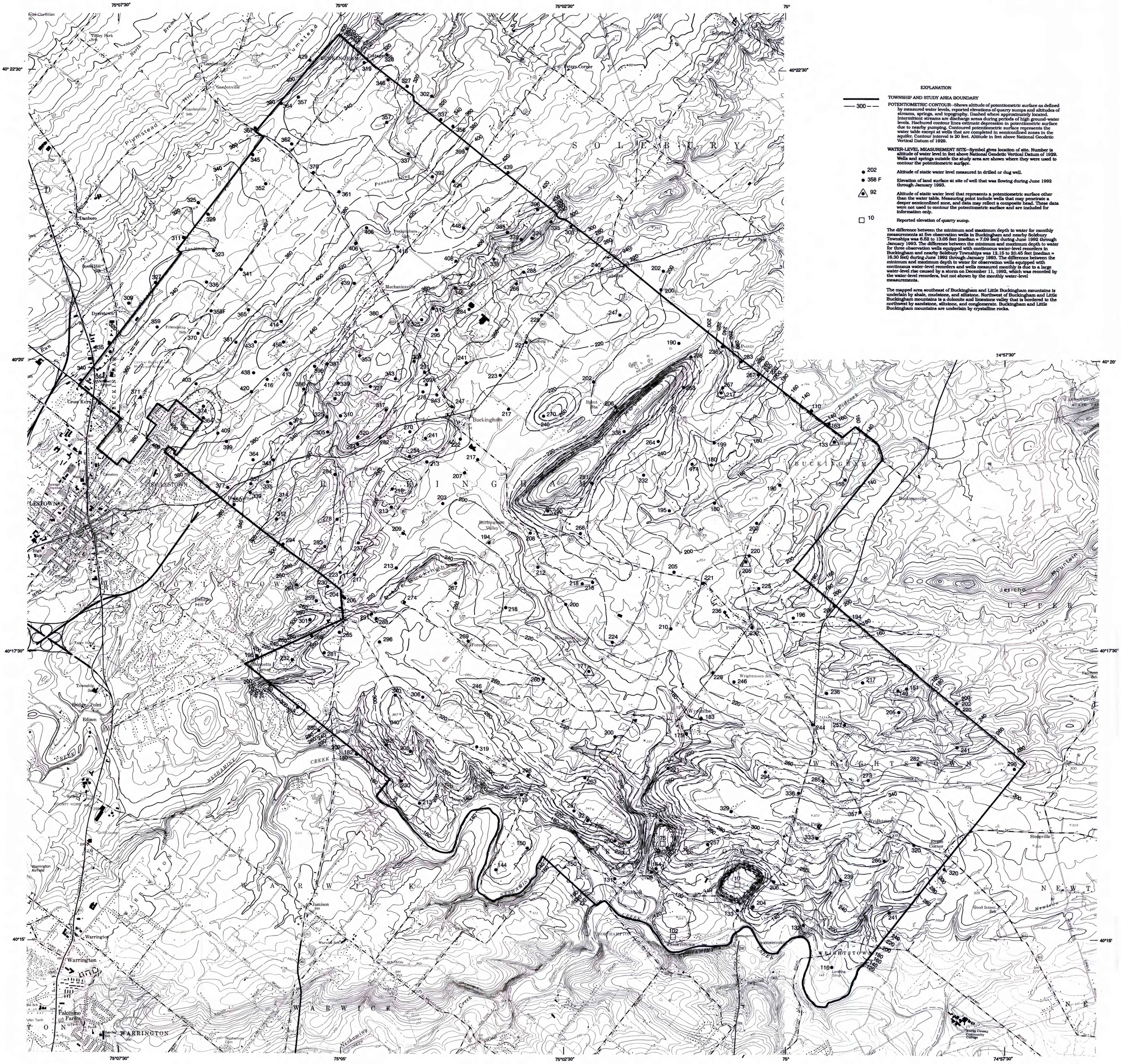
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH
NEW HOPE BOROUGH AND BRIDGETON, BUCKINGHAM, NOCKAMIXON, PLUMSTEAD, SOLEBURY, SPRINGFIELD, TINICUM, AND WRIGHTSTOWN TOWNSHIPS, BUCKS COUNTY, PENNSYLVANIA

OPEN-FILE REPORT 93-417



EXPLANATION

TOWNSHIP AND STUDY AREA BOUNDARY

300 POTENTIOMETRIC CONTOUR--Shows altitude of potentiometric surface as defined by measured water levels, reported elevations of quarry sumps and altitudes of streams, springs, and topography. Dashed where approximately located. Intermittent streams are discharge areas during periods of high ground-water levels. Hachured contour lines estimate depression in potentiometric surface due to nearby pumping. Contoured potentiometric surface represents the water table except at wells that are completed in semiconfined zones in the aquifer. Contour interval is 20 feet. Altitude in feet above National Geodetic Vertical Datum of 1929.

WATER-LEVEL MEASUREMENT SITE--Symbol gives location of site. Number is altitude of water level in feet above National Geodetic Vertical Datum of 1929. Wells and springs outside the study area are shown where they were used to contour the potentiometric surface.

● 202 Altitude of static water level measured in drilled or dug well.

● 358 F Elevation of land surface at site of well that was flowing during June 1992 through January 1993.

92 Altitude of static water level that represents a potentiometric surface other than the water table. Measuring point include wells that may penetrate a deeper semiconfined zone, and data may reflect a composite head. These data were not used to contour the potentiometric surface and are included for information only.

□ 10 Reported elevation of quarry sump.

The difference between the minimum and maximum depth to water for monthly measurements at five observation wells in Buckingham and nearby Solebury Townships was 6.52 to 13.05 feet (median = 7.09 feet) during June 1992 through January 1993. The difference between the minimum and maximum depth to water for three observation wells equipped with continuous water-level recorders in Buckingham and nearby Solebury Townships was 12.15 to 20.45 feet (median = 16.30 feet) during June 1992 through January 1993. The difference between the minimum and maximum depth to water for observation wells equipped with continuous water-level recorders and wells measured monthly is due to a large water-level rise caused by a storm on December 11, 1992, which was recorded by the water-level recorders, but not shown by the monthly water-level measurements.

The mapped area southeast of Buckingham and Little Buckingham mountains is underlain by shale, mudstone, and siltstone. Northwest of Buckingham and Little Buckingham mountains is a dolomite and limestone valley that is bordered to the northwest by sandstone, siltstone, and conglomerate. Buckingham and Little Buckingham mountains are underlain by crystalline rocks.

ALTITUDE AND CONFIGURATION OF THE POTENTIOMETRIC SURFACE IN BUCKINGHAM AND WRIGHTSTOWN TOWNSHIPS, BUCKS COUNTY, PENNSYLVANIA, JUNE 1992 THROUGH JANUARY 1993

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PENNSYLVANIA