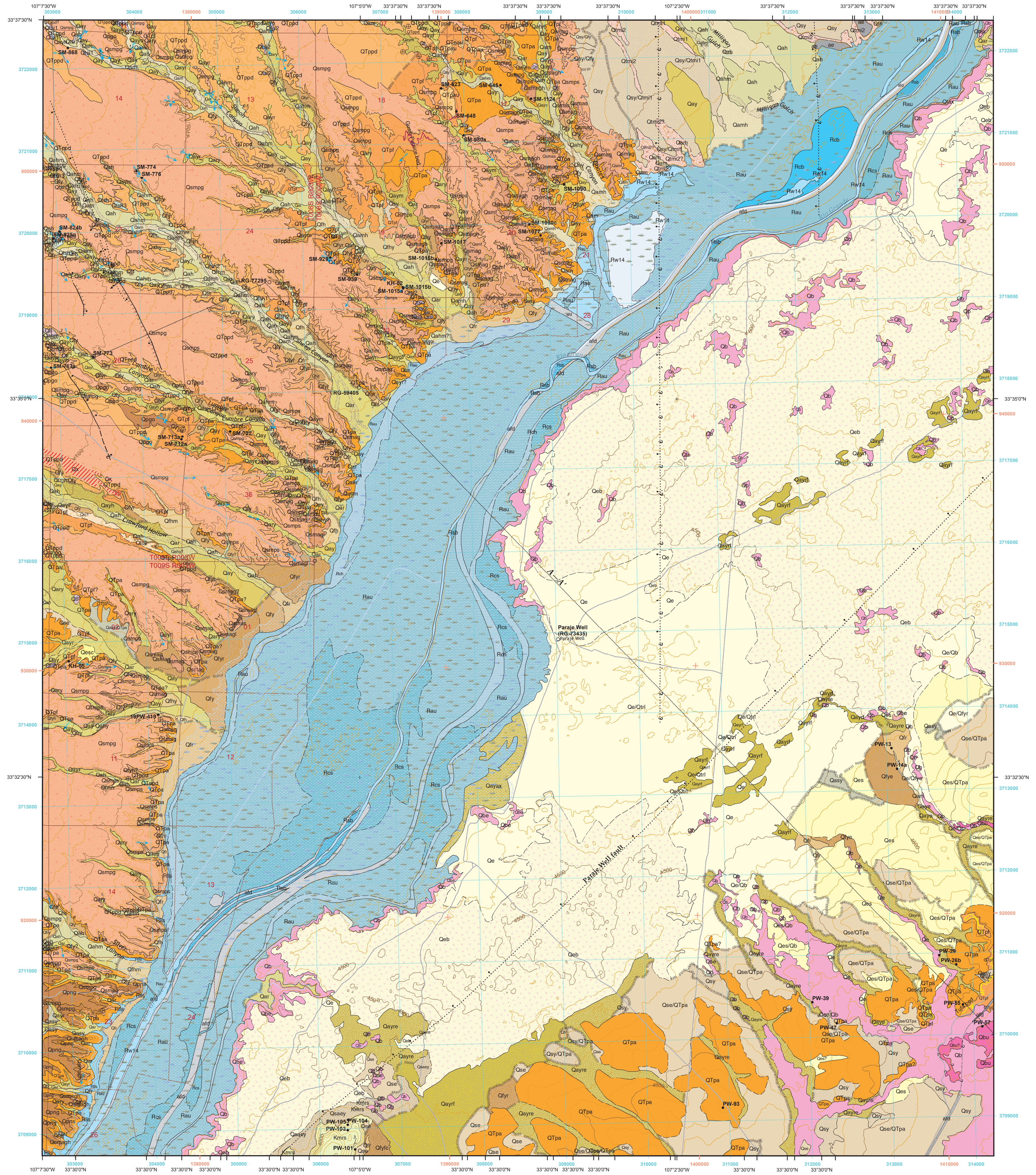
