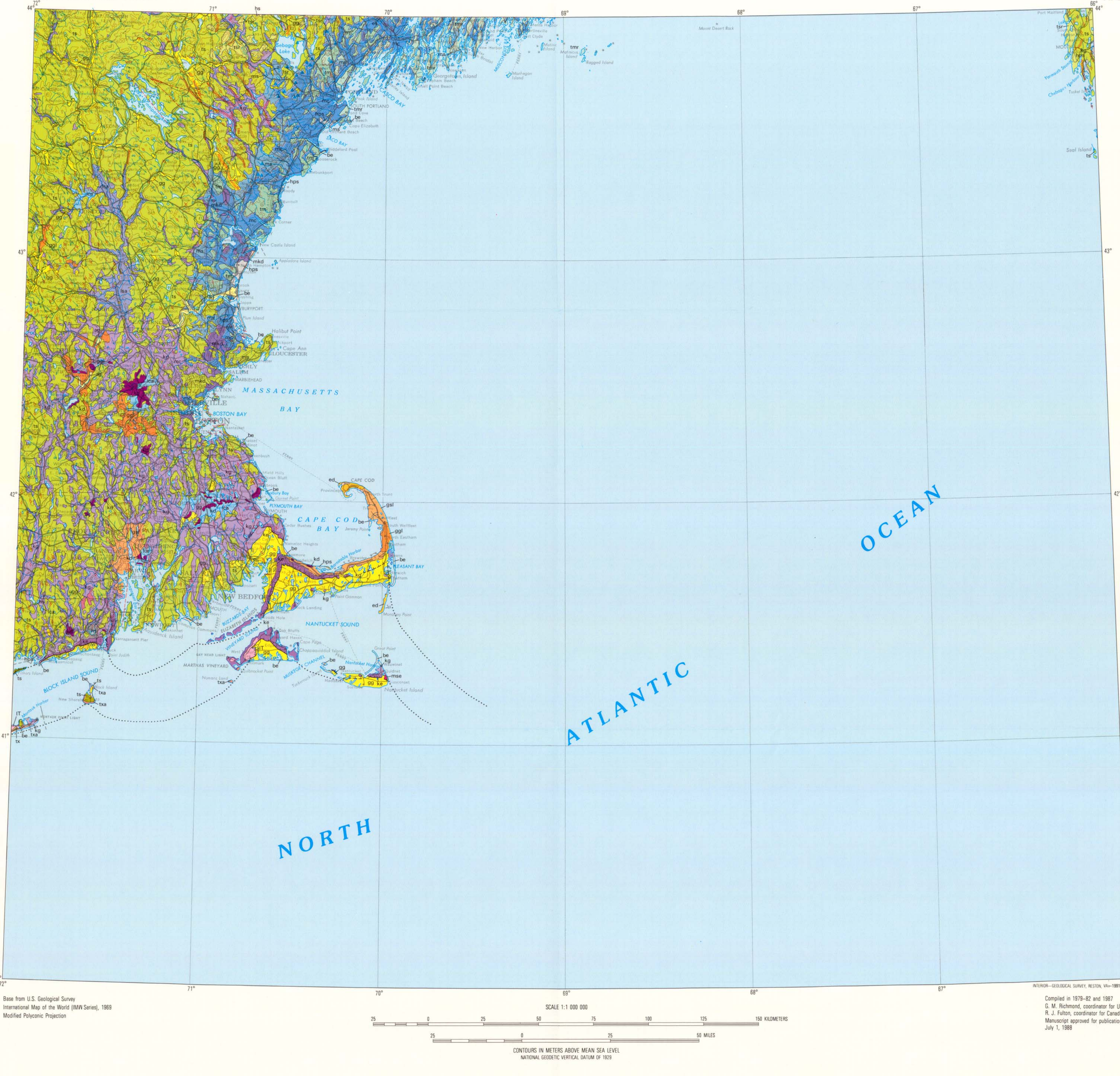


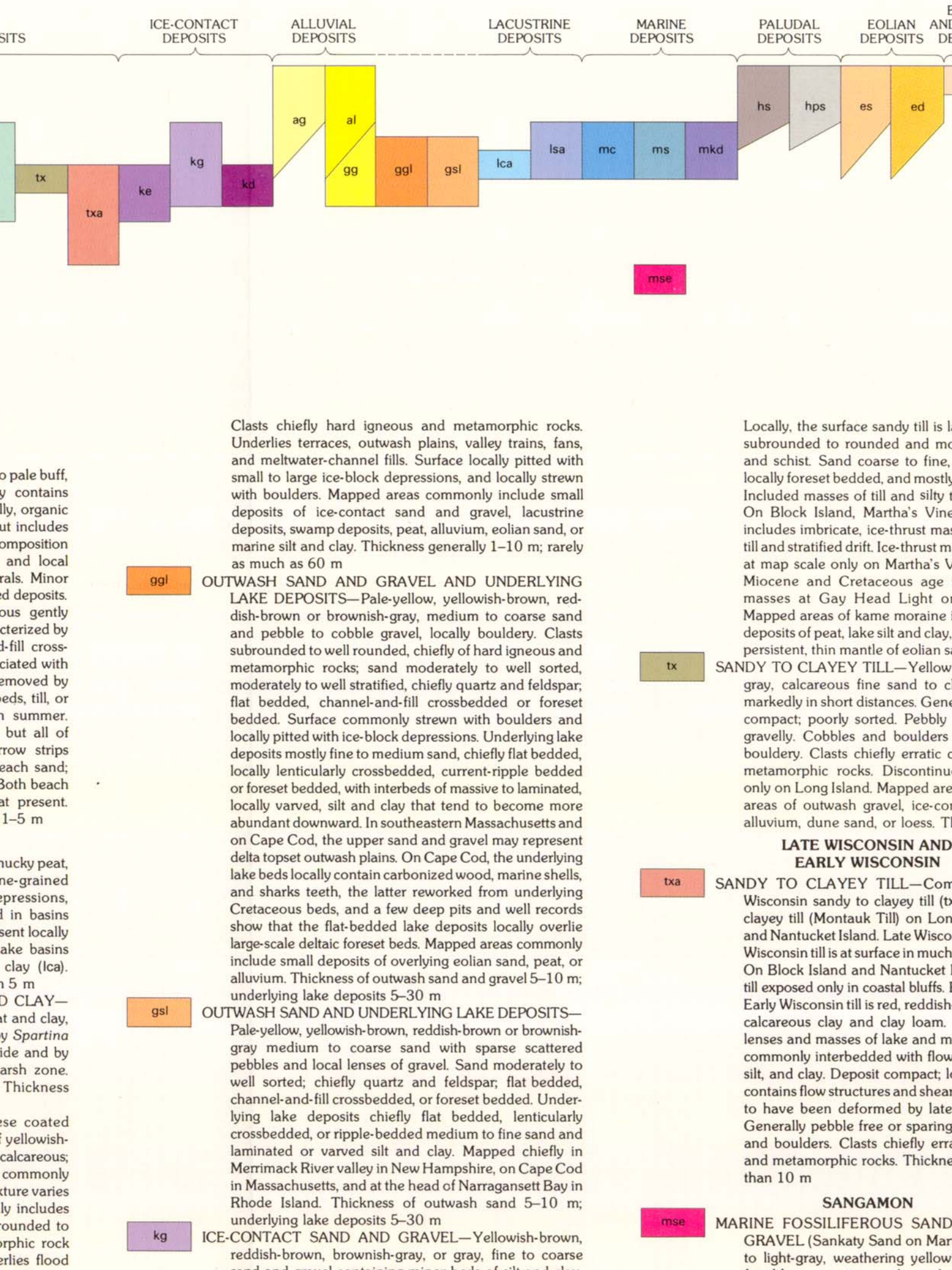
DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



LIST OF MAP UNITS

Table listing geological units with symbols (e.g., be, hwa, hps) and corresponding descriptions. Includes units like 'BEACH AND DUNE SAND', 'HOLOCENE AND LATE WISCONSIN SWAMP DEPOSIT', 'SANDY TILL', 'GLACIAL DEPOSITS', 'ICE-CONTACT SAND AND GRAVEL', etc.

CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

be BEACH AND DUNE SAND—Beach sands to gray to pale buff, well sorted, medium to coarse, commonly contains scattered shell fragments, seaweed, and locally, organic and inorganic trash. Sand mostly rounded but includes angular grains, especially near till headlands. Composition mostly quartz, but includes some feldspar and local streaks and thin lenses of dark heavy minerals. Minor components reflect source in glacial till and gravel. Commonly characterized by long continuous gently seaward sloping planar laminae, locally characterized by ripple structures or by shallow, channel-and-fill cross-bedding. Boulder accumulations locally associated with deposits at till headlands. Sand frequently removed by winter storms exposing underlying boulder beds, till, or bedrock beaches in places, redeposited in summer. Associated dune sand is same as unit, but of Holocene age. Commonly present as narrow strips adjacent to immediate island from beach sand cannot be separately mapped at general scale. Both beach and dune sand deposits appear active at present. Thickness generally 1-3 m.

hwa HOLOCENE AND LATE WISCONSIN SWAMP DEPOSIT—Dark brown to black mucky peat, peat, and organic residues mixed with fine-grained mineral sediment. Occurs in ice-block depressions, abandoned glacial forebay basins, and in basins demarcated by glacial deposits. Fibrous peat present locally in ice-block depressions and small glacial lake basins where common. Surface lake silt and clay (hcl) underlies lake deposits 5-10 m, rarely more than 5 m.

