(elstocena

(Wisconsin)

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A layer of windblown sand and silt containing sparse scattered ventifacts and generally mixed with underlying glacial deposits is present over much of the area but has not been mapped.



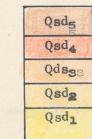
Alluvium

Stream deposits of light-grayish brown silt, sand and gravel along the Scantic River and smaller streams. Generally less than 20 feet thick: Qf; alluvial fan deposits; coarse grained fan-shaped poorly sorted and rudely stratified stream deposits. As much as 15 feet thick.



Stream terrace deposits Yellowish-brown well-bedded sand, silt, and clay; locally gravelly. Highest terraces 50 feet above Securio Scantic River; numerous small nonpaired terraces at lower levels on both sides of rivers and

streams generally included in alluvium. Some deposits as much as 50 feet thick.



Outwash deposits

Proglacial kettled to unkettled outwash grading from coarse gravel to fine sand and silt downstream. Qsd1 deposited when ice margin stood along line from Goat Rock to Somers. Qsd2 deposited when ice margin stood along line trending WSW from Goat Rock. Qsd3 deposited when ice margin was along an arcuate line trending SW from Mile Oak Corner into Long Meadow and Springfield. Qsd4 deposited when ice margin stood along a line trending SW from Wilbraham to Springfield. Qsd5 deposited when ice margin was north of quadrangle.



Kame terrace deposits

Coarse sand and gravel deposited between ice and valley walls by meltwater at higher altitudes than outwash deposits. Internal structure indicates collapse due to deposition on or against ice. Color ranges from reddish brown in western half of quadrangle to gray in east half of quadrangle. Includes several levels of kame terrace deposits. Locally as much as 100 feet thick but generally less than 50 feet thick.



Till

Compact to loose, non-sorted to poorly-sorted, nonstratified mixture of clay, silt, sand, pebble;, cobble, and boulder sized particles. Generally reddish-brown to pale reddish-brown in west half of quadrangle; gray to light gray in east half of area. Includes small lenses of stratified drift. Thickness varies but is generally less than 20 feet. May be more than 100 feet thick under crests of some drumlins. Deposited by ice moving southward in the lowlands and southeast in the highlands in east half of quadrangle. Till in highlands slightly older than that in lowlands in west half of quadrangle.

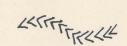


Individual outcrops shown by solid color; thinly veneered bedrock and scattered small outcrops shown by ruled pattern.



Artificial fill

Artificially emplaced earth, mainly sand and gravel, locally some till. Trash fills not mapped. Most fills less than 20 feet thick but locally as much as 40 feet thick.



Crest of ice-channel filling (eskers and crevasse fillings); angle of chevron points in direction of inferred flow.



Dashed where approximately located.

Glacial striations

Arrow shows inferred direction of movement of glacier; point of observation at tip of arrowhead



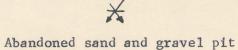
Strandline of inferred glacial lake



Abandoned quarry



Sand and gravel pit





Facewall of large sand and gravel pit



glacier.

Spillway or large ice-marginal channel; arrow shows inferred direction of meltwater flow

Long axis of streamline molded form Streamline hill (drumlin or drumlinoid) composed partly or entirely of till; smoothed and shaped by movement of



Swamp deposits

Grayish-brown to black peat, muck, sand, silt, and clay. Mineral matter accumulates by a combination of colluvial, alluvial, and eolian processes. Generally 5 to 10 feet thick but may be as much as 25 feet thick.

Qgf

Undifferentiated glaciofluvial deposits Reddish-brown to yellowish-brown sand and gravel in irregular landforms not distinct enough to separate by origin. May include some glaciolacustrine deposits. Correlates with Qgf of Hartshorn and Koteff (1967) in Springfield



Deposits of glacial lake Hampden Gray well-stratified silt, sand, and minor gravel as much as 70 feet thick generally below altitude 370.



Lacustrine deposits

Thin silt and sand deposited in shallow temporary lake as ice margin slowly melted back from position when Qsd4 was deposited.

Qcd

Ice-contact stratified drift

Sand, gravel, and minor amounts of silt deposited by meltwater; includes eskers, kames, high kame terraces and some other kettled deposits. Includes both glaciofluvial and glaciolacustrine deposits. Reddish-brown in western part of quadrangle; gray in east half of area.

Cushman, R.V., 1964, Ground-water resources of north-central Connecticut: U.S. Geol. Survey Water Supply Paper 1752, 96 p.

Cushman, R.V., Baker, J.A., and Meikle, R.L., 1964, Records and logs of selected wells and test borings and chemical analyses of water in north-central Connecticut: Conn. Water Resources Comm. Conn. Water Resources Bull. no. 4, 27 p.

quadrangle, Hampden County, Massachusetts, and Hartford and Tolland Counties, Connecticut: U.S. Geol. Survey Quadrangle Map GQ-678.

Hartshorn, J.H., and Koteff, Carl, 1967, Geologic map of the Springfield South

• 45

Well or test boring ending at or in bedrock Number indicates depth to bedrock surface. Well data from Cushman (1964), Cushman, Baker, and Meikle (1964). Additional data in Connecticut by Robert Ryder (oral communication) and in Massachusetts by John Cotton (oral communication).



Materials classification

Letter symbols indicate texture of deposit in decreasing

order of abundance. Read comma as "and" s, sand

p, pebble

cg, cobble gravel t, till

c, cobble

g, gravel of mixed sizes

Small ice-marginal meltwater channel Narrow walley open at both ends which was cut by meltwater in ice-marginal channels, spillways or in tunnels at the base of the ice. May be floored with thin deposit of coarse gravel. Arrow is not to scale; shows inferred direction of meltwater flow.

U.S. Geological Survey OPEN FILE MAP This map is preliminary and has

not been edited or reviewed for

standards or nomenclature.

conformity with Geological Survey

To accompany map of surficial deposits

Hampden Quadrangle, Mass.-Conn. by Roger B. Colton

Massachusetts (Hampden guad).

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