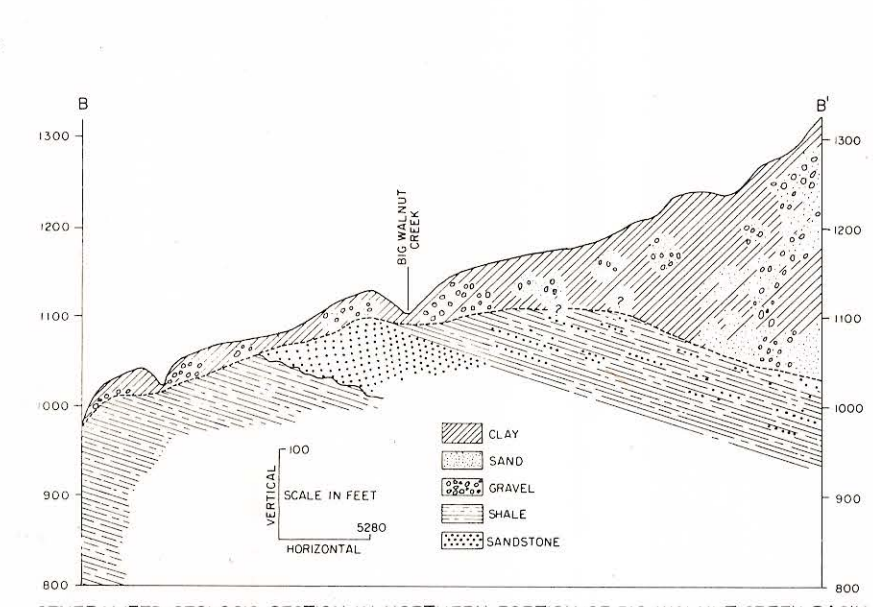


GENERALIZED GEOLOGIC SECTION BENEATH THE SOUTHERN PORTION OF BIG WALNUT CREEK BASIN



GENERALIZED GEOLOGIC SECTION IN NORTHERN PORTION OF BIG WALNUT CREEK BASIN

LEGEND

- AREAS IN WHICH WELLS YIELD AS MUCH AS 1000 GALLONS PER MINUTE OR MORE**

Permeable sand and gravel deposits adjacent to the major perennial streams. Large sustained yields recharged by stream infiltration.
- AREAS IN WHICH WELLS YIELD 100 TO 500 GALLONS PER MINUTE**

Regionally extensive permeable sand and gravel deposits yield as much as 500 gallons per minute. Interbedded sand and gravel deposits underlying thick till beneath the Alum Creek valley may yield as much as 200 gallons per minute. Test drilling may be necessary to locate the coarser materials.
- Thin to thick lenses of sand and gravel interbedded in layers of clay. Glacial materials above the shale bedrock are reported to be less than 150 feet thick. Large yields are reported, however, isolated aquifers are noted.
- AREAS IN WHICH WELLS YIELD 5 TO 25 GALLONS PER MINUTE**

Berea sandstone aquifer of variable thickness beneath 3 to 125 feet of glacial drift. Although yields of 70 gallons per minute have been reported, the average yield is more likely less than 25 gallons per minute.
- Thin to thick glacial moraine deposits consisting of thin lenses of sand and gravel interbedded in thick layers of clayey till. Thin to thick sandstone formations or non-water-bearing shale lie beneath these glacial deposits.
- Lenses of sand and gravel interbedded in clayey till and deposited above shale. Yields of as much as 25 gallons per minute, sufficient for small industrial, farm, and domestic needs may be developed.
- Irregular thin lenses of sand and gravel interbedded in thick layers of clayey till. Yields of 5 to 10 gallons per minute are generally available, although some wells are as much as 200 feet deep.
- AREAS IN WHICH WELLS MAY YIELD LESS THAN 5 GALLONS PER MINUTE**

Relatively thick glacial drift composed essentially of clayey till, overlying shale, and ranging from 8 to 91 feet thick. Limited quantities of ground water are developed; dug wells and cisterns are often necessary to supplement water needs.
- Approximate boundary of glacial moraines.

EXPLANATION OF SYMBOLS

- Domestic well
 - ⊙ Industrial well
 - ⊕ Municipal well
 - S Sand
 - G Gravel
 - UN Clay, sand, gravel
 - LS Limestone
 - SH Shale
 - SS Sandstone
- $\frac{\%}{\%}$ Chemical analysis in text.
 Total depth (Ft.) - Water-bearing formation - Yield (gpm)
 Depth to bedrock (Ft.)

MAP OF THE
BIG WALNUT CREEK BASIN
SHOWING
AVAILABILITY OF
UNDERGROUND WATER

PUBLISHED BY - STATE OF OHIO, DEPARTMENT OF NATURAL RESOURCES, DIVISION OF WATER

This is a generalized map, showing the potential underground-water resources, based on data presently available. Detailed studies and exploratory drilling are needed to fully define the hydrologic characteristics of the buried valleys and bedrock aquifers.