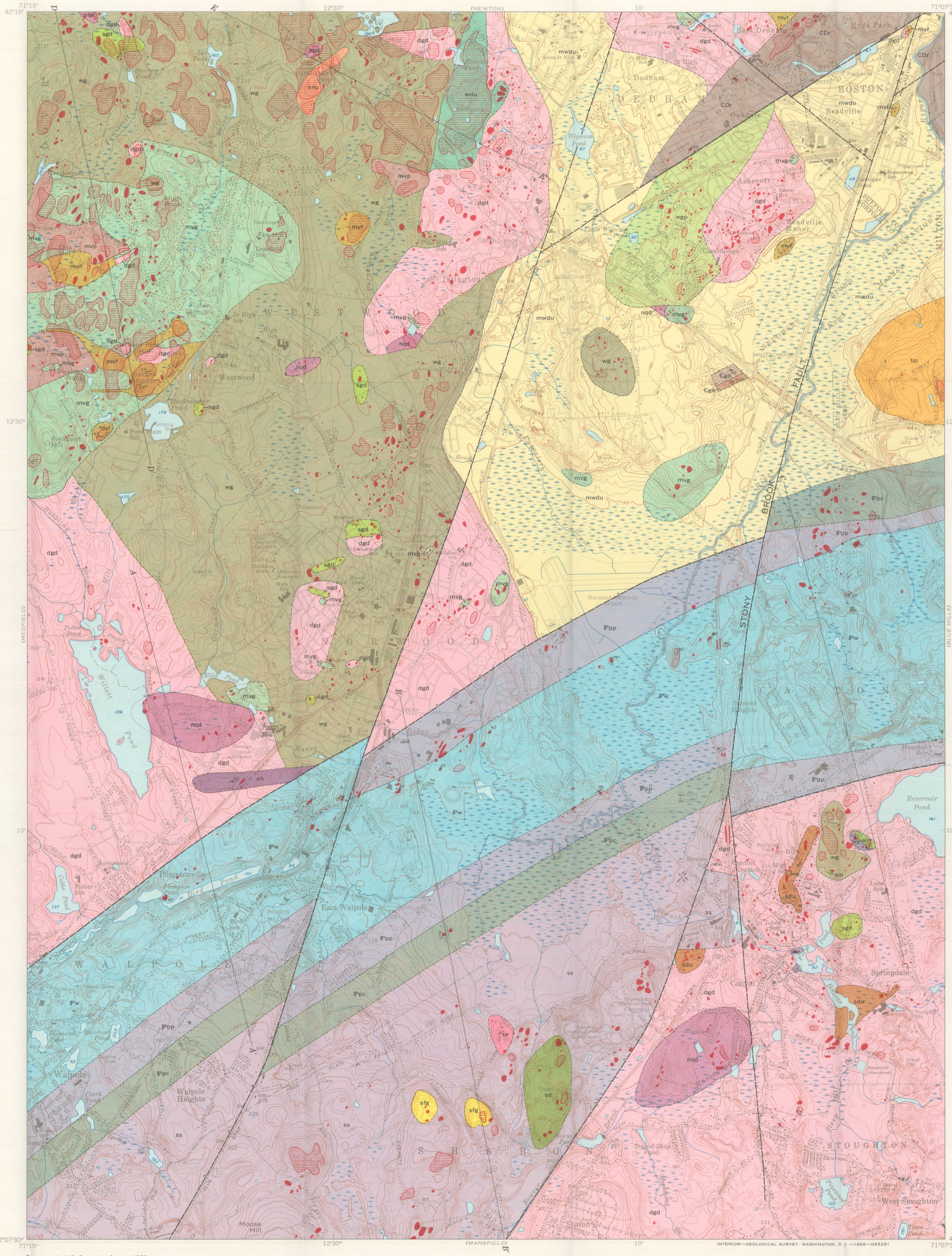
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

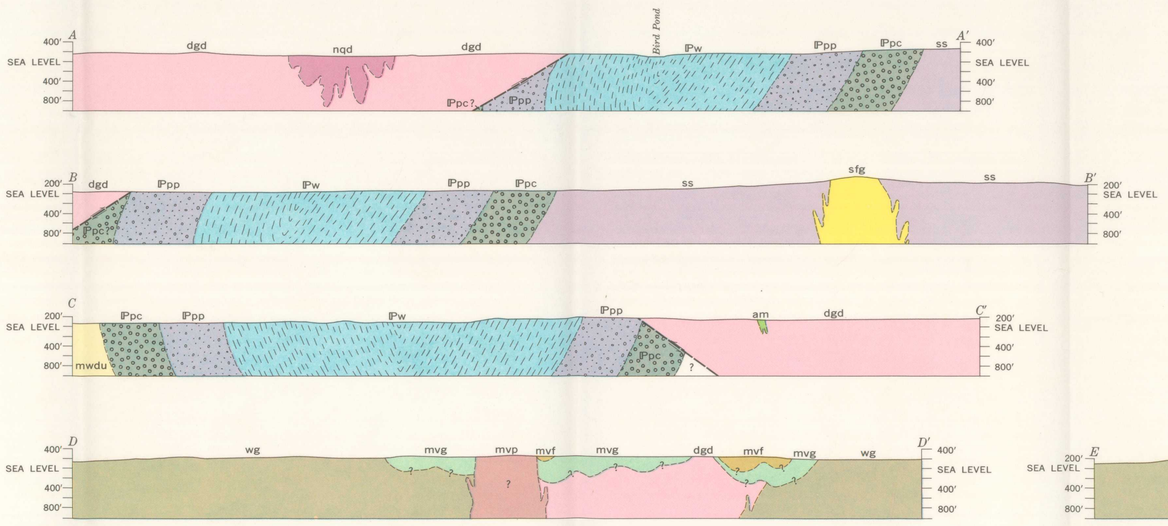
PREPARED IN COOPERATION WITH
THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

