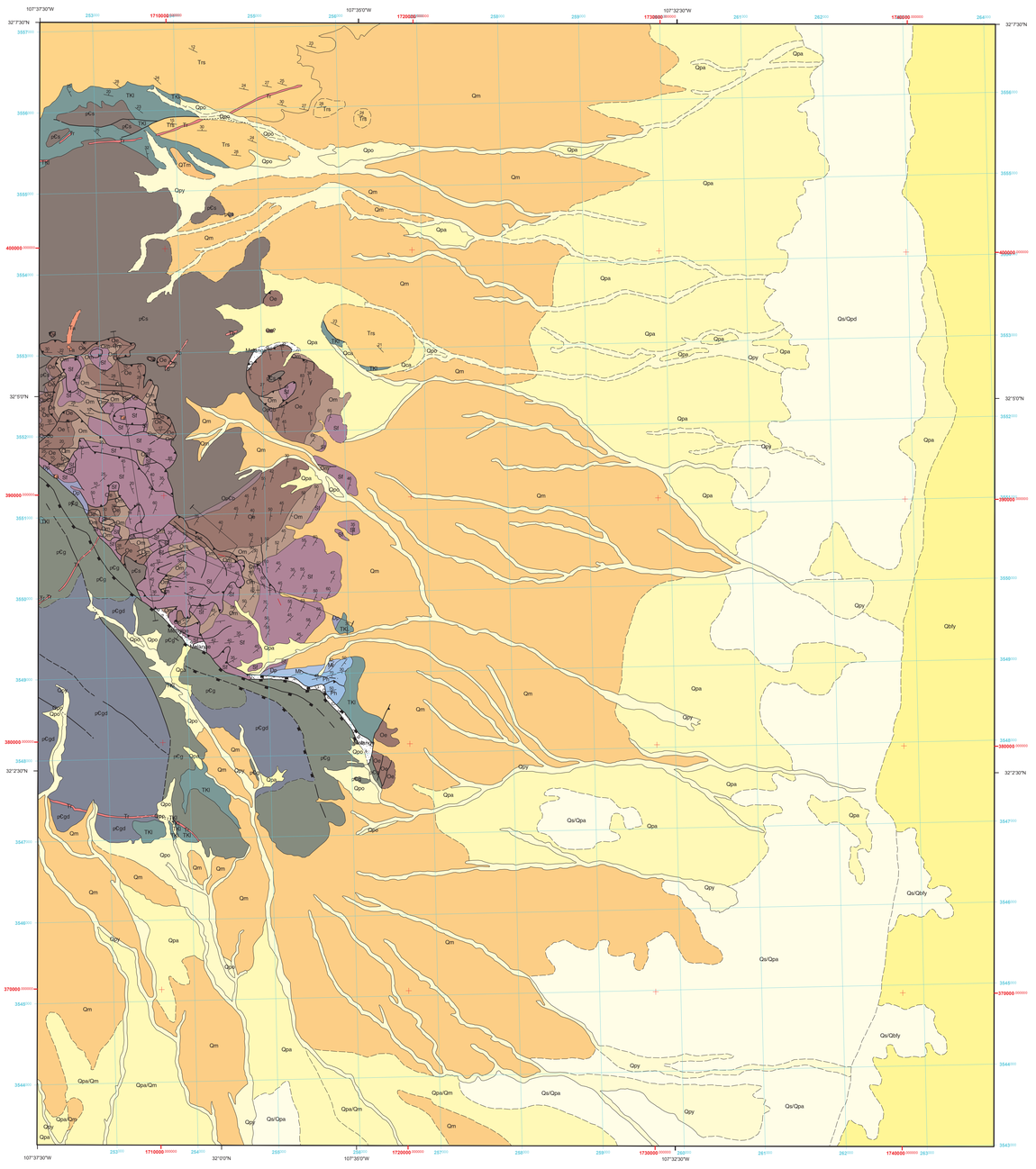
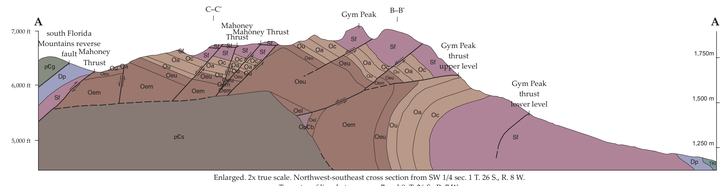
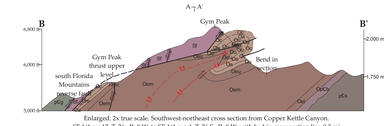
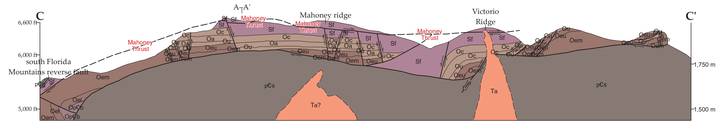




