

HYDROLOGICAL, METEOROLOGICAL, AND GEOHYDROLOGICAL DATA FOR AN UNSATURATED
ZONE STUDY NEAR THE RADIOACTIVE WASTE MANAGEMENT COMPLEX,
IDAHO NATIONAL ENGINEERING LABORATORY, IDAHO--1987

by Linda C. Davis and John R. Pittman

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CONVERSION FACTORS AND ABBREVIATIONS

Units of measure used in this report may be converted to other units by using the following factors:

<u>Multiply</u>	<u>by</u>	<u>To obtain</u>
millimeter (mm)	0.03937	inch
centimeter (cm)	0.3937	inch
meter (m)	3.281	foot
kilometer (km)	0.6214	mile
square kilometer (km ²)	0.3861	square mile
milliliter (mL)	0.03382	ounce, fluid
liter (L)	33.82	ounce, fluid
cubic meter (m ³)	35.31	cubic foot
meter per second (m/s)	2.237	mile per hour
kilometer per hour (km/hr)	0.6214	mile per hour
gram (g)	0.03527	ounce, avoirdupois
gram per cubic centimeter (g/cm ³)	0.03613	pound per cubic inch
watts per meter squared (W/m ²)	2.064	calories per centimeter squared per day
angstrom (Å)	10 ⁻¹⁰	meter
curie (Ci)	3.7×10 ¹⁰	becquerel
bar	100.0	kilopascal

For temperature, degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) by using the formula °F = [(1.8)(°C)] + 32.

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 "Sea Level Datum of 1929."

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ABSTRACT

Since 1952, radioactive waste has been buried at the RWMC (Radioactive Waste Management Complex) at the Idaho National Engineering Laboratory in southeastern Idaho. In 1985, the U.S. Geological Survey, in cooperation with the U.S. Department of Energy, began a study of the geohydrology of the RWMC to provide a basis for estimating the extent of and the potential for migration of radionuclides in the unsaturated zone beneath the waste burial trenches and pits. This study is being conducted to provide hydrological, meteorological, and geohydrological data for the test trench area adjacent to the northern boundary of the RWMC.

During 1987, data were collected from the test trench area, where several types of instrumentation were installed in the surficial sediment in 1985. Hydrological data collected from both disturbed and undisturbed soil included measurements, recorded hourly and averaged every 12 hours, of soil temperature and soil-water potential from 28 thermocouple psychrometers placed at selected depths to about 6 m. Soil-moisture content measurements were collected biweekly in nine neutron-probe access holes with a neutron moisture depth gage. One additional neutron-probe access hole was installed during November 1987 to extend the area over which soil-moisture content measurements were made.

Meteorological data collected hourly and summarized daily included incoming and emitted long-wave radiation; incoming and reflected short-wave radiation; air temperature, relative humidity, and windspeed at 1 and 2 m above land surface; wind direction; and precipitation.

To describe grain-size distribution with depth, nine samples from neutron-probe access hole 1, and eight samples from the east lysimeter area were analyzed using sieve and pipette methods. Statistical parameters,

generalized carbonate content, color, particle roundness and sphericity, and mineralogic and clastic constituents were determined for each sample. Selected size fractions of some samples were analyzed by X-ray diffraction techniques to determine bulk and clay mineralogy.

INTRODUCTION

The RWMC (Radioactive Waste Management Complex) occupies about 0.6 km² of the INEL (Idaho National Engineering Laboratory) in southeastern Idaho (fig. 1). The RWMC is managed by the U.S. Department of Energy and operated by EG&G Idaho, Inc., a Department of Energy contractor at the INEL. Radioactive waste has been buried at the RWMC since 1952. From 1952 to 1970, low-level radioactive and transuranic wastes were buried in pits and trenches excavated into a veneer of surficial sediment. The sediment is underlain by a thick sequence of basaltic lava intercalated with sedimentary deposits. Since 1970, low-level radioactive waste has been buried and transuranic waste has been stored on above-ground asphalt pads in retrievable containers. From 1952 to 1986, about 180,000 m³ of low-level and transuranic radioactive wastes containing about 9.5 million Ci of radioactivity were buried at the RWMC. An estimated 335,000 L of organic wastes were also buried before 1970 (D.E. Kudera, EG&G Idaho, Inc., written commun., 1987).

Radionuclides have been detected in core and drill cuttings from several boreholes drilled into the surficial sediment and underlying basalt at the RWMC. Americium-241, plutonium-238, and plutonium-239, -240 (undivided) were detected in core samples from the 34-m deep sedimentary deposit (P.T. Laney, written commun., 1988). Because of the potential for the migration of radionuclides from the RWMC to the Snake River Plain aquifer about 177 m below land surface, a comprehensive study to determine the extent of and the potential for future migration was undertaken by the U.S. Geological Survey, in cooperation with the U.S. Department of Energy. The objectives and methods to be used in the multiphase program are described in a two-volume planning document by the U.S. Department of Energy, U.S. Geological Survey, and EG&G Idaho, Inc. (1983).

