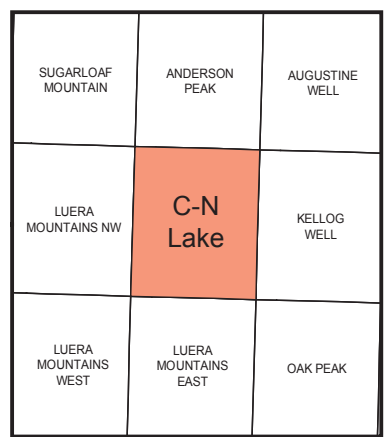
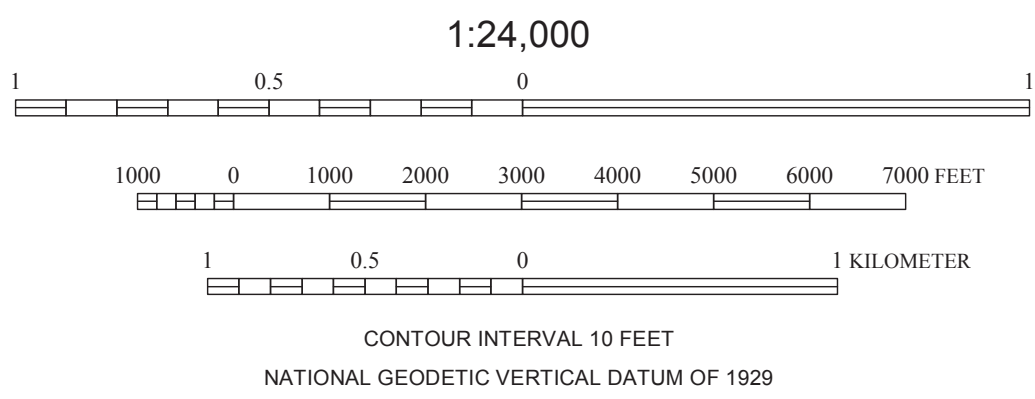
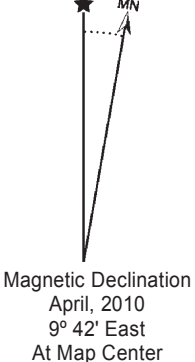
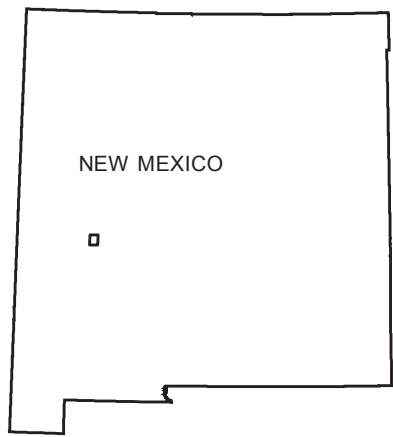


Base map from U. S. Geological Survey 1981, from photographs taken 1973, field checked in 1975, edited in 1981.
1927 North American datum, UTM projection - zone 13N
1000-meter Universal Transverse Mercator grid, zone 13, shown in red



QUADRANGLE LOCATION



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This and other STATEMAP quadrangles are (or soon will be) available
for free download in both PDF and ArcGIS formats at:

<http://geoinfo.nmt.edu>

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of the National Cooperative Geologic Mapping Act, administered by the U. S. Geological Survey,
and by the New Mexico Bureau of Geology and Mineral Resources. (Dr. Peter A. Schulte,
Director and State Geologist, Dr. J. Michael Trimmons, Geologic Mapping Program Manager)

Geologic Map of the C-N Lake
7.5-Minute Quadrangle, Catron County,
New Mexico

June 2011

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map may be based on any of the following: reconnaissance field geologic mapping, compilation of published and unpublished work, and photogeologic interpretation.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

