISED EDITION)
1938
OKLAHOMA
ARKANSAS
LOUISIANA
NEW MEXICO
MEXICO
GULF OF MEXICO
LEGEND
UNIVERSITY OF TEXAS

E.L. Porch, Jr., Geological Map of Texas, Austin: University of Texas, Bureau of Economic Geology, 1919, Map #94091, Map Collection, Archives and Records Program, Texas General Land Office, Austin, TX.

The University of Texas at Austin established the Bureau of Economic Geology and Technology, the institution's oldest research unit, in 1909. It



NOTE

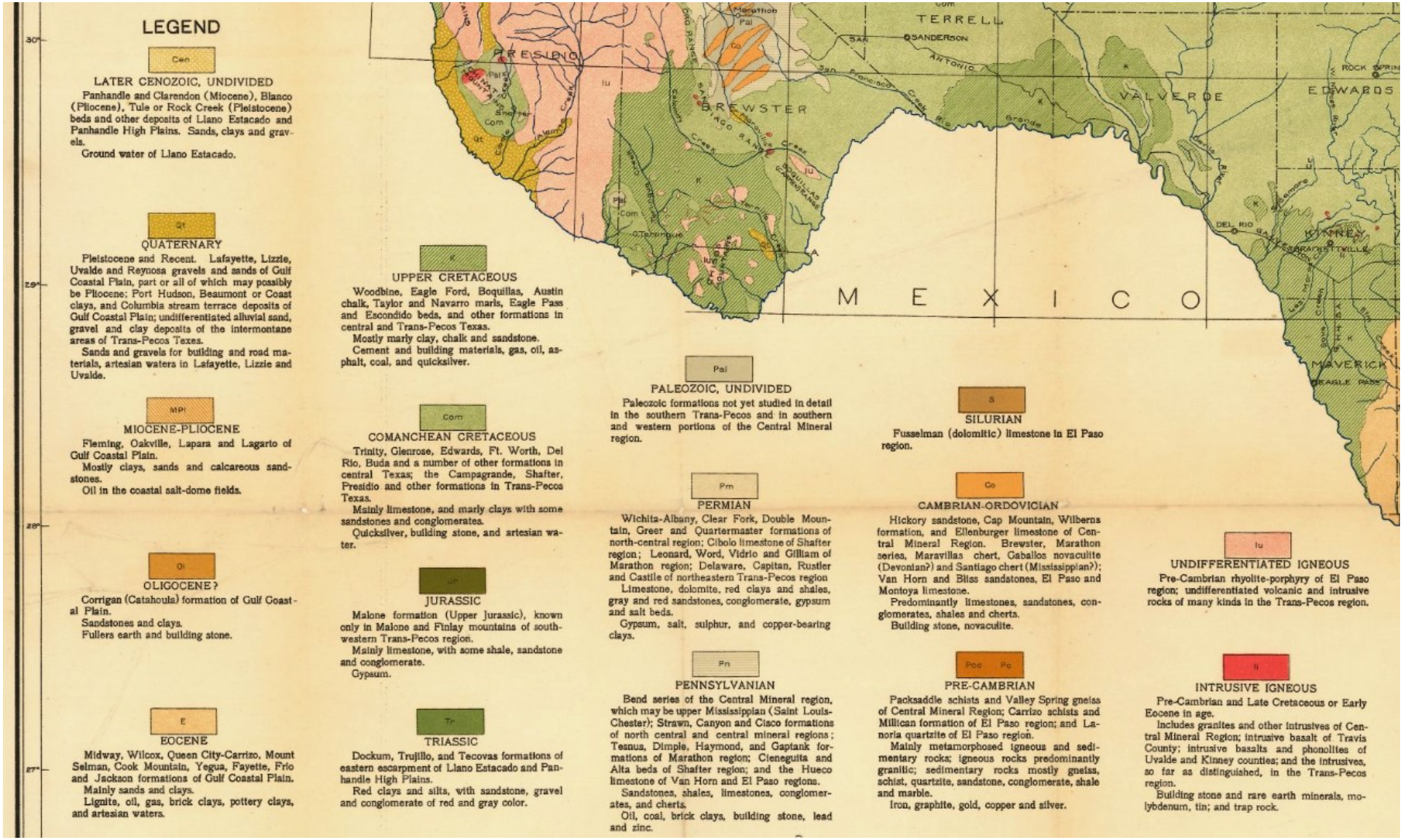
This map is essentially a compilation of earlier publications on the geology of Texas. In part it represents original work by the Bureau of Economic Geology and Technology. Outside the published literature on the geology of the state, the sources drawn upon are: a manuscript map of the geology of South Texas, by Alexander Deussen, furnished by the U. S. Geological Survey; a manuscript map of a part of East Texas, furnished by E. T. Dumble; a manuscript map of a part of West Texas, by R. T. Hill, furnished by the U. S. Geological Survey; and original notes by the compilers.

