DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

MISCELLANEOUS GEOLOGIC INVESTIGATIONS
MAP I-514-A (SHEET 3 OF 7)

EXPLANATION

The map units are based on lithology and do not imply stratigraphic succession. See accompanying table for detailed descriptions and engineering properties. Heavy border around box indicates unit present on this map

24 — Conglomerate (fanglomerate)

23 — Basalt flows, diabase dikes, and sills

22 — Chiefly red sandstone and shale with conglomerate

21 — Black shale, mudstone, and siltstone
Locally well cemented and very hard

20 — Chiefly red shale

19 — Conglomerate
Relatively unmetamorphosed; well cemented and hard

18 — Shale and limestone
Relatively unmetamorphosed

17 — Sandstone and shale
Relatively unmetamorphosed

16 — Volcanic rocks
Commonly altered and slightly metamorphosed; includes felsite, rhyolite, and local andesite, basalt, and porphyry

15 — Greenstone

14 — Argillite, siliceous shale, slaty shale, slate, phyllite, and fine-grained schist

13 — Gneiss and schist
Typically massive and granitic in appearance, containing pebble- to boulder-size fragments

12 — Fine-grained mica schist, chlorite schist, and phyllite with interbedded sequences of micaceous quartzite

11 — Mica schist and mica gneiss, medium to coarsely crystalline

10 — Marble, crystalline limestone, and dolomite

9 — Quartzite, with interbedded conglomerate, schist, and gneiss

8 — Anorthosite

7 — Serpentinite, steatite, and related ultramafic and gabbroic rocks

6 — Massive to gneissic granitic rocks
Range in composition from quartz diorite to granite

5 — Quartz gabbro, diorite, dark quartz diorite, and their low-grade metamorphic equivalents

4 — Gabbro, norite, and massive- to weakly-foliated metagabbro
Includes some ultramafic rocks

3 — Layered gneiss
Strongly layered; layers differ sharply in composition. Mineralogy depends on degree of metamorphism. Includes interbedded amphibolite, hypersthene granulite, quartz-plagioclase gneiss, biotite-quartz-feldspar gneiss, mica schist, greenstone, and schistose felsite

2 — Amphibolite, epidote amphibolite, and well-foliated metagabbro

1 — Biotite-quartz-feldspar gneiss with associated migmatite, granulite, amphibolite, and granitic rocks

Coastal Plain deposits
Shown in section only

Contact
Dotted where concealed; omitted within the mapped area where sources of data differ

Fault
Dashed where approximately located; dotted where concealed

Thrust fault
Sawteeth on upper plate

(11) VI — Well from which bedrock samples, indicated by color and unit number, were recovered from beneath Coastal Plain deposits. Roman numeral refers to accompanying table

— 500 — Contours on bedrock surface beneath Coastal Plain deposits. Contour interval 100 feet; datum is mean sea level

LIMIT OF AREA OF STUDY

Thick glacial deposits
Bedrock poorly exposed

Probably mica schists and granitic gneisses comparable to those of southern Connecticut

Base by U.S. Geological Survey

SCALE 1:250 000

5 0 5 10 15 20 25 MILES

5 0 5 10 15 20 25 KILOMETERS

CONTOUR INTERVALS 50 AND 100 FEET
WITH SUPPLEMENTARY CONTOURS AT 25 FOOT INTERVALS
DATUM IS MEAN SEA LEVEL

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1967—G67177

Geology compiled by D. L. Southwick; contours on bedrock surface compiled by H. E. Gill, John Walker, and H. R. Schmoll

INDEX MAP SHOWING AREA OF STUDY.
AREA OF THIS SHEET SHADED

ENGINEERING GEOLOGY OF THE NORTHEAST CORRIDOR, WASHINGTON, D.C., TO BOSTON, MASSACHUSETTS

BEDROCK GEOLOGY

Prepared by the
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