Department of Natural Resources
MARYLAND GEOLOGICAL SURVEY
Kenneth N. Weaver, Director

REPORT OF INVESTIGATIONS NO. 41-A

HYDROLOGIC AND MINING DATA FROM AN AREA OF UNDERGROUND COAL MINING IN GARRETT COUNTY, MARYLAND

by

Steven N. Hiortdahl

Prepared in cooperation with the
United States Department of the Interior
Geological Survey
and the
Maryland Bureau of Mines

1988

CONVERSION FACTORS AND ABBREVIATIONS

For the convenience of readers who may prefer to use International System (SI) units rather than the inch-pound units used in this report, values may be converted by using the following factors:

Multiply inch-pound units	by	To obtain SI units
inch (in.)	25.4	millimeter (mm)
inch per year (in/yr)	2.54	centimeter per year (cm/yr)
foot (ft)	0.3048	meter (m)
foot per year (ft/yr)	0.3048	meter per year (m/yr)
mile (mi)	1.609	kilometer (km)
acre	4,047	square meter (m^2)
acre per year (acre/yr)	0.4047	hectare per year (hectare/yr)
square mile (mi^2)	2.590	square kilometer (km^2)
gallon (gal)	3.785	liter (L)
million gallons (Mgal)	3,785	cubic meter (m^3)
million gallons per year (Mgal/yr)	3,785	cubic meter per year (m^3/yr)
cubic foot per second (ft^3/s)	0.02832	cubic meter per second (m^3/s)

Chemical concentration and water temperature in this report are expressed in SI units. Chemical concentration is given in milligrams per liter (mg/L) or in micrograms per liter (μg/L). Milligrams per liter is a unit expressing the concentration of chemical constituents in solution as weights of solute per unit volume of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. For concentrations of less than about 7,000 mg/L, the numerical value is about the same as for concentration in parts per million.

Water temperature is expressed in degrees Celsius (°C), which can be converted to degrees Fahrenheit (°F) by the following equation:

$$°F = 1.8\,(°C) + 32$$

Specific electrical conductance of water is expressed in microsiemens per centimeter at 25°C (μS/cm). This unit is identical to micromhos per centimeter at 25°C, formerly used by the U.S. Geological Survey.

Sea level: In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)— A geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "Mean Sea Level of 1929."

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HYDROLOGIC AND MINING DATA FROM AN AREA OF UNDERGROUND COAL MINING IN GARRETT COUNTY, MARYLAND

by Steven N. Hiortdahl

ABSTRACT

This report is the second in a series of reports describing the hydrologic conditions in an area of underground coal mining in southwestern Garrett County, Maryland. Hydrologic and mining data collected during the second study phase (October 1981 to September 1984) are presented, and changes in mining activity and hydrologic conditions between the first and second study phases are briefly noted.

Three adjacent permit areas were mined using the room-and-pillar method. Coal extraction within the three permit areas was about 50 percent complete by the end of 1984. The cumulative area undermined increased from about 650 acres in July 1981 to about 1,650 acres by July 1984. Total annual pumpage of mine-drainage water increased from 410 to 660 million gallons per year during the same period.

Water levels in several observation wells above the mines have declined from tens to hundreds of feet. Water-level declines ranging from about 400 to 450 feet occurred in two undermined wells open to a confined zone immediately above the mine. Long-term water-level declines occurred in two wells that are open to a confined zone below the mines.

Discharges of treated acid-mine drainage raised the specific conductance in South Fork Sand Run and contributed about 19 to 44 percent of the daily flow at the gage. The effect was less obvious in Laurel Run, because the volume of treated acid-mine drainage discharged there comprised only about 3 to 4 percent of the daily flow at the gage.

Several main-channel segments of Laurel Run lost streamflow to the local ground-water system. Periodic streamflow-seepage measurements conducted between 1980 and 1984 indicate that the location and magnitude of the stream-channel seepage losses varied from year to year.

INTRODUCTION

In late 1977, the Mettiki Coal Corporation started work on the first of three underground coal mines in southwestern Garrett County, Md. (fig. 1). In April 1979, a long-term hydrologic investigation was begun to document the hydrologic conditions of the area as it was being undermined. This long-term investigation consists of several short, successive study periods.

The report on the first study period (Duigon and Smigaj, 1985) evaluates and describes the hydrogeologic conditions of the study area and includes most of the hydrologic and mining data collected from October 1, 1977, to September 30, 1981 (water years 1978-81).[1] This second report extends that period of record by incorporating the hydrologic and mining data collected during the second study phase, October 1, 1981, to September 30, 1984 (water years 1982-84).

Purpose and Scope

The purpose of this report is to present the hydrologic and mining data collected during the second phase of the long-term investigation and to briefly describe changes in mining activity, ground-water levels, and streamflow conditions within the study area. Although the data are primarily for water years 1980-84, selected earlier data are also presented. In addition, ground-water-level data from one well cluster for most of the 1985 water year are also included to document mining-related water-level declines that occurred after the 1984 water year.

Continuous hydrologic monitoring equipment was used to collect the data on both the ground- and surface-water systems in the study area. Hydrologic data consist of ground-water-level measurements, streamflow, stream-water-quality field measurements, and streamflow-seepage measurements at the sites shown in figure 2; mining data include maps of mining progress and pumpage figures from dewatering of the mines.

[1]The water year is the 12-month period beginning on October 1 and ending on September 30; it is designated by the calendar year in which it ends.

[2]Wells and test borings described in this report are identified with the Maryland Geological Survey numbering system. This system consists of two pairs of letters followed by a number (for example, GA FA 26). The first pair of letters indicates the county (GA for Garrett). The second pair designates one of the 5-minute quadrangles into which each county has been divided (Nutter and others, 1980, pl. 1). The number identifies and locates a specific well within a 5-minute quadrangle. The county identifier has been omitted in this report.

Location and Setting

The study area is located in southwestern Garrett County, Md., and lies on the southwestern end of the Upper Potomac Coal Basin (fig. 1). The area is flanked by Backbone Mountain on the northwest and the North Branch Potomac River on the east and southeast, and includes the drainage basins of Sand Run (North and South Forks), Laurel Run, and several other minor tributaries to the North Branch Potomac River. Altitudes in the study area range from approximately 2,500 to 3,400 ft above sea level. Mean annual precipitation of 47.8 in/yr was reported for the period 1905-84 at the Bayard, W. Va. (fig. 1) weather station (National Oceanic and Atmospheric Administration, 1984).

The study area is in the Allegheny Plateau division of the Appalachian physiographic province, which is a broad upland with northeast-southwest trending ridges and valleys, and is characterized by a series of symmetrical synclines and anticlines. The limbs of the syncline dip as much as 18° in this area (Duigon and Smigaj, 1985).

The rocks exposed in the study area are part of the Pennsylvanian System, which, in this area, is about a 1,200-ft-thick sedimentary-rock sequence, primarily composed of alternating beds of shale, sandstone, clay, and coal. Figure 3 is a generalized geologic column that represents the stratigraphic section in the study area and shows the average cumulative stratigraphic thickness of the rock formations above the Mississippian Mauch Chunk Formation.

The coal being extracted from the three Mettiki Corporation mines is the Upper Freeport Coal, which defines the top of the Allegheny Group and stratigraphically separates the Allegheny and Conemaugh Groups of the Pennsylvanian System. The Upper Freeport Coal ranges from about 5 to 7 ft thick in most areas of the three mines; it is underlain by a fire clay and overlain by either a shale or sandstone, depending on the presence and location of paleochannels above the coal. The stratigraphic nomenclature used in this report is that of recent workers in Maryland and does not necessarily follow the usage of the U.S. Geological Survey.

Data-Collection Network and Methods

Hydrologic data for this project were collected at the ground-water observation wells and stream sites shown in figure 2. Ground-water data collection consisted of continuous monitoring of water levels in 13 observation wells located at three well-cluster sites. Four other observation wells, FA 26, FA 27, FA 28, and FA 29,[2] were measured

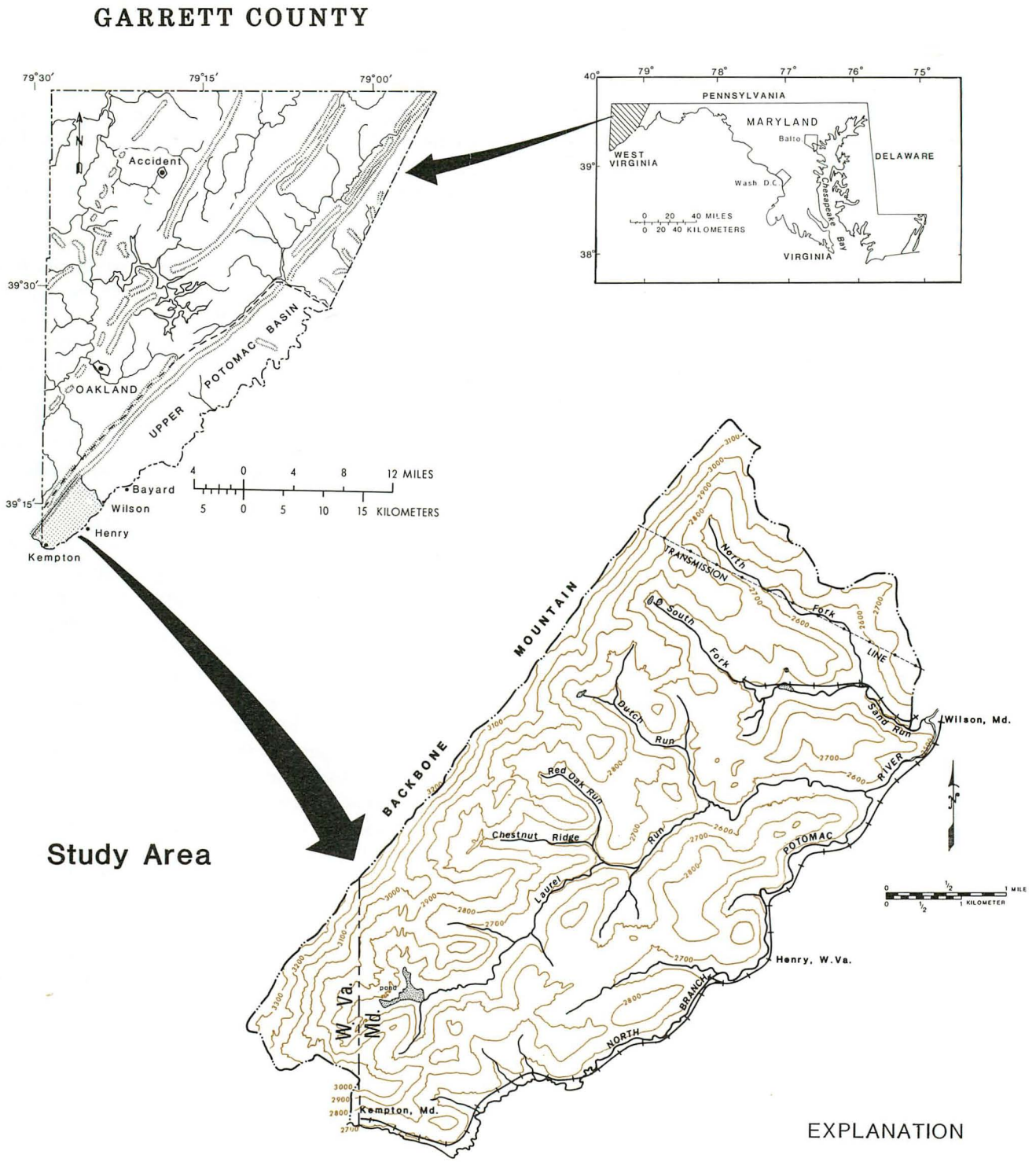

Figure 1. —Location of the study area. (Modified from Duigon and Smigaj, 1985, p. 4.)

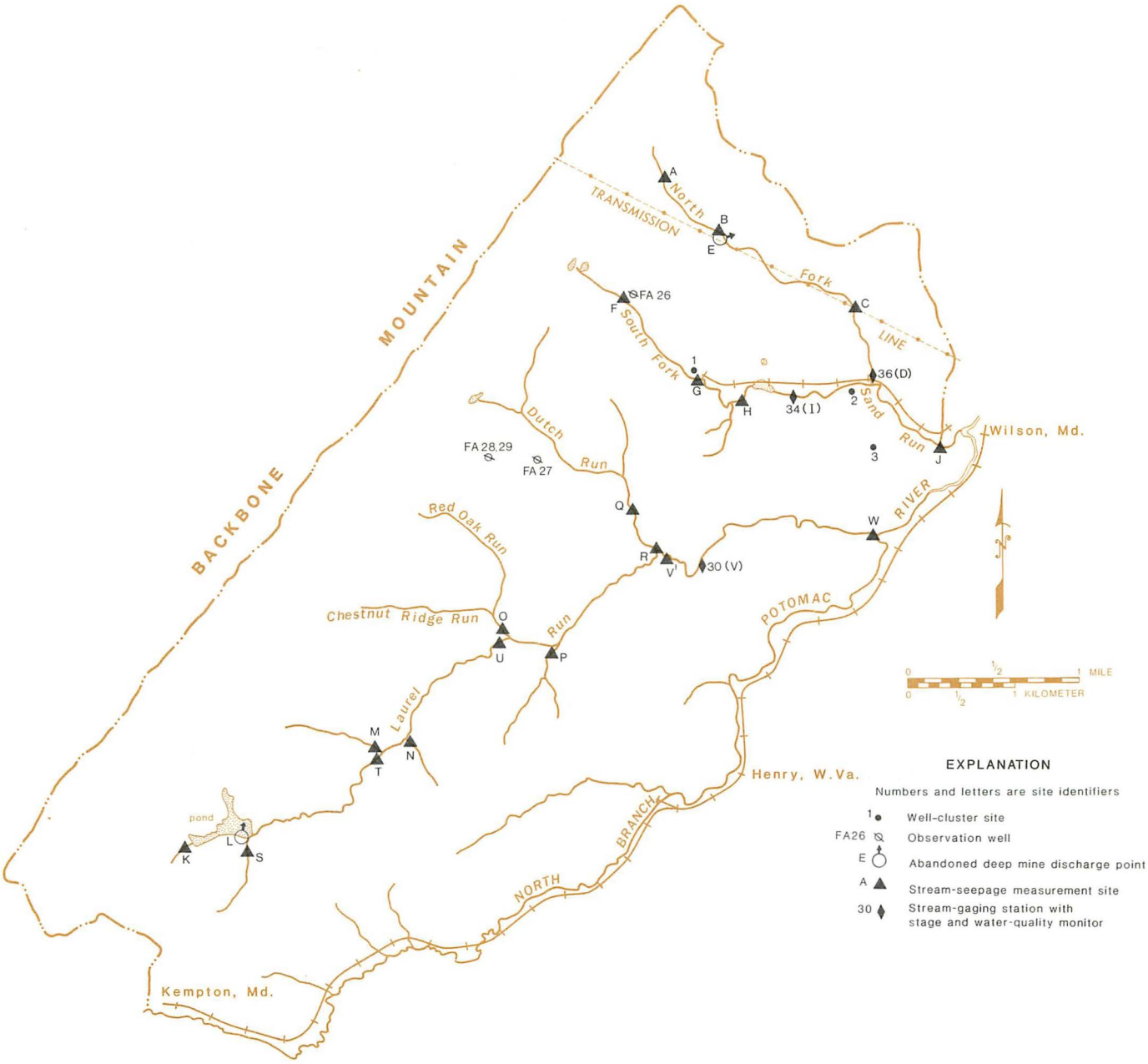

Figure 2. — Data-collection network. (Modified from Duigon and Smigaj, 1985, p. 5.)

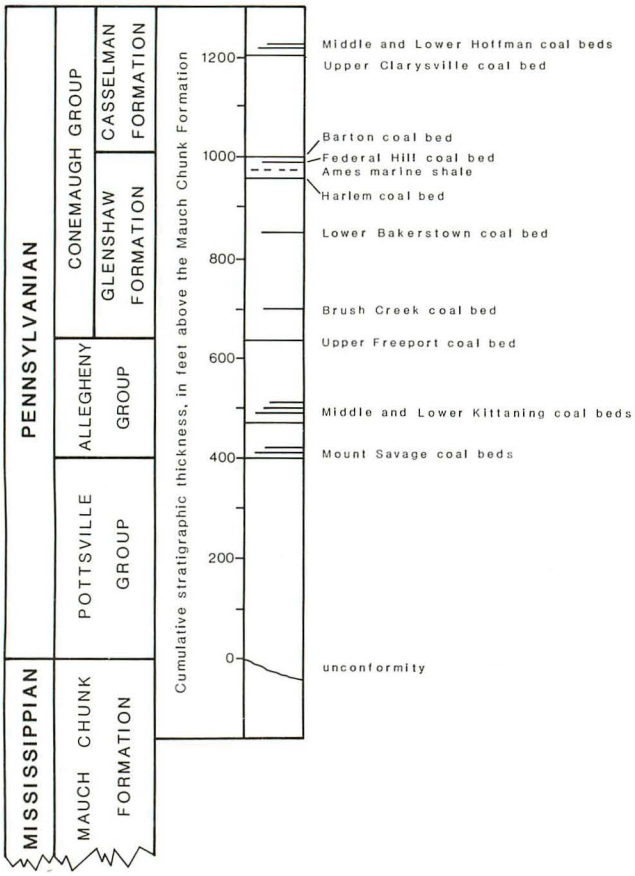

Figure 3. —Generalized geologic column for study area. (Modified from Duigon and Smigaj, 1985, p. 11.)

periodically. Surface-water data collection consisted of continuous (hourly) monitoring of stream stage, specific conductance, and water temperature at three U.S. Geological Survey stream gages: (1) Station 01594930, Laurel Run at Dobbin Road near Wilson, Md.; (2) Station 01594934, South Fork of Sand Run near Wilson, Md.; and (3) Station 01594936, North Fork of Sand Run near Wilson, Md. Hereinafter, these gaging stations are collectively referred to as the "three stream gages." Streamflow-seepage (discharge) measurements were conducted twice during baseflow conditions to document streamflow gains or losses at the sites shown in figure 2.

Mean-daily streamflow at the three stream gages was computed from the observed stage-discharge relationship using U.S. Geological Survey stream-gaging techniques described by Rantz and others (1982). *In situ* stream-quality field measurements of specific conductance and water temperature were made hourly at the three stream gages using a U.S. Geological Survey "minimonitor." The minimonitors were maintained and calibrated according to procedures outlined by Gordon and Katzenbach (1983). All field and laboratory water-quality analyses and sampling procedures were performed in accordance with methodologies described in the "National Handbook of Recommended Methods for Water-Data Acquisition" (U.S. Geological Survey, 1977).

Some additions were made to the original data-collection network (Duigon and Smigaj, 1985). In late 1984, pH probes were installed at the three stream-gaging stations and a telemetered tipping-bucket rain gage was installed near the main acid-mine drainage (AMD) treatment plant (fig. 4) in February 1985. The data from these new installations will be presented in the next report in this series.

Acknowledgments

The author is grateful to the Mettiki Coal Corporation for their willing cooperation in this long-term study, particularly for the assistance of Blucher Allison, Chief Mine Engineer, and David Thomas, Environmental Coordinator. Each of these men provided valuable insight and data pertinent to the mine operations.

This phase of the project was completed under the supervision of Herbert J. Freiberger, District Chief of the Mid-Atlantic District of the U.S. Geological Survey, in cooperation with the Maryland Geological Survey, Kenneth N. Weaver, Director. Additional funding was provided by the Maryland Bureau of Mines, Anthony F. Abar, Director.

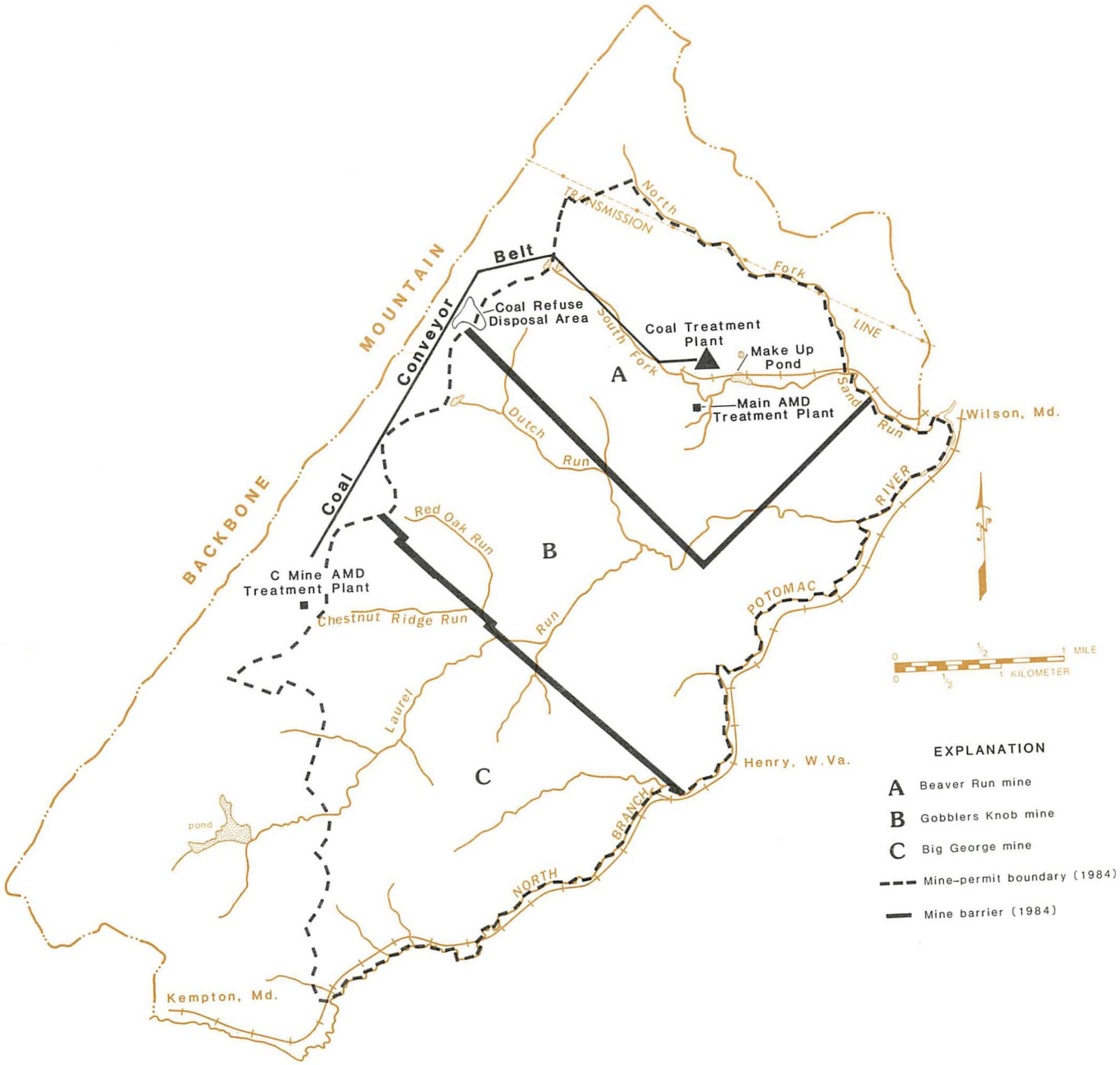

Figure 4. —Underground mine-permit boundaries and selected mine-related surface facilities.

MINING ACTIVITY

Both surface and underground coal mining have occurred within and around the study area since the early 1900's and are described by Duigon and Smigaj (1985, p. 16). This report covers only the underground operations of the three Mettiki Coal Corporation mines.

Mine Boundaries and Progress

Figure 4 shows the mine-permit areas (A, B, and C mines) and several of the mine-related surface facilities existing in 1984. The three permits as of July 1984, comprise a total holding of about 2,500 acres. Extraction of coal within these permit areas is projected to continue until about 1990, and was approximately 50 percent complete by the end of 1984 (Blucher Allison, Chief Mine Engineer, Mettiki Coal Corp., oral commun., 1985).

Figure 5 depicts the areal extent of the three underground mines at yearly intervals from August 1980 to July 1984. All three mines originated at the coal outcrop and were worked downdip towards the synclinal axis and then updip on the opposite limb of the syncline (fig. 8). All mining during the period August 1979 to July 1984 was exclusively by the room-and-pillar method, with second mining (pillar removal) beginning in some areas in 1981.

Figure 6 is a graph showing the area undermined by each of the three mines and the cumulative area undermined from August 1980 to July 1984. Also shown is the cumulative area second mined during the same period. Total acreage undermined increased from about 650 acres in July 1981 to about 1,650 acres by July 1984. The average rate of increase during this period was about 310 acres/yr.

Pumpage and Treatment of Mine Drainage

Underground mining, particularly mining downdip in a synclinal structure, often necessitates removal of water which infiltrates (seeps) into the mine workings from the ore body and from the surrounding water-bearing rock formations. Water inflow into the three mines is predominantly derived from leakage through the roof, as the Upper Freeport coal underclays are relatively effective confining beds (Blucher Allison, Chief Mine Engineer, Mettiki Coal Corp., oral commun., 1985). High-volume turbine pumps are used in conjunction with a series of storage sumps to collect the mine inflow and to transport it to an AMD treatment plant for neutralization.

The primary function of the AMD treatment plant is to treat and neutralize the acidic pumpage produced by dewatering the mines. Minor amounts of surface runoff from the coal treatment plant and the coal refuse-disposal area (fig. 4) are also treated. Large volumes of mine-inflow water are pumped to and treated by the AMD treatment plants. The released water affects streamflow and water-quality characteristics of the stream basins that receive the treated AMD effluent.

Two separate AMD treatment plants were in operation from 1978 to August 1984 (fig. 4). Both treatment plants were operated in a semiautomatic mode and treated AMD was discharged to the receiving streams at irregular intervals during this period. The C Mine AMD treatment plant, which discharged into Chestnut Ridge Run, ceased operation in August 1984; subsequently, all mine inflow has been pumped to the main AMD treatment plant located upstream of the make-up pond on the South Fork of Sand Run. The coal treatment plant consumes small but fairly constant amounts of water from the make-up pond. On the average, about 60 to 65 Mgal/yr was withdrawn from the make-up pond for coal treatment processes during this study period (David Thomas, Environmental Coordinator, Mettiki Coal Corp., oral commun., 1985).

The net annual AMD treatment-plant discharges are roughly equivalent to the volume of water removed annually from the local ground-water systems by the mine pumping operations. The volume of treated effluent discharged monthly by the two AMD treatment plants was measured with a totalizing flowmeter. Figure 7 shows the volume of mine pumpage treated and discharged annually from the two treatment plants. Total annual mine pumpage increased from about 410 Mgal/yr in 1981 to about 660 Mgal/yr by 1984.

Samples of raw and treated AMD were collected for laboratory analysis on July 3, 1984. The concentrations of selected constituents in the raw and treated AMD samples are shown in table 1. The raw sample is characterized by low pH, high acidity, and high dissolved-solids concentration, particularly sulfate and iron. The treated sample is nearly neutral (pH 7.3); acidity is less than 1 mg/L (as $CaCO_3$) and alkalinity is 12 mg/L (as $CaCO_3$). The dissolved-solids concentration is slightly higher in the treated sample than in the raw sample.

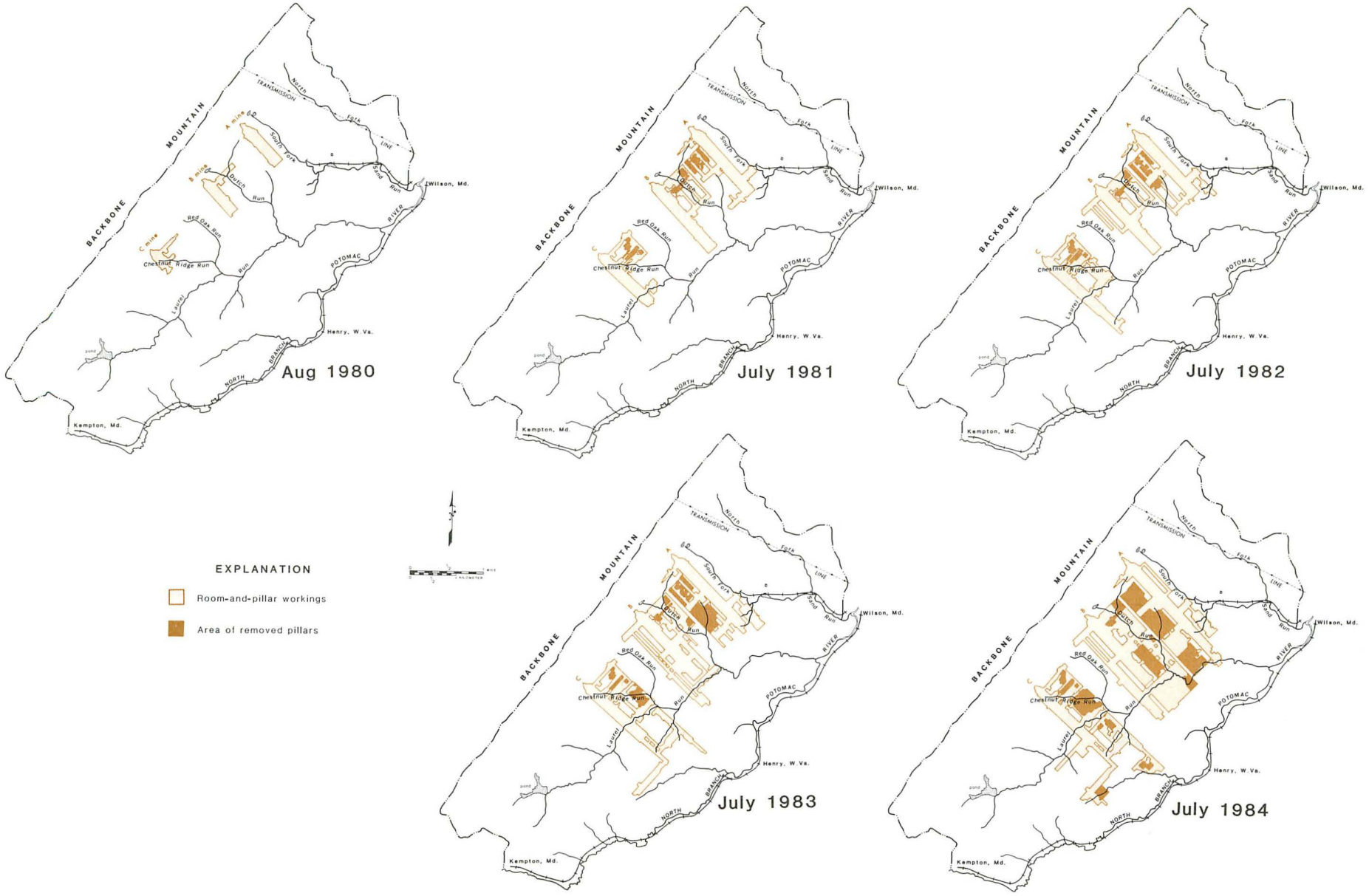

Figure 5.—Progress of underground mining from August 1980 to July 1984. (From Mettiki Coal Corporation, Biannual mining projection and ventilation maps.)

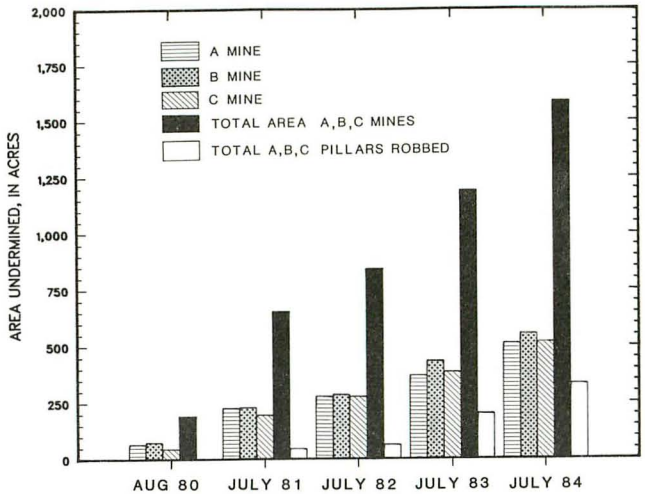

Figure 6. —Cumulative area undermined from August 1980 to July 1984.

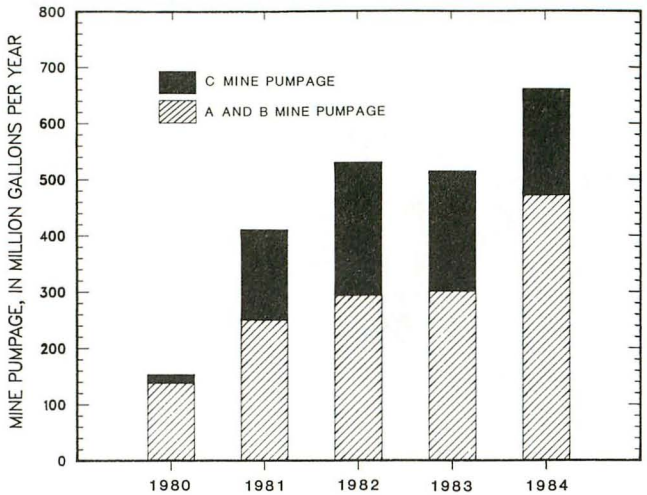

Figure 7. —Total annual mine pumpage from 1980 to 1984.

Table 1. — Selected chemical constituents of raw and treated acid-mine drainage

Constituent	Raw	Treated	Units
Acidity, total as $CaCO_3$	442	<1	mg/L
Alkalinity, total as $CaCO_3$	<1	12	mg/L
Aluminum, dissolved	12,000	160	μg/L
Calcium, dissolved	210	460	mg/L
Copper, dissolved	500	1	μg/L
Iron, dissolved	50,000	100	μg/L
Manganese, total	3,700	6,700	μg/L
Manganese, dissolved	3,400	740	μg/L
pH, field	2.7	7.3	units
pH, laboratory	2.7	7.2	units
Residue on evaporation	1,820	1,970	mg/L
Sulfate, dissolved	1,200	1,400	mg/L
Specific conductance	2,500	2,210	μS/cm

Observation Wells

Shallow (less than about 100 ft deep), intermediate (about 100 to 400 ft deep), and deep (greater than about 400 ft) ground-water flow systems occur in the study area. Many of the rock units in this area have low primary porosity. Secondary processes such as faulting, fracturing, or solution, may greatly increase the effective porosity of a rock unit after its deposition. Duigon and Smigaj (1985, p. 44) describe the permeability of the rock units in this area as predominantly being "fracture controlled."

Water-level data were collected continuously since mid-1978 at 13 observation wells located in three clusters (sites 1, 2, and 3; see fig. 2). Periodic water-level measurements were made since 1978 at four other observation wells shown in figure 2. Figure 8 shows the locations of the open-hole sections for each of the 13 observation wells and well FA 26 as described by Duigon and Smigaj (1985):

> "Each well in a cluster is open to a different zone. At each cluster, zone 1 is open just below the Upper Freeport coal; zone 2 is open above the Upper Freeport coal; zone 3 is open between the Brush Creek and Lower Bakerstown coal horizons, and zone 4 is open above the Harlem coal. Zone 5 at site 3 is open near land surface (from 22 to 85 ft). With the exception of the shallow zone at site 3, these zones are fairly extensive sandstone units."

Figure 9 shows hydrographs of continuous (hourly) water-level measurements made in the 13 observation wells at the three well clusters for water years 1980-84. Mean-daily water levels for each of these wells are tabulated and presented in appendix A.

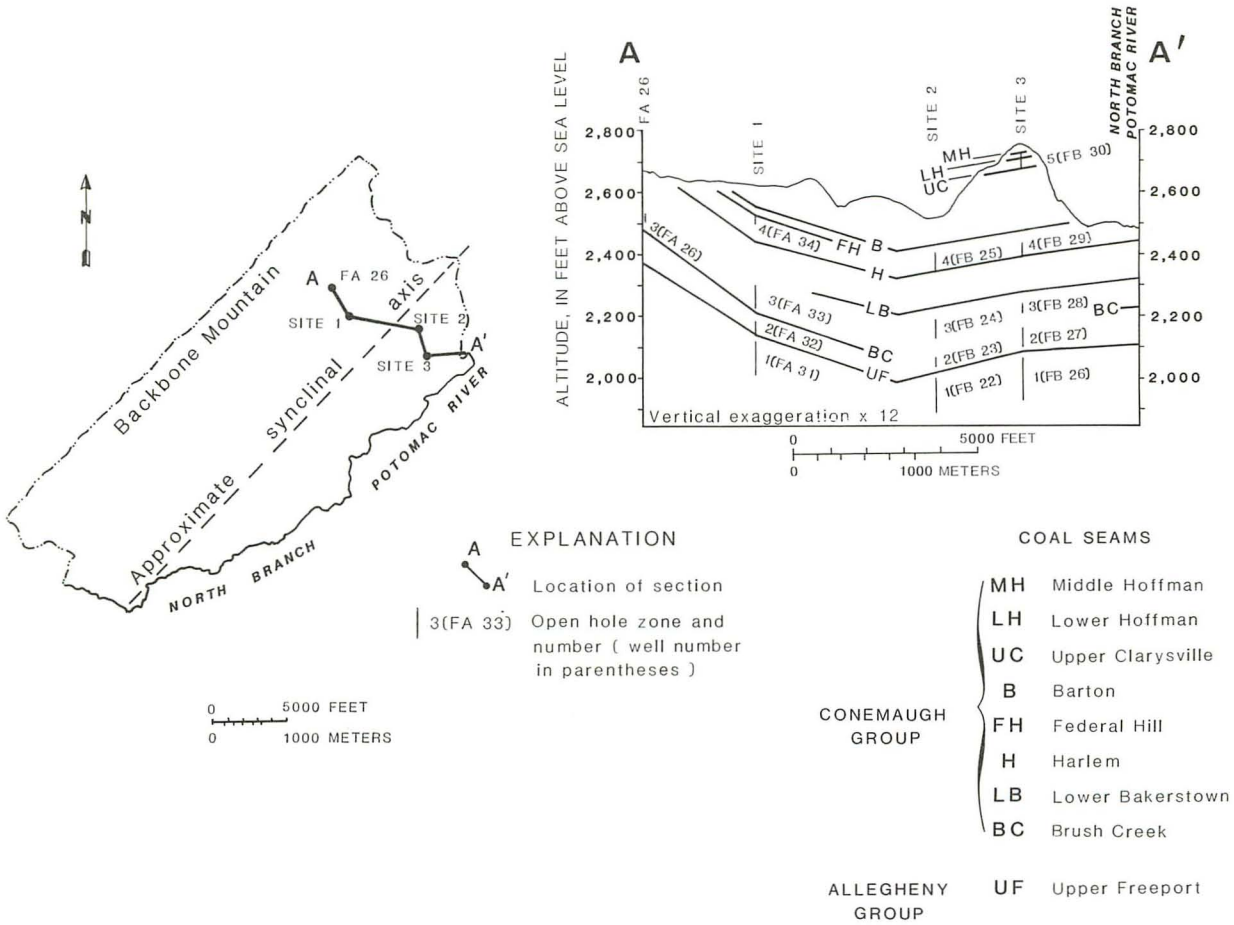

Figure 8. —Open-hole zones of observation wells and identification of coals at three well-cluster sites. (Modified from Duigon and Smigaj, 1985, p. 36.)

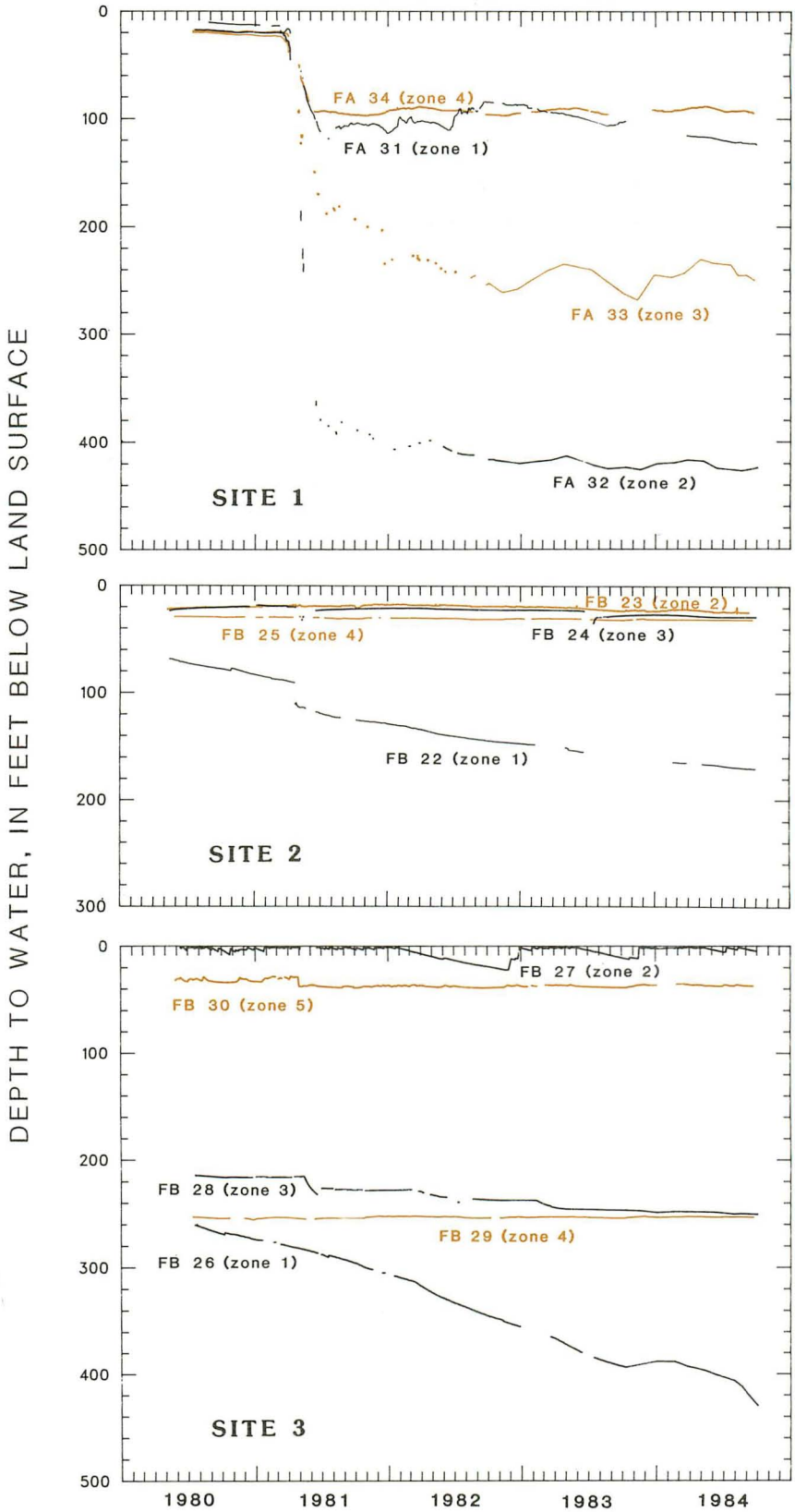

Figure 9. — Water levels at three observation well-cluster sites, for water years 1980-84.

Water levels in all the wells at site 1 were significantly lowered when that site was affected by nearby mining during the spring of 1981 (Duigon and Smigaj, 1985, p. 35). Since then, none of the water levels in these wells have fully recovered to premining levels. Comparison of the water-level elevations in the three wells open to zones above the coal (zones 2, 3, and 4) indicates that ground-water flow is now vertically downward through the overburden toward the mines at this site.

The range of seasonal water-level fluctuations in the shallower wells at site 1 (particularly FA 33) appears to be greater in the postundermining period (water years 1982-84) than in the premining period of record (1980 to spring 1981). This indicates that some seasonal replenishment of ground-water storage occurs in the zones comprising the overburden. Enough replenishment of storage occurs to temporarily counter ground-water discharges from these zones whether the discharges be vertically downward or horizontal, although it is not enough recharge to allow water levels to fully recover to premining levels.

Well-cluster sites 2 and 3 were not undermined during the first or second study periods. Water levels in all the wells open to zones above the Upper Freeport coal at sites 2 and 3 remained very near premining levels through September 1984 (fig. 9). However, significant declining trends are noted in wells FB 22 and FB 26, which are open to the confined zone below the Upper Freeport coal (zone 1). Continual declining water-level trends in these two wells averaged about 30 ft/yr from October 1980 to September 1984. Water levels in well FB 26 declined at an average rate of 38 ft/yr during this period, while FB 22 had declines of about 22 ft/yr during the same period. Comparison of water-level elevations in the wells in zone 1 indicates that ground-water flow in this zone at the beginning of the study was downdip towards the axis of the syncline (appendix A).

