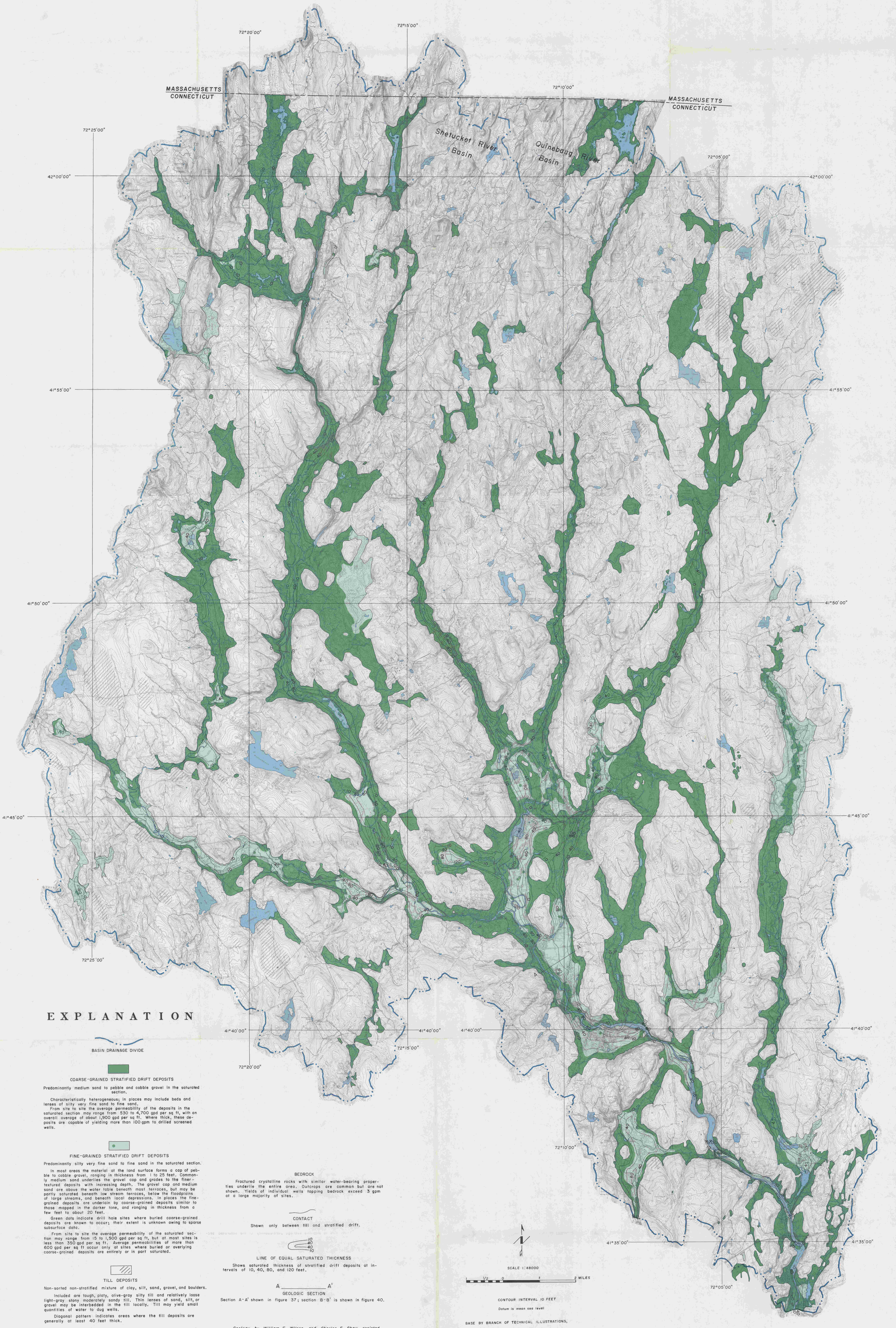

EXPLANATION

BASIN DRAINAGE DIVIDE

COARSE-GRAINED STRATIFIED DRIFT DEPOSITS

Predominantly medium sand to pebble and cobble gravel in the saturated section.

Characteristically heterogeneous; in places may include beds and lenses of silty very fine sand to fine sand.

From site to site the average permeability of the deposits in the saturated section may range from 530 to 4,700 gpd per sq ft, with an overall average of about 1,900 gpd per sq ft. Where thick, these deposits are capable of yielding more than 100 gpm to drilled screened wells.

FINE-GRAINED STRATIFIED DRIFT DEPOSITS

Predominantly silty very fine sand to fine sand in the saturated section.

In most areas the material at the land surface forms a cap of pebble to cobble gravel, ranging in thickness from 1 to 25 feet. Commonly medium sand underlies the gravel cap and grades to the finer-textured deposits with increasing depth. The gravel cap and medium sand are above the water table beneath most terraces, but may be partly saturated beneath low stream terraces, below the floodplains of large streams, and beneath local depressions. In places the fine-grained deposits are underlain by coarse-grained deposits similar to those mapped in the darker tone, and ranging in thickness from a few feet to about 20 feet.

Green dots indicate drill hole sites where buried coarse-grained deposits are known to occur; their extent is unknown owing to sparse subsurface data.

From site to site the average permeability of the saturated section may range from 15 to 1,500 gpd per sq ft, but at most sites is less than 350 gpd per sq ft. Average permeabilities of more than 600 gpd per sq ft occur only at sites where buried or overlying coarse-grained deposits are entirely or in part saturated.

TILL DEPOSITS

Non-sorted non-stratified mixture of clay, silt, sand, gravel, and boulders.

Included are tough, platy, olive-gray silty till and relatively loose light-gray stony moderately sandy till. Thin lenses of sand, silt, or gravel may be interbedded in the till locally. Till may yield small quantities of water to dug wells.

Diagonal pattern indicates areas where the till deposits are generally at least 40 feet thick.

SWAMPS

Surficial deposits of up to about 10 feet of peat or muck. Mapped as stratified drift or till according to type of underlying deposit.

BEDROCK

Fractured crystalline rocks with similar water-bearing properties underlie the entire area. Outcrops are common but are not shown. Yields of individual wells tapping bedrock exceed 3 gpm at a large majority of sites.

CONTACT

Shown only between till and stratified drift.

10
40
40
10

LINE OF EQUAL SATURATED THICKNESS

Shows saturated thickness of stratified drift deposits at intervals of 10, 40, 80, and 120 feet.

A ——— A'

GEOLOGIC SECTION

Section A-A' shown in figure 37; section B-B' is shown in figure 40.

Geology by William E. Wilson and Charles E. Shaw assisted by Robert L. Melvin and Douglas H. Underhill. Eastford quadrangle in part after Pease (in preparation); Fitchville quadrangle after Pessl (1966); Hampton quadrangle in part after Dixon and Pessl (1966); Norwich quadrangle after Hanshaw and Snyder (1962); Scotland quadrangle after Dixon and Shaw (1965); and South Coventry quadrangle in part after Frankel (in preparation).

GEOHYDROLOGIC MAP OF THE SHETUCKET RIVER BASIN