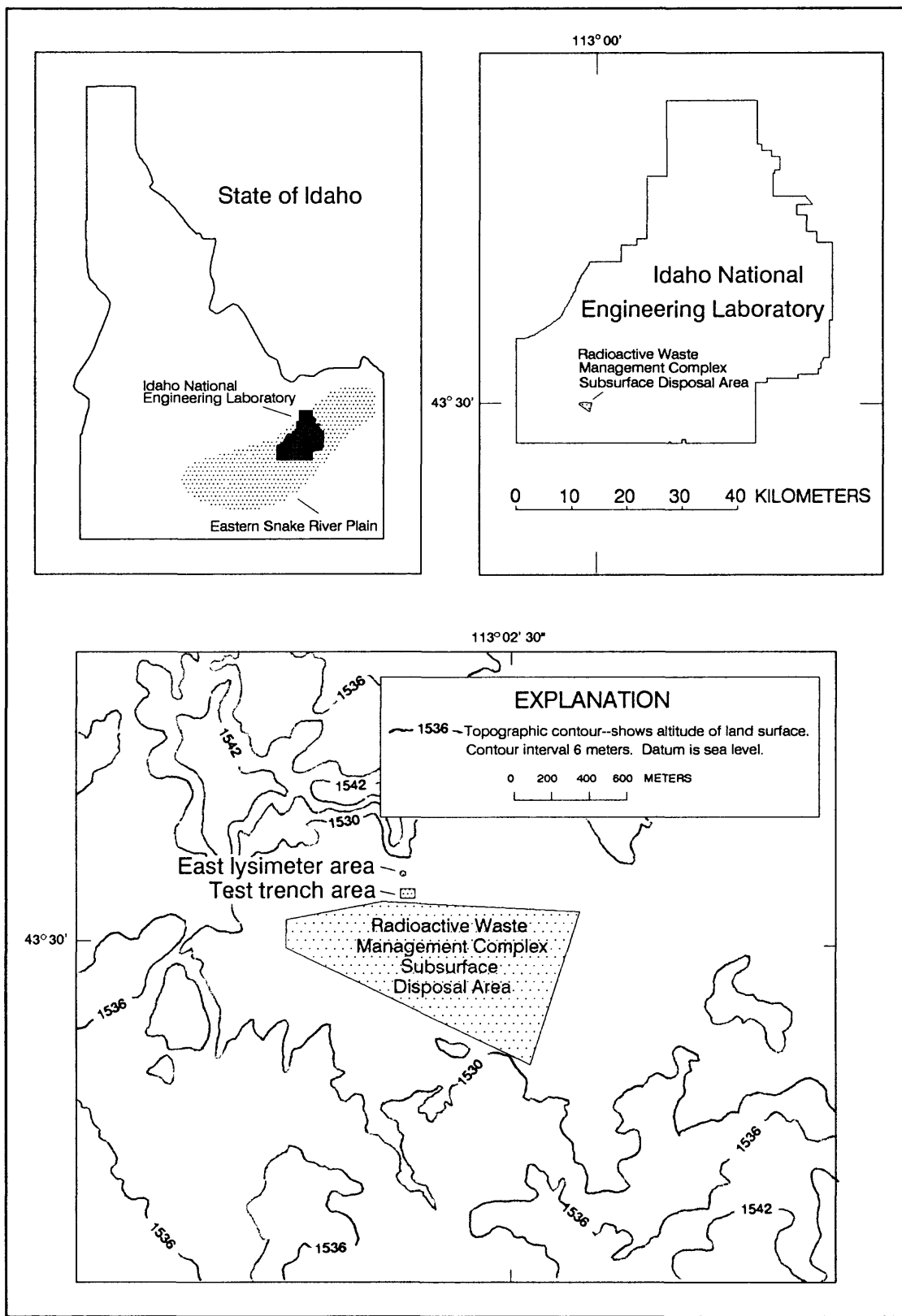


Figure 1.--Location of the eastern Snake River Plain, Idaho National Engineering Laboratory, and the relation of the test trench and east lysimeter areas to the Radioactive Waste Management Complex Subsurface Disposal Area.

Purpose and Scope

The purpose of this report is to present data needed to obtain a reliable estimate of the amount of water that infiltrates the surficial sediment and eventually recharges the aquifer. This is one of the primary factors influencing the migration of radionuclides in the unsaturated zone. The amount of water that reaches the buried waste depends on the amount of rainfall, snowmelt, evaporation, and transpiration, as well as the physical properties of the surficial sediment.

The study of the movement of water through the unsaturated surficial sediment is one of several investigations included in a comprehensive subsurface investigation program at the RWMC. This study provides data to determine the potential for downward movement of water through the surficial sediment and waste by quantifying ET (evapotranspiration) rates, soil-moisture content and variability with depth and time, soil-moisture flux, hydraulic conductivities, soil-moisture velocities, soil temperatures, and geohydrological properties of soil. This report presents hydrological, meteorological, and geohydrological data collected as part of the test trench study for 1987; these data are included in figures 4-17 and tables 1-38 at the end of this report.

Physical and Geologic Setting

The eastern Snake River Plain is a structural basin about 325 km long and 80 to 110 km wide. The eastern Snake River Plain is bounded on the north, south, and east by mountain ranges and high plateaus. Many of the high peaks in these ranges exceed 3,500 m in altitude. Streams within alluvial valleys separating the mountain ranges to the north and northwest drain onto the plain and the INEL in response to rainfall and snowmelt.