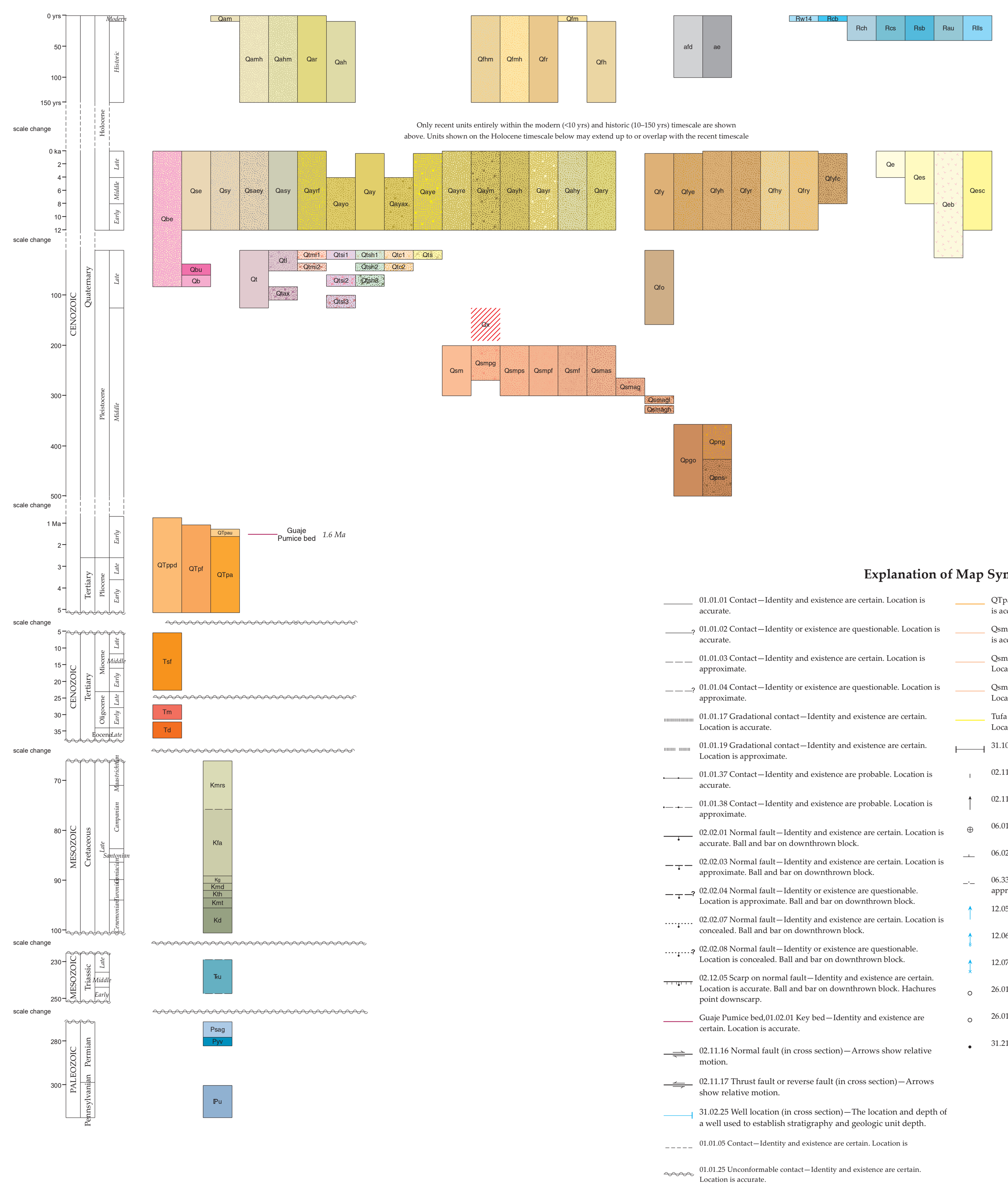


