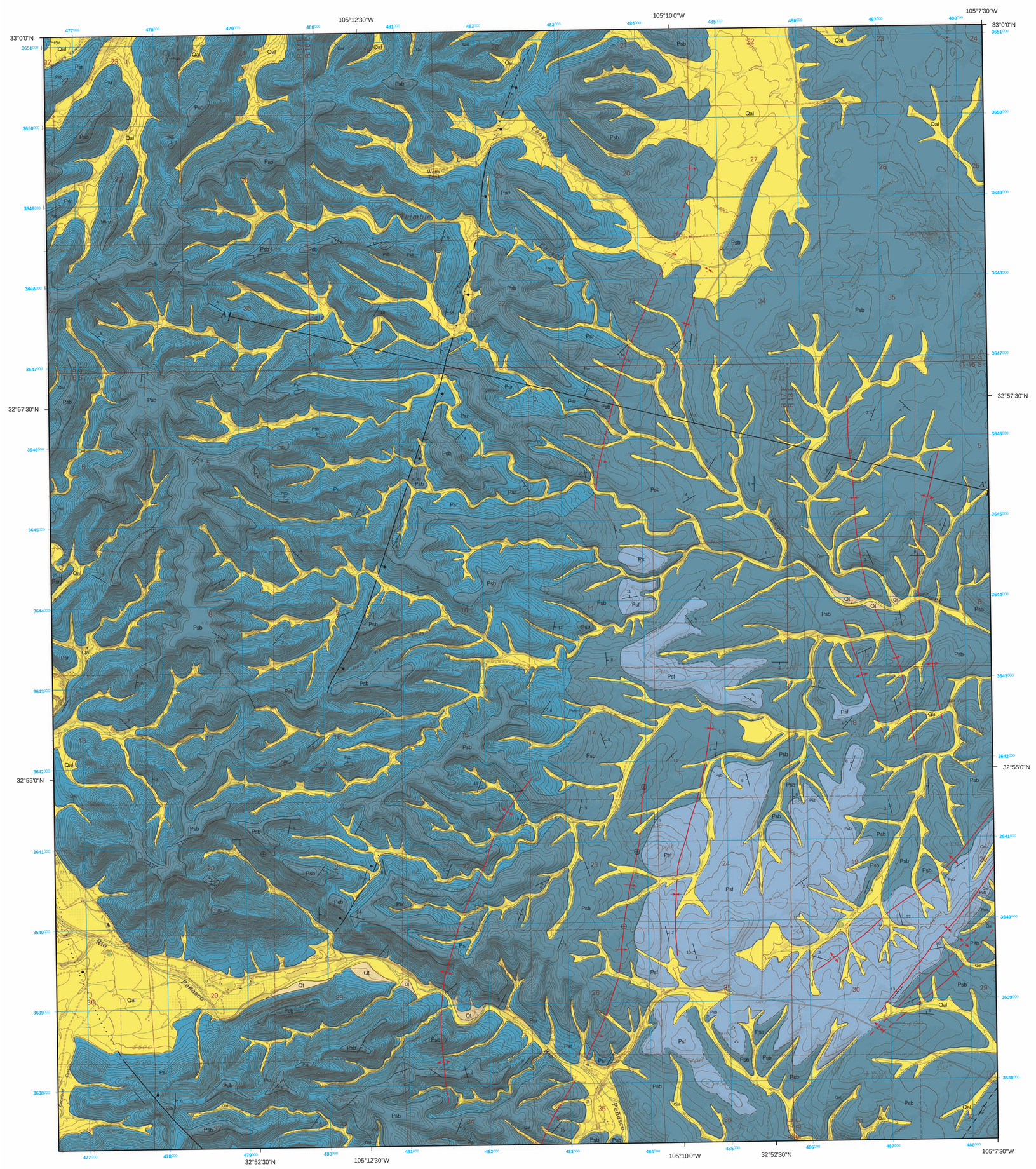


Map Unit Descriptions

Quaternary

Qal — **Young alluvium**—Cobbles and pebbles of limestone in modern fluvial channels, incised into surrounding strata.

