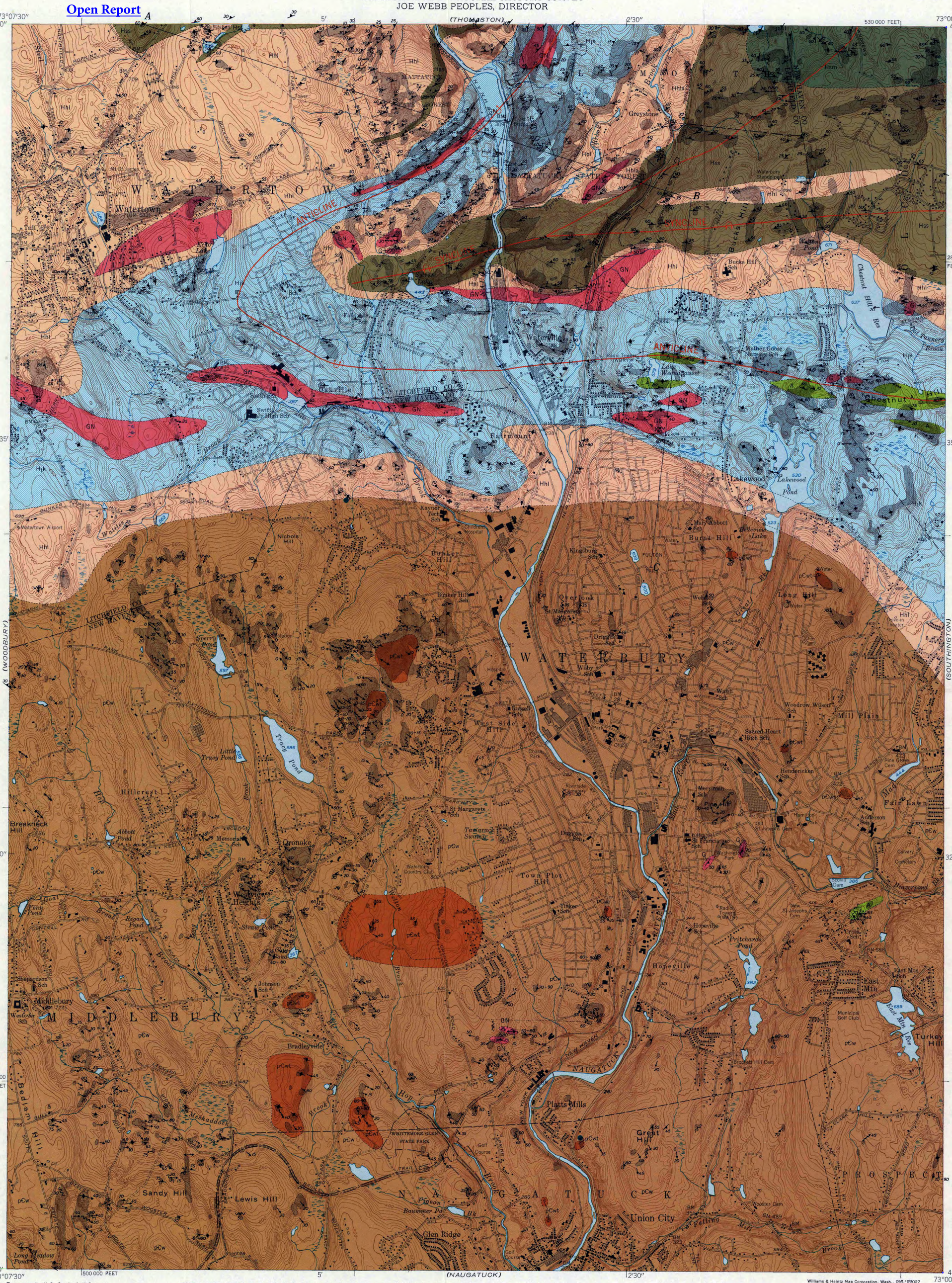
STATE OF CONNECTICUT
GEOLOGICAL AND NATURAL HISTORY SURVEY
JOE WEBB PEOPLES, DIRECTOR

Open Report

QUADRANGLE REPORT NO. 22
Plate 1



GEOLOGIC MAP OF THE WATERBURY QUADRANGLE, CONNECTICUT

Bedrock Geology by Robert M. Gates, and Charles W. Martin 1962-64

Base map by U.S. Geological Survey

Control by USGS, USC&GS, and Connecticut Geodetic Survey

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1944. Field check 1948
Revised 1955

