

EXPLANATION

HYDROGEOLOGIC ENVIRONMENTS

I-A-1

Sand and gravel aquifer 150-200 feet or more thick; no areally extensive interstratified clay layers present; recharge by induced stream infiltration available. Transmissibility generally ranges from 300,000 to 500,000 gpd per foot. Storage coefficient about 0.2. Individual wells can yield as much as 3,000 gpm

I-A-2

Sand and gravel aquifer less than 150 feet thick; no areally extensive interstratified clay layers present; recharge by induced stream infiltration available. Transmissibility generally ranges from 100,000 to 300,000 gpd per foot. Storage coefficient about 0.2. Individual wells can yield as much as 3,000 gpm

I-B-1

Sand and gravel aquifer 150-200 feet or more thick; areally extensive interstratified clay layers may be present; recharge by induced stream infiltration available. Transmissibility of entire aquifer generally ranges from about 250,000 to 450,000 gpd per foot; transmissibility of individual component units is lower. Storage coefficient is about 0.2 in upper, unconfined unit and ranges from 0.02 to 0.0002 in lower, semiconfined or confined units. Properly located and developed individual wells in lower units can yield as much as 3,000 gpm. Yields in upper unit generally do not exceed 500 gpm owing to lack of available drawdown

I-B-2

Sand and gravel aquifer less than 150 feet thick; areally extensive interstratified clay layers may be present; recharge by induced stream infiltration available. Transmissibility generally ranges from 100,000 to 200,000 gpd per foot. Storage coefficient ranges from 0.2 to 0.0002, depending on degree of confinement. Individual wells can yield as much as 2,000 gpm

II-A-1

Sand and gravel aquifer 150-200 feet or more thick; no areally extensive interstratified clay layers present; recharge by induced stream infiltration available. Transmissibility generally ranges from 300,000 to 500,000 gpd per foot. Storage coefficient about 0.2. Individual wells can yield 500 gpm, with some favorably located wells yielding as much as 1,000 gpm

II-A-2

Sand and gravel aquifer less than 150 feet thick; no areally extensive interstratified clay layers present; recharge by induced stream infiltration not available. Large ground-water supplies generally cannot be developed in this environment owing to its insufficient areal extent or proximity to bedrock valley walls

II-B-1

Sand and gravel aquifer 150-200 feet or more thick; areally extensive interstratified clay layers may be present; recharge by induced stream infiltration not available. Transmissibility generally ranges from 250,000 to 450,000 gpd per foot. Storage coefficient ranges from 0.2 to 0.0002, depending on degree of confinement. Individual wells can yield 100-500 gpm

II-B-2

Sand and gravel aquifer less than 150 feet thick; areally extensive interstratified clay layers may be present; recharge by induced stream infiltration not available. Large ground-water supplies generally cannot be developed in this environment owing to its insufficient areal extent and proximity to the bedrock valley wall

III

Sand and gravel aquifer overlain by clay; stream recharge generally not available. Transmissibility ranges from 35,000 to 300,000 gpd per foot. Storage coefficient ranges from about 0.1 to 0.002. Individual wells can generally be expected to yield 100-500 gpm; yields as high as 1,000 gpm are not uncommon. The transmission and storage properties of this environment are highly variable

IV

Valley filled largely or entirely with clay; large ground-water supplies generally not available

V

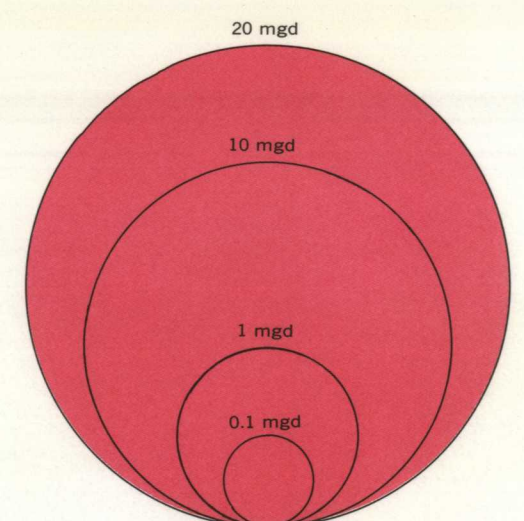
Shale bedrock overlain by 50 feet or less of relatively impermeable glacial till; large ground-water supplies generally not available

