GENERALIZED GEOLOGIC MAP OF WASHINGTON COUNTY AND LOCATIONS OF SELECTED WELLS

1974

EXPLANATION

QUATERNARY

Qal

SURFICIAL DEPOSITS

Unconsolidated clay, silt, sand, gravel and some boulders in stream valleys. Most grains rounded; texture ranges from poorly to well sorted. (Not mapped)

Data are scarce; reported yields from two wells: 200 and 350 gpm. Depths range from 28 to 63 feet. Water is generally hard and has a high iron, manganese and dissolved solids content; also low turbidity and generally bacteriologically pure.

PERMIAN

Pg

GREENE FORMATION

Sandstone grading into thin-bedded shaly sandstone with thin shaly limestone and thin coal beds.

A sandstone 10 to 40 feet thick is most important water-yielding unit in this formation. Yields are low, ranging from 1 to 35 gpm, because of low permeability shales and the smallness and scarcity of fractures. Well depths range from 32 to 308 feet, most less than 120 feet. The water is of good quality, but moderately hard.

PENNSYLVANIAN

PPw

WASHINGTON FORMATION

Alternating beds of shale and sandstone and several coal beds; some discontinuous limestone units.

Poor producer of water because of shale members and scarcity of fractures. Well yields range from 1 to 70 gpm; median of 2 gpm. Depths of wells range from 36 to 304 feet.

Pm

MONONGAHELA GROUP

Dense and massive to thin-bedded limestone, discontinuous shales and sandstones and several mineable coals.

Yields of wells are low because of smallness and scarcity of fractures and dewatering by coal mining. Well yields range from 0.1 to 50 gpm; a median of 1 gpm. Yields greater than those for domestic purposes are difficult to obtain. Depths of wells range from 50 to 400 feet, most are over 100 feet. Water is largely calcium bicarbonate type; chloride concentrations are high where unit lies greater than 100 feet below major streams.

Pc

CONEMAUGH GROUP

Primarily sandstone and shale with lesser amounts of limestone and coal.

Best units for water are sandstone beds. Water is generally obtained from bedding and joint planes in the shales and limestones. Well yields are small to moderate with a median of 5 gpm; some wells yield 50 to 160 gpm. Well depths range up to 438 feet. Yields are sufficient for domestic purposes; however, large quantities for industrial and municipal purposes are more difficult to obtain. Water shows a wide range in chemical character.

● 155 ● 498S
Well (S indicates data from well completion report)

Sp3
Spring

075000
Gaging Station

Geologic Contacts

MN GN
5° 89 MILS
0°27′ 8 MILS
UTM GRID AND 1969 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

Scale $\frac{1}{125000}$
1 ½ 0 1 2 3 4 5 6 7 8 9 Miles
3000 1500 0 3000 6000 9000 12000 Yards
5000 0 5000 10000 15000 20000 25000 Feet
1 0 1 2 3 4 5 6 Kilometers

Base map and geology by Pennsylvania Geologic Survey