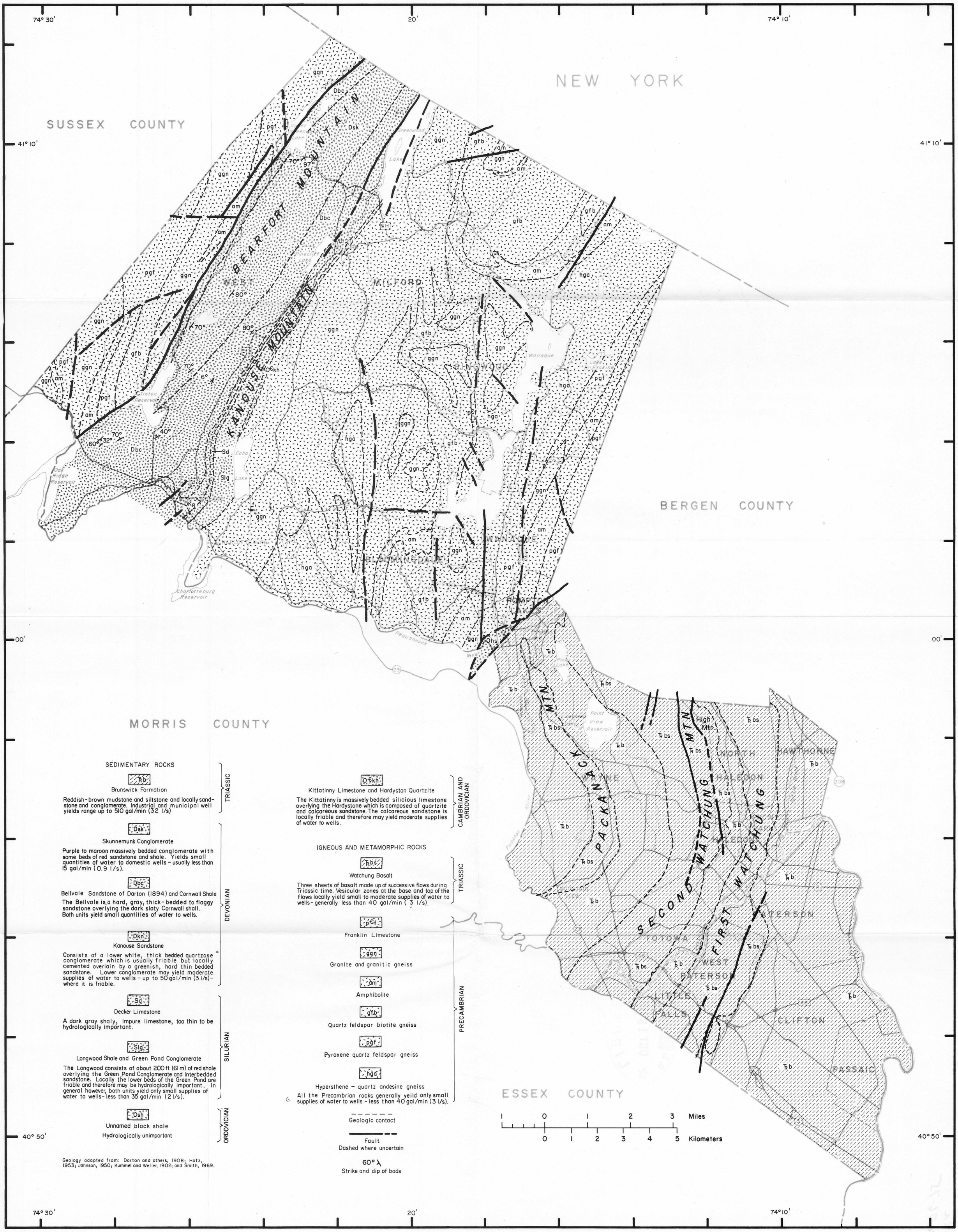

SEDIMENTARY ROCKS

Ꞧb — Brunswick Formation (TRIASSIC)

Reddish-brown mudstone and siltstone and locally sandstone and conglomerate. Industrial and municipal well yields range up to 510 gal/min (32 l/s)

Dsk — Skunnemunk Conglomerate (DEVONIAN)

Purple to maroon massively bedded conglomerate with some beds of red sandstone and shale. Yields small quantities of water to domestic wells – usually less than 15 gal/min (0.9 l/s).

Dbc — Bellvale Sandstone of Darton (1894) and Cornwall Shale (DEVONIAN)

The Bellvale is a hard, gray, thick-bedded to flaggy sandstone overlying the dark slaty Cornwall shall. Both units yield small quantities of water to wells.

Dkn — Kanouse Sandstone (DEVONIAN)

Consists of a lower white, thick bedded quartzose conglomerate which is usually friable but locally cemented overlain by a greenish, hard thin bedded sandstone. Lower conglomerate may yield moderate supplies of water to wells – up to 50 gal/min (3 l/s) – where it is friable.

Sd — Decker Limestone (SILURIAN)

A dark gray shaly, impure limestone, too thin to be hydrologically important.

Slg — Longwood Shale and Green Pond Conglomerate (SILURIAN)

The Longwood consists of about 200 ft (61 m) of red shale overlying the Green Pond Conglomerate and interbedded sandstone. Locally the lower beds of the Green Pond are friable and therefore may be hydrologically important. In general however, both units yield only small supplies of water to wells – less than 35 gal/min (2 l/s).

Osh — Unnamed black shale (ORDOVICIAN)

Hydrologically unimportant

O€kh — Kittatinny Limestone and Hardyston Quartzite (CAMBRIAN AND ORDOVICIAN)

The Kittatinny is massively bedded silicious limestone overlying the Hardystone which is composed of quartzite and calcareous sandstone. The calcareous sandstone is locally friable and therefore may yield moderate supplies of water to wells.

IGNEOUS AND METAMORPHIC ROCKS

Ꞧbs — Watchung Basalt (TRIASSIC)

Three sheets of basalt made up of successive flows during Triassic time. Vesicular zones at the base and top of the flows locally yield small to moderate supplies of water to wells – generally less than 40 gal/min (3 l/s).

p€f — Franklin Limestone (PRECAMBRIAN)

ggn — Granite and granitic gneiss

am — Amphibolite

gfb — Quartz feldspar biotite gneiss

pgf — Pyroxene quartz feldspar gneiss

hga — Hypersthene – quartz andesine gneiss

All the Precambrian rocks generally yeild only small supplies of water to wells – less than 40 gal/min (3 l/s).

Geologic contact

Fault
Dashed where uncertain

60° λ
Strike and dip of beds

Geology adapted from: Darton and others, 1908; Hotz, 1953; Johnson, 1950; Kummel and Weller, 1902; and Smith, 1969.

Base map adapted from N. J. State Atlas Sheets 22, 23, and 26.

Figure 3 -- Geologic map of Passaic County, New Jersey