550

Piezometric contour  
Shows altitude of piezometric surface in October 1964. Contour interval, 10 feet with supplemental 5-foot contours. Datum is mean sea level. Dashed where inferred

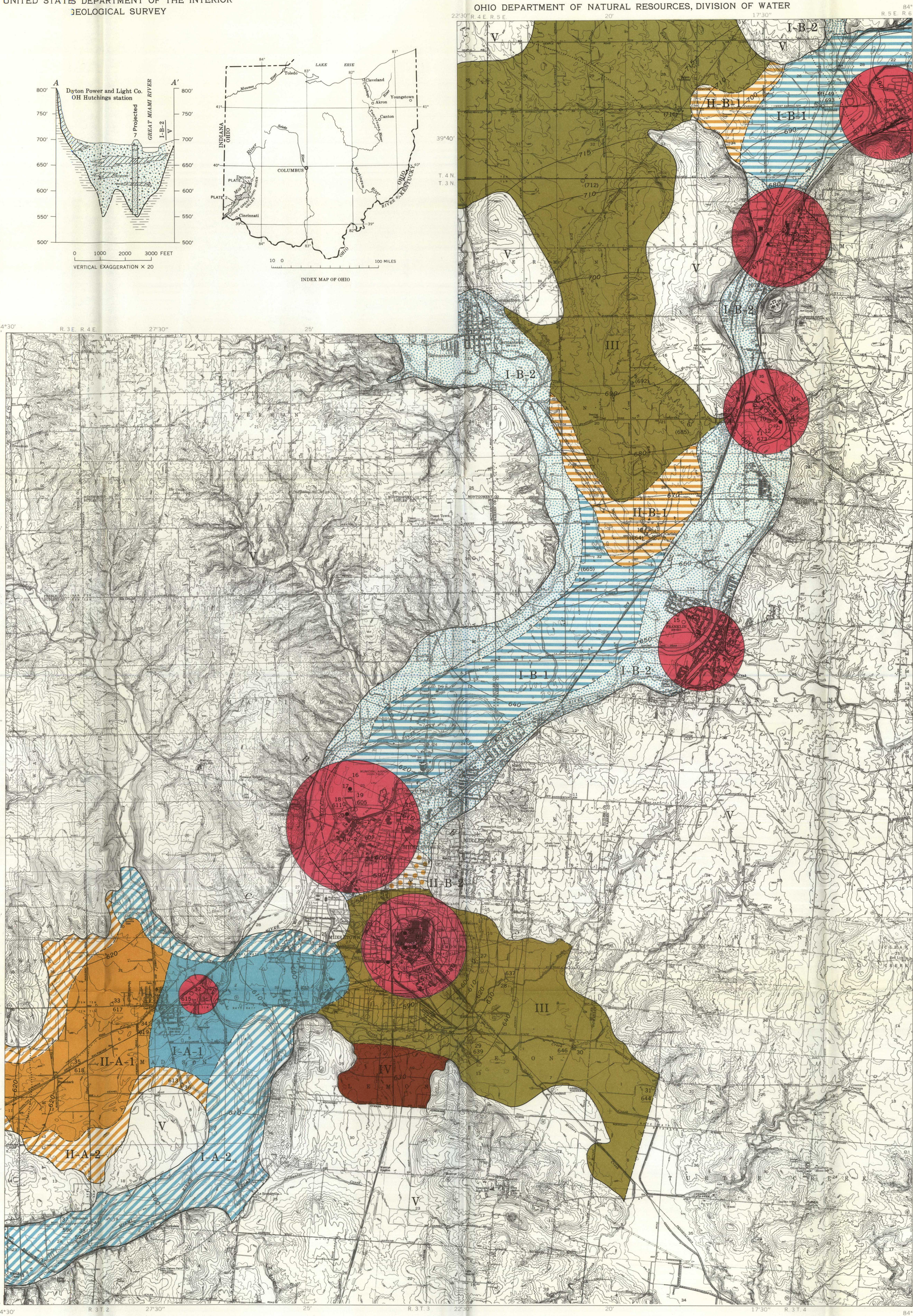
WELLS

- 39 — Number of well
- 544 — Measured altitude of water surface, in feet above mean sea level
- 60 — Number of well
- (491) — Projected altitude of water surface, in feet above mean sea level
- 31 — Well sampled for chemical analysis
- 1 — Stream-sampling station and number (See table 9)
- Stream-gaging station
- Boundary of buried valley
- Arbitrary limit of area of investigation
- Ground-water divide



