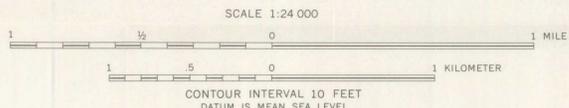




EXPLANATION

- Qs**  
Swamp deposits  
*Accumulations of muck, peat, sand, and fine gravel, generally a few inches to a few feet thick, but as much as 28 feet thick in swamp along Neponset River. Diatomite lenses in upper few feet along west side of Neponset River near Neponset Street*
- STRATIFIED GLACIAL DEPOSITS**
- Qsu**  
Unclassified sand and gravel deposits  
*Small deposits of sand and gravel on floors of ice block holes and late-glacial drainage channels. Deposits that border the Neponset River swamp include some peat and lake-bottom sand and gravel and may be of diverse origins*
- Qop**  
Outwash plains  
*Broad gently sloping plains of horizontally stratified sand and gravel deposited by glacial melt waters. Gravel usually diminishes in coarseness and amount downstream*
- Qf**  
Alluvial fans  
*Coalescing alluvial fans composed of sand and gravel eroded from six or more ravines cover the lower part of the delta outwash plain at the eastern edge of the quadrangle*
- Qdop**  
Delta outwash plain  
*Horizontally bedded topset beds of gravel 5-8 feet thick overlying westward dipping foreset beds composed chiefly of interbedded pebble gravel and sand 45-76 feet thick along Route 128*
- Qkp**  
Kame plains  
*Relatively flat-topped deposits of sand and gravel that stand above their surroundings and are bounded completely or almost completely by ice-contact slopes. Upper 3-5 feet is pebble gravel and some cobble gravel and sand overlying sand containing some pebble gravel*
- Qkt**  
Kame terraces  
*Terrace deposits of sand and gravel formed by streams of glacial melt water that flowed between the sides of a valley and residual masses of glacial ice in the center of the valley*
- Qic**  
Ice-channel fillings  
*Narrow ridges of sand and gravel deposited in tunnels in the ice and in open crevasses*
- Qk**  
Kames and kame fields  
*Small hills of varied size and shape of sand and gravel. Groups form kame fields. Contain different relative amounts of sand and gravel; some have scattered boulders*
- UNSTRATIFIED GLACIAL DEPOSITS**
- Qgm**  
Ground moraine  
*Chiefly till. Occurs as blanket over most of quadrangle. Thin where bedrock outcrops are abundant; thick where bedrock outcrops are scarce. Probably underlies other surficial deposits in many places*
- Qd**  
Drumlins  
*Oval-shaped hills composed mostly of till*
- af**  
Artificial fill  
*Shown only where thick and extensive*
- Bedrock outcrops**  
*Individual outcrops shown by solid color. Groups of closely spaced outcrops shown by ruled pattern*
- x x x**  
Boulder concentration
- Contact**  
*Dashed where approximately located*
- Axis of buried valley, approximately located**  
*Dashed where inferred*
- Direction of glacial striae**  
*Point of arrow is close to or at the point of observation*
- Pit in sand, gravel, or till**  
*Letter symbols indicate composition of deposit; t, till; s, sand; p, pebble gravel; c, cobble gravel; and b, boulders. Arranged in order of decreasing relative abundance. Points of observation not at pits are indicated by small circles. Numbers give depth of exposure, in feet*
- Quarry in bedrock**  
*119*
- Seismic survey station**  
*Dot indicates location of shot point; number indicates depth to bedrock, in feet, as interpreted from seismic record*
- Wash boring site**  
*Sites numbered for reference. Letter symbols indicate type of material penetrated (M, fill, muck, and peat; C, coarse sand and gravel; S, fine sand; G, sand and gravel; T, till; B, bedrock or boulder); numbers indicate thickness, in feet*
- Scarp**  
*Line at base; ticks point up slope*

**SURFICIAL GEOLOGIC MAP OF THE NORWOOD QUADRANGLE, MASSACHUSETTS**



Base map by U.S. Geological Survey, 1958

Geology by N. E. Chute, 1940