

SURFICIAL GEOLOGIC MAPS OF THE
KENT AND ELLSWORTH QUADRANGLES
LITCHFIELD COUNTY, CONNECTICUT

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EXPLANATION

Windblown silt and sand to 3 ft thickness, locally containing frost-disturbed rock fragments, cover part of the surface materials but are not shown separately

Qal
Alluvium

Dark-brown, yellowish-red and dark gray-brown clay, silt, sand and gravel-size material deposited during floods as low terraces along modern streams; typically 10 to 15 ft above the Housatonic River, and 2 to 5 ft above smaller streams

Qta
Talus

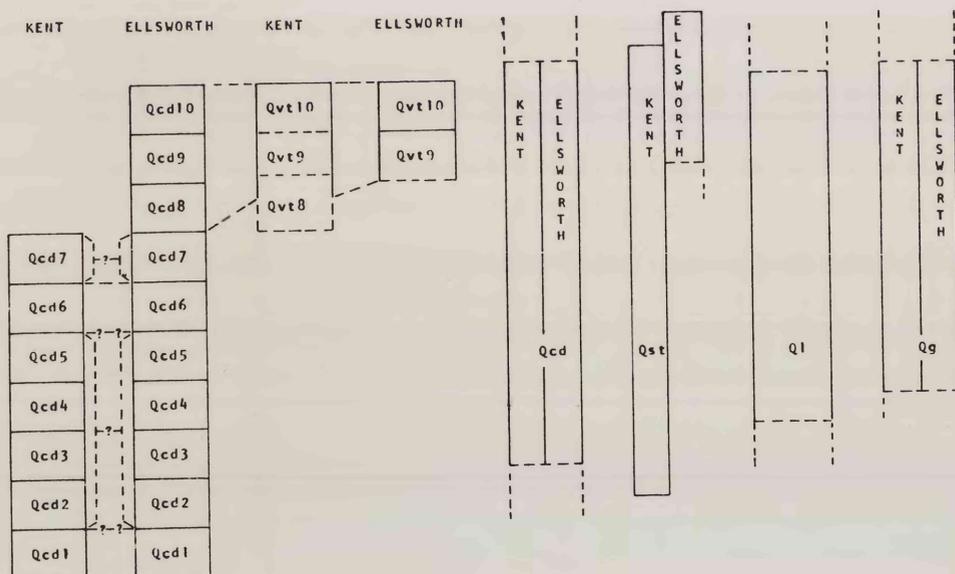
Qf
Alluvial-fan deposits

Qs
Swamp deposit

Angular to sub-angular cobble boulder, and block-size rock fragments derived from adjacent bedrock exposures

Yellowish-red, reddish-brown, and dark brown, sub-round to angular, poorly sorted silt, sand, fine to coarse gravel and boulders graded to valley train deposits stream terraces, and alluvium

Black, dark-brown, and gray partially decomposed organic material containing interlayers of clay, silt and sand. Thickness: from less than 1 ft to more than 30 ft; average thickness typically 4 to 5 ft



STRATIFIED DEPOSITS

Unit subscripts indicate order of deposition in each area; 1 is oldest. Unnumbered units are uncorrelated. Deposit areas are indicated above symbols. Correlation of deposits from area to area is tentative; deposits not correlated with other materials are indicated as Qcd or Qg

Ice-contact deposits

Stream terrace deposits

Lacustrine deposits

Qcd: Non-stratified to well-stratified, poor to moderately well-sorted silt, sand and gravel with textures ranging from silt, through sand containing scattered large boulders, to gravel consisting of rounded boulders 1 to 8 ft in diameter in which sand and pebbles are present only interstitially. The position and morphology are controlled by uneven melting of ice masses on, and close to which, melt water deposited these sediments. Topographically, hummocky knob and kettle terrain, kame terrace remnants, and irregular ridges reflect melting of supporting ice masses subsequent to deposition. Exposures reveal internal collapse structures produced by ice melting, including tilted, contorted, and faulted strata

Qst: Light gray, yellow, yellow-brown silt, sand, and fine to coarse, rounded to sub-rounded, moderate to well-sorted, non-stratified to well-stratified gravel composing or veneering stream terraces. Older than lower modern flood plains and younger than adjacent glaciofluvial deposits. These deposits may be outwash material emplaced during late phases of deglaciation or they may be flood plain or channel material emplaced by streams during early postglacial entrenchment along the Housatonic River and tributary streams. They record the transition from aggrading, sediment-charged melt-water stream regimes to stable, nearly graded, modern stream regimes