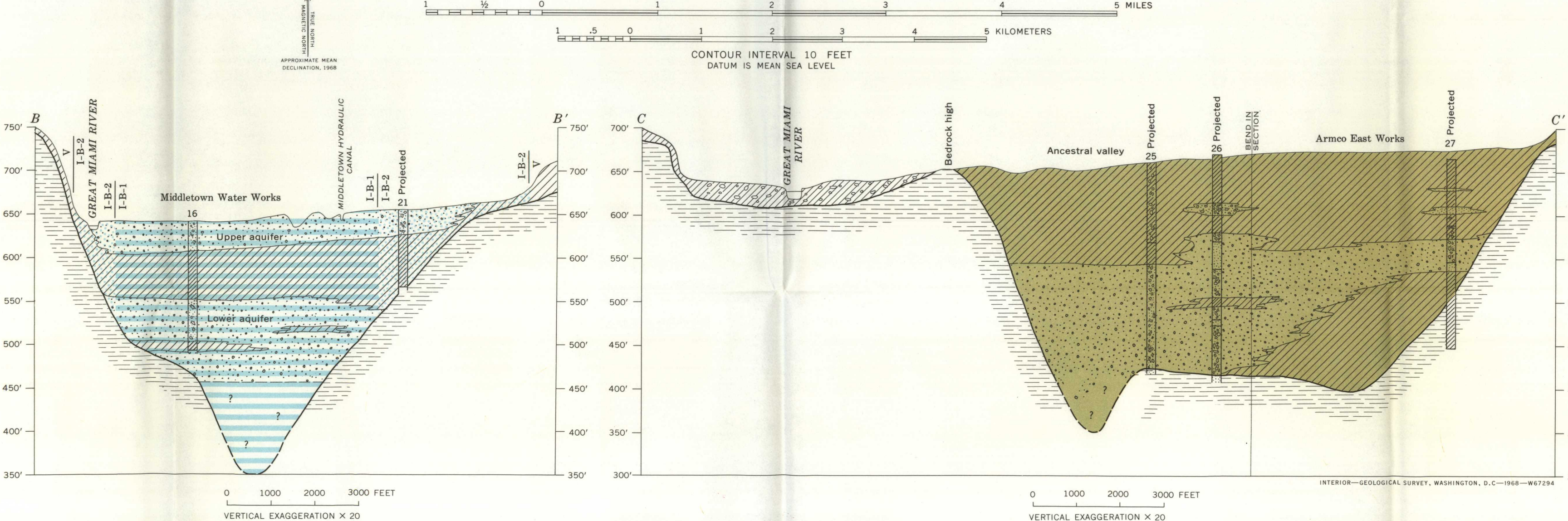
SECTIONS

- Soil
- Till
- Sand
- Fine sand and silt
- Sand and gravel
- Dirty sand and gravel
- Poorly stratified gravel mixed with till
- Clay and till
- Clay
- Weathered bedrock in section E-E'
- Bedrock
- Shale in sections E-E' and F-F'
- Shale and thin interbedded limestone in remaining section
- Seismic depth determination
- Boundary of buried valley
- Dashed where approximately located
- Lithologic boundary
- Dashed where approximately located; queried where doubtful



Base from U.S. Geological Survey  
Franklin, 1955, and Miamisburg NE, 1955

Hydrogeology by Andrew M. Spieker



HYDROGEOLOGIC MAP AND SECTIONS OF THE LOWER GREAT MIAMI RIVER VALLEY FROM  
WEST CARROLLTON TO NEAR WOODSDALE, SOUTHWESTERN OHIO