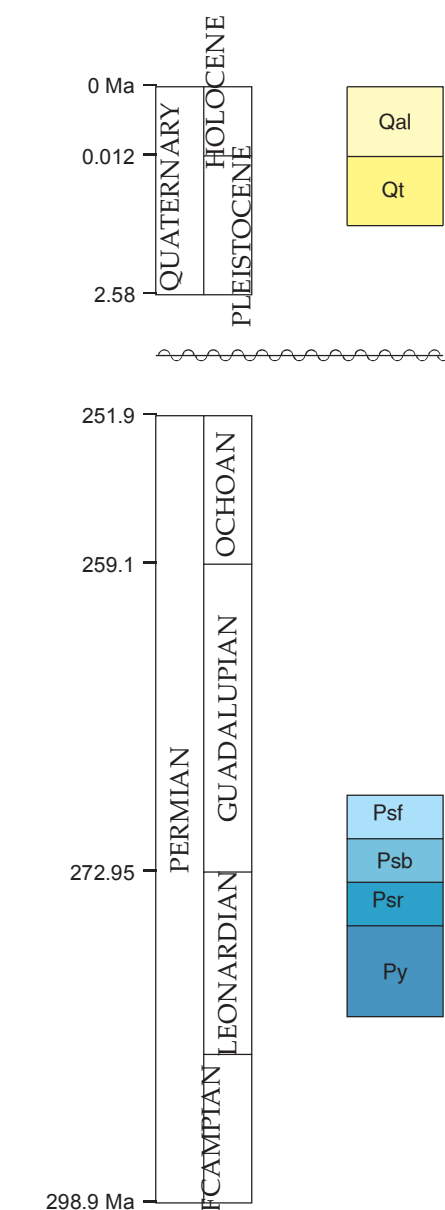


Correlation of Map Units



Description of Map Units

- 00-00-00-00—heading02—Quaternary—Quaternary—Quate...
- 00-01-00-00—time
- 00-01-01-00-00—unit—Qal—Alluvium—Limestone pebbles and cobbles found in modern, active streams and arroyos. Also includes silts and muds of associated floodplain deposits. Thickness varies from 1 to 50 m (3 to 150 feet).
- 00-02-00-00-00—time
- 00-02-01-00-00—unit—Qt—Young Stream Terraces—Cemented limestone pebbles and cobbles occurring as flat-surfaced landforms occurring 3 to 5 m above modern floodplain surfaces. Thickness usually less than 3 m (10 feet).
- 01-00-00-00—time
- 01-01-00-00-00—time
- 01-02-00-00-00—heading03—Guadalupian—Guadalupian—Gu...
- 01-02-01-00-00—unit—Psl—Fourmile Draw Member of the San Andres Formation—Dolomitized, thin bedded sandy limestone. No fossils evident in the few, poor exposures. Contains no chert. Upper Fourmile Draw Member is gypsiferous. 0 to 50 feet as preserved.
- 01-02-02-00-00—unit—Ppb—Bonney Canyon Member of the San Andres Formation—Dolomitized, medium bedded packstone to grainstone that is porous. Fossils replaced with chert. Usually caps ridgelines. Lower contact is placed at both a change in vegetation seen in air photographs and locally at wavy laminated bed. Upper contact is placed at thin bed of limestone with abundant, large, laminated chert pieces. 0 to 60 feet in thickness (Kelley, 1971).
- 01-02-03-00-00—unit—Ppr—Rio Bonito Member of the San Andres Formation—Micrite to packstone that is medium to thick bedded. Lower third is dolomitized, tan to ivory in color, and contains two tongues of the Glorieta Sandstone. Upper two-thirds is non-dolomitized and dark gray in color. Fossiliferous when broken and nonporous. Abundant fossils are present and include crinoids, echinoid spines, bellerophonitid and turritellid gastropods, and ammonites, brachiopods. 250 to 350 feet in thickness (Kelley, 1971). Glorieta Sandstone is a medium-grained, well sorted, well rounded quartz arenite that is red gold or white in color.
- 01-03-00-00-00—heading03—Leonardian—Leonardian—Leona...
- 01-03-01-00-00—unit—Py—Yeso Formation—Cross-section only. Bright yellow and red mudstone interbedded with thin pale brown dolomite beds and medium beds of sandstone (massive to thin bedded).
- 01-04-00-00-00—time
- 01-04-00-00-00—unit—Wolfcampian—Wolfcampian—Wolfcampian