Enlarged. 2x true scale. Northwest-southeast cross section from SW 1/4 sec. 1 T. 26 S., R. 8 W. To center of line between sec. 7 and 8, T. 26 S., R. 7 W. Symbols not used on geologic map are: Oel—lower El Paso Formation, Oem—middle El Paso Formation, Oeu—upper El Paso Formation, Ou—Upham member of Montoya Formation, Oa—Aleman member of Montoya Formation, Oc—Cutter member of Montoya Formaiton.



Enlarged. 2x true scale. Southwest-northeast cross section from Copper Kettle Canyon. SE 1/4 sec.12, T. 26., R. 8 W. to SE 1/4 sec. 1, T. 26 S., R. 8 W. with bed in cross section line 0.3 mi northeast of gym peak. Symbols same as on cross section A—A'



Enlarged. 2x true scale. South-north cross section from Priser Mine to NE 1/4 sec. 36, T. 25 S., R. 8 W, 0.5 mi east-northeast of Baldy Peak. Symbols same as cross section A–A'

Description of Map

Symbol

01-01–Map Unit–Qs–Windblown sand–Unconsolidated dunes up to 10 ft high; mostly underlain by caliche horizon; forms over over map unit shown by symbol under the line (for example Qs/Qpa)

01-02–Map Unit–Qbfy–Younger basin-floor sediment–Predominately nongravelly to slightly gravelly alluvium in the Mimbres Basin unaffected by arroyo incision; contain very little pedogenic carbonate

01-03–Map Unit–Qca–Undifferentiated colluvium-alluvium–Thin talus-slope veneers and colluvial and alluvial fills on arroyo-valley sideslopes; found in mountain canyons and piedmont slopes

01-04–Map Unit–Qpa–Undifferentiated piedmont-slope alluvium–Complexly intermixed older piedmont-slope alluvium and younger piedmont-slope alluvium (Qpo and Qpy)

01-05–Map Unit–Qpo–Older piedmont-slope alluvium–Unconsolidated fan deposits, piedmont-valley fills, and erosion-surface veneers, associated with surfaces graded to closed basins; uppermost beds typically cemented with pedogenic carbonate

01-06–Map Unit–Qpy–Younger piedmont-slope alluvium–Fills (silty to gravelly) of shallow drainageways cut below older fan and erosion surfaces graded to closed basins

01-07–Map Unit–Qm–Formation of Mimbres Basin–Fan gravel and interbedded, sandy lenses representing piedmont-slope facies; includes thin, erosion-surface veneers near mountain fronts; upper layers contain carbonate accumulations (caliche) up to several f*

01-08–Map Unit–QTm–Formation of Mimbres Basin–Similar to Qm but found on higher terrace and alluvial-fan remnants; igneous-rock clasts are much mroe intensely weathered; up to 200 ft thick

02-01–Map Unit–Ta–Diorite/andesite–Intensely altered and deeply weathered dikes and small irregular intrusions; exposed only in arroyos and on a few bare slopes and ridges

02-02–Map Unit–Tb–Basalt or basaltic-andesite dikes–Dark-gray to black, dense, aphanitic rock; a few dikes are diabasic; some of the rocks are slightly vesicular with carbonate and chlorite fillings

02-03–Map Unit–Tr–Rhyolite Dikes –Very light gray dikes ranging from 1 to 18 feet in thickness; holocrystalline, generally nonporphyritic, fractures commonly stained with manganese oxides

02-04–Map Unit–Trs–Starvation Draw member of Rubio Peak–Grayish-purple and reddish breccias of polylithic volcanic clasts grading upward into greenish-gray breccias and conglomeratic sandstones; basal beds contain abundant granite and limestone clasts; *

02-05–Map Unit–TKl–Lobo Formation–Interbedded reddish shale and chert-limestone conglomerate, calcareous gray siltstone, sandstone, and pebble to cobble congolmerate; this unit is Dalton's (1916) Lobo Formation; up to 500 ft thick

