(Ordovician)

and phyl-

granofels, and sulfidic schist

cordierite schist and sillimanite quartzite

and sulfidic schist

granofels, sulfidic schist, and minor calc-silicate

-bedded biotite granofels and calc-silicate granofels

tamorphosed thin-bedded, pelitic and calcareous

ly low-grade equivalent of Paxton Formation

d calcareous sandstone, siltstone, and minor mus-

and calcareous phyllite

r Hill Quartzite

gneiss with large schlieren of biotite, locally contains garnet and muscovite

PALEOZOIC AUTOCHTHONOUS AND PARAUTOCHTHONOUS SEDIMENTARY AND VOLCANIC ROCKS AND THEIR METAMORPHIC EQUIVALENTS

Walloomsac Formation (Middle Ordovician)

Ow — Dark-gray, graphitic quartz phyllite and schist containing minor lenses of limestone

Owq — Tan to dark-blue-gray laminated quartzite and calcareous quartzite previously mapped as Bellowspipe Quartzite

Owm — Orange-brown weathering, graphite-albite-biotite calcitic marble and schistose marble and interbedded black phyllite

Owl — Blue-gray and white mottled crystalline limestone lenses near base of the Walloomsac locally yielding fragments of pelmatozoa, bryozoa and cup coral

Stockbridge Formation (Lower Ordovician to Lower Cambrian)

Osg, Osf — Blue and gray mottled limestone and calcite marble and beds of beige dolostone; local layers of punky weathering crossbedded quartzose limestone near base (Osf)

Ose — White to blue-gray and white layered calcite marble

Osd — Tan-beige weathering quartzose calcite and dolomite marble; minor cross-laminated quartzite

Osct — Massive to finely laminated steel-gray calcitic dolomite marble containing a prominent zone of white quartz nodules near top

Csb — Beige, tan, and dark-gray weathering quartzose dolomite marble containing interbeds of black, green and maroon phyllite and punky weathering blue quartz pebble quartzite

Csa — White to light-powdery-blue-gray dolostone with disseminated grains of quartz and prominent sprays of tremolite in higher-grade areas

Cq — **Cheshire Quartzite (Lower Cambrian)**—White, massive vitreous quartzite

Dalton Formation (Lower Cambrian and Proterozoic Z)

€Zd — Tan weathering, muscovite-microcline quartzite and feldspathic quartzite rich in black tourmaline, locally includes thin beds of other rock types listed below

€Zdb — Black to dark-gray carbonaceous quartz schist

€Zdq — White to yellowish-gray weathering, flaggy quartzite interbedded in feldspathic quartzite

€Zdg — Well-layered orange-tan feldspathic, biotite-spotted, muscovite-microcline-quartz gneiss and granofels

Orangish-gray, gray, and light-greenish-gray muscovite-quartz schist and interlayered feldspathic quartzite and quartz conglomerate; minor beds of rusty albitic schist

Mountain Formation (Lower Ordovician and Proterozoic Z)—Rusty-weathering, coarse garnet schist and feldspathic schist

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PALEOZOIC SEDIMENTARY AND VOLCANIC ROCKS, AND THEIR METAMORPHIC EQUIVALENTS, IN THE TACONIC ALLOCHTHON

Oagl — **Austin Glen Graywacke (Middle Ordovician)**—Light-gray to brown weathering calcareous graywacke

Opo — **Poultney Formation (Middle and Lower Ordovician)**—White weathering, well-laminated gray slate and chert

€hh — **Hatch Hill Formation (Upper Cambrian)**—Bluish-gray weathering black sulfidic slate and chert

West Castleton and Nassau Formations, undivided (Lower Cambrian and Proterozoic Z)—Dark-gray to black calcareous slate interlayered with greenish-gray phyllite