Because neither of these well-cluster sites were undermined during the period of record shown in figure 9, the continual declining trend in the wells in zone 1 suggests that a somewhat more regional water-level decline may be occurring in the deep confined zones below the Upper Freeport Coal in this area. The declining trend in zone 1 is probably the result of some combination of hydrologic effects resulting from mining and pumping by the Mettiki Corporation on the western limb of the syncline, coupled

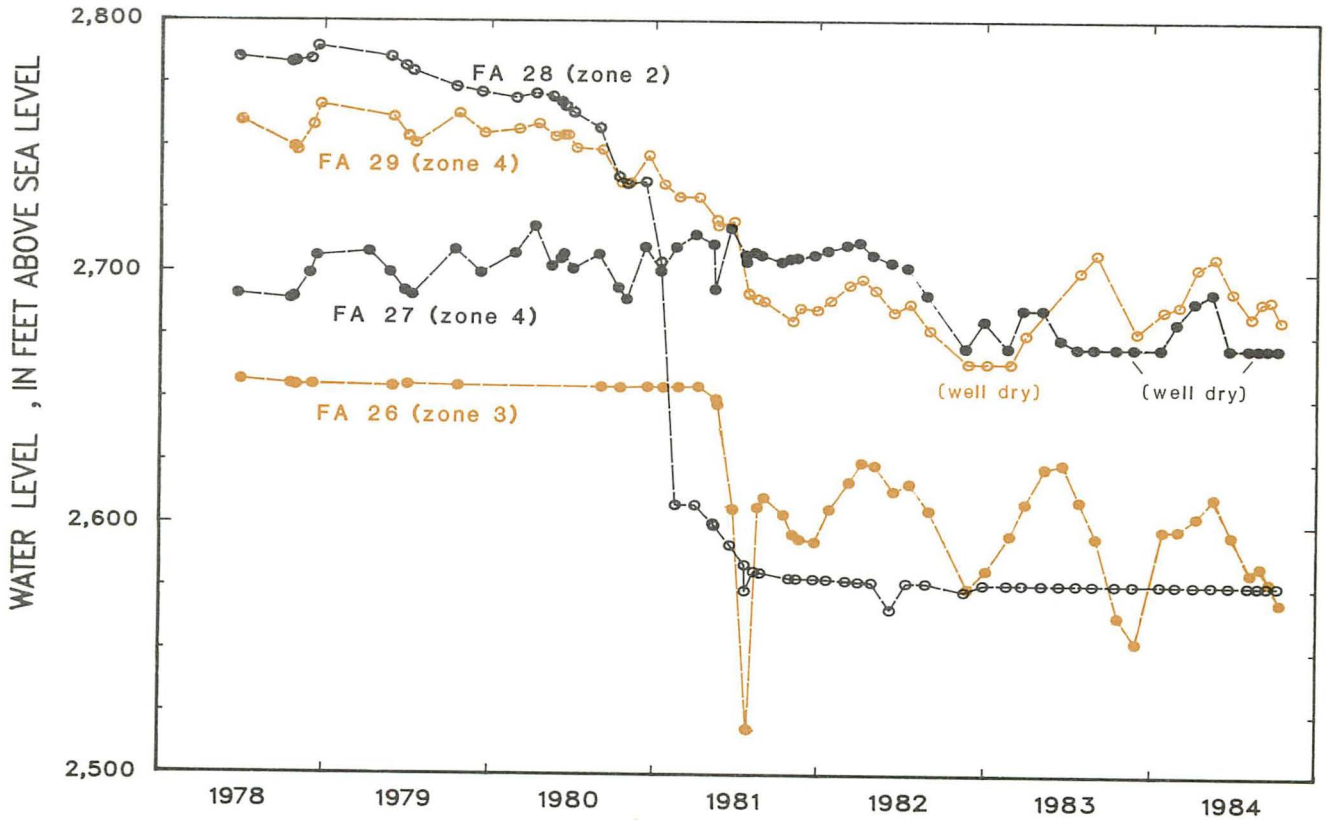

Figure 10. —Periodic water-level measurements at four observation wells from June 1978 to September 1984.

with the effects from about two decades of mining and pumping on the eastern limb of the same syncline in West Virginia. The Island Creek Coal Corporation operates three active underground mines in the Upper Freeport Coal, which are reported to have collectively pumped about 2,500 Mgal/yr of mine-drainage water in 1984 (Jeff McCormick, Engineering Technician, West Virginia Dept. of Energy, Division of Mines and Minerals, oral commun., 1987).

Water levels were also periodically measured in four coal company observation wells: FA 26, FA 27, FA 28, and FA 29 (fig. 2). Figure 10 shows hydrographs of the water-level measurements in these wells from June 1978 through the 1984 water year; the water-level measurements are tabulated in appendix B. The water levels in all four wells declined significantly when the wells were undermined in early 1981. Water levels in well FA 28 (zone 2) declined more than 200 ft after being undermined. Water-level measurements through 1984 indicate that well FA 28 is most affected by the mining operation. Two of the shallower wells, FA 27 and FA 29, were occasionally dry during parts of 1983 and 1984.

Although none of these wells have fully recovered to premining static levels, significant temporary recovering trends are noted in figure 10, especially in wells FA 26 (zone 3), and FA 27 and FA 29 (zone 4). The range of seasonal water-level fluctuation in the wells in zones 3 and 4 appears to be greater and more variable in the postmining period (1982-84) than in the premining period (1978-81). Comparison of the range of seasonal water-level fluctuations in these four wells during the postmining period indicates that ground-water storage is seasonally more variable in the shallower wells in zones 3 and 4 than the wells in zone 2.

Wells at Site 2 during Water Year 1985

The cluster of wells at site 2 was undermined during early 1985, as shown in plan view in figure 11. Figure 12 shows hydrographs of continuous water-level measurements in the four observation wells at site 2 from October 1984 to August 1985. Although these water levels were observed after the second study period, they are presented to illustrate the hydrologic response of the wells at this site to the nearby mine development. The data (water year 1985) for these wells are tabulated and presented in appendix A.

In early January 1985, the leading edge of a major mine heading had approached to within 700 ft of the site 2 well cluster (fig. 11). Water levels in well FB 23 (zone 2) began to decline gradually during January in response to the mining. In February, the mine workings were immediately adjacent to the well cluster and the water level in well FB 23 began a precipitous decline of more than 400 ft. The water level in the well recovered in late February as mining continued. The recovery was short-lived, however, for in May 1985, the water level began a steady decline until the well was dry by August.

Similar initial water-level recoveries occurred in some shallow wells affected by longwall mining in a similar geologic setting in western Pennsylvania (Stoner, 1983). Stoner suggests the pre-existing fractures that provided the vertical connection to the mine may have opened and then closed, or later became plugged by fine clay gouges, allowing the water level in the well to recover. The water-level recovery observed in well FB 23 during late February suggests that some recovery mechanism, possibly similar to that proposed by Stoner, may have occurred at this site.

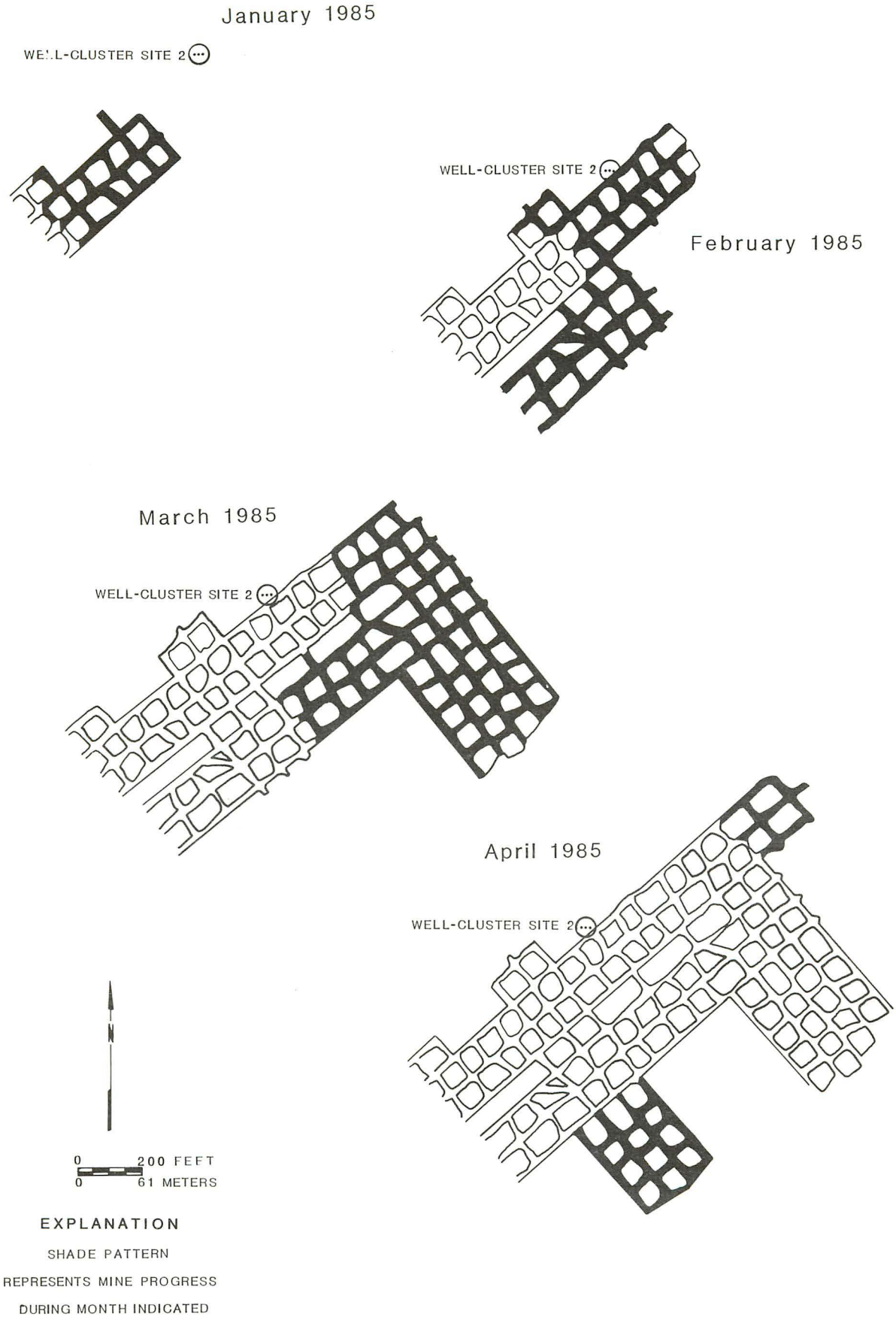

Figure 11. —Underground mine development in vicinity of site 2 during part of 1985 water year.

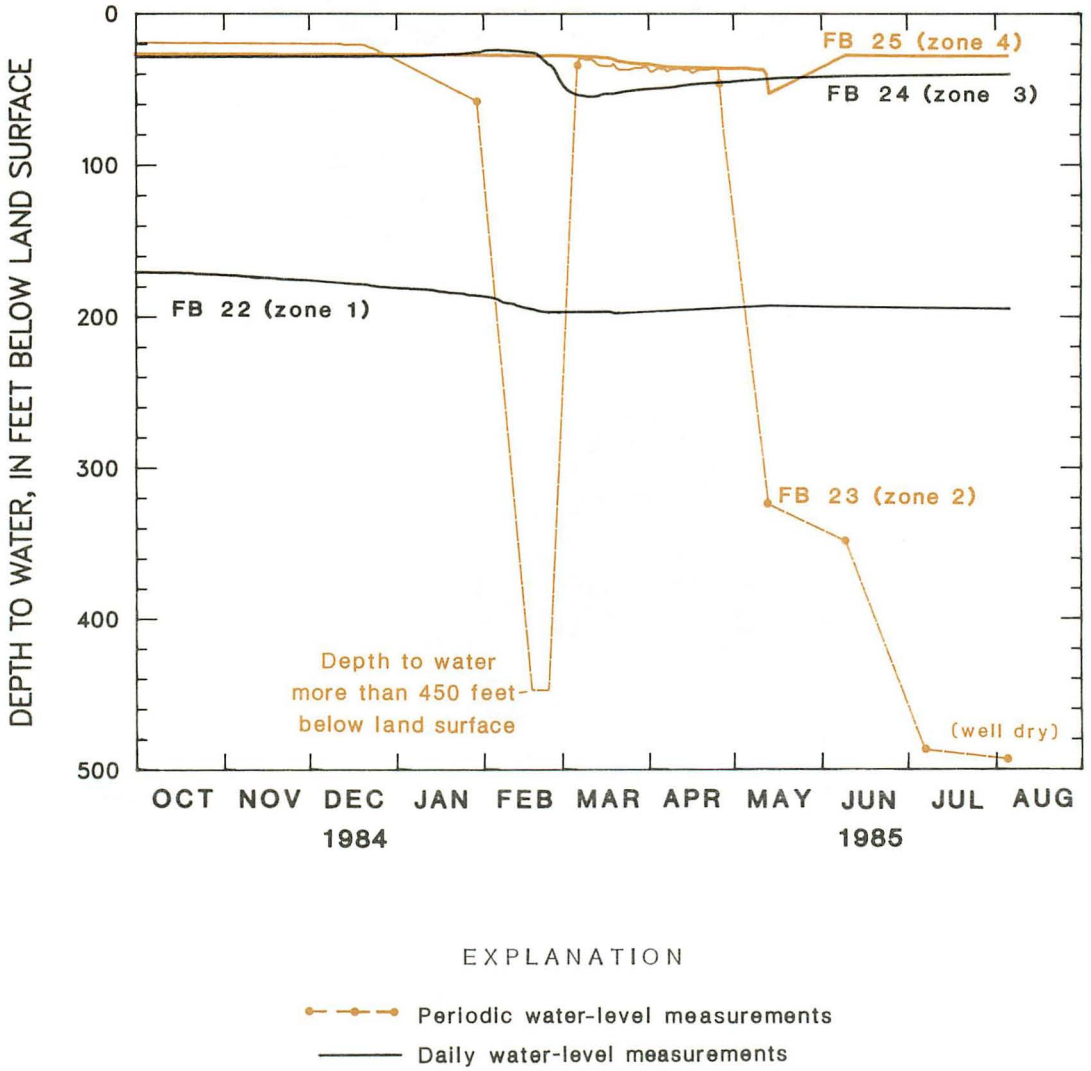

Figure 12. —Water levels in wells at site 2 during part of the 1985 water year.

Streamflow

Stream stage, specific conductance, and water temperature were continuously monitored at the three stream-gage sites shown in figure 2. Records of mean-daily discharge and mean-daily specific conductance at the three stream-gage sites are presented in appendixes C and D.

Figure 13 shows daily precipitation and hydrographs of mean-daily streamflow at each of the three stream gages, for water years 1980-84. The daily precipitation data are from a National Weather Service station located in Bayard, W. Va. (fig. 1), about 4 mi northeast of the study area. The rapid changes in daily streamflow at the South Fork Sand Run gage show the degree to which streamflow at this site is affected by the effluent discharges from the main AMD treatment plant.

The main AMD treatment plant discharged a daily average of about 1.5 ft^3/s of treated effluent to the South Fork Sand Run between water years 1981 and 1984. The C Mine AMD treatment plant discharged a daily average of about 0.9 ft^3/s of effluent into a tributary of Laurel Run. These contributions to streamflow ranged from about 19 to 44 percent of the mean-daily discharge at South Fork, and only about 3 to 4 percent of the mean-daily discharge at Laurel Run during this period.

The North Fork Sand Run has been the least disturbed of the three streams by either past or present mining operations (fig. 5). Both the North Fork Sand Run and Laurel Run exhibit fairly linear base-flow recessions during extended periods of minimal precipitation in late summer (fig. 13) when most of the streamflow is derived from ground-water discharges to the stream channel. During periods of minimal precipitation, base-flow recessions in the South Fork Sand Run are interrupted and overshadowed by the contributions to streamflow from the main AMD treatment-plant discharges.

Specific Conductance and Water Temperature

Figure 14 shows hydrographs of mean-daily specific conductance at each of the three stream-gage sites and daily precipitation at Bayard, W. Va. Missing periods of record, due to equipment malfunction, are represented by blank areas on the graph. Higher specific conductance generally occurs during low-flow periods in late summer or fall, because increased runoff tends to dilute the dissolved-solids concentration of the stream. Rapid changes of specific conductance at the South Fork gage site correspond to streamflow fluctuations induced by the main AMD treatment-plant discharges.

Daily specific conductance at the South Fork stream gage generally ranged between 200 and 1,000 $\mu S/cm$ during 1980-81 (fig. 14). However, between 1982 and 1984, specific conductance at this site ranged from about 200 to about 2,000 $\mu S/cm$, primarily because of the increased volume of effluent discharged into the South Fork by the main AMD treatment plant.

Specific conductance at the North Fork gage site ranged from about 100 to 900 $\mu S/cm$ during 1981-84 (fig. 14), and about 200 to 1,500 $\mu S/cm$ at the Laurel Run gage site during the period 1980-84. The range of daily specific conductance at Laurel Run was somewhat greater during 1983-84 compared to the period 1980-82, also because of the increased volume of effluent discharged from the C Mine AMD treatment plant.

Figure 15 shows hydrographs of mean-daily water temperature at each of the three stream gages for water years 1980-84. Figure 15 shows that during certain periods (for example, winter 1982 and summer 1983), the mean-daily water temperature at the South Fork gage was slightly higher than at the North Fork gage. The South and North Forks of Sand Run are about the same size, with drainage areas of 1.6 mi^2 and 1.9 mi^2, respectively. The major difference between the two tributaries is the presence of the main AMD treatment plant and the make-up pond on South Fork (fig. 4). Also, the streambanks around the North Fork have remained undisturbed, whereas much of the riparian vegetation on the South Fork was removed during construction of the make-up pond and other facilities.

Stream-Seepage Measurements

A series of discharge measurements to determine stream-seepage gains or losses was conducted in August 1983 and September 1984. The locations of the stream-seepage measurement sites in each of the three basins are shown in figure 2.

A seepage run consists of measuring stream discharge at intervals along a channel reach during a period of base flow. A similar series of measurements was conducted previously (Duigon and Smigaj, 1985) in November 1980 and August 1981. All of the stream-seepage investigations were conducted during stable, base-flow periods, which followed periods of no precipitation. Streamflow during base-flow periods consists entirely of ground-water discharges to the stream channel. Losing stream reaches have less flow downstream than upstream, after deducting contributions from tributaries. In addition to discharge measurements, field

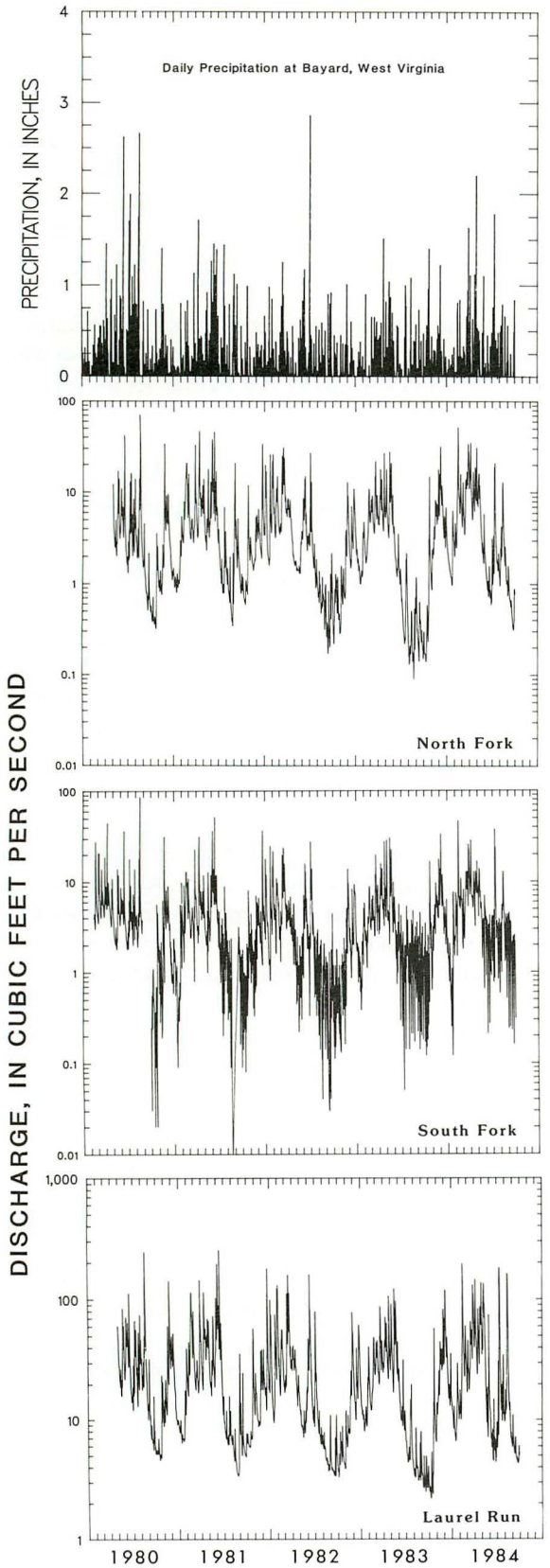

Figure 13. — Mean-daily streamflow at the three stream gages and daily precipitation at Bayard, West Virginia, for water years 1980-84.

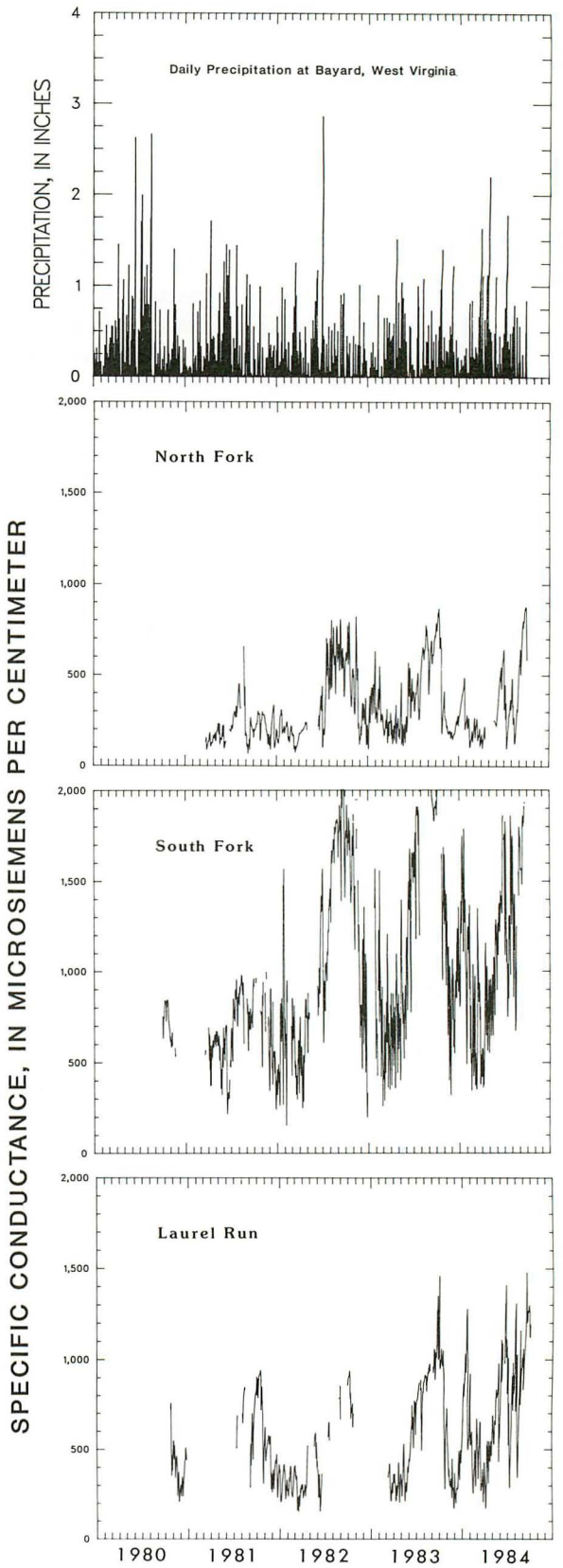

Figure 14. — Mean-daily specific conductance at the three stream gages and daily precipitation at Bayard, West Virginia, for water years 1981-84.

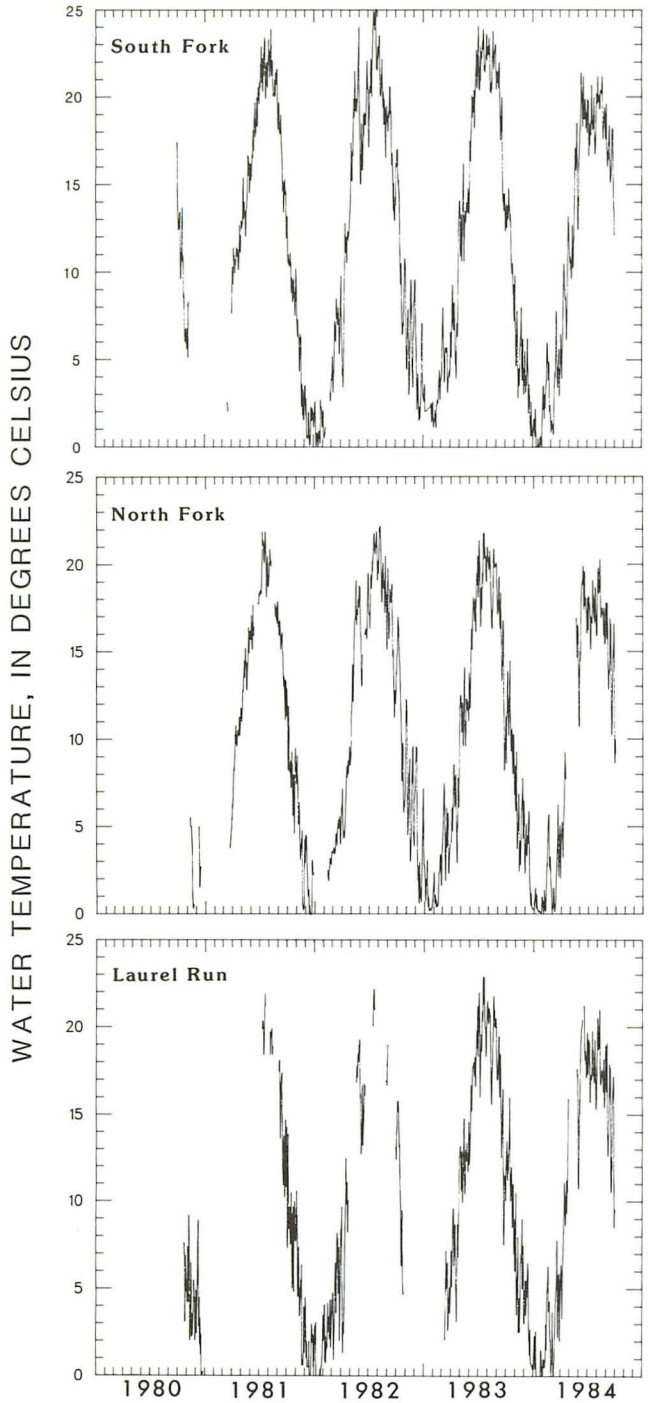

Figure 15. — Mean-daily water temperature at the three stream gages, for water years 1980-84.

water-quality measurements of specific conductance, pH, and water temperature were also made concurrently.

Table 2 summarizes the streamflow and field water-quality measurements made during the seepage runs of August 1983 and September 1984. Because of the small inaccuracies inherently associated with open-channel streamflow measurements, the values reported for very small gains or losses may reflect measurement error rather than actual gain or loss. The data in table 2 are presented in downstream order from the headwaters of each stream; tributaries are listed in the order in which they enter the main stem.

Losing stream reaches identified during the four seepage investigations conducted between 1980 and 1984 are shown in figure 16. Losing reaches may develop as undermining and dewatering induce ground water to discharge toward the mines rather than the stream channels.

The locations of stream-channel seepage losses are observed to vary with time. The seepage run of August 1981 identified several losing channel segments on Laurel Run where it was undermined by the B and C mines (fig. 16). These same stream-channel segments gained water during the next series of seepage measurements conducted in August 1983. Seepage measurements in September 1984 also indicate that other stream-channel segments previously losing water (August 1983) were gaining water the following year.

(Text continued on p. 23.)

Figure 16. —Losing stream reaches from November 1980 to September 1984.

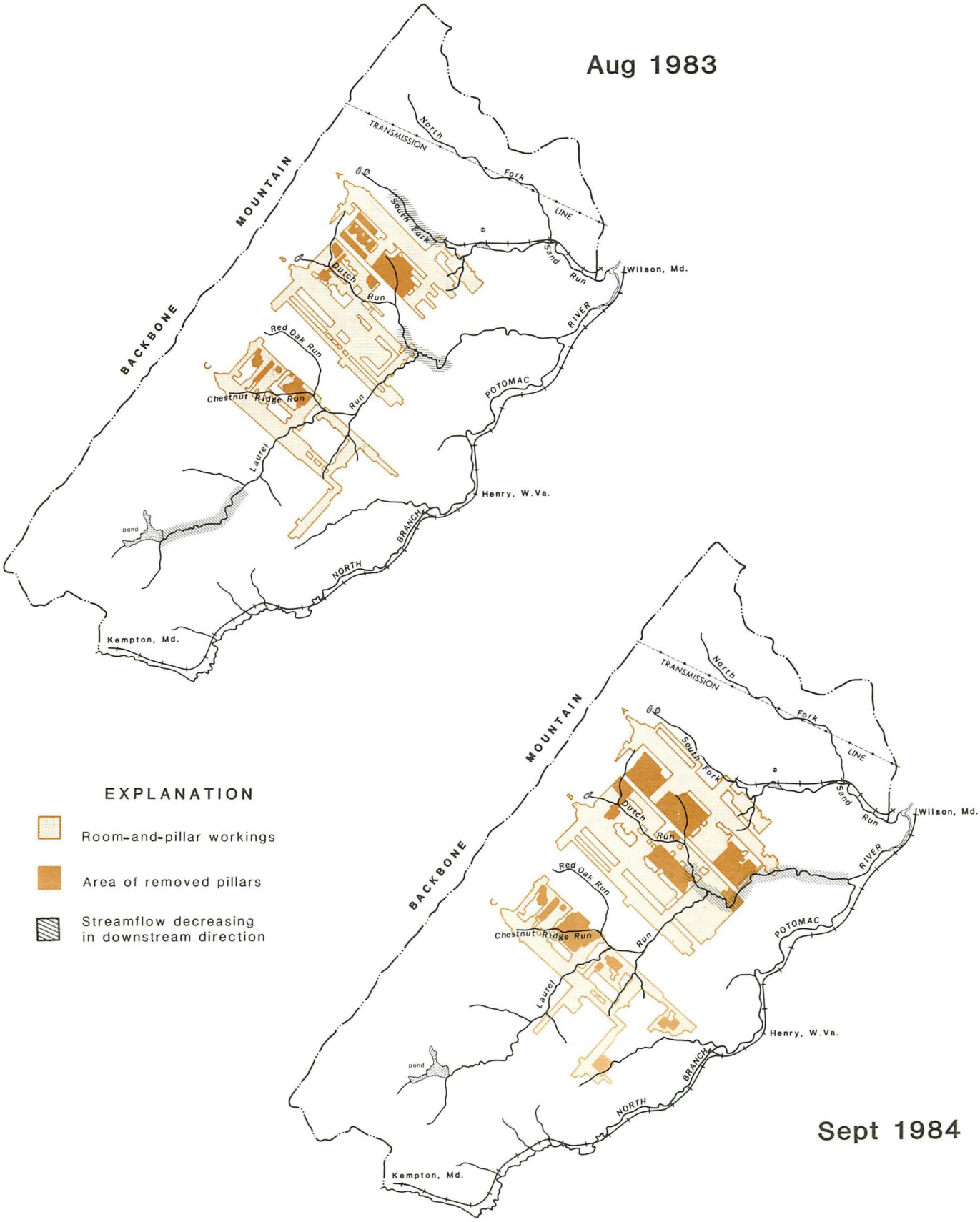
Aug 1983
BACKBONE MOUNTAIN
TRANSMISSION LINE
North Fork
South Fork
Dutch Run
Sand Run
Wilson, Md.
Red Oak Run
Chestnut Ridge Run
Laurel Run
POTOMAC RIVER
Henry, W.Va.
NORTH BRANCH
pond
Kempton, Md.
EXPLANATION
Room-and-pillar workings
Area of removed pillars
Streamflow decreasing in downstream direction
Sept 1984

Table 2. —Summary of stream-seepage and field water-quality measurements on August 2-3, 1983, and September 18-19, 1984

Site identification	Stream	Measured discharge (ft^3/s)	Gain or loss (ft^3/s)	Water temperature (^oC)	pH (units)	Specific conductance ($\mu S/cm$)
		August 2, 1983				
A	North Fork Sand Run	-	-	-	-	-
B	North Fork Sand Run	0.10	-	21.9	7.2	92
E	Buffalo Coal mine discharge	0.02	-	-	-	-
C	North Fork Sand Run	0.19	+0.07	22.9	-	595
D	....do.... (gage)	0.19	0.00	23.9	7.2	552
F	South Fork Sand Run	0.07	-	20.0	-	311
G	....do....	0.06	-0.01	20.8	7.2	258
I	....do.... (gage)	0.11	+0.05	28.7	7.5	1,340
J	Sand Run (main stem)	0.33	+0.03	26.1	6.7	2,030
		August 3, 1983				
S	Laurel Run	0.02	-	15.5	-	-
L	Kempton Well	3.92	-	-	-	-
T	Laurel Run	2.98	-0.96	24.0	-	-
M	Laurel Run tributary	0.01	-	-	-	-
N	...do.....	0.01	-	-	-	-
U	Laurel Run	3.41	+0.41	18.6	3.3	896
O	Chestnut Ridge Run	0.29	-	18.5	7.1	969
P	Laurel Run tributary	0.07	-	17.2	7.9	29
R	Dutch Run	0.06	-	17.5	7.0	204
V	Laurel Run (gage)	3.82	-0.01	19.9	3.3	902
W	Laurel Run	4.16	+0.34	18.2	-	895
		September 18, 1984				
S	Laurel Run	0.04	-	-	7.3	-
L	Kempton Well	1.77	-	10.4	3.4	-
T	Laurel Run	3.92	+2.11	15.8	3.1	1,260
M	Laurel Run tributary	0.01	-	10.2	7.2	27
N	....do....	<0.01	-	10.0	6.3	27
U	Laurel Run	4.16	+0.23	9.5	3.0	1,180
O	Chestnut Ridge Run	0.20	-	12.0	6.8	710
P	Laurel Run tributary	0.20	-	10.0	7.3	40
R	Dutch Run	0.04	-	15.0	4.0	760
V'	Laurel Run	4.78	+0.18	14.0	3.1	1,120
V	Laurel Run (gage)	4.46	-0.32	10.5	2.9	1,210
W	Laurel Run	3.86	-0.60	11.0	2.9	1,170
		September 19, 1984				
A	North Fork Sand Run	0.11	-	9.2	5.9	40
B	North Fork Sand Run	0.15	+0.40	12.0	6.5	85
E	Buffalo Coal mine discharge	0.04	-	12.0	5.4	2,650
C	North Fork Sand Run	0.45	+0.26	7.8	6.8	875
D	....do.... (gage)	0.43	-0.02	9.8	7.0	805
F	South Fork Sand Run	0.04	-	11.3	7.1	290
G	....do....	0.08	+0.04	10.5	7.4	235
I	....do.... (gage)	0.22	+0.14	17.2	6.9	1,900
J	Sand Run (main stem)	1.28	+0.63	12.5	6.8	1,780

SUMMARY

Hydrologic and mining data were collected during the second study phase (October 1, 1981, to September 30, 1984) of a long-term investigation which began in 1979, to assess the hydrologic impacts of an extensive underground coal-mining operation in southwestern Garrett County, Md. This report completes the second study phase of the long-term investigation. It presents all of the hydrologic and mining data collected during the second study phase, and briefly describes changes in mining activity, water levels, and streamflow conditions.

Extraction of coal in three mines using the room-and-pillar method was about 50 percent complete by the end of 1984. The cumulative area of the three mines increased from about 650 acres in July 1981 to about 1,650 acres by July 1984. Removal of pillars began in some areas of the mines in 1981. Total annual mine pumpage increased during the same period from 410 to 660 Mgal/yr.

The observation wells at site 1, which were affected by nearby mining in the spring of 1981, have exhibited relatively long-term declines in water levels. The declines range from tens to hundreds of feet in the water-bearing rock formations above the mine. Long-term declines in water level averaging about 30 ft/yr occurred in two wells open to a confined zone below the mine workings. Water levels in well FB 23 (zone 2) at site 2 declined precipitously in response to undermining in February 1985. The water level in this well almost recovered to its former static level for a brief period, but then declined again until the well was dry in August 1985.

Discharges of treated AMD significantly increased streamflow and specific conductance in the South Fork Sand Run basin, but had less effect on Laurel Run. Discharges of treated AMD from the main treatment plant also slightly raised the mean-daily water temperature at the South Fork Sand Run stream gage.

Several undermined main-channel segments of Laurel Run lost streamflow to the ground-water system. Subsequent stream-seepage measurements have shown that the location of the stream-channel seepage losses varies from year to year.

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APPENDIXES

APPENDIX A

Mean-daily ground-water levels for water years 1980-84 at observation well-cluster sites 1, 2, and 3, and water year 1985 at site 2

WELL-CLUSTER SITE 1, ZONE 1, WELL NUMBER **FA 31**, PERMIT NUMBER GA-73-2142, LAND-SURFACE DATUM IS 2,618 FEET ABOVE SEA LEVEL, WELL DEPTH 606 FEET, OPEN-HOLE INTERVAL 489 TO 606 FEET, GEOLOGIC UNIT: ALLEGHENY GROUP

MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1980**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1											---	10.46
2											---	10.50
3											---	10.54
4											---	10.60
5											---	10.59
6											---	10.63
7											---	10.66
8											---	10.70
9											---	10.72
10											---	10.75
11											---	10.81
12											---	10.88
13											---	10.92
14											---	10.93
15											---	10.92
16											---	10.97
17											---	11.01
18											---	11.09
19											---	11.16
20											---	11.18
21											---	11.18
22											---	11.18
23											---	11.15
24											---	11.18
25											---	11.24
26											---	11.26
27											---	11.31
28											10.39	11.33
29											10.38	11.34
30											10.39	11.33
31											10.43	---
MEAN												10.95

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.36	12.01	12.48	12.67	---	13.40	16.22	---	91.10	---	---	107.00
2	11.34	12.09	12.47	12.67	---	13.37	16.33	---	91.91	---	---	106.52
3	11.36	12.12	12.48	12.71	---	13.35	16.47	---	92.56	---	---	106.26
4	11.38	12.13	12.57	12.74	---	13.38	16.88	---	93.11	---	---	106.33
5	11.46	12.15	12.52	12.81	---	13.36	17.49	---	93.64	---	---	106.53
6	11.52	12.20	12.46	12.77	---	13.40	17.96	55.87b	94.19	---	---	106.55
7	11.56	12.27	12.45	12.73	---	13.48	19.65	---	94.75	---	---	106.62
8	11.55	12.32	12.42	12.80	---	13.59	23.90	---	95.29	---	---	106.70
9	11.54	12.32	12.36	12.86	---	13.64	27.31	---	95.64	---	---	106.72
10	11.60	12.31	12.35	12.95	---	a	29.36	---	96.36	---	---	106.77
11	11.69	12.38	12.38	13.00	---	---	30.68	62.22b	97.25	---	108.32	106.77
12	11.74	12.40	12.40	13.01	---	18.10	31.43	---	98.52	---	107.78	106.72
13	11.77	12.45	12.38	13.01	---	19.89	32.00	69.52	99.66	---	107.67	106.66
14	11.77	12.48	12.39	---	---	20.54	32.63	70.27	100.34	---	107.76	106.61
15	11.86	12.51	12.37	---	---	20.50	33.56	71.27	---	---	107.68	106.36
16	11.91	12.52	12.36	---	13.73	20.49	34.99	72.18	---	---	107.61	105.72
17	11.93	12.50	12.37	---	13.65	20.41	35.81	73.12	---	---	107.41	104.99
18	11.88	12.38	12.39	---	13.61	20.32	---	74.09	102.60	---	107.10	104.58
19	11.88	12.48	12.42	---	13.58	20.17	---	76.46	103.47	---	106.80	104.26
20	11.94	12.54	12.50	---	13.50	19.90	---	78.85	105.08	---	106.63	104.33
21	11.99	12.54	12.56	---	13.51	19.51	---	80.70	106.26	118.51b	107.57	104.09
22	12.03	12.62	12.55	---	13.56	19.20	---	82.05	107.11	118.47b	108.61	103.75
23	12.09	12.64	12.54	---	13.51	19.01	---	83.17	108.21	---	109.07	103.93
24	12.09	12.56	12.52	---	13.47	18.79	---	84.18	109.12	---	109.17	104.96
25	12.01	12.52	12.55	---	13.48	18.54	---	85.08	109.64	---	108.90	104.95
26	11.99	12.58	12.59	---	13.49	18.15	---	85.84	110.19	---	108.26	104.90
27	12.05	12.58	12.61	---	13.51	17.55	---	86.51	111.00	---	107.87	104.94
28	12.05	12.49	12.64	---	13.47	16.87	---	87.13	111.42	---	107.74	105.08
29	12.00	12.45	12.63	---	---	16.46	---	88.04	111.79	---	107.74	105.11
30	12.02	12.49	12.58	---	---	16.27	---	89.10	---	---	107.72	105.02
31	12.01	---	12.63	---	---	16.12	---	90.14	---	---	107.43	---
MEAN	11.79	12.40	12.48			17.16			101.16			105.66

WTR YR 1981 HIGH 11.34 LOW 118.51

a-Well pumped this date.

b-Instantaneous water-level measurement.

FA 31-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1982**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104.87	105.05	105.33	113.34	98.87	99.20	102.27	103.36	107.44	101.38	93.27	93.19
2	104.80	105.29	105.33	113.24	98.21	98.99	101.98	103.21	107.60	98.26	93.37	93.44
3	104.73	105.60	105.55	113.11	98.09	98.68	101.71	103.15	107.80	97.65	93.74	93.15
4	104.55	105.95	105.67	112.79	98.47	98.25	101.59	103.11	108.04	97.28	94.05	92.60
5	104.40	106.27	105.89	112.49	99.30	97.96	101.69	103.12	108.25	96.94	94.23	92.10
6	104.25	106.27	106.05	112.32	99.70	97.98	101.80	103.20	108.45	96.70	94.63	92.34
7	103.98	106.28	106.04	112.10	100.13	99.26	101.94	103.25	108.68	96.58	95.08	92.33
8	103.80	106.11	106.02	111.96	100.53	100.57	102.10	103.28	108.85	96.28	94.74	92.07
9	103.78	106.21	106.34	111.73	100.86	101.42	102.14	103.39	108.99	95.65	92.12	91.86
10	103.83	106.23	106.79	111.52	101.28	101.95	102.22	103.50	109.13	95.26	90.71	90.16
11	103.99	105.79	107.20	111.35	101.62	102.42	102.32	103.62	109.32	95.02	90.14	89.35
12	104.13	105.46	107.62	111.19	101.59	102.89	102.48	103.75	109.59	94.67	89.88	89.14
13	104.24	105.26	107.97	110.96	101.49	103.31	102.61	103.91	109.87	93.99	90.07	89.02
14	104.40	105.09	108.05	110.53	101.56	103.62	102.69	104.14	110.11	92.22	91.51	88.65
15	104.59	105.03	107.99	110.13	101.65	103.81	102.72	104.29	110.28	91.26	92.04	87.84
16	104.71	104.86	107.92	109.74	102.00	103.78	102.72	104.35	110.36	90.83	92.15	87.63
17	104.75	104.71	108.28	109.40	102.89	103.62	102.72	104.32	110.43	90.60	91.43	87.58
18	104.76	104.63	108.69	109.10	103.49	103.57	102.72	104.40	110.43	90.52	90.17	86.54
19	104.77	104.52	109.09	108.84	103.69	103.48	102.74	104.59	110.22	90.48	89.66	85.96
20	105.02	104.42	109.58	108.57	103.71	103.26	102.75	104.76	110.16	90.43	89.69	85.29
21	105.25	104.45	110.05	108.22	103.71	102.80	102.82	104.95	110.07	92.85	89.60	84.56
22	105.22	104.58	110.27	107.99	103.68	102.34	102.95	105.26	109.30	94.90	89.72	84.29
23	105.14	104.64	110.53	107.81	102.38	102.21	103.10	105.54	108.21	95.30	90.55	84.16
24	105.37	104.54	110.81	107.64	101.14	102.52	103.20	105.78	107.56	94.73	90.91	84.16
25	105.62	104.63	111.04	107.43	100.61	102.63	103.30	105.99	107.32	94.30	90.76	84.20
26	105.75	104.79	111.20	107.25	100.12	102.58	103.43	106.21	107.20	94.15	90.86	84.30
27	105.75	104.87	111.52	107.11	99.72	102.48	103.56	106.43	106.92	94.08	91.09	84.30
28	105.55	105.08	112.58	105.38	99.43	102.44	103.68	106.66	106.50	93.65	91.37	84.36
29	105.47	105.18	113.16	101.99	---	102.39	103.84	106.89	104.23	93.52	91.82	84.53
30	105.31	105.26	113.40	100.25	---	102.34	103.55	107.08	101.10	93.52	92.42	84.70
31	105.14	---	113.41	99.89	---	102.33	---	107.28	---	93.34	92.75	---
MEAN	104.77	105.24	108.69	109.21	101.07	101.78	102.64	104.61	108.41	94.40	91.76	88.13

WTR YR 1982 MEAN 101.74 HIGH 84.16 LOW 113.41

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84.74	---	87.26	86.95	90.26	92.54	94.20	95.74	97.85		---	105.77
2	84.65	---	87.16	86.93	90.51	92.55	94.05	95.95	97.94		---	105.69
3	84.40	---	87.06	86.91	90.63	92.63	94.01	96.09	97.99		---	105.62
4	84.35	---	87.26	86.97	90.72	92.78	94.00	96.11	97.99		---	105.61
5	84.34	---	87.33	86.87	90.72	92.92	93.98	96.17	97.99		---	105.81
6	84.44	---	87.30	86.72	90.68	92.98	94.22	96.21	98.06		---	105.91
7	84.53	---	87.46	86.63	---	92.98	94.37	96.21	98.30		---	105.94
8	84.61	---	87.58	86.76	---	92.99	94.42	96.20	98.48		---	105.88
9	84.74	---	87.53	86.86	---	93.03	94.46	96.20	98.63		---	105.83
10	84.90	---	87.25	87.00	---	93.22	94.51	96.24	98.72		---	105.80
11	84.92	---	87.22	87.22	---	93.52	94.52	96.24	98.79		---	105.70
12	84.86	85.58	87.08	87.37	---	93.61	94.54	96.40	98.87		---	105.64
13	84.89	85.63	86.99	87.52	---	93.81	94.81	96.50	98.92		---	105.57
14	84.87	85.82	86.96	87.55	---	---	95.10	96.57	---		---	105.46
15	84.82	85.96	86.85	87.59	90.69	---	94.94	96.63	---		---	105.33
16	84.90	86.10	86.71	87.55	91.07	---	94.81	96.63	---		---	105.22
17	85.00	86.25	86.67	87.57	91.62	---	94.80	96.69	---		---	105.12
18	---	86.61	86.66	87.75	91.86	---	94.73	96.81	---		---	104.99
19	---	86.84	86.57	89.11	91.93	---	94.62	96.90	103.06b		---	104.90
20	---	86.99	87.07	89.79	92.20	---	94.56	97.15	---		---	104.71
21	---	87.05	87.67	90.03	92.73	---	94.57	97.39	---		---	104.46
22	---	87.04	87.59	90.12	92.87	---	94.71	97.43	---		---	104.18
23	---	87.02	87.03	90.06	92.62	93.92	94.80	97.43	---		---	103.79
24	---	87.06	87.02	90.06	92.41	93.82	94.79	97.46	---		---	103.40
25	---	87.23	86.90	89.94	92.39	93.89	94.81	97.53	---		106.58	103.14
26	---	87.33	86.89	90.14	92.62	94.02	94.96	97.58	---		106.36	102.95
27	---	87.32	87.01	90.25	92.71	93.98	95.16	97.66	---		106.11	102.84
28	---	87.28	86.93	90.17	92.63	94.00	95.31	97.75	---		105.94	102.86
29	---	87.11	86.88	89.99	---	94.18	95.46	97.80	---		105.87	102.93
30	---	87.15	86.91	90.05	---	94.38	95.60	97.82	---		105.88	103.10
31	---	---	86.95	90.12	---	94.40	---	97.82	---		105.84	---
MEAN			87.09	88.34			94.66	96.82				104.81

WTR YR 1983 HIGH 84.34 LOW 106.58

b-Instantaneous water-level measurement.