The eastern Snake River Plain is underlain by a sequence of basaltic lava flows interbedded with sedimentary deposits. Rhyolitic lava flows and tuffs crop out locally at the surface and occur at depth below the basalt-sediment sequence (Mann, 1986).

The INEL is located on the eastern Snake River Plain (fig. 1), and occupies about 2,300 km² of semiarid sagebrush-covered terrain on the north-western side of the plain. Based on NOAA (National Oceanic and Atmospheric Administration) records from 1950 to 1988, the INEL has an average annual total precipitation of 221 mm, with an average annual snowfall total of about 70 cm (Clawson and others, 1989).

The RWMC is located in the southwestern part of the INEL in a shallow topographic depression (fig. 1). The surficial sediment at the RWMC consists of about 0.6 to 7.0 m of clay, silt, sand, and gravel. Sedimentary deposits occur at depths of about 9-, 34-, and 73-m below land surface (designated sedimentary interbeds A-B, B-C, and C-D, respectively, by Anderson and Lewis [1989]). The 73-m deposit (interbed C-D) underlies all of the RWMC and may underlie a large part of the INEL. The 9- and 34-m deposits (interbeds A-B and B-C) are discontinuous at the RWMC, although the 34-m deposit underlies a large part of the RWMC. Other sedimentary deposits of lesser areal extent occur at depth at the RWMC and were designated sedimentary interbeds D-E, E-F, F-FG, FG-G, F-G, G-H, and H-I by Anderson and Lewis (1989). Boreholes and wells at the RWMC penetrate about 215 m of basaltic lava flows and sedimentary deposits. Most boreholes are completed in the upper 90 m of the unsaturated zone; thus, the extent of the 9-, 34-, and 73-m deposits are better defined than the deeper interbeds (Anderson and Lewis, 1989). Well INEL-1 (total depth 3,519 m), 16 km north-northeast of the RWMC, penetrates 658 m of intercalated basalt flows and sedimentary deposits before encountering a series of tuffaceous interbeds, welded tuffs, and rhyodacite ash flows (Mann, 1986). The basaltic lava flows and sedimentary deposits combine to form the Snake River Plain aquifer.

The specific study area for this project, designated the test trench area, is located adjacent to the northern boundary of the RWMC Subsurface Disposal Area (SDA) (fig. 1). The fenced study area measures 61 by 46 m with predominant vegetation consisting of sagebrush and crested wheatgrass. The thickness of the surficial sediment ranges from about 3 to 6 m. This sediment is underlain by basaltic lava flows intercalated with other sedimentary deposits.

Acknowledgments

Several faculty members of the Geology Department at Idaho State University were instrumental in data acquisition and reduction. In particular, H. Thomas Ore provided helpful discussions regarding grain-size analysis and statistical evaluation of the data and gave a comprehensive review of the manuscript. Paul Karl Link and Charles W. Blount provided access to X-ray diffraction equipment, laboratory space, and computer facilities. A.M. Sturrock, Jr., of the U.S. Geological Survey's Hydrologic Instrumentation Facility provided valuable assistance in setting up and "troubleshooting" the meteorological station.

HYDROLOGICAL AND METEOROLOGICAL INSTRUMENTATION AT THE STUDY AREA

Test Trenches

In 1985, two test trenches, designated as the east and west test trenches, were installed in the surficial sediment near the northern boundary of the RWMC SDA (fig. 2). A 61 by 46 m area was fenced around the test trenches to preserve natural vegetation and to prevent vehicular traffic. The conceptual design for these test trenches, described by Foster and Erickson (1980), Cahill (1982), Nichols (1982), and Lewis (1984), permits the placement of retrievable instrumentation in the unsaturated zone. The test trenches near the RWMC are modeled after those described by Morgan and Fischer (1984). Pittman (1989) describes in detail the installation design and procedures used at the test trenches. Retrievable instrumentation is placed horizontally from the vertical culverts into undisturbed soil and vertically from the horizontal culverts into undisturbed and disturbed soil (fig. 3). By installing the instrumentation horizontally from the vertical culvert through augered holes, disturbance of the vertical soil column was minimized. Instrumentation installed in the test trenches included thermocouple psychrometers with soil temperature sensors, and tensiometers. Neutron-probe access holes were installed near the perimeter of the test trenches to collect spatially distributed soil-moisture profiles and provide an independent method of