Data for the base of this map have been obtained from several publications issued by the U. S. Geological Survey, such as: the Topographic Quadrangles in Texas; Bulletin 190, by H. Gannett; map of the Black and Grand Prairies, by R. T. Hill; Topographic map of Indian Territory, by C. H. Fitch; Map of Texas and Adjoining Territories, by R. T. Hill; and Map and Sections of Texas, etc., by Alexander Deussen. Other sources of information have been the Post Route Map of Texas, issued by the U. S. Post Office Department, in 1915; the Official Railroad and County Map of Texas, issued by the Railroad Commissioners of Texas, 1914; the Rand and McNally map of Texas; Map of the Sabine River by A. C. Veatch, published by the Louisiana State Geological Survey; various maps and astronomic locations furnished by the U. S. Coast and Geodetic Survey; various maps of the U. S. General Land Office; county maps furnished by the Land Commissioner of Texas; Reconnaissance Geologic Map of Trans-Pecos Texas, North of the Texas and Pacific Railway, by G. B. Richardson; Geological Section Showing Structure through the Chisos Mountains, from Terlingua Creek to the Carmen Range, by J. A. Udden, published by the "Mining World," 1911; and some manuscript maps on West Texas, by C. L. Baker.

[left] A note on the map lists the sources researchers used in its compilation. **[right]** In Central Texas, Llano is the site of diverse geological formations including Intrusive Igneous (red), Pre-Cambrian (brown), Cambrian-Ordovician (orange), Comanchean Cretaceous (green), Pennsylvanian (gray with horizontal lines), Paleozoic Undivided (solid dark gray), and Permian (solid light gray).

Using original research to create "essentially a compilation of earlier publications on the geology of Texas," researchers collected information from dozens of maps. Sources included rare manuscripts from the U.S.