APPENDIX A.-CONTINUED

FA 31-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1984**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103.11	---		---	---	---	115.68	116.62	117.41	119.76	121.84	122.31
2	103.08	---		---	---	---	115.74	116.62	117.45	119.83	121.81	122.32
3	103.02	---		---	---	---	115.87	116.61	117.51	119.97	121.77	122.32
4	102.93	---		---	---	---	115.95	116.58	117.69	120.16	121.74	122.33
5	102.86	---		110.43b	---	---	115.96	116.57	117.86	120.16	121.70	122.33
6	102.78	---		---	---	---	115.96	116.56	117.87	120.15	121.67	122.52
7	102.62	---		---	---	---	115.97	116.60	117.92	120.15	121.63	122.68
8	102.40	---		---	---	---	116.05	116.63	117.99	120.14	121.60	122.69
9	102.24	---		---	---	---	116.14	116.63	118.08	120.15	121.56	122.69
10	102.13	---		---	---	---	116.17	116.63	118.18	120.15	121.53	122.70
11	102.05	---		---	---	---	116.17	116.67	118.22	120.14	121.49	122.71
12	---	---		---	---	---	116.17	116.71	118.29	120.34	121.46	122.71
13	---	---		---	---	---	116.17	116.75	118.34	120.54	121.42	122.72
14	---	---		---	---	---	116.17	116.78	118.38	120.57	121.39	122.72
15	---	---		---	---	---	116.17	116.83	118.46	120.62	121.36	122.72
16	---	---		---	---	---	116.17	116.88	118.67	120.65	121.32	122.72
17	---	---		---	---	---	116.17	116.91	118.71	120.94	121.29	122.72
18	---	---		---	---	---	116.16	116.92	118.76	120.95	121.25	122.73
19	---	---		---	---	---	116.17	116.92	118.84	120.96	121.22	122.73
20	---	---		---	---	---	116.26	116.92	118.99	121.04	121.60	122.73
21	---	110.19b		---	113.96b	---	116.38	116.92	119.06	121.08	122.11	122.73
22	---	---		---	---	---	116.49	116.92	119.11	121.08	122.12	122.74
23	---	---		---	---	---	116.50	116.92	119.28	121.30	122.13	122.74
24	---	---		---	---	---	116.50	116.96	119.40	121.42	122.13	122.74
25	---	---		---	---	---	116.50	117.03	119.41	121.41	122.16	122.74
26	---	---		---	---	---	116.50	117.06	119.44	121.41	122.25	122.74
27	---	---		---	---	115.56	116.53	117.12	119.53	121.40	122.28	122.75
28	---	---		---	---	115.56	116.57	117.16	119.69	121.40	122.28	122.75
29	---	---		---	---	115.56	116.61	117.18	119.74	121.40	122.29	123.61
30	---	---		---	---	115.56	116.62	117.24	119.76	121.40	122.29	123.76
31	---	---		---	---	115.60	---	117.33	---	121.40	122.30	---
MEAN							116.22	116.84	118.60	120.71	121.77	122.71

WTR YR 1984 HIGH 102.05 LOW 123.76

b-Instantaneous water-level measurement.

WELL-CLUSTER SITE 1, ZONE 2, WELL NUMBER **FA 32**, PERMIT NUMBER GA-73-2143, LAND-SURFACE DATUM IS 2,618 FEET ABOVE SEA LEVEL, WELL DEPTH 473 FEET, OPEN-HOLE INTERVAL 430 TO 473 FEET, GEOLOGIC UNIT: CONEMAUGH GROUP

MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1980**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	17.45	17.70
2										---	17.44	17.74
3										---	17.42	17.81
4										---	17.44	17.85
5										---	17.50	17.85
6										---	17.55	17.88
7										---	17.56	17.89
8										---	17.57	17.91
9										---	17.56	17.95
10										---	17.56	17.98
11										---	17.59	18.03
12										---	17.65	18.07
13										---	17.66	18.10
14										---	17.68	18.08
15										---	17.67	18.08
16										---	17.68	18.14
17										---	17.68	18.17
18										---	17.56	18.24
19										---	17.55	18.29
20										---	17.51	18.30
21										17.31	17.44	18.28
22										17.29	17.41	18.29
23										17.30	17.42	18.28
24										17.36	17.42	18.33
25										17.39	17.44	18.34
26										17.40	17.48	18.38
27										17.40	17.52	18.41
28										17.40	17.59	18.40
29										17.41	17.64	18.40
30										17.44	17.67	18.42
31										17.46	17.68	---
MEAN											17.55	18.12

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.44	19.28	19.57	---	20.08	19.77	27.85	---	---	---	---	
2	18.45	19.37	19.54	---	20.01	19.74	28.13	---	---	---	---	
3	18.48	19.41	19.59	---	20.08	19.76	28.48	---	---	---	---	
4	18.51	19.52	19.58	---	20.07	19.80	31.89	---	---	---	---	
5	18.55	19.66	19.54	---	20.11	19.79	32.78	---	---	---	---	
6	18.57	19.79	19.52	---	20.08	19.87	34.39	189.56b	---	---	---	
7	18.58	19.86	19.49	---	20.09	19.97	41.45	---	---	---	---	
8	18.61	19.86	19.46	---	20.02	20.05	---	---	---	---	---	
9	18.65	19.83	---	---	20.06	20.06	---	---	---	---	---	
10	18.70	19.86	---	---	20.09	20.11	---	---	---	---	---	
11	18.75	19.91	---	---	20.05	20.15	---	225.15b	---	---	390.72b	
12	18.83	19.94	19.41b	---	20.16	20.02	---	---	---	---	392.39b	
13	18.86	19.94	---	19.91	20.18	20.04	---	238.71b	---	---	---	
14	18.89	19.95	---	19.93	20.15	20.14	---	---	---	---	---	
15	18.88	19.96	---	19.97	20.09	20.18	---	---	---	---	---	
16	18.88	19.95	---	20.02	20.05	20.15	---	---	---	---	---	
17	18.86	19.90	---	20.05	20.04	20.28	---	---	365.20b	---	---	
18	18.86	19.86	---	20.04	20.03	20.33	---	---	---	---	---	
19	18.85	19.93	---	20.06	19.99	20.69	---	---	---	---	---	
20	18.88	19.91	---	20.09	19.91	22.34	---	---	---	---	---	
21	18.93	19.89	---	20.08	19.95	22.71	---	---	---	384.99b	---	
22	18.98	19.92	---	20.09	19.91	22.73	---	---	---	385.02b	---	
23	19.05	19.89	---	20.11	19.82	22.87	---	---	---	---	---	
24	19.02	19.76	---	20.15	19.81	22.98	---	---	---	---	---	
25	18.91	19.78	---	20.17	19.82	23.62	---	---	---	---	---	
26	18.95	19.80	---	20.14	19.83	25.82	---	---	---	---	381.23b	
27	18.98	19.72	---	20.13	19.84	27.13	---	---	---	---	---	
28	18.98	19.62	---	20.16	19.79	27.51	---	---	---	---	---	
29	19.02	19.58	---	20.17	---	27.49	---	---	379.70b	---	---	
30	19.00	19.59	---	20.19	---	27.31	---	---	---	---	---	
31	19.12	---	---	20.19	---	27.68	---	---	---	---	---	
MEAN	18.81	19.77			20.00	21.97						

WTR YR 1981 HIGH 18.44 LOW 392.39

b-Instantaneous water-level measurement.

FA 32-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1982**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---		---		---	---		---	---	411.57	
2	---	---		---		403.70b	---		---	---	411.59	
3	---	---		---		---	---		404.30	---	411.64	
4	---	---		---		---	---		404.31	---	411.64	
5	---	---		---		---	---		404.44	---	411.72	
6	---	---		---		---	---		404.77	---	411.83	
7	---	---		---		---	---		405.17	---	411.86	
8	388.96b	---		---		---	---		405.37	---	411.86	
9	---	---		---		---	---		405.57	---	411.86	
10	---	---		---		---	---		405.61	---	411.94	
11	---	---		---		---	---		405.93	---	412.04	
12	---	392.86b		---		---	---		406.09	---	412.08	
13	---	---		---		---	---		406.24	410.35	412.09	
14	---	---		---		---	---		406.52	410.35	412.10	
15	---	---		---		---	---		406.60	410.52	412.10	
16	---	---		---		---	---		406.62	410.63	412.10	
17	---	---		---		---	---		406.89	410.65	412.10	
18	---	---		406.78b		---	---		407.16	410.66	412.11	
19	---	---		---		---	---		407.18	410.69	412.11	
20	---	---		---		---	---		407.30	410.84	412.11	
21	---	396.75b		---		---	---		407.40	411.13	412.11	
22	---	---		---		---	---		407.67	411.16	412.12	
23	---	---		---		---	---		407.92	411.21	412.12	
24	---	---		---		---	---		408.15	411.40	412.13	
25	---	---		---		---	---		---	411.45	---	
26	---	---		---		---	---		---	411.45	---	
27	---	---		---		---	---		---	411.46	---	
28	---	---		---		---	398.44b		---	411.45	---	
29	---	---		---		400.70b	---		---	411.51	---	
30	---	---		---		---	---		---	411.57	---	
31	---	---		---		---	---		---	411.57	---	

WTR YR 1982 HIGH 388.96 LOW 412.13
b-Instantaneous water-level measurement.

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	417.29	---		---	---		---		---	---	
2	---	417.29	---		---	---		---		---	---	
3	---	417.29	---		---	---		---		---	---	
4	---	417.33	---		---	---		---		---	---	
5	---	417.33	---		---	---		412.87b		---	---	
6	---	417.53	---		---	---		---		---	---	
7	---	417.59	---		---	---		---		---	---	
8	---	417.61	---		---	---		---		---	---	
9	---	417.77	---		---	---		---		---	---	
10	---	417.77	---		---	---		---		---	---	
11	---	417.82	---		---	---		---		---	---	
12	---	417.84	---		---	---		---		---	---	
13	---	c	---		---	---		---		---	---	
14	---	---	---		---	---		---		---	---	
15	---	---	---		417.86b	---		---		---	---	
16	---	---	---		---	---		---		---	---	
17	---	---	---		---	---		---		---	---	
18	---	---	---		---	---		---		---	---	
19	---	---	---		---	---		---		421.65b	---	
20	416.22	---	---		---	---		---		---	---	
21	416.33	---	---		---	---		---		---	---	
22	416.60	---	---		---	---		---		---	---	
23	416.80	---	---		---	416.70b		---		---	---	
24	416.93	---	---		---	---		---		---	---	
25	416.95	---	---		---	---		---		---	424.60b	
26	416.98	---	---		---	---		---		---	---	
27	417.04	---	---		---	---		---		---	---	
28	417.05	---	419.80b		---	---		---		---	---	
29	417.05	---	---		---	---		---		---	---	
30	417.11	---	---		---	---		---		---	---	
31	417.26	---	---		---	---		---		---	---	

WTR YR 1983 HIGH 416.22 LOW 417.84
b-Instantaneous water-level measurement.
c-Digital recorder removed from well this date.

FA 32-CONTINUED
INSTANTANEOUS WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1984**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---		---	---	---		---	---	---	---	---
2	---	---		---	---	---		---	---	---	---	---
3	---	---		---	---	---		---	---	---	---	---
4	---	---		---	---	---		---	---	---	---	---
5	---	---		---	---	---		---	---	---	---	---
6	---	---		420.04	---	---		---	---	---	---	---
7	---	---		---	---	---		---	---	---	---	---
8	---	---		---	---	---		---	---	---	---	---
9	---	---		---	---	---		---	---	---	---	---
10	---	---		---	---	---		417.79	---	---	---	425.48
11	---	---		---	---	---		---	---	---	---	---
12	---	---		---	---	---		---	---	---	---	---
13	423.39	---		---	---	---		---	---	---	---	---
14	---	---		---	---	---		---	---	---	---	---
15	---	---		---	---	---		---	424.33	---	---	---
16	---	---		---	---	---		---	---	---	---	---
17	---	---		---	---	---		---	---	---	---	---
18	---	---		---	---	---		---	---	---	---	---
19	---	---		---	---	---		---	---	---	---	---
20	---	---		---	---	---		---	---	---	426.63	---
21	---	425.57		---	419.23	---		---	---	---	---	---
22	---	---		---	---	---		---	---	---	---	---
23	---	---		---	---	---		---	---	---	---	---
24	---	---		---	---	---		---	---	---	---	---
25	---	---		---	---	---		---	---	---	---	---
26	---	---		---	---	---		---	---	---	---	---
27	---	---		---	---	416.76		---	---	---	---	---
28	---	---		---	---	---		---	---	---	---	---
29	---	---		---	---	---		---	---	---	---	---
30	---	---		---	---	---		---	---	---	---	---
31	---	---		---	---	---		---	---	425.83	---	---

WTR YR 1984 HIGH 416.76 LOW 426.63

WELL-CLUSTER SITE 1, ZONE 3, WELL NUMBER **FA 33**, PERMIT NUMBER GA-73-2144, LAND-SURFACE DATUM IS 2,618 FEET ABOVE SEA LEVEL, WELL DEPTH 391 FEET, OPEN-HOLE INTERVAL 318 TO 391 FEET, GEOLOGIC UNIT: CONEMAUGH GROUP

MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1980**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	16.65	16.88
2										---	16.64	16.92
3										---	16.61	16.97
4										---	16.61	17.03
5										---	16.68	17.03
6										---	16.75	17.06
7										---	16.77	17.06
8										---	16.76	17.08
9										---	16.75	17.12
10										---	16.75	17.16
11										---	16.76	17.21
12										---	16.83	17.26
13										---	16.87	17.31
14										---	16.89	17.29
15										---	16.86	17.26
16										---	16.87	17.31
17										---	16.89	17.35
18										---	16.74	17.45
19										---	16.74	17.51
20										---	16.70	17.53
21										16.53	16.63	17.49
22										16.53	16.57	17.48
23										16.51	16.57	17.46
24										16.57	16.56	17.51
25										16.60	16.56	17.54
26										16.63	16.59	17.58
27										16.61	16.64	17.63
28										16.60	16.69	17.63
29										16.59	16.80	17.62
30										16.63	16.85	17.62
31										16.65	16.84	---
MEAN											16.72	17.31

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.64	18.38	18.71	19.06	19.97	19.68	25.53	---	---	---	---	
2	17.63	18.44	18.69	19.10	19.86	19.68	25.71	---	---	---	---	
3	17.65	18.46	18.70	19.13	19.89	19.67	25.90	---	---	---	---	
4	17.70	18.50	18.76	19.23	19.93	19.81	26.89	---	---	---	---	
5	17.76	18.57	18.72	19.21	19.94	19.94	28.15	---	---	---	---	
6	17.79	18.65	18.68	19.22	19.94	20.01	28.82	89.23b	---	---	---	
7	17.80	18.71	18.67	19.30	19.93	20.07	34.11	a	---	---	---	
8	17.82	18.74	18.62	19.38	19.88	20.15	43.00	---	---	---	---	
9	17.88	18.75	18.58	19.50	19.87	20.16	47.20	---	---	---	---	
10	17.98	18.74	18.57	19.53	19.93	20.17	---	---	---	---	---	
11	18.01	18.81	18.62	19.53	19.91	20.22	---	119.92b	---	---	180.07b	
12	18.10	18.85	18.62	19.54	19.99	20.39	---	---	---	---	---	
13	18.17	18.89	18.59	19.54	20.05	20.24	---	113.85b	---	---	181.00b	
14	18.22	18.89	18.60	19.57	20.05	20.18	---	112.62b	---	---	---	
15	18.23	18.91	18.59	19.62	20.01	20.24	---	---	---	---	---	
16	18.22	18.92	18.57	19.69	19.98	20.19	---	---	---	---	---	
17	18.21	18.91	18.61	19.74	19.94	20.23	---	---	---	---	---	
18	18.19	18.82	18.64	19.76	19.94	20.28	---	---	146.00b	---	---	
19	18.17	18.90	18.69	19.79	19.91	20.38	---	---	---	---	---	
20	18.20	18.95	18.78	19.82	19.83	20.98	---	---	---	---	---	
21	18.26	18.95	18.84	19.85	19.82	21.49	---	---	---	184.72b	---	
22	18.31	18.98	18.84	19.86	19.85	21.66	---	---	---	185.24b	---	
23	18.39	18.99	18.84	19.86	19.78	21.74	---	---	---	---	---	
24	18.39	18.91	18.84	19.90	19.73	22.00	---	---	---	---	---	
25	18.26	18.87	18.90	19.95	19.74	22.20	---	---	---	---	---	
26	18.27	18.90	18.93	19.94	19.75	22.94	---	---	---	---	178.02b	
27	18.32	18.88	18.98	19.94	19.77	24.21	---	---	---	---	---	
28	18.31	18.78	19.00	19.95	19.74	25.03	---	---	166.93b	---	---	
29	18.34	18.71	18.98	19.97	---	25.35	---	---	---	---	---	
30	18.35	18.71	19.01	20.01	---	25.37	---	---	---	---	---	
31	18.33	---	19.04	20.03	---	25.38	---	---	---	---	---	
MEAN	18.09	18.78	18.75	19.63	19.89	21.29						

WTR YR 1981 HIGH 17.63 LOW 185.24.

a-Well pumped this date.

b-Instantaneous water-level measurement.

FA 33-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1982**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---		---	226.94	---	---	---	---	243.10
2	---	---	---	---		226.41b	227.66	---	---	---	---	243.03
3	---	---	---	---		---	227.88	---	235.79b	---	---	242.94
4	---	---	---	---		---	---	---	---	---	---	242.71
5	---	---	---	---		---	---	---	---	---	---	242.48
6	---	---	---	---		---	---	---	---	---	---	---
7	---	---	---	---		---	---	---	---	---	---	---
8	190.61b	---	---	---		---	---	---	---	---	---	---
9	---	---	---	---		---	---	---	---	---	---	---
10	---	---	---	---		---	---	---	---	---	---	---
11	---	---	---	---		---	---	---	---	---	---	---
12	---	197.20b	---	---		---	---	---	---	---	---	---
13	---	---	---	---		---	---	---	---	238.86b	---	---
14	---	---	---	---		---	---	---	---	---	---	---
15	---	---	---	---		---	---	---	239.06b	---	---	---
16	---	---	---	---		---	---	---	---	---	---	---
17	---	---	---	---		---	---	---	---	---	---	---
18	---	---	---	227.43b		---	---	---	---	---	---	---
19	---	---	---	---		224.38b	---	---	---	---	---	---
20	---	---	200.59b	---		---	---	230.83b	---	---	---	---
21	---	---	---	---		---	---	---	---	---	---	---
22	---	---	---	---		---	---	---	---	---	---	---
23	---	---	---	---		---	---	---	---	---	---	---
24	---	---	---	---		---	---	---	---	---	---	---
25	---	---	---	---		---	---	---	---	---	244.50	---
26	---	---	---	---		---	---	---	---	---	244.27	---
27	---	---	---	---		---	---	---	---	239.49b	244.05	---
28	---	---	---	---		---	227.53b	---	---	---	243.82	---
29	---	---	---	---		223.95b	---	---	---	---	243.55	---
30	---	---	231.12b	---		---	---	---	---	---	243.40	---
31	---	---	---	---		226.16	---	---	---	---	243.24	---

WTR YR 1982 HIGH 190.61 LOW 244.50
b-Instantaneous water-level measurement.

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---			---		---		---	---	
2	---	---	---			---		---		---	---	
3	---	---	---			---		---		---	---	
4	---	---	---			---		---		---	---	
5	---	---	---			---		231.44b		---	---	
6	251.07	---	---			---		---		---	---	
7	250.92	---	---			---		---		---	---	
8	250.73	---	---			---		---		---	---	
9	250.54	---	---			---		---		---	---	
10	250.36	---	---			---		---		---	---	
11	250.13	---	---			---		---		---	---	
12	249.91	---	---			---		---		---	---	
13	249.78	---	---			---		---		---	---	
14	c	---	---			---		---		---	---	
15	---	---	---			---		---		---	---	
16	---	---	---			---		---		---	---	
17	---	---	---			---		---		---	---	
18	---	258.14b	---			---		---		---	---	
19	---	---	---			---		---		236.91b	---	
20	---	---	---			---		---		---	---	
21	---	---	---			---		---		---	---	
22	---	---	---			---		---		---	---	
23	---	---	---			237.40b		---		---	---	
24	---	---	---			---		---		---	---	
25	---	---	---			---		---		---	246.63b	
26	---	---	---			---		---		---	---	
27	---	---	---			---		---		---	---	
28	---	---	255.17b			---		---		---	---	
29	---	---	---			---		---		---	---	
30	---	---	---			---		---		---	---	
31	---	---	---			---		---		---	---	

WTR YR 1983 HIGH 231.44 LOW 258.14
b-Instantaneous water-level measurement.
c-Digital recorder removed from well this date.

APPENDIX A.-CONTINUED

FA 33-CONTINUED
INSTANTANEOUS WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1984**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---		---	---	---		---	---	---	---	---
2	---	---		---	---	---		---	---	---	---	---
3	---	---		---	---	---		---	---	---	---	---
4	---	---		---	---	---		---	---	---	---	---
5	---	---		---	---	---		---	---	---	---	---
6	---	---		241.65	---	---		---	---	---	---	---
7	---	---		---	---	---		---	---	---	---	---
8	---	---		---	---	---		---	---	---	---	---
9	---	---		---	---	---		---	---	---	---	---
10	---	---		---	---	---		236.96	---	---	---	---
11	---	---		---	---	---		---	---	---	---	---
12	---	---		---	---	---		---	---	---	---	241.85
13	258.89	---		---	---	---		---	---	---	---	---
14	---	---		---	---	---		---	---	---	---	---
15	---	---		---	---	---		---	230.70	---	---	---
16	---	---		---	---	---		---	---	---	---	---
17	---	---		---	---	---		---	---	---	---	---
18	---	---		---	---	---		---	---	---	---	---
19	---	---		---	---	---		---	---	---	---	---
20	---	---		---	---	---		---	---	---	240.35	---
21	---	265.03		---	244.04	---		---	---	---	---	---
22	---	---		---	---	---		---	---	---	---	---
23	---	---		---	---	---		---	---	---	---	---
24	---	---		---	---	---		---	---	---	---	---
25	---	---		---	---	---		---	---	---	---	---
26	---	---		---	---	---		---	---	---	---	---
27	---	---		---	---	239.94		---	---	---	---	---
28	---	---		---	---	---		---	---	---	---	---
29	---	---		---	---	---		---	---	---	---	---
30	---	---		---	---	---		---	---	---	---	---
31	---	---		---	---	---		---	---	232.14	---	---

WTR YR 1984 HIGH 230.70 LOW 265.03

WELL-CLUSTER SITE 1, ZONE 4, WELL NUMBER **FA 34**, PERMIT NUMBER GA-73-2145, LAND-SURFACE DATUM IS 2,618 FEET ABOVE SEA LEVEL, WELL DEPTH 115 FEET, OPEN-HOLE INTERVAL 96 TO 115 FEET, GEOLOGIC UNIT: CONEMAUGH GROUP

MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1980**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	15.29	15.20
2										---	15.24	15.25
3										---	15.19	15.35
4										---	15.24	15.39
5										---	15.37	15.39
6										---	15.44	15.40
7										---	15.43	15.37
8										---	15.42	15.40
9										---	15.40	15.45
10										---	15.39	15.50
11										---	15.46	15.57
12										---	15.55	15.62
13										---	15.54	15.65
14										---	15.57	15.57
15										---	15.54	15.58
16										---	15.54	15.67
17										---	15.47	15.72
18										---	15.29	15.82
19										---	15.26	15.88
20										---	15.14	15.87
21										15.26	15.00	15.80
22										15.26	14.93	15.80
23										15.24	14.92	15.81
24										15.30	14.89	15.86
25										15.30	14.91	15.87
26										15.29	14.98	15.94
27										15.25	15.05	15.94
28										15.25	15.13	15.89
29										15.27	15.17	15.89
30										15.29	15.19	15.92
31										15.30	15.18	---
MEAN											15.26	15.65

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.94	16.27	15.82	15.92	16.41	---	17.54	---	79.65	90.32	91.18	91.93
2	15.96	16.29	15.78	15.95	16.36	---	17.67	---	80.38	90.26	90.96	92.01
3	15.98	16.28	15.89	15.96	16.49	---	17.74	---	---	90.20	90.68	92.10
4	16.03	16.38	15.83	16.03	16.45	---	18.24	---	---	89.94	90.65	92.23
5	16.06	16.43	15.75	16.08	16.47	---	18.67	---	---	89.77	90.68	92.36
6	16.06	16.42	15.70	16.01	16.37	---	19.11	47.43b	---	89.74	90.63	92.38
7	16.07	16.45	15.62	16.05	16.35	---	a	47.85b	---	89.88	90.56	92.36
8	16.11	16.45	15.56	16.16	16.21	---	---	---	---	89.97	90.57	92.33
9	16.15	16.37	15.54	16.18	16.31	---	---	---	---	89.93	90.66	92.48
10	16.16	16.42	15.60	16.25	16.32	---	---	---	---	89.91	90.82	92.57
11	16.24	16.49	15.63	16.21	16.27	---	---	58.94b	---	89.98	90.82	92.64
12	16.38	16.51	15.56	16.26	16.50	15.96	---	---	---	89.97	90.65	92.63
13	16.42	16.49	15.55	16.28	16.44	15.95	---	61.41	---	89.88	90.74	92.61
14	16.44	16.48	15.51	16.35	16.35	16.02	---	61.79	---	89.72	90.85	92.56
15	16.36	16.50	15.46	16.43	16.24	15.97	---	62.48	---	89.84	90.69	92.54
16	16.34	16.49	15.50	16.49	16.19	15.92	---	63.32	---	89.84	90.73	92.60
17	16.30	16.38	15.57	16.53	16.19	15.96	---	64.17	---	89.94	90.95	92.74
18	16.26	16.38	15.59	16.49	16.17	16.00	---	64.84	90.70b	90.01	91.06	92.77
19	16.23	16.49	15.69	16.54	16.07	16.06	---	66.22	---	90.04	91.06	92.61
20	16.29	16.46	15.78	16.58	15.97	16.31	---	67.32	---	89.94	91.21	92.60
21	16.35	16.41	15.75	16.57	16.04	16.55	---	68.43	---	89.93	91.62	92.74
22	16.44	16.46	15.72	16.55	15.93	16.58	---	69.37	---	90.16	91.79	92.78
23	16.53	16.36	15.72	16.59	15.77	16.60	---	70.33	---	90.46	91.87	93.09
24	16.42	16.21	15.70	16.65	15.79	16.66	---	71.27	---	90.49	91.97	93.24
25	16.23	16.26	15.81	16.63	15.78	16.77	---	72.23	---	90.50	92.04	93.32
26	16.32	16.23	15.79	16.56	---	17.07	---	73.15	---	90.50	91.97	93.28
27	16.32	16.04	15.85	16.61	---	17.33	---	73.89	---	90.51	91.93	93.22
28	16.32	15.87	15.85	16.63	---	17.60	---	74.81	---	90.51	92.02	93.27
29	16.39	15.84	15.80	16.65	---	17.53	---	76.09	90.52	90.52	92.04	93.34
30	16.33	15.86	15.87	16.67	---	17.40	---	77.21	90.44	90.81	91.96	93.29
31	16.27	---	15.91	16.61	---	17.52	---	78.48	---	91.19	91.93	---
MEAN	16.25	16.33	15.70	16.37						90.15	91.20	92.69

WTR YR 1981 HIGH 15.46 LOW 93.34

a-Well pumped this date.

b-Instantaneous water-level measurement.

FA 34-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1982**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93.07	93.82	92.89	90.69	88.24	87.07	85.76	86.88	88.66	---	89.07	
2	93.05	93.81	92.84	90.70	88.30	86.74	85.76	86.84	88.86	---	89.12	
3	93.26	93.93	93.01	90.33	87.88	86.82	85.18	86.84	88.98	---	89.18	
4	93.28	93.97	93.04	89.88	88.15	86.72	85.38	86.87	---	---	89.28	
5	93.24	93.91	93.16	90.14	88.18	86.69	85.64	86.90	---	---	89.39	
6	93.13	93.71	93.11	89.82	87.98	86.75	85.47	86.83	---	---	89.51	
7	93.13	93.89	92.84	89.90	87.98	86.59	85.97	86.74	---	---	89.57	
8	93.23	94.05	92.72	89.65	87.84	87.14	85.96	86.75	---	---	89.54	
9	93.38	94.10	92.89	89.19	87.39	87.39	85.69	86.94	---	---	89.51	
10	93.39	94.09	92.84	89.23	87.45	87.62	86.05	87.05	---	---	89.67	
11	93.40	94.00	92.88	89.25	87.50	87.52	86.02	87.15	---	---	89.77	
12	93.45	94.00	92.98	89.38	87.51	87.49	86.11	87.21	---	---	89.83	
13	93.55	93.99	92.90	89.01	87.23	87.52	85.93	87.29	---	89.08	89.85	
14	93.51	93.80	92.62	88.71	87.21	87.55	86.14	87.36	---	89.04	89.87	
15	93.37	93.53	92.36	88.81	87.16	87.60	86.21	87.42	---	88.99	89.89	
16	93.27	93.38	92.46	88.74	87.01	87.46	86.27	87.47	---	88.93	89.94	
17	93.27	93.33	92.33	88.91	86.90	87.18	86.13	87.55	---	88.85	89.97	
18	93.01	93.39	92.25	88.78	87.09	87.34	86.22	87.61	---	88.74	90.04	
19	93.34	93.39	92.24	88.71	87.09	87.36	86.23	87.67	---	88.62	90.15	
20	93.61	93.16	92.24	88.78	86.98	87.11	86.15	87.71	---	88.58	90.15	
21	93.68	93.33	92.04	88.70	86.75	86.87	86.25	87.85	---	88.70	90.12	
22	93.62	93.47	91.77	88.83	87.08	86.69	86.36	87.99	---	88.72	90.24	
23	93.52	93.44	91.69	88.20	87.25	86.74	86.44	88.09	---	88.72	90.25	
24	93.73	93.26	91.90	88.11	87.15	86.61	86.40	88.13	---	88.83	90.37	
25	93.72	93.41	91.75	88.25	87.51	86.39	86.37	88.16	---	88.88	90.26	
26	93.63	93.31	91.45	88.49	87.64	86.16	86.34	88.27	---	88.89	---	
27	93.52	93.14	91.13	88.61	87.43	86.08	86.45	88.38	---	88.89	---	
28	93.73	93.26	91.15	88.39	87.28	86.25	86.69	88.45	---	88.80	---	
29	93.84	93.29	91.34	88.60	---	86.16	86.88	88.56	---	88.96	---	
30	93.93	93.20	91.35	88.35	---	86.01	86.94	88.56	---	88.99	---	
31	93.93	---	90.85	88.03	---	85.71	---	88.67	---	89.00	---	
MEAN	93.44	93.61	92.29	89.07	87.41	86.88	86.11	87.55		88.85		

WTR YR 1982 HIGH 85.18 LOW 94.10

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	93.45		---	89.58	87.81	87.23	86.49	88.13	90.32	
2	---	---	93.54		---	89.52	87.60	87.09	86.66	88.24	90.44	
3	---	---	93.43		---	89.61	87.45	86.89	86.55	88.38	90.46	
4	---	---	93.20		---	89.62	87.82	86.90	86.31	88.38	90.44	
5	---	---	92:97		---	89.57	87.94	87.08	86.37	88.33	90.47	
6	92.56	---	92.93		---	89.46	87.87	87.28	86.35	88.52	90.50	
7	92.53	---	93.28		---	89.21	87.84	87.17	86.39	88.73	90.69	
8	92.50	---	93.22		---	89.03	87.75	86.95	86.49	---	90.92	
9	92.50	---	92.98		---	88.93	87.72	87.11	86.71	---	91.11	
10	92.62	---	92.69		---	88.86	87.60	87.28	86.80	---	91.38	
11	92.68	---	92.43		---	88.82	87.55	87.35	86.86	---	91.37	
12	92.79	93.06	92.37		---	88.79	87.75	87.36	86.84	---	91.47	
13	92.75	93.43	92.46		---	88.76	87.81	87.33	86.81	---	91.71	
14	92.71	93.46	92.47		---	88.67	87.67	87.27	86.80	---	91.83	
15	92.70	93.47	92.32		90.04	88.65	87.48	87.12	86.78	---	91.86	
16	92.88	93.56	92.04		90.00	88.75	87.46	87.15	86.88	---	91.91	
17	---	93.53	92.11		89.99	88.69	87.25	87.46	86.99	---	91.94	
18	---	93.53	92.06		90.08	88.32	87.06	87.59	87.03	---	91.92	
19	---	93.56	91.67		90.10	88.12	87.00	87.51	87.12	89.64	92.03	
20	---	93.56	91.55		90.28	88.28	87.01	87.40	87.23	89.73	92.06	
21	---	93.47	91.77		90.26	87.99	87.11	87.34	87.38	89.76	92.11	
22	---	93.36	91.90		90.01	88.28	87.19	87.08	87.57	89.81	92.12	
23	---	93.28	91.80		89.70	88.51	87.08	86.95	87.63	89.87	92.17	
24	---	93.43	91.75		89.68	88.42	86.62	87.03	87.62	89.89	92.24	
25	---	93.70	91.66		89.75	88.43	86.79	87.00	87.61	90.11	92.25	
26	---	93.55	91.53		90.05	88.53	87.11	86.86	87.75	90.28	---	
27	---	93.57	91.47		90.09	88.07	87.24	86.88	87.80	90.38	---	
28	---	93.33	91.14		89.87	87.89	87.24	86.83	87.82	90.43	---	
29	---	93.12	---		---	88.17	87.33	86.53	87.93	90.46	---	
30	---	93.42	---		---	88.17	87.27	86.38	88.08	90.42	---	
31	---	---	---		---	87.89	---	86.37	---	90.36	---	
MEAN			92.36			88.70	87.41	87.09	87.06		91.43	

WTR YR 1983 HIGH 86.31 LOW 93.70

FA 34-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1984**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---		---	---	88.55	87.27	85.84	85.30	88.12	89.11	88.70
2	---	---		---	---	88.62	87.21	85.78	85.32	88.35	89.12	88.65
3	---	---		---	---	88.75	87.13	85.39	85.37	88.46	89.05	88.48
4	---	---		---	---	88.78	86.78	85.13	85.58	88.49	89.00	88.53
5	---	---		---	---	88.43	86.36	85.49	85.73	88.48	89.01	88.68
6	---	---		88.14	---	88.35	86.39	85.54	85.86	88.60	89.01	88.71
7	---	---		88.37	---	88.45	86.61	85.52	85.96	88.75	88.97	88.76
8	---	---		88.49	---	88.36	86.77	85.35	86.00	88.99	88.99	88.91
9	---	---		88.70	---	88.55	86.69	85.33	86.04	89.05	89.08	88.91
10	---	---		88.62	---	88.53	86.48	85.49	86.09	89.09	89.17	88.92
11	95.09b	---		88.72	---	88.33	86.31	85.45	86.16	89.12	89.18	89.04
12	---	---		88.97	---	88.61	86.23	85.37	86.31	89.33	89.20	89.27
13	---	---		88.99	---	88.47	86.12	85.37	86.35	89.58	89.20	89.37
14	---	---		89.00	---	88.52	86.05	85.32	86.33	89.76	89.20	89.34
15	---	---		88.97	---	88.53	85.89	85.36	86.55	89.71	89.20	89.40
16	---	---		88.69	---	88.31	85.69	85.38	86.67	89.58	89.20	89.69
17	---	---		88.78	---	88.34	85.73	85.37	86.68	89.57	89.20	89.86
18	---	---		88.74	---	88.09	85.93	85.06	86.68	89.54	89.11	89.86
19	---	---		88.73	---	87.95	86.14	84.75	86.87	89.76	88.95	89.76
20	---	---		88.86	---	87.75	86.24	84.61	87.08	89.74	89.00	89.71
21	---	94.53b		89.01	89.47	87.45	86.30	84.67	87.20	89.66	89.24	89.88
22	---	---		89.09	89.48	87.69	86.14	84.74	87.29	89.63	89.10	90.11
23	---	---		89.05	89.15	88.00	85.69	84.71	87.35	89.57	88.89	90.14
24	---	---		88.76	88.95	88.06	85.66	84.94	87.36	89.48	88.97	90.14
25	---	---		88.71	88.84	87.70	85.92	84.90	87.47	89.43	89.07	90.10
26	---	---		88.93	89.07	87.61	86.13	84.89	87.61	89.31	89.04	90.20
27	---	---		88.80	88.83	87.53	86.12	85.09	87.66	89.15	88.89	90.49
28	---	---		88.79	88.13	87.11	86.17	84.99	87.86	89.28	88.78	90.61
29	---	---		89.23	88.31	86.87	86.17	85.00	87.95	89.30	88.72	90.79
30	---	---		89.62	---	87.24	85.79	85.15	87.98	89.27	88.63	90.96
31	---	---		---	---	87.35	---	85.21	---	89.18	88.62	---
MEAN				88.83		88.09	86.27	85.20	86.62	89.20	89.03	89.53

WTR YR 1984 HIGH 84.61 LOW 90.96

b-Instantaneous water-level measurement.

WELL-CLUSTER SITE 2, ZONE 1, WELL NUMBER **FB 22**, PERMIT NUMBER GA-73-2146, LAND-SURFACE DATUM IS 2,530 FEET ABOVE SEA LEVEL, WELL DEPTH 640 FEET, OPEN-HOLE INTERVAL 517 TO 640 FEET, GEOLOGIC UNIT: ALLEGHENY GROUP

MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1980**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	69.80	72.32	74.42	76.28
2								---	69.84	72.57	74.45	76.35
3								---	69.90	72.70	74.49	76.42
4								---	70.02	72.70	74.55	76.49
5								---	70.10	72.71	74.65	76.51
6								---	70.13	72.76	74.76	76.55
7								---	70.21	72.89	74.86	76.58
8								---	70.28	72.93	74.90	76.65
9								---	70.62	72.98	74.92	76.69
10								---	70.86	73.05	74.96	76.73
11								---	71.07	73.11	75.02	76.78
12								---	71.25	73.19	75.06	76.84
13								---	71.29	73.25	75.12	76.92
14								---	71.22	73.39	75.14	76.94
15								68.48	71.18	73.47	75.20	76.94
16								68.47	71.09	73.50	75.28	77.01
17								68.46	71.19	73.50	75.43	77.04
18								68.43	71.24	73.60	75.46	77.14
19								68.51	71.29	73.72	75.47	77.28
20								68.56	71.40	73.80	75.52	77.33
21								68.64	71.56	73.87	75.58	77.35
22								68.82	71.68	73.90	75.66	77.36
23								68.90	71.75	73.90	75.77	77.36
24								68.95	71.84	73.93	75.88	77.43
25								68.99	71.90	74.02	75.95	77.48
26								69.16	71.95	74.09	76.01	77.54
27								69.33	72.04	74.15	76.05	77.66
28								69.45	72.11	74.19	76.11	77.72
29								69.54	72.13	74.20	76.17	77.75
30								69.65	72.16	74.28	76.20	77.76
31								69.73	---	74.37	76.23	---
MEAN								68.95	71.10	73.45	75.33	77.03

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77.76	77.26	80.24	82.88	85.37	87.41	88.98	112.87	---	119.15	121.81	
2	77.77	77.43	80.32	82.98	85.38	87.38	89.09	113.20	---	119.22	122.09	
3	77.81	77.54	80.51	83.07	85.39	87.37	89.17	113.20	---	119.26	122.16	
4	77.87	77.53	80.68	83.21	85.46	87.48	89.22	113.21	---	119.27	122.22	
5	78.01	77.59	80.74	83.40	85.55	87.45	89.27	113.59	---	119.28	122.26	
6	78.14	77.73	80.83	83.34	85.60	87.48	89.43	113.67	---	119.29	122.27	
7	78.15	77.76	80.93	83.28	85.61	87.57	89.58	113.73	---	119.51	122.28	
8	78.15	77.84	80.99	83.47	85.61	87.70	89.61	---	---	119.84	122.30	
9	78.16	77.99	81.02	83.57	85.62	87.78	89.66	---	---	119.92	122.40	
10	78.23	78.11	81.14	83.68	85.63	87.78	89.81	---	---	119.93	122.55	
11	78.26	78.28	81.29	83.77	85.65	87.77	89.82	113.36	---	119.94	122.64	
12	78.33	78.42	81.41	83.84	85.98	87.76	89.82	113.36	---	120.12	122.71	
13	78.42	78.52	81.45	83.86	86.08	87.74	89.92	113.36	---	120.33	122.73	
14	78.52	78.57	81.58	83.86	86.12	87.82	90.00	113.46	---	120.39	122.74	
15	78.59	78.66	81.64	83.98	86.14	87.89	90.20	113.55	---	120.40	122.75	
16	78.69	78.80	81.65	84.09	86.20	87.86	90.26	113.55	---	120.41	122.76	
17	78.75	78.89	81.80	84.19	87.20	87.86	90.21	113.55	---	120.42	122.77	
18	78.79	78.84	81.88	84.24	87.19	87.86	90.24	113.81	---	120.60	122.79	
19	78.83	79.06	82.01	84.34	87.17	87.87	90.36	114.23	117.73	120.78	122.80	
20	78.88	79.20	82.23	84.42	87.14	87.90	90.39	114.32	117.83	120.85	122.81	
21	78.97	79.28	82.35	84.48	87.12	87.93	90.49	114.34	117.84	120.87	122.82	
22	79.11	79.44	82.39	84.56	87.09	88.25	a	---	117.84	120.88	122.83	
23	79.30	79.55	82.37	84.58	87.06	88.28	110.75	---	117.85	120.90	122.85	
24	79.38	79.52	82.32	84.68	87.04	88.35	109.65	---	117.88	120.91	122.86	
25	79.37	79.65	82.47	84.79	87.17	88.46	109.18	---	118.04	120.98	122.87	
26	79.40	79.86	82.56	84.82	87.40	88.55	110.05	---	118.13	121.12	---	
27	79.51	79.87	82.70	84.86	87.46	88.59	111.17	---	118.32	121.26	---	
28	79.54	79.83	82.79	84.97	87.43	88.72	111.84	---	118.59	121.36	---	
29	78.50	79.88	82.78	85.10	---	88.42	112.08	---	118.95	121.45	---	
30	77.31	80.12	82.80	85.27	---	88.72	112.21	---	119.12	121.50	---	
31	77.30	---	82.85	85.37	---	88.75	---	---	---	121.57	---	
MEAN	78.51	78.70	81.70	84.10	86.35	87.96	95.60			120.38	122.56	

WTR YR 1981 HIGH 77.26 LOW 122.87

a-Well pumped this date.

