

Base From U.S. Geological Survey  
Lansdale 1:24,000 1983 Contour interval 10 Feet

SCALE 1:16,000  
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Stratigraphy from Lyttle and Epstein, 1987  
Geologic contacts after Longwill and Wood, 1965



ALTITUDE AND CONFIGURATION OF THE POTENTIOMETRIC SURFACE IN THE UPPER TRIASSIC SEDIMENTARY ROCKS AT AND NEAR THE NORTH PENN AREA 12 SUPERFUND SITE, WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA, JULY 20-27, 1995

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EXPLANATION

APPROXIMATE BOUNDARY OF THE NORTH PENN AREA 12 SUPERFUND SITE-- The site is underlain by Upper Triassic sedimentary rocks of the Lockatong Formation (Trl) consisting of siltstone, shale, and sandstone. Lower Jurassic and Upper Triassic sedimentary rocks of the lower part of the Brunswick Group (J Trbl) are found north-northwest of the site.

POTENTIOMETRIC CONTOUR-- Shows altitude of potentiometric surface as defined by measured water levels. Dashed where approximately located. Contour interval is 20 feet. Altitude is in feet above the National Geodetic Vertical Datum of 1929.

WATER-LEVEL MEASUREMENT SITE-- Symbol gives approximate location of site. Number is the altitude of a static water-level measurement in a drilled well in feet above the National Geodetic Vertical Datum of 1929. Water levels may reflect composite of heads in multiple yielding zones.

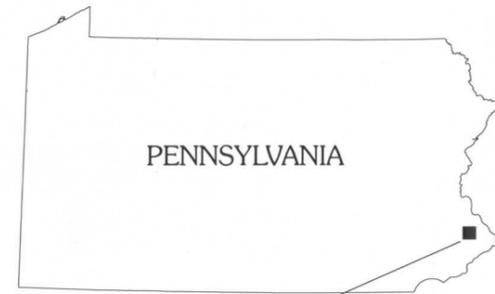
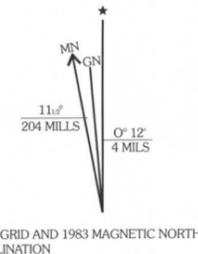
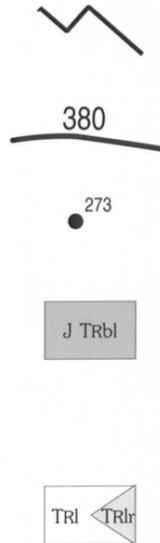
DESCRIPTION OF MAP UNITS

Lower part of the Brunswick Group (Lower Jurassic and Upper Triassic)-- Predominantly grayish-red to reddish-brown, evenly to irregularly bedded, thin- to thick-bedded shale, siltstone, very fine to coarse-grained sandstone, and red-matrix conglomerate. Mudcracks, ripple marks, crossbeds, and burrows are common. Lower contact with the Lockatong Formation (Trl) is gradational through about 1,640 ft and mapped where thickness of red beds is dominant over thickness of gray and black beds. Interfingers laterally with the Lockatong (Trl), lower contact is conformable and gradational to older rocks of the Newark Supergroup.

Lockatong Formation (Upper Triassic)-- Predominantly laminated to thick-bedded gray and black siltstone and shale; rich in fossils. Main unit composed of alternating detrital and chemical cycles. Contains interbedded, reddish-brown sandy siltstone in units from 10 to 270 ft thick (Trlr). Detrital cycles: lower part laminated, medium dark gray to black, calcareous, pyritic siltstone and shale, overlain by platy to massive, disrupted (mudcracked and burrowed), dark-gray, calcareous siltstone, ripple-bedded siltstone, and fine-grained sandstone, more common in the lower Lockatong. Averages about 17 ft thick. Chemical cycles: Lower part platy, medium-dark-gray to black, dolomitic siltstone and marlstone, with shrinkage cracks and lenses of pyritic limestone, overlain by massive, gray or red, analcime- and carbonate-rich, disrupted siltstone. Average thickness about 10 ft. Lower contact of the Lockatong is gradational, placed at base of lowest continuous black siltstone bed.

REFERENCES CITED

- Longwill, S.M., and Wood, C.R., 1965, Ground-water resources of the Brunswick Formation in Montgomery and Berks Counties, Pennsylvania: Pennsylvania Geological Survey, 4th Series., Bulletin W 22, 59 p.
- Lyttle, P.T., and Epstein, J.B., 1987, Geologic map of the Newark 1° x 2° Quadrangle, New Jersey, Pennsylvania and New York: U. S. Geological Survey Miscellaneous Investigative Series Map 1 - 1715, 2 plates, scale 1:250,000.



LOCATION OF MAPPED AREA