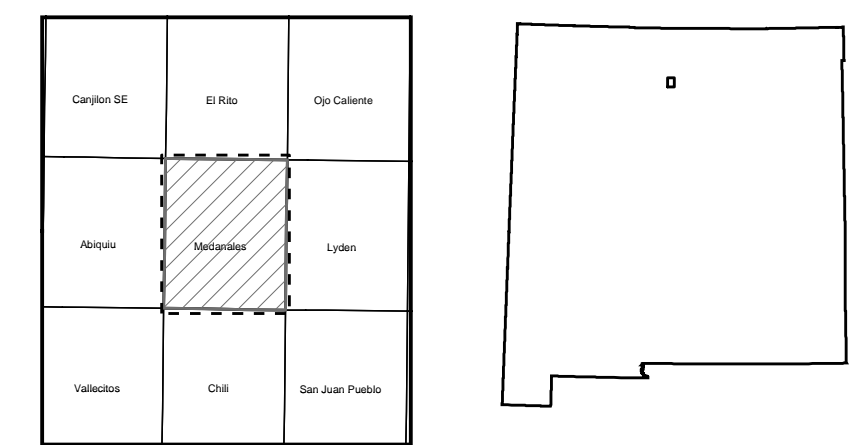


Based from U.S. Geological Survey 1984, from photographs taken 1970 and field checked in 1976.  
Map sheet of 1984  
1987 North American datum, UTM projection - zone 13N  
1000 meters Universal Transverse Mercator grid zone 13, shown in red



#### 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map may be based on any of the following: reconnaissance field geologic mapping, compilation of published and unpublished work, and photogeologic interpretation.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.

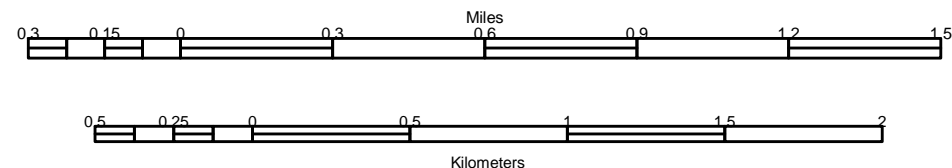
Cross sections are constructed based upon the interpretations of the author made from geologic mapping, and available geophysical, and subsurface (drillhole) data. Cross-sections should be used as an aid to understanding the general geologic framework of the map area, and not be the sole source of information 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.

#### Geologic Map of the Medanales 7.5 - minute Quadrangle

by  
Daniel J. Koning, Judson May, Scott Aby, and Robert Horning

May 2004  
1:24,000

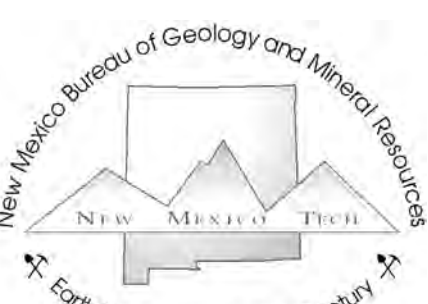


CONTOUR INTERVAL 30 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

This work was performed under the STATEMAP component of the USGS National Cooperative Geologic Mapping Program. Funding for geological mapping was provided by the U.S. Geological Survey and the New Mexico Bureau of Geology and Mineral Resources, a division of New Mexico Tech.

New Mexico Bureau of Geology  
New Mexico Tech  
901 Leroy Place  
Socorro, NM 87789-4796  
(505) 835-5430  
http://geoinfo.nmt.edu  
This and other maps are available in PDF format from:  
http://geoinfo.nmt.edu/statemap  
or contact:  
NMBGMR Publications - (505) 835-5410  
NMBGMR Geologic Information Center - (505) 835-5145



**DRAFT**

NMBGMR OF-GM 89

This draft geologic map was produced from scans of hand-drafted originals from the author(s). It is being distributed in this form because of the demand for current geologic mapping in this important area. The final release of this map will be made following peer review and redrafting in color using NMBGMR cartographic standards. The final product will be made available on the internet as a PDF file and in a GIS format.

#### DESCRIPTION OF MAP UNITS (See report for complete description and text.)

##### ANTHROGENIC DEPOSITS

af Artificial fill (recent).