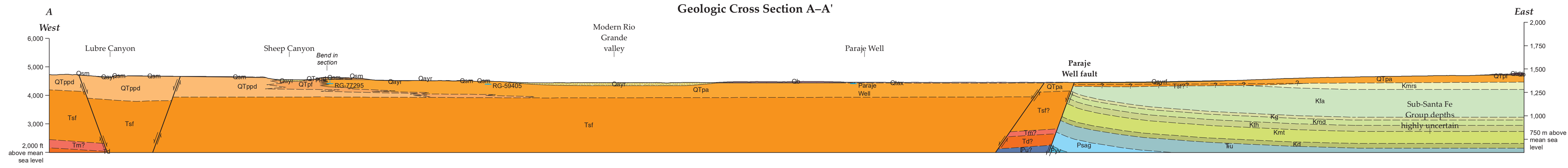
Correlation of Map Units



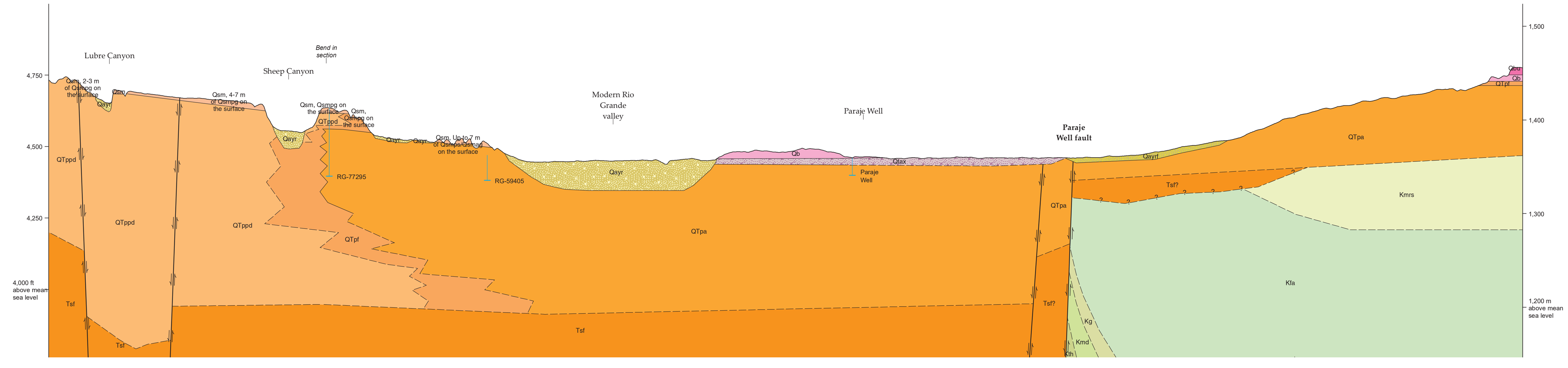
Only recent units entirely within the modern (<10 yrs) and historic (10-150 yrs) timescale are shown above. Units shown on the Holocene timescale below may extend up to or overlap with the recent timescale.

Explanation of Map Symbols

Geologic Cross Section A–A'



Geologic Cross Section A–A' Vertical Exaggeration: 10x



Base map from U.S. Geological Survey 2020.
North American Datum of 1983 (NAD83)
Projection and 1,000-meter grid: Universal Transverse Mercator, Zone 13S, shown in blue.
10,000-foot ticks: New Mexico Coordinate System of 1983 (central zone), shown in red.

Roads........ U.S. Census Bureau, 2016
Names........ GNIS, 1980–2016
Hydrography........ National Hydrography Dataset, 2005—2019
Contours........ IFSAR 4.5 m Digital Terrain Model, 2008
Wetlands........ FWS National Wetlands Inventory, 2002
Public Land Survey System........ BLM, 2011

Hickman Ranch	Fort Craig	San Marcial
Black Hill	**Paraje Well**	Pope
Romero Canyon	Lava	Tucson Spring

New Mexico

Magnetic Declination
July 2018
8° 31' East
At Map Center

Quadrangle Location

New Mexico Bureau of Geology and Mineral Resources
New Mexico Tech
801 Leroy Place
Socorro, New Mexico
87801-4796

[575] 835-5490

This and other STATEMAP quadrangles are available for free download in both PDF and ArcGIS formats at:

http://geoinfo.nmt.edu

Digital layout and cartography by the NMBGMR Map Production Group:
Phil L. Miller, Amy L. Dunn, Ann D. Knight, and Justine L. Nicolette

1:24,000

1 0.5 0 1 Mile

1000 0 1000 2000 3000 4000 5000 6000 7000 Feet

1 0.5 0 1 Kilometer

Contour Interval 20 Feet

North American Vertical Datum of 1988

New Mexico Bureau of Geology and Mineral Resources
Open-File Geologic Map 286

Mapping of this quadrangle was funded by a matching-funds grant from the STATEMAP program of the National Cooperative Geologic Mapping Act (Fund Number: G19AC00226), administered by the U. S. Geological Survey, and by the New Mexico Bureau of Geology and Mineral Resources, (Dr. Nelia W. Dunbar, *Director and State Geologist*; Dr. J. Michael Timmons, *Assoc. Director for Mapping Programs*).