FB 22-CONTINUED

MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1982**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	126.30	127.06	128.49	130.19	131.52	133.71	136.13	138.46	139.92	141.25	142.83
2	---	126.30	127.06	128.31	130.26	131.66	133.85	136.20	138.58	140.00	141.32	142.83
3	---	126.33	127.08	128.64	130.27	131.79	133.70	136.34	138.67	139.91	141.39	142.83
4	---	126.38	127.12	128.64	130.30	131.85	133.81	136.48	138.67	139.91	141.50	142.91
5	---	126.39	127.25	128.70	130.42	131.92	134.01	136.57	138.59	140.05	141.56	143.01
6	---	126.39	127.39	128.80	130.41	132.10	133.94	136.64	138.65	140.13	141.64	143.06
7	---	126.39	127.41	128.84	130.41	132.15	134.21	136.69	138.78	140.17	141.67	143.10
8	125.21	126.45	127.40	129.00	130.45	132.42	134.29	136.74	138.85	140.19	141.72	143.15
9	125.25	126.54	127.40	129.01	130.44	132.53	134.15	136.87	138.91	140.21	141.74	143.22
10	125.28	126.54	127.44	129.01	130.44	132.66	134.30	136.97	138.94	140.20	141.81	143.25
11	125.33	126.55	127.47	129.05	130.44	132.64	134.38	137.05	138.98	140.20	141.92	143.30
12	125.41	126.69	127.61	129.22	130.46	132.62	134.47	137.13	139.04	140.30	141.97	143.37
13	125.52	126.78	127.73	129.25	130.45	132.67	134.48	137.23	139.04	140.41	142.03	143.43
14	125.60	126.80	127.82	129.25	130.47	132.80	134.64	137.31	139.11	140.46	142.09	143.44
15	125.62	126.81	127.82	129.27	130.52	132.83	134.76	137.37	139.17	140.53	142.15	143.43
16	125.62	126.81	127.83	129.31	130.54	132.70	134.87	137.44	139.15	140.59	142.20	143.44
17	125.63	126.81	127.90	129.48	130.55	132.64	134.91	137.53	139.20	140.64	142.23	143.44
18	125.63	126.81	127.90	129.57	130.63	132.79	134.99	137.63	139.29	140.65	142.28	143.45
19	125.63	126.82	127.90	129.62	130.69	132.86	135.12	137.69	139.30	140.65	142.34	143.48
20	125.77	126.82	127.91	129.63	130.70	132.87	135.16	137.74	139.37	140.68	142.36	143.50
21	125.82	126.82	127.91	129.62	130.71	132.87	135.29	137.82	139.40	140.76	142.37	143.55
22	125.84	126.83	127.92	129.62	130.84	133.01	135.41	137.91	139.47	140.83	142.41	143.57
23	125.87	126.83	127.92	129.62	131.00	133.14	135.53	137.98	139.56	140.87	142.49	143.59
24	125.88	126.83	127.93	129.61	131.03	133.19	135.56	138.04	139.64	140.93	142.51	143.65
25	125.88	126.83	127.93	129.61	131.25	133.24	135.62	138.08	139.70	141.00	142.46	143.67
26	125.88	126.86	127.94	129.72	131.45	133.30	135.63	138.15	139.74	141.03	142.50	143.79
27	125.88	126.86	127.94	130.08	131.47	133.45	135.69	138.20	139.76	141.07	142.53	143.68
28	125.94	126.89	127.95	130.07	131.49	133.66	135.85	138.25	139.76	141.06	142.61	143.93
29	126.06	127.00	128.16	130.17	---	133.73	136.01	138.33	139.73	141.09	142.75	144.11
30	126.12	127.06	128.44	130.18	---	133.64	136.09	138.34	139.77	141.15	142.81	144.16
31	126.16	---	128.48	130.17	---	133.54	---	138.42	---	141.18	142.82	---
MEAN	125.70	126.68	127.71	129.35	130.65	132.74	134.81	137.40	139.18	140.54	142.11	143.41

WTR YR 1982 MEAN 134.36 HIGH 125.21 LOW 144.16

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144.15	145.16	145.98	146.75	147.68	---		---	153.45	---	---	
2	144.14	145.17	146.07	146.75	147.68	---		---	153.59	---	---	
3	144.17	145.17	146.09	146.76	147.69	---		---	153.62	---	---	
4	144.21	145.16	146.05	146.89	147.69	---		---	153.56	---	---	
5	144.29	145.21	146.00	146.92	147.75	---		150.59	153.67	---	---	
6	144.38	145.35	146.01	146.92	147.78	---		150.70	153.67	---	---	
7	144.38	145.40	146.23	146.93	147.79	---		150.75	153.74	---	---	
8	144.36	145.42	146.34	146.93	147.79	---		150.71	153.83	---	---	
9	144.36	145.47	146.33	146.94	147.79	---		150.80	153.97	---	---	
10	144.40	145.48	146.28	146.94	147.80	---		150.94	154.05	---	---	
11	144.44	145.47	146.21	146.95	---	---		151.18	154.13	---	---	
12	144.49	145.43	146.22	146.95	---	---		151.31	154.17	---	---	
13	144.49	145.43	146.36	147.08	---	---		152.60	154.22	---	---	
14	144.48	145.48	146.42	147.18	---	---		152.69	154.27	---	---	
15	144.46	145.54	146.42	147.19	---	---		152.68	154.29	---	---	
16	144.51	145.59	146.32	147.19	---	---		152.72	154.36	---	---	
17	144.61	145.59	146.43	147.20	---	---		152.88	154.43	---	---	
18	144.82	145.64	146.45	147.23	---	---		152.98	154.48	---	---	
19	144.86	145.70	146.34	147.42	---	---		152.99	154.55	157.87b	---	
20	144.84	145.72	146.30	147.54	---	---		153.01	154.61	---	---	
21	144.85	145.70	146.41	147.55	---	---		153.04	154.62	---	---	
22	144.93	145.65	146.55	147.56	---	---		152.98	---	---	---	
23	144.97	145.60	146.56	147.56	---	148.85b		152.98	---	---	---	
24	145.00	145.66	146.61	147.57	---	---		153.10	---	---	---	
25	144.98	145.85	146.66	147.57	---	---		153.16	---	---	159.44b	
26	145.02	145.84	146.70	147.58	---	---		153.19	---	---	---	
27	145.09	145.88	146.75	147.58	---	---		153.32	---	---	---	
28	145.11	145.81	146.64	147.59	---	---		153.38	---	---	---	
29	145.10	145.70	146.62	147.66	---	---		153.31	---	---	---	
30	145.13	145.86	146.63	147.67	---	---		153.30	---	---	---	
31	145.17	---	146.74	147.67	---	---		153.36	---	---	---	
MEAN	144.65	145.54	146.38	147.23				152.39				

WTR YR 1983 HIGH 144.14 LOW 154.62

b-Instantaneous water-level measurement.

FB 22-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1984**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---		---	---	164.35		---	166.49	167.70	169.05	169.82
2	---	---		---	---	164.35		---	166.49	167.75	169.08	169.82
3	---	---		---	---	164.44		---	166.50	167.82	169.08	169.83
4	---	---		---	---	164.53		---	166.50	167.85	169.09	169.84
5	---	---		162.77b	---	164.55		---	166.51	167.85	169.10	169.93
6	---	---		---	---	164.55		---	166.52	167.85	169.11	170.07
7	---	---		---	---	164.55		---	166.56	167.89	169.09	170.12
8	---	---		---	---	164.55		---	166.59	168.00	169.11	170.17
9	---	---		---	---	164.56		---	166.63	168.08	169.15	170.18
10	---	---		---	---	164.63		165.91	166.69	168.10	169.19	170.07
11	160.88b	---		---	---	164.64		165.92	166.72	168.11	169.19	169.96
12	---	---		---	---	164.72		165.91	166.76	168.13	169.20	169.95
13	---	---		---	---	164.78		165.99	166.82	168.20	169.23	169.95
14	---	---		---	---	164.80		166.03	166.85	168.31	169.27	169.94
15	---	---		---	---	164.85		166.09	166.90	168.37	169.32	169.94
16	---	---		---	---	164.85		166.17	166.95	168.37	169.32	170.03
17	---	---		---	---	164.85		166.24	166.97	168.37	169.32	170.15
18	---	---		---	---	164.85		166.29	166.97	168.40	169.32	170.15
19	---	---		---	---	164.85		166.29	166.98	168.52	169.31	170.15
20	---	---		---	---	164.85		166.30	167.04	168.59	169.45	170.14
21	---	161.71b		---	164.24	164.85		166.30	167.11	168.61	169.55	170.14
22	---	---		---	164.24	164.85		166.31	167.16	168.69	169.56	170.21
23	---	---		---	164.24	164.85		166.33	167.21	168.76	169.57	170.28
24	---	---		---	164.24	164.85		166.37	167.24	168.79	169.61	170.29
25	---	---		---	164.24	164.85		166.39	167.32	168.83	169.71	170.29
26	---	---		---	164.25	164.85		166.39	167.42	168.87	169.77	170.28
27	---	---		---	164.35	164.85		166.46	167.48	168.87	169.79	170.40
28	---	---		---	164.35	---		166.49	167.55	168.91	169.80	170.39
29	---	---		---	164.35	---		166.49	167.65	168.99	169.80	170.39
30	---	---		---	---	---		166.50	167.68	169.04	169.81	170.38
31	---	---		---	---	---		166.50	---	169.04	169.81	---
MEAN						164.71			166.94	168.38	169.38	170.11

WTR YR 1984 HIGH 164.24 LOW 170.40
b-Instantaneous water-level measurement.

WATER YEAR 1985

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170.57	172.23	---	180.72	186.40	196.84		---	---	---	194.74	195.19
2	170.58	172.28	---	180.84	186.62	196.83		---	---	---	194.74	195.20
3	170.58	172.40	---	180.98	186.91	196.83		---	---	---	194.75	195.22
4	170.60	172.43	---	180.98	187.20	196.82		---	---	---	194.75	195.23
5	170.64	172.45	---	181.03	187.86	196.81		---	---	---	194.76	195.21
6	170.72	172.64	---	181.32	188.34	196.80		---	---	---	194.76	195.18
7	170.78	172.91	---	181.34	189.41	196.79		---	---	---	194.77	195.22
8	170.79	173.09	---	181.37	190.42	196.79		---	---	194.13	194.79	195.20
9	170.80	173.18	---	181.58	190.78	196.78		---	---	194.13	194.80	195.21
10	170.87	173.20	---	181.69	191.02	196.77		---	193.46b	194.14	194.81	195.22
11	170.90	173.23	---	181.71	191.22	196.76		---	---	194.14	194.83	195.26
12	170.94	173.43	---	181.86	191.64	196.76		---	---	194.16	194.85	195.33
13	170.94	173.63	---	182.09	192.58	196.75		---	---	194.24	194.88	195.42
14	170.95	173.83	---	182.19	193.07	196.74		192.59b	---	194.28	194.92	195.50
15	170.96	173.94	---	182.59	193.73	196.73		---	---	194.30	194.95	195.53
16	171.02	173.99	---	183.06	194.05	196.72		---	---	194.31	194.96	195.54
17	171.15	174.21	178.03	183.18	194.41	196.72		---	---	194.36	194.98	195.55
18	171.24	174.31	178.11	183.36	194.78	196.71		---	---	194.41	195.01	195.56
19	171.29	174.34	178.12	183.67	195.11	---		---	---	194.44	195.02	195.56
20	171.33	174.59	178.33	184.00	195.79	---		---	---	194.46	195.03	195.57
21	171.39	174.82	178.52	184.08	196.31	---		---	---	194.46	195.05	195.58
22	171.47	175.00	178.76	184.14	196.50	---		---	---	194.46	195.06	195.59
23	171.50	175.04	179.19	184.28	196.77	---		---	---	194.47	195.07	195.59
24	171.60	175.09	179.40	184.39	196.88	---		---	---	194.55	195.08	195.60
25	171.69	175.19	179.71	184.67	196.87	---		---	---	194.60	195.10	195.61
26	171.75	175.33	180.02	185.27	196.87	---		---	---	194.62	195.11	195.61
27	171.82	---	180.11	185.55	196.86	---		---	---	194.62	195.13	195.62
28	171.85	---	180.19	185.55	196.85	---		---	---	194.66	195.14	195.63
29	171.87	---	180.28	185.70	---	---		---	---	194.70	195.15	195.63
30	172.01	---	180.51	186.01	---	---		---	---	194.72	195.16	195.64
31	172.16	---	180.66	186.22	---	---		---	---	194.74	195.18	---
MEAN	171.19			183.08	192.69						194.95	195.43

WTR YR 1985 HIGH 170.57 LOW 196.88
b-Instantaneous water-level measurement.

WELL-CLUSTER SITE 2, ZONE 2, WELL NUMBER **FB 23**, PERMIT NUMBER GA-73-2176, LAND-SURFACE DATUM IS 2,530 FEET ABOVE SEA LEVEL, WELL DEPTH 495 FEET, OPEN-HOLE INTERVAL 460 TO 495 FEET, GEOLOGIC UNIT: CONEMAUGH GROUP

MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1980**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	21.28	20.69	20.14	19.84
2								---	21.19	20.72	20.09	19.91
3								---	21.08	20.76	19.85	19.95
4								---	21.06	20.76	19.81	19.85
5								---	21.12	20.70	19.88	19.79
6								---	21.04	20.63	20.06	19.76
7								---	20.95	20.65	20.35	19.74
8								---	20.90	20.54	20.34	19.74
9								---	20.93	20.42	20.26	19:76
10								---	20.94	20.35	20.23	19.94
11								---	20.95	20.45	20.17	19.67
12								---	20.98	20.63	20.09	20.02
13								---	20.96	20.59	20.11	20.03
14								---	20.91	20.60	20.13	20.00
15								21.73	20.96	20.57	20.16	19.93
16								21.67	20.89	20.51	20.10	19.99
17								21.56	20.83	20.48	20.07	20.01
18								21.40	20.80	20.53	19.72	20.10
19								21.38	20.77	20.62	19.61	20.20
20								21.39	20.74	20.58	19.64	20.21
21								21.29	20.76	20.53	19.68	19.94
22								21.19	20.77	20.48	19.73	19.82
23								21.10	20.72	20.36	19.79	19.73
24								20.99	20.61	20.30	19.73	19.72
25								20.89	20.63	20.37	19.58	19.76
26								21.01	20.64	20.41	19.59	19.79
27								21.17	20.64	20.42	19.64	19.84
28								21.15	20.67	20.39	19.73	19.83
29								21.09	20.64	20.25	19.75	19.80
30								21.17	20.63	20.20	19.76	19.79
31								21.33	---	20.17	19.77	---
MEAN									20.87	20.51	19.92	19.88

WTR YR 1980 HIGH 19.58 LOW 21.73

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.74	19.29	19.20	18.87	18.48	18.06	18.10	17.30	18.57	18.22	18.16	18.36
2	19.73	19.39	19.17	18.93	18.26	18.04	18.13	17.74	18.51	18.20	18.11	18.30
3	19.70	19.31	19.26	19.01	18.39	18.11	18.14	18.35	18.48	18.22	18.09	18.17
4	19.74	19.06	19.33	19.10	18.41	18.15	18.10	18.49	18.45	18.15	18.14	17.94
5	19.90	19.10	19.30	19.17	18.55	18.00	18.10	18.53	18.35	18.16	18.18	17.73
6	19.95	19.17	19.29	18.98	18.51	18.17	18.24	18.53	18.16	18.21	18.16	17.73
7	19.80	19.13	19.28	18.84	18.52	18.32	18.35	18.50	18.08	18.30	18.10	17.75
8	19.73	19.15	19.20	19.01	18.42	18.45	18.28	17.81	18.12	18.33	18.10	17.70
9	19.71	19.19	19.09	19.06	18.63	18.46	18.25	17.42	18.19	18.30	18.21	17.67
10	19.83	19.01	19.09	19.19	18.72	18.41	18.35	17.28	18.27	18.28	18.29	17.71
11	19.81	19.07	19.16	19.08	18.57	18.31	18.20	17.21	18.35	18.33	18.26	17.78
12	19.89	19.13	19.15	19.01	18.86	18.29	17.96	17.19	18.40	18.34	18.26	17.81
13	19.97	19.12	19.30	18.87	18.86	18.21	17.82	17.21	18.42	18.29	18.31	17.83
14	19.97	19.15	19.46	18.71	18.75	18.25	17.70	17.77	18.24	18.22	18.34	17.81
15	19.98	19.33	19.50	18.74	18.67	18.23	17.87	18.11	18.04	18.28	18.28	17.77
16	20.02	19.54	19.45	18.77	18.59	18.07	17.85	18.40	18.02	18.28	18.21	17.69
17	19.98	19.71	19.57	18.92	18.50	18.09	17.74	18.59	18.11	18.32	18.26	17.65
18	19.88	19.55	19.56	18.95	18.40	18.18	17.74	18.56	18.20	18.38	18.26	17.64
19	19.84	19.63	19.64	18.98	18.21	18.21	17.79	18.43	18.21	18.41	18.25	17.57
20	19.85	19.64	19.76	19.05	18.01	18.31	17.74	18.40	18.15	18.33	18.26	17.59
21	19.85	19.54	19.75	19.21	18.08	18.50	17.22	18.50	18.08	18.29	18.34	17.65
22	19.90	19.58	19.59	19.33	18.10	18.63	17.97	18.58	17.98	18.40	18.35	17.65
23	20.00	19.51	19.43	19.37	18.00	18.53	17.22	18.68	18.08	18.49	18.25	17.74
24	19.94	19.25	19.33	19.46	18.03	18.49	17.09	18.72	18.14	18.46	18.27	17.77
25	19.53	19.10	19.50	19.49	18.15	18.45	17.22	18.73	18.13	18.37	18.34	17.76
26	19.46	19.10	19.48	19.38	18.30	18.41	17.36	18.77	18.18	18.30	18.37	17.63
27	19.52	18.90	19.50	19.27	18.35	17.91	17.34	18.76	18.25	18.29	18.39	17.37
28	19.38	18.83	19.44	19.05	18.19	18.21	17.28	18.72	18.28	18.17	18.44	17.21
29	19.49	18.83	19.22	19.05	---	18.07	17.22	18.73	18.27	18.03	18.41	17.26
30	19.45	19.08	19.16	18.93	---	17.92	17.32	18.68	18.21	18.11	18.34	17.49
31	19.34	---	19.10	18.77	---	18.10	---	18.61	---	18.16	18.33	---
MEAN	19.77	19.25	19.36	19.05	18.41	18.24	17.79	18.24	18.23	18.28	18.26	17.72

WTR YR 1981 MEAN 18.55 HIGH 17.09 LOW 20.02

FB 23-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1982**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.42	17.73	16.36	16.54	16.31	16.31	16.96	16.67	16.93	16.99	17.03	17.94
2	17.39	17.57	16.01	16.90	16.27	16.31	16.93	16.66	16.54	16.99	17.04	17.86
3	17.52	17.53	16.08	17.09	15.98	16.43	16.70	16.69	16.12	16.80	17.09	17.81
4	17.60	17.03	16.19	16.82	16.00	16.45	16.78	16.77	16.93	16.49	17.12	17.88
5	17.71	17.32	16.31	16.66	16.03	16.53	16.87	16.83	16.76	16.56	17.18	17.92
6	17.67	16.95	16.28	16.50	16.10	16.54	16.77	16.83	16.68	16.75	17.23	17.91
7	17.66	16.82	16.20	16.54	16.20	16.70	16.93	16.83	16.72	16.85	17.26	17.92
8	17.73	16.88	16.15	16.50	16.23	16.95	16.86	16.86	16.68	16.84	17.24	17.93
9	17.80	16.71	16.24	16.32	16.14	16.95	16.72	16.96	16.70	16.80	17.19	17.96
10	17.81	17.28	16.17	16.46	16.32	16.98	16.86	17.02	16.67	16.83	17.17	17.95
11	18.31	17.23	16.25	16.59	16.40	16.88	16.84	17.08	16.58	16.83	17.13	17.96
12	19.19	17.23	16.38	16.78	16.42	16.75	16.86	17.12	16.49	16.89	17.16	18.00
13	19.46	17.19	16.43	16.62	16.34	16.65	16.77	17.14	16.41	16.94	17.17	18.03
14	19.56	17.10	16.39	16.59	16.39	16.76	16.86	17.19	16.41	16.99	17.19	18.01
15	19.57	16.99	16.42	16.74	16.42	16.95	16.91	17.17	16.42	17.01	17.23	17.95
16	19.58	16.88	16.52	16.76	16.39	16.96	16.95	17.22	16.44	17.01	17.28	17.93
17	19.62	16.87	16.46	16.85	16.23	16.78	16.89	17.25	16.52	16.99	17.30	17.95
18	19.51	16.91	16.48	16.65	16.23	16.86	16.90	17.28	16.59	16.99	17.34	17.89
19	19.57	16.83	16.61	16.66	16.16	16.90	16.92	17.27	16.60	16.98	17.39	17.93
20	19.62	16.71	16.43	16.72	16.09	16.85	16.88	17.25	16.70	16.97	17.38	17.90
21	19.58	16.70	16.48	16.65	16.05	16.75	16.95	17.27	16.74	16.99	17.37	17.93
22	19.48	16.82	16.45	16.68	16.22	16.83	16.98	15.93	16.80	16.97	17.43	17.90
23	19.34	17.04	16.34	16.24	16.22	16.88	16.95	17.32	16.87	16.99	17.41	17.88
24	19.12	17.02	16.22	16.13	16.11	16.92	16.90	17.29	16.91	17.04	17.40	17.88
25	18.73	17.16	16.23	16.21	16.28	16.95	16.86	17.26	16.93	17.08	17.35	17.86
26	18.65	17.09	16.29	16.31	16.33	16.95	16.79	17.26	16.93	17.09	17.72	17.85
27	18.28	16.84	16.35	16.36	16.28	17.06	16.79	17.27	16.91	17.09	17.84	17.72
28	18.04	16.75	16.52	16.34	16.32	17.14	16.78	17.23	16.89	17.05	17.95	17.79
29	17.96	16.61	16.68	16.47	---	17.10	16.72	17.19	16.83	17.06	18.05	17.81
30	17.89	16.57	16.75	16.36	---	17.02	16.72	17.10	16.87	17.05	18.03	17.79
31	17.84	---	16.60	16.26	---	16.94	---	17.01	---	17.01	18.01	---
MEAN	18.56	17.01	16.36	16.56	16.23	16.81	16.85	17.04	16.69	16.93	17.38	17.90

WTR YR 1982 MEAN 17.03 HIGH 15.93 LOW 19.62

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.73	17.78	17.40	17.48	17.97	17.75	18.00	18.46	18.65	19.14	19.96	20.69
2	17.69	17.76	17.41	17.48	17.75	17.75	18.00	18.40	18.73	19.18	20.02	20.73
3	17.70	17.76	17.42	17.55	17.62	17.80	18.02	18.26	18.69	19.26	20.07	20.74
4	17.75	17.75	17.43	17.68	17.77	17.75	18.29	18.12	18.44	19.26	20.08	20.78
5	17.81	17.74	17.44	17.66	17.89	17.68	18.35	18.27	18.51	19.26	20.10	20.80
6	17.88	17.78	17.53	17.58	17.78	17.63	18.33	18.55	18.65	19.36	20.09	20.80
7	17.86	17.77	17.78	17.54	17.73	17.60	18.25	18.56	18.69	19.48	20.13	20.84
8	17.83	17.74	17.84	17.70	17.85	17.59	18.16	18.56	18.76	19.50	20.17	20.93
9	17.82	17.77	17.82	17.75	17.89	17.57	18.17	18.72	18.88	19.46	20.19	20.94
10	17.85	17.77	17.75	17.68	17.90	17.61	18.08	18.77	18.91	19.49	20.23	20.94
11	17.85	17.71	17.71	17.56	17.90	17.70	18.03	18.79	17.11	19.57	20.18	20.95
12	17.86	17.55	17.77	17.70	17.97	17.81	18.16	18.78	16.70	19.61	20.16	20.98
13	17.78	17.66	17.95	17.82	18.05	17.93	18.23	18.77	18.95	19.66	20.28	20.98
14	17.69	17.69	18.04	17.80	17.91	17.96	18.23	18.78	18.94	19.70	20.35	20.99
15	17.64	17.74	18.12	17.74	17.95	18.04	18.20	18.75	18.94	19.71	20.37	21.06
16	17.70	17.80	17.99	17.80	18.00	18.12	18.17	18.62	18.98	19.72	20.38	21.02
17	17.84	17.81	17.98	17.88	17.98	18.16	18.16	18.33	18.98	19.78	20.37	20.99
18	17.88	17.85	17.99	18.07	18.02	18.04	18.19	18.32	18.97	19.83	20.36	21.08
19	17.87	17.89	17.91	18.23	18.03	17.90	18.27	18.39	18.99	19.88	20.43	21.13
20	17.79	17.90	17.93	18.29	18.10	17.84	18.38	18.41	19.04	19.92	20.46	21.10
21	17.76	17.87	18.12	18.25	18.04	17.71	18.49	18.42	19.04	19.88	20.51	21.01
22	17.76	17.80	18.27	18.16	17.82	17.78	a	18.26	19.03	19.83	20.53	21.12
23	17.76	17.65	18.29	18.07	17.63	17.93	18.54	18.04	19.02	19.82	20.60	21.22
24	17.76	17.64	18.23	18.08	17.57	17.96	18.24	18.06	18.96	19.75	20.64	21.30
25	17.67	17.72	18.15	18.12	17.58	18.06	17.96	18.21	18.97	19.80	20.67	21.28
26	17.71	17.66	18.00	18.16	17.77	18.17	18.06	18.33	19.09	19.85	20.66	21.27
27	17.76	17.73	17.95	18.19	17.85	17.99	18.18	18.50	19.14	19.92	20.64	21.26
28	17.74	17.61	17.17	18.17	17.83	17.83	18.28	18.58	19.12	19.95	20.62	21.29
29	17.73	17.29	17.25	18.15	---	17.97	18.40	18.56	19.13	19.96	20.65	21.31
30	17.78	17.34	17.44	18.04	---	18.01	18.41	18.53	19.15	19.95	20.70	21.27
31	17.80	---	17.47	18.03	---	17.95	---	18.56	---	19.96	20.70	---
MEAN	17.78	17.72	17.79	17.88	17.86	17.86	18.23	18.47	18.77	19.66	20.36	21.03

WTR YR 1983 MEAN 18.62 HIGH 16.70 LOW 21.31

a-Well pumped this date.

APPENDIX A.-CONTINUED

FB 23-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1984**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.27	21.12	20.75	21.47	20.95	20.24	19.81	20.34	21.16	22.22	22.19	22.35
2	21.27	21.07	20.83	21.32	20.99	20.33	19.75	20.44	21.17	22.23	22.23	22.35
3	21.28	20.87	20.82	21.29	20.83	20.33	19.72	20.37	21.23	22.22	22.20	22.30
4	21.25	20.73	20.61	21.20	20.73	20.31	19.62	20.32	21.33	22.16	22.14	22.32
5	21.23	20.66	20.60	21.17	20.67	20.04	19.29	20.61	21.37	22.08	22.13	22.40
6	21.35	20.68	20.34	21.14	20.80	19.87	19.32	20.65	21.41	22.05	22.12	22.40
7	21.43	20.74	20.27	21.33	20.97	19.91	19.57	20.54	21.45	21.98	22.01	22.41
8	21.41	20.77	20.36	21.38	21.03	19.85	19.81	20.45	21.45	22.03	21.99	22.42
9	21.39	20.74	20.53	21.48	20.96	19.94	19.90	20.43	21.45	22.04	22.04	22.35
10	21.49	20.55	20.67	21.38	20.97	19.95	19.89	20.55	21.51	21.91	22.05	22.28
11	21.47	20.36	20.68	21.42	20.95	19.85	19.94	20.55	21.55	21.58	21.92	22.29
12	21.38	20.53	20.46	21.51	20.92	20.02	20.01	20.54	21.58	21.45	21.83	22.39
13	21.33	20.61	20.46	21.43	20.75	19.88	20.03	20.54	21.57	21.48	21.72	22.38
14	21.42	20.61	20.67	21.40	20.39	19.85	20.14	20.58	21.53	21.61	21.67	22.32
15	21.51	20.52	21.03	21.37	20.00	19.81	20.08	20.71	21.87	21.65	21.75	22.36
16	21.51	20.28	21.31	21.25	19.98	19.60	19.88	20.81	22.24	21.67	20.91	22.51
17	21.48	20.30	21.47	21.35	20.07	19.59	19.90	20.89	22.20	21.75	20.02	22.57
18	21.46	20.44	21.49	21.30	20.24	19.65	20.10	20.89	22.15	21.80	21.80	22.48
19	21.49	20.44	21.48	21.29	20.25	19.70	20.25	20.82	22.18	22.00	17.45	22.39
20	21.50	20.25	21.58	21.36	20.30	19.69	20.34	20.87	22.24	22.04	21.86	22.35
21	21.39	20.64	21.65	21.38	20.06	19.58	20.42	21.00	22.25	22.06	22.14	---
22	21.20	21.01	21.43	21.34	19.90	19.75	20.40	21.07	22.23	22.11	22.12	---
23	20.82	21.02	21.40	21.24	19.89	19.92	20.05	21.04	22.22	22.12	22.06	---
24	20.51	20.96	21.28	21.03	19.85	20.01	19.98	21.13	22.20	22.10	22.16	---
25	20.58	20.93	21.38	20.90	19.79	19.86	20.19	21.14	22.23	22.11	22.24	---
26	20.66	21.04	21.46	20.91	19.96	19.61	20.38	21.19	22.26	22.08	22.27	---
27	20.82	21.02	21.53	20.77	19.87	19.40	20.43	21.36	22.25	22.02	22.23	---
28	20.88	20.77	21.41	20.75	19.64	19.23	20.52	21.32	22.28	22.13	22.21	---
29	20.98	20.54	21.49	20.71	19.96	19.19	20.45	21.22	22.29	22.17	22.23	---
30	21.13	20.60	21.67	20.77	---	19.59	20.22	21.18	22.27	22.19	22.21	---
31	21.10	---	21.54	20.89	---	19.74	---	21.15	---	22.18	22.26	---
MEAN	21.23	20.69	21.05	21.21	20.40	19.82	20.01	20.80	21.84	21.97	21.81	

WTR YR 1984 MEAN 21.07 HIGH 17.45 LOW 22.57

WATER YEAR 1985

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	22.02	21.96	---	---	---	37.21	---	---	---	---	---
2	---	22.12	22.07	---	---	---	39.98	---	---	---	---	---
3	22.39	22.09	21.99	---	---	---	39.74	---	---	---	---	---
4	22.45	22.02	22.10	---	---	---	38.61	---	---	---	---	495.00b
5	22.54	22.00	22.15	---	---	---	37.77	---	---	---	---	---
6	22.65	22.16	21.94	---	---	---	38.43	---	---	---	495.00b	---
7	22.65	22.28	22.19	---	---	---	38.35	---	---	---	---	---
8	22.58	22.28	22.23	---	---	31.22	39.92	---	---	489.02b	---	---
9	22.53	22.22	22.37	---	---	31.43	39.07	---	---	---	---	---
10	22.60	22.14	22.32	---	---	32.32	38.25	---	350.00b	---	---	---
11	22.68	22.11	22.40	---	---	32.37	38.27	---	---	---	---	---
12	22.69	22.22	22.36	---	---	32.01	37.99	---	---	---	---	---
13	22.61	22.32	---	---	---	32.98	37.83	---	---	---	---	---
14	22.58	22.42	---	---	---	35.20	39.19	326.06b	---	---	---	---
15	22.63	22.29	---	---	---	36.10	38.89	---	---	---	---	---
16	22.71	22.20	---	---	---	36.35	38.96	---	---	---	---	---
17	22.76	22.34	22.84b	---	---	36.46	40.81	---	---	---	---	---
18	22.71	22.26	---	---	---	36.54	40.00	---	---	---	---	---
19	22.57	22.26	---	---	>450.00b	36.51	39.12	---	---	---	---	---
20	22.56	22.47	---	---	---	35.35	38.61	---	---	---	---	---
21	22.55	22.52	---	---	---	37.94	38.80	---	---	---	---	---
22	22.27	22.48	---	---	---	38.93	38.55	---	---	---	---	---
23	22.22	22.40	---	---	---	38.78	38.54	---	---	---	---	---
24	22.12	22.43	---	---	---	38.81	37.60	---	---	---	---	---
25	22.09	22.49	---	---	---	38.93	37.11	---	---	---	---	---
26	22.03	22.55	---	---	---	38.55	38.30	---	---	---	---	---
27	22.02	22.57	---	---	---	37.75	58.22	---	---	---	---	---
28	22.03	22.33	---	---	---	37.53	79.68	---	---	---	---	---
29	22.01	22.01	---	---	---	37.68	c	---	---	---	---	---
30	22.01	21.84	---	59.93b	---	37.54	---	---	---	---	---	---
31	22.10	---	---	---	---	36.86	---	---	---	---	---	---
MEAN	---	22.26	---	---	---	---	---	---	---	---	---	---

WTR YR 1985 HIGH 21.84 LOW 495 --WELL DRY
b-Instantaneous water-level measurement.
c-Digital recorder removed from well this date.

APPENDIX A.-CONTINUED

WELL-CLUSTER SITE 2, ZONE 3, WELL NUMBER **FB 24**, PERMIT NUMBER GA-73-2177, LAND-SURFACE DATUM IS 2,530 FEET ABOVE SEA LEVEL, WELL DEPTH 400 FEET, OPEN-HOLE INTERVAL 340 TO 400 FEET, GEOLOGIC UNIT: CONEMAUGH GROUP

MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1980**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	22.31	21.59	20.93	20.54
2								---	22.27	21.57	20.91	20.54
3								---	22.23	21.56	20.89	20.52
4								---	22.19	21.54	20.86	20.52
5								---	22.17	21.53	20.84	20.51
6								---	22.15	21.49	20.83	20.50
7								---	22.11	21.47	20.83	20.49
8								---	22.07	21.45	20.83	20.47
9								---	22.04	21.42	20.81	20.46
10								---	22.01	21.39	20.80	20.45
11								---	21.97	21.35	20.79	20.44
12								---	21.97	21.32	20.78	20.43
13								---	21.96	21.29	20.77	20.42
14								---	21.95	21.27	20.75	20.41
15								23.32	21.92	21.25	20.74	20.40
16								23.27	21.88	21.23	20.72	20.39
17								23.20	21.85	21.21	20.71	20.37
18								23.12	21.82	21.19	20.70	20.36
19								23.04	21.80	21.18	20.66	20.35
20								22.97	21.78	21.17	20.63	20.35
21								22.89	21.76	21.16	20.61	20.34
22								22.83	21.74	21.14	20.59	20.32
23								22.75	21.73	21.12	20.58	20.30
24								22.69	21.72	21.09	20.57	20.28
25								22.63	21.71	21.07	20.57	20.27
26								22.57	21.69	21.05	20.57	20.25
27								22.52	21.67	21.03	20.56	20.24
28								22.47	21.66	21.02	20.56	20.23
29								22.42	21.64	20.99	20.55	20.23
30								22.39	21.62	20.96	20.55	20.22
31								22.35	---	20.94	20.55	---
MEAN									21.91	21.26	20.71	20.39

WTR YR 1980 HIGH 20.22 LOW 23.32

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.20	19.80	19.36	---	18.59	18.95	19.73	---	---	---	22.08	21.82
2	20.18	19.79	19.35	---	18.60	18.94	19.73	---	---	22.63	22.08	21.80
3	20.15	19.79	19.34	---	18.62	18.93	19.72	---	---	22.61	22.06	21.78
4	20.13	19.77	19.34	---	18.65	18.92	19.72	---	---	22.58	22.05	21.75
5	20.12	19.75	19.35	---	18.68	18.91	19.72	---	---	22.55	22.03	21.72
6	20.11	19.73	19.35	---	18.71	18.90	19.72	---	---	22.52	22.02	21.70
7	20.09	19.71	19.35	---	18.73	18.89	19.72	---	---	22.50	21.87	21.69
8	20.04	19.69	19.32	---	18.74	18.89	19.74	---	---	22.47	21.98	21.66
9	20.05	19.67	19.31	---	18.76	18.89	19.75	---	---	22.46	21.96	21.64
10	20.04	19.65	19.31	---	18.79	18.89	19.76	---	---	22.43	21.95	21.62
11	20.03	19.63	---	---	18.81	18.89	19.77	31.93b	---	22.42	21.94	21.60
12	20.01	19.63	19.29b	18.09	18.83	18.88	19.77	---	---	22.41	21.94	21.58
13	20.01	19.63	---	18.12	18.88	18.88	19.77	---	---	22.39	21.94	21.58
14	20.01	19.63	---	18.14	18.91	18.87	19.77	28.79b	---	22.36	21.94	21.57
15	20.00	19.63	---	18.15	18.96	18.86	19.77	---	---	22.33	21.94	21.56
16	20.00	19.61	---	18.18	19.00	18.85	19.77	---	---	22.31	21.92	21.54
17	19.99	19.60	---	18.21	19.03	18.83	19.77	---	---	22.29	21.90	21.52
18	19.98	19.57	---	18.23	19.04	18.82	19.76	---	---	22.27	21.90	21.51
19	19.96	19.55	---	18.26	19.04	18.80	19.76	---	22.95b	22.26	21.89	21.50
20	19.94	19.52	---	18.29	19.03	18.78	19.75	---	---	22.25	21.88	21.48
21	19.92	19.51	---	18.30	19.01	18.77	19.75	---	---	22.23	21.88	21.47
22	19.91	19.51	---	18.33	19.00	18.77	19.75	---	---	22.21	21.88	21.45
23	19.90	19.52	---	18.35	18.99	18.76	19.75	---	---	22.20	21.87	21.44
24	19.90	19.51	---	18.37	18.97	18.76	a	---	---	22.20	21.87	21.44
25	19.90	19.49	---	18.39	18.96	18.76	---	---	---	22.18	21.87	21.44
26	19.88	19.47	---	18.41	18.96	18.76	---	---	---	22.17	21.88	21.44
27	19.86	19.46	---	18.42	18.96	18.76	---	---	---	22.15	21.88	21.44
28	19.85	19.43	---	18.45	18.96	18.76	92.29b	---	---	22.14	21.87	21.44
29	19.83	19.40	---	18.48	---	18.76	---	---	---	22.12	21.87	21.43
30	19.83	19.37	---	18.51	---	18.75	---	---	---	22.10	21.85	21.43
31	19.82	---	---	18.55	---	19.20	---	---	---	22.09	21.83	---
MEAN	19.99	19.60		18.31	18.86	18.85				22.33	21.93	21.57

WTR YR 1981 HIGH 18.09 LOW 31.93

a-Well pumped this date.
b-Instantaneous water-level measurement.

FB 24-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1982**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.43	---	20.97	20.80	20.73	20.68	20.64	20.99	21.37	21.56	21.73	22.04
2	21.41	---	20.95	20.80	20.73	20.67	20.67	21.00	21.38	21.58	21.74	22.04
3	21.38	---	20.94	20.80	20.74	20.66	20.69	21.03	21.37	21.59	21.75	22.04
4	21.38	---	20.94	20.79	20.74	20.66	20.68	21.04	21.37	21.58	21.76	22.04
5	21.37	---	20.93	20.78	20.74	20.66	20.68	21.06	21.38	21.57	21.77	22.05
6	21.36	---	20.93	20.77	20.74	20.66	20.68	21.07	21.38	21.57	21.78	22.06
7	21.34	---	20.93	20.77	20.74	20.66	20.68	21.09	21.38	21.57	21.80	22.07
8	21.33	---	20.91	20.76	20.74	20.64	20.69	21.10	21.39	21.58	21.81	22.08
9	---	---	20.91	20.75	20.74	20.64	20.69	21.11	21.39	21.58	21.82	22.10
10	---	---	20.90	20.74	20.73	20.64	20.69	21.14	21.40	21.57	21.82	22.10
11	---	---	20.88	20.72	20.73	20.64	20.70	21.15	21.40	21.57	21.83	---
12	---	---	20.88	20.72	20.73	20.64	20.71	21.16	21.40	21.57	21.83	---
13	---	21.09	20.88	20.72	20.73	20.64	20.72	21.19	21.40	21.59	21.84	---
14	---	21.09	20.88	20.70	20.73	20.64	20.72	21.20	21.40	21.61	21.85	---
15	---	21.09	20.87	20.69	20.73	20.64	20.74	21.22	21.40	21.61	21.85	---
16	---	21.07	20.86	20.69	20.73	20.64	20.75	21.23	21.40	21.63	21.86	---
17	---	21.06	20.85	20.68	20.73	20.64	20.77	21.26	21.40	21.64	21.87	---
18	---	21.04	20.81	20.68	20.72	20.64	20.78	21.28	21.40	21.65	21.88	---
19	---	21.03	20.79	20.70	20.72	20.64	20.80	21.29	21.40	21.65	21.89	---
20	---	21.02	20.80	20.74	20.72	20.64	20.81	21.31	21.40	21.66	21.90	---
21	---	21.00	20.81	20.75	20.72	20.64	20.82	21.31	21.41	21.66	21.91	---
22	---	20.99	20.81	20.76	20.71	20.64	20.85	21.32	21.42	21.66	21.92	---
23	---	20.99	20.80	20.76	20.71	20.64	20.87	21.33	21.44	21.67	21.93	---
24	---	20.98	20.80	20.74	20.71	20.63	20.90	21.34	21.46	21.67	21.94	---
25	---	20.98	20.80	20.73	20.70	20.63	20.91	21.34	21.49	21.69	21.96	---
26	---	20.97	20.80	20.72	20.68	20.63	20.92	21.35	21.51	21.70	21.97	---
27	---	20.97	20.80	20.72	20.68	20.63	20.93	21.35	21.53	21.72	21.98	---
28	---	20.97	20.79	20.72	20.68	20.62	20.93	21.36	21.54	21.72	21.98	---
29	---	20.97	20.79	20.72	---	20.62	20.95	21.36	21.55	21.72	22.00	---
30	---	20.97	20.79	20.73	---	20.64	20.98	21.37	21.55	21.72	22.02	---
31	---	---	20.80	20.73	---	20.64	---	21.37	---	21.72	22.03	---
MEAN		21.02	20.86	20.74	20.72	20.64	20.78	21.22	21.42	21.63	21.87	

WTR YR 1982 HIGH 20.62 LOW 22.10

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	22.25	22.14	22.07	22.14		---	22.55	---	---	27.97
2	---	---	22.24	22.14	22.06	22.15		---	22.56	---	---	27.94
3	---	---	22.24	22.14	22.04	22.15		---	22.57	---	---	27.91
4	---	---	22.23	22.14	22.03	22.15		---	22.59	---	---	27.88
5	---	---	22.22	22.15	22.03	22.15		22.34	22.59	---	---	27.85
6	22.18b	---	22.21	22.15	22.04	22.14		22.34	22.60	---	---	27.82
7	---	---	22.21	22.15	22.04	22.14		22.36	22.61	---	---	27.78
8	---	---	22.21	22.15	22.04	22.14		22.37	22.62	---	---	27.75
9	---	---	22.20	22.15	22.04	---		22.39	22.64	---	---	27.74
10	---	---	22.20	22.15	22.04	---		22.41	22.68	---	---	27.72
11	---	---	22.20	22.15	22.05	---		22.43	22.71	---	---	27.70
12	---	22.33	22.20	22.13	22.05	---		22.45	22.74	---	---	27.67
13	---	22.31	22.19	22.13	22.05	---		22.46	22.76	---	---	27.64
14	---	22.28	22.19	22.13	22.05	---		22.47	22.79	---	---	27.61
15	---	22.26	22.19	22.12	22.05	---		22.49	22.84	---	---	27.59
16	---	22.23	22.19	22.11	22.05	---		22.49	22.88	---	---	27.57
17	---	22.23	22.18	22.10	22.07	---		22.49	22.92	---	---	27.54
18	---	22.30	22.17	22.09	22.08	---		22.49	22.96	---	---	27.52
19	---	22.31	22.16	22.09	22.09	---		22.50	23.00	34.59	---	27.51
20	---	22.31	22.14	22.09	22.10	---		22.51	23.03	33.18	---	27.49
21	---	22.31	22.12	22.10	22.11	---		22.51	23.08	31.70	---	27.46
22	---	22.31	22.11	22.10	22.14	---		22.52	23.12	30.93	---	27.42
23	---	22.31	22.11	22.10	22.15	22.15b		22.52	23.16	30.46	---	27.40
24	---	22.30	22.10	22.10	22.15	---		22.52	---	29.96	---	27.40
25	---	22.29	22.10	22.09	22.14	---		22.52	---	29.56	---	27.41
26	---	22.29	22.09	22.08	22.14	---		22.52	---	29.18	28.25	27.40
27	---	22.29	22.09	22.08	22.14	---		22.52	---	28.90	28.22	27.38
28	---	22.29	22.12	22.08	22.14	22.22b		22.54	---	28.80	28.17	27.37
29	---	22.28	22.15	22.08	---	---		22.55	---	28.78	28.12	27.35
30	---	22.25	22.14	22.08	---	---		22.55	---	---	28.07	27.32
31	---	---	22.14	22.07	---	---		22.55	---	---	28.03	---
MEAN			22.17	22.11	22.08			22.47				27.60

WTR YR 1983 HIGH 22.03 LOW 34.59

b-Instantaneous water-level measurement.

