DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
NEW YORK STATE DEPARTMENT OF HEALTH

OPEN-FILE REPORT 82-81
(SHEET 5 OF 6)

WATER-TABLE

By
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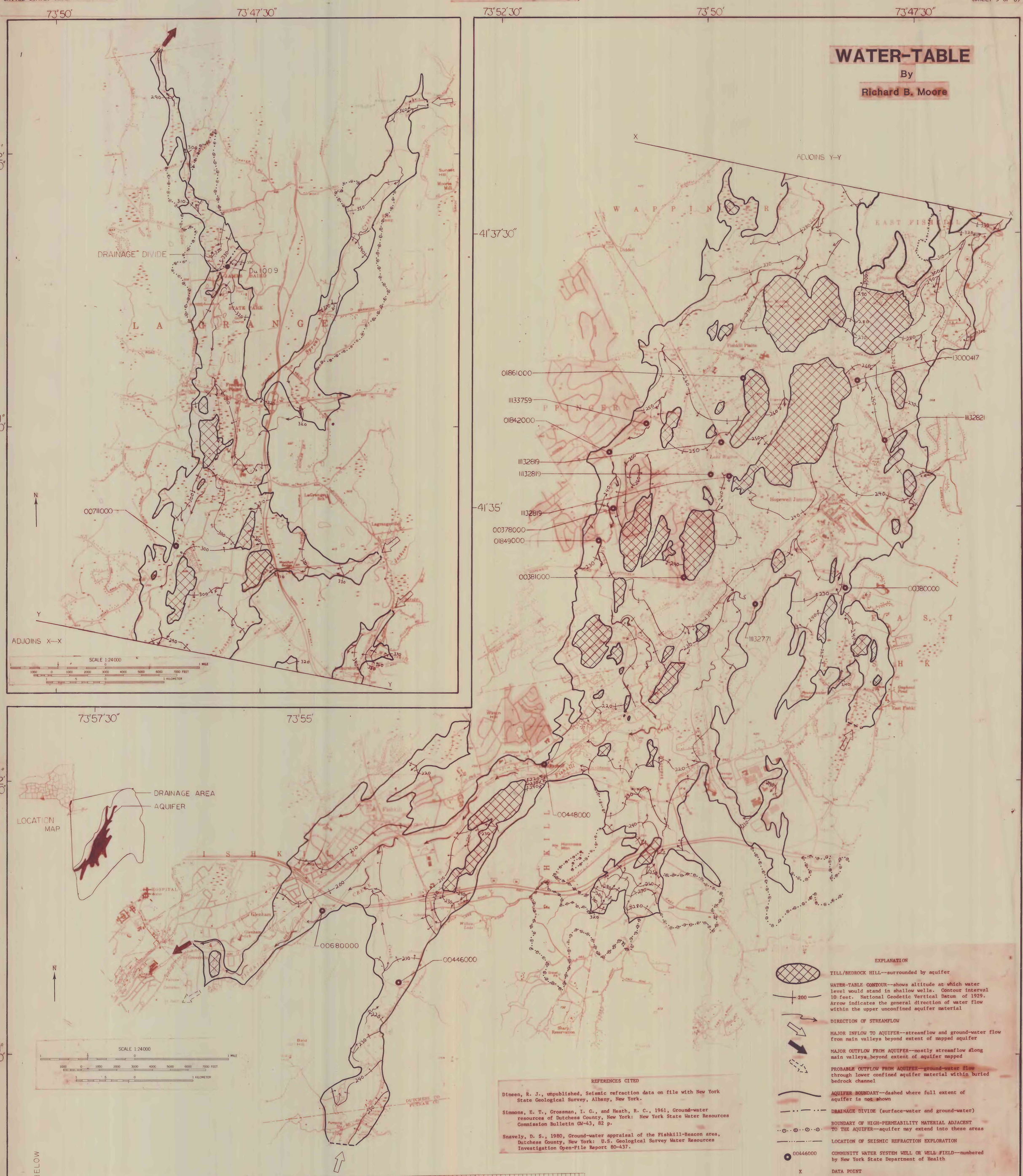

EXPLANATION

TILL/BEDROCK HILL--surrounded by aquifer

200 — WATER-TABLE CONTOUR--shows altitude at which water level would stand in shallow wells. Contour interval 10 feet. National Geodetic Vertical Datum of 1929. Arrow indicates the general direction of water flow within the upper unconfined aquifer material

DIRECTION OF STREAMFLOW

MAJOR INFLOW TO AQUIFER--streamflow and ground-water flow from main valleys beyond extent of mapped aquifer

MAJOR OUTFLOW FROM AQUIFER--mostly streamflow along main valleys beyond extent of aquifer mapped

PROBABLE OUTFLOW FROM AQUIFER--ground-water flow through lower confined aquifer material within buried bedrock channel

AQUIFER BOUNDARY--dashed where full extent of aquifer is not shown

DRAINAGE DIVIDE (surface-water and ground-water)

BOUNDARY OF HIGH-PERMEABILITY MATERIAL ADJACENT TO THE AQUIFER--aquifer may extend into these areas

LOCATION OF SEISMIC REFRACTION EXPLORATION

00446000 — COMMUNITY WATER SYSTEM WELL OR WELL FIELD--numbered by New York State Department of Health

X — DATA POINT

Du 1009 — OBSERVATION WELL--location for which hydrograph data is shown, numbered by U.S. Geological Survey

REFERENCES CITED

Dineen, R. J., unpublished, Seismic refraction data on file with New York State Geological Survey, Albany, New York.

Simmons, E. T., Grossman, I. G., and Heath, R. C., 1961, Ground-water resources of Dutchess County, New York: New York State Water Resources Commission Bulletin GW-43, 82 p.

Snavely, D. S., 1980, Ground-water appraisal of the Fishkill-Beacon area, Dutchess County, New York: U.S. Geological Survey Water Resources Investigation Open-File Report 80-437.

NOTE

The contours show the estimated average altitude of the water table under nonstressed conditions (no pumping) based on water levels in shallow wells and on surface-water elevations. The water table fluctuates seasonally in response to recharge and discharge. Recharge occurs over the entire aquifer, although it is greater where the land surface is highly permeable and along the aquifer boundaries where runoff from the hillsides is concentrated. The aquifer is also recharged from underlying and adjacent till and bedrock and from adjacent material of high permeability. The overall drainage area contributing recharge to the aquifer is depicted on the location map. Discharge occurs principally by evapotranspiration and infiltration to streams. Seasonal water-table fluctuations are greatest along the margin of the aquifer and least along major streams and lakes.

The hydrograph of U.S.G.S. well DU 1009 shows the range of seasonal fluctuations of the water table in a well within a northern sector of the aquifer. Seasonal fluctuation of the water table in the well are small despite its proximity to the aquifer margin. The water-level data shown in the hydrograph are on file with the U.S. Geological Survey, Albany, New York.

BASE FROM NEW YORK STATE DEPARTMENT OF TRANSPORTATION HOPEWELL JUNCTION, N.Y., 1973; PLEASANT VALLEY, N.Y., 1973; WAPPINGERS FALLS, N.Y., 1973; AND WEST POINT, N.Y., 1973. 1:24,000

GEOHYDROLOGY OF THE VALLEY-FILL AQUIFER IN THE SPROUT AND FISHKILL CREEKS AREA, DUTCHESS COUNTY, NEW YORK

HYDROLOGY MAPPED IN 1981

1982