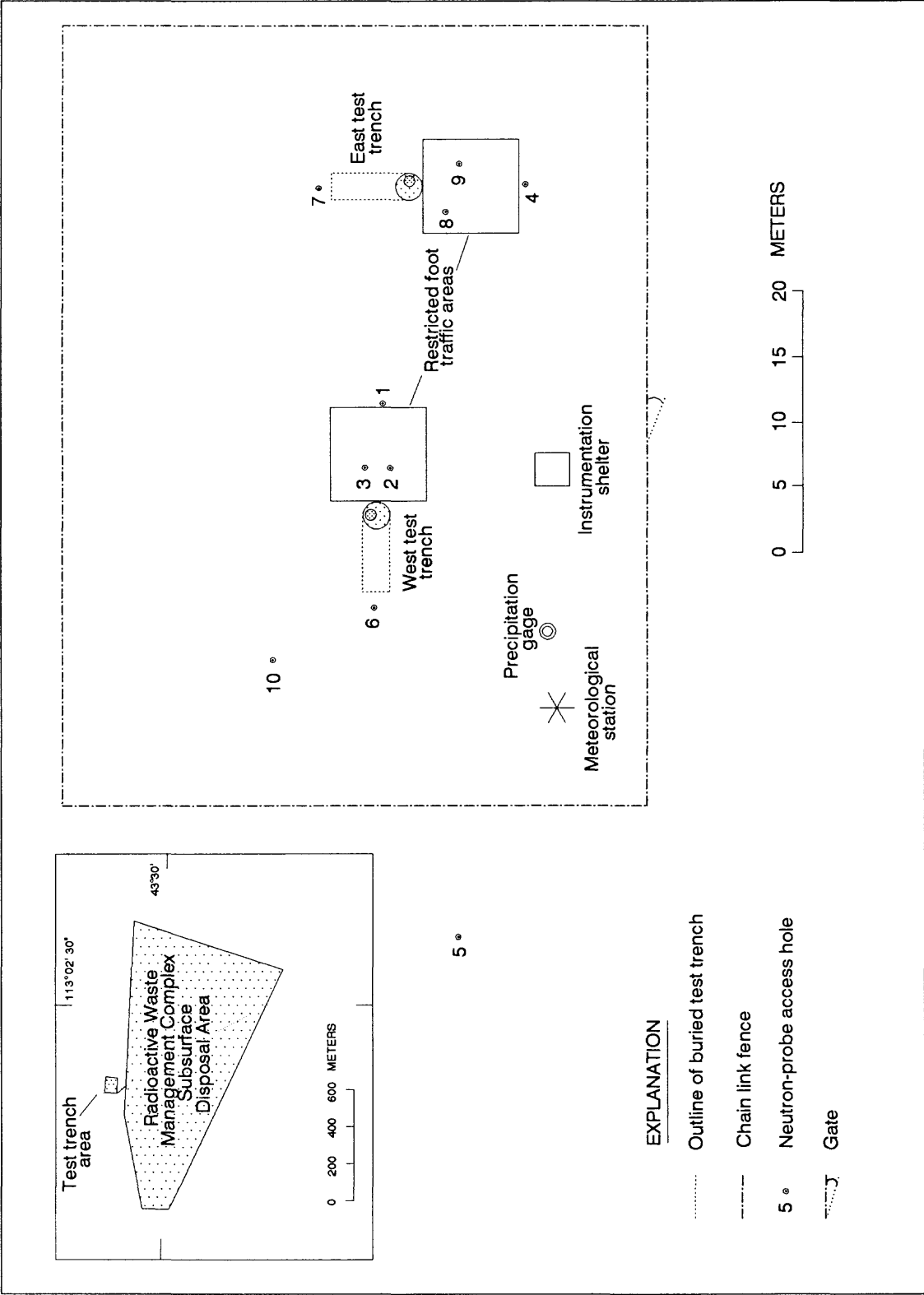


Figure 2.--Location of the test trenches near the Radioactive Waste Management Complex

