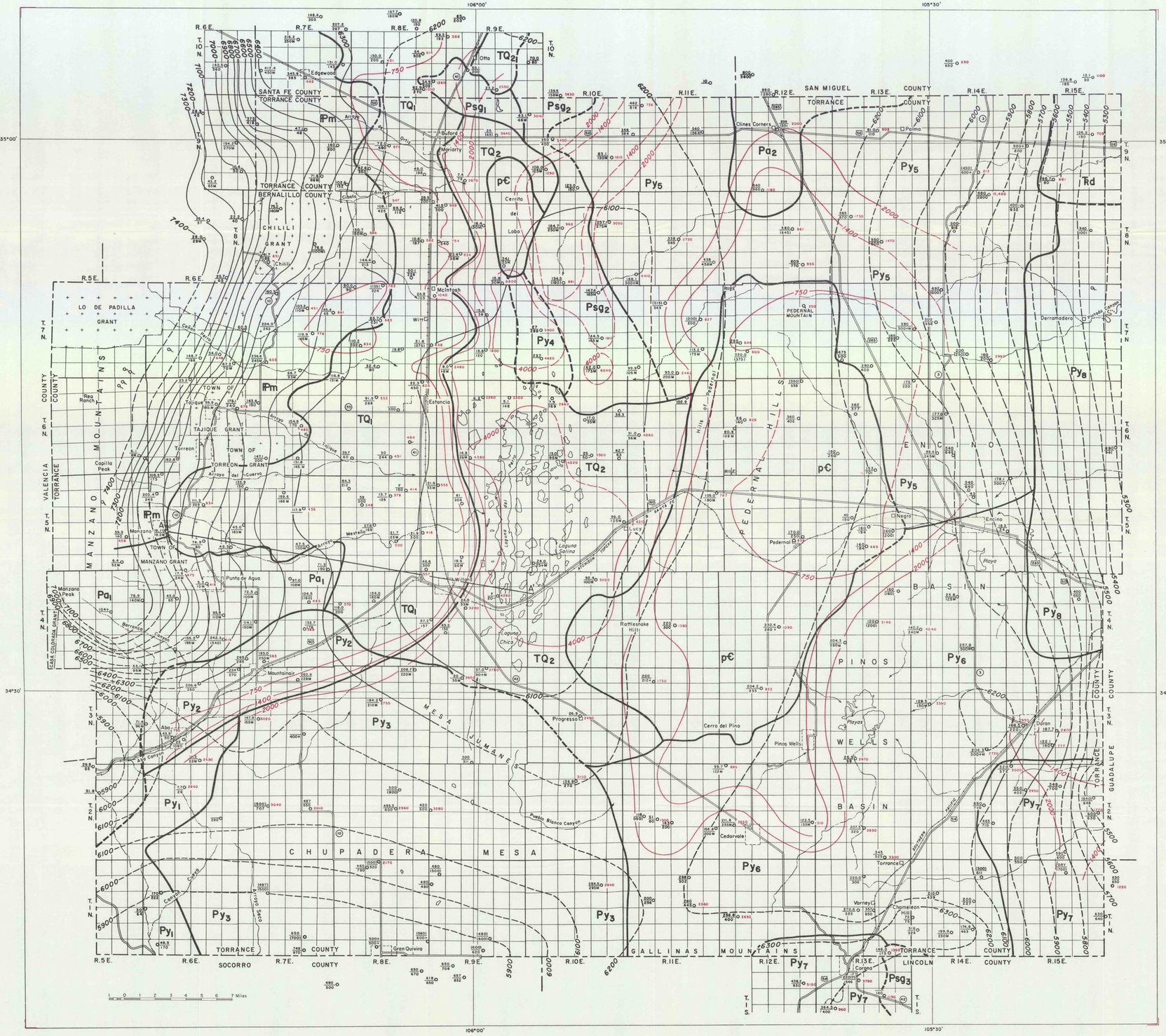

AVAILABILITY AND CHEMICAL QUALITY OF GROUND WATER AND ALTITUDE OF WATER IN WELLS IN TORRANCE COUNTY, N. MEX.

EXPLANATION

AREAS IN WHICH THE QUATERNARY AND TERTIARY(?) VALLEY FILL IS THE PRINCIPAL AQUIFER

TQ

Depth to water: 0 to 250 feet.

Quantity: Most of area furnishes water to irrigation wells. Average good well yields about 1,200 gpm. Maximum yield measured - 2,380 gpm.

Chemical quality: Satisfactory for domestic use, irrigation, and stock.

TQ_2

Depth to water: 0 to 120 feet.

Quantity: Part of area furnishes water to irrigation wells. Yields as high as 1,500 gpm reported. Adequate water for stock can be expected anywhere in area.

Chemical quality: Undesirable to unsatisfactory for domestic use and irrigation. Generally satisfactory for stock.

AREA IN WHICH THE DOCKUM GROUP IS THE PRINCIPAL AQUIFER

Rd

Depth to water: 10 to 250 feet. Perched water. May be necessary to drill 800 to 1,000 feet to main water table in Yeso formation (see Pyg).

Quantity: Adequate for windmills.

Chemical quality: Generally satisfactory for domestic use, irrigation, and stock.