03-01–Map Unit–Ph–Hueco Formation–Thin- to medium-bedded, medium- to dark-gray limestone, slightly dolomitic near base; lenses of yellow to red sandstone interbedded near top; includes 30-ft Abo (?) tongue overlying the fossiliferous limestones; approxi*

04-01–Map Unit–Mr–Rancheria Formation–Thin- to medium- bedded, dark-gray to black, fine crystalline, fossiliferous limestone; containing up to 505 chert near top; 220 ft thick

05-01–Map Unit–Dp–Percha Shale–Dark-gray to olive-gray fissile shale, with 1-ft black fossiliferous limestone bed 10 ft above base; 250 ft thick

06-01–Map Unit–Sf–Fusselman Dolomite–Tin- to massive-bedded, light- to dark-gray, medium- to coarse-crystalline dolomite; two coral-rich zones near base and one near top; sparse chert in basal and uppermost beds; 1,480 ft thick

07-01–Map Unit–Om–Montoya Formation–Basal, coarse sandy dolomite (Cable Canyon) overlain by dark-brown, coarse-crystalline dolomite (Upham), thin-bedded, medium-gray limestone and cherty limestone (Aleman), and medium - bedded limestone and dolomite; fos*

07-02–Map Unit–Oe–El Paso Formation–Basal unit of dark-gray, medium-crystalline dolomite overlain by thick middle unti of thin- to medium-bedded, light- to medium-gray limestone and cherty limestone, and upper unit of thin- to medium- bedded, medium- to*

07-03–Map Unit–O=b–Bliss Sandstone–Thin- to medium- bedded arkosic to quartzose sandstone; grades us to calcareous sandstone and silty limestone, up to 120 ft thick

08-01–Map Unit–=gd–Granite with abundant xenoliths–Fine- to coarse-crystalline alkali feldspar granite containing up to 50% meladiotire, diorite and diorite-porphyry xenoliths; predominate bedrock type in lower slopes and ridges south of south Florida M*

08-02–Map Unit–=g–Granite–Coarse-crystalline, brown, alkali-feldspar granite; contains approximately 65% perthite and microcline. 28% quartz, 5% chlorite (altered mafics), and 2% magnetite, zircon, sphene, and apaite; predominant bedrock type in lower s*

08-03–Map Unit–=s–Syenite and quartz syenite –Predominately coarse crystalline with many aplitic zones; unweathered rock is bluish gray but prevailing outcrops are yellowish brown; composition ranges from alkali-feldpar syenite with only a trace of quar*

Description of Map Symbols

6.2 Inclined bedding
6.3 Vertical bedding
6.4 Overturned bedding
31.10 Cross section line
5.1.1 Anticline (1st option)—Identity and existence certain, location accurate
5.3.17 Overturned anticline (1st option)—Identity and existence certain, location accurate
5.7.17 Overturned syncline (1st option)—Identity and existence certain, location accurate
31.8 Map boundary
1.1.1 Contact—Identity and existence certain, location accurate
1.1.3 Contact—Identity and existence certain, location approximate
2.1.1 Fault (generic; vertical, subvertical, or high-angle; or unknown or unspecified orientation or sense of slip)—Identity and existence certain, location accurate
2.1.3 Fault (generic; vertical, subvertical, or high-angle; or unknown or unspecified orientation or sense of slip)—Identity and existence certain, location approximate
2.1.7 Fault (generic; vertical, subvertical, or high-angle; or unknown or unspecified orientation or sense of slip)—Identity and existence certain, location concealed
2.4.1 Reverse fault—Identity and existence certain, location accurate
2.4.3 Reverse fault—Identity and existence certain, location approximate
2.8.1 Thrust fault (1st option)—Identity and existence certain, location accurate

Base map from U.S. Geological Survey, 2010.
North American Datum of 1927 (NAD27) World Geodetic System of 1984 (WGS84).
Projection and 1000-meter grid, Universal Transverse Mercator, Zone 13S, shown in blue.
10 000-foot ticks: New Mexico Coordinate System of 1927(west zone), shown in red.

Roads.....©2006-2010 Tele Atlas
Names.....GNIS, 2008
Hydrography.....National Hydrography Dataset, 2005
Contours.....National Elevation Dataset, 2000

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

North American Vertical Datum of 1988

New Mexico Bureau of Geology and Mineral Resources
Geologic Map 58

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http://geoinfo.nmt.edu

Digital layout and cartography by the NMBGMR Map Production Group

Geology of Gym Peak quadrangle, Luna County, New Mexico

1983

by
Russell E. Clemons [1] and Glen A. Brown

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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 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.

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