



EXPLANATION

	Qal	Alluvium Sand and gravel	QUATERNARY
	Qt	Terrace deposits Sand and gravel	
	QTb	Basalt Flows, some cinders	TERTIARY OR QUATERNARY
	Qta	Ancha formation Silt, sand, and gravel; includes basalt tuff unit	
	Tt	Tesuque formation Fine sand and sandstone	TERTIARY
	Tu	Pre-Santa Fe Tertiary rocks Sandstone, volcanic sediments, volcanic breccias, flows, and intrusive bodies; probably include Mesozoic sedimentary rocks locally	
	Fm	Magdalena group Limestone; minor sandstone and shale	PRE-PENNSYLVANIAN
	pc	Granite, gneiss, schist, and amphibolite	

Contact
 Dashed where approximately located
 Fault

WATER-LEVEL CONTOURS

	6700	In Tesuque formation
	6800	In Ancha formation
	6900	In pre-Tesuque rocks

Contours on extrapolated pre-pumping water levels
 Some water levels do not conform to the generalized contours because of loss or gain in hydrostatic head, owing to interconnection of aquifers or to local variations in ground-water recharge and discharge

POINTS AT WHICH WATER LEVEL HAS BEEN DETERMINED

	Seismic
	Resistivity
	Well Number indicates altitude of water table. R, reported
	Spring Number indicates altitude

SUMMARY OF THE AVAILABILITY OF GROUND WATER IN THE SANTA FE AREA

- SANGRE DE CRISTO MOUNTAINS AREA**
 - Precambrian rocks are at or near the surface in most of area. Drilling is extremely difficult, and the probabilities of obtaining even small domestic supplies of water from wells are small except in valleys and other depressions, which may indicate presence of zones of fractured rocks and in which depths to water are generally less than 100 feet. If water is not obtained within 100 feet, it is unlikely that any will be obtained at greater depth. Altitudes of the stream surface at low stage are shown in the perennial stream valleys (area 5). Ground-water levels in the Precambrian rocks are generally somewhat higher than the floors of valleys for which water-level altitudes are shown, except in Rio Tesuque valley below 7,000 feet
 - 1b-1d. Pennsylvanian rocks
 - Areas in which limestone is present in significant amounts. Favorable for wells yielding 5 to 50 gpm, and in places more, although large pumping drafts may deplete the ground water locally
 - In these areas shale is predominant, and the limestone is thin or absent. These areas are unfavorable for development of even small ground-water supplies
 - Areas in which limestone is probably present in the subsurface. In these areas, the overlying Tesuque formation also may yield water
- CERRILLOS AND CIENEGA AREAS**

Rocks in these areas are early and middle Tertiary consolidated sedimentary and volcanic rocks, cropping out in scattered patches. In general, the yields of wells in these rocks are low, and they impede movement of ground water in the adjacent Tesuque and Ancha formations and in valley alluvium. Equivalent rocks that form the bedrock floor of area 5, also control ground-water movement in adjacent sediments. Most of these rocks are difficult to drill and yield only small quantities of water to wells
- PLAINS AREA**

The Tesuque and Ancha formations are the major aquifers in the plains area, and the availability of water in this area is classified on the basis of the distribution and character of these formations and on their relation to each other and to older units. Some ground water is available in the Tesuque or Ancha formation at all points in area 3, but locally near the mountain front, and in the eastern part of the plains south of Arroyo Hondo, yields are likely to be very small. Elsewhere in the plains area, at least sufficient water for ordinary domestic use is available

 - Areas where the Tesuque formation generally yields small supplies
 - Water perched in Ancha; small yields from Tesuque formation at greater depths
 - Areas where the Tesuque formation probably will sustain large yields
 - Area where the saturated zone in the Ancha formation is thin or absent, and very small supplies might be obtained from pre-Tesuque rocks
- CERROS DEL RIO AREA**

Conditions in this area are generally similar to those in the area immediately to the east, except that hard basalt layers will be found in at least the upper parts of wells. The water occurs in the Ancha and Tesuque formations at depths generally greater than 300 feet
- STREAM-VALLEY AREAS CONTAINING SATURATED ALLUVIUM**

Parts of the stream valleys that probably have saturated alluvium suitable for development by means of shallow wells or infiltration galleries are classified as area 5. In general, where alluvium is water-bearing perennially the underlying rocks have a low permeability

AVAILABILITY OF WATER AND GENERALIZED GEOLOGY IN THE SANTA FE AREA, NEW MEXICO



Base from U. S. Geological Survey topographic quadrangles, 1952

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