



LOCATION MAP




TOPOGRAPHIC QUADRANGLE INDEX

Well

Dry hole

Well with chemical analysis

Spring

Spring with chemical analysis

NOTE: Geologic symbol in blue indentifies aquifer in which the well is completed, or, if a spring, the source. The number beneath aquifer symbol indicates total depth of well in feet; asterisk (*) denotes depth to water only (total depth of well unknown).

6600 Water-level contour

Shows altitude of water table or potentiometric surface, 1962-1963. Dashed where approximately located. Contour interval 100 feet. Datum is mean sea level.

6800 Topographic contour

*Shows altitude of land surface. Contour interval 500 feet. Datum is mean sea level.*

Contact

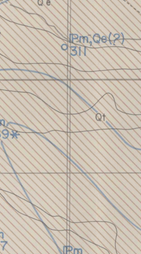
*Dotted where concealed, queried where speculative*

High-angle fault

*Presumed normal or strike-slip; dashed where uncertain, dotted where concealed, queried where speculative, dumbell on apparent downthrown side, arrows show inferred lateral component of slip*

High-angle thrust fault

*Indicators on upthrown side*




Sources of geologic mapping (geology slightly modified)

Anticline

*Dashed where uncertain, arrow shows plunge*

Syncline

*Dashed where uncertain, arrow shows plunge*

Section

*Line of diagrammatic section in text figure*

**QUATERNARY**

Qal

Alluvium

*Channel and slope deposits in mountain valleys; up to several tens of feet thick. Where resting on valley fill beyond mountains, restricted to deposits on floors of present stream channels. Locally good aquifer where sufficient saturated thickness*

Ql

Landslide deposits

*Coarse, chaotic debris and large slide-blocks on eastern dip-slope of the Sandia Mountains. Generally not an aquifer, but yields water to at least one spring*

Qt

Terrace alluvium

*Sand and gravel on major terraces. Not an aquifer; everywhere above saturated zone*

Qe

Estancia valley fill

*Reddish brown to tan silt, sand, and gravel; angular to subrounded; up to 300 feet thick. Good aquifer where sufficient saturated thickness*

**TERTIARY**

QTs

Santa Fe Group, undivided

*Tan to terra cotta sand, gravel, mudstone, and marly beds; angular to subrounded material; up to several hundred feet thick. Good aquifer*

Tm

Monzonitic rocks

*Mostly intrusive sills and apophyses. Not an aquifer*

Tg

Galisteo Formation

*Gray, buff, and reddish-brown sandstone, conglomeratic sandstone, and gray to reddish-brown and purple mudstone; lower 1000+ feet crops out near Placitas, inferred much thicker northward beneath Santa Fe Group. Aquifer characteristics untested*

**CRETACEOUS**

Kmv

Mesaverde Group, undivided

*Grayish sandstone, dark brown to black shale, coaly shale; contains numerous coal beds up to about 4 feet thick in lenses and zones at several intervals; as much as 2,900 feet thick. Chemical quality of water generally poor*

Kmd

Mancos Shale and Dakota Sandstone, undivided

*Mancos Shale (Km): black shale, light-gray to rusty-weathering sandstone and siltstone beds; contains some thin coal beds in upper part and near base; 1,500 to 1,800 feet thick. Chemical quality of water generally poor.*
*Dakota Sandstone (Kd): light-gray to buff sandstone and black shale; 5 to 250 feet thick. Water quality generally poor*

**JURASSIC**

J

Jurassic rocks

*Morrison Formation (Jm): variegated mudstone, sandstone, conglomerate, and some limestone; lenticular; 480 to 750 feet thick. Chemical quality of water generally poor; possible local exceptions.*
*Todilto Limestone (Jt): gypsum with laminae of limestone overlying thin, black, fetid limestone; 0 to 85 feet thick. Water quality poor.*
*Entrada Sandstone (Je): buff to tan-brown; 100 to 145 feet thick. Water quality poor; possible exceptions locally*

**TRIASSIC**

TR

Triassic rocks

*Chinle Formation (Trc): mudstone with lenticular sandstone beds; variegated in lower part and tan-brown to brownish-red in upper part; 1,300 to 2,000 feet thick. Sandstones good aquifers.*
*Santa Rosa Sandstone (Trs): light gray to reddish-brown sandstone and brownish-red mudstone; conglomerate locally near base, lenticular; 70 to 400 feet thick. Good aquifer*

**PERMIAN**

Psg

San Andres Limestone and Glorieta Sandstone, undivided

*San Andres Limestone: limestone and buff to tan sandstone; 0 to 190 feet thick. Good aquifer.*
*Glorieta Sandstone (Pg): light gray; 0 to 150 feet thick; both formations locally removed by pre-Santa Rosa erosion. Good aquifer*

Py

Yeso Formation

*San Ysidro Member (Pys): tan-brown sandstone and gray cavernous limestone; locally gypsiferous in upper part; 250 to 400 feet thick. Good aquifer, but water quality poor where gypsiferous.*
*Meseta Blanca Sandstone Member (Pym): tan-brown and buff, even bedded; 70 to 150 feet thick. Good aquifer*

Pa

Abo Formation

*Reddish-brown, lenticular sandstone and mudstone; locally light gray sandstone, pellet limestone, and black shale; 700 to 950 feet thick. Good aquifer*

**PENNSYLVANIAN**

IPm

Madera Limestone

*Prominent ledges of gray fossiliferous limestone commonly cherty; dark-gray, reddish-brown, and green shales, micaceous and feldspathic; gray, greenish, reddish-brown sandstone; some arkosic conglomerate; 1,009 to 2,000? feet thick. Most widely used aquifer, but aquifer characteristics highly variable and locally unpredictable except in general sense*

IPs

Sandia Formation

*Black shale, dark-gray limestone, gray to greenish-gray and brownish sandstone, locally conglomerate, occasional streaks of coal; soft beds; 10 to 230 feet thick (locally east of Placitas limestone and some shale of Mississippian and Devonian(?) age, up to 90 feet thick, is included with Sandia Formation). Aquifer characteristics untested*

**PRECAMBRIAN**

p€

Precambrian rocks

*Undifferentiated granite, gneiss, schist, greenstone, and quartzite. Yields water to springs and locally to few wells, but generally poor aquifer*

# GEOLOGY, WATER-LEVEL CONTOURS, AND SELECTED WELLS AND SPRINGS FOR THE SANDIA AND NORTHERN MANZANO MOUNTAINS, NEW MEXICO