hps BROWN OR BROWNISH GRAY OR GRAY MEDIUM TO COARSE SAND WITH SPARSE STRATIFIED PEBBLES AND LOCAL GRASS. Sand moderately to well sorted, chiefly quartz and feldspar. Fat bedded, channel-and-fill crossbedded, or forest bedded. Underlying till and gravel. Commonly 1-3 m, rarely more than 1 m.

hpa ALLUVIUM—Grav, locally olive or manganese coated pebbles, brown, or gray sand and some silt. Noncalcareous, typically well sorted, poorly to well sorted. Commonly crossbedded or with cut-and-fill structure. Texture varies laterally and vertically. Upper part commonly includes more sand and silt than the lower part. Fine to coarse sand, locally gravelly. Commonly overlies till and gravel. Occurs in stream channels and on flood plains, stream terraces, and alluvial fans. Mapped areas may include some outwash gravel or ice-contact sand.

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NOTE: This map is the product of collaboration between three units: the Maine Geological Survey, the Geological Survey of Canada, and the U.S. Geological Survey, and is designed for both scientific and practical purposes. It was prepared in two stages. First, reconnaissance maps and map explanations of the parts of States and Province included in the quadrangle were prepared by the State and Province geologists; secondly, the maps were revised and locally supplemented by the editors; map unit symbols were prepared to a uniform symbol of classification, and map unit descriptions were prepared from information received from the complex and from additional sources. The two diagrams were prepared by Richard M. Pratt. Map and text were reviewed by Byron Stone, U.S. Geological Survey.

Differences in mapping or interpretation in different areas were resolved by correspondence to the extent possible. Most simply reflected differences in available information or in philosophies of mapping, and should encourage further investigation.

For scientific purposes, the map illustrates Quaternary surficial deposits on the basis of lithology, texture, grain, stratigraphic relationships, and age, as shown on the correlation diagram and indicated in the map unit descriptions. Some geomorphic features, such as moraines and ice-contact deltas, are distinguished as map units. Stream-cut terraces and ice-entrained alluvium are not distinguished as map units. They cannot be differentiated in the map area to the scale of 1:100,000. In deference to F. B. Black (deceased), compiler for Connecticut, the inland response of moraines of Goldsmith (1962), which Black did not consider to be of glacial origin, are not shown on the map but are outlined on the map showing topographic relief.

For practical purposes, the map is a surficial materials map. Materials are distinguished on the basis of texture, position, and local specific characteristics. It is not a map of soils as recognized and classified according to the Soil Conservation Service soil taxonomy. It does not show parent materials or soil profiles, or of subsoils or parent materials which pedologic and agronomic soils are formed. As a materials map it serves as a base from which a wide variety of derivative maps for use in planning engineering, land use, land management, or water resource projects can be compiled. However, it does not replace detailed site study and analysis.

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INDEX TO QUATERNARY GEOLOGIC MAP OF THE BOSTON 4 x 6 QUADRANGLE, UNITED STATES AND CANADA
TOPOGRAPHICALLY CONTROLLED LOBATE MARGINS OF LATE WISCONSIN LAURENTIDE ICE SHEET IN SOUTHEASTERN NEW ENGLAND
DISTRIBUTION OF GLACIAL DRIFT ON THE CENTRAL SHELF AND IN THE GULF OF MAINE

EXPLANATION
Foliated gravel in the glacial drift
Southern limit of abundant gravel
Probable southern limit of glaciation—Contourfaded
South to north is covered with sand
Bathymetric contour in meters

EXPLANATION
Sediments ridge with coarse bottom sediment
Area of coarse bottom sediment beyond submarine ridges

EXPLANATION
Inferred outer limit of glacial advance at still stand

RESPONSIBILITY FOR STATE AND PROVINCE COMPILATIONS
MAINE GEOLOGICAL SURVEY
DEPARTMENT OF GEOLOGY, SLIPPERY ROCK STATE COLLEGE, PENNSYLVANIA
DEPARTMENT OF GEOLOGY, UNIVERSITY OF CONNECTICUT
AND GEOLOGICAL SURVEY OF CANADA

STATE AND PROVINCE COMPILERS
Joseph H. Hartshorn, Woodrow B. Thompson, William F. Chapman, Robert F. Black, Gerald M. Richmond, Donald R. Dunsen, David S. Fullerton
EDITED AND INTEGRATED BY
Gerald M. Richmond and David S. Fullerton

QUATERNARY GEOLOGIC ATLAS OF THE UNITED STATES

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