

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
W. E. WRATHER, DIRECTOR

GEOLOGIC
QUADRANGLE MAPS
OF THE
UNITED STATES
BEDROCK GEOLOGY
OF THE
DELAWARE QUADRANGLE
MICHIGAN
By
Henry R. Cornwall



INDEX MAP OF MICHIGAN

PUBLISHED BY THE U. S. GEOLOGICAL SURVEY
WASHINGTON, D. C.
1954

The present series of Geologic Quadrangle Maps of the United States continues the project of geologically mapping the entire country, begun with the folios of the Geologic Atlas of the United States, which were published from 1894 to 1945. The new series consists of geologic maps, supplemented where possible by structure sections, columnar sections, and other graphic means of presenting geologic data and accompanied by the minimum of explanatory text required to make the maps useful for general scientific and economic purposes. Full description of the areas shown on these maps and interpretation of the geologic history are reserved for publication in other channels, such as the Bulletins and Professional Papers of the Geological Survey.

Where additional types of geologic maps are required, separate maps of the same areas, covering bedrock, surficial, engineering, and other phases of geology, may be published in the geologic quadrangle map series. Each edition is issued in two forms—flat for filing in large map cases and folded for convenience in filing and for use in the field.

These maps may be obtained, flat or folded, from the U. S. Geological Survey, Washington 25, D. C., at the prices listed below. Prepayment is required and may be made by postal or express money order payable to the U. S. Geological Survey, or in cash—the exact amount—at sender's risk. Postage stamps are not accepted in payment for publications.