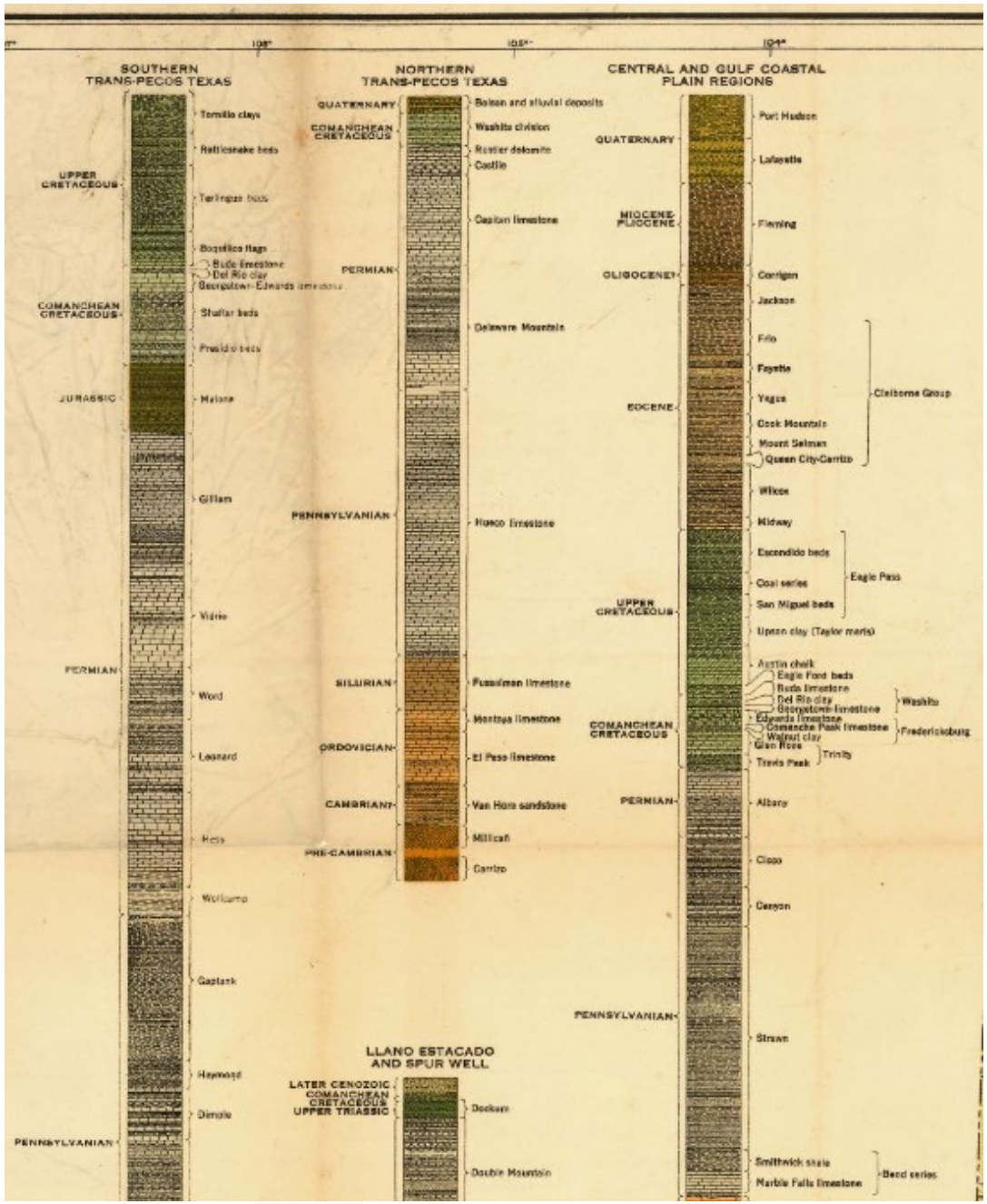
Geological Survey, the U.S. Post Office Department, the Louisiana State Geological Survey, the U.S. Coast and Geodetic Survey, the U.S. General Land Office, the Texas Railroad Commission, and the Texas General Land Office.[2] The science of geology was vital at a time when "concepts of the origin, migration, and accumulation of oil and gas advanced rapidly from 1918 to 1926," making the knowledge gathered on this map critical to Texas' emerging oil and gas industry.[3]