APPENDIX A.-CONTINUED

FB 24-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1984**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27.29	26.79	26.48	26.34	26.35	26.60	27.16	27.89	28.37	28.63	28.62	28.56
2	27.26	26.80	26.49	26.35	26.37	26.63	27.21	27.92	28.38	28.63	28.63	28.58
3	27.23	26.78	26.49	26.34	26.39	26.68	27.27	27.93	28.38	28.63	28.63	28.58
4	27.20	26.75	26.47	26.32	26.38	26.73	27.30	27.92	28.39	28.63	28.63	28.57
5	27.16	26.72	26.45	26.31	26.36	26.75	27.29	27.93	28.41	28.62	28.62	28.57
6	27.14	26.70	26.42	26.30	26.36	26.75	27.29	27.96	28.43	28.61	28.61	28.57
7	27.14	26.69	26.38	26.29	26.38	26.77	27.31	27.99	28.45	28.59	28.60	28.58
8	27.13	26.69	26.38	26.30	26.42	26.79	27.37	28.00	28.48	28.59	28.58	28.60
9	27.12	26.69	26.40	26.32	26.46	26.81	27.42	28.00	28.49	28.60	28.57	28.61
10	27.12	26.67	26.42	26.33	26.50	26.84	27.46	28.01	28.51	28.60	28.57	28.61
11	27.11	26.63	26.44	26.34	26.53	26.86	27.49	28.03	28.52	28.57	28.56	28.60
12	27.09	26.60	26.43	26.36	26.56	26.88	27.52	28.05	28.54	28.54	28.55	28.60
13	27.05	26.60	26.40	26.39	26.59	26.91	27.54	28.07	28.55	28.53	28.53	28.61
14	27.02	26.60	26.36	26.41	26.59	26.91	27.57	28.09	28.56	28.53	28.52	28.61
15	27.01	26.59	26.33	26.42	26.59	26.95	27.58	28.12	28.58	28.54	28.52	28.60
16	27.00	26.56	26.32	26.42	26.60	26.97	27.58	28.15	28.62	28.54	28.52	28.61
17	26.99	26.54	26.35	26.41	26.61	26.99	27.57	28.19	28.63	28.53	28.52	28.63
18	26.98	26.55	26.38	26.41	26.62	27.00	27.57	28.22	28.63	28.52	28.52	28.64
19	26.96	26.56	26.38	26.40	26.62	27.00	27.60	28.23	28.62	28.52	28.52	28.64
20	26.95	26.56	26.39	26.40	26.62	27.01	27.63	28.24	28.62	28.54	28.51	28.63
21	26.93	26.54	26.40	26.41	26.61	26.98	27.66	28.26	28.63	28.55	28.53	28.62
22	26.91	26.54	26.38	26.43	26.61	26.94	27.70	28.28	28.64	28.56	28.54	28.63
23	26.86	26.55	26.36	26.44	26.62	26.96	27.70	28.30	28.64	28.58	28.54	28.65
24	26.80	26.54	26.32	26.43	26.61	27.00	27.68	28.32	28.64	28.58	28.53	28.65
25	26.77	26.53	26.30	26.40	26.60	27.03	27.69	28.33	28.64	28.58	28.54	28.65
26	26.74	26.52	26.29	26.39	26.61	27.03	27.72	28.34	28.64	28.59	28.55	28.65
27	26.72	26.53	26.29	26.38	26.63	27.05	27.77	28.36	28.64	28.58	28.57	28.66
28	26.73	26.52	26.28	26.37	26.61	27.06	27.82	28.38	28.64	28.57	28.57	28.66
29	26.73	26.49	26.26	26.36	26.59	27.04	27.86	28.38	28.64	28.59	28.57	28.65
30	26.76	26.48	26.28	26.35	---	27.05	27.88	28.37	28.64	28.60	28.56	28.64
31	26.78	---	26.31	26.34	---	27.10	---	28.37	---	28.61	28.56	---
MEAN	26.99	26.61	26.38	26.37	26.53	26.91	27.54	28.15	28.55	28.58	28.56	28.62

WTR YR 1984 MEAN 27.48 HIGH 26.26 LOW 28.66

WATER YEAR 1985

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.62	28.51	28.36	28.06	24.61	46.09	49.66	44.81	41.57	40.64	40.07	39.94
2	28.61	28.50	28.36	28.05	24.23	48.55	49.55	44.62	41.52	40.62	40.05	39.94
3	28.59	28.50	28.36	28.05	24.11	50.39	49.44	44.40	41.48	40.59	40.05	39.95
4	28.58	28.49	28.36	28.01	24.07	51.62	49.33	44.21	41.42	40.57	40.05	39.95
5	28.58	28.45	28.37	27.95	23.99	52.55	49.21	44.06	41.36	40.55	40.05	39.94
6	28.60	28.43	28.34	27.94	23.93	53.32	49.05	43.93	41.29	40.53	40.05	39.93
7	28.62	28.43	28.31	27.90	24.00	53.83	48.92	43.79	41.24	40.51	40.04	39.93
8	28.63	28.44	28.30	27.85	24.17	54.10	48.80	43.66	41.17	40.50	40.03	39.93
9	28.62	28.44	28.30	27.82	24.22	54.35	48.61	43.53	41.11	40.46	40.01	39.94
10	28.62	28.42	28.29	27.76	24.36	54.68	48.36	43.43	41.06	40.41	40.01	39.92
11	28.63	28.40	28.28	27.66	24.47	54.94	48.04	43.29	41.03	40.35	40.00	39.92
12	28.63	28.39	28.27	27.56	24.59	54.94	47.74	43.18	40.98	40.33	40.00	39.92
13	28.62	28.38	28.26	27.46	24.78	54.69	47.46	43.08	40.93	40.32	40.00	39.92
14	28.61	28.39	28.27	27.37	24.90	54.54	47.21	42.94	40.90	40.31	40.00	39.94
15	28.60	28.40	28.29	27.25	25.10	53.68	46.99	42.73	40.88	40.28	40.00	39.95
16	28.59	28.39	28.29	27.18	25.39	53.07	46.78	42.56	40.86	40.24	39.99	39.96
17	28.59	28.39	28.29	27.08	25.58	52.97	46.59	42.45	40.83	40.23	39.98	39.95
18	28.59	28.40	28.28	26.95	25.73	52.96	46.44	42.34	40.80	40.23	39.98	39.94
19	28.58	28.38	28.25	26.82	25.95	52.96	46.27	42.29	40.77	40.23	39.97	39.95
20	28.57	28.37	28.21	26.74	26.53	52.68	46.12	42.25	40.74	40.22	39.97	39.95
21	28.57	28.38	28.17	26.69	28.03	52.31	45.99	42.21	40.72	40.21	39.97	39.95
22	28.56	28.41	28.11	26.67	29.69	51.94	45.87	42.18	40.72	40.19	39.97	39.94
23	28.55	28.42	28.10	26.63	31.44	51.57	45.77	42.13	40.71	40.17	39.97	39.93
24	28.55	28.41	28.10	26.51	33.08	51.25	45.65	42.06	40.70	40.17	39.97	39.92
25	28.54	28.40	28.08	26.33	34.11	51.00	45.53	42.00	40.68	40.16	39.95	39.91
26	28.54	28.40	28.12	26.09	35.91	50.79	45.43	41.95	40.67	40.15	39.95	39.90
27	28.54	28.41	28.13	25.94	39.16	50.57	45.33	41.91	40.66	40.13	39.95	39.88
28	28.54	28.40	28.12	25.81	43.03	50.35	45.22	41.86	40.65	40.12	39.96	39.87
29	28.52	28.37	28.10	25.61	---	50.13	45.14	41.80	40.64	40.12	39.96	39.89
30	28.51	28.36	28.07	25.31	---	49.95	45.00	41.76	40.64	40.11	39.95	39.89
31	28.51	---	28.07	24.97	---	49.80	---	41.68	---	40.10	39.94	---
MEAN	28.58	28.42	28.23	27.03	27.47	52.15	47.18	42.87	40.96	40.31	39.99	39.93

WTR YR 1985 MEAN 36.98 HIGH 23.93 LOW 54.94

WELL-CLUSTER SITE 2, ZONE 4, WELL NUMBER **FB 25**, PERMIT NUMBER GA-73-2178, LAND-SURFACE DATUM IS 2,530 FEET ABOVE SEA LEVEL, WELL DEPTH 180 FEET, OPEN-HOLE INTERVAL 120 TO 180 FEET, GEOLOGIC UNIT: CONEMAUGH GROUP

MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1980**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	28.65	28.72	28.81
2									---	28.65	28.72	28.81
3									---	28.65	28.72	28.81
4									28.60	28.67	28.73	28.82
5									28.60	28.66	28.73	28.82
6									28.58	28.66	28.73	28.82
7									28.58	28.68	28.74	28.83
8									28.57	28.66	28.74	28.83
9									28.57	28.66	28.74	28.83
10									28.57	28.65	28.74	28.84
11									28.61	28.67	28.75	28.84
12									28.61	28.65	28.75	28.84
13									28.60	28.66	28.75	28.84
14									28.59	28.67	28.76	28.85
15									28.58	28.67	28.76	28.85
16									28.56	28.67	28.76	28.85
17									28.58	28.67	28.76	28.86
18									28.57	28.68	28.77	28.86
19									28.56	28.68	28.77	28.86
20									28.57	28.68	28.77	28.86
21									28.59	28.69	28.78	28.87
22									28.59	28.69	28.78	28.87
23									28.60	28.69	28.78	28.87
24									28.60	28.69	28.79	28.88
25									28.60	28.70	28.79	28.88
26									28.60	28.70	28.79	28.88
27									28.62	28.70	28.79	28.88
28									28.62	28.71	28.80	28.89
29									28.61	28.71	28.80	28.89
30									28.62	28.71	28.80	28.89
31									---	28.72	28.81	---
MEAN									28.59	28.68	28.76	28.85

WTR YR 1980 HIGH 28.56 LOW 28.89

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.90	29.03	28.81	---	---	28.66	28.65	---	---	29.01	29.51	29.98
2	28.90	29.10	28.77	---	---	28.61	28.69	---	---	29.02	29.47	29.92
3	28.90	29.09	28.84	---	---	28.66	28.72	---	---	29.03	29.43	29.88
4	28.91	29.01	28.84	---	---	28.23	28.72	---	---	29.04	29.46	29.75
5	28.91	29.01	28.80	---	---	28.52	28.73	---	---	---	29.49	29.69
6	29.12	29.02	28.80	---	---	28.69	28.82	---	---	---	29.48	29.66
7	29.07	28.99	28.79	---	---	28.78	28.88	28.53	---	---	29.44	29.60
8	29.05	29.01	28.75	---	---	28.86	28.89	28.25	---	---	29.45	29.48
9	29.05	29.02	28.68	---	---	28.87	28.88	28.15	---	---	29.55	29.45
10	29.06	29.04	28.71	---	---	28.85	28.96	28.11	---	---	29.66	29.48
11	29.03	29.08	28.73	---	---	28.78	28.90	28.00	---	---	29.66	29.51
12	29.06	29.11	28.74	29.04b	---	28.80	28.84	27.89	---	---	29.67	29.53
13	29.12	29.09	---	---	---	28.77	28.82	27.96	---	---	29.73	29.54
14	29.15	29.03	---	---	---	28.82	28.80	28.47	---	---	29.78	29.52
15	29.15	29.00	---	---	---	28.79	28.89	28.57	---	---	29.73	29.49
16	29.17	29.05	---	29.12	---	28.71	28.88	28.63	---	---	29.67	29.47
17	29.15	28.65	---	29.15	28.83	28.72	28.78	28.67	---	---	29.77	29.52
18	29.09	28.85	---	29.12	28.81	28.73	28.77	---	---	---	29.83	29.63
19	29.08	28.98	---	29.14	28.70	28.74	28.82	---	28.96	---	29.84	29.61
20	29.11	28.98	---	29.15	28.58	28.77	28.78	---	28.95	29.31	29.85	29.61
21	29.13	28.61	---	29.12	28.67	28.87	28.86	---	28.95	29.31	29.91	29.68
22	29.20	28.98	---	29.08	28.69	28.95	28.86	---	28.94	29.41	29.94	29.68
23	29.31	28.99	---	29.04	28.59	28.92	28.79	---	28.97	29.52	29.94	29.77
24	29.29	28.81	---	29.07	28.64	28.93	a	---	28.98	29.51	29.95	29.83
25	29.05	28.81	---	29.11	28.71	28.94	---	---	28.96	29.50	30.00	29.85
26	29.07	28.83	---	29.04	28.78	28.94	---	---	28.97	29.49	30.03	29.83
27	29.13	28.71	---	29.00	28.81	28.86	---	---	29.00	29.49	30.03	29.80
28	29.04	28.63	---	28.99	28.70	28.88	---	---	29.01	29.47	30.06	29.82
29	29.09	28.65	---	29.03	---	28.78	---	---	29.01	29.39	30.05	29.87
30	29.09	28.80	---	29.09	---	28.32	---	---	29.00	29.46	30.02	29.88
31	29.04	---	---	---	---	28.71	---	---	---	29.51	30.01	---
MEAN	29.08	28.93				28.76				29.34	29.76	29.68

WTR YR 1981 HIGH 27.89 LOW 30.06

a-Well pumped this date.
b-Instantaneous water-level measurement.

FB 25-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1982**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.78	29.71	---	---	29.08	29.08	28.94	29.00	29.12	29.09	29.31	29.96
2	29.74	29.65	---	---	29.08	29.03	28.95	29.00	29.15	29.13	29.35	29.91
3	29.85	29.61	---	---	29.08	29.02	28.88	29.00	29.15	29.00	29.39	29.90
4	29.92	29.54	---	---	29.08	29.02	28.91	29.02	29.14	28.98	29.44	29.98
5	29.92	29.43	---	---	29.08	29.03	28.95	29.02	29.01	29.00	29.50	30.03
6	29.85	29.22	---	---	29.08	29.03	28.91	29.02	29.00	29.00	29.55	30.03
7	29.85	29.21	---	---	29.05	29.01	28.97	29.01	29.02	28.99	29.58	30.04
8	29.88	29.28	---	---	29.05	29.06	28.96	29.02	29.00	28.96	29.57	30.04
9	29.95	29.29	---	---	29.05	29.05	28.91	29.05	29.00	28.96	29.53	30.05
10	29.98	29.26	---	---	29.05	29.04	28.96	29.07	28.97	28.96	29.59	30.03
11	29.99	29.18	---	---	29.05	29.00	28.95	29.08	29.00	28.95	29.63	30.04
12	29.98	29.18	---	---	29.08	28.99	28.95	29.09	28.99	28.97	29.65	30.08
13	30.00	29.17	---	---	29.08	28.97	28.93	29.11	28.96	28.99	29.66	30.12
14	29.97	29.12	---	---	29.08	29.00	28.96	29.13	28.96	29.00	29.68	30.10
15	29.90	29.02	---	---	29.08	29.00	28.97	29.15	28.95	29.01	29.70	30.05
16	29.85	28.96	---	---	29.08	28.96	28.98	29.17	28.93	29.02	29.73	30.05
17	29.86	28.94	---	---	29.08	28.94	28.96	29.20	28.95	29.03	29.75	30.07
18	29.71	28.97	28.68	---	29.08	28.97	28.97	29.21	28.96	29.03	29.77	30.02
19	29.76	29.01	29.01	29.09	29.08	28.95	28.98	29.23	28.94	29.02	29.83	30.05
20	29.88	28.91	29.06	29.09	29.08	28.93	28.97	29.21	28.96	29.02	29.82	30.04
21	29.92	28.95	---	29.09	29.08	28.91	28.99	29.24	28.97	29.07	29.79	30.08
22	29.90	29.05	---	29.09	29.08	28.93	29.01	29.28	28.98	29.09	29.84	30.05
23	29.85	29.07	---	29.09	29.08	28.94	29.02	29.30	29.01	29.10	29.83	30.06
24	29.89	28.99	---	29.08	29.08	28.94	29.01	29.30	29.02	29.15	29.87	30.07
25	29.90	29.05	---	29.07	29.08	28.93	29.00	29.29	29.01	29.20	29.87	30.04
26	29.85	29.09	---	29.07	29.08	28.93	28.98	29.29	29.02	29.22	29.95	30.02
27	29.72	---	---	29.08	29.08	28.96	28.99	29.28	29.02	29.23	29.92	29.91
28	29.72	---	---	29.08	29.08	28.99	29.01	29.26	29.01	29.18	29.97	29.99
29	29.75	---	---	29.08	---	28.97	29.02	29.25	28.98	29.22	30.05	30.03
30	29.74	---	---	29.08	---	28.96	29.02	29.19	29.00	29.25	30.03	30.01
31	29.75	---	---	29.08	---	28.93	---	29.17	---	29.26	30.02	---
MEAN	29.86				29.07	28.98	28.97	29.15	29.01	29.07	29.72	30.03

WTR YR 1982 HIGH 28.68 LOW 30.12

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.94	29.90	29.43	28.94	---	28.85	28.64	28.91	28.84	29.09	29.56	29.82
2	29.89	29.87	29.43	28.92	---	28.84	28.61	28.89	28.77	29.12	29.60	29.85
3	29.89	29.84	29.38	28.93	---	28.91	28.80	28.86	28.86	29.16	29.64	29.85
4	29.90	29.81	29.28	29.04	---	28.92	28.98	28.85	28.83	29.17	29.64	29.87
5	29.93	29.86	29.21	29.02	---	28.94	29.00	28.87	28.86	29.15	29.65	29.87
6	29.97	29.95	29.20	28.96	---	28.92	28.99	28.90	28.85	29.20	29.64	29.86
7	29.94	29.96	29.36	28.90	---	28.86	28.98	28.88	28.87	29.31	29.64	29.87
8	29.90	29.94	29.43	29.04	---	28.79	28.97	28.85	28.89	29.34	29.65	29.93
9	29.86	29.95	29.38	29.10	---	28.76	28.96	28.88	28.94	29.31	29.65	29.96
10	29.89	29.96	29.32	29.06	29.19	28.76	28.92	28.90	28.97	29.30	29.69	29.95
11	29.90	29.90	29.23	28.93	29.13	28.77	28.93	28.90	29.00	29.34	29.64	29.94
12	29.93	29.77	29.23	29.02	29.19	28.80	28.96	28.89	29.01	29.40	29.60	29.93
13	29.87	29.82	29.33	29.14	29.26	28.85	28.97	28.88	29.01	29.43	29.69	29.92
14	29.82	29.87	29.38	29.16	29.14	28.86	28.95	28.88	29.01	29.46	29.74	29.94
15	29.75	29.88	29.38	29.07	29.13	28.90	28.92	28.85	29.00	29.46	29.75	30.00
16	29.78	29.91	29.26	29.11	29.15	28.98	28.93	28.84	29.04	29.46	29.75	29.97
17	29.91	29.90	29.29	29.12	29.14	28.99	28.91	28.87	29.07	29.49	29.73	29.94
18	29.96	29.91	29.28	29.24	29.18	28.87	28.90	28.88	29.07	29.52	29.69	29.97
19	29.96	29.93	29.16	29.37	29.17	28.76	28.90	28.85	29.08	29.60	29.74	30.01
20	29.90	29.93	29.09	29.43	29.24	28.81	28.92	28.84	29.09	29.61	29.76	29.99
21	29.88	29.89	29.19	---	29.22	28.66	28.95	28.83	29.09	29.57	29.79	29.90
22	29.92	29.81	29.31	---	29.08	28.73	28.97	28.79	29.11	29.53	29.80	29.94
23	29.93	29.73	29.31	---	28.90	28.82	28.95	28.77	29.10	29.51	29.83	30.04
24	29.92	29.70	29.31	---	28.85	28.80	28.86	28.81	29.05	29.43	29.88	30.12
25	29.86	29.82	29.28	---	28.83	28.80	28.89	28.81	29.03	29.46	29.90	30.10
26	29.88	29.75	29.20	---	28.97	28.88	28.92	28.81	29.08	29.49	29.89	30.07
27	29.92	29.73	29.17	---	29.02	28.72	28.93	28.83	29.10	29.54	29.85	30.04
28	29.91	29.61	28.87	---	28.95	28.62	28.92	28.84	29.07	29.57	29.80	30.05
29	29.89	29.39	28.87	---	---	28.72	28.93	28.81	29.06	29.60	29.80	30.06
30	29.91	29.45	28.97	---	---	28.75	28.91	28.79	29.09	29.59	29.83	30.01
31	29.92	---	28.96	---	---	28.67	---	28.81	---	29.57	29.81	---
MEAN	29.90	29.82	29.24			28.82	28.91	28.85	29.00	29.41	29.73	29.96

WTR YR 1983 MEAN 29.33 HIGH 28.61 LOW 30.12

FB 25-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR 1984

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.98	29.75	28.77	29.31	29.38	29.33	29.31	29.28	29.32	29.40	29.29	29.26
2	29.96	29.70	28.78	29.29	29.39	29.35	29.30	29.29	29.32	29.46	29.30	29.26
3	29.96	29.55	28.74	29.29	29.36	29.36	29.29	29.26	29.33	29.45	29.27	29.24
4	29.92	29.48	28.72	29.27	29.35	29.35	29.25	29.26	29.35	29.42	29.25	29.24
5	29.88	29.43	28.72	29.29	29.34	29.32	29.21	29.31	29.35	29.36	29.27	29.27
6	29.96	29.43	28.44	29.31	29.35	29.32	29.25	29.30	29.36	29.33	29.26	29.29
7	30.05	29.46	28.42	29.34	29.39	29.34	29.28	29.29	29.36	29.32	29.22	29.30
8	30.07	29.46	28.49	29.35	29.40	29.33	29.30	29.28	29.35	29.37	29.22	29.31
9	30.08	29.47	28.55	29.37	29.37	29.34	29.29	29.28	29.34	29.38	29.23	29.27
10	30.10	29.40	28.58	29.36	29.37	29.35	29.28	29.29	29.34	29.31	29.26	29.22
11	30.12	---	28.59	29.37	29.37	29.33	29.28	29.30	29.35	29.32	29.26	29.22
12	30.08	---	28.41	29.39	29.37	29.35	29.29	29.29	29.37	29.31	29.25	29.25
13	30.01	---	28.71	29.38	29.35	29.34	29.29	29.29	29.37	29.32	29.24	29.26
14	30.05	---	29.15	29.38	29.23	29.35	29.29	29.29	29.36	29.24	29.24	29.23
15	30.13	---	29.22	29.37	29.32	29.34	29.28	29.30	29.39	29.26	29.24	29.23
16	30.14	---	29.27	29.35	29.32	29.33	29.26	29.31	29.41	29.25	29.25	29.34
17	30.11	---	29.29	29.37	29.32	29.33	29.27	29.32	29.39	29.24	29.24	29.42
18	30.08	---	29.28	29.37	29.32	29.32	29.29	29.31	29.37	29.22	29.24	29.39
19	30.08	---	29.28	29.37	29.31	29.31	29.31	29.30	29.39	29.30	29.24	29.34
20	30.10	---	29.29	29.39	29.30	29.31	29.32	29.30	29.42	29.33	29.24	29.29
21	30.04	28.96	29.29	29.44	29.30	29.27	29.32	29.32	29.43	29.35	29.24	29.32
22	29.98	28.99	29.26	29.47	29.33	29.30	29.30	29.33	29.42	29.32	29.23	29.42
23	29.76	28.96	29.27	29.45	29.31	29.33	29.26	29.32	29.42	29.27	29.21	29.46
24	29.66	28.89	29.25	29.36	29.30	29.34	29.26	29.33	29.40	29.28	29.23	29.46
25	29.66	28.83	29.27	29.36	29.30	29.31	29.30	29.33	29.42	29.28	29.25	29.43
26	29.62	28.91	29.28	29.37	29.33	29.30	29.31	29.33	29.44	29.27	29.25	29.44
27	29.64	28.90	29.28	29.35	29.31	29.29	29.31	29.35	29.43	29.24	29.24	29.50
28	29.67	28.77	29.27	29.35	29.26	29.25	29.30	29.34	29.45	29.29	29.23	29.44
29	29.71	28.73	29.29	29.35	29.30	29.24	29.30	29.32	29.47	29.30	29.24	29.43
30	29.79	28.76	29.32	29.35	---	29.29	29.27	29.33	29.44	29.30	29.23	29.41
31	29.76	---	29.31	29.36	---	29.31	---	29.32	---	29.29	29.24	---
MEAN	29.94		28.99	29.36	29.33	29.32	29.29	29.31	29.39	29.32	29.25	29.33

WTR YR 1984 MEAN 29.34 HIGH 28.41 LOW 30.14

WATER YEAR 1985

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.32	29.32	29.31	29.28	29.42	29.54	34.93	37.80	---	29.20	29.04	29.41
2	29.36	29.31	29.34	29.30	29.43	29.55	35.22	37.74	---	29.14	29.07	29.43
3	29.30	29.31	29.31	29.28	29.58	29.68	35.56	37.51	---	29.11	29.10	29.46
4	29.32	29.29	29.33	29.20	29.63	29.64	35.96	37.60	---	29.13	29.10	29.44
5	29.37	29.27	29.32	29.27	29.51	29.63	36.14	37.62	---	29.15	29.10	29.42
6	29.42	29.31	29.27	29.32	29.44	29.87	36.38	37.63	---	29.17	29.04	29.43
7	29.43	29.35	29.31	29.28	29.53	29.97	36.70	37.82	---	29.22	28.99	29.49
8	29.38	29.34	29.31	29.31	29.62	29.96	36.86	38.10	---	29.22	28.98	29.51
9	29.37	29.32	29.34	29.35	29.69	30.09	37.02	38.36	---	29.03	29.02	29.47
10	29.39	29.30	29.32	29.34	29.74	30.22	37.20	38.49	28.85	28.81	29.05	29.46
11	29.41	29.29	29.32	29.33	29.67	30.24	37.24	38.55	28.83	28.85	29.08	29.52
12	29.38	29.32	29.31	29.34	29.40	30.13	37.36	38.54	28.76	28.90	29.12	29.56
13	29.35	29.34	29.32	29.33	29.48	30.34	37.38	41.26	28.80	28.96	29.14	29.63
14	29.31	29.35	29.34	29.31	29.60	30.45	37.35	---	28.84	28.98	29.16	29.67
15	29.34	29.32	29.34	29.35	29.67	30.68	37.28	---	28.84	28.91	29.15	29.64
16	29.36	29.31	29.33	29.38	29.72	30.85	37.27	---	28.80	28.93	29.15	29.58
17	29.42	29.34	29.32	29.32	29.82	30.88	37.40	---	28.84	28.98	29.20	29.58
18	29.42	29.32	29.32	29.33	29.92	31.06	37.42	---	28.81	29.00	29.22	29.63
19	29.38	29.29	29.27	29.34	29.89	31.28	37.45	---	28.86	29.01	29.23	29.67
20	29.38	29.59	29.29	29.36	29.91	32.07	37.52	---	28.89	29.03	29.27	29.66
21	29.37	29.59	29.27	29.37	29.96	32.79	37.58	---	28.93	29.02	29.27	29.64
22	29.38	29.59	29.27	29.37	29.92	33.26	37.60	---	28.94	29.01	29.30	29.65
23	29.38	29.59	29.31	29.37	29.88	33.52	37.60	---	28.95	29.05	29.31	29.66
24	29.34	29.58	29.29	29.36	29.64	33.76	37.56	---	28.96	29.08	29.29	29.67
25	29.36	29.58	29.30	29.35	29.61	34.08	37.56	---	28.98	29.08	29.27	29.70
26	29.34	29.58	29.32	29.44	29.61	34.36	37.63	---	28.98	29.05	29.34	29.63
27	29.33	29.58	29.30	29.43	29.55	34.51	37.65	---	29.02	29.07	29.42	29.60
28	29.32	29.55	29.29	29.40	29.60	34.69	37.71	---	29.03	29.10	29.42	29.79
29	29.31	29.42	29.28	29.46	---	34.84	37.81	---	29.08	29.11	29.37	29.83
30	29.32	29.30	29.29	29.50	---	34.92	37.82	---	29.16	29.13	29.26	29.77
31	29.34	---	29.30	29.42	---	34.94	---	---	---	29.09	29.30	---
MEAN	29.36	29.40	29.31	29.35	29.66	31.67	37.07	---	---	29.05	29.19	29.59

WTR YR 1985 HIGH 29.22 LOW 41.26

WELL-CLUSTER SITE 3, ZONE 1, WELL NUMBER **FB 26**, PERMIT NUMBER GA-73-2179, LAND-SURFACE DATUM IS 2,755 FEET ABOVE SEA LEVEL, WELL DEPTH 832 FEET, OPEN-HOLE INTERVAL 687 TO 832 FEET, GEOLOGIC UNIT: ALLEGHENY GROUP

MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1980**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	261.53	265.20
2										---	261.61	265.29
3										---	261.68	265.45
4										---	261.86	265.58
5										---	262.08	265.68
6										---	262.29	265.78
7										---	262.42	265.87
8										---	262.50	265.98
9										---	262.54	266.10
10										---	262.62	266.20
11										---	262.73	266.31
12										---	262.82	266.43
13										---	262.95	266.55
14										---	263.06	266.62
15										---	263.13	266.65
16										---	263.26	266.77
17										---	263.46	266.83
18										---	263.51	267.03
19										---	263.60	267.27
20										---	263.71	267.39
21										260.51	263.83	267.45
22										260.54	263.95	267.52
23										260.57	264.14	267.59
24										260.69	264.30	267.71
25										260.85	264.43	267.81
26										260.98	264.55	267.93
27										261.07	264.67	268.11
28										261.15	264.79	268.21
29										261.23	264.91	268.29
30										261.34	264.98	268.33
31										261.46	265.07	---
MEAN											263.32	266.80

WTR YR 1980 HIGH 260.51 LOW 268.33

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	268.36	268.85	270.78	273.58	---	---	279.71	281.83	284.63	---	289.49	292.41
2	268.40	268.86	271.10	273.77	---	---	279.81	281.99	284.73	287.65	289.55	292.50
3	268.52	268.87	271.27	273.95	---	---	279.93	282.16	284.77	287.76	289.55	292.59
4	268.66	268.88	271.46	274.04	---	---	279.95	282.27	284.82	287.86	289.62	292.65
5	268.95	268.89	271.47	---	---	---	279.98	282.32	284.90	287.92	289.74	292.77
6	269.13	268.92	271.51	---	---	---	280.17	282.33	284.94	288.04	289.80	292.92
7	269.20	269.01	271.54	---	---	---	280.33	282.43	284.97	288.30	289.80	293.00
8	269.23	269.03	271.56	---	---	---	280.37	282.57	285.03	288.47	289.88	293.02
9	268.21	269.19	271.58	---	---	---	280.40	282.63	285.06	288.62	290.13	293.13
10	267.35	269.21	271.59	---	---	---	280.55	282.64	285.17	288.74	290.35	293.31
11	267.35	269.33	271.73	---	---	---	280.59	282.64	285.44	288.92	290.45	293.48
12	267.42	269.41	271.82	---	---	---	280.57	282.74	285.62	289.10	290.54	293.61
13	267.61	269.43	271.85	---	---	278.08	280.69	282.89	285.72	289.25	290.68	293.69
14	267.73	269.44	271.98	---	---	278.23	280.78	282.91	285.80	289.36	290.70	293.75
15	267.79	269.45	272.04	---	---	278.34	281.04	282.90	285.91	289.50	290.70	293.80
16	267.93	269.83	272.07	274.32b	---	278.23	281.09	283.06	285.99	289.67	290.70	293.90
17	267.99	269.98	272.21	---	---	278.33	280.98	283.27	286.10	289.82	290.78	294.05
18	268.00	269.99	272.35	---	---	278.35	281.02	283.34	286.21	290.04	290.94	294.24
19	268.00	270.12	272.56	---	---	278.36	281.14	283.36	286.26	290.21	291.03	294.27
20	268.07	270.25	272.87	---	---	278.47	281.15	283.42	---	289.40	291.12	294.32
21	268.18	270.30	273.08	---	---	278.72	281.31	283.54	---	288.34	291.29	294.50
22	268.35	270.41	273.15	---	---	278.96	281.36	283.65	---	288.36	291.43	294.60
23	268.58	270.48	273.16	---	---	278.98	281.28	283.75	---	288.50	291.50	294.80
24	268.67	270.49	273.18	---	276.23	279.04	281.19	283.82	---	288.59	291.61	294.97
25	268.67	270.50	273.20	---	---	279.17	281.36	283.91	---	288.69	291.90	295.12
26	268.67	270.60	273.28	---	---	279.29	281.56	283.97	---	288.79	291.93	295.19
27	268.70	270.63	273.40	---	---	279.37	281.65	284.02	---	288.91	291.98	295.22
28	268.71	270.64	273.48	---	---	279.51	281.71	284.03	---	288.97	292.12	295.31
29	268.77	270.65	273.50	---	---	279.53	281.72	284.18	---	289.02	292.24	295.48
30	268.83	270.66	273.52	---	---	279.46	281.79	284.31	---	289.20	292.29	295.57
31	268.84	---	273.53	---	---	279.63	---	284.43	---	289.37	292.35	---
MEAN	268.35	269.74	272.32			278.84	280.84	283.14		288.85	290.84	293.94

WTR YR 1981 HIGH 267.35 LOW 295.57

b-Instantaneous water-level measurement.

FB 26-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	295.58	300.04	---	---	309.08	311.90	317.04	323.18	328.16	332.58	336.44	340.77
2	295.58	300.17	---	---	309.31	311.90	317.25	323.34	328.30	332.85	336.62	340.81
3	295.78	300.26	---	---	309.23	311.85	317.29	323.52	328.42	332.96	336.76	340.93
4	295.97	300.33	---	---	309.38	311.89	317.43	323.75	328.73	332.97	336.97	341.15
5	296.06	300.34	---	---	309.61	311.95	317.87	323.99	328.84	333.08	337.11	341.35
6	296.11	300.44	---	---	309.62	312.16	317.88	324.15	328.98	333.21	337.26	341.46
7	296.17	300.69	---	---	309.78	312.12	318.32	324.26	329.00	333.32	337.42	341.59
8	296.31	300.86	---	---	309.85	312.39	318.55	324.40	329.11	333.40	337.48	341.72
9	296.43	301.00	---	---	309.78	312.56	318.59	324.61	329.30	333.48	337.53	341.88
10	296.63	---	---	---	309.91	312.70	318.92	324.84	329.80	333.61	337.75	341.97
11	296.85	---	---	---	310.09	312.70	319.08	325.03	329.83	333.64	337.96	342.07
12	297.10	301.35	---	---	310.24	312.78	319.30	325.20	329.90	333.95	338.10	342.25
13	297.34	301.38	---	---	310.24	312.86	319.43	325.39	329.94	334.10	338.22	342.41
14	297.50	301.38	---	---	310.33	313.10	319.70	325.55	330.07	334.10	338.34	342.53
15	297.59	301.38	---	---	310.42	313.23	319.94	325.74	330.18	334.14	338.48	342.59
16	297.65	301.49	---	---	310.46	313.31	320.18	325.91	330.23	334.46	338.61	342.68
17	297.85	301.62	304.78b	---	310.49	313.48	320.32	326.07	330.39	334.46	338.76	342.83
18	297.93	---	---	---	310.66	313.85	320.52	326.23	330.68	334.61	338.95	342.89
19	298.03	---	---	307.79	310.77	314.03	320.76	326.39	330.70	334.89	339.12	342.99
20	298.40	---	---	307.87	310.81	314.18	320.87	326.53	331.00	334.91	339.23	343.06
21	298.62	---	304.77b	307.99	310.78	314.35	321.12	326.67	331.09	335.03	339.29	343.20
22	298.75	---	---	308.16	310.99	314.65	321.41	326.85	331.25	335.12	339.46	343.35
23	298.84	---	---	307.97	311.24	314.98	321.68	327.06	331.44	335.26	339.56	343.50
24	299.03	---	---	307.94	311.26	315.17	321.83	327.23	331.65	335.48	339.71	343.67
25	299.20	---	---	308.18	311.54	315.38	321.96	327.38	331.83	335.55	339.77	343.75
26	299.27	---	---	308.40	311.78	315.61	322.05	327.48	332.00	335.87	340.03	343.91
27	299.35	---	---	308.61	311.80	316.00	322.15	327.59	332.11	335.94	340.08	343.95
28	299.57	---	---	308.62	311.83	316.41	322.42	327.73	332.15	335.96	340.27	344.18
29	299.70	---	---	308.86	---	316.58	322.83	327.87	332.15	336.30	340.52	344.41
30	299.82	---	---	308.89	---	316.67	323.06	327.97	332.29	336.31	340.61	344.55
31	300.00	---	---	308.87	---	316.79	---	328.11	---	336.31	340.70	---
MEAN	297.71				310.40	313.79	319.99	325.81	330.32	333.10	338.62	342.61

WTR YR 1982 HIGH 292.43 LOW 344.55

b-Instantaneous water-level measurement.

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	344.62	347.71	352.01			---	365.80	371.75	377.07	---	386.22	389.66
2	344.67	347.76	352.15			---	365.89	371.74	377.37	---	386.41	389.82
3	344.80	347.86	352.25			---	365.98	371.74	377.51	---	386.57	389.95
4	344.94	347.90	352.29			---	366.36	371.83	377.58	---	386.68	390.07
5	345.14	348.14	352.33			---	366.61	372.26	377.84	---	386.79	390.15
6	345.37	348.29	352.41			---	366.73	372.46	377.99	---	386.87	390.22
7	345.41	348.42	352.88			---	366.85	372.64	378.17	---	386.96	390.31
8	345.42	348.55	353.01			---	366.98	372.73	378.41	---	387.06	390.49
9	345.43	348.68	353.04			---	367.15	373.06	378.73	---	387.16	390.60
10	345.50	348.72	353.11			---	367.29	373.32	378.95	---	387.32	390.64
11	345.64	348.73	353.14			---	367.44	373.51	379.14	---	387.37	390.75
12	345.79	349.31	353.19			---	367.75	373.68	379.30	---	387.42	390.79
13	345.86	349.84	353.32			---	368.03	373.84	379.39	---	387.65	390.87
14	345.89	349.92	353.61			---	368.20	373.96	---	---	387.81	391.03
15	345.96	350.01	353.65			---	368.32	374.04	---	---	387.92	391.22
16	346.05	350.24	353.68			---	368.63	374.16	---	---	388.04	391.28
17	346.33	350.29	353.72			---	368.88	374.49	---	---	388.11	391.32
18	346.53	350.51	353.78			---	368.87	374.75	---	---	388.18	391.46
19	346.64	350.69	353.83			---	368.89	374.90	---	384.61	388.34	391.60
20	346.65	350.82	353.86			---	369.15	375.03	---	384.73	388.46	391.68
21	346.72	350.85	353.90			---	369.36	375.21	---	384.83	388.58	391.64
22	346.91	350.89	354.36			---	369.73	375.29	---	384.91	388.66	391.76
23	347.05	350.92	354.45			---	369.80	375.39	---	385.02	388.81	391.99
24	347.12	351.10	354.57			364.69	369.78	375.65	---	385.09	388.98	392.20
25	347.15	351.45	354.70			364.82	369.81	375.88	---	385.25	389.09	392.29
26	347.25	351.53	354.76			365.16	370.57	376.06	---	385.45	389.13	392.30
27	347.39	351.60	354.86			365.22	370.59	376.31	---	385.63	389.15	392.37
28	347.46	351.70	354.91			365.22	370.87	376.51	---	385.79	389.20	392.46
29	347.49	351.74	---			365.50	371.16	376.61	---	385.93	389.28	392.57
30	347.53	351.81	---			365.69	371.38	376.67	---	386.04	389.43	392.61
31	347.64	---	---			365.70	---	376.82	---	386.12	389.52	---
MEAN	346.20	349.87	353.49				368.43	374.27			387.97	391.20

WTR YR 1983 HIGH 344.62 LOW 392.61

APPENDIX A.-CONTINUED

FB 26-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1984**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	392.67			---	---	---		---	---	---	---	---
2	392.74			---	---	---		---	---	---	---	---
3	392.81			---	---	---		---	---	---	---	---
4	392.84			---	---	---		---	---	---	---	---
5	392.84			388.06b	---	---		---	---	---	---	---
6	393.04			---	---	---		---	---	---	---	---
7	393.24			---	---	---		---	---	---	---	---
8	393.37			---	---	---		---	---	---	---	---
9	393.44			---	---	---		---	---	---	---	---
10	393.55			---	---	---		396.48b	---	---	---	420.74b
11	393.63			---	---	---		---	---	---	---	---
12	c			---	---	---		---	---	---	---	---
13	---			---	---	---		---	---	---	---	---
14	---			---	---	---		---	---	---	---	---
15	---			---	---	---		---	401.01b	---	---	---
16	---			---	---	---		---	---	---	---	---
17	---			---	---	---		---	---	---	---	---
18	---			---	---	---		---	---	---	---	---
19	---			---	---	---		---	---	---	---	---
20	---			---	---	---		---	---	---	411.65b	---
21	---			---	388.30b	---		---	---	---	---	---
22	---			---	---	---		---	---	---	---	---
23	---			---	---	---		---	---	---	---	---
24	---			---	---	---		---	---	---	---	---
25	---			---	---	---		---	---	---	---	---
26	---			---	---	---		---	---	---	---	---
27	---			---	---	392.88b		---	---	---	---	---
28	---			---	---	---		---	---	---	---	---
29	---			---	---	---		---	---	---	---	---
30	---			---	---	---		---	---	---	---	---
31	---			---	---	---		---	---	406.33b	---	---

WTR YR 1984 HIGH 392.67 LOW 420.74
b-Instantaneous water-level measurement.
c-Digital recorder removed from well this date.

WELL-CLUSTER SITE 3, ZONE 2, WELL NUMBER **FB 27**, PERMIT NUMBER GA-73-2182, LAND-SURFACE DATUM IS 2,755 FEET ABOVE SEA LEVEL, WELL DEPTH 656 FEET, OPEN-HOLE INTERVAL 590 TO 656 FEET, GEOLOGIC UNIT: CONEMAUGH GROUP

MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1980**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	1.71	1.13	2.99
2									---	2.02	1.21	3.20
3									---	1.43	1.36	3.41
4									---	1.41	1.57	3.56
5									---	1.38	1.61	1.36
6									---	1.21	1.86	1.75
7									---	1.38	2.10	1.96
8									---	1.20	2.34	2.17
9									---	1.29	2.23	2.37
10									---	1.26	2.17	2.58
11									1.40	1.34	1.24	2.79
12									1.46	1.26	1.13	3.00
13									1.55	1.16	1.46	3.20
14									1.96	1.10	1.77	3.40
15									1.91	1.17	1.41	3.60
16									.96	1.28	1.22	3.80
17									1.08	1.19	1.61	4.00
18									1.07	1.33	1.02	4.19
19									1.08	1.71	.90	4.38
20									1.29	1.98	.92	4.58
21									1.48	2.27	.97	4.78
22									1.82	1.28	1.02	4.98
23									2.17	1.09	1.15	1.90
24									2.52	1.36	1.27	1.77
25									2.87	1.44	1.40	1.96
26									3.19	1.53	1.68	2.14
27									3.52	1.70	1.90	2.32
28									3.83	1.58	2.12	2.52
29									3.86	1.15	2.34	2.72
30									1.36	1.18	2.56	2.91
31									---	1.22	2.78	---
MEAN										1.41	1.60	3.01

WTR YR 1980 HIGH 0.90 LOW 4.98

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.10	4.00	3.27	1.64	1.46	---	1.27	1.04	---	2.01	1.73	1.88
2	3.28	4.17	3.23	1.75	1.04	---	1.37	1.19	---	1.31	1.83	1.08
3	3.47	4.35	3.23	1.89	1.18	---	1.55	1.23	---	1.40	1.93	1.15
4	3.68	4.52	3.25	2.03	1.23	1.40	1.67	1.26	---	1.52	2.04	.97
5	3.87	4.70	3.33	2.18	1.36	1.28	1.79	a	---	1.59	2.14	1.10
6	4.05	4.87	3.45	2.32	1.51	1.39	1.91	---	---	1.72	2.24	1.21
7	4.24	5.03	3.44	2.44	1.63	1.47	2.03	---	---	1.94	2.35	1.32
8	4.43	5.19	3.43	2.58	1.76	1.52	2.15	---	---	2.14	2.45	1.21
9	4.62	4.28	3.15	2.71	1.88	1.62	2.27	---	---	2.32	2.56	1.30
10	4.84	3.51	2.39	2.88	2.01	1.74	2.38	---	---	2.50	2.67	1.44
11	5.07	3.71	1.36	3.03	1.04	1.50	1.56	---	---	2.67	2.77	1.55
12	5.28	3.88	1.40	3.16	1.22	1.33	.93	---	---	2.83	2.88	1.66
13	5.51	4.04	1.47	3.28	1.25	1.13	.85	---	---	2.15	2.98	1.76
14	5.73	4.20	1.58	3.41	1.31	1.37	.96	---	---	1.42	3.08	1.86
15	5.97	4.37	1.74	3.54	1.34	1.50	1.12	---	---	1.61	3.18	1.69
16	6.18	4.54	1.89	3.68	1.39	1.54	1.20	---	---	1.78	1.58	1.16
17	6.40	4.39	2.04	3.81	---	1.50	1.16	---	---	1.93	1.63	1.44
18	6.62	3.17	2.20	3.94	---	1.62	1.15	---	---	2.08	1.74	1.58
19	6.84	3.45	2.35	4.05	---	1.74	1.39	---	1.18	2.23	1.84	1.69
20	7.06	3.47	2.50	4.19	---	1.87	1.14	---	.88	2.39	1.95	1.79
21	7.29	3.35	2.67	4.33	---	1.99	1.41	---	1.06	2.54	2.05	1.89
22	7.50	3.38	2.82	4.46	---	2.11	1.51	---	.95	2.65	2.15	1.99
23	7.71	3.30	2.97	4.59	---	1.83	1.43	---	1.12	2.75	2.26	2.09
24	7.92	2.87	3.12	4.72	---	1.09	1.12	---	1.25	1.73	2.36	2.19
25	3.86	2.98	3.27	4.75	___	1.20	1.11	---	1.24	1.47	2.48	2.29
26	2.46	3.06	3.41	1.43	---	1.36	1.37	---	1.16	1.63	2.59	2.39
27	2.69	3.10	3.56	1.22	---	.98	1.09	---	1.46	1.74	2.69	2.50
28	2.36	3.12	3.71	1.35	---	1.07	1.28	---	1.66	1.37	2.32	2.60
29	3.03	3.32	3.19	1.37	---	1.15	1.31	---	1.78	1.24	1.65	2.71
30	3.65	3.43	1.54	1.44	---	1.21	1.34	---	1.89	1.46	1.75	2.81
31	3.83	---	1.62	1.54	---	1.35	---	---	---	1.62	1.86	---
MEAN	4.92	3.86	2.66	2.89		1.46	1.43			1.93	2.25	1.74

WTR YR 1981 HIGH 0.85 LOW 24.78

a-Well pumped this date.