BULLETIN 1163-B
PLATE 1



Base map by U.S. Geological Survey, 1958

Geology mapped by N. E. Chute in 1940; geology in the Western part of the quadrangle based in part on field notes by Wallace de Laguna, 1939



BEDROCK GEOLOGIC MAP AND SECTIONS OF THE NORWOOD QUADRANGLE, MASSACHUSETTS

SCALE 1:24 000

1 ½ 0 1 MILE

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1966—G65291

EXPLANATION

PENNSYLVANIAN AND CARBONIFEROUS

Ppw — Wamsutta Formation
Red nonmarine fine-grained crossbedded sandstone containing interbedded red shale and gray granule and pebble conglomerate. Plant fossils scarce

Ppp / **Ppc** — Pondville Conglomerate
Ppp, interbedded gray sandstone, granule conglomerate, and pebble conglomerate
Ppc, cobble conglomerate

DEVONIAN OR CARBONIFEROUS

CDr — Roxbury Conglomerate
Slate, tillite, and pebble and cobble conglomerate containing small arkosic sandstone lenses

bp — Blue Hill Granite Porphyry
Bluish gray; weathers light gray to pink. Phenocrysts of quartz and microperthite abundant. Riebeckite in large poikilitic grains and in minute needle-shaped crystals

mvp / **mvf** / **mvg** — Mattapan Volcanic Complex
mvp, pink porphyritic intrusive rhyolite containing albite and quartz phenocrysts in a fine-grained matrix of quartz and feldspar
mvf, eruptive breccia composed of fragments of gray and pink felsite, Dedham Granodiorite, and Westwood Granite
mvg, gray porphyritic extrusive felsite containing albite phenocrysts

mwdu — Mattapan Volcanic Complex, Westwood Granite, and Dedham Granodiorite, undivided

DEVONIAN OR OLDER

sa — Aplite
Light gray; composed of quartz, microperthite, and sericite; contains minor biotite, chlorite, and other accessory minerals

sfg — Fine-grained granite
Brownish gray; composed of quartz and microperthite; contains minor amounts of oligoclase, chloritized biotite, magnetite, and apatite

ss — Sharon Syenite
Medium-grained syenite composed of perthitic orthoclase, hornblende, and subordinate microcline perthite, oligoclase, and quartz; contains secondary sericite, epidote, clay minerals, and chlorite

sd — Diorite
Dark greenish gray, medium grained; composed of andesine, pyroxene, epidote, magnetite, and iron sulfide

PRE-CARBONIFEROUS

wg / **wgp** — Westwood Granite
wg, medium- to fine-grained gray to pink granite composed of quartz, orthoclase or microperthite, albite or sodic oligoclase, microcline, and small amounts of magnetite, sphene, apatite, and chloritized biotite
wgp, porphyritic granite composed of white phenocrysts of sericitized albite and sodic oligoclase, and pink phenocrysts of perthite in a fine-grained groundmass of quartz and feldspar partly in micrographic intergrowth

wdu — Westwood Granite and Dedham Granodiorite, undivided

dgd — Dedham Granodiorite
Coarse-grained light-gray granite and quartz monzonite containing microperthite, oligoclase, quartz, and a small amount of chloritized biotite

nqd — Newburyport Quartz Diorite
Greenish gray, massive, medium grained; characterized by large equidimensional poikilitic grains of hornblende. Composed of altered plagioclase, poikilitic hornblende, small amounts of perthite or orthoclase, and quartz, and accessory sphene, magnetite, pyrite, and apatite

sgd — Salem Gabbro-Diorite
Medium grained, massive, dark greenish gray. Composed of altered plagioclase, hornblende, and small amounts of orthoclase perthite, quartz, magnetite, pyrite, apatite, and sphene; contains secondary chlorite, epidote, clinozoisite, and sericite. Locally contains pegmatitic podlike and tabular segregations a few inches to a few tens of feet wide

sdu — Salem Gabbro-Diorite with abundant Dedham Granodiorite not separately mappable

snu — Salem Gabbro-Diorite with abundant Newburyport Quartz Diorite not separately mappable

CAMBRIAN

Upper Cambrian

Cgp / **Cgq** — Green Lodge Formation of Rhodes and Graves (1931)
Cgp, dark-gray phyllite containing thin light-gray siltstone laminae
Cgq, light-gray fossiliferous quartzite composed of recrystallized quartz grains and a small amount of sericite

ph — Phyllite
Gray phyllite containing small decomposed limonite-stained porphyroblasts and bed of light-gray carbonate-rich rock. May be part of the Green Lodge Formation of Rhodes and Graves (1931)

AGE UNKNOWN

mr — Metarhyolite
Fine-grained gray to greenish-gray metarhyolite having flow banding in places; composed of quartz, orthoclase, highly altered plagioclase, and partly chloritized green biotite. Accessory minerals include sphene, magnetite, and apatite, and secondary sericite, chlorite, and epidote

am — Amphibolite
Amphibolite containing white highly altered tabular feldspar phenocrysts aligned by flowage, and amphibolite containing small lenses of hornblende scattered through a matrix of abundant hornblende

Bedrock outcrops
Individual outcrops shown by solid color. Groups of closely spaced outcrops shown by ruled pattern

Contact
Long dashed where approximately located; short dashed where inferred; dotted where concealed; queried where doubtful

Fault
Dashed where approximately located; queried where inferred. Arrows show direction of movement

70 — Strike and dip of beds

60 — Strike and dip of overturned beds

66 — Strike and dip of cleavage

50 — Strike and dip of foliation

Quarry