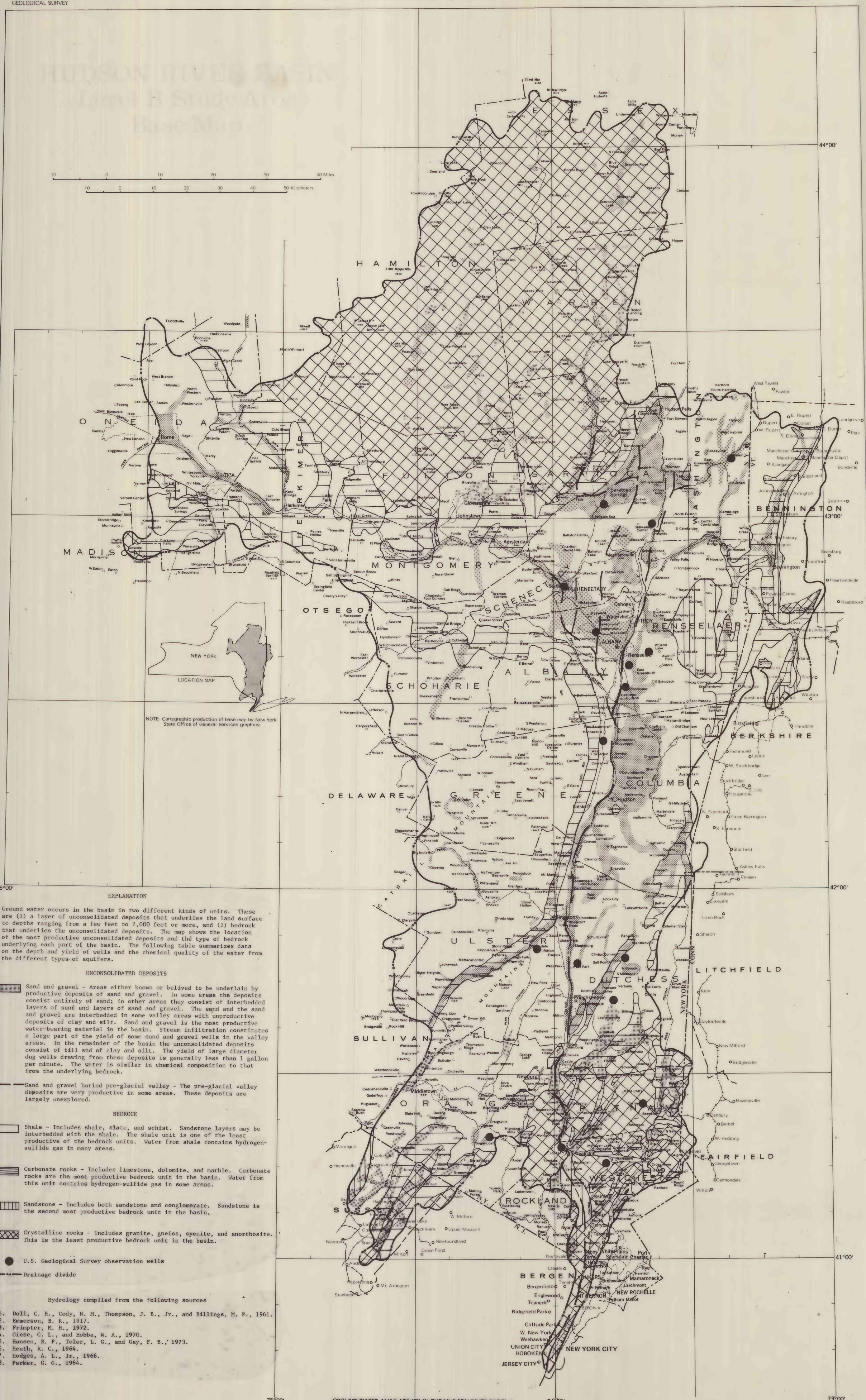

EXPLANATION

Ground water occurs in the basin in two different kinds of units. These are (1) a layer of unconsolidated deposits that underlies the land surface to depths ranging from a few feet to 2,000 feet or more, and (2) bedrock that underlies the unconsolidated deposits. The map shows the location of the most productive unconsolidated deposits and the type of bedrock underlying each part of the basin. The following table summarizes data on the depth and yield of wells and the chemical quality of the water from the different types of aquifers.

UNCONSOLIDATED DEPOSITS

Sand and gravel - Areas either known or belived to be underlain by productive deposits of sand and gravel. In some areas the deposits consist entirely of sand; in other areas they consist of interbedded layers of sand and layers of sand and gravel. The sand and the sand and gravel are interbedded in some valley areas with unproductive deposits of clay and silt. Sand and gravel is the most productive water-bearing material in the basin. Stream infiltration constitutes a large part of the yield of some sand and gravel wells in the valley areas. In the remainder of the basin the unconsolidated deposits consist of till and of clay and silt. The yield of large diameter dug wells drawing from these deposits is generally less than 1 gallon per minute. The water is similar in chemical composition to that from the underlying bedrock.

Sand and gravel buried pre-glacial valley - The pre-glacial valley deposits are very productive in some areas. These deposits are largely unexplored.

BEDROCK

Shale - Includes shale, slate, and schist. Sandstone layers may be interbedded with the shale. The shale unit is one of the least productive of the bedrock units. Water from shale contains hydrogen-sulfide gas in many areas.

Carbonate rocks - Includes limestone, dolomite, and marble. Carbonate rocks are the most productive bedrock unit in the basin. Water from this unit contains hydrogen-sulfide gas in some areas.

Sandstone - Includes both sandstone and conglomerate. Sandstone is the second most productive bedrock unit in the basin.

Crystalline rocks - Includes granite, gneiss, syenite, and anorthosite. This is the least productive bedrock unit in the basin.

U.S. Geological Survey observation wells

Drainage divide

Hydrology compiled from the following sources

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3. Frimpter, M. H., 1972.
4. Giese, G. L., and Hobba, W. A., 1970.
5. Hansen, B. P., Toler, L. G., and Gay, F. B., 1973.
6. Heath, R. C., 1964.
7. Hodges, A. L., Jr., 1966.
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