FB 27-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1982**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.91	1.69	1.25	1.36	1.82	4.22	7.03	9.62	11.79	13.02	15.41	17.45
2	3.00	1.79	1.33	1.25	1.90	4.31	7.12	9.70	11.87	13.10	15.47	17.49
3	3.10	1.88	1.48	1.35	1.98	4.49	7.21	9.78	11.87	13.19	15.54	17.41
4	3.20	1.98	1.54	1.02	2.04	4.64	7.29	9.87	11.74	13.26	15.60	17.48
5	3.30	2.08	1.52	1.01	2.12	4.73	7.38	9.95	11.37	13.34	15.67	17.54
6	2.96	1.32	1.57	1.11	2.20	4.82	7.48	10.03	11.11	13.42	15.74	17.61
7	1.64	1.41	1.55	1.01	2.29	4.90	7.57	10.12	11.08	13.50	15.80	17.67
8	1.72	1.48	1.08	1.03	2.40	4.99	7.66	10.20	11.15	13.58	15.87	17.74
9	1.80	1.55	1.37	1.14	2.49	5.07	7.74	10.29	11.24	13.66	15.93	17.80
10	1.90	1.65	1.44	1.25	2.57	5.16	7.83	10.37	11.32	13.74	16.00	17.86
11	2.00	1.75	1.46	1.37	2.66	5.24	7.91	10.46	11.40	13.83	16.06	17.93
12	2.09	1.86	1.50	1.47	2.76	5.32	8.00	10.56	11.48	13.91	16.12	17.99
13	2.19	1.96	1.54	1.57	2.85	5.40	8.08	10.64	11.56	13.98	16.19	18.05
14	2.30	2.06	1.63	1.63	2.94	5.48	8.17	10.72	11.64	14.06	16.25	18.12
15	2.40	2.16	1.72	1.69	3.03	5.56	8.25	10.81	11.71	14.14	16.32	18.13
16	2.51	2.26	1.78	1.81	3.11	5.65	8.34	10.90	11.79	14.22	16.39	18.16
17	2.61	2.36	1.89	1.91	3.19	5.72	8.43	10.98	11.87	14.30	16.45	18.23
18	2.71	2.46	1.96	2.01	3.28	5.80	8.53	11.07	11.95	14.38	16.52	18.29
19	2.81	2.56	2.01	2.14	3.36	5.88	8.62	11.15	12.03	14.47	16.58	18.36
20	2.90	2.66	2.06	2.24	3.45	5.96	8.72	11.23	12.11	14.55	16.65	18.42
21	3.00	2.76	2.18	2.16	3.53	6.03	8.80	11.32	12.19	14.62	16.72	18.49
22	3.10	2.85	1.56	1.91	3.61	6.11	8.90	11.40	12.28	14.70	16.78	18.56
23	3.20	2.94	.57	1.38	3.69	6.19	8.98	11.49	12.36	14.78	16.85	18.62
24	3.30	3.04	.74	1.10	3.78	6.27	9.06	11.57	12.44	14.86	16.91	18.68
25	3.40	3.14	.88	1.20	3.87	6.36	9.14	11.66	12.53	14.93	16.98	18.74
26	2.51	2.52	.99	1.30	3.96	6.44	9.22	11.75	12.61	15.01	17.05	18.80
27	.99	1.15	1.10	1.40	4.04	6.53	9.30	11.81	12.70	15.09	17.12	18.67
28	1.30	1.48	1.20	1.50	4.12	6.62	9.38	11.82	12.78	15.14	17.18	18.70
29	1.43	1.59	1.31	1.58	---	6.74	9.46	11.88	12.86	15.22	17.25	18.77
30	1.48	1.68	1.41	1.67	---	6.85	9.54	11.96	12.94	15.27	17.31	18.83
31	1.59	---	1.52	1.74	---	6.95	---	11.77	---	15.34	17.38	---
MEAN	2.43	2.07	1.46	1.49	2.97	5.63	8.30	10.87	11.93	14.21	16.39	18.15

WTR YR 1982 MEAN 8.01 HIGH 0.57 LOW 18.83

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.89	20.95	18.56	1.62	1.48	1.65	1.83	1.68	1.64	3.55	5.83	8.42
2	18.96	21.02	16.87	1.70	1.43	1.74	1.92	1.43	1.74	3.64	5.91	8.50
3	19.02	21.09	15.17	1.77	1.26	1.83	1.85	1.24	1.83	3.72	6.00	8.59
4	19.08	21.15	13.56	1.85	1.16	1.92	1.86	1.03	1.65	3.81	6.09	8.68
5	19.14	21.22	12.34	1.92	1.25	2.01	1.94	1.16	1.53	3.89	6.17	8.76
6	19.20	21.28	11.83	1.99	1.41	2.10	1.82	1.26	1.65	3.97	6.25	8.84
7	19.27	21.35	11.88	2.09	1.56	2.19	1.40	1.35	1.74	4.05	6.34	8.92
8	19.35	21.43	11.95	2.21	1.66	2.17	1.41	1.45	1.83	4.14	6.41	8.99
9	19.41	21.49	12.01	2.31	1.75	1.53	1.55	1.56	1.92	4.22	6.50	9.07
10	19.48	21.56	12.08	2.41	1.82	1.63	1.14	1.65	2.01	4.30	6.59	9.15
11	19.56	21.64	12.14	2.49	1.96	1.73	1.21	1.75	2.10	4.39	6.64	9.24
12	19.62	21.70	12.21	2.56	2.05	1.82	1.25	1.84	2.18	4.47	6.72	9.31
13	19.68	21.75	12.28	2.64	2.14	1.91	1.33	1.92	2.26	4.56	6.84	9.40
14	19.76	21.82	12.35	2.73	2.24	1.95	1.43	2.01	2.35	4.65	6.92	9.49
15	19.82	21.88	12.41	2.84	2.33	2.04	1.30	2.10	2.44	4.73	7.01	9.56
16	19.88	21.93	12.48	2.94	2.42	2.13	1.47	1.10	2.53	4.82	7.10	9.65
17	19.95	22.00	11.61	3.03	2.28	2.22	1.60	1.10	2.62	4.90	7.18	9.73
18	20.01	22.06	11.25	3.13	1.46	2.30	1.69	1.21	2.71	4.98	7.26	9.82
19	20.08	22.12	11.32	3.21	1.29	1.45	1.77	1.29	2.79	5.12	7.35	9.90
20	20.15	22.18	11.38	3.30	1.27	1.46	1.87	1.28	2.88	5.23	7.43	9.98
21	20.21	22.25	11.44	3.40	1.34	1.26	1.97	1.32	2.96	5.31	7.51	10.05
22	20.27	22.26	11.51	3.49	1.38	1.16	2.06	1.29	3.05	5.38	7.59	10.14
23	20.35	22.17	11.58	3.58	1.15	1.23	2.14	1.11	3.13	5.47	7.69	10.20
24	20.41	22.15	11.30	3.68	1.10	1.29	1.04	1.16	3.22	5.19	7.77	10.28
25	20.48	22.09	9.41	3.77	1.17	1.42	1.03	1.25	3.30	5.22	7.85	10.37
26	20.55	22.15	8.53	3.86	1.26	1.55	1.13	1.34	3.38	5.31	7.93	10.45
27	20.62	22.21	---	3.95	1.40	1.35	1.23	1.43	3.47	5.40	8.01	10.53
28	20.69	22.21	1.20	4.04	1.56	1.28	1.34	1.53	3.56	5.48	8.10	10.61
29	20.75	21.43	1.26	4.13	---	1.54	1.49	1.62	3.56	5.57	8.18	10.69
30	20.83	19.97	1.40	3.72	---	1.64	1.57	1.23	3.46	5.66	8.26	10.77
31	20.89	---	1.54	2.25	---	1.74	---	1.48	---	5.74	8.34	---
MEAN	19.88	21.68	10.83	2.86	1.59	1.72	1.55	1.42	2.52	4.74	7.09	9.60

WTR YR 1983 MEAN 7.14 HIGH 1.03 LOW 22.26

FB 27-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR 1984

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.85	10.94	1.52	1.80	---	1.74	1.41	1.39	3.09	5.32	2.82	2.63
2	10.94	10.99	1.61	1.88	---	1.82	1.33	1.49	3.16	5.39	2.89	2.71
3	11.01	11.05	1.69	1.95	---	1.90	1.13	1.57	3.24	5.47	2.97	2.77
4	11.09	11.09	1.56	2.03	---	1.98	1.14	1.65	3.32	5.54	3.04	2.84
5	11.16	11.14	1.32	2.09	---	1.67	.97	1.73	3.39	5.62	3.11	2.91
6	11.24	11.19	1.06	2.12	---	1.45	1.10	1.59	3.47	5.67	3.18	2.98
7	11.32	11.25	.96	---	---	1.29	1.20	1.47	3.56	5.21	3.25	3.05
8	11.39	11.30	1.19	---	---	1.49	1.26	1.23	3.63	5.28	3.32	3.12
9	11.47	11.34	1.42	---	---	1.61	1.34	1.18	3.71	5.34	3.39	3.18
10	11.56	11.40	1.61	---	---	1.70	1.48	1.24	3.80	2.80	2.65	3.32
11	11.63	11.45	1.70	---	---	1.77	1.59	1.38	3.87	1.16	1.62	3.46
12	11.70	11.50	1.67	---	---	1.85	1.67	1.41	3.95	1.07	1.58	3.53
13	11.77	11.55	1.30	---	---	1.92	1.74	1.59	4.02	1.18	1.22	3.59
14	11.83	11.61	1.38	---	---	2.00	1.82	1.66	4.10	1.29	1.18	3.66
15	11.90	11.66	1.56	---	---	1.79	1.84	1.73	4.17	1.45	1.27	3.73
16	11.96	10.75	1.66	---	---	1.47	1.51	1.83	4.25	1.64	1.39	3.81
17	12.04	6.06	1.74	---	---	1.07	1.63	1.91	4.32	1.72	1.56	3.88
18	12.10	1.58	1.82	---	---	1.17	1.71	1.98	4.39	1.79	1.65	3.94
19	12.16	1.35	1.90	---	---	1.32	1.78	2.06	4.46	1.87	1.73	4.01
20	12.24	1.28	1.99	---	---	1.51	1.85	2.14	4.53	1.94	1.79	4.08
21	12.31	1.38	2.06	---	1.79	1.55	1.93	2.22	4.61	2.02	1.85	4.15
22	12.37	1.53	2.15	---	1.85	1.44	1.71	2.29	4.69	2.08	1.92	4.21
23	11.22	1.61	1.79	---	1.92	1.37	1.48	2.38	4.76	2.16	1.99	4.27
24	10.55	1.68	1.81	---	1.77	1.52	1.25	2.46	4.83	2.23	2.06	4.34
25	10.61	1.76	1.90	---	1.57	1.35	1.29	2.54	4.89	2.31	2.13	4.41
26	10.65	1.83	1.99	---	1.43	.93	1.38	2.62	4.97	2.38	2.20	4.49
27	10.71	1.89	2.06	---	1.47	1.06	1.51	2.71	5.04	2.46	2.28	4.55
28	10.75	1.51	2.13	---	1.59	1.08	1.54	2.78	5.11	2.52	2.34	4.62
29	10.80	1.16	1.79	---	1.67	1.11	1.25	2.86	5.18	2.60	2.42	4.69
30	10.84	1.27	1.63	---	---	1.23	1.30	2.94	5.25	2.67	2.49	4.76
31	10.90	---	1.71	---	---	1.36	---	3.01	---	2.75	2.56	---
MEAN	11.39	6.87	1.67			1.50	1.47	1.97	4.19	3.00	2.25	3.72

WTR YR 1984 HIGH 0.93 LOW 12.37

WELL-CLUSTER SITE 3, ZONE 3, WELL NUMBER **FB 28**, PERMIT NUMBER GA-73-2183, LAND-SURFACE DATUM IS 2,755 FEET ABOVE SEA LEVEL, WELL DEPTH 556 FEET, OPEN-HOLE INTERVAL 516 TO 556 FEET, GEOLOGIC UNIT: CONEMAUGH GROUP

MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1980**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	214.44	215.18
2										---	214.47	215.21
3										---	214.49	215.23
4										---	214.51	215.25
5										---	214.54	215.28
6										---	214.56	215.30
7										---	214.59	215.33
8										---	214.61	215.35
9										---	214.63	215.37
10										---	214.66	215.40
11										---	214.68	215.42
12										---	214.71	215.44
13										---	214.73	215.47
14										---	214.75	215.49
15										---	214.78	215.52
16										---	214.80	215.54
17										---	214.82	215.56
18										---	214.85	215.59
19										---	214.87	215.61
20										---	214.90	215.64
21										214.18	214.92	215.66
22										214.20	214.94	215.68
23										214.23	214.97	215.71
24										214.25	214.99	215.73
25										214.28	215.02	215.76
26										214.30	215.04	215.78
27										214.32	215.06	215.80
28										214.35	215.09	215.83
29										214.37	215.11	215.85
30										214.39	215.13	215.87
31										214.42	215.16	---
MEAN											214.80	215.53

WTR YR 1980 HIGH 214.18 LOW 215.87

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	215.90	215.76	215.93	---	---	215.82		---	225.80	---	---	
2	215.92	215.76	215.93	---	---	215.82		---	226.21	226.03b	---	
3	215.95	215.77	215.94	---	---	215.82		---	226.60	---	---	
4	215.97	215.77	215.95	---	---	215.82		215.30b	226.98	---	---	
5	215.99	215.78	215.95	---	---	215.81		---	227.35	---	---	
6	216.02	215.79	215.96	---	---	215.81		---	227.70	---	---	
7	216.04	215.79	215.96	---	---	215.81		---	228.07	---	---	
8	216.07	215.80	215.97	---	---	215.81		---	228.41	---	---	
9	216.09	215.80	---	---	---	215.81		---	228.75	---	---	
10	216.07	215.81	215.98	---	---	215.81		---	229.07	---	227.20b	
11	216.05	215.81	---	---	---	215.81		---	229.42	---	---	
12	216.04	215.82	---	---	---	215.81		---	229.76	---	---	
13	216.02	215.83	---	---	---	215.81		214.96	230.09	---	---	
14	216.00	215.83	---	---	---	215.81		215.19	230.40	---	---	
15	215.98	215.84	---	---	---	215.81		215.64	230.72	---	---	
16	215.97	215.84	---	215.41b	215.80	215.81		216.34	230.99	---	---	
17	215.95	215.85	---	---	215.80	215.81		217.10	231.29	---	---	
18	215.93	215.85	---	---	215.80	215.81		217.85	231.58	---	---	
19	215.91	215.86	---	---	215.80	215.81		218.57	231.83	---	---	
20	215.90	215.87	---	---	215.80	215.81		219.26	---	226.22	---	
21	215.88	215.87	---	---	215.80	215.81		219.94	---	226.22	---	
22	215.86	215.88	---	---	215.80	215.81		220.59	---	226.25	---	
23	215.84	215.88	---	---	215.80	215.81		221.24	---	226.30	---	
24	215.83	215.89	---	---	215.80	215.81		221.84	---	---	---	
25	215.81	215.89	---	---	215.81	215.81		222.41	---	---	227.24b	
26	215.79	215.90	---	---	215.82	---		222.96	---	---	---	
27	215.77	215.91	---	---	215.82	---		223.47	---	---	---	
28	215.76	215.91	---	---	215.82	---		223.97	---	---	---	
29	215.74	215.92	---	---	---	---		224.46	---	---	---	
30	215.75	215.92	---	---	---	---		224.91	---	---	---	
31	215.75	---	---	---	---	215.63b		225.36	---	---	---	
MEAN	215.92	215.84				215.81						

WTR YR 1981 HIGH 214.96 LOW 231.83

b-Instantaneous water-level measurement.

FB 28-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1982**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	229.20	232.23	234.38	---	---	236.33
2	---	---	---	---	227.91b	---	229.33	232.34	234.39	---	---	236.35
3	---	---	---	---	---	227.44b	229.41	232.41	234.41	---	---	236.37
4	---	---	---	---	---	---	229.52	232.50	234.43	---	---	236.39
5	---	---	---	---	227.74b	---	229.70	232.57	234.44	---	---	236.39
6	---	---	---	---	---	---	229.78	232.63	234.46	---	---	236.42
7	---	---	---	---	---	---	230.27	232.68	234.47	---	---	236.46
8	227.57b	---	---	---	---	---	---	232.72	234.49	---	---	236.49
9	---	---	---	---	---	---	---	232.79	234.50	---	---	236.52
10	---	---	---	---	---	---	---	232.84	234.52	---	---	236.54
11	---	---	---	---	---	---	---	232.90	---	---	---	236.56
12	---	228.12b	---	---	---	---	---	233.02	---	---	---	236.59
13	---	---	---	---	---	---	---	233.11	---	239.15b	---	236.62
14	---	---	---	---	---	---	---	233.19	---	---	---	236.64
15	---	---	---	---	---	---	---	233.29	---	---	---	236.65
16	---	---	---	---	---	---	---	233.36	---	---	---	236.67
17	---	---	227.90b	---	---	---	---	233.44	---	---	---	236.70
18	---	---	---	---	---	---	---	233.50	---	---	---	236.70
19	---	---	---	227.95b	---	---	---	233.58	---	---	---	236.73
20	---	---	---	---	---	---	---	233.93	---	---	---	236.74
21	---	---	---	---	---	---	---	233.95	---	---	---	236.76
22	---	---	---	---	---	---	---	233.98	---	---	---	236.79
23	---	---	---	---	---	---	---	234.03	---	---	---	236.81
24	---	---	---	---	---	---	---	234.07	---	---	---	236.83
25	---	---	---	---	---	---	---	234.14	---	---	236.14b	236.84
26	---	---	---	---	---	---	---	234.17	---	---	---	236.87
27	---	---	---	---	---	---	---	234.22	---	---	---	236.87
28	---	---	---	---	---	---	---	234.27	---	---	---	236.92
29	---	---	---	---	---	228.87	232.08	234.32	---	---	---	236.96
30	---	---	---	---	---	228.95	232.16	234.35	---	---	236.32	236.98
31	---	---	---	---	---	229.05	---	234.36	---	---	236.32	---
MEAN								233.38				236.65

WTR YR 1982 HIGH 227.44 LOW 239.15
b-Instantaneous water-level measurement.

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	236.98	237.36		---	---	240.42	244.00	245.50	---	---	---	
2	236.99	237.36		---	---	240.57	244.08	245.50	---	---	---	
3	237.00	237.36		---	---	240.73	244.18	245.53	---	---	---	
4	237.02	---		---	---	240.86	244.30	245.54	---	---	---	
5	237.04	---		---	---	241.00	244.38	245.56	---	---	---	
6	237.08	---		---	---	241.14	244.44	c	---	---	---	
7	237.08	---		---	---	241.25	244.50	---	---	---	---	
8	237.08	---		---	---	241.35	244.55	---	---	---	---	
9	237.08	---		---	---	241.47	244.61	---	---	---	---	
10	237.09	---		---	237.43	241.59	244.64	---	---	---	---	
11	237.10	---		---	237.51	241.70	244.69	---	---	---	---	
12	237.12	237.43		---	237.68	241.81	244.74	---	---	---	---	
13	237.13	237.44		---	237.85	241.92	244.80	---	245.79b	---	---	
14	237.13	237.46		---	237.98	242.02	244.83	---	---	---	---	
15	237.13	237.48		---	238.15	242.13	244.86	---	---	---	---	
16	237.13	---		---	238.32	242.24	244.90	---	---	---	---	
17	237.17	---		---	238.48	242.34	244.94	---	---	---	---	
18	237.20	---		---	238.68	242.41	244.95	---	---	246.08b	---	
19	237.21	---		---	238.85	242.49	244.98	---	---	---	---	
20	237.21	---		---	239.03	242.60	244.99	---	---	---	---	
21	237.23	---		---	239.20	242.65	245.04	---	---	---	---	
22	237.26	---		---	239.35	242.77	245.09	---	---	---	---	
23	237.27	---		---	239.49	242.88	245.16	---	---	---	---	
24	237.29	---		---	239.65	243.26	245.16	---	---	---	---	
25	237.29	---		---	239.80	243.57	245.19	---	---	---	246.44b	
26	237.30	---		---	239.99	243.65	245.29	---	---	---	---	
27	237.33	---		---	240.16	243.69	245.36	---	---	---	---	
28	237.33	---		237.25b	240.30	243.75	245.40	---	---	---	---	
29	237.33	---		---	---	243.84	245.44	---	---	---	---	
30	237.34	---		---	---	243.90	245.47	---	---	---	---	
31	237.35	---		---	---	243.93	---	---	---	---	---	
MEAN	237.17					242.26	244.83					

WTR YR 1983 HIGH 236.98 LOW 245.56
b-Instantaneous water-level measurement.
c-Digital recorder removed from well this date.

FB 28-CONTINUED
INSTANTANEOUS WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1984**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---		---	---	---		---	---	---	---	---
2	---	---		---	---	---		---	---	---	---	---
3	---	---		---	---	---		---	---	---	---	---
4	---	---		---	---	---		---	---	---	---	---
5	---	---		248.83	---	---		---	---	---	---	---
6	---	---		248.83	---	---		---	---	---	---	---
7	---	---		---	---	---		---	---	---	---	---
8	---	---		---	---	---		---	---	---	---	---
9	---	---		---	---	---		---	---	---	---	---
10	---	---		---	---	---		248.37	---	---	---	250.31
11	246.75	---		---	---	---		---	---	---	---	---
12	---	---		---	---	---		---	---	---	---	---
13	---	---		---	---	---		---	---	---	---	---
14	---	---		---	---	---		---	---	---	---	---
15	---	---		---	---	---		---	248.74	---	---	---
16	---	---		---	---	---		---	---	---	---	---
17	---	---		---	---	---		---	---	---	---	---
18	---	---		---	---	---		---	---	---	---	---
19	---	---		---	---	---		---	---	---	---	---
20	---	---		---	---	---		---	---	---	250.01	---
21	---	---		---	248.04	---		---	---	---	---	---
22	---	247.29		---	---	---		---	---	---	---	---
23	---	---		---	---	---		---	---	---	---	---
24	---	---		---	---	---		---	---	---	---	---
25	---	---		---	---	---		---	---	---	---	---
26	---	---		---	---	---		---	---	---	---	---
27	---	---		---	---	248.23		---	---	---	---	---
28	---	---		---	---	---		---	---	---	---	---
29	---	---		---	---	---		---	---	---	---	---
30	---	---		---	---	---		---	---	---	---	---
31	---	---		---	---	---		---	---	250.36	---	---

WTR YR 1984 HIGH 246.75 LOW 250.36

WELL CLUSTER SITE 3, ZONE 4, WELL NUMBER **FB 29**, PERMIT NUMBER GA-73-2184, LAND-SURFACE DATUM IS 2,755 FEET ABOVE SEA LEVEL, WELL DEPTH 360 FEET, OPEN-HOLE INTERVAL 316 TO 360 FEET, GEOLOGIC UNIT: CONEMAUGH GROUP

MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1980**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	251.55	252.15
2										---	251.57	252.17
3										---	251.59	252.19
4										---	251.61	252.21
5										---	251.63	252.23
6										---	251.65	252.25
7										---	251.67	252.27
8										---	251.69	252.29
9										---	251.71	252.31
10										---	251.73	252.33
11										---	251.75	252.35
12										---	251.77	252.37
13										---	251.79	252.39
14										---	251.80	252.40
15										---	251.82	252.42
16										---	251.84	252.44
17										---	251.86	252.46
18										---	251.88	252.48
19										---	251.90	252.50
20										---	251.92	252.52
21										251.34	251.94	252.54
22										251.36	251.92	252.56
23										251.38	251.98	252.58
24										251.40	252.00	252.60
25										251.42	252.02	252.62
26										251.44	252.04	252.64
27										251.46	252.06	252.66
28										251.48	252.08	252.68
29										251.49	252.10	252.70
30										251.51	252.11	252.71
31										251.53	252.13	---
MEAN											251.84	252.43

WTR YR 1980 HIGH 251.34 LOW 252.71

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252.73		---	254.03	252.34	251.75	251.81	252.71	---	252.83	252.43	252.80
2	252.75		---	254.11	252.19	251.72	251.89	252.76	---	252.81	252.43	252.75
3	252.77		---	254.20	252.20	251.75	251.95	252.83	---	252.76	252.44	252.68
4	252.79		---	254.30	252.16	251.79	251.98	252.86	---	252.68	252.44	252.51
5	252.81		---	253.76	252.27	251.70	252.03	252.89	---	252.66	252.44	252.38
6	252.83		---	253.91	252.27	251.80	252.16	252.91	---	252.62	252.44	252.32
7	252.85		---	254.40	252.23	251.94	252.26	253.01	---	252.65	252.44	252.29
8	252.87		---	254.50	252.08	252.05	252.29	252.97	---	252.65	252.44	252.25
9	252.77		252.58	254.51	252.16	252.07	252.33	252.79	---	252.61	252.44	252.15
10	252.70		252.39	253.11	252.23	252.06	252.40	252.73	---	252.55	252.44	252.19
11	252.69		252.30	253.76	252.14	252.03	252.44	252.63	---	252.53	252.44	252.26
12	252.68		252.37	252.90	252.26	252.03	252.35	252.28	---	252.52	252.47	252.28
13	252.68		252.42	---	252.31	252.00	252.24	252.50	---	252.49	252.63	252.30
14	252.67		252.48	---	252.21	252.02	252.18	252.92	---	252.41	252.66	252.32
15	252.66		252.56	---	252.15	252.00	252.27	253.18	---	252.36	252.62	252.32
16	252.66		252.63	252.71	252.09	251.89	252.27	253.37	---	252.33	252.58	252.30
17	252.65		252.74	252.72	252.05	251.89	252.19	253.49	---	252.36	252.64	252.32
18	252.65		252.88	252.70	252.01	251.90	252.23	253.49	---	252.37	252.70	252.68
19	252.64		253.02	252.71	251.91	251.91	252.28	253.43	253.25	252.36	252.71	252.76
20	252.63		253.20	252.73	251.75	251.95	252.31	253.39	253.15	252.29	252.73	252.68
21	252.63		253.33	252.77	251.76	252.08	252.39	253.39	253.10	252.27	252.81	252.70
22	252.62		253.38	252.68	251.79	252.19	252.42	253.40	252.98	252.36	252.85	252.68
23	252.62		253.36	252.60	251.72	252.18	252.38	253.40	252.98	252.45	252.84	252.73
24	252.61		253.38	252.60	251.70	252.19	252.35	253.41	252.99	252.46	252.86	252.79
25	252.60		253.52	252.64	251.75	252.19	252.47	253.43	252.94	252.43	252.89	252.85
26	252.60		253.62	252.63	251.85	252.21	252.58	---	252.90	252.43	252.85	252.86
27	252.59		253.71	252.63	251.90	252.10	252.63	---	252.92	252.43	252.85	252.86
28	252.59		253.81	252.56	251.85	252.04	252.66	---	252.92	252.43	252.90	252.86
29	---		253.87	252.47	---	251.88	252.62	---	252.90	252.43	252.88	252.86
30	---		253.92	252.49	---	251.73	252.68	---	252.86	252.43	252.85	252.88
31	---		253.97	252.50	---	251.84	---	---	---	252.43	252.84	---
MEAN	252.69			253.20	252.05	251.96	252.30	253.05		252.50	252.64	252.55

WTR YR 1981 HIGH 251.70 LOW 254.51

APPENDIX A.-CONTINUED

FB 29-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1982**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252.87	252.52	251.09	251.03	251.01	250.97	250.95	251.24	251.43	251.50	251.94	252.66
2	252.87	252.48	251.00	251.06	250.99	250.93	250.97	251.24	251.43	251.54	252.02	252.63
3	252.87	252.40	251.00	251.11	250.82	250.98	250.84	251.24	251.42	251.42	252.08	252.63
4	252.91	252.27	250.99	251.07	250.88	250.98	250.90	251.25	251.39	251.31	252.14	252.65
5	252.92	252.12	251.02	250.89	250.84	251.03	250.99	251.27	251.20	251.33	252.19	252.68
6	252.91	251.89	251.00	250.98	250.82	251.03	250.89	251.28	251.14	251.34	252.24	252.69
7	252.88	251.73	250.91	250.91	250.86	250.99	251.04	251.26	251.16	251.33	252.25	252.71
8	252.88	251.75	250.82	250.94	250.86	251.11	251.01	251.26	251.20	251.30	252.25	252.72
9	252.93	251.76	250.89	250.90	250.76	251.11	250.91	251.32	251.19	251.26	252.25	252.74
10	252.95	251.70	250.79	250.73	250.87	251.11	251.02	251.35	251.25	251.27	252.27	252.73
11	252.98	251.64	250.80	250.91	250.93	251.04	251.03	251.35	251.29	251.29	252.30	252.73
12	253.01	251.57	250.87	250.88	250.96	250.99	251.03	251.38	251.21	251.31	252.33	252.78
13	253.02	251.52	250.90	250.84	250.93	250.90	250.99	251.40	251.15	251.37	252.36	252.83
14	253.02	251.51	250.85	250.95	250.98	250.94	251.02	251.41	251.13	251.40	252.37	252.83
15	253.01	251.49	250.75	250.99	251.01	250.96	251.07	251.43	251.13	251.42	252.37	252.78
16	252.88	251.49	250.77	251.06	250.99	250.90	251.09	251.44	251.10	251.44	252.37	252.76
17	252.85	251.49	250.74	251.08	250.93	250.81	251.09	251.47	251.12	251.46	252.37	252.77
18	252.75	251.49	250.73	---	250.95	250.82	251.10	251.50	251.15	251.48	252.44	252.73
19	252.75	251.43	250.86	251.11	250.90	250.82	251.13	251.52	251.16	251.50	252.52	252.75
20	252.85	251.24	251.02	251.15	250.86	250.76	251.13	251.51	251.20	251.52	252.52	252.76
21	252.87	251.27	251.05	251.13	250.81	250.70	251.19	251.53	251.22	251.55	252.52	252.78
22	252.87	251.34	251.01	251.19	250.92	250.75	251.23	251.57	251.27	251.56	252.52	252.78
23	252.87	251.37	250.95	250.95	250.93	250.79	251.28	251.58	251.34	251.59	252.52	252.77
24	252.87	251.36	251.02	250.88	250.89	250.79	251.26	251.58	251.37	251.64	252.52	252.76
25	252.87	251.36	251.01	250.93	251.02	250.79	251.25	251.57	251.39	251.67	252.54	252.74
26	252.87	251.33	251.00	251.02	251.03	250.82	251.23	251.57	251.41	251.69	252.63	252.71
27	252.87	251.28	250.92	251.04	250.98	250.92	251.25	251.55	251.41	251.71	252.61	252.62
28	252.78	251.30	250.98	250.99	250.98	250.99	251.28	251.51	251.42	---	252.64	252.65
29	252.58	251.27	251.03	251.12	---	251.00	251.29	251.48	251.40	251.83	252.71	252.67
30	252.58	251.21	251.10	251.04	---	250.98	251.29	251.45	251.42	251.83	252.72	252.65
31	252.56	---	251.09	250.94	---	250.93	---	251.43	---	251.83	252.72	---
MEAN	252.86	251.62	250.93	250.99	250.92	250.92	251.09	251.42	251.27	251.49	252.39	252.72

WTR YR 1982 MEAN 251.56 HIGH 250.70 LOW 253.02

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252.59	---	252.04	251.57	252.15	251.64	251.46	251.61	251.56	251.75	252.31	252.63
2	252.56	---	252.03	251.55	252.03	251.66	251.41	251.57	251.63	251.79	252.35	252.65
3	252.55	---	252.00	251.59	251.97	251.72	251.41	251.53	251.63	251.85	252.38	252.65
4	252.58	---	251.93	251.71	251.98	251.76	251.63	251.49	251.58	251.88	252.39	252.69
5	252.61	---	251.83	251.70	252.02	251.77	251.70	251.54	251.65	251.88	252.40	252.70
6	252.65	---	251.80	251.67	251.97	251.76	251.70	251.62	251.66	251.95	252.38	252.69
7	252.64	---	251.93	251.62	251.87	251.68	251.68	251.59	251.70	252.02	252.38	252.70
8	252.61	---	252.01	251.76	251.94	251.63	251.65	251.55	251.75	252.05	252.41	252.76
9	252.59	---	251.99	251.84	252.01	251.58	251.63	251.61	251.83	252.03	252.40	252.79
10	252.62	---	251.95	251.81	252.01	251.57	251.57	251.66	251.88	252.05	252.42	252.80
11	252.63	---	251.87	251.71	251.97	251.58	251.56	251.68	251.93	252.09	252.38	252.82
12	252.66	252.54	251.85	251.79	252.03	251.61	251.61	251.68	251.95	252.14	252.35	252.81
13	252.61	252.57	251.95	251.91	252.08	251.68	251.64	251.69	251.92	252.18	252.39	252.81
14	252.54	252.56	252.01	251.93	252.00	251.70	251.61	251.71	251.89	252.21	252.46	252.80
15	252.49	252.58	252.04	251.86	252.00	251.77	251.56	251.72	251.88	252.21	252.48	252.83
16	252.51	252.60	251.94	251.90	252.02	251.84	251.56	251.66	251.92	252.21	252.49	252.83
17	252.60	252.59	251.94	251.92	252.03	251.86	251.52	251.65	251.95	252.25	252.46	252.82
18	---	252.62	251.90	252.04	252.03	251.74	251.51	251.62	251.95	252.30	252.44	252.85
19	---	252.64	251.80	252.15	252.04	251.65	251.52	251.56	251.95	252.40	252.48	252.89
20	---	252.63	251.73	252.23	252.07	251.66	251.58	251.55	251.98	252.37	252.52	252.88
21	---	252.59	251.78	252.23	252.05	251.51	251.66	251.54	251.95	252.32	252.57	252.79
22	---	252.53	251.90	252.17	251.92	251.53	251.72	251.45	251.88	252.27	252.59	252.81
23	---	252.43	251.91	252.11	251.71	251.59	251.71	251.40	251.82	252.24	252.63	252.89
24	---	252.39	251.90	252.11	251.62	251.57	251.53	251.43	251.76	252.18	252.66	252.95
25	---	252.44	251.89	252.15	251.60	251.60	251.54	251.44	251.72	252.18	252.70	252.95
26	---	252.37	251.84	252.20	251.72	251.65	251.60	251.44	251.75	252.19	252.70	252.93
27	---	252.35	251.83	252.22	251.86	251.51	251.61	251.52	251.76	252.23	252.66	252.94
28	---	252.23	251.50	252.27	251.84	251.44	251.61	251.53	251.75	252.26	252.61	252.93
29	---	252.05	251.48	252.21	---	251.52	251.63	251.49	251.74	252.29	252.62	252.94
30	---	252.06	251.57	252.16	---	251.54	251.60	251.47	251.76	252.31	252.66	252.89
31	---	---	251.57	252.18	---	251.47	---	251.51	---	252.31	252.65	---
MEAN	252.59	252.46	251.86	251.94	251.95	251.64	251.59	251.56	251.80	252.14	252.49	252.81

WTR YR 1983 MEAN 252.04 HIGH 251.40 LOW 252.95

FB 29-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1984**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252.84	252.37	251.46	251.94	252.13	251.82	251.71	251.79	251.93	252.21	252.06	251.96
2	252.83	252.32	251.46	251.93	252.19	251.88	251.71	251.79	251.93	252.21	252.10	251.97
3	252.84	252.22	251.42	251.92	252.08	251.93	251.67	251.72	251.97	252.21	252.10	251.95
4	252.81	252.22	251.32	251.91	252.04	251.97	251.56	251.56	252.02	252.18	252.06	251.96
5	252.74	252.08	251.33	251.90	251.98	251.88	251.42	251.70	252.05	252.12	252.08	251.97
6	252.82	252.06	251.15	251.91	252.02	251.83	251.45	251.76	252.06	252.11	252.08	251.99
7	252.91	252.09	251.12	252.05	252.10	251.85	251.54	251.71	252.08	252.08	252.03	251.99
8	252.94	252.10	251.15	252.07	252.13	251.85	251.61	251.63	252.07	252.10	252.02	251.99
9	252.94	252.06	251.23	252.15	252.14	251.86	251.61	251.59	252.08	252.10	252.04	251.95
10	252.98	251.92	251.26	252.12	252.14	251.90	251.57	251.66	252.11	252.02	252.05	252.01
11	252.96	251.77	251.29	252.11	252.12	251.86	251.58	251.65	252.14	251.90	252.02	252.07
12	252.90	251.82	251.17	252.18	252.10	251.95	251.61	251.65	252.21	251.83	251.97	252.11
13	252.81	251.86	251.10	252.19	252.02	251.91	251.62	251.66	252.21	251.84	251.91	252.11
14	252.84	251.87	251.24	252.19	251.88	251.94	251.65	251.67	252.14	251.83	251.86	252.07
15	252.90	251.82	251.46	252.17	251.77	251.95	251.62	251.71	252.17	251.80	251.86	252.07
16	252.89	251.71	251.62	252.10	251.77	251.87	251.56	251.74	252.21	251.79	251.85	252.17
17	252.87	251.69	251.74	252.16	251.74	251.86	251.59	251.77	252.20	251.79	251.85	252.25
18	252.85	251.76	251.76	252.18	251.77	251.79	251.66	251.78	252.18	251.78	251.85	252.23
19	252.84	251.76	251.74	252.20	251.74	251.77	251.73	251.75	252.19	251.85	251.87	252.17
20	252.84	251.64	251.79	252.24	251.73	251.74	251.78	251.79	252.21	251.89	251.87	252.14
21	252.77	251.62	251.85	252.29	251.74	251.65	251.82	251.86	252.21	251.91	251.87	252.17
22	252.67	251.66	251.73	252.33	251.78	251.71	251.82	251.90	252.23	251.96	251.85	252.24
23	252.45	251.69	251.79	252.33	251.80	251.82	251.68	251.89	252.24	251.97	251.82	252.30
24	252.34	251.64	251.71	252.23	251.74	251.88	251.62	251.94	252.22	251.95	251.85	252.33
25	252.30	251.57	251.75	252.17	251.73	251.80	251.71	251.93	252.22	251.94	251.91	252.28
26	252.27	251.61	251.81	252.17	251.82	251.72	251.78	251.95	252.25	251.94	251.94	252.29
27	252.31	251.60	251.84	252.08	251.78	251.69	251.77	252.04	252.23	251.91	251.94	252.31
28	252.33	251.48	251.81	252.06	251.60	251.60	251.80	252.01	252.24	251.96	251.92	252.24
29	252.35	251.41	251.85	252.03	251.68	251.51	251.78	251.97	252.26	252.00	251.92	252.23
30	252.40	251.43	251.96	252.05	---	251.67	251.79	251.96	252.23	252.01	251.90	252.21
31	252.39	---	251.96	252.09	---	251.73	---	251.93	---	252.03	251.91	---
MEAN	252.71	251.83	251.54	252.11	251.91	251.81	251.66	251.79	252.15	251.97	251.95	252.12

WTR YR 1984 MEAN 251.96 HIGH 251.10 LOW 252.98

WELL-CLUSTER SITE 3, ZONE 5, WELL NUMBER **FB 30**, PERMIT NUMBER GA-73-2185, LAND-SURFACE DATUM IS 2,755 FEET ABOVE SEA LEVEL, WELL DEPTH 85 FEET, OPEN-HOLE INTERVAL 82 TO 85 FEET, GEOLOGIC UNIT: CONEMAUGH GROUP

MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1980**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	31.27	28.78	30.67
2									---	31.36	28.82	30.83
3									---	31.39	28.93	31.05
4									30.32	31.47	29.17	31.16
5									29.97	31.46	29.41	31.20
6									29.60	31.55	29.66	31.24
7									29.38	31.62	29.85	31.33
8									29.14	31.50	30.02	31.45
9									29.07	30.85	30.19	31.50
10									29.04	30.07	30.41	31.57
11									29.11	29.76	30.59	31.64
12									29.05	29.63	30.72	31.72
13									29.00	29.35	30.88	31.78
14									29.00	28.98	30.94	31.70
15									29.10	28.85	30.98	31.76
16									29.02	28.88	30.68	31.84
17									28.29	28.99	30.08	31.85
18									27.93	29.27	29.38	32.02
19									28.03	29.51	28.05	32.08
20									28.40	29.73	27.21	32.00
21									28.78	29.95	27.16	31.98
22									29.04	30.11	27.52	32.00
23									29.36	30.07	28.01	32.04
24									29.71	29.71	28.39	32.12
25									30.01	29.47	28.71	32.10
26									30.24	29.38	29.02	32.21
27									30.52	29.39	29.36	32.27
28									30.72	29.47	29.72	32.24
29									30.82	29.29	30.01	32.23
30									31.02	28.87	30.24	32.20
31									---	28.76	30.45	---
MEAN									29.40	30.00	29.46	31.73

WTR YR 1980 HIGH 27.16 LOW 32.27

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.18	32.45	29.14	31.42	29.45	---	27.57	27.50	35.73	36.20	36.97	37.46
2	32.22	32.58	29.18	31.58	29.15	---	27.93	27.41	35.55	36.29	36.97	37.48
3	32.27	32.46	29.25	31.53	28.87	---	27.99	27.23	35.51	36.28	37.00	37.45
4	32.38	32.32	29.01	31.73	28.48	27.23b	28.04	27.21	35.49	36.20	37.04	37.24
5	32.54	32.37	28.95	31.78	28.45	---	28.17	27.70	35.24	36.23	37.05	36.93
6	32.50	32.44	29.14	31.47	28.35	---	28.53	a	34.87	36.31	37.03	36.70
7	32.38	32.35	29.37	31.44	28.41	---	28.79	34.25	34.56	36.38	37.06	36.50
8	32.36	32.47	29.47	31.72	28.41	---	28.93	36.11	34.55	36.39	37.09	36.38
9	32.44	32.43	29.54	31.68	28.88	---	29.15	36.18	34.70	36.39	37.15	36.30
10	32.48	32.50	29.44	31.76	29.04	---	29.59	36.22	34.96	36.45	37.14	36.17
11	32.42	32.45	29.15	31.65	28.93	---	29.67	36.26	35.11	36.51	37.13	36.13
12	32.56	32.29	28.96	31.67	29.00	---	29.30	36.45	35.21	36.53	37.16	36.08
13	32.63	32.12	29.04	31.59	28.55	29.22	28.16	36.51	35.38	36.55	37.19	36.08
14	32.62	32.02	29.26	31.66	28.17	29.15	26.91	36.50	35.31	36.60	37.19	36.08
15	32.61	32.02	29.37	31.79	28.11	28.69	26.73	36.45	34.62	36.65	37.17	36.14
16	32.64	32.14	29.47	31.84	28.11	28.27	26.58	36.42	34.59	36.66	37.22	36.18
17	32.55	31.99	29.81	31.87	---	28.07	26.58	36.33	34.87	36.71	37.26	36.13
18	32.50	31.86	29.96	31.80	---	28.02	26.93	36.22	35.19	36.74	37.26	36.01
19	32.54	31.61	30.29	31.85	---	28.07	27.21	36.05	35.41	36.75	37.27	35.91
20	32.62	31.21	30.62	31.88	---	28.31	27.32	35.79	35.51	36.76	37.29	36.02
21	32.65	30.90	30.78	31.86	---	28.70	27.57	35.66	35.46	36.79	37.32	36.11
22	32.76	30.89	30.80	31.81	---	---	27.60	35.65	35.33	36.86	37.31	36.15
23	32.83	30.69	30.80	31.84	---	---	27.59	35.70	35.47	36.86	37.33	36.32
24	32.67	30.18	30.82	31.95	---	---	27.67	35.75	35.55	36.86	37.35	36.39
25	32.37	29.30	31.24	32.01	26.90b	---	27.85	35.81	35.58	36.88	37.37	36.43
26	32.68	28.56	31.27	31.85	---	---	27.67	35.87	35.75	36.89	37.38	36.43
27	32.74	28.04	31.42	31.63	---	---	27.43	35.92	35.93	36.93	37.40	36.45
28	32.55	27.91	31.45	30.92	---	---	27.22	35.97	35.93	36.90	37.42	36.62
29	32.70	28.24	31.29	30.47	---	---	27.06	36.10	36.07	36.95	37.41	36.63
30	32.61	28.85	31.36	30.17	---	---	27.30	36.06	36.10	36.98	37.43	36.63
31	32.47	---	31.38	29.87	---	27.51	---	35.98	---	36.99	37.45	---
MEAN	32.53	31.25	30.03	31.55			27.83	34.42	35.32	36.63	37.22	36.45

WTR YR 1981 MEAN 32.92 HIGH 26.58 LOW 37.48

a-Well pumped this date.

b-Instantaneous water-level measurement.