##### QUATERNARY AEOLIAN DEPOSITS

Qe Aeolian sand deposits (middle to late Pleistocene and Holocene)

Qayh Eolian sediment overlying unit Qayh (upper Holocene)

Qe Eolian sediment overlying the Ojo Caliente Sandstone (upper Holocene)

##### QUATERNARY PLAYA DEPOSITS

Qpl Lagunita playa deposit (Holocene)

##### QUATERNARY LANDSLIDE DEPOSITS

Qls Undifferentiated landslide deposits (Holocene to late Pleistocene)

##### QUATERNARY ALLUVIUM

Qam Modern alluvium (less than approximately 20 years old)

Qay1 Younger alluvium occupying a low topographic position in valley bottoms (approximately 20-100 years old)

Qay1 Younger alluvium occupying an intermediate topographic position in valley bottoms (50-200? years old)

Qayh Younger alluvium occupying a high topographic position in valley bottoms (Holocene, greater than 100 years old)

Qao Older alluvium (middle to upper Pleistocene)

Qgh High-level gravel deposits (middle to upper Pleistocene)

##### TERRACE DEPOSITS OF CAÑON LA MADERA

Qtm Terrace deposits along Cañon la Madera (upper Pleistocene)

##### TERRACE DEPOSITS OF THE RIO OJO CALIENTE

Qtrac Terrace deposits along the Rio Ojo Caliente (upper Pleistocene)

##### TERRACE DEPOSITS OF THE RIO CHAMA

Qtcu Non-correlated terrace deposits of the Rio Chama (Upper to lower Pleistocene)

Qtc7 Lowermost terrace deposit of the Rio Chama (Upper Pleistocene)

Qtc6 Lower terrace deposit of the Rio Chama (Upper Pleistocene)

Qtc5 Lower-middle terrace deposit of the Rio Chama (Upper to middle Pleistocene)

Qtc4 Middle terrace deposit of the Rio Chama (Middle Pleistocene)

Qtc3 Upper-middle terrace deposit of the Rio Chama (Middle Pleistocene)

Qtc2 Upper terrace deposit of the Rio Chama (Lower Pleistocene)

Qtc1 Uppermost terrace deposit of the Rio Chama (Lower Pleistocene)

##### TERRACE DEPOSITS OF THE EL RITO

Qtr4 Lower terrace deposit of El Rito (upper Pleistocene)

Qtr3 Lower-middle terrace deposit of El Rito (upper-middle Pleistocene)

Qtr2 Upper-middle terrace deposit of El Rito (upper-middle Pleistocene)

Qtr1 Upper terrace deposit of El Rito (middle Pleistocene)

##### MIOCENE SEDIMENTARY ROCKS

##### TESUQUE FORMATION

Tto, Tto Ojo Caliente Member of the Tesuque Formation (middle to upper Miocene)

Ttco Interbedded Ojo Caliente Sandstone-Chama-El Rito Member, Tesuque Formation (middle to upper Miocene)

Ttc Chama-El Rito Member, Tesuque Formation (middle Miocene)

Ttce Chama-El Rito Member mixed with volcanic detritus from the El Rito vents

Ttce Marker bed of Chama-El Rito Member mixed with volcanic detritus from the El Rito vents

##### EL RITO VOLCANIC VENTS

Tea Basaltic agglutinate

Tep Basaltic phreatomagmatic deposits

Te1 Basaltic volcanic deposits consisting primarily of pyroclastic tuff breccia

Te2 Basaltic volcanoclastic tuff and lapilli tuff

##### LOBATO FORMATION

Ltd Dikes of basalt to basaltic andesite(?) (upper Miocene)