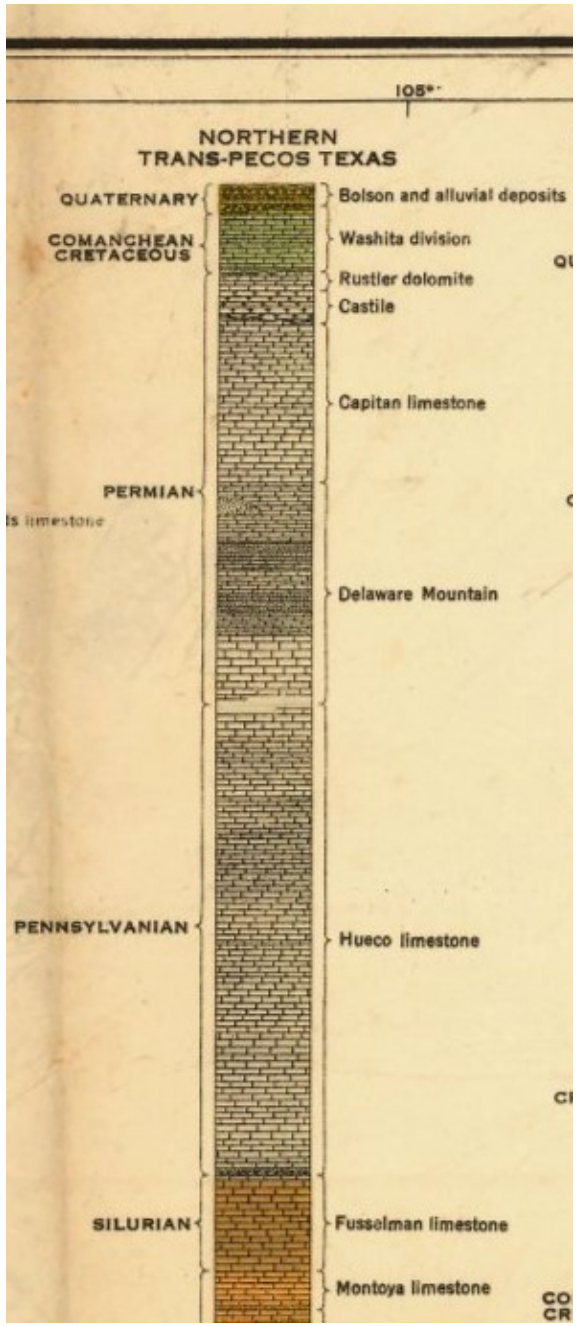


A legend illustrates the state's geological formations.

In the lower-left corner, a legend includes seventeen color-coded formations, defined by the U.S. Geological Survey as "the fundamental unit

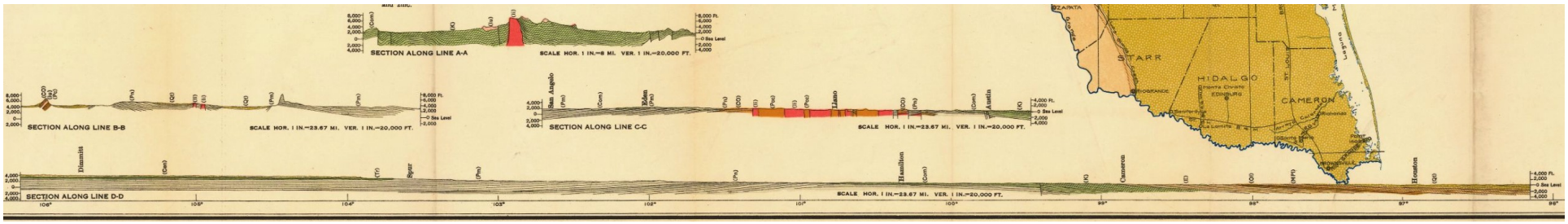
in the local classification of rocks into geologic units based on similar characteristics in…color, mineralogic composition, and grain size."[4] The map names and identifies each unique formation in detail, including the types of rocks and minerals and their locations. The Bureau superimposed these formations over a standard map of the state that includes counties, county seats, waterways, and railroads to provide an immediate visual understanding of the different geological regions of the state.