Unit Descriptions

- H** **Man-made deposits (Holocene)**—Earthen dams for tanks along active gulleys or valleys.
- Qy** **Active alluvium (Holocene)**—Active and recently active alluvium, typically incised <1m.
- Qe** **Eolian deposits (Quaternary)**—Deposits consist of active and vegetated dunes (fine to medium-grained sand) and silt (loess).
- Qc** **Colluvium and other slope deposits (Quaternary).**
- Qpy** **Pluvial and lacustrine deposits (Quaternary)**—Deposits are locally mantled with eolian sand.
- Qbm** **Baymouth bar deposits (Quaternary)**—Sand and gravel composed mostly of sub-angular to sub-rounded pebbles and cobbles with sparse well-rounded pebbles.
- Qf1** **Alluvial fan and piedmont deposits (Quaternary)**—Deposits are typically incised <5m. Clasts are derived from a local source.
- Qfo** **Older alluvial fan and piedmont deposits (Quaternary)**—Deposits typically incised >5m. Clasts are derived from a local source.
- QT** **Older alluvium and piedmont deposits (Miocene - Quaternary)**—Containing clasts of rhyolitic ignimbrite, felsic, intermediate, and mafic lava. The mafic lava probably derived from the Luera Mts. range crest ~5km to the south. Thickness: 0-100m.
- Tvc** **Volcaniclastic conglomerate (Oligocene - Miocene)**—Conglomerate containing boulders and cobbles of rhyolitic and dacitic lava, felsic ignimbrite, and mafic lava. Thickness: 0-50m.
- Tsc** **South Canyon Tuff (Oligocene)**—Rhyolitic ash-flow tuff containing 4-30% phenocrysts of plagioclase, sanidine, quartz, and biotite. Lithic-lapilli are generally <5%, and pumice lapilli 5-25%. Thickness: 0 - 50m.
- Tbo** **Basalt (Oligocene)**—Vesicular basalt containing < 10% phenocrysts of plagioclase, olivine, and pyroxene.
- Tvp** **Vicks Peak Tuff (Oligocene)**—Densely welded rhyolitic ash-flow tuff containing 1-15% phenocrysts, chiefly sanidine up to 4mm lesser plagioclase up to 2mm, and sparse pyroxene, hornblende, and biotite <2mm. The tuff contains 2-25% strongly flattened pumice lapilli up to 1m long, and sparse <10cm lithic lapilli. The tuff is typically light gray and the pumice lapilli are commonly recessive on weathered surfaces. Thickness: up to 90m.
- Tj** **La Jencia Tuff (Oligocene)**—Densely welded rhyolitic ash-flow tuff containing 2-10% phenocrysts of sanidine (1-4mm) and plagioclase (1-2mm), and minor biotite, pyroxene, and hornblende, and quartz. The tuff is generally light to dark gray and contains 5-15% strongly flattened pumice lapilli up to 1m long, and up to 5% lithic lapilli. Thickness: up to 120m.
- Tvo** **Older volcaniclastic conglomerate (Oligocene)**—Conglomerate principally containing boulder and cobbles of the dacitic lava (Td). Thickness: 0-30m.
- Tba** **Basaltic andesite lava (Oligocene)**—Phenocryst-poor ash-flow tuff containing < 5% mafic lava containing less than 5% <3mm plagioclase, pyroxene and/or hornblende. Unit is interbedded with the Hells Mesa, Blue Canyon, and Rock House Canyon tufts.
- Thm** **Hells Mesa Tuff (Oligocene)**—Densely welded phenocryst-rich rhyolitic to trachytic ash-flow tuff containing 20-35% phenocrysts of plagioclase (<3mm), sanidine (<3mm), quartz (<4mm), hornblende (<2mm), and biotite (<2mm). The tuff is reddish brown to orange in color and contains sparse lithic lapilli and generally <10%, pumice lapilli <10cm long. Thickness: 0-25m.
- Tbc** **Blue Canyon Tuff (Oligocene)**—Moderately phenocryst-rich ash-flow tuff containing 10-20% 1-4mm plagioclase, and abundant 1-3mm biotite. Thickness: 0-50m.
- Trh** **Rock House Canyon Tuff (Oligocene)**—Phenocryst-poor mafic lava containing less than 5%, < 3mm feldspar phenocrysts, and a trace of mafics. Thickness: 0-50m.

MAP EXPLANATION

- Strike and dip of bedding
- Strike and dip of eutaxitic foliation
- Strike and dip of flow-foliation (lava)
- Contact—dashed where approximate
- Fault contact—dashed where approximate, dotted where concealed
- Quartz vein
- Beach ridge, with barbs facing inward
- Projected beach ridge, with barbs facing inward
- Geologic Cross Section