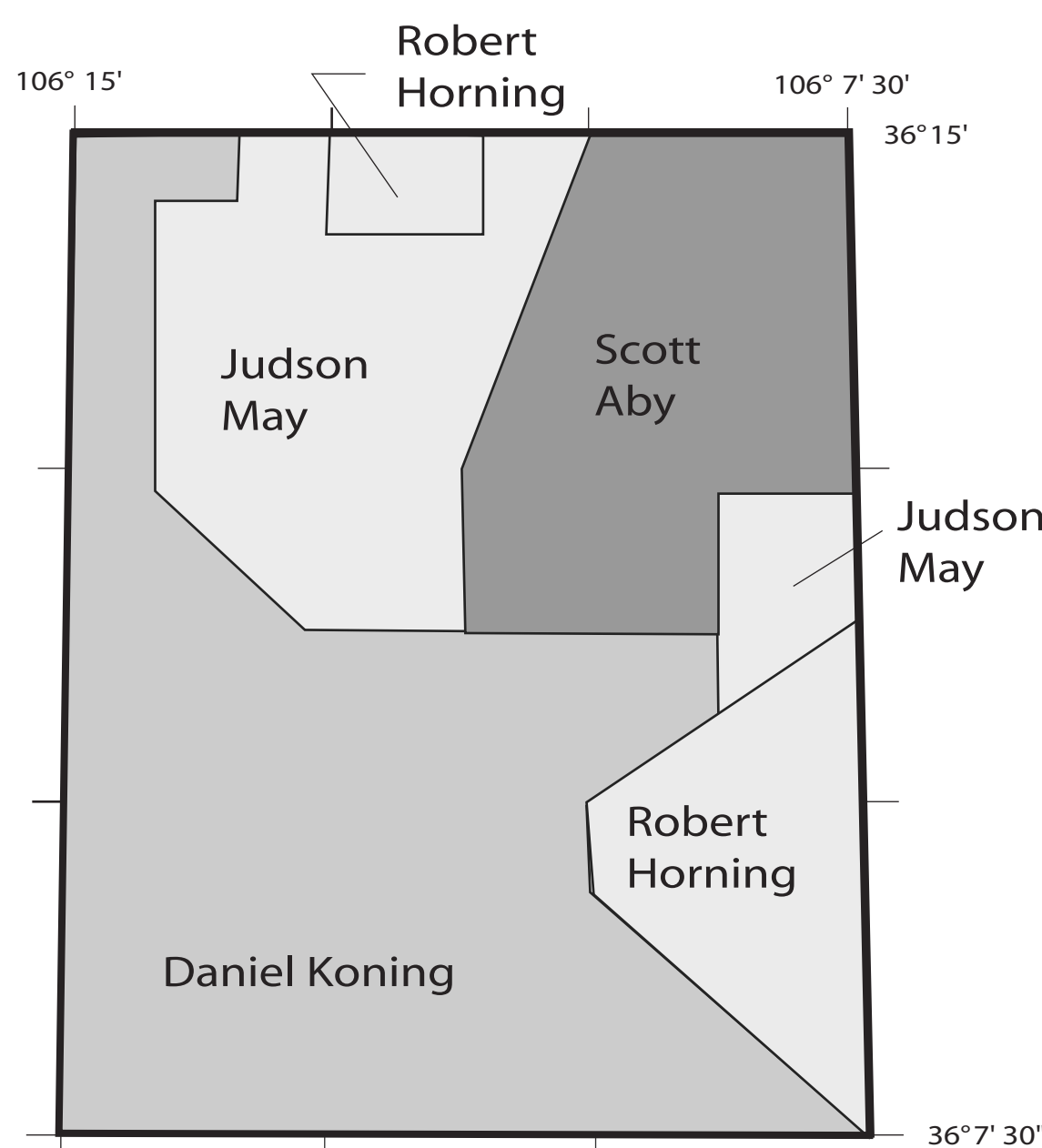
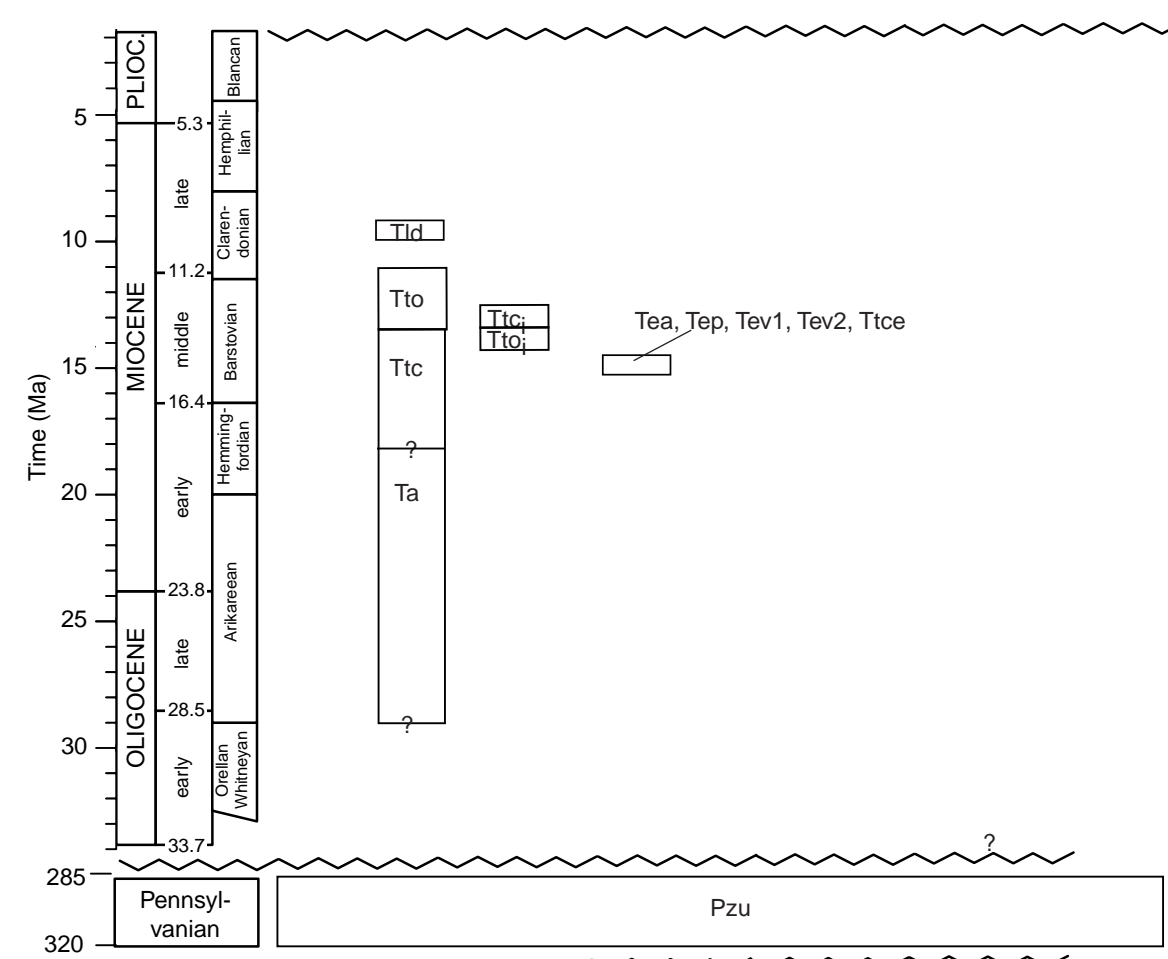
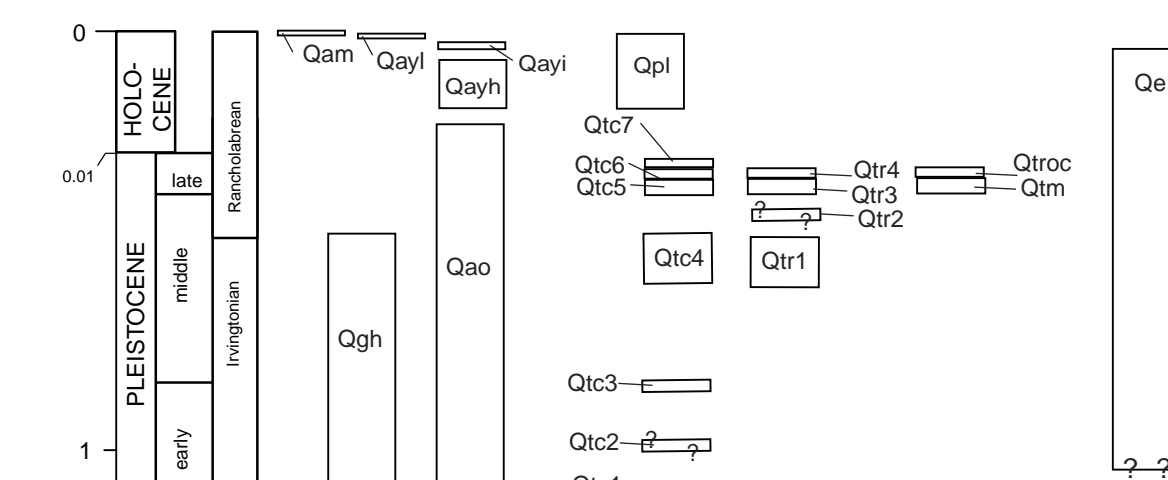
##### ABIQUI FORMATION

Ta Abiqui Formation (lower(?) Miocene)

##### SUBSURFACE UNITS DEPICTED ONLY ON CROSS-SECTION

Pzu Undivided Paleozoic strata (Mississippian to Permian)

#### CORRELATION OF UNITS



Portions of the quadrangle mapped by each of the authors.

#### EXPLANATION OF MAP SYMBOLS

