

**CORRELATION OF MAP UNITS**

Jc	Jd	Jo	Jurassic
Rb	Rl	Rs	Triassic
UNCONFORMITY			
Cok	Ch	PC	Cambrian-Ordovician Cambrian Precambrian
UNCONFORMITY			

- DESCRIPTION OF MAP UNITS**
- SEDIMENTARY ROCKS**
- Rb** BRUNSWICK FORMATION- Predominantly red or reddish-brown shales and siltstones with lesser amounts of fine-grained feldspathic sandstone and green, yellow, gray or purple shales and argillite. Usually altered to hornfels within 25 to 100 feet of major diabase bodies. Includes coarse sandstones and conglomerates in northwestern portion of quadrangle.
  - Rl** LOCKATONG FORMATION- Primarily reddish-brown, black and gray, cyclically bedded, lacustrine siltstone.
  - Rs** STOCKTON SANDSTONE- Light-gray, yellow, buff and red-colored arkose with subordinate red siltstone.
  - Cok** KITTATINNY SUPERGROUP (undifferentiated)- Primarily light- to medium gray, tan- or brown-weathering, massive dolomite. Fissile, shaly layers 2 to 6 feet thick are present in places.
  - Ch** HARDYSTON SANDSTONE- Light-pink, gray or brown, locally arkosic, fine- to coarse-grained quartzite.
- IGNEOUS AND METAMORPHIC ROCKS**
- Jc** CUSHETUNK MOUNTAIN DIABASE- Discordant, fine- to coarse-grained, ophitic, high-Fe<sub>2</sub>O<sub>3</sub> diabase. Grades from a fine-grained, quartz normative tholeiitic diabase near the contacts with the Brunswick Formation into a coarse-grained, iron-rich granophyric diabase near its interior.
  - Jd** DIABASE- Dark-gray to black, fine- to medium-grained quartz tholeiite intrusion, occurs as dikes less than 10 feet wide.
  - Jo** ORANGE MOUNTAIN BASALT- Fine-grained, tholeiitic basalt, vesicular in places.
  - PC** PRECAMBRIAN ONEISSSES (undifferentiated)- Primarily white granite-gneiss composed of oligoclase and quartz with hornblende, pyroxene and biotite.

- MAP SYMBOLS**
- Contact, approximately located
  - Fault, approximately located, showing direction of dip (U Uprthrown side, D Downthrown side)
  - ..... Concealed fault
  - ▲ Strike and dip of beds
  - Horizontal beds
  - ⊗ Abandoned clay pit
  - ⊗ Abandoned diabase quarry
  - ⊗ Abandoned copper mine
  - ⊗ Abandoned iron mine
  - Unconsolidated Cenozoic sediments overlying named geologic unit. Thickness usually 5 to 20 feet.

**REFERENCES**

Bayley, W.S., Salisbury, R.D., and Kummel, H.B., 1914, Raritan Folio, N.J.: U.S. Geol. Survey Geol. Atlas, Folio 191.

Bell, C., unpub., Inventory of active and abandoned mines, pits and quarries in New Jersey: New Jersey Geol. Survey.

Bureau of Engineering Research, 1950-1957, Engineering soil survey of New Jersey, reports 1-22: Engineering Research Bulletins 15-36, Rutgers University, College of Engineering, New Brunswick, N.J.

Johnson, M.E., 1950, Geologic map of New Jersey: N.J. Geol. Survey, Atlas Sheet 40, scale 1:250,000 (revision of geologic map of New Jersey by Lewis, J.V., and Kummel, H.B., 1910-1912).

Johnson, M.E., and Markewicz, F.J., 1958, Spruce Run-Round Valley reservoir project, Raritan River basin water resources development: N.J. Div. of Water Policy and Supply, Special Report 15.

Kummel, H.B., unpub., Field maps: New Jersey Geol. Survey, (ca. 1900).

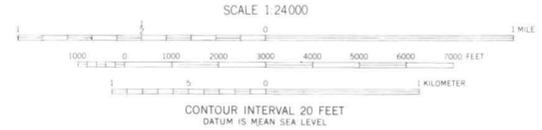
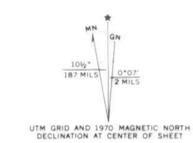
N.J. Geol. Survey (undated), Geologic Overlay Series (ca. 1975, overlay maps of geologic contacts for N.J. Geol. Survey Topographic Atlas, Sheets 21-36, scale 1:63,360).

Olsen, F.E., 1980, Triassic and Jurassic formations of the Newark Basin, in Manspeizer, W., ed., Field studies of New Jersey geology and guide to field trips: 52nd annual meeting of the New York State Geological Assoc., Rutgers University, Newark, N.J., p. 2-41.

Puffer, J.H., and Lechler, P., 1979, The geochemistry of Cushtunk Mountain, New Jersey, N.J. Acad. Science v. 24, p. 1-5.

U.S. Dept. of Agriculture, 1962-pres., National Cooperative Soil Survey; U.S. Dept. of Agriculture, Soil Conservation Service (County Soil Reports).

Base from U.S. Geological Survey, 1954  
Photorevised as of 1970  
10,000 Foot grid based on New Jersey  
Coordinate system.  
Universal Transverse Mercator grid ticks,  
Zone 18, shown at 1000 meter intervals.



Contacts and faults modified from N.J. Geol. Surv. (undated), Bayley and others (1914), and Johnson and Markewicz (1958). Additional bedrock data from Kummel (unpub.), N.J. Geol. Surv. permanent geologic notes (unpub.), and Johnson and Markewicz (1958). Extent and thickness of surficial deposits modified from Bayley and others (1914), Johnson (1950), N.J. Geol. Surv. permanent geologic notes (unpub.), Bureau of Engineering Research (1950-1957), U.S. Dept. of Agriculture (1962-pres.), Mines, pits and quarries from Bell (unpub.). Descriptions modified for this quadrangle from Puffer and Lechler (1979), Olsen (1980), and other sources.

This map is an interim product and will be revised.

**GEOLOGIC COMPILATION MAP OF THE  
FLEMINGTON QUADRANGLE, NEW JERSEY**

By  
Lloyd G. Mullikin  
1984