€Zn — **Nassau Formation (Lower Cambrian and Proterozoic Z)**

Gray to dark-greenish-gray, siliceous phyllite with abundant beds of quartzite, olive-gray metasiltstone and subgraywacke (includes Bomoseen Graywacke Member and Zion Hill Quartzite Member)

€Zngy — Dark-gray to black chloritoid-rich phyllite

€Zna — Greenish-gray albitic phyllite

€Znp — Lustrous, soft green, yellowish-green and purple laminated chloritoid-chlorite phyllite (Mettawee Member)

€Znr — Rensselaer Graywacke Member—Greenish-gray, plagioclase-rich, blue quartz pebble metagraywacke and minor gneiss-cobble conglomerate

€Znv — Dark-green to greenish brown, massive to well foliated stilpnomelane-chlorite-oligoclase-epidote metabasalt and basaltic tuff

€Zb — **Greylock Schist (Lower Cambrian and Proterozoic Z)**

Soft, lustrous green phyllite with minor beds of green quartzite and well laminated gray dolomitic phyllite; resembles Hoosac (€Zhg) and Nassau (€Znp)

€Zga — Light-green to gray, white albite-spotted phyllite and interbedded blue-quartz metagraywacke, salmon-pink dolostone, and blue-quartz conglomerate. Minor interbeds of black and white albite-spotted phyllite resembles Hoosac (€Zhga)

€Zev — **Everett Formation (Lower Cambrian and Proterozoic Z)**

Light-green and greenish-gray chlorite-muscovite-albite or chloritoid-rich phyllite. Predominantly dark-gray chloritoid-rich schist in Lenox Mountain

€Zevc — Olive-gray to green, blue-quartz pebble metagraywacke and quartzite

SPECIAL ROCK TYPES ASSOCIATED WITH ALLOCHTHONOUS PALEOZOIC SEDIMENTARY AND VOLCANIC ROCKS

Otc — **Tectonic breccia (Ordovician)**—Zones of mixed inclusions of Stockbridge Formation, Walloomsac Formation, and phyllites of the Taconic allochthon

BEDROCK GEOLOGIC MAP OF MASSACHUSETTS

Compiled By
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E-an Zen, Editor

Assisted By
Norman L. Hatch, Jr., Andrew F. Shride, Elaine G. A. Weed, and David R. Wones

1983

Superfund Records Center
SITE: Conitch Property
BREAK: 17.4
OTHER: 556473

SDMS DocID 556473

Zmgd — Mafic phase. Gray, seriate to sub-porphyritic granite to granodiorite to be in clots; locally gneissic. Intrudes Zb

Zhg — **Hope Valley Alaskite Gneiss (Proterozoic Z)**—Mafic-poor gneissic granite, locally muscovitic. Gradational with Zsg

Zegr — **Alaskite (Proterozoic Z)**—Light-gray, pinkish-gray to tan, mafic-poor gneissic granite commonly containing muscovite

Zsg — **Scituate Granite Gneiss (Proterozoic Z)**—Gneissic granite containing biotite in small clots. Equivalent to part of former Northbridge Granite Gneiss (usage now abandoned). Gradational with Zhg

Zegr — **Esmond Granite (Proterozoic Z)**—Light-gray to pink biotite granite, generally slightly altered, locally foliated. Gradational with Zgmgd. Intrudes Zsg

Ztgd — **Topsfield Granodiorite (Proterozoic Z)**—Gray to gray-green, porphyritic granodiorite containing blue quartz; usually cataclastically foliated and altered. Intrudes Zrdi, Zv

Zgmgd — **Grant Mills Granodiorite (Proterozoic Z)**—Medium- to coarse-grained porphyritic granodiorite. Gradational with Zegr

Zdgr — **Dedham Granite (Proterozoic Z)**
Light grayish-pink to greenish-gray, equigranular to slightly porphyritic, variably altered, granite south and west of Boston. Includes dioritic rock near Scituate and Cohasset and Barefoot Hills Quartz Monzonite of Lyons (1969) and Lyons and Wolfe (1971). Intrudes Zdi, Zgb, Zb, Zv

