UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER-SUPPLY PAPER 1801
PLATE 1

MAP OF NORTHERN JORNADO DEL MUERTO AND NORTHERN TULAROSA BASIN AND ADJACENT AREAS, SOCORRO, LINCOLN, SIERRA AND OTERO COUNTIES, NEW MEXICO, SHOWING GEOLOGY, WELL AND SPRING DATA, AND CONTOURS ON THE WATER TABLE, 1957

SCALE 1:125 000

2 0 2 4 6 8 10 MILES

EXPLANATION

Qal — Alluvium
May include some Tertiary conglomerate

Qb — Basalt

QTb — Basalt

Ts — Santa Fe Group
Sand, silt, gravel, and sandstone

Tv — Basalt flows, tuff, and other volcanic rocks
May include rocks of Oligocene age

Ti — Intrusive rocks

Td — Datil Formation
Rhyolite, rhyolite tuff, and volcanic fluviatile derivatives

Tb — Baca Formation
Conglomerate, sandstone, and siltstone

Kmv — Messaverde Group
Mainly sandstone

Km — Mancos Shale
Shale, mudstone, and limestone

Kd — Dakota Sandstone
Quartzitic and ferruginous sandstone

Ks — Sedimentary rocks undifferentiated

Rd — Dockum Group
Red shale and sandstone, some parts conglomeratic

Psg — San Andres Limestone and Glorieta Sandstone
Tongue of Yeso Formation mapped with unit in northern part of area. Alternating limestone, gypsum, dolomite, and sandstone

Py — Yeso Formation
Alternating red siltstone, gypsum, limestone, and locally halite in the subsurface

Pa — Abo Formation
Red and purplish-red siltstone, shale, and sandstone

Pb — Bursum Formation
Tongue of Abo Formation mapped with Bursum in northern part of area. Alternating limestone, sandstone, arkose, conglomerate, and shale

PPma — Magdalena Group
Mississippian and Devonian rocks locally mapped with group. Limestone, shale, and red sandstone

PPm — Madera Limestone
Cherty and arkosic limestone containing some shale

IPs — Sandia Formation
Arkose and quartzitic sandstone

MCu — Sedimentary rocks
Lake Valley Limestone (Mississippian) in the San Andres Mountains; Sly Gap Formation of Stevenson (1945) (Devonian); Montoya Dolomite and El Paso Limestone (Ordovician); and Bliss Sandstone (Ordovician and Cambrian)

pC — Granite, gneiss, schist, and quartzite

Contact
Dashed where approximately located

Fault
Dashed where approximately located; short dashed where inferred; dotted where concealed. U, upthrown side; D, downthrown side

Anticline
Showing trace of axial plane and plunge of axis

Syncline
Showing trace of axial plane and plunge of axis

Strike and dip of beds

ped — Pediments
Coextensive surfaces developed on rock and unconsolidated materials

165R • 2160 — Well
Number at left is depth to water, in feet; R indicates reported water level; number at right is sulfate content of water, in parts per million

405 • 904 — Test hole
Number at left is depth to water, in feet; number at right is sulfate content of water, in parts per million

630R ○ — Well, approximately located
Number indicates depth to water, in feet; R indicates reported water level

5265 ▽ 564 — Spring
Number at left is altitude, in feet; number at right is sulfate content of water, in parts per million

701 — Dry hole
Number indicates depth of hole, in feet

8440 × 4590 — Stream sample
Number at left is chloride content, in parts per million; number at right is sulfate content, in parts per million

5000 — Water-table contour
Shows altitude of water table. Contour intervals 50 a. d. 100 feet. Datum is mean sea level

Pleistocene and Recent	QUATERNARY	
Pliocene(?) or Pleistocene	QUATERNARY	TERTIARY(?)
Pliocene(?)	TERTIARY(?)	
Miocene	TERTIARY	
Miocene(?)	TERTIARY	
Eocene(?)	TERTIARY	
Upper Cretaceous	CRETACEOUS	
Upper Triassic	TRIASSIC	
Permian	PERMIAN	
Pennsylvanian	PENNSYLVANIAN	CARBONIFEROUS
Mississippian	CARBONIFEROUS	
Cambrian through Mississippian	CAMBRIAN THROUGH MISSISSIPPIAN	
Precambrian	PRECAMBRIAN	

SOURCES OF GEOLOGIC DATA
1 Wilpolt and Wanek (1951)
2 Modified after Kelley (1955)
3 Modified after Schmalz (1955), unpublished
4 Author (a) reconnaissance (b) photogeology

Base modified from county highway maps by New Mexico Highway Department. Modifications of land divisions were made on the basis of topographic maps by Army Map Service and U.S. Geological Survey

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