EXPLANATION

QUATERNARY

Recent

Qd — **Dune sand**
Loose windblown sand; 0–100 feet thick. Not known to yield water to wells

Qal — **Younger alluvium**
Sand, gravel, silt, and clay; 0–80 feet thick. Yields 0.25–9 gpm of good quality water to wells

Pleistocene

Qc — **Upland cover of older alluvium**
Unconsolidated silty sand, clay, and gravel; 0–600 feet thick. Yields 0.25–325 gpm of poor to good quality water to wells

TERTIARY

Pliocene

To — **Ogallala Formation**
Caliche and stratified gravel, sand, silt, and clay; 0–250 feet thick. Yields 0.1–1600 gpm of good quality water to wells

CRETACEOUS

Lower Cretaceous

Ks — **Sandstone and shale**
Pajarito Shale 0–80 feet thick, Mesa Rica Sandstone 0–120 feet thick, and Tucumcari Shale 0–60 feet thick. Yields 0.5–3 gpm of good quality water to wells

JURASSIC

Upper Jurassic

Jm — **Morrison Formation**
Variegated red and blue clay, blue shale, and buff sandstone; 0–240 feet thick. Yields 1–2 gpm of good quality water to wells

Je — **Entrada Sandstone**
Fine- to medium-grained, poorly cemented, light-buff to white sandstone; some limestone and siltstone; 0–240 feet thick. Yields 1.5–250 gpm of good quality water to wells

Js — **Shale and siltstone**
Age relation to other Jurassic rocks is unknown. Not water-bearing

TRIASSIC

Upper Triassic

Trc — **Redonda and Chinle Formations**
Red shale, siltstone, sandstone, variegated red and blue clay, and limestone; 0–1230 feet thick. Yields 0.1–20 gpm of very poor to fair quality water to wells

Trsr — **Santa Rosa Sandstone**
Gray or red irregularly bedded sandstone, clay, shale, and conglomerate; 220–450 feet thick. Yields 1–50 gpm of good quality water to wells

Contact
Dashed where approximately located

Fault
Dashed where approximately located; dotted where concealed

A — A' Line of diagrammatic section

Section A–A' shown on Plate 3

Section B–B' shown on Plate 4

Section C–C' shown on Plate 5

UNION COUNTY

HARDING COUNTY

SAN MIGUEL COUNTY

GUADALUPE COUNTY

DE BACA COUNTY

CURRY COUNTY

QUAY COUNTY

ROOSEVELT COUNTY

LOCKNEY · PUERTA VISA · OBAR · SAND SPRINGS · LOGAN · HUDSON · TUCUMCARI · LESBIA · PORTER · NEW ENDEE · GLENRIO · ENDEE · BARD · SAN JON · NORTON · WHEATLAND (CAMERON P.O.) · RAGLAND · JORDAN · FORREST · McALISTER · HOUSE · HASSELL · IMA · MONTOYA · SALOMAS · LOUISIANA MESA

Tucumcari Lake · Metropolitan Park · Tucumcari Mountain · Liberty Mesa · Mesa Rica · Redonda · Bonita Fault · High Plains

Base map adapted from New Mexico State Highway Commission Planning Maps, 1956

GEOLOGIC SOURCE INFORMATION

1. Dobrovolny, Ernest, Summerson, C. H., and Bates, R. L., Geology of Northwestern Quay County, USGS Oil and Gas Preliminary Map–62, 1946, generalized by C. F. Berkstresser, Jr.

2. Reconnaissance geologic mapping and photo interpretation by C. F. Berkstresser, Jr. (area of Bonita Faultzone mapped by Alfred Clebsch, Jr.), in part adapted from Darton, N. H., Geologic Map of New Mexico, 1928

3. Spiegel, Z. E., unpublished field mapping, slightly modified by C. F. Berkstresser, Jr.

GEOLOGIC MAP OF QUAY COUNTY, NEW MEXICO