Zdngr — Gray granite to granodiorite more mafic than Zdgr north of Boston. Intrudes Zw, Zv

Zwgr — **Westwood Granite (Proterozoic Z)**—Light-gray to pinkish-gray, fine- to medium-grained granite. Intrudes Zdgr

fgr — **Fine-grained granite and granite porphyry (age uncertain)**

Zfgr — **Granite of the Fall River pluton (Proterozoic Z)**—Light-gray, medium-grained, biotite granite, in part mafic-poor. Gneissic in New Bedford area. Includes Bulgarmarsh Granite (Proterozoic Z). Intrudes Zgs

Zpg — **Ponaganset Gneiss (Proterozoic Z)**—Gneissic biotite granite containing megacrysts of microcline; biotite in coarse streaks and patches. Equivalent to part of former Northbridge Granite Gneiss (usage now abandoned)

Zpgr — **Porphyritic granite (Proterozoic Z)**—Gray to gray-green, seriate to porphyritic biotite granite containing clots and streaks of biotite, epidote, and sphene. Mafic inclusions common. Gneissic in New Bedford area. Intrudes Zgs

Zgg — **Granite, gneiss, and schist, undivided (Proterozoic Z)**—Plutonic and metamorphic rocks of probable Proterozoic Z age. May include plutonic and volcanic rocks of Paleozoic or younger age

Zrdi — **Diorite at Rowley (Proterozoic Z)**—Dark, green-gray, medium-grained hornblende diorite

Zdi — **Diorite (Proterozoic Z)**—Medium-grained hornblende diorite metamorphosed in part to amphibolite and hornblende gneiss

Zdigb — **Diorite and gabbro (Proterozoic Z)**—Complex of diorite and gabbro, subordinate metavolcanic rocks and intrusive granite and granodiorite

Zgb — **Gabbro (Proterozoic Z)**—Hornblende gabbro and hornblende-pyroxene gabbro metamorphosed in part to hornblende gneiss and amphibolite

Zssy — **Sharon Syenite (Proterozoic Z)**—Gray to dark-gray syenite containing microperthite, oligoclase and clinopyroxene, mixed with ferro-gabbro

SEDIMENTARY AND VOLCANIC ROCKS AND THEIR METAMORPHIC EQUIVALENTS

T — **Tertiary sediments**—Unconsolidated sand, silt, and clay in discontinuous patches; contains Tertiary fossils; may include Pleistocene sediments (cross section only)

