DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
NEW YORK STATE DEPARTMENT OF HEALTH

OPEN-FILE REPORT 82-110
(SHEET 5 OF 7)

POTENTIOMETRIC SURFACE

By

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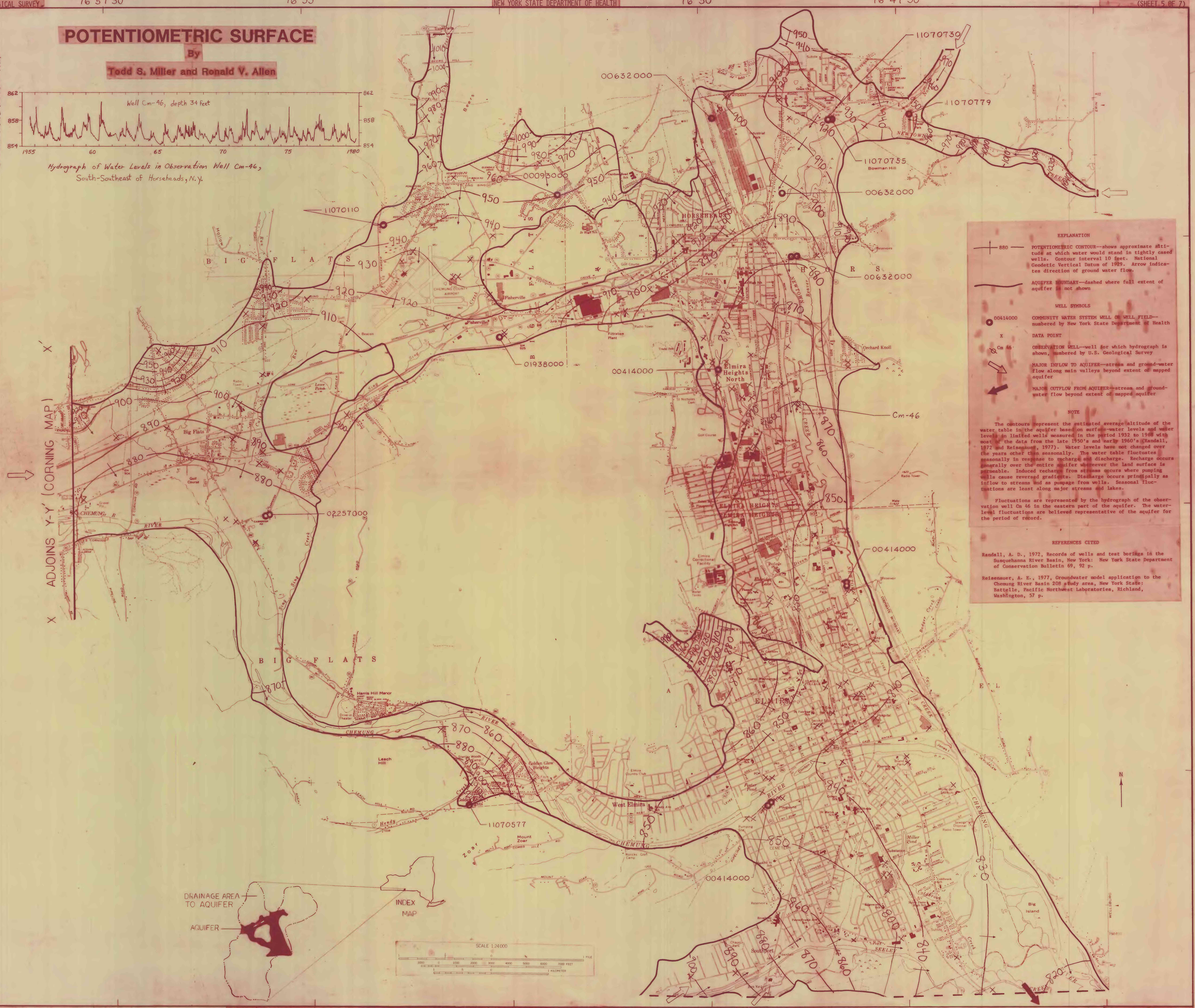
Hydrograph of Water Levels in Observation Well Cm-46, South-Southeast of Horseheads, N.Y.



EXPLANATION

880 — POTENTIOMETRIC CONTOUR--shows approximate altitude at which water would stand in tightly cased wells. Contour interval 10 feet. National Geodetic Vertical Datum of 1929. Arrow indicates direction of ground water flow.

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

WELL SYMBOLS

00414000 — COMMUNITY WATER SYSTEM WELL OR WELL FIELD--numbered by New York State Department of Health

X — DATA POINT

Cm 46 — OBSERVATION WELL--well for which hydrograph is shown, numbered by U.S. Geological Survey

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

MAJOR OUTFLOW FROM AQUIFER--stream and ground-water flow beyond extent of mapped aquifer

NOTE

The contours represent the estimated average altitude of the water table in the aquifer based on surface-water levels and water levels in limited wells measured in the period 1932 to 1968 with most of the data from the late 1950's and early 1960's (Randall, 1972 and Reisenauer, 1977). Water levels have not changed over the years other than seasonally. The water table fluctuates seasonally in response to recharge and discharge. Recharge occurs generally over the entire aquifer wherever the land surface is permeable. Induced recharge from streams occurs where pumping wells cause reversed gradients. Discharge occurs principally as inflow to streams and as pumpage from wells. Seasonal fluctuations are least along major streams and lakes.

Fluctuations are represented by the hydrograph of the observation well Cm 46 in the eastern part of the aquifer. The water-level fluctuations are believed representative of the aquifer for the period of record.

REFERENCES CITED

Randall, A. D., 1972, Records of wells and test borings in the Susquehanna River Basin, New York: New York State Department of Conservation Bulletin 69, 92 p.

Reisenauer, A. E., 1977, Groundwater model application to the Chemung River Basin 208 study area, New York State: Battelle, Pacific Northwest Laboratories, Richland, Washington, 57 p.

BASE FROM NEW YORK STATE DEPARTMENT OF TRANSPORTATION BIG FLATS, N.Y., 1978; ELMIRA, N.Y., 1978; SEELEY CREEK, N.Y.-PA., 1978; HORSEHEADS, N.Y., 1978. 1:24,000

GEOHYDROLOGY OF THE VALLEY-FILL AQUIFER IN THE ELMIRA AREA, CHEMUNG COUNTY, NEW YORK

1982

HYDROLOGY MAPPED IN 1981