Explanation of Map Symbols

- 06.01 Horizontal bedding
- 06.02 Inclined bedding—Showing strike and dip.
- 31.10 Cross section line and label
- 30.02.01 Perennial river, stream, or creek (single-line drainage)
- 05.01.01 Anticline (1st option)—Identity and existence are certain. Location is accurate.
- 05.01.03 Anticline (1st option)—Identity and existence are certain. Location is approximate.
- 05.01.05 Anticline (1st option)—Identity and existence are certain. Location is inferred.
- 05.01.07 Anticline (1st option)—Identity and existence are certain. Location is concealed.
- 05.05.01 Syncline (1st option)—Identity and existence are certain. Location is accurate.
- 05.05.03 Syncline (1st option)—Identity and existence are certain. Location is approximate.
- 05.05.05 Syncline (1st option)—Identity and existence are certain. Location is inferred.
- 05.05.07 Syncline (1st option)—Identity and existence are certain. Location is concealed.
- 05.09.01 Monocline (1st option)—Identity and existence are certain. Location is accurate. Arrow shows direction of dip.
- 05.09.03 Monocline (1st option)—Identity and existence are certain. Location is approximate. Arrow shows direction of dip.
- 05.09.07 Monocline (1st option)—Identity and existence are certain. Location is concealed. Arrow shows direction of dip.

ContactsAndFaults

- Symbol
- 01.01.01
- 01.01.03
- 02.02.01
- 02.02.03
- 02.02.07
- 02.06.03
- 31.08
- 01.01.01 Contact—Identity and existence are certain. Location is accurate.
- 01.01.25 Unconformable contact—Identity and existence are certain. Location is accurate.

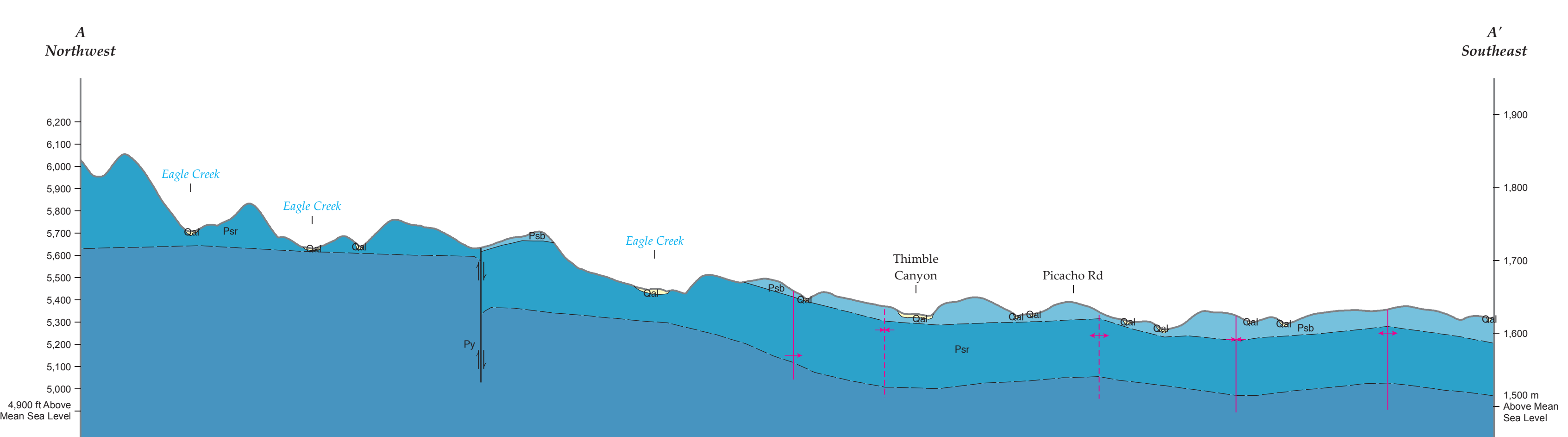
Comments to Map Users

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 boundaries 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.

Geologic Cross-section A-A' Vertical Exaggeration: 5x



Base map from U.S. Geological Survey 2017. North American Datum of 1983 (NAD83). Projection and 1250-meter grid. Contour interval 20 feet. 10,000-foot scale. New Mexico Coordinate System of 1983 (best case), shown in red.

U.S. Census Bureau, 2015-2016. National Hydrography Dataset, 2014. Contours—IF500-4.5 in Digital Terrain Model, 2008. Public Land Survey System. BLM, 2011.

Geologic Scale: Quaternary, Permian, Guadalupian, Leonardian, Wolfcampian. Local Geology: Eagle Cr., Yeso Fm., Rio Bonito M., Bonney Canyon M., Fourmile Draw M., Alluvium.

Administrative: County, Division, Section 36.

Quadrangle Location

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

<http://geoinfo.nmt.edu>



Geologic Map of the Thimble Canyon 7.5-Minute Quadrangle, Chaves County, New Mexico

May 2009

by
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