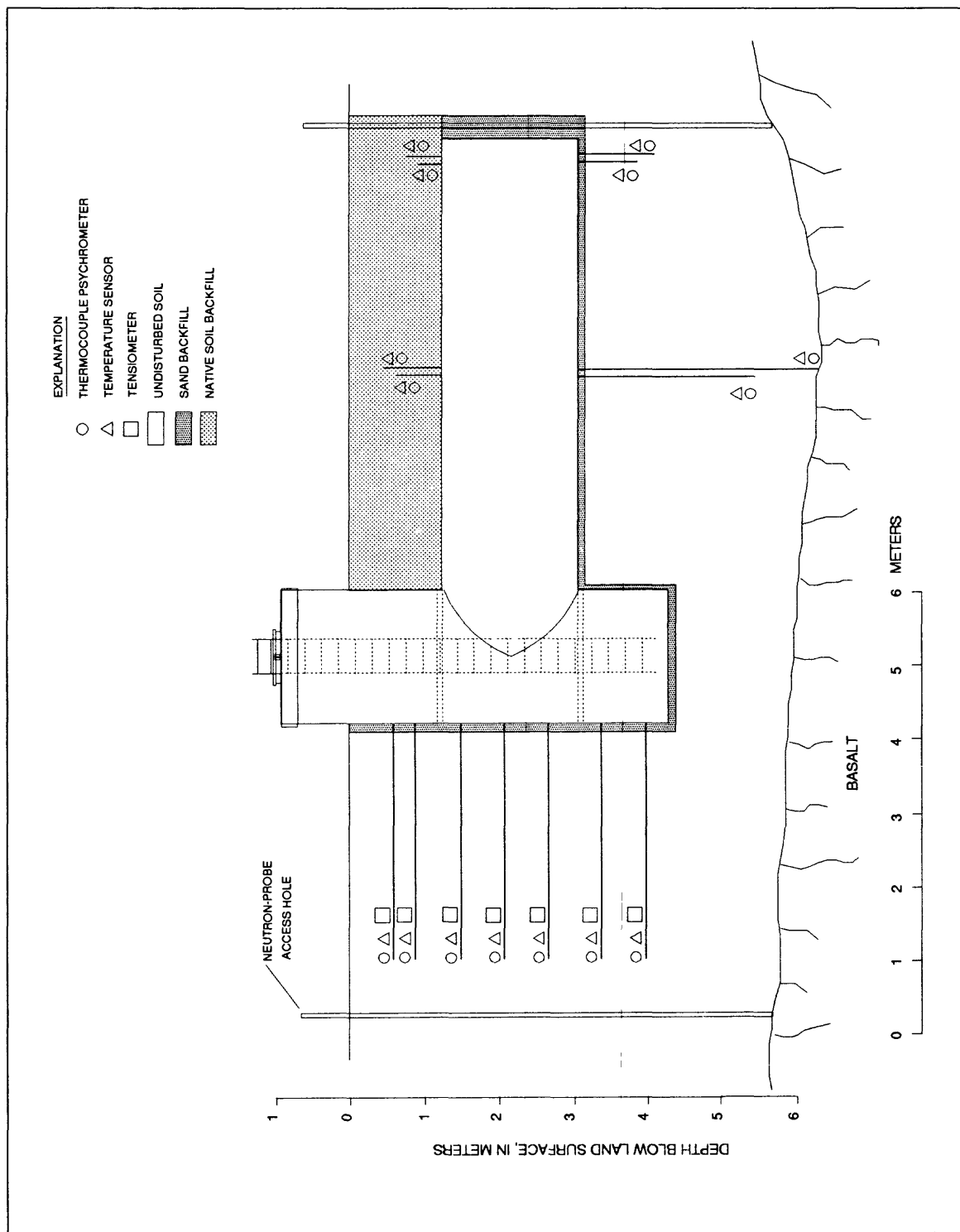


Figure 3.--Cross section of the west test trench.

verifying psychrometer data. Pittman (1989) gives a complete description of installation procedures for the various instrumentation used at the test trench area.

Thermocouple Psychrometers

The theory of psychrometric measurement of soil-water potential has been discussed by Rawlins (1966, 1972) and by Van Haveren and Brown (1972). Thermocouple psychrometers installed at the test trenches were of the screen-caged, Spanner type and were calibrated prior to installation using methods described by Meyn and White (1972). Regression equations based on these calibrations were developed for each psychrometer and were used to convert the psychrometer output to soil-water potential. The average standard error of the soil-water potentials calculated using the regression equations was ± 2.3 bars. Soil temperature was also measured by the thermocouple psychrometers.

Tensiometers

Tensiometers were installed in the west test trench (fig. 2) in the same manner as the psychrometers (Pittman, 1989), 3.2 m horizontally from the vertical culverts. When soil-water potentials were above the -1 bar limit of the thermocouple psychrometers (close to the 0.0 to -0.6 bar range of the tensiometers), attempts were made to take measurements. Soil conditions, however, were too dry (< -0.6 bar) during 1987 for the tensiometers to work.

Neutron-Probe Access Holes

In 1985, nine neutron-probe access holes (fig. 2) were installed in the test trench area to collect spatially distributed soil-moisture profiles and to provide an independent method to check the psychrometer moisture data. Soil cores from the neutron-probe access holes were collected for sediment

and moisture analyses. During 1987, neutron-probe access hole 10 was installed in undisturbed soil (fig. 2) to extend the area over which soil-moisture measurements were taken. Soil cores from neutron-probe access hole 10 were collected at 30-cm depth intervals.

The neutron probe used to measure soil-moisture content contains a source of fast high-energy neutrons and a slow (thermal) neutron detector. The probe is lowered into a cased hole to a specified depth and readings are taken. Hydrogen present in the soil water slows the neutrons down for detection by the probe. The moisture data collected from the neutron-probe access holes are displayed as raw neutron counts that can then be correlated with the water content of the cores (Campbell Pacific Nuclear, 1984, p. 1).

The soil cores taken when the access holes were augered were analyzed to determine the weight of the water, the dry weight, and the oven-dry bulk densities of the soil cores. Volumetric water content was calculated for each core based on the formula:

$$\theta = \frac{W_w Y_d}{W_d Y_w} \times 100 \text{ percent} \quad (1)$$

where θ = volumetric water content (percent),
 W_w = weight of water (grams),
 W_d = dry weight of soil (grams),
 Y_d = oven-dry bulk density (grams per cubic centimeter), and
 Y_w = water density (grams per cubic centimeter).

Calibration equations based on linear regressions of the neutron-probe data were developed using the calculated volumetric water content of the soil cores and the ratio of the raw count to the standard count calculated by the neutron moisture depth gage. A single calibration equation was developed for field data from the neutron probe. The raw counts were converted to volumetric water content using this calibration equation. The standard error of the volumetric water content based on the calibration

equation was ± 2.8 percent. Relative changes in soil-moisture content with time at the test trench area were proportioned to the changes in the raw neutron count.