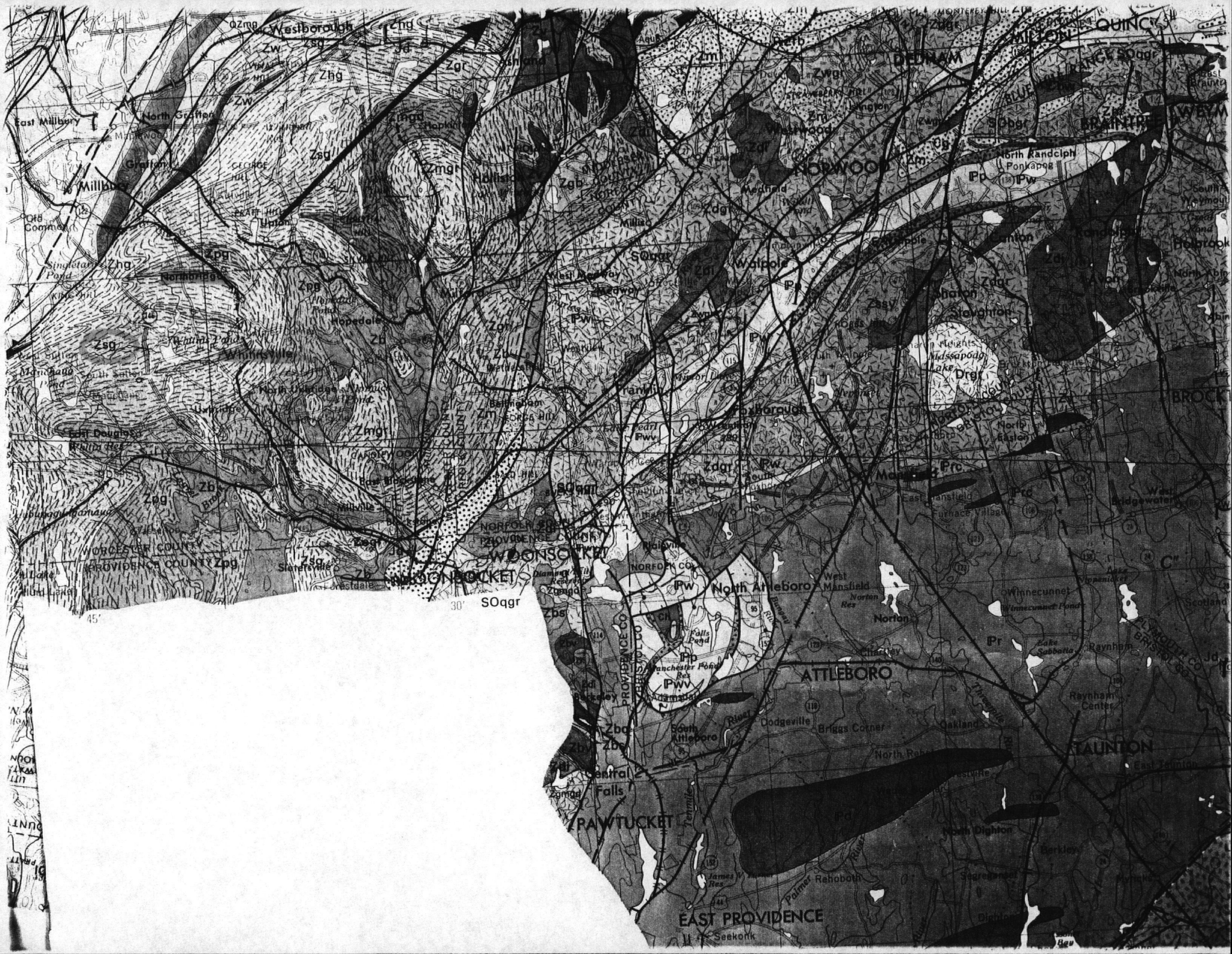
K — **Cretaceous sediments**—Clay, silt, sand, and gravel, mostly of non-marine and nearshore marine origin, Campanian and older

JTr — **Sedimentary and volcanic rocks (Lower Jurassic and Upper Triassic)**—(Cross section only)

JTrb — **Altered amygdaloidal basalt (Lower Jurassic and Upper Triassic)**—(Cross section only)

Red arkosic conglomerate, sandstone, and siltstone (Upper Triassic)—In Esse[illegible]

[illegible] **Conglomerate (Upper Pennsylvanian)** [illegible] conglomerate having sandy [illegible] minor sandstone [illegible] Formation (Upper [illegible]



Westborough
Ashland
DEDHAM
MILTON
QUINCY
BRAINTREE
WEYM
NORWOOD
North Randolph
Ponkapog
Canton
Randolph
Holbrook
Walpole
Sharon
Stoughton
Foxborough
Franklin
Mansfield
East Mansfield
Furnace Village
West Bridgewater
North Attleboro
West Mansfield
Norton
Winnecunnet
Raynham
Raynham Center
ATTLEBORO
Dodgeville
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Oakland
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Central Falls
PAWTUCKET
South Attleboro
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Hopedale
Milford
Medway
West Medway
Millis
Medfield
Westwood
Hollister
Upton
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Drgr
SOqgr
SObgr
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