Qt — **Terrace deposits**—Flat topped, thick deposits of pebbles and cobbles. Up to 4-5 m thick.

Permian

Psf — **Fourmile Draw Member, 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.

Psb — **Bonney Canyon Member, San Andres Formation**—Thin to medium bedded tan dolomite. Common chert that is white, yellow, red, orange and purple in color.

Psr — **Rio Bonito Member, San Andres Formation**—Medium to occasionally thick bedded dark gray micrite to wackestone, with packstone occurring in upper third. 0.5 m thick tongue of Hondo Sandstone occurs rarely: gold, medium grained, well sorted, well rounded quartz arenite.

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).

Correlation Diagram

Quaternary		Qal
		Qt
Permian	Guadalupian	Psf
		Psb
		Psr
	Leonardian	Py

Map Symbols

- Contact
- Fault Trace. Bar-ball on down-thrown side
- Extrapolation of contact, fold, or fault trace
- Fold, monocline
- Fold, syncline
- Fold, anticline
- Horizontal bedding
- Strike and dip of inclined bedding
- A — A′ Geologic cross section

View up-dip (to the west) on Thimble Canyon monocline.

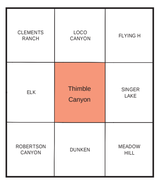
Cliffs formed by thick beds in medial Rio Bonito Member, San Andres Formation.

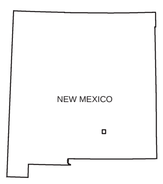
Laminated chert in top surface of Bonney Canyon Member, San Andres Formation.

Interbedded dolomite and muddy sandstone in Yeso Formation.

View to north of northeast-southwest trending fault in the western half of Thimble Canyon quadrangle.

Base map from U.S. Geological Survey 1970, from photographs taken 1965, field checked in 1970, edited in 1993.
1927 North American datum, UTM projection – zone 13N
1000-meter Universal Transverse Mercator grid, zone 13, shown in blue





QUADRANGLE LOCATION

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

NATIONAL GEODETIC VERTICAL DATUM OF 1929

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 associated with recent development may not be shown.

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 map has not been reviewed according to New Mexico Bureau of Geology and Mineral Resources standards. The contents of the report and map should not be considered final and complete until reviewed and published by the New Mexico Bureau of Geology and Mineral Resources. The views and conclusions contained in this document 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.

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Open-File Geologic Map 176

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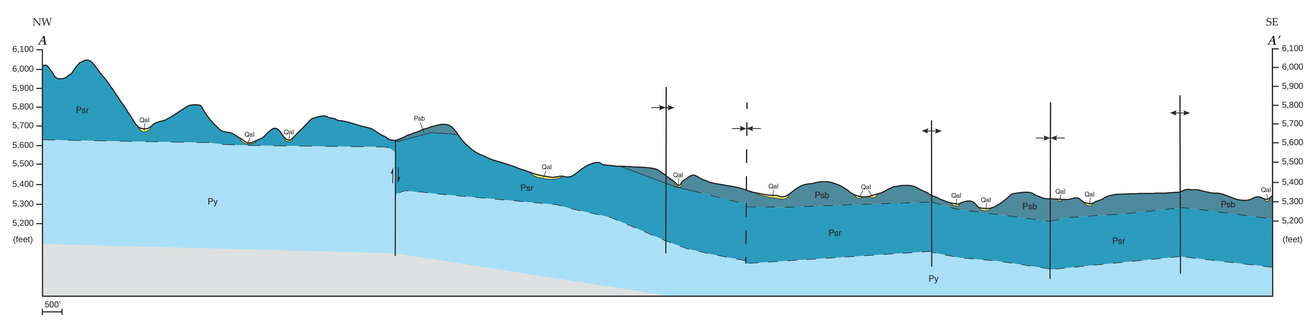

Geologic map of the Thimble Canyon quadrangle, Chaves County, New Mexico.

May 2009

by
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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

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