Meteorological Station

The amount of precipitation lost to evaporation and transpiration must be determined to obtain an accurate estimate of the amount of water that infiltrates the surficial sediment and eventually recharges the aquifer. In 1985 and 1986, the meteorological station was configured for use with the Idso ET equation (Idso and others, 1979). The Idso ET equation detailed in the original study plan (U.S. Department of Energy and others, 1983) proved to be inapplicable for determining ET rates in a semiarid environment (Novak and Black, 1982). In January 1987, the existing meteorological station was disassembled and the instrumentation was sent to the manufacturer for repairs and recalibration. The heated rain gage remained online. A new meteorological instrument configuration was installed at the test trench area in August 1987 to provide data for use with several methods of determining evapotranspiration (Bowen, 1926; Penman, 1948; Jensen and Haise, 1963; Ritchie, 1972). The instrumentation consisted of precision spectral pyranometers used to measure incoming and reflected short-wave radiation; precision infrared radiometers used to measure incoming and emitted long-wave radiation; two chemical adsorption hygrometers and thermistors used to measure relative humidity and air temperature; two 3-cup anemometers used to measure windspeed; a wind vane used to measure wind direction; and a heated rain gage used to measure precipitation (cover illustration).

PROCEDURES FOR GEOHYDROLOGICAL ANALYSES OF SURFICIAL SEDIMENT

Grain-Size Distribution

To determine the variation in grain-size distribution with depth of surficial sediment at the test trench area, nine soil cores taken from neutron-probe access hole 1 were analyzed. Each sample was thoroughly

disaggregated by placing it in a mortar and gently pounding with a rubber-tipped pestle to avoid breaking individual grains. The sample was then passed through a series of U.S. Standard Testing sieves with mesh openings ranging from 4 to 0.062 mm, with each successively smaller screen representing a 1 phi interval. The phi scale ($\Phi = -\log_2$ [particle diameter in mm]) was devised by Krumbein (1934) as a tool to allow application of statistical parameters to sedimentary data (Krumbein and Pettijohn, 1938). The fractions larger than 0.062 mm were examined under a binocular microscope to determine whether the sample had been completely disaggregated. Because of the fine-grained nature of these sediments, it was necessary to recrush the sample and wet-sieve the sand-size fraction to remove any residual fine material. The remaining sand-size material was then air dried and passed through the testing sieves. The sieves were placed on a mechanical shaker and shaken for 15 minutes. Each size fraction was weighed and the weights were converted to weight percent of the total sample.

The silt- and clay-size fraction (less than 0.062 mm) was further analyzed using the pipette method of determining size distribution (Folk, 1980), which is based on settling velocities of grains of differing diameters in a fluid. Approximately 15 g of sample representative of the silt- and clay-size fraction was placed into a settling cylinder and a dispersing agent, sodium hexametaphosphate, was added to prevent flocculation. The cylinder was then filled with distilled water to exactly 1,000 mL and thoroughly mixed to ensure a homogeneous suspension. Samples consisting of 25 mL of the suspension were withdrawn at times determined from Wadell's modification of Stoke's Law of settling velocities (Krumbein and Pettijohn, 1938). These samples contained grains finer than the diameter of a particle which would have settled past the sampling depth at the predetermined sampling time. The samples were dried and weighed, and correction factors were applied to the data to account for the weight of the dispersing agent added and volume of sample withdrawn from the 1,000 mL suspension. The resultant sample weight for each of the size fractions was then converted to weight percent of the total sample.

Eight soil core samples from the east lysimeter area located north of the test trench area (fig. 1) were also analyzed for grain-size distribu-

tion. The soils in the lysimeter area are disturbed, thoroughly mixed, homogeneous soils taken from one of the borrow pits used to supply final trench cover material at the RWMC SDA. These soils were analyzed to determine the degree of grain-size uniformity with depth as compared to undisturbed soils at the test trench area.

The same analytical procedures were used as for neutron-probe access hole 1 samples, except the sand and gravel fractions were separated according to the grain-size scale used by engineers (American Geological Institute and others, 1982). Because this scale failed to provide sufficient detail in analyzing sand- and gravel-size fractions, sieves based on the phi scale or the Modified Wentworth Scale (American Geological Institute and others, 1982) were used for subsequent analysis of samples.

Statistical Parameters Based on Grain-Size Distribution

To evaluate the variability of grain-size distribution with depth for neutron-probe access hole 1 and east lysimeter samples, statistical parameters were obtained for each sample based on data collected from grain-size analysis. A cumulative curve of weight percent versus grade limits was plotted on probability paper for each sample data set. Because the probability scale is condensed in the center and extended at the ends, the cumulative curve is straightened out, allowing greater accuracy in determining statistical parameters from the curves. The probability plot also provides more information about the grain-size distribution at the extreme coarse and fine ends of a skewed distribution (Folk, 1980).