Geologic Map of the Paraje Well 7.5-Minute Quadrangle, Socorro County, New Mexico

December 2020

by
Daniel J. Koning, Andrew P. Jochems, Kevin M. Hobbs, Kristin S. Pearthree, and David W. Love

New Mexico Bureau of Geology and Mineral Resouces,
801 Leroy Place, Socorro, NM 87801

Comments to Map Users

A geologic map displays information on the distribution, nature, orientation, and age relationships of rock and deposits and the occurrence of structural features. Geologic and fault contacts are irregular surfaces that form boundaries between different types or ages of units. Data depicted on this geologic quadrangle map may be based on any of the following: reconnaissance field geologic mapping, compilation of published and unpublished work, and photogeologic interpretation. Locations of contacts are not surveyed, but are plotted by interpretation of the position of a given contact onto a topographic base map; therefore, the accuracy of contact locations depends on the scale of mapping and the interpretation of the geologist(s). Any enlargement of this map could cause misunderstanding in the detail of mapping and may result in erroneous interpretations. Site-specific conditions should be verified by detailed surface mapping or subsurface exploration. Topographic and cultural changes may not be shown due to recent development.

Cross sections are constructed based upon the interpretations of the author made from geologic mapping and available geophysical and subsurface (drillhole) data. Cross sections should be used as an aid to understanding the general geologic framework of the map area, and not be the sole source of information for use in locating or designing wells, buildings, roads, or other man-made structures.

The New Mexico Bureau of Geology and Mineral Resources created the Open-file Geologic Map Series to expedite dissemination of these geologic maps and map data to the public as rapidly as possible while allowing for map revision as geologists continued to work in map areas. Each map sheet carries the original date of publication below the map as well as the latest revision date in the upper right corner. In most cases, the original date of publication coincides with the date of the map product delivered to the National Cooperative Geologic Mapping Program (NCGMP) as part of New Mexico's STATEMAP agreement. While maps are produced, maintained, and updated in an ArcGIS geodatabase, at the time of the STATEMAP deliverable, each map goes through cartographic production and internal review prior to uploading to the Internet. Even if additional updates are carried out on the ArcGIS map data files, citations to these maps should reflect this original publication date and the original authors listed. The views and conclusions contained in these map documents are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the State of New Mexico, or the U.S. Government.

Description of Map Units

01-00-00-00-00—heading01—Quaternary—Quaternary—Quaternary

01-01-00-00-00—heading02—Anthropogenic Units—Anthropogenic Units—Anthropogenic Units

01-01-01-00-00—unit—afd—Disturbed land and anthropogenic fill—The unit represents altered ground and thick accumulations of sediment (primarily sand, minor gravel, clay, and silt) used as fill for levees and berms. The deposit is 1–6 m thick.

01-01-02-00-00—unit—ae—Excavated ground—The unit represents excavations associated with stock tank impoundments and borrow pits.

01-02-00-00-00—heading02—EolSheet—Eolian and Sheetflood Units Outside of Valley Floors—Locally, underlying map units are noted using a backslash (i.e., Qes/underlying unit).

01-02-01-00-00—unit—Qe—Eolian sand—Loosely consolidated, light-brown (7.5YR 6/4) sand that forms 0.3–2 m tall dunes, sheets, or ramps (the latter along the margins of basalt flows). The dunes are mostly internally massive and include coppice, irregular, or longitudinal forms. The sand consists of well-sorted, mostly subrounded, and is fine- to medium-grained. Surface clast coverage is typically no more than 5%. The deposit is 0.3–2 m thick.

01-02-01-01-00—unit—Qeb—Eolian sand with subordinate outcrops of basalt—Mapped where small (not mappable at 1:24,000) basalt outcrops occur within predominately eolian sand sheets or dunes. See individual descriptions for units Qe and Qb.

01-02-02-00-00—unit—Qes—Eolian sand and minor sheetflood deposits—Loosely consolidated sand that underlies eolian sheets, coppice dunes, irregular dune forms, and small blowouts. The sand is fine- to medium-grained and is grayish-brown to brown (10YR 5/2–3) in the west and light- to strong-brown (7.5YR 5–6/4, 5/6) in the east. There are occasional