PUBLISHED MAPS IN THE
GEOLOGIC QUADRANGLE MAP SERIES

| | | |
|-------|---|--------|
| GQ 1 | Bedrock geology of the Pawtucket quadrangle, Rhode Island-Massachusetts, by Alonzo W. Quinn, R. G. Ray, and W. L. Seymour, 1949 | \$0.50 |
| GQ 2 | Surficial geology of the Pawtucket quadrangle, Rhode Island-Massachusetts, by Newton E. Chute, 1949 | .50 |
| GQ 3 | Bedrock geology of the Mount Grace quadrangle, Massachusetts, by Jarvis B. Hadley, 1949 | .50 |
| GQ 4 | Surficial geology of the Mount Grace quadrangle, Massachusetts, by Jarvis B. Hadley, 1949 | .50 |
| GQ 5 | Bedrock geology of the Brockton quadrangle, Massachusetts, by Newton E. Chute, 1950 | .50 |
| GQ 6 | Surficial geology of the Brockton quadrangle, Massachusetts, by Newton E. Chute, 1950 | .50 |
| GQ 7 | Geology of the Mount Tobin quadrangle, Nevada, by S. W. Muller, H. G. Ferguson, and Ralph J. Roberts, 1951 | .50 |
| GQ 8 | Bedrock geology of the Mount Toby quadrangle, Massachusetts, by Max E. Willard, 1951 | .50 |
| GQ 9 | Surficial geology of the Mount Toby quadrangle, Massachusetts, by Richard H. Jahns, 1951 | .50 |
| GQ 10 | Geology of the Antler Peak quadrangle, Nevada, by Ralph J. Roberts, 1951 | .50 |
| GQ 11 | Geology of the Winnemucca quadrangle, Nevada, by H. G. Ferguson, S. W. Muller, and Ralph J. Roberts, 1951 | .50 |
| GQ 12 | Geology of the Mount Moses quadrangle, Nevada, by H. G. Ferguson, S. W. Muller, and Ralph J. Roberts, 1951 | .50 |
| GQ 13 | Bedrock geology of the North Scituate quadrangle, Rhode Island, by Alonzo W. Quinn, 1951 | .50 |
| GQ 14 | Geology of the Dannemora quadrangle, New York, by A. Williams Postel, 1951 | .50 |
| GQ 15 | Geology of the Golconda quadrangle, Nevada, by H. G. Ferguson, Ralph J. Roberts, and S. W. Muller, 1952 | 1.00 |
| GQ 16 | Bedrock geology of the Georgiaville quadrangle, Rhode Island, by Gerald M. Richmond, 1952 | 1.00 |
| GQ 17 | Bedrock geology of the East Greenwich quadrangle, Rhode Island, by Alonzo W. Quinn, 1952 | 1.00 |
| GQ 18 | Geology of the Niota quadrangle, Tennessee, by John Rodgers, 1952 | 1.00 |
| GQ 19 | Geology of the Athens quadrangle, Tennessee, by John Rodgers, 1952 | 1.00 |
| GQ 20 | Bedrock geology of the Greenfield quadrangle, Massachusetts, by Max E. Willard, 1952 | 1.00 |
| GQ 21 | Surficial geology of the Ayer quadrangle, Massachusetts, by Richard H. Jahns, 1953 | 1.00 |
| GQ 22 | Surficial geology of the Georgiaville quadrangle, Rhode Island, by Gerald M. Richmond, 1953 | 1.00 |
| GQ 23 | Geology of the Coaldale quadrangle, Nevada, by H. G. Ferguson, S. W. Muller, and S. H. Cathcart, 1953 | 1.00 |
| GQ 24 | Geology of the Pearland quadrangle, California, by Levi F. Noble, 1953 | 1.00 |
| GQ 25 | Geology of the Galice quadrangle, Oregon, by F. G. Wells and G. W. Walker, 1953 | 1.00 |
| GQ 26 | Geology of the Bowbells quadrangle, North Dakota, by Richard W. Lemke and Clifford A. Kay, 1953 | 1.00 |
| GQ 27 | Bedrock geology of the Ahmeek quadrangle, Michigan, by Walter S. White, Henry R. Cornwall, and Roger W. Swanson, 1953 | 1.00 |
| GQ 28 | Geology of the Carlisle quadrangle, Pennsylvania, by George W. Stose, 1953 | 1.00 |
| GQ 29 | Geology of the Eagleton quadrangle, Montana, by Robert M. Lindvall, 1953 | 1.00 |
| GQ 30 | Bedrock geology of the Silver Creek quadrangle, New York, by Wallace de Witt, Jr., and George W. Colton, 1953 | 1.00 |
| GQ 31 | Geology of the Velva quadrangle, North Dakota, by Richard W. Lemke, 1953 | 1.00 |
| GQ 32 | Geology of the Pierre quadrangle, South Dakota, by Dwight R. Crandell, 1954 | 1.00 |
| GQ 33 | Geology of the Bull Canyon quadrangle, Colorado, by Fred W. Cater, Jr., 1954 | 1.00 |
| GQ 34 | Bedrock geology of the Phoenix quadrangle, Michigan, by Henry R. Cornwall, 1954 | 1.00 |
| GQ 35 | Bedrock geology of the Bruneau Creek quadrangle, Michigan, by James C. Wright and Henry R. Cornwall, 1954 | 1.00 |
| GQ 36 | Bedrock geology of the Eagle Harbor quadrangle, Michigan, by Henry R. Cornwall and James C. Wright, 1954 | 1.00 |
| GQ 37 | Bedrock geology of the Hornell quadrangle, New York, by James F. Pepper, 1954 | 1.00 |
| GQ 38 | Geology of the Starbuck quadrangle, Washington, by L. M. Gard, Jr., and H. H. Waldron, 1954 | 1.00 |
| GQ 39 | Geology of the Canning quadrangle, South Dakota, by Dwight R. Crandell, 1954 | 1.00 |
| GQ 40 | Geology of the Round Mountain quadrangle, Nevada, by H. G. Ferguson and S. H. Cathcart, 1954 | 1.00 |
| GQ 41 | Geology of the Globe quadrangle, Arizona, by Nels P. Peterson, 1954 | 1.00 |
| GQ 42 | Bedrock geology of the Bristol quadrangle and vicinity, Rhode Island-Massachusetts, by Alonzo W. Quinn and George H. Springer, 1954 | 1.00 |
| GQ 43 | Geology of the Haas quadrangle, Washington, by Donald E. Trimble, 1954 | 1.00 |
| GQ 44 | Geology of the Noonan quadrangle, North Dakota, by R. C. Townsend, 1954 | 1.00 |
| GQ 45 | Geology of the Mina quadrangle, Nevada, by H. G. Ferguson, S. W. Muller, and S. H. Cathcart, 1954 | 1.00 |
| GQ 46 | Geology of the Crosby quadrangle, North Dakota, by R. C. Townsend, 1954 | 1.00 |
| GQ 47 | Geology of the Portal quadrangle, North Dakota, by R. C. Townsend, 1954 | 1.00 |
| GQ 48 | Geology of the Hay quadrangle, Washington, by H. H. Waldron and L. M. Gard, Jr., 1954 | 1.00 |
| GQ 49 | Geology of the Fredonia quadrangle, Kansas, by Holly C. Wagner, 1954 | 1.00 |
| GQ 50 | Geology of the Valyermo quadrangle and vicinity, California, by Levi F. Noble, 1954 | 1.00 |
| GQ 51 | Bedrock geology of the Delaware quadrangle, Michigan, by Henry R. Cornwall, 1954 | 1.00 |