

EXPLANATION



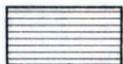
Uplands above 400 feet with 30 to 100 feet of Holly Springs sand covered by 5 to 25 feet of gravel and loess. Good quality water in quantities suitable for domestic use is obtainable from three horizons. At depths of about 30 feet, water of good quality can sometimes be obtained from the gravel. At depths of about 50 to 80 feet, softer water, although generally higher in iron content, is available in the Holly Springs sand. At depths of about 300 to 400 feet, water may be obtained from sands in the Ripley formation. The water in the Ripley formation is generally harder and higher in iron content than that in the Holly Springs sand.



Hill slopes and valleys between altitudes of 350 and 400 feet with as much as 30 feet of Holly Springs sand covered by a thin mantle of gravel and loess. A few shallow wells obtain water of good quality from the Pliocene(?) gravels. At depths of 15 to 30 feet softer water, although generally higher in iron content, can be obtained from the Holly Springs sand. At depths of about 300 to 400 feet, water may be obtained from sands in the Ripley formation. The water in the Ripley formation is generally harder and higher in iron content than that in the Holly Springs sand.

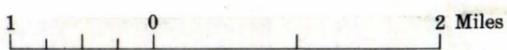


River bottoms and lowlands below 350 feet altitude which are underlain chiefly by Quaternary alluvium. The Porters Creek clay underlies the alluvium in almost all of the area. At depths of 10 to 100 feet, water of fair quality in quantities suitable for domestic use can be obtained from the alluvium. Depths to water range from 5 to 25 feet. The water is generally hard and may have a high iron content. At greater depths softer water, but higher in iron content, can be obtained from sands in the Ripley formation. Depths to the Ripley formation range from about 100 feet in the northeastern part of the area to about 300 feet in the western and southern parts of the area. Some of the wells in the Ripley formation produce enough water for small industrial supplies.



Upland area in the eastern and northeastern part of the Paducah area in which the Porters Creek clay occurs at altitudes of 330 to 360 feet. A small outcrop of the Ripley formation is at the north edge of the area. A blanket of gravel 25 to 50 feet thick covers the Porters Creek clay. Good quality water in amounts large enough for household use can be obtained from the gravel at depths of 40 to 60 feet. Most wells probably encounter the water near the base of the gravel and additional footage into the clays acts as storage space. At greater depths, water of similar quality, although higher in iron content, can be obtained from the Ripley formation. Depth to the Ripley formation ranges from about 50 feet at Reidland to 300 feet in the southern part of the area.

MAP OF PADUCAH AREA, KENTUCKY, SHOWING THE AVAILABILITY OF GROUND WATER



408539 O - 57 (in pocket)