Ql: Light to dark gray, yellow and yellowish-brown, generally well-sorted, non-stratified to well-stratified clay, silt and sand. Observed primarily in wells in isolated and restricted valleys and beneath alluvium, valley train, and stream terrace deposits along the Housatonic River near Kent and Gaylordsville

Valley train deposits

Undifferentiated deposits

Qvt: Moderate to well-sorted, generally well-stratified outwash silt, sand and gravel deposited in the Housatonic River valley by melt water charged with glacial debris, derived partly from stagnant ice and partly from tributary streams. Average particle size decreases downstream, and deposits generally contain uncollapsed, horizontally-stratified, or cross-bedded layers which distinguish it in exposures from ice-contact deposits

Qg: Silt, sand and gravel of uncertain genesis. Presumably contains melt water and runoff-deposited material, but location and nondescript morphology prevent correlation with other deposits or clarifying depositional history

Qt / Qtm

Till and modified till

Qt: Gray to gray-brown, non-sorted to poorly sorted, generally non-stratified mixture of angular to sub-rounded rock fragments ranging from clay size to boulders exceeding 8 ft in diameter deposited directly by glacial ice. Thickness ranges from thin sheets less than 5 ft thick to deposits 70 ft thick. Till unit contains minor, isolated, stratified deposits of small areal extent in upland areas that are not shown on the map. These require systematic trenching for detection and delineation. Two till materials occur but are not separately shown. One is a light- to dark-gray, poorly sorted, compact mixture of clay- to boulder-sized rock fragments with a clay and silt matrix. Excavation of this till in fresh exposures is extremely difficult. The second till material is light gray, brown-gray or yellowish-brown, loose and friable with a sandy matrix. Fresh exposures are easily excavated

Qtm: Consists of easily excavated, intermixed till and fluvial material



Bedrock exposures¹

Solid color indicates essentially continuous outcrop. Overprint pattern identifies areas of numerous outcrops; unconsolidated material between the outcrops is generally less than 10 ft thick. Small, scattered outcrops occur in many additional areas



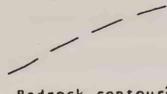
Artificial fill and graded areas

Sand, gravel, broken rock, and till material emplaced by man. aft, trashfill. Ruled pattern indicates area where the landform has been modified by man



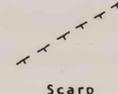
Contact

Dashed where approximately located



Bedrock contour²

Indicates approximate altitude of bedrock surface. Contour interval 50 ft. Datum mean sea level



Scarp

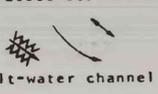
Edge of an erosional feature within a map unit. Ticks indicate downslope side



Striations or grooves

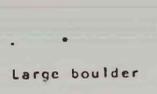
Point of observation is at tip of arrow. Double arrow indicates striae in more than one direction; relative age of the direction of movement could not be determined. Striae associated with lunate fractures

Till-fabric locality



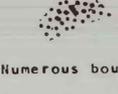
Melt-water channel

Sawtooth pattern defines large channel. Arrow alone defines small channel. Arrow point indicates inferred direction of stream flow. Double-pointed arrow indicates that direction of flow is uncertain across the local drainage divide



Large boulder

Boulder larger than 10 ft



Numerous boulders

Area of boulder concentration



Active pit



Inactive pit



Inactive mine



Mine tailings



Water well or test hole

34
9 p.s.f.

Material classification

Letters indicate material in decreasing order of relative abundance. Superposed symbols indicate superposition of materials in exposures, pits, mines, wells, or test holes. Numerals refer to material thickness in feet. Read hyphens as "to"; c, clay; s, silt; g, sand; p, pebble gravel; c, cobble gravel; g, gravel (gravel of mixed sizes); b, boulder gravel; t, till; r, bedrock; M, marble; I, iron; Q, quartz; P, pegmatite

Material textures



Silt



Sand



Gravel



Boulders



Blocks

Morphologic features

Letters indicate examples of selected features. k, kame; kt, kame terrace; d, delta; ic, ice-channel filling

Footnotes:

1. Extent of bedrock exposures based in part on aerial photographs and in part on Gonick, W. N., and others (1970)
2. Bedrock contours from Robert Melvin, U.S.G.S. Water Resources Division, Hartford, Connecticut



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This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards or nomenclature.