AREAS IN WHICH THE GLORIETA SANDSTONE MEMBER OF THE SAN ANDRES FORMATION IS THE PRINCIPAL AQUIFER

Psg_1

Depth to water: 25 to 100 feet.

Quantity: Furnishes water to irrigation wells; yield 1,200 to 3,000 gpm. Adequate water for stock can be expected anywhere in area.

Chemical quality: Satisfactory to unsatisfactory for domestic use, irrigation, and stock.

Psg_2

Depth to water: 30 to 200 feet.

Quantity: Adequate for windmills.

Chemical quality: Generally unsatisfactory for domestic use and irrigation. Satisfactory to undesirable for stock.

Psg_3

Depth to water: Less than 150 feet (probably perched).

Quantity: Adequate for windmills and small pump jacks.

Chemical quality: Generally satisfactory for domestic use, irrigation, and stock.

AREAS IN WHICH THE YESO FORMATION IS THE PRINCIPAL AQUIFER

Py_1

Depth to water: 5 to 180 feet.

Quantity: Generally adequate for windmills.

Chemical quality: Generally unsatisfactory for domestic use and irrigation. Satisfactory for stock.

Py_2

Depth to water: 25 to 300 feet.

Quantity: Adequate for windmills in most of area. Northeast of Mountainair two wells pumped for municipal supply at 133 and 240 gpm derive water from limestone.

Chemical quality: Generally satisfactory for domestic use, irrigation, and stock.

Py_3

Depth to water: 175 to 750 feet.

Quantity: Adequate for windmills.

Chemical quality: Generally unsatisfactory for domestic use and irrigation. Satisfactory for stock.

AREAS IN WHICH THE YESO FORMATION IS THE PRINCIPAL AQUIFER. Continued

Py_4

Depth to water: 20 to 50 feet.

Quantity: Furnishes water to irrigation wells; yield of 2,250 to 3,000 gpm reported. Adequate water for stock can be expected anywhere in area.

Chemical quality: Unsatisfactory for domestic use. Unsatisfactory, but used, for irrigation. Undesirable for stock.

Py_5

Depth to water: 40 to 625 feet.

Quantity: Generally adequate for windmills.

Chemical quality: Satisfactory to unsatisfactory for domestic use and irrigation. Generally satisfactory for stock.

Py_6

Depth to water: 15 to 325 feet.

Quantity: Generally adequate for windmills.

Chemical quality: Generally unsatisfactory for domestic use and irrigation. Satisfactory for stock. South and southwest of Pinos Wells, satisfactory for domestic use, irrigation, and stock.

Py_7

Depth to water: 200 to 650 feet.

Quantity: Adequate for windmills.

Chemical quality: Generally unsatisfactory for domestic use and irrigation. Satisfactory for stock.

Py_8

Information limited.

Depth to water: 400 to 900 feet.

Quantity: Adequate for windmills.

Chemical quality: No analyses available. Generally unsatisfactory for domestic use. Satisfactory for stock.

AREAS IN WHICH THE ABO FORMATION IS THE PRINCIPAL AQUIFER

Pa_1

Depth to water: 5 to 260 feet.

Quantity: Adequate to inadequate for windmills.

Chemical quality: Satisfactory for domestic use, irrigation, and stock.

Pa_2

Depth to water: 825 to 900 feet.

Quantity: Adequate for wells equipped with large pump jacks.

Chemical quality: Satisfactory to undesirable for domestic use and irrigation. Satisfactory for stock.

AREAS IN WHICH THE ARKOSIC LIMESTONE MEMBER OF THE MADERA LIMESTONE IS THE PRINCIPAL AQUIFER

Pm

Depth to water: 5 to 360 feet. Most shallow wells are in western (higher) parts of area.

Quantity: Usually adequate for windmills. Irrigation wells are present along western margin of Estancia Valley, but supply is likely to become inadequate after a few years of use.

Chemical quality: Satisfactory for domestic use, irrigation, and stock.

AREAS IN WHICH THE PRECAMBRIAN ROCKS ARE THE PRINCIPAL AQUIFER

pC

Depth to water: 30 to 375 feet.

Quantity: Generally adequate for windmills and commonly adequate for wells equipped with pump jacks. Railroad supply well north of Negra test-pumped at 110 gpm.

Chemical quality: Satisfactory to undesirable for domestic use and irrigation. Satisfactory for stock.

184.2 / 210 M ○ 895 Well. Most wells listed in well tables are shown hereon, except in Estancia Valley (see pl. 3). Figure above line -- depth to water in feet, measured water levels in tenths of a foot. Figure below line -- depth of well in feet; "M" means measured depth. Parentheses mean the figure is approximate. "F" means flowing. Figure in red -- specific conductance of water sample from well.

Spring (only observed springs shown).

Approximate boundary of different aquifers, dashed where information is limited.

Contour line of water level, feet above sea level, dashed where information is limited. Contour interval, 100 feet.

Line of equal specific conductance, micromhos, dashed where information is limited. Values shown -- 750, 1,400, and 2,000. Lines are generally representative of water at shallow depths where information is available on vertical variation of specific conductance.

Water-level and chemical-quality information based on data collected between 1941 and 1953.

Base map adapted from County Highway Planning Map, 1951.