APPENDIX A.-CONTINUED

FB 30-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1982**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36.54	36.41	36.11	35.70	36.26	35.51	35.81	36.45	37.02	36.80	36.92	37.59
2	36.67	36.33	36.09	36.09	36.12	35.81	35.76	36.50	37.06	36.70	36.95	37.61
3	36.86	36.31	36.02	35.99	35.49	35.98	35.52	36.54	37.00	36.52	36.97	37.65
4	36.81	36.31	35.93	35.76	35.51	36.11	35.69	36.60	36.95	36.34	37.00	37.66
5	36.82	36.28	35.99	35.71	35.25	36.34	35.38	36.61	36.84	36.08	37.04	37.73
6	37.68	36.23	35.87	35.62	35.26	36.33	35.60	36.59	36.77	35.79	37.06	37.67
7	37.69	36.41	35.78	35.53	35.41	36.25	35.81	36.61	36.63	35.83	37.07	37.68
8	37.65	36.50	35.78	35.42	35.50	36.46	35.54	36.71	36.45	35.81	37.07	37.70
9	37.65	36.45	35.78	35.17	35.45	36.31	35.48	36.74	36.34	35.80	37.10	37.71
10	37.65	36.36	35.64	35.34	35.79	36.19	35.62	36.76	36.24	35.81	37.17	37.71
11	37.65	36.29	35.67	35.52	35.95	35.93	35.66	36.78	36.12	35.82	37.17	37.73
12	37.64	36.33	35.00	35.75	35.39	35.87	35.70	36.81	35.72	35.96	37.19	37.74
13	37.60	36.34	35.82	35.44	35.53	35.40	35.53	36.84	35.58	36.06	37.20	37.74
14	37.60	36.29	35.72	35.74	35.55	35.45	35.70	36.89	35.43	36.11	37.22	37.74
15	37.58	36.27	35.73	35.90	36.25	35.34	35.29	36.93	35.27	36.20	37.25	37.75
16	37.62	36.34	35.96	36.20	36.24	35.26	35.72	36.94	35.24	36.28	37.27	37.76
17	37.62	36.44	36.01	36.48	36.13	35.08	35.69	36.94	35.40	36.35	37.28	37.76
18	37.58	36.57	36.05	36.50	36.06	34.97	35.84	36.95	35.51	36.39	37.31	37.77
19	37.55	36.58	36.13	36.55	35.80	34.96	36.03	36.98	35.54	36.42	37.33	37.78
20	37.51	36.52	36.22	36.67	35.56	34.89	36.10	36.96	35.77	36.50	37.33	37.79
21	37.54	36.71	36.15	36.64	35.33	34.75	36.33	37.05	35.79	36.61	37.36	37.80
22	37.51	36.80	36.09	36.72	35.45	34.81	36.43	37.07	35.96	36.59	37.39	37.80
23	37.18	36.76	35.89	36.28	35.39	34.86	36.49	37.09	36.19	36.63	37.40	37.81
24	37.46	36.71	35.37	36.13	35.34	34.87	36.45	37.09	36.31	36.69	37.42	37.80
25	37.24	36.86	35.05	36.00	35.66	35.08	36.46	37.11	36.36	36.70	37.48	37.81
26	37.24	36.79	35.06	36.01	35.84	35.35	36.47	37.14	36.44	36.72	37.54	37.80
27	37.19	36.71	35.12	35.82	35.09	35.68	36.58	37.14	36.48	36.73	37.53	37.80
28	37.11	36.65	35.36	35.92	35.26	35.89	36.69	37.11	36.47	36.73	37.58	37.80
29	36.85	36.46	35.65	36.19	---	35.80	36.61	37.11	36.47	36.84	37.57	37.77
30	36.73	36.31	35.98	36.09	---	35.58	36.52	37.09	36.62	36.84	37.58	37.74
31	36.55	---	35.45	36.04	---	35.63	---	37.08	---	36.86	37.59	---
MEAN	37.31	36.48	35.76	35.97	35.64	35.57	35.95	36.88	36.20	36.37	37.27	37.74

WTR YR 1982 MEAN 36.43 HIGH 34.75 LOW 37.81

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37.72	37.34	35.79	35.32	---	---	35.21	35.35	35.57	36.61	36.98	37.33
2	37.72	37.33	35.60	35.33	---	---	35.15	35.32	35.74	36.65	37.01	37.32
3	37.72	37.32	35.38	35.53	---	---	35.23	35.30	35.71	36.66	37.00	37.34
4	37.71	37.34	35.30	35.75	---	---	35.59	35.37	35.73	36.64	37.00	37.34
5	37.71	37.37	35.23	35.70	---	---	35.59	35.38	35.94	36.65	37.01	37.35
6	37.68	37.36	35.40	35.70	---	---	35.52	35.41	35.91	36.72	37.02	37.36
7	37.69	37.33	35.69	35.81	---	---	35.47	35.25	36.00	36.73	37.03	37.38
8	37.65	37.31	35.62	36.16	---	---	35.35	35.21	36.08	36.69	37.04	37.39
9	37.65	37.32	35.62	36.22	---	---	35.30	35.44	36.18	36.67	37.07	37.38
10	37.65	37.28	35.57	36.09	35.65	---	35.15	35.53	36.18	36.72	37.08	37.38
11	37.65	37.25	35.68	36.05	35.67	---	35.09	35.54	36.17	36.74	37.05	37.39
12	37.64	37.20	35.87	36.40	35.93	---	35.21	35.58	36.15	36.75	37.11	37.40
13	37.60	37.31	36.14	36.52	35.94	---	35.19	35.68	36.19	36.77	37.13	37.42
14	37.60	37.20	36.21	36.38	36.10	---	35.11	35.76	36.19	36.78	37.12	37.43
15	37.58	37.26	36.20	36.34	---	---	35.11	35.83	36.20	36.78	37.13	37.43
16	37.62	37.21	36.15	36.46	---	---	35.14	35.94	36.29	36.80	37.15	37.41
17	37.62	37.21	36.14	36.49	---	---	35.04	35.71	36.32	36.83	37.14	37.44
18	37.58	37.21	35.94	36.70	---	---	35.05	35.37	36.32	36.85	37.16	37.45
19	37.55	37.20	35.70	36.72	---	---	35.16	35.13	36.34	36.87	37.19	37.46
20	37.51	37.17	35.78	36.64	---	---	35.32	35.13	36.38	36.88	37.19	37.44
21	37.54	37.16	36.02	36.55	---	---	35.48	35.14	36.43	36.88	37.20	37.45
22	37.51	37.14	36.08	36.51	---	---	35.59	35.01	36.45	36.90	37.20	37.49
23	37.49	37.08	36.03	36.47	---	---	35.56	34.86	36.43	36.90	37.24	37.50
24	37.46	37.12	35.92	36.64	---	35.09	35.33	34.82	36.40	36.93	37.25	37.50
25	37.42	36.94	35.65	36.69	---	35.23	35.22	34.80	36.46	36.96	37.25	37.48
26	37.44	36.69	35.52	---	---	35.34	35.18	34.88	36.53	36.98	37.25	37.49
27	37.41	36.59	35.39	---	---	35.08	35.11	35.10	36.52	36.99	37.26	37.50
28	37.38	36.31	34.99	---	---	35.12	35.12	35.19	36.51	36.99	37.27	37.51
29	37.36	36.13	35.17	---	---	35.35	35.24	35.15	36.60	36.99	37.29	37.51
30	37.38	36.02	35.37	---	---	35.26	35.25	35.24	36.60	36.97	37.30	37.50
31	37.35	---	35.27	---	---	35.11	---	35.38	---	36.97	37.30	---
MEAN	37.57	37.09	35.69	36.21			35.27	35.32	36.22	36.81	37.14	37.43

WTR YR 1983 MEAN 36.44 HIGH 34.80 LOW 37.72

FB 30-CONTINUED
MEAN WATER LEVEL, IN FEET BELOW LAND SURFACE, **WATER YEAR 1984**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37.52	36.78	35.00	---	---	---	34.83	35.10	35.89	36.49	36.05	35.95
2	37.53	36.73	34.98	---	---	---	34.84	35.16	35.84	36.50	36.10	35.90
3	37.52	36.71	35.05	---	---	---	34.75	35.03	35.87	36.47	36.05	35.85
4	37.53	36.71	34.95	---	---	---	34.56	35.11	35.97	36.40	36.08	35.96
5	37.54	36.68	35.12	35.75b	---	---	34.31	35.53	35.99	36.39	36.12	36.06
6	37.56	36.67	34.73	---	---	---	34.38	35.56	36.01	36.40	36.11	36.07
7	37.56	36.61	34.83	---	---	---	34.66	35.42	36.04	36.39	36.08	36.06
8	37.56	36.53	34.69	---	---	---	34.83	35.17	36.03	36.33	36.14	36.04
9	37.57	36.39	34.73	---	---	---	34.83	35.11	36.06	36.23	36.19	35.96
10	37.57	36.21	34.86	---	---	---	34.84	35.19	36.09	36.13	36.19	35.98
11	37.55	36.20	34.85	---	---	---	34.96	35.15	36.13	35.91	36.07	36.04
12	37.56	36.24	34.70	---	---	---	35.12	35.20	36.17	35.63	35.86	36.15
13	37.56	36.06	34.71	---	---	---	35.23	35.26	36.14	35.42	35.62	36.10
14	37.60	36.01	34.63	---	---	---	35.34	35.32	36.15	35.29	35.37	36.07
15	37.60	35.82	34.92	---	---	---	35.35	35.43	36.26	35.14	35.24	36.16
16	37.59	35.71	35.24	---	---	---	35.21	35.54	36.28	35.08	35.13	36.26
17	37.60	35.78	35.39	---	---	---	35.23	35.66	36.22	35.10	35.06	36.24
18	37.59	35.69	35.36	---	---	---	35.36	35.63	36.21	35.14	35.04	36.17
19	37.61	35.52	35.37	---	---	---	35.46	35.57	36.31	35.37	35.08	36.15
20	37.61	35.23	35.53	---	---	---	35.52	35.67	36.35	35.37	35.22	36.17
21	37.61	35.39	35.58	---	34.87b	---	35.57	35.86	36.33	35.41	35.31	36.28
22	37.60	35.35	35.36	---	---	---	35.48	35.97	36.32	35.55	35.27	36.31
23	37.57	35.22	35.49	---	---	---	35.14	35.97	36.33	35.65	35.26	36.29
24	37.52	35.15	35.28	---	---	---	35.12	36.11	36.33	35.71	35.45	36.28
25	37.38	35.21	---	---	---	---	35.25	36.05	36.38	35.80	35.60	36.27
26	37.22	35.35	---	---	---	---	35.32	36.10	36.40	35.80	35.64	36.35
27	37.16	35.22	---	---	---	34.30	35.30	36.21	36.39	35.83	35.64	36.34
28	37.00	34.95	---	---	---	34.17	35.40	36.08	36.45	36.03	35.67	36.32
29	36.99	34.89	---	---	---	34.26	35.37	36.09	36.44	36.08	35.74	36.35
30	36.87	34.95	---	---	---	34.59	34.98	36.08	36.44	36.04	35.74	36.35
31	36.81	---	---	---	---	34.75	---	35.96	---	36.02	35.86	---
MEAN	37.45	35.87					35.08	35.59	36.19	35.84	35.68	36.15

WTR YR 1984 HIGH 34.17 LOW 37.61

b-Instantaneous water-level measurement.

APPENDIX B

Periodic water-level measurements in observation wells FA 26, FA 27, FA 28, and FA 29, from June 23, 1978, to September 10, 1984

WELL NUMBER: **FA 26**
LAND-SURFACE DATUM: 2,673 FEET ABOVE SEA LEVEL
WELL DEPTH: 170 FEET
OPEN-HOLE INTERVAL: 150 TO 170 FEET
HIGHEST WATER LEVEL: 16.00 FEET BELOW LAND SURFACE, JUNE 23, 1978
LOWEST WATER LEVEL: 154.37 FEET BELOW LAND SURFACE, JULY 23, 1981

WATER LEVELS, IN FEET BELOW LAND SURFACE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 23, 1978	16.00	JUN 18, 1981	66.77	AUG 25, 1982	67.22	JUN 18, 1984	76.94
OCT 11	17.63	JUL 21	154.24	NOV 18	98.29	JUL 30	91.88
23	18.10	23	154.37	DEC 28	91.00	AUG 21	89.20
NOV 29	17.75	AUG 12	66.05	FEB 18, 1983	77.10	SEP 10	95.34
MAY 24, 1979	18.43	26	62.18	MAR 23	64.35		
JUN 26	17.80	OCT 09	68.96	MAY 05	50.32		
OCT 15	18.24	29	76.85	JUN 13	48.78		
AUG 28, 1980	18.50	NOV 13	78.78	JUL 20	63.38		
OCT 09	18.73	DEC 17	79.88	AUG 25	77.98		
DEC 09	18.45	JAN 18, 1982	66.78	OCT 13	109.25		
JAN 13, 1981	18.64	MAR 02	55.95	NOV 21	119.40		
FEB 16	18.50	30	48.30	JAN 19, 1984	75.00		
APR 01	18.31	APR 28	49.29	FEB 22	74.74		
MAY 11	23.17	JUN 08	59.54	APR 02	69.55		
14	25.42	JUL 13	56.57	MAY 10	61.90		

WELL NUMBER: **FA 27**
LAND-SURFACE DATUM: 2,860 FEET ABOVE SEA LEVEL
WELL DEPTH: 215 FEET
OPEN-HOLE INTERVAL: 190 TO 215 FEET
HIGHEST WATER LEVEL: 141.93 FEET BELOW LAND SURFACE, APRIL 8, 1980
LOWEST WATER LEVEL: WELL DRY: NOV 17, 1982; NOV 18, 1982; FEB 18, 1983; JUL 20, 1983; AUG 25, 1983; OCT 13, 1983; NOV 21, 1983; JAN 19, 1984; JUN 18, 1984; JUL 30, 1984; AUG 21, 1984; SEP 10, 1984

WATER LEVELS, IN FEET BELOW LAND SURFACE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 23, 1978	169.00	OCT 10, 1980	166.22	MAR 02, 1982	149.17	FEB 22, 1984	179.87
OCT 18	170.80	29	170.77	30	148.11	APR 02	171.40
25	170.00	DEC 09	150.03	APR 28	153.14	MAY 11	167.80
NOV 29	160.82	JAN 13, 1981	159.69	JUN 08	156.14	JUN 18	DRY
DEC 14	153.80	FEB 16	150.09	JUL 13	158.05	JUL 30	DRY
APR 08, 1979	152.13	APR 01	145.09	AUG 25	168.89	AUG 21	DRY
MAY 24	160.33	MAY 11	148.87	NOV 17	DRY	SEP 10	DRY
JUN 26	167.52	14	166.78	18	DRY		
JUL 12	169.14	JUN 18	142.50	DEC 28	179.25		
OCT 15	151.25	JUL 21	153.12	FEB 18, 1983	DRY		
DEC 10	160.51	23	155.95	MAR 23	174.74		
FEB 24, 1980	152.71	AUG 11	152.09	MAY 05	174.73		
APR 08	141.93	25	153.25	JUN 13	186.48		
MAY 15	157.77	OCT 09	155.93	JUL 20	DRY		
JUN 04	154.75	28	154.64	AUG 25	DRY		
11	152.85	NOV 13	154.24	OCT 13	DRY		
JUL 01	158.84	DEC 21	153.15	NOV 21	DRY		
AUG 28	153.01	JAN 19, 1982	151.33	JAN 19, 1984	DRY		

WELL NUMBER: **FA 28**
LAND-SURFACE DATUM: 2,890 FEET ABOVE SEA LEVEL
WELL DEPTH: 341 FEET
OPEN-HOLE INTERVAL: 317 TO 341 FEET
HIGHEST WATER LEVEL: 100.60 FEET BELOW LAND SURFACE, DEC 14, 1978
LOWEST WATER LEVEL: 316.46 FEET BELOW LAND SURFACE, JUL 22, 1981

WATER LEVELS, IN FEET BELOW LAND SURFACE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 23, 1978	105.00	OCT 10, 1980	152.14	MAR 02, 1982	312.43	FEB 22, 1984	313.98
OCT 18	107.02	29	154.96	30	312.84	APR 02	314.03
25	106.50	DEC 09	154.12	APR 28	313.01	MAY 11	313.90
NOV 29	105.71	JAN 13, 1981	186.09	JUN 08	323.78	JUN 18	314.06
DEC 14	100.60	FEB 16	282.41	JUL 13	313.28	JUL 30	314.05
MAY 24, 1979	104.81	APR 01	282.46	AUG 25	313.40	AUG 21	314.08
JUN 26	108.40	MAY 11	289.65	NOV 17	316.59	SEP 10	314.08
JUL 12	110.36	14	290.50	DEC 28	313.88		
OCT 15	116.56	JUN 18	298.35	FEB 18, 1983	313.84		
DEC 10	118.68	JUL 21	306.16	MAR 23	313.86		
FEB 24, 1980	120.89	22	316.46	MAY 05	313.93		
APR 08	119.15	AUG 11	308.80	JUN 13	313.95		
MAY 15	120.27	25	309.35	JUL 20	313.84		
JUN 04	122.45	OCT 28	311.52	AUG 25	313.96		
JUL 01	126.70	DEC 21	311.78	NOV 21	313.93		
AUG 28	132.75	JAN 19, 1982	311.95	JAN 19, 1984	313.85		

WELL NUMBER: **FA 29**
LAND-SURFACE DATUM: 2,890 FEET ABOVE SEA LEVEL
WELL DEPTH: 226 FEET
OPEN-HOLE INTERVAL: 203 TO 226 FEET
HIGHEST WATER LEVEL: 123.40 FEET BELOW LAND SURFACE, DEC 14, 1978
LOWEST WATER LEVEL: WELL DRY: NOV 17, 1982; NOV 18, 1982; DEC 28, 1982; FEB 18, 1983

WATER LEVELS, IN FEET BELOW LAND SURFACE

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 23, 1978	129.75	OCT 10, 1980	154.29	MAR 02, 1982	194.88	MAY 11, 1984	183.68
OCT 18	140.10	29	154.18	30	192.50	JUN 18	197.27
25	141.50	DEC 09	143.38	APR 28	196.82	JUL 30	207.25
NOV 29	131.46	JAN 13, 1981	154.91	JUN 08	205.61	AUG 21	201.25
DEC 14	123.40	FEB 16	159.97	JUL 13	202.24	SEP 10	200.40
MAY 24, 1979	128.28	APR 01	160.04	AUG 25	212.69		
JUN 26	135.87	MAY 11	168.96	NOV 17	DRY		
JUL 12	138.66	14	171.35	18	DRY		
OCT 15	126.92	JUN 18	169.63	DEC 28	DRY		
DEC 10	134.75	JUL 21	198.05	FEB 18, 1983	DRY		
FEB 24, 1980	133.12	22	198.50	MAR 23	214.58		
APR 08	130.91	AUG 11	200.41	JUL 20	189.50		
MAY 15	136.01	25	201.36	AUG 25	182.40		
JUN 04	135.31	OCT 28	209.18	NOV 21	213.50		
12	135.41	NOV 13	204.02	JAN 19, 1984	204.80		
JUL 01	140.55	DEC 21	204.75	FEB 22	202.75		
AUG 28	141.17	JAN 19, 1982	200.97	APR 02	187.90		

APPENDIX C

Mean-daily streamflow at Laurel Run, South Fork Sand Run, and North Fork Sand Run stream gages for water years 1980-84

STATION 01594930 LAUREL RUN AT DOBBIN ROAD NEAR WILSON, MD
DISCHARGE, IN CUBIC FEET PER SECOND, **WATER YEAR 1980**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								60	26	13	47	10
2								49	32	12	37	13
3								44	72	29	30	14
4								37	67	19	29	12
5								33	45	16	33	38
6								29	53	33	23	14
7								28	41	17	20	11
8								24	52	67	18	10
9								22	41	51	24	11
10								21	65	42	19	9.1
11								20	44	34	21	7.7
12								19	37	57	31	7.3
13								27	32	56	22	6.9
14								20	28	37	19	9.1
15								17	28	29	49	7.7
16								16	113	24	50	6.9
17								16	58	28	34	6.9
18								22	43	21	246	6.4
19								19	34	17	136	6.4
20								30	30	14	81	6.9
21								85	25	13	54	5.6
22								48	22	40	43	5.6
23								39	18	54	35	16
24								46	17	34	29	9.7
25								61	15	26	24	7.3
26								40	14	21	21	8.2
27								32	15	18	18	6.4
28								28	15	35	16	5.6
29								24	15	75	13	6.0
30								22	19	38	12	5.2
31								26	---	30	12	---
MEAN								32.4	37.2	32.3	40.2	9.66

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	11	31	9.5	14	81	46	67	65	12	6.9	3.9
2	5.6	9.5	46	9.1	40	55	41	58	52	16	6.7	13
3	5.6	8.8	50	8.6	35	43	34	45	47	10	6.9	15
4	5.2	11	39	8.2	30	36	30	38	65	9.4	6.5	36
5	5.2	15	34	8.0	24	35	29	32	87	9.8	6.2	15
6	5.6	11	32	7.8	22	29	26	30	196	9.0	7.5	8.5
7	5.4	9.9	31	8.4	19	26	22	26	138	8.3	7.3	7.5
8	5.2	9.5	28	9.0	18	22	20	22	74	7.9	7.1	14
9	5.2	19	51	10	17	21	20	20	57	7.7	6.0	11
10	5.2	22	53	9.0	16	20	18	19	90	7.3	5.6	8.1
11	6.0	16	41	8.0	45	19	39	21	61	7.1	5.2	7.0
12	7.0	14	36	7.0	39	18	84	20	45	6.9	4.9	6.0
13	6.0	13	31	6.8	37	24	115	18	39	12	4.6	5.2
14	5.6	12	26	6.4	30	26	67	16	255	8.5	4.5	5.0
15	5.2	11	24	7.0	24	23	51	32	127	7.1	5.0	6.0
16	5.0	12	22	7.6	26	32	47	27	62	6.7	8.5	25
17	4.8	21	19	7.0	43	29	47	24	47	6.5	6.0	8.0
18	4.6	61	18	7.0	70	25	58	27	34	6.4	4.8	7.0
19	5.2	35	17	7.0	77	22	44	74	32	6.2	4.6	6.4
20	5.0	29	13	6.8	106	20	50	61	65	7.1	4.4	6.2
21	5.0	26	12	6.8	115	19	35	43	46	7.5	4.2	6.0
22	5.0	22	12	6.6	77	17	32	34	46	6.5	4.0	5.8
23	4.8	20	11	6.8	77	18	38	29	32	6.2	3.8	5.6
24	4.8	142	10	7.0	62	21	48	26	26	16	3.6	5.4
25	24	103	10	6.9	48	22	52	24	24	8.3	3.6	5.2
26	16	57	9.8	9.9	40	25	41	22	20	7.3	3.5	5.2
27	9.5	45	9.0	18	33	145	70	19	16	7.7	3.5	5.0
28	20	38	10	17	62	83	53	26	14	11	3.4	5.0
29	21	32	10	14	---	62	46	37	12	12	3.4	5.0
30	15	27	10	12	---	56	40	37	11	8.3	3.5	4.9
31	12	---	9.6	11	---	45	---	104	---	7.5	3.6	---
MEAN	7.90	28.8	24.4	8.85	44.5	36.1	44.8	34.8	62.8	8.72	5.14	8.90

LAUREL RUN AT DOBBIN ROAD NEAR WILSON, MD.-CONTINUED
DISCHARGE, IN CUBIC FEET PER SECOND, **WATER YEAR 1982**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	16	39	22	125	19	29	17	12	10	6.2	6.2
2	7.7	14	34	19	115	19	26	15	19	8.7	6.2	8.3
3	6.9	13	26	17	130	18	40	14	19	74	7.5	11
4	6.5	11	24	100	115	17	39	13	17	80	6.2	6.0
5	6.4	11	21	65	57	22	32	12	48	39	6.0	4.6
6	7.7	25	18	42	44	18	42	12	39	28	5.9	4.3
7	7.3	20	18	75	34	24	33	11	38	21	5.7	4.2
8	6.7	17	39	50	28	20	32	12	32	25	5.7	3.8
9	6.4	17	30	36	33	19	32	10	26	17	7.9	3.8
10	6.2	17	26	25	26	20	28	9.0	44	15	5.7	4.0
11	6.2	15	23	23	22	48	26	8.7	160	15	5.7	3.8
12	6.0	13	21	19	20	112	28	9.0	70	14	6.0	3.8
13	6.0	12	19	16	18	73	39	8.7	83	12	5.7	3.7
14	5.9	11	18	15	16	51	38	9.0	58	10	5.4	3.8
15	5.9	10	18	13	18	43	32	8.3	43	10	4.8	3.8
16	6.0	10	16	12	32	98	28	8.1	34	9.4	4.6	3.5
17	5.9	10	16	11	47	159	28	7.7	36	8.7	4.6	3.5
18	7.3	9.4	19	10	39	80	27	7.7	26	8.1	4.8	3.7
19	8.1	8.7	14	9.8	57	54	22	7.1	21	7.7	4.5	3.5
20	7.3	9.8	13	9.4	50	101	20	12	19	12	4.5	3.4
21	7.1	9.8	12	11	56	113	19	10	16	9.4	4.8	3.4
22	6.9	9.4	58	13	41	75	16	9.4	15	7.5	4.2	7.1
23	7.1	9.0	180	76	36	52	16	8.5	13	7.5	4.5	3.8
24	7.1	9.0	85	64	34	40	15	8.3	12	7.3	4.2	3.5
25	6.9	9.4	49	48	30	34	13	7.7	11	6.9	4.3	3.4
26	13	9.4	35	40	26	41	21	8.3	10	6.4	3.7	6.2
27	58	38	29	33	23	31	24	12	12	6.2	4.2	11
28	50	31	26	28	21	27	22	11	9.4	8.7	4.2	7.5
29	34	21	26	24	---	27	19	9.4	13	8.1	3.8	5.9
30	22	18	19	22	---	28	17	13	13	6.9	3.8	5.2
31	19	---	18	70	---	32	---	18	---	6.5	3.8	---
MEAN	11.7	14.5	31.9	32.8	46.2	48.9	26.8	10.5	32.3	16.3	5.13	4.99

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	3.9	54	21	18	24	27	26	24	8.6	4.1	8.0
2	4.4	3.9	44	19	26	26	25	35	22	7.7	3.9	5.4
3	3.9	3.9	34	17	41	29	30	51	21	6.6	3.7	4.2
4	3.7	11	28	15	32	39	28	92	27	6.6	3.7	3.6
5	3.7	12	24	14	27	44	27	68	23	6.6	3.4	3.4
6	3.7	8.4	21	13	22	40	33	48	19	5.9	3.9	3.6
7	3.3	7.4	18	13	21	33	41	37	17	5.2	3.4	3.4
8	3.8	6.9	16	12	18	46	46	34	15	5.2	3.3	3.0
9	5.2	6.1	16	11	16	44	40	30	14	5.0	3.9	2.8
10	5.2	5.9	14	11	14	36	72	26	14	4.6	3.3	2.7
11	4.8	5.9	14	12	13	31	64	22	12	4.4	8.6	2.7
12	4.2	6.6	12	11	13	27	53	20	11	4.4	7.7	2.7
13	8.0	11	11	10	12	25	44	18	10	4.6	4.8	5.0
14	7.4	8.9	10	10	12	25	37	17	9.8	5.4	4.4	3.6
15	5.9	8.2	10	11	12	24	64	28	9.9	5.9	3.9	3.3
16	6.6	7.8	40	9.0	13	21	50	123	9.9	4.6	3.9	2.8
17	5.4	8.4	25	8.5	17	20	42	104	13	4.6	3.9	3.0
18	4.9	7.9	21	8.0	17	21	35	62	11	5.4	4.1	2.7
19	4.4	7.6	19	8.5	18	50	30	48	9.5	4.6	3.9	2.5
20	5.0	7.6	19	9.0	19	47	28	42	8.8	11	3.4	3.3
21	8.9	7.9	16	10	26	88	26	49	32	14	3.1	5.0
22	6.6	16	15	11	37	67	23	76	16	15	3.1	4.8
23	5.9	16	29	12	49	47	22	97	13	12	3.4	4.2
24	5.0	26	45	13	47	37	107	67	11	20	3.4	3.3
25	5.0	21	62	11	38	30	95	47	10	9.6	3.3	2.7
26	4.8	18	55	9.0	30	26	61	36	8.7	7.2	3.7	2.7
27	4.4	16	50	8.8	26	41	42	30	8.1	6.1	3.9	2.7
28	4.4	29	42	8.8	24	46	35	25	8.6	5.4	6.4	3.3
29	4.4	79	34	9.4	---	38	30	24	12	4.6	3.4	3.6
30	4.2	41	28	16	---	33	29	45	10	4.6	3.1	4.1
31	4.2	---	24	23	---	30	---	26	---	4.4	7.4	---
MEAN	5.04	14.0	27.4	12.1	23.5	36.6	42.9	46.9	14.3	7.09	4.17	3.60

APPENDIX C.-CONTINUED

LAUREL RUN AT DOBBIN ROAD NEAR WILSON, MD.-CONTINUED
DISCHARGE, IN CUBIC FEET PER SECOND, **WATER YEAR 1984**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	6.5	36	15	10	26	40	52	18	9.6	10	6.0
2	2.8	6.6	29	14	13	21	45	35	17	7.2	9.6	5.9
3	2.7	14	32	13	11	20	54	51	13	5.9	10	7.1
4	2.5	13	70	13	18	17	85	51	12	5.8	18	11
5	2.7	11	56	12	16	30	146	38	12	7.4	12	7.3
6	2.8	11	119	12	13	46	83	88	10	14	11	7.1
7	2.5	13	119	11	12	31	58	94	7.6	31	14	6.2
8	2.4	14	63	10	11	27	48	116	6.9	9.2	12	5.8
9	2.2	16	45	9.0	10	27	45	135	7.5	7.4	13	5.5
10	2.2	19	39	8.4	12	23	39	97	6.8	141	28	5.2
11	2.5	26	33	10	21	18	33	70	5.8	180	68	5.2
12	3.3	23	49	13	37	18	27	92	7.7	181	163	5.2
13	4.2	18	47	9.4	60	20	24	64	7.9	104	159	7.2
14	5.4	16	38	8.4	196	25	27	48	8.4	49	121	7.1
15	2.8	27	34	7.8	141	28	59	39	5.2	28	62	6.5
16	2.5	45	28	7.5	78	57	84	31	4.6	23	31	5.1
17	2.4	34	24	7.3	51	66	57	24	4.8	14	22	4.9
18	2.4	29	21	7.0	40	57	50	18	4.5	15	17	4.8
19	3.6	38	18	6.6	35	50	43	15	15	12	15	4.6
20	3.6	35	17	7.0	35	42	34	13	8.6	12	13	4.9
21	14	39	15	9.0	28	56	29	11	5.5	20	13	4.5
22	7.7	29	19	10	24	44	54	9.4	7.2	11	12	4.4
23	58	26	20	11	23	36	75	19	6.2	9.7	14	4.4
24	21	28	16	16	48	32	87	15	6.9	14	11	4.4
25	13	39	14	30	61	66	82	8.8	5.4	21	8.9	4.3
26	11	30	13	20	44	131	72	8.4	4.9	11	7.6	4.8
27	11	28	14	17	37	93	61	7.1	4.4	35	7.0	4.5
28	9.6	80	23	16	34	111	74	12	6.8	20	7.8	6.1
29	7.9	83	36	14	29	92	137	75	4.8	12	6.6	5.0
30	7.1	49	21	12	---	61	79	33	7.7	11	6.3	5.2
31	6.7	---	16	11	---	47	---	21	---	11	7.0	---
MEAN	7.29	28.2	36.3	11.9	39.6	45.7	61.0	44.9	8.10	33.3	29.3	5.67

APPENDIX C.-CONTINUED

STATION 01594934 SOUTH FORK SAND RUN NEAR WILSON, MD.
DISCHARGE, IN CUBIC FEET PER SECOND, **WATER YEAR 1980**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	4.1	9.5	6.6	4.0	2.1	4.2	
2					---	3.9	7.2	4.8	4.7	1.8	3.7	
3					---	3.5	5.7	4.0	8.8	3.8	3.0	
4					---	3.5	9.1	3.5	6.7	2.8	3.7	
5					---	21	6.7	3.0	4.4	2.5	4.4	
6					---	12	5.7	2.7	6.7	6.2	2.6	
7					---	7.3	5.0	2.5	5.2	2.9	2.1	
8					---	21	5.2	2.3	5.6	18	1.9	
9					---	9.3	45	2.3	4.5	7.3	2.7	
10					---	6.3	8.5	2.1	6.4	4.7	2.4	
11					---	6.2	6.6	2.2	4.7	3.7	3.9	
12					---	4.6	5.7	2.0	4.0	9.2	4.6	
13					---	4.2	5.5	3.2	3.6	7.0	3.3	
14					---	4.0	10	2.2	3.4	4.3	3.3	
15					4.0	4.2	8.1	1.9	5.0	3.4	18	
16					4.5	5.0	7.4	1.8	37	3.0	8.4	
17					3.6	9.8	6.4	1.9	7.8	4.8	4.1	
18					3.4	14	5.8	2.4	5.0	4.5	87	
19					3.0	6.8	5.2	2.2	4.0	2.7	21	
20					3.5	5.6	4.8	3.6	3.6	2.3	8.8	
21					5.7	8.0	4.2	14	3.2	2.0	5.9	
22					28	6.9	3.9	5.7	3.1	6.4	4.5	
23					19	5.9	3.5	4.5	2.5	7.4	3.8	
24					12	5.3	3.4	8.8	2.2	4.6	3.3	
25					7.5	5.5	3.2	12	2.2	3.9	2.7	
26					6.1	4.6	4.0	6.0	1.9	4.1	3.4	
27					5.1	4.1	8.5	4.7	1.8	2.3	3.8	
28					4.7	4.5	6.1	4.1	2.0	4.9	---	
29					4.2	6.6	5.1	3.7	2.1	14	---	
30					---	5.1	11	3.3	2.8	4.0	---	
31					---	19	---	3.8	---	3.3	---	
MEAN					---	7.48	7.53	4.12	5.30	4.96	---	

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.24	0.81	5.3	1.8	1.4	11	6.7	12	5.9	1.8	.61	---
2	.03	.58	8.0	1.3	10	6.6	5.0	9.0	5.3	4.8	.59	---
3	.56	.74	8.2	1.6	4.9	6.4	3.3	6.0	5.9	1.5	1.6	---
4	.35	1.8	4.5	1.8	3.9	4.6	2.9	4.5	13	1.0	2.3	---
5	.24	.67	5.0	1.3	3.6	4.6	3.0	3.5	15	.94	.30	---
6	.90	.28	3.5	.55	2.8	4.6	3.3	3.0	37	.76	1.7	---
7	.97	.54	3.6	.86	2.5	2.4	2.1	2.6	14	1.5	.99	---
8	1.1	.45	4.2	1.0	2.1	2.5	2.9	2.4	8.0	2.1	1.3	---
9	.48	1.7	9.1	.81	1.3	2.7	3.1	2.2	7.6	2.2	.36	---
10	.53	2.2	8.8	1.0	2.2	2.4	2.6	2.0	14	3.4	.61	---
11	.44	1.3	5.6	1.2	9.3	2.9	8.9	2.4	9.0	1.5	2.3	---
12	.41	.46	4.6	.51	5.3	3.4	20	2.4	5.6	.36	.86	---
13	.27	.19	3.5	.17	3.5	3.8	32	2.9	6.2	2.4	.64	---
14	.19	.23	2.9	.19	2.7	4.3	12	.99	52	4.0	.32	---
15	.02	.52	3.5	.09	3.5	4.2	9.1	4.9	13	.46	.09	---
16	.37	.80	1.9	.27	4.5	5.3	5.5	4.1	8.7	.20	1.3	---
17	.15	2.3	2.2	.39	6.0	4.7	5.8	1.7	7.8	1.7	1.3	3.2
18	.09	6.3	1.2	.53	7.5	3.7	7.5	3.0	5.6	2.7	2.4	1.6
19	.32	3.0	1.9	.54	9.3	3.2	5.0	13	5.9	.41	.19	2.5
20	.70	1.6	.91	.47	13	2.6	8.0	8.3	12	.35	.01	.79
21	.61	2.6	.79	.29	13	2.1	6.9	5.2	9.3	1.7	---	1.3
22	.14	.77	1.3	.78	9.0	.79	3.8	4.0	12	1.1	---	1.8
23	.03	1.6	.75	.57	10	3.3	4.2	3.9	8.0	1.6	---	.16
24	.02	32	.79	.50	9.4	5.4	5.0	2.2	3.8	9.0	---	.17
25	5.7	15	.96	.71	6.1	4.3	6.0	2.5	3.5	2.9	---	.37
26	3.0	8.0	.87	2.2	4.6	4.0	4.5	2.6	5.0	.80	---	1.5
27	1.4	5.0	.82	5.7	3.9	23	8.0	3.5	4.1	1.6	---	1.0
28	4.6	4.4	.58	4.7	9.8	8.8	5.0	3.7	1.9	3.0	---	.59
29	2.8	3.5	.84	3.6	---	6.5	4.5	4.8	2.1	4.6	---	1.6
30	1.3	3.0	2.3	2.5	---	7.3	4.0	6.3	3.0	2.0	---	.09
31	2.0	---	2.4	1.1	---	6.8	---	12	---	2.9	---	---
MEAN	0.97	3.41	3.25	1.26	5.90	5.10	6.69	4.57	10.1	2.11	---	---

APPENDIX C.-CONTINUED

SOUTH FORK SAND RUN NEAR WILSON, MD.-CONTINUED
DISCHARGE, IN CUBIC FEET PER SECOND, **WATER YEAR 1982**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.3	5.0	3.3	15	3.2	4.2	1.2	2.7	1.8	0.33	1.5
2	.68	2.0	6.0	3.1	9.0	3.2	3.6	1.2	2.7	2.0	.68	1.1
3	1.8	2.7	4.8	2.3	22	2.5	4.8	3.0	.86	28	.20	1.3
4	.40	1.1	3.3	18	14	1.3	4.6	1.9	2.3	16	.79	.33
5	.14	.76	5.5	11	6.8	4.8	3.8	1.3	7.2	6.3	1.5	.16
6	.68	4.5	3.3	6.8	5.5	2.9	6.3	.44	4.2	6.9	1.6	.11
7	1.0	2.9	4.0	12	3.8	4.1	5.6	1.3	6.3	7.5	.33	1.0
8	.22	.97	6.7	7.7	3.9	3.8	4.4	.48	4.6	14	.14	1.3
9	1.0	3.0	3.6	4.4	5.7	4.0	3.8	.48	3.0	7.5	1.9	.48
10	.52	1.8	3.1	3.5	4.8	3.4	3.2	2.5	5.3	3.2	2.0	.06
11	.24	2.0	3.5	3.2	5.1	10	3.2	.73	16	2.6	1.4	.04
12	.79	1.2	2.4	3.6	3.6	20	3.8	1.2	6.1	4.6	1.0	.03
13	.93	1.8	2.1	2.9	1.8	11	6.9	1.2	13	4.0	2.3	.03
14	.08	.40	3.1	2.4	1.6	6.6	4.8	1.1	7.8	3.0	.30	.05
15	.93	.67	4.6	2.0	2.9	6.9	2.6	.36	3.6	2.3	.11	1.7
16	.22	1.7	4.8	1.2	6.7	24	3.2	.22	5.6	1.4	.57	.97
17	.73	1.2	1.8	1.3	11	22	4.0	1.2	6.6	.68	.04	.34
18	.36	.33	1.6	1.2	7.1	11	2.7	.33	3.8	.52	.24	.07
19	1.6	1.2	1.4	1.4	8.5	7.8	3.0	1.5	2.0	1.4	1.2	.04
20	2.1	2.3	1.3	.80	7.2	16	2.2	2.0	1.8	2.5	.44	.66
21	.33	.60	1.2	1.1	9.8	14	4.4	1.9	3.4	2.5	.48	.38
22	.52	.66	11	1.4	6.8	10	2.3	.62	2.7	.57	.30	1.8
23	.52	1.8	37	25	6.8	8.1	2.5	.52	1.8	1.4	1.3	.31
24	1.9	3.0	12	9.4	5.3	5.8	1.4	1.5	2.0	1.2	1.8	1.5
25	1.2	.70	6.7	6.3	6.0	5.0	1.2	1.2	2.5	.33	2.1	.48
26	.86	.88	4.7	5.0	4.1	5.8	5.0	.68	1.2	1.2	1.3	.77
27	8.1	7.1	3.7	4.0	2.4	3.4	5.8	.30	.33	2.3	.92	4.5
28	5.8	3.4	5.5	3.8	2.3	3.0	3.8	2.5	1.1	2.0	.26	.78
29	3.6	2.1	4.6	2.6	---	3.2	2.3	1.5	2.7	2.7	.14	1.1
30	3.7	1.4	4.0	3.6	---	4.4	2.1	.93	2.7	.48	.37	.28
31	1.6	---	2.7	10	---	5.6	---	2.1	---	3.0	1.0	---
MEAN	1.41	1.85	5.32	5.30	6.77	7.64	3.72	1.21	4.20	4.32	0.87	0.77

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.2	9.6	2.4	3.2	2.9	4.6	4.0	5.1	2.3	2.1	3.6
2	.26	1.1	6.9	2.0	4.3	3.6	2.6	7.9	4.5	1.2	1.7	1.5
3	.15	.94	5.4	1.7	5.9	4.2	4.1	14	3.4	.34	.73	.41
4	.72	.93	3.0	2.0	4.0	6.4	5.5	29	6.8	.25	1.4	.22
5	.11	1.6	2.4	2.0	2.7	4.6	2.9	15	4.9	.84	2.1	1.2
6	.13	.59	2.1	2.1	2.2	3.7	4.8	7.5	4.2	1.9	1.6	2.3
7	.39	.33	3.1	1.8	2.7	3.7	7.8	3.9	2.5	2.8	.21	2.5
8	1.2	1.2	1.7	.99	2.9	6.6	11	3.7	1.7	1.9	1.5	.47
9	.15	1.1	2.3	.76	2.5	7.1	6.4	4.1	1.4	.19	2.2	.95
10	.25	1.3	1.5	1.9	1.9	4.7	16	4.8	2.9	.05	3.8	.32
11	.85	.39	1.1	1.5	2.3	4.8	12	4.5	1.7	1.2	2.4	.14
12	.31	2.4	.85	1.7	1.4	3.7	11	3.4	.73	.77	3.4	2.3
13	.83	1.3	1.7	.88	1.1	4.1	7.4	4.0	1.9	1.4	.44	4.6
14	1.8	.49	1.5	1.5	2.6	3.1	7.0	2.0	2.6	2.0	.21	3.2
15	1.8	.70	1.8	.95	2.9	2.5	14	3.0	.98	1.8	.98	.22
16	.65	.16	8.4	.60	2.1	3.8	6.9	31	2.2	.80	4.8	1.6
17	.35	.42	3.6	1.3	4.1	2.5	5.0	19	3.6	.14	1.3	.46
18	.64	1.8	2.2	.89	3.9	4.3	5.4	8.6	1.7	1.1	1.0	.20
19	.55	1.2	2.0	.80	3.4	12	6.4	6.8	1.7	2.0	1.5	1.9
20	.55	.42	2.7	.38	3.5	8.1	4.6	7.8	2.2	1.1	2.0	2.7
21	.88	.43	2.5	.60	5.5	20	3.9	11	5.7	3.4	.17	1.5
22	.27	3.9	2.0	.71	7.8	11	4.4	23	2.7	5.4	2.2	.55
23	.28	3.7	5.5	.67	8.9	7.6	3.2	19	2.7	1.5	2.5	3.2
24	.21	5.1	7.9	2.2	8.7	4.5	28	9.7	2.4	2.3	1.1	.80
25	1.2	2.4	9.4	1.8	5.7	4.8	22	6.9	1.1	1.8	.83	.18
26	.18	1.6	7.9	1.7	3.7	2.8	8.4	5.7	.29	3.8	3.2	1.5
27	.74	1.6	7.5	1.6	3.1	6.4	9.0	3.8	1.2	1.7	.74	1.3
28	.19	4.9	7.6	2.7	3.6	9.3	5.8	2.7	2.4	.75	.51	1.1
29	.14	14	7.4	1.2	---	8.5	4.1	2.8	4.3	1.8	.66	1.1
30	.14	5.0	3.5	3.3	---	4.6	6.1	10	2.8	1.1	.69	1.9
31	.13	---	2.8	5.1	---	4.7	---	5.8	---	.14	1.9	---
MEAN	0.56	2.07	4.12	1.60	3.81	5.83	8.01	9.17	2.74	1.54	1.61	1.46

SOUTH FORK SAND RUN NEAR WILSON, MD.-CONTINUED
DISCHARGE, IN CUBIC FEET PER SECOND, **WATER YEAR 1984**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.43	0.85	5.8	1.6	2.4	3.3	7.1	8.0	4.9	4.2	1.3	1.6
2	.17	1.6	5.4	2.4	2.2	2.3	9.7	7.3	4.1	2.4	3.5	.27
3	2.0	2.8	7.0	2.0	3.5	2.0	10	8.7	.90	2.9	3.1	.24
4	3.5	3.2	14	1.4	7.6	1.8	18	8.3	2.4	.77	2.5	2.7
5	.76	1.7	11	1.5	6.7	6.8	29	4.1	4.1	3.1	.98	4.6
6	.12	1.8	34	1.3	5.4	8.3	12	9.6	3.7	4.9	3.2	4.0
7	1.7	3.7	20	.94	3.2	4.1	8.9	10	3.3	2.9	5.6	3.6
8	.47	4.3	10	.78	3.7	2.9	6.6	14	3.8	.85	3.8	1.3
9	.15	3.4	7.1	2.1	1.5	2.5	7.1	13	.82	2.3	5.5	.25
10	.94	3.0	5.5	1.9	3.4	2.3	6.6	9.2	.21	38	4.7	1.6
11	1.7	5.6	5.3	1.6	6.3	3.6	6.2	6.6	1.7	16	5.8	3.7
12	.62	4.2	12	.95	6.4	4.9	5.7	8.1	3.3	24	11	3.5
13	.18	2.6	9.6	.59	10	6.0	5.1	5.0	3.3	8.6	13	2.0
14	2.6	2.8	7.3	.48	47	6.9	5.3	5.9	3.2	5.9	7.8	2.1
15	2.4	6.1	6.0	.50	25	8.9	9.4	5.4	3.4	2.3	5.9	.90
16	.26	9.8	5.8	.25	10	13	13	5.9	.85	3.6	4.5	.23
17	1.6	7.0	3.9	.69	7.0	12	9.9	4.1	.27	3.4	3.0	.39
18	.78	5.5	2.6	.98	5.3	10	9.1	3.7	1.5	3.7	2.2	2.2
19	1.3	6.4	3.6	1.1	5.4	8.8	7.8	1.9	4.3	3.1	1.3	1.9
20	.46	5.1	3.6	.32	6.0	8.1	4.2	1.4	2.4	3.0	1.4	2.2
21	5.9	7.0	3.1	.12	6.8	13	3.2	3.0	1.1	1.7	3.4	2.5
22	3.0	5.5	5.3	.22	5.0	9.4	9.3	3.1	1.0	.83	3.5	.98
23	17	4.3	4.5	.97	5.9	7.5	13	3.9	1.2	1.0	4.4	.16
24	7.1	4.0	4.0	7.0	11	5.3	13	3.9	.91	3.5	3.2	1.2
25	3.8	6.1	2.0	7.7	10	14	9.8	3.2	2.1	3.4	1.3	2.3
26	1.8	4.1	2.7	4.3	6.2	26	8.2	1.2	3.7	3.4	.51	2.6
27	2.4	3.9	3.7	2.5	6.4	14	7.4	.65	3.8	3.9	1.3	2.0
28	3.5	18	3.4	2.0	6.5	23	8.4	2.0	4.2	.93	3.9	2.2
29	.90	15	6.4	1.5	5.7	14	17	7.1	2.6	.58	4.0	.82
30	.63	7.9	2.7	1.9	---	9.6	10	5.4	1.3	1.6	4.1	.31
31	1.6	---	1.8	2.5	---	7.8	---	5.0	---	3.3	4.4	---
MEAN	2.25	5.24	7.07	1.74	7.98	8.45	9.67	5.76	2.48	5.16	4.00	1.81