For each sample, the Graphic Mean, Inclusive Graphic Standard Deviation, and the Inclusive Graphic Skewness (Folk, 1980) were computed from the cumulative curves. The Graphic Mean (M_z) represents the mean grain diameter for the total sample and is calculated by the formula:

$$M_z = (\Phi_{16} + \Phi_{50} + \Phi_{84})/3 \quad (2)$$

where, for example, Φ_{16} is the value of Φ where the cumulative curve crosses

the 16th percentile line on the probability scale. The Inclusive Graphic Standard Deviation (σ_1) is a measure of grain-size sorting within a sample, and is calculated by the formula:

$$\sigma_1 = \frac{\Phi_{84} - \Phi_{16}}{4} + \frac{\Phi_{95} - \Phi_5}{6.6} \quad (3)$$

Folk (1980) suggested the following verbal limits for values obtained for σ_1 :

σ_1	under 0.35 Φ	very well sorted
	0.35 - 0.50 Φ	well sorted
	0.50 - 0.71 Φ	moderately well sorted
	0.71 - 1.0 Φ	moderately sorted
	1.0 - 2.0 Φ	poorly sorted
	2.0 - 4.0 Φ	very poorly sorted
	over 4.0 Φ	extremely poorly sorted

The Inclusive Graphic Skewness (Sk_1) is a measure of the degree of asymmetry of a curve, and its mathematical sign indicates whether it is coarse skewed or fine skewed. A perfectly symmetrical curve would have a value of 0.00. The Inclusive Graphic Skewness is calculated by the formula:

$$\frac{\Phi_{16} + \Phi_{84} - 2\Phi_{50}}{2(\Phi_{84} - \Phi_{16})} + \frac{\Phi_5 + \Phi_{95} - 2\Phi_{50}}{2(\Phi_{95} - \Phi_5)} \quad (4)$$

Folk (1980) suggested the following verbal limits for skewness:

+1.00 to	+0.30	strongly fine skewed
+0.30 to	+0.10	fine skewed
+0.10 to	-0.10	near symmetrical
-0.10 to	-0.30	coarse skewed
-0.30 to	-1.00	strongly coarse skewed

Sediment Characteristics

Each bulk sample and sand-size fraction separated through grain-size analysis was examined under a binocular microscope to determine generalized carbonate content, color, roundness and sphericity, and mineralogic and

clastic components. Carbonate content was qualitatively estimated by saturating part of the sample with a 10-percent solution of hydrochloric acid and determining the relative degree of effervescence of the sample. Descriptive terms such as slight, moderate, and strong reactions were assigned to each sample or size fraction. Color was determined using the Geological Society of America's Rock-Color Chart (1980), which is a visual comparison chart with numerical designations and descriptive names based on color value (degree of lightness), hue (tint), and chroma (degree of color saturation). Roundness and sphericity were estimated through visual comparison of the bulk sample or size fraction with the chart presented by Krumbein and Sloss (1963, p. 111). Minerals and clastic components comprising the bulk sample were identified through visual determination under the binocular microscope supplemented with X-ray diffraction analysis of selected samples.

X-ray Diffraction

Selected bulk and sand-size fractions of samples from neutron-probe access hole 1 and the east lysimeter area were analyzed by X-ray diffraction techniques (Bartholomay and others, 1989) to confirm the presence of minerals identified by visual determination, and to identify additional minerals not observed with the binocular microscope.

Because the silt- and clay-size fractions of the samples are too fine grained for accurate visual determination of mineralogic components, selected samples of these size fractions were analyzed by X-ray diffraction. The size fraction less than 0.062 mm was ground with a mortar and pestle, packed into an aluminum sample holder, and scanned with a diffractometer using copper K α (wavelength of the characteristic line) radiation. Diffractograms were prepared and minerals identified from characteristic standard peaks. Because peaks characteristic of smectite and chlorite clays often overlap when both are present in a sample, the types of clays are difficult to distinguish. However, when smectite clays are exposed to an ethylene glycol atmosphere for 24 hours, the mineral lattice expands from 14 to 17 Å as ethylene glycol replaces water in the lattice. To distinguish

between smectite and chlorite clays, some samples whose diffractograms indicated the presence of clays (undifferentiated) were glycolated and rescanned. Bartholomay and others (1989) describe the glycolation procedure in detail.

HYDROLOGICAL DATA

During 1987, soil temperature at each thermocouple psychrometer was recorded hourly and averaged over 12-hour periods. The temperature of the undisturbed soil was measured at selected depths ranging from 0.6 to 4.0 m below land surface 3.2 m horizontally from the vertical culverts and from 3.8 to 6.1 m (the sediment-basalt contact) below the trenches. Undisturbed soil temperatures measured by psychrometers located 3.2 m horizontally from the east test trench vertical culvert ranged from 20.4 to -0.6 °C at 0.6 m below land surface, and from 11.9 to 6.2 °C at 3.4 m (fig. 4). Undisturbed soil temperatures measured 3.2 m horizontally from the west test trench vertical culvert ranged from 20.0 to -1.4 °C at 0.6 m and from 11.3 to 6.4 °C at 4.0 m. The temperatures of the disturbed soils above both horizontal culverts were recorded at depths ranging from 0.5 to 0.9 m below land surface. Disturbed soil temperatures ranged from 21.5 to -3.5 °C at 0.5 m below land surface. Soil temperatures at the test trenches for 1987 are listed in tables 1-6.

Soil-water potential from each thermocouple psychrometer was recorded hourly and was averaged over 12-hour periods. Fluctuations in soil-water potentials were largest in the shallow, disturbed sediment overlying the horizontal culverts where soil-water potentials ranged from -1 bar, the psychrometer limit, to about -19 bars. Fluctuations were smaller in the undisturbed sediment 3.2 m horizontally from the vertical culverts, where soil-water potentials ranged from greater than -1 bar to about -18 bars. Selected soil-water potentials for undisturbed soil at the east test trench are shown in figure 5. Soil-water potentials at the test trenches during 1987 are listed in tables 1-6.

