

19. Log of test hole 19 in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T. 34 S., R. 31 W., drilled by the State and Federal Geological Surveys, 1944. Surface altitude, 2,611 feet. (Authority, samples studied by Oscar S. Fent and Thad G. McLaughlin.)

	Thickness, feet	Depth, feet
Beade formation		
Sand, coarse to fine, and gravel, medium to fine; containing brown silt	3	3
Sand, coarse to fine, and gravel, medium to fine; cemented with calcium carbonate to form "mortar beds"	4	7
Roxroad and Laverne formations		
Clay, light-gray, containing a little sand, coarse to fine	4	11
Sand, coarse to fine, and silt, clayey, light greenish-gray and pink-buff; containing fine to medium gravel	7	18
Gravel, fine, and sand	8	26
Sand, medium to fine, consolidated	4	30
Sand, coarse to fine, and gravel, medium to fine; containing light-brown silt and gray-green clay	53	83
Caliche, gray-white, containing fine to medium sand	1	84
Sand, coarse to fine, and gravel, medium to fine	26	110
Gravel, medium to fine, and sand	53	173
Caliche, hard, white, containing fine to medium sand	1	174
Gravel, fine, and sand, containing clay, gray-green and yellow	6	180
Gravel, fine, and sand; in part cemented; containing blue-gray and light gray-green clay in lower part	20	200

Sand, coarse to fine, and gravel, fine	63	263
Silt, soft light yellow-buff and light-gray	5	268
Sand coarse to fine, and gravel, fine	30	298
Clay, soft, buff, containing fine to coarse sand	7	305
Gravel, fine, and sand	135	440
Clay, light yellow-brown, light greenish-gray, light pink-buff, and brown, containing fine to medium sand	28	468
Permian redbeds		
Shale, dull-red	12	480

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