Polyconic projection. 1927 North American datum
10,000-foot grid based on Connecticut coordinate system

1000 meter Universal Transverse Mercator grid ticks, zone 18, shown in blue

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State of Connecticut

13°
MAGNETIC NORTH
TRUE NORTH
APPROXIMATE MEAN DECLINATION, 1955

SCALE 1:24 000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

CONNECTICUT
QUADRANGLE LOCATION

Williams & Heintz Map Corporation, Wash., D.C. 20027

WATERBURY, CONN.
N4130—W7300/7.5
1955

EXPLANATION

Hhl / Hhla

Hitchcock Lake Member

Thin to thick interlayered finely streaked, oligoclase-quartz granulites and coarsely streaked, mica-oligoclase-quartz gneiss. Subordinate layers of a friable mica-plagioclase-quartz granulite are present. Distinguished from the Straits Schist by abundant biotite, lack of kyanite and increase in total quartz-plagioclase. Hhla-Amphibolitic rocks interlayered with the granulites and gneisses, typically found at base of The Straits Schist.

Hjk

Hartland Unit I member

Fine-grained, light-gray muscovite-biotite-plagioclase-quartz granulite or granulitic gneiss. Subordinate layers of mica-plagioclase-quartz schist are present throughout. Kyanite-bearing mica-plagioclase-quartz granulite and granulitic gneiss. Calc-silicate layers are rare.

pCw / pCwt

Waterbury Formation

pCw *Mainly thin to thick interlayered assemblage of light- to dark-gray, fine- to medium-grained paragneisses composed of muscovite-biotite-oligoclase to andesine-quartz with kyanite a minor but ubiquitous mineral. Layering is related to relative amounts of micas. Kyanite and garnet typically associated with micas.*

Migmatitic mixtures of the paragneisses and quartzofeldspathic material ranging in composition from trondhjemitic to granitic predominate. Calc silicate pods are common. pCwt *Mainly trondhjemitic rocks composed of biotite, quartz and andesine with subordinate granodioritic to granitic rocks. These rocks intrude paragneisses but do not appear in Hartland.*

G / GN

Granite (G) and Granite Gneiss (GN)

Fine- to medium-grained gray to white granite and granite gneiss composed of biotite, microcline, oligoclase, quartz and muscovite with accessory garnet, magnetite, sphene, apatite, allanite, tourmaline, zircon, and chlorite

A

Amphibolite

Fine- to coarse-grained, black to mottled black and white amphibolites composed of hornblende, andesine, quartz, and garnet with accessory sphene, ilmenite, and epidote. Several amphibolites carry abundant, coarse garnet crystals.

Hsm

HARTLAND FORMATION

Southington Mountain Member

Thinly interlayered fine- to medium-grained mica-oligoclase-quartz granulites and schists. Accessory garnet and kyanite are subordinate, particularly in comparison with The Straits Schist. Quartz pods are common. Pegmatites are abundant as dikes and sills.

Hss

The Straits Schist Member

A medium- to coarse-grained oligoclase-biotite-muscovite-quartz schist with garnet and kyanite porphyroblasts. Graphite ranges from very minor in amount to conspicuous. In the northeast corner of quadrangle, graphite is particularly abundant. Accessory minerals are chlorite, apatite, rutile, sphene, tourmaline, zircon, staurolite, and magnetite.

- Isolated serpentinized ultrabasic rock composed mainly of serpentine with remanent olivine and orthopyroxene.
- Formational contacts. Dashed where inferred or approximately located.
- Intraformational contacts. Dashed where inferred or approximately located.
- Outcrop area. Where outcrop area is smaller than size of structural symbol, enclosure is omitted.
- 35 Strike and dip of compositional layering and mica folia.
- Outcrop trend of layering and foliation where variable.
- 50 Direction and plunge of mesoscopic fold axes.
- Generalized trend of crumpled lineations or fold axes.
- 20 10 Variable plunges of fold axes.
- Horizontal fold axes.
- Vertical fold axes.
- Migmatites showing no regular layering or folding on outcrop scale.
- Strike of vertical bedding or layering.
- Strike of vertical foliation.
- 60 Generalized strike and dip of crumpled or variable foliation or layering. Dip in direction of numeral.
- Generalized strike of crumpled layers showing plunge of fold axes.
- Horizontal foliation or layering.
- Generalized trend of layering where dip not determined.
- Fault dashed where inferred or approximately located.
- Overturned Anticline
- Overturned Syncline