APPENDIX C.-CONTINUED

STATION 01594936 NORTH FORK SAND RUN NEAR WILSON, MD.
DISCHARGE, IN CUBIC FEET PER SECOND, **WATER YEAR 1980**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								12	3.6	1.5	5.6	1.5
2								9.2	4.4	1.3	4.4	1.6
3								6.9	8.9	2.9	3.4	1.7
4								5.4	11	2.1	2.8	1.8
5								4.4	5.6	1.8	3.4	4.6
6								3.9	7.9	3.9	2.5	1.8
7								3.6	5.4	1.9	2.1	1.4
8								3.1	6.6	13	1.9	1.3
9								2.8	4.8	7.2	2.4	1.2
10								2.5	6.9	4.6	2.0	1.2
11								2.5	4.6	3.5	2.7	.94
12								2.5	3.8	16	4.0	.86
13								5.0	3.4	16	2.4	.79
14								2.8	3.2	7.2	1.9	.82
15								2.4	6.6	4.6	14	.79
16								2.1	42	3.6	14	.72
17								2.0	14	5.8	6.3	.66
18								2.9	8.2	3.5	71	.62
19								2.7	5.6	2.6	37	.57
20								5.4	4.4	2.3	17	.51
21								17	3.6	2.0	11	.79
22								8.2	3.4	6.1	7.2	.66
23								5.8	2.5	8.5	5.4	2.2
24								7.9	2.2	4.2	4.2	1.1
25								14	2.2	3.1	3.5	.86
26								7.5	1.9	2.5	2.9	.79
27								5.4	1.7	2.2	2.5	.62
28								4.2	1.7	5.8	2.2	.60
29								3.5	1.6	14	2.0	.57
30								3.1	2.0	5.4	1.8	.54
31								3.8	---	4.0	1.6	---
MEAN								5.31	6.12	5.26	7.91	1.14

WATER YEAR 1981

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.49	1.2	4.8	1.4	3.0	16	8.5	14	5.2	2.8	1.5	1.4
2	.54	1.0	9.2	1.3	5.5	9.9	7.2	11	11	4.0	1.3	7.2
3	.57	.90	9.2	1.2	4.5	7.5	5.4	8.2	32	2.7	1.3	8.5
4	.49	1.0	5.8	1.1	4.0	5.8	4.8	6.3	38	2.3	1.2	21
5	.44	1.1	5.0	1.0	3.5	5.6	4.6	5.4	33	2.2	.98	8.2
6	.40	.90	4.6	.90	3.2	4.8	3.9	5.0	14	2.0	1.5	4.4
7	.40	.82	4.8	1.0	3.0	4.0	3.5	4.4	10	1.6	1.3	3.1
8	.38	.82	4.4	1.1	2.9	3.6	3.2	3.6	14	1.5	1.2	5.0
9	.38	1.4	9.6	1.2	2.8	3.4	3.4	3.2	12	1.4	.98	4.2
10	.49	1.3	8.9	1.1	3.2	3.2	3.4	2.9	7.5	1.4	.86	3.1
11	.72	1.0	6.3	1.0	8.0	3.1	13	3.4	5.8	1.2	.80	2.4
12	.46	.90	5.2	.90	7.0	3.1	29	3.1	46	1.0	.75	2.0
13	.42	.86	4.6	.85	6.0	4.6	47	2.6	27	1.9	.72	1.7
14	.40	.79	3.8	.80	5.0	5.0	20	2.3	13	1.5	.66	1.5
15	.38	.76	3.4	1.1	6.4	4.0	12	5.2	8.9	1.2	.62	2.3
16	.36	.98	3.2	1.3	9.0	5.2	8.5	4.0	6.3	1.0	2.0	5.2
17	.36	1.2	2.8	1.2	12	4.6	8.5	3.6	4.8	.90	1.1	3.2
18	.42	2.7	2.6	1.1	15	4.0	9.9	4.4	13	.79	.70	2.5
19	.44	2.0	2.5	.90	16	3.8	6.9	18	9.2	.79	.62	2.2
20	.38	1.7	2.0	1.0	20	3.5	8.6	13	17	.98	.56	1.9
21	.36	1.6	1.7	1.0	21	3.2	6.4	8.2	8.9	1.0	.50	1.7
22	.34	1.5	1.6	1.1	14	2.8	5.4	5.6	6.3	.86	.46	1.6
23	.32	1.7	1.5	1.1	14	3.2	6.3	4.2	5.6	.79	.40	1.4
24	.32	34	1.4	1.0	12	3.8	8.5	3.6	6.4	6.9	.38	1.3
25	3.6	21	1.3	1.1	8.2	4.2	9.2	3.2	6.9	2.4	.42	1.1
26	2.2	9.9	1.2	1.4	6.3	4.4	6.6	4.2	5.6	1.8	.38	1.1
27	1.4	6.6	1.1	2.0	5.2	33	12	4.8	4.4	1.5	.34	.90
28	2.6	5.2	1.2	3.0	10	14	7.5	4.4	3.6	2.6	2.2	.86
29	2.3	4.4	1.3	2.6	---	11	6.9	13	3.2	3.8	1.1	.79
30	1.6	3.8	1.4	2.2	---	9.6	5.8	7.2	2.8	2.5	.60	.79
31	1.4	---	1.5	2.0	---	7.5	---	6.1	---	2.0	1.2	---
MEAN	0.82	3.77	3.80	1.29	8.24	6.50	9.53	6.07	12.7	1.91	0.92	3.42

NORTH FORK SAND RUN NEAR WILSON, MD.-CONTINUED
DISCHARGE, IN CUBIC FEET PER SECOND, **WATER YEAR 1982**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.94	2.6	5.4	4.2	22	3.8	6.4	1.7	3.1	2.9	1.0	0.83
2	1.3	2.1	5.7	3.6	11	3.7	5.4	1.6	3.2	2.6	.94	.94
3	1.0	2.0	4.6	3.4	26	3.6	8.3	1.6	3.2	27	.90	1.0
4	.91	1.8	4.1	20	21	3.5	8.4	1.7	3.1	19	.71	.65
5	.84	2.2	3.8	14	13	4.3	6.5	1.8	8.7	7.0	.80	.47
6	1.2	3.3	3.4	8.7	9.3	3.7	8.6	1.7	7.1	4.7	.81	.31
7	1.1	3.1	3.1	17	6.9	4.6	7.2	1.8	6.7	3.7	.75	.26
8	.94	2.6	6.6	9.9	5.8	3.9	6.5	1.7	5.6	13	.62	.34
9	.84	2.4	5.4	7.3	6.9	3.7	6.7	1.5	4.9	5.6	1.4	.38
10	.77	2.1	4.6	5.8	5.8	3.9	5.8	1.4	8.6	4.3	.93	.32
11	.69	2.0	4.2	4.3	4.7	12	5.3	1.4	14	3.7	.96	.25
12	.69	1.9	3.9	3.4	3.9	25	5.7	1.5	6.9	3.2	.99	.20
13	.65	1.7	3.5	2.7	3.5	17	8.3	1.5	15	2.7	.79	.17
14	.63	1.7	3.7	2.3	3.2	12	7.5	1.4	8.2	2.1	.72	.20
15	.63	1.6	2.9	2.1	3.5	9.5	6.1	1.4	5.6	1.9	.58	.84
16	.66	1.6	2.6	2.0	7.3	26	5.3	1.4	4.5	1.7	.47	.45
17	.59	1.5	2.4	1.9	11	31	5.1	1.4	5.9	1.6	.55	.32
18	1.0	1.4	2.3	1.8	7.8	17	5.1	1.4	4.0	1.5	.62	.27
19	1.1	1.6	2.2	1.7	11	12	4.2	1.4	3.4	1.5	.54	.25
20	1.0	1.6	2.1	1.6	10	24	3.9	1.6	3.0	2.8	.57	.20
21	.90	1.7	1.9	1.8	15	23	3.6	1.3	2.5	2.1	1.2	.21
22	.83	1.8	10	1.9	9.0	17	3.3	1.5	2.3	1.7	.56	1.3
23	.91	1.8	34	26	7.6	12	3.0	1.5	3.0	1.4	.73	.71
24	.88	1.9	17	15	7.1	9.5	2.8	1.4	3.4	1.2	.78	.41
25	.76	1.8	10	8.1	6.2	7.8	2.2	1.3	3.2	1.0	.75	.41
26	2.4	2.0	7.2	5.4	4.9	9.0	2.0	1.9	3.0	.90	.69	1.1
27	12	5.4	5.8	4.7	4.5	7.0	2.1	2.5	3.0	.93	.66	2.2
28	7.3	3.8	5.0	4.1	4.1	6.0	2.0	2.9	2.7	1.9	.66	1.3
29	4.7	3.3	4.9	3.6	---	5.9	1.8	2.7	3.6	1.4	.41	1.1
30	3.7	2.9	3.9	4.2	---	5.9	1.7	3.2	3.3	1.2	.31	.87
31	3.1	---	3.4	13	---	6.6	---	3.8	---	1.2	.36	---
MEAN	1.77	2.24	5.79	6.63	9.00	10.8	5.03	1.77	5.16	4.11	0.73	0.61

WATER YEAR 1983

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.68	0.29	9.2	3.7	3.2	4.9	4.9	5.3	4.2	1.1	0.20	1.0
2	.56	.31	7.7	3.3	3.6	5.5	4.5	6.0	3.7	.89	.16	.57
3	.35	.37	5.6	2.9	4.8	6.2	5.5	9.0	3.6	.73	.17	.39
4	.28	1.5	4.6	2.3	4.0	8.2	4.8	18	4.3	.64	.13	.30
5	.29	1.6	3.8	2.1	3.4	8.4	4.4	11	3.7	.70	.14	.32
6	.22	1.2	3.4	2.4	2.9	7.2	6.0	7.8	3.1	.61	.20	.30
7	.22	.94	2.9	2.4	2.6	6.1	8.0	6.2	2.6	.53	.21	.26
8	.41	.74	2.4	1.9	2.3	9.3	9.4	5.8	2.1	.46	.17	.23
9	.65	.64	2.1	1.7	2.1	8.8	8.4	5.4	2.0	.41	.17	.21
10	.88	.60	1.9	1.7	1.9	6.7	18	4.6	1.9	.37	.17	.19
11	.68	.60	1.7	1.9	1.7	5.7	13	4.1	1.8	.33	.35	.16
12	.62	1.2	1.6	1.7	1.7	4.9	10	3.7	1.6	.32	.51	.14
13	1.3	1.5	1.5	1.4	1.8	4.6	7.8	3.5	1.4	.30	.46	.62
14	1.2	1.2	1.6	1.5	1.9	4.4	6.4	3.2	1.3	.26	.37	.64
15	1.1	.96	1.7	1.6	2.0	4.0	14	4.2	1.3	.25	.23	.40
16	1.1	.79	7.1	1.4	2.2	3.7	9.1	28	1.2	.23	.20	.37
17	.80	.72	4.6	1.3	2.8	3.6	7.4	18	1.5	.22	.14	.40
18	.60	.74	3.5	1.2	3.1	4.1	6.3	10	1.4	.25	.18	.38
19	.47	.69	3.1	1.1	3.2	15	5.7	8.7	1.9	.24	.17	.31
20	.49	.69	3.0	1.0	3.6	10	5.0	7.7	1.7	.39	.15	.23
21	1.2	.80	2.9	1.0	5.2	22	4.3	10	3.6	1.1	.15	.23
22	.95	3.3	2.4	1.1	8.0	14	3.9	21	2.1	1.9	.09	.31
23	.71	3.3	4.2	1.2	11	9.6	3.8	21	1.6	1.1	.15	.27
24	.49	3.9	7.6	1.3	10	7.3	27	13	1.4	2.2	.54	.24
25	.40	3.0	11	1.4	7.7	6.1	19	8.9	1.3	1.3	.29	.22
26	.44	2.1	8.7	1.3	5.9	5.1	11	6.7	1.1	.89	.19	.20
27	.42	2.0	8.2	1.3	4.9	9.3	7.8	5.4	.99	.55	.41	.18
28	.47	5.1	7.0	1.2	4.7	9.3	6.2	4.6	1.0	.45	.72	.16
29	.32	13	5.9	1.3	---	7.2	5.4	4.5	1.5	.36	.47	.15
30	.28	6.1	4.9	2.6	---	6.0	5.6	9.5	1.3	.31	.60	.18
31	.29	---	4.2	3.7	---	5.5	---	4.7	---	.24	1.2	---
MEAN	0.61	2.00	4.52	1.80	4.01	7.51	8.42	9.02	2.07	0.63	0.30	0.32

NORTH FORK SAND RUN NEAR WILSON, MD.-CONTINUED
DISCHARGE, IN CUBIC FEET PER SECOND, **WATER YEAR 1984**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.30	0.90	7.0	3.4	2.0	5.4	11	9.8	2.3	3.2	1.1	0.95
2	.29	.86	5.5	3.0	2.1	4.8	13	7.5	2.1	1.6	.96	.74
3	.20	2.3	6.2	2.6	2.8	4.5	16	8.3	1.9	1.1	1.4	.85
4	.17	2.4	16	2.3	4.7	4.2	25	9.0	1.7	.99	2.5	1.6
5	.17	1.9	11	2.2	4.1	9.5	35	7.0	1.6	1.3	1.8	1.4
6	.17	2.2	32	2.1	3.5	13	19	13	1.4	2.6	2.4	1.2
7	.17	2.4	25	1.9	3.1	8.3	15	14	1.3	3.4	4.3	.91
8	.15	2.5	14	1.8	2.5	6.6	11	16	1.2	1.9	2.8	.79
9	.14	2.1	9.6	1.7	2.5	5.6	9.6	16	1.1	1.3	2.0	.72
10	.14	2.8	8.5	1.7	2.9	5.0	7.7	11	1.0	19	3.2	.69
11	.16	4.3	7.2	1.6	6.0	4.6	6.7	8.5	.94	13	4.2	.66
12	.26	4.1	12	1.5	9.0	3.5	5.7	12	.87	21	11	.64
13	.38	3.3	11	1.4	14	3.5	5.0	9.1	.85	8.6	13	.60
14	.59	3.1	9.5	1.4	52	4.6	5.6	7.3	1.1	5.1	8.5	.56
15	.48	4.9	8.0	1.3	31	5.9	14	6.1	.79	3.7	5.9	.67
16	.34	8.4	6.3	1.3	17	13	17	5.1	.72	3.5	4.4	.64
17	.27	6.3	5.2	1.2	12	14	11	4.4	.84	2.6	3.6	.56
18	.23	5.5	4.5	1.2	9.6	13	9.9	3.8	.82	2.5	3.0	.49
19	.34	7.9	4.0	1.2	8.5	11	8.3	3.4	1.6	1.9	2.5	.44
20	.50	7.6	3.6	1.1	8.8	11	7.1	3.1	1.1	1.7	2.0	.41
21	3.1	7.5	3.2	1.0	7.0	17	6.2	2.6	.86	1.9	1.8	.37
22	2.1	5.3	5.6	.98	6.0	15	13	2.2	.74	1.7	1.6	.33
23	15	4.5	5.3	.97	5.9	13	19	2.9	.70	1.6	2.6	.33
24	5.0	5.2	4.3	4.0	15	12	17	2.5	.87	1.4	1.9	.32
25	2.4	7.4	3.5	6.4	16	21	13	2.0	.73	1.6	1.6	.31
26	1.8	5.6	3.1	4.4	11	34	9.8	1.9	.71	1.4	1.4	.35
27	1.8	5.1	2.5	3.9	8.9	21	8.1	1.7	.59	2.2	1.2	.40
28	1.5	18	5.4	3.5	8.0	28	16	1.7	.74	1.9	1.0	.87
29	1.3	16	6.9	3.0	6.6	21	31	5.9	.63	1.5	1.1	.89
30	1.1	9.7	4.5	2.7	---	15	15	3.6	1.3	1.2	1.1	.78
31	.94	---	4.2	2.3	---	11	---	2.8	---	1.2	1.0	---
MEAN	1.34	5.34	8.21	2.23	9.74	11.6	13.4	6.59	1.10	3.79	3.12	0.68

APPENDIX D

Mean-daily specific conductance at Laurel Run, South Fork Sand Run, and North Fork Sand Run stream gages for water years 1981-84

STATION 01594930 LAUREL RUN AT DOBBIN ROAD NEAR WILSON, MD.
SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, **WATER YEAR 1981**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	492	304							---	---	---
2	---	516	277							---	---	---
3	---	550	238							---	---	---
4	---	542	271							---	---	---
5	---	443	300							---	---	290
6	---	461	318							---	696	380
7	---	495	336							---	645	483
8	---	522	349							---	675	530
9	---	463	301							---	733	411
10	---	342	238							---	768	464
11	---	374	270							690	805	550
12	---	403	298							---	820	595
13	---	438	324							---	838	639
14	---	451	342							507	848	691
15	---	463	365							617	837	702
16	---	454	387							675	---	493
17	---	422	400							687	---	442
18	---	242	428							---	---	544
19	---	272	439							---	---	606
20	---	313	440							---	---	638
21	---	333	478							---	---	677
22	---	360	510							---	---	718
23	729	377	490							---	---	729
24	759	235	474							---	---	754
25	514	207	442							---	---	776
26	353	237	---							---	---	797
27	451	261	---							---	---	814
28	467	273	---							---	---	817
29	380	282	---							---	---	824
30	428	297	---							---	---	842
31	472	---	---							---	---	---
MEAN		384	361									623

WATER YEAR 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	907	524	336	379	268	403	280	---	437	---	---	762
2	800	551	261	370	281	399	309	---	386	---	---	667
3	802	569	301	387	269	392	275	---	386	---	---	---
4	853	608	332	227	239	411	229	---	381	---	---	---
5	898	624	341	206	260	349	258	---	235	---	---	---
6	854	455	372	242	274	378	242	---	233	---	---	---
7	785	433	387	212	306	333	246	---	255	---	---	---
8	831	461	279	225	343	335	270	---	303	---	---	---
9	888	470	288	250	320	354	271	---	364	---	---	---
10	915	484	321	268	323	351	285	---	332	---	---	---
11	917	506	338	309	366	288	305	---	154	---	---	---
12	915	508	369	325	380	159	306	---	198	---	---	---
13	919	521	393	338	395	189	267	---	185	---	---	---
14	929	531	403	352	407	209	240	---	211	---	---	---
15	940	545	418	356	404	234	261	---	247	572	---	---
16	941	552	428	379	327	203	285	---	286	603	---	---
17	922	555	441	389	261	152	297	---	292	631	---	---
18	892	571	425	413	252	220	289	---	322	646	---	---
19	754	578	436	413	248	244	328	---	362	651	---	---
20	716	573	450	417	241	188	364	---	---	550	---	---
21	782	525	473	386	235	184	401	519	---	---	---	---
22	852	535	358	378	257	214	442	565	---	---	---	---
23	826	550	231	283	283	237	484	578	---	---	---	---
24	781	551	259	224	295	260	520	573	---	---	---	---
25	769	565	289	237	313	286	---	587	---	---	---	---
26	695	574	312	255	347	261	---	592	---	---	---	---
27	388	360	339	282	370	280	---	511	---	---	---	---
28	310	279	366	302	384	301	---	449	---	---	786	---
29	385	325	379	318	---	303	---	540	---	---	---	---
30	446	370	402	334	---	292	---	470	---	---	---	862
31	485	---	416	313	---	286	---	403	---	---	854	---
MEAN	777	508	359	315	309	280	311					

LAUREL RUN AT DOBBIN ROAD NEAR WILSON, MD.-CONTINUED
SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, **WATER YEAR 1983**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	865					---	347	366	393	673	879	---
2	891					---	364	354	413	710	885	---
3	906					---	320	320	444	755	897	>1000
4	908					---	317	239	448	771	913	>1000
5	907					---	350	244	432	771	916	d
6	912					---	365	287	444	774	913	957
7	929					---	320	328	463	782	903	928
8	939					---	303	335	478	802	906	957
9	907					---	288	337	500	819	911	1030
10	805					---	218	380	523	832	861	1060
11	781					---	213	435	563	846	886	1050
12	815					347	229	485	593	863	823	1050
13	766					370	261	511	619	872	906	955
14	669					375	303	533	636	---	881	890
15	710					379	259	428	676	>1000	914	943
16	717					401	246	235	747	>1000	931	1040
17	702					421	266	211	636	---	---	1010
18	733					413	284	260	609	833	954	1020
19	744					283	305	280	643	887	926	1010
20	755					257	313	293	679	---	950	1070
21	622					219	358	318	547	842	969	1270
22	628					212	410	299	507	667	976	1230
23	689					242	428	264	656	689	977	1350
24	697					267	250	272	716	493	937	1350
25	---					293	204	289	773	546	---	1090
26	---					315	257	314	732	659	>1000	1000
27	---					298	284	341	758	791	>1000	1010
28	---					257	309	380	763	825	---	1030
29	---					272	343	403	620	814	969	1440
30	---					314	366	373	580	861	---	1460
31	---					314	---	373	---	879	---	---
MEAN							303	338	586			

d- Range of monitoring equipment changed from 0-1,000 µS/cm to 0-2,000 µS/cm on this date.

WATER YEAR 1984

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1100	665	215	518	857	672	427	533	562	808	1210	999
2	970	730	325	545	923	616	367	593	636	866	1270	1030
3	950	690	370	583	801	567	343	617	693	943	1310	1060
4	960	525	255	659	564	585	284	689	691	1010	970	831
5	970	530	230	658	524	497	171	685	925	938	709	889
6	1000	485	255	808	525	336	191	644	1110	748	761	950
7	990	430	200	868	542	360	253	563	969	523	798	---
8	1060	385	205	795	571	411	295	535	878	621	1000	---
9	1020	350	250	796	589	451	310	529	907	756	1030	---
10	990	390	285	856	598	489	411	532	1090	550	855	---
11	980	330	285	894	540	515	524	598	1000	286	515	---
12	965	300	280	1010	411	543	483	661	---	296	343	1150
13	990	310	285	1030	331	612	481	655	---	396	365	1190
14	1030	325	290	1030	270	655	548	638	---	406	424	1480
15	1050	325	280	944	256	649	399	637	---	451	461	1370
16	975	290	300	929	315	417	312	689	---	497	529	1200
17	945	300	360	1100	325	270	386	785	---	570	609	1210
18	935	340	400	1240	355	272	381	835	---	599	676	1210
19	900	330	430	1280	392	290	485	810	982	631	729	1220
20	835	250	453	1220	392	312	547	792	1310	844	775	1270
21	710	230	491	1070	431	296	520	788	1170	910	925	1270
22	620	370	367	1040	476	310	516	793	1360	751	1160	1260
23	440	450	332	1000	497	356	451	803	1410	769	826	1280
24	280	370	373	824	364	393	432	837	1090	986	746	1300
25	370	275	436	516	295	335	441	835	1010	716	825	1280
26	480	280	468	498	320	206	493	980	1100	841	916	1280
27	560	290	496	516	366	242	546	936	1110	915	954	1260
28	580	210	455	531	462	283	539	897	1060	810	936	1130
29	615	170	425	547	583	256	484	431	1070	862	993	1120
30	635	180	481	564	---	345	465	543	1010	826	1010	1190
31	645	---	487	639	---	428	---	596	---	1150	959	---
MEAN	824	370	347	823	478	418	416	692		719	825	1180

APPENDIX D.-CONTINUED

STATION 01594934 SOUTH FORK SAND RUN NEAR WILSON, MD.
SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, **WATER YEAR 1981**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	751	644				---	---	587	693	637	878	---
2	632	621				---	690	674	549	679	849	---
3	632	596				---	556	663	604	691	814	849
4	742	585				---	510	615	547	604	897	766
5	742	617				---	657	615	633	542	916	819
6	744	585				---	460	674	510	509	879	686
7	777	663				---	644	657	625	505	918	563
8	808	666				---	374	590	657	660	922	569
9	841	595				---	516	613	699	780	922	781
10	841	---				---	594	606	671	853	928	743
11	819	---				---	559	596	687	850	961	677
12	839	---				---	372	626	708	828	981	781
13	833	---				---	513	650	693	783	977	716
14	835	---				---	522	624	291	739	952	686
15	725	---				---	584	512	215	760	897	745
16	764	---				---	598	598	249	725	908	798
17	843	---				---	526	573	285	775	872	679
18	805	---				---	574	511	308	889	933	739
19	835	577				546	624	494	338	901	939	758
20	835	531				568	580	356	326	863	816	749
21	845	545				558	620	377	333	849	604	717
22	842	---				---	585	361	301	889	---	771
23	825	---				---	584	465	308	957	---	779
24	752	---				---	623	380	377	854	---	690
25	725	---				---	644	321	405	808	---	804
26	720	---				---	651	505	---	706	944	838
27	698	---				---	615	560	482	699	---	908
28	687	---				---	657	581	516	766	---	941
29	674	---				---	599	474	474	862	---	958
30	631	---				---	632	495	609	832	---	918
31	617	---				---	---	630	---	861	688	---
MEAN	763						575	548	486	763	887	765

WATER YEAR 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	482	344	328	372	668	702	727	---	1540	1460	1820
2	958	476	474	323	---	854	752	553	---	1570	1430	1820
3	---	862	739	361	---	849	572	556	---	1320	1390	1630
4	---	870	585	394	---	621	466	879	---	666	1270	1760
5	---	812	889	471	---	739	429	---	---	608	1480	1770
6	912	940	907	494	---	746	544	---	874	700	1610	1770
7	---	---	903	400	---	670	588	768	---	928	1670	1780
8	939	---	764	450	---	634	584	737	---	948	1630	1850
9	963	---	598	397	---	815	445	773	---	930	1600	1920
10	---	---	469	287	---	721	335	---	d	882	1640	1900
11	974	---	495	262	---	624	261	---	918	782	1640	1850
12	---	---	455	550	---	470	249	---	896	782	1680	1790
13	---	---	378	750	---	510	438	---	758	1040	1690	1750
14	---	880	464	798	---	418	542	---	900	1030	1730	1570
15	---	669	833	825	---	423	335	---	822	999	1720	1390
16	---	---	---	713	---	489	284	---	804	1050	1730	2010
17	---	---	---	613	---	324	520	---	1010	1030	1690	2050
18	---	998	533	682	---	378	540	---	1020	977	1600	2020
19	---	959	561	853	---	429	499	---	972	946	1800	1900
20	---	---	503	769	---	388	593	---	878	1060	1780	1930
21	---	---	442	746	---	297	634	---	878	1110	1760	2130
22	---	---	565	651	---	389	787	---	1150	1110	1780	2070
23	---	924	520	476	---	516	809	---	1220	1090	1770	2140
24	---	---	422	268	---	526	850	---	1300	1220	1790	2080
25	---	---	323	249	---	614	814	---	1360	1230	1830	2190
26	---	705	264	451	697	624	744	---	1420	1220	1830	2060
27	782	753	242	602	562	521	848	---	1340	1350	1820	1580
28	768	549	303	605	429	403	751	---	1330	1340	1830	1680
29	764	477	394	552	---	331	756	---	1380	1400	1840	1410
30	777	382	416	462	---	482	750	---	1480	1360	1840	1510
31	748	---	465	409	---	660	---	750	---	1430	1830	---
MEAN			526	681		553	581			1090	1680	1840

d- Range of monitoring equipment changed from 0-1,000 µS/cm to 0-2,000 µS/cm on this date.

SOUTH FORK SAND RUN NEAR WILSON, MD.-CONTINUED
SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, **WATER YEAR 1983**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1560	1670	771	---	741	457	882	573	1100	1660	>2000	>2000
2	1750	1800	703	---	644	410	676	626	1180	1660	>2000	>2000
3	1780	1870	819	---	655	439	373	769	1190	1600	>2000	>2000
4	1760	1660	767	---	656	762	619	669	1160	1550	>2000	>2000
5	1750	1330	482	---	428	530	745	662	786	1520	>2000	>2000
6	1740	1300	465	---	---	290	630	742	877	1570	>2000	>2000
7	1840	1190	836	---	---	403	580	557	1110	1730	>2000	---
8	1920	1120	1040	---	899	633	879	402	1370	1770	>2000	>2000
9	1800	1470	1160	---	951	664	596	467	1420	1680	>2000	>2000
10	1640	---	1180	---	980	443	481	1000	1470	1180	>2000	>2000
11	1710	---	905	---	1230	740	568	1230	1500	1180	>2000	>2000
12	1760	---	600	---	1010	752	776	1350	1380	1860	>2000	>2000
13	1730	>2000	838	---	720	832	692	1400	1340	1870	>2000	1960
14	1710	---	1340	---	898	684	807	1280	1580	1910	>2000	1950
15	1850	1680	1360	---	1560	609	667	868	1650	1900	>2000	1950
16	1830	1790	1090	---	1090	986	566	778	1680	1910	>2000	1930
17	1820	1780	718	---	968	1150	367	712	1640	1870	>2000	1920
18	1670	---	663	---	866	1210	359	882	1180	1860	>2000	1900
19	1780	>2000	445	---	689	753	882	811	774	1890	>2000	1900
20	1760	---	533	---	421	362	951	727	903	1910	>2000	1880
21	1590	1500	1100	---	591	520	870	762	1510	1700	>2000	1830
22	1420	1220	865	---	847	674	1030	521	1450	1890	>2000	1830
23	1380	1110	1050	---	683	716	1100	714	1550	1860	>2000	1850
24	1440	1260	532	---	916	572	693	748	1630	1300	>2000	1910
25	1450	1030	298	---	638	587	573	845	1660	1200	>2000	1910
26	1450	801	223	1360	492	530	443	794	1620	---	>2000	1900
27	1530	802	197	1460	259	351	773	924	1580	>2000	>2000	1900
28	1690	635	325	1570	443	465	825	890	1650	>2000	>2000	1910
29	1750	816	---	1190	---	817	748	637	1600	>2000	>2000	1930
30	1720	774	---	520	---	644	876	625	1490	>2000	>2000	1940
31	1640	---	---	674	---	703	---	960	---	>2000	---	---
MEAN	1680		761		780	635	701	804	1370		>2000	

WATER YEAR 1984

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1930	1650	970	806	1230	977	422	810	1250	1140	1730	1750
2	1860	1630	990	843	1120	875	423	899	1270	1090	1750	1690
3	1940	1530	1070	1030	1250	532	580	959	1120	1650	1690	1560
4	1990	1280	736	1240	1230	375	558	912	1090	1830	1230	---
5	>2000	1450	985	1300	1240	556	362	830	1270	1760	857	---
6	---	1090	900	1390	1190	523	475	667	1360	1660	969	---
7	---	921	584	1390	1100	475	516	645	1370	1240	1190	---
8	>2000	1370	702	1210	1320	386	378	743	1380	1050	1340	1570
9	>2000	1430	735	1290	902	361	455	868	1300	1100	1420	1510
10	>2000	1370	655	1660	1370	351	756	963	1220	1180	1430	1480
11	>2000	1100	551	1710	1200	402	910	984	1240	788	1210	1650
12	>2000	1280	836	1750	575	1100	1060	912	1360	750	816	1830
13	---	744	863	1640	662	1350	1090	699	1450	838	674	1860
14	---	648	951	1430	813	1190	1160	647	1410	1040	720	1800
15	>2000	1130	876	1360	496	1130	665	911	1380	934	799	1820
16	>2000	826	953	1110	550	924	648	1080	1420	850	1000	1820
17	---	1140	1000	1110	542	831	870	1050	1380	1300	1250	1820
18	>2000	969	857	1530	464	897	960	1080	1330	1310	---	1860
19	---	745	853	1790	346	917	1030	1040	1320	1300	---	1910
20	---	401	1160	1710	540	936	893	757	1380	1310	---	---
21	1630	530	1150	1430	673	889	616	770	1480	1280	---	1930
22	1650	1030	1240	1270	838	732	564	1170	1650	1110	---	---
23	951	909	941	1320	1040	807	610	1260	1840	980	---	---
24	987	768	1190	1400	817	544	746	1220	1850	1490	---	---
25	1350	561	966	1100	527	388	822	1290	1860	1740	---	---
26	1380	406	886	989	424	379	907	1260	---	1860	1550	---
27	1380	319	1360	718	463	422	954	1150	---	1770	1420	---
28	1520	700	1180	628	782	542	855	1080	1730	1440	1700	---
29	1690	952	1030	491	901	421	553	896	1760	1260	1800	---
30	1470	950	972	651	---	510	630	1080	1690	1410	1770	---
31	1260	---	875	990	---	575	---	1190	---	1620	1710	---
MEAN		994	936	1240	848	687	716	962	1430	1290		

APPENDIX D.-CONTINUED

STATION 01594936 NORTH FORK SAND RUN NEAR WILSON, MD.
SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, **WATER YEAR 1981**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1						---	113	152	161	194	410	168
2						---	124	138	178	186	441	173
3						---	137	135	225	196	453	166
4						---	132	138	217	211	438	104
5						---	132	158	105	220	448	107
6						---	134	188	98	222	399	120
7						---	169	190	96	213	348	115
8						---	172	185	109	202	327	93
9						---	183	192	131	206	315	67
10						---	177	210	117	226	316	95
11						---	152	213	128	248	---	117
12						---	120	234	134	276	---	108
13						---	105	228	---	283	---	123
14						---	111	205	---	280	---	147
15						---	114	173	---	289	---	138
16						---	125	189	---	300	---	86
17						---	127	229	---	299	---	236
18						---	123	231	---	289	---	255
19						---	123	146	---	283	---	268
20						---	127	117	---	263	---	246
21						---	144	131	---	287	---	238
22						---	147	144	---	305	656	217
23						---	163	147	---	331	569	214
24						133	166	152	---	299	436	217
25						150	166	154	---	267	330	202
26						155	168	150	---	285	389	203
27						103	149	141	198	298	436	200
28						88	158	161	197	326	294	186
29						92	167	177	196	335	164	188
30						103	181	221	196	352	187	199
31						112	---	168	---	378	183	---
MEAN							144	174		269		167

WATER YEAR 1982

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	249	154	184	180	220	174	239	---	403	680	570
2	161	252	133	166	180	212	178	198	---	440	703	600
3	203	265	110	192	194	188	180	---	---	326	607	596
4	189	292	136	142	199	169	177	---	---	103	533	643
5	192	299	133	142	205	172	176	---	---	102	419	672
6	195	282	151	130	211	180	180	---	---	111	519	657
7	199	284	168	141	215	164	183	---	---	201	744	604
8	205	284	89	131	221	165	184	---	---	179	803	546
9	208	279	117	123	228	170	189	---	---	189	640	523
10	214	278	171	150	237	170	190	---	---	206	431	633
11	226	281	205	156	244	154	189	---	---	189	524	766
12	232	282	232	164	240	91	191	---	---	169	606	808
13	231	277	238	231	218	109	197	---	---	242	631	781
14	228	265	255	260	207	108	195	---	---	335	676	730
15	237	256	271	271	188	109	193	---	---	367	763	560
16	254	244	289	275	148	106	195	---	---	386	741	546
17	277	232	304	279	141	73	200	---	221	483	650	531
18	303	232	316	301	156	83	204	---	255	704	566	571
19	296	228	326	309	160	101	204	---	278	700	555	624
20	286	204	329	310	154	108	205	---	235	570	562	646
21	283	195	336	283	134	91	211	---	196	495	608	649
22	285	194	224	289	130	104	213	---	271	637	587	537
23	286	187	113	200	147	105	216	---	317	677	526	596
24	286	171	98	176	173	110	221	---	321	645	396	589
25	287	163	102	182	183	116	226	---	336	622	469	597
26	249	158	107	186	197	123	236	---	379	546	632	542
27	154	117	120	191	212	130	241	---	386	453	727	388
28	137	134	132	198	220	135	234	---	320	485	753	381
29	154	163	147	205	---	141	230	---	304	366	769	418
30	183	176	176	215	---	152	233	---	373	416	733	451
31	230	---	203	219	---	162	---	---	---	469	663	---
MEAN	227	231	190	206	190	136	202			394	620	592

NORTH FORK SAND RUN NEAR WILSON, MD.-CONTINUED
SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25 DEG. C, **WATER YEAR 1983**
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	536	536	145	155	319	276	295	267	191	412	535	394
2	571	528	144	122	326	248	264	236	247	383	550	440
3	592	500	174	105	299	209	183	211	275	409	583	473
4	621	486	219	94	289	208	169	159	261	389	606	528
5	624	502	191	239	290	197	253	167	206	340	606	578
6	595	352	168	314	258	176	212	193	187	302	625	584
7	580	307	215	326	235	166	148	203	221	302	650	615
8	592	292	279	387	289	175	190	176	238	342	654	637
9	622	284	316	318	339	181	200	148	359	366	638	653
10	720	300	345	237	379	200	120	238	519	385	642	681
11	774	366	348	334	407	201	129	304	571	400	623	690
12	714	482	298	377	426	221	185	355	519	406	585	682
13	604	749	248	405	359	254	200	415	441	396	611	594
14	558	823	268	408	310	246	226	461	383	412	631	562
15	586	712	342	432	387	215	174	346	427	435	638	566
16	699	652	288	388	550	209	165	133	497	457	641	615
17	793	590	274	281	496	280	150	118	542	472	649	606
18	770	473	311	367	454	315	139	166	524	471	656	607
19	681	472	279	433	413	200	218	232	424	514	726	612
20	606	531	230	395	320	146	270	226	272	485	775	628
21	490	537	316	407	242	125	269	214	264	386	761	635
22	464	356	376	451	280	169	285	133	304	310	753	692
23	413	206	360	411	255	220	339	110	349	306	716	693
24	367	211	246	290	256	242	149	138	396	255	749	700
25	351	236	161	347	278	246	123	166	455	257	705	719
26	326	206	130	429	289	247	139	198	484	264	678	709
27	334	176	115	486	267	165	176	221	418	306	669	716
28	373	147	120	534	245	---	229	230	355	363	638	733
29	429	117	223	633	---	---	244	205	381	424	643	759
30	503	149	228	549	---	---	250	126	391	465	640	789
31	530	---	197	256	---	239	---	150	---	501	433	---
MEAN	562	409	244	352	331	213	203	214	370	384	645	630

WATER YEAR 1984

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	754	392	172	270	268	212	176	---	242	311	437	589
2	770	412	187	275	281	236	163	---	261	346	479	613
3	741	337	188	283	272	253	147	---	278	402	482	643
4	764	276	167	296	211	268	129	---	299	449	350	572
5	779	272	163	305	207	223	98	---	315	439	324	510
6	791	269	153	314	222	155	118	---	339	317	340	504
7	845	258	146	322	239	177	132	---	361	259	231	564
8	836	254	153	336	255	195	144	---	386	290	238	626
9	825	256	161	349	265	206	152	---	408	348	267	668
10	839	250	170	357	263	222	166	---	429	214	267	707
11	866	226	177	364	217	232	181	---	444	111	239	740
12	817	211	176	374	169	250	196	---	467	95	155	762
13	787	219	172	391	138	262	210	---	493	111	122	777
14	646	222	177	388	106	239	217	---	467	136	127	797
15	664	213	183	400	103	225	150	---	506	163	140	759
16	668	183	193	412	114	164	---	---	529	187	159	797
17	685	183	203	412	126	140	---	---	530	202	183	791
18	708	189	215	419	137	147	---	---	543	223	207	792
19	643	184	224	427	149	159	---	---	442	240	228	810
20	651	174	235	447	151	170	---	---	426	264	253	829
21	365	177	248	469	164	163	---	---	466	286	281	849
22	297	179	248	486	178	168	---	251	516	280	316	859
23	188	195	228	484	195	192	---	250	555	295	312	867
24	176	195	241	355	148	207	---	249	572	320	300	873
25	216	184	258	200	132	175	---	---	585	340	337	875
26	248	188	270	208	145	109	---	---	593	365	391	860
27	271	191	277	218	156	122	---	---	621	339	442	875
28	294	162	276	227	168	120	---	---	633	311	476	727
29	316	152	221	237	187	125	---	---	640	327	519	648
30	338	161	239	246	---	145	---	---	544	355	544	585
31	361	---	259	254	---	165	---	220	---	389	558	---
MEAN	585	225	206	340	185	188			463	281	313	729

NOTES

NOTES

MARYLAND GEOLOGICAL SURVEY
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Baltimore, Maryland 21218
(301) 554-5505

Selected Reports of Investigations:

3. Water resources of the Salisbury area, Maryland, by D.H. Boggess and S.G. Heidel, 1968, 69 p. 3.00
5. Chemical quality reconnaissance of water of Maryland streams, by J.D. Thomas, 1966, 61 p. 2.00
9. Chemical and physical character of municipal water supplies in Maryland, by J.D. Thomas and S.G. Heidel, 1969, 52 p. 1.00
10. Ground-water occurrence in the Maryland Piedmont, by L.J. Nutter and E.G. Otton, 1969, 56 p. 2.50
13. Extent of brackish water in the tidal rivers of Maryland, by W.E. Webb and S.G. Heidel, 1970, 46 p. ... 1.50
14. Geologic and hydrologic factors bearing on subsurface storage of liquid wastes in Maryland, by E.G. Otton, 1970, 39 p. 2.75
17. Water resources of Dorchester and Talbot Counties, Maryland: With special emphasis on the ground-water potential of the Cambridge and Easton areas, by F.K. Mack, W. E. Webb, and R. A. Gardner, 1971, 107 p. 5.25
18. Solid-waste disposal in the geohydrologic environment of Maryland, by E.G. Otton, 1972, 59 p. 3.00
19. Hydrogeology of the carbonate rocks, Frederick and Hagerstown Valleys, Maryland, by L.J. Nutter, 1973, 70 p. 3.50
20. Hydrogeology of the formation and neutralization of acid waters draining from underground mines of western Maryland, by E.F. Hollyday and S.W. McKenzie, 1973, 50 p. 2.25
24. Availability of fresh ground water in northeastern Worcester County, Maryland: With special emphasis on the Ocean City area, by J. M. Weigle, 1974, 64 p. 4.00
26. Hydrogeology of the Triassic rocks of Maryland, by L.J. Nutter, 1975, 37 p. 2.50
28. Digital simulation and prediction of water levels in the Magothy aquifer in Southern Maryland, by F.K. Mack and R.J. Mandle, 1977, 42 p. 3.00
31. Simulated changes in water level in the Piney Point aquifer in Maryland, by J.F. Williams III, 1979, 50 p. 6.25
33. A quasi three-dimensional finite-difference ground-water flow model with a field application, by G. Achmad and J.M. Weigle, 1979, 22 p. with appendix 6.50
34. The availability of ground water in western Montgomery County, Maryland, by E.G. Otton, 1981, 76 p. 5.75
35. Characteristics of streamflow in Maryland, by D.H. Carpenter, 1983, 238 p. 12.50
37. Geohydrology of the fresh-water aquifer system in the vicinity of Ocean City, Maryland, with a section on simulated water-level changes, by J.M. Weigle and G. Achmad, 1982, 56 p. 10.00
38. Hydrogeology, digital simulation, and geochemistry of the Aquia and Piney Point-Nanjemoy aquifer system in Southern Maryland, by F.H. Chapelle and D.D. Drummond, 1982, 100 p. 14.50
39. Hydrogeology of the upper Chesapeake Bay area, Maryland, with emphasis on aquifers in the Potomac Group, by E. G. Otton and R. J. Mandle, 1984, 62 p. 11.00
41. First report on the hydrologic effects of underground coal mining in southern Garrett County, Maryland, by M.T. Duigon and M.J. Smigaj, 1985, 99 p. 6.75

41-A. Hydrologic and mining data from an area of underground coal mining in Garrett County, Maryland, by S.N. Hiortdahl, 1988, 81 p. 8.00

43. Hydrogeology, digital solute-transport simulation, and geochemistry of the Lower Cretaceous aquifer system near Baltimore, Maryland, by F.H. Chapelle, 1985, 120 p. 13.50
45. Simulation of ground-water flow and base flow in weathered crystalline rock, upper Cattail Creek, Howard County, Maryland, by R.E. Willey and G. Achmad, 1986, 68 p. 8.50
46. Evaluation of the water-supply potential of aquifers in the Potomac Group of Anne Arundel County, Maryland, by F. K. Mack and G. Achmad, 1986, 111 p. 8.50