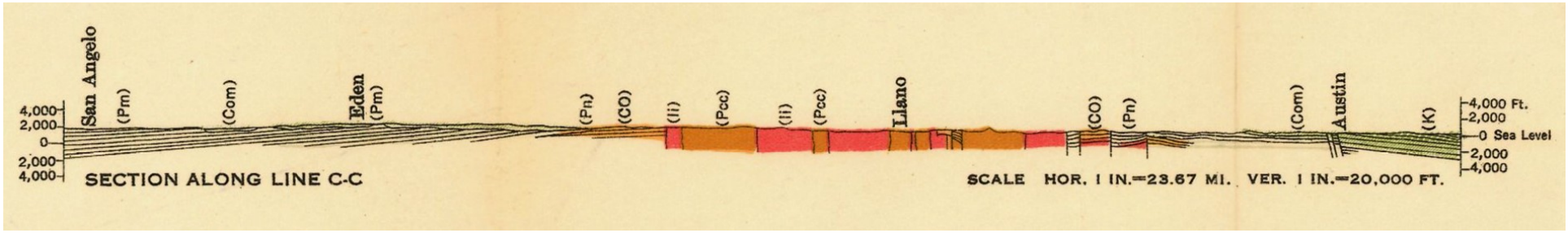

SOUTHERN TRANS-PECOS TEXAS
NORTHERN TRANS-PECOS TEXAS
CENTRAL AND GULF COASTAL PLAIN REGIONS
LLANO ESTACADO AND SPUR WELL
QUATERNARY
COMANCHEAN CRETACEOUS
UPPER CRETACEOUS
JURASSIC
PERMIAN
PENNSYLVANIAN
SILURIAN
ORDOVICIAN
CAMBRIAN
PRE-CAMBRIAN
MIOCENE-PLIOCENE
OLIGOCENE
EOCENE
LATER CENOZOIC
UPPER TRIASSIC
Bolson and alluvial deposits
Washita division
Rustler dolomite
Castile
Capitan limestone
Delaware Mountain
Hueco limestone
Fusselman limestone
Montoya limestone
El Paso limestone
Van Horn sandstone
Carrizo
Dockum
Double Mountain
Port Hudson
Lafayette
Fleming
Catahoula
Corrigan
Jackson
Frio
Fayette
Yegua
Cook Mountain
Mount Selman
Queen City-Carrizo
Claiborne Group
Wilcox
Midway
Escondido beds
Coal series
San Miguel beds
Eagle Pass
Upson clay (Taylor marls)
Austin chalk
Eagle Ford beds
Buda limestone
Del Rio clay
Georgetown limestone
Edwards limestone
Comanche Peak limestone
Walnut clay
Glen Rose
Travis Peak
Trinity
Fredericksburg
Albany
Cisco
Canyon
Strawn
Smithwick shale
Marble Falls limestone
Bend series
Tornillo clay
Rattlesnake beds
Terlingua beds
Boquillas flags
Buda limestone
Del Rio clay
Georgetown-Edwards limestone
Shutlar beds
Presidio beds
Malone
Gilliam
Vidrio
Word
Leonard
Hess
Wolfcamp
Gaptank
Haymond
Dimple


NORTHERN TRANS-PECOS TEXAS
QUATERNARY
COMANCHEAN CRETACEOUS
PERMIAN
PENNSYLVANIAN
SILURIAN
Bolson and alluvial deposits
Washita division
Rustler dolomite
Castile
Capitan limestone
Delaware Mountain
Hueco limestone
Fusselman limestone
Montoya limestone

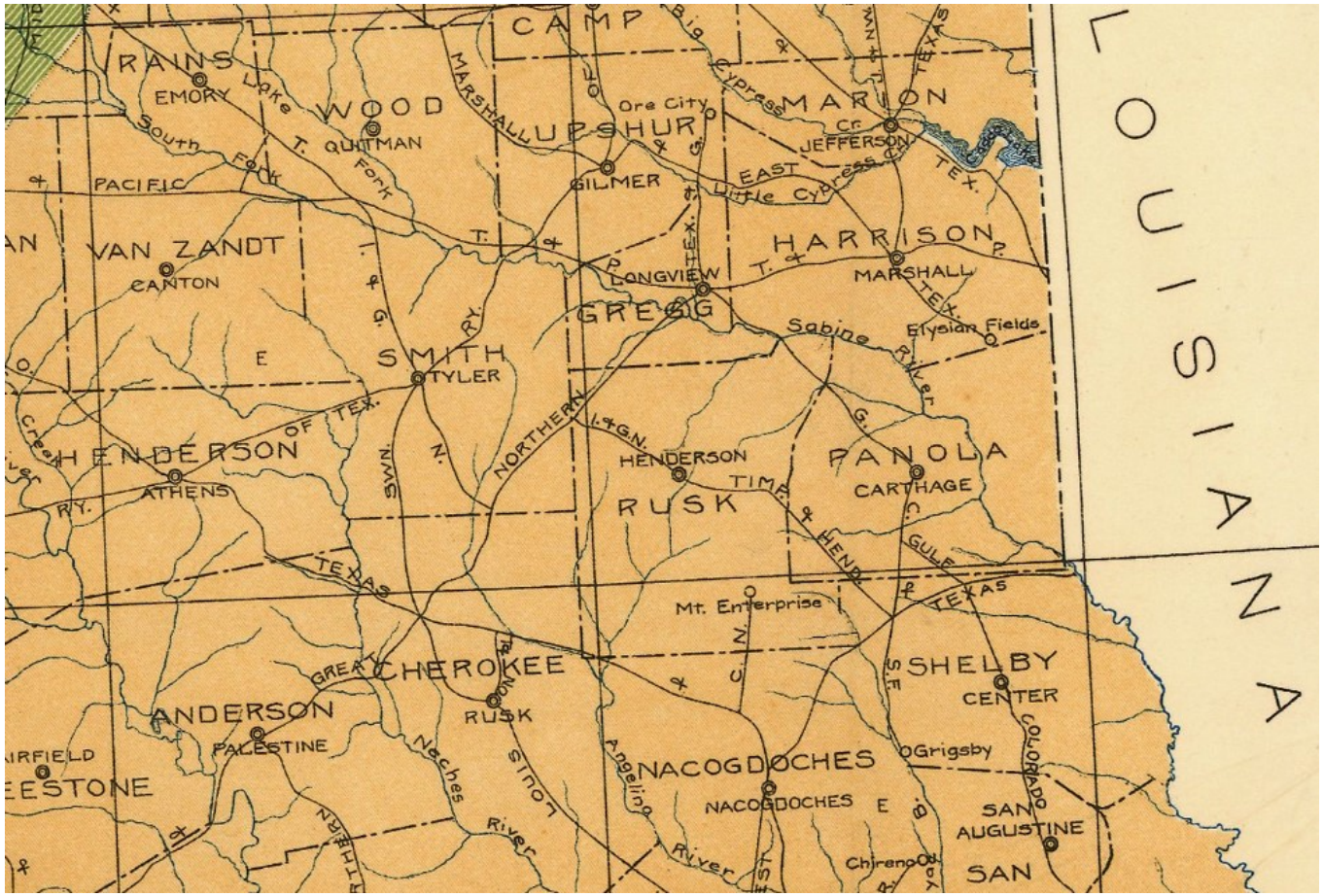
[left] The map includes vertical cross-sections for four regions at a scale of 2,000 feet per inch. **[right]** A detailed view of the Northern Trans-Pecos region.