Soil-moisture content data obtained with a neutron probe were collected on a biweekly basis in 1987. Moisture profiles were generally driest in September and wettest in April after recharge from snowmelt or rainfall (tables 7-16). Changes in moisture content were greatest at shallow depths and attenuated with depth (figs. 6-14). During 1987, few changes in the moisture profiles were observed at depths below 3 m. Soil-moisture content data for neutron-probe access holes 1-10 are shown in tables 7-16.

METEOROLOGICAL DATA

The average annual precipitation at the nearest weather station located 10 km from the RWMC is 221 mm based on NOAA records from 1950 to 1988 (Clawson and others, 1989). The annual precipitation at the test trench area for 1987 was 176 mm; about 80 percent of the average annual precipitation (fig. 15). The maximum precipitation event at the test trench area for 1987 occurred November 2 and 3 as snowfall with a total water content of 16 mm. The average daily air temperatures at 2 m above land surface ranged from 26.7 °C on August 6 to -14.6 °C on December 25. Selected meteorological data for 1987 at the test trench area are shown in table 17.

GEOHYDROLOGICAL DATA

Grain-size distribution data indicate that neutron-probe access hole 1 samples are fine grained (table 18). Individual samples had between 17.5 and 39.9 weight percent of particles in the sand-size range (0.062-2.00 mm), 39.2 to 65.6 weight percent in the silt-size range (0.002-0.062 mm), and 9.5 to 27.3 weight percent in the clay-size range (<0.002 mm).

Statistical parameters based on grain-size distribution of neutron-probe access hole 1 samples are shown in table 19. These parameters were calculated on the basis of cumulative weight percent versus grain-size grade limit curves plotted on probability scales. The Graphic Mean grain diameter of the samples ranged from 0.014 mm (6.2 Φ) to 0.026 mm (5.3 Φ), and the Inclusive Graphic Standard Deviation ranged from 2.3 to 2.9 Φ , indicating

that all the samples are very poorly sorted. Inclusive Graphic Skewness values ranged from -0.01 to +0.46, indicating that the grain-size distributions of these samples are near symmetrical to strongly fine skewed. Most samples, however, are fine skewed. The distribution of the major grain-size classes (sand, silt, and clay) shows general trends of variable sand and silt content and slightly increasing clay content with depth (fig. 16).

Grain-size data from the east lysimeter samples also show the fine-grained nature of these sediments (table 20). The uppermost two samples from this hole contained as much as 2.4 weight percent gravel (>4.75 mm); no gravel was found below the 0.32 m sample depth. Sand-size particles (0.074-4.75 mm) comprise between 12.4 and 31.3 weight percent of individual samples, silt-size particles comprise between 57.1 and 74.9 weight percent, and clay-size particles comprise between 11.0 and 13.1 weight percent.

Statistical parameters based on grain-size distribution of east lysimeter samples are shown in table 21. The Graphic Mean grain diameter ranged from 0.024 mm (5.4 Φ) to 0.035 mm (4.8 Φ), with the Inclusive Graphic Standard Deviation ranging from 1.9 to 2.2 Φ , indicating the soils are poorly sorted to very poorly sorted. The Inclusive Graphic Skewness values ranged from +0.20 to +0.43, signifying fine skewed to strongly fine skewed distributions. The sand and silt contents of the east lysimeter samples are fairly consistent for the uppermost four samples analyzed, but the relative proportion varies below about 0.5 m below land surface (fig. 17). The clay content is nearly uniform with depth.

Neutron-probe access hole 1 samples from 0.3 to 1.2 m below land surface reacted moderately to strongly to hydrochloric acid; below 1.5 m, there was either a very slight reaction or no reaction at all. The size fractions of individual samples examined vary in roundness and sphericity, and range from rounded, high sphericity to angular, low sphericity. The individual bulk samples are generally subangular or subrounded. The samples are generally yellow brown in color. Samples from neutron-probe access hole 1 are composed predominantly of quartz, plagioclase, orthoclase, calcite, smectite, illite, kaolinite, pyroxene, and basalt fragments. Minor amounts of quartzite, dolomite and muscovite are present in some samples. Sediment

characteristics for neutron-probe access hole 1 samples are given in tables 22-30.

East lysimeter samples reacted moderately to strongly to hydrochloric acid. Individual bulk samples are subangular to subrounded, with moderate sphericity, and are generally yellow-olive grey in color. The principal mineralogic and clastic components are quartz, plagioclase, orthoclase calcite, dolomite, smectite, illite, kaolinite, biotite, obsidian, quartzite, and basalt fragments. Magnetite, pyroxene, olivine, and chlorite may be present in some samples, however analyses were inconclusive. Sediment characteristics for east lysimeter samples are given in tables 31-38.

SUMMARY

The RWMC occupies about 0.6 km² of the INEL in southeastern Idaho. Radioactive waste has been buried at the RWMC since 1952. Radionuclides have been detected in soil and rock samples from several boreholes drilled into the surficial sediment and underlying rock units at the RWMC. In 1985, the U.