Four vertical sections in the map's upper-left corner provide detailed information on subsurface strata at a scale of two thousand feet per inch for locations in the Southern Trans-Pecos, Northern Trans-Pecos, Central and Gulf Coastal Plain, and Llano Estacado and Spur Well regions. At the bottom of the sheet, four horizontal cross-sections detail specific portions of the map labeled with letters A through D, the largest of which stretches from Deaf Smith County in the Panhandle to Galveston on the Gulf Coast.





[top] Four lines show regional elevations and subsurface formations, the longest stretching from the Panhandle to the Gulf Coast. **[bottom]** A detailed view of the line stretching from San Angelo to Austin.



The area including the East Texas Oilfield, discovered in 1930, receives no special attention on the map.

Notably, the map pays no special attention to northeastern Texas. A little over a decade after its publication, prospector C.M. “Dad” Joiner discovered the East Texas Oilfield in Gregg, Rusk, Upshur, Smith, and Cherokee

counties, an area thought to be devoid of oil resources. This area appears on the map as part of an Eocene formation, which the legend describes as “mainly sands and clays; lignite, oil, gas, brick clays, pottery clays, and artesian waters.” The site was the largest oil deposit in the continental United States, and its discovery forever transformed the state’s energy industry.[5]

1. UT Bureau of Economic Geology, “State Geological Survey,” accessed September 8, 2021, https://www.beg.utexas.edu/outreach/state-geological-survey.
2. UT Bureau of Economic Geology Records, 1874–1988, Center for American History, The University of Texas at Austin.
3. Edgar W. Owen, “Remarks on the History of American Petroleum Geology,” *Journal of the Washington Academy of Sciences* 49, no. 7 (1959): 256–57.
4. United States Geological Survey, “Definition of Terms,” accessed September 8, 2021, https://pubs.usgs.gov/ha/ha747/pdf/definition.pdf.
5. Julia Cauble Smith, “East Texas Oilfield,” *Handbook of Texas Online*, accessed September 8, 2021, https://www.tshaonline.org/handbook/entries/east-texas-oilfield. Published by the Texas State Historical Association.

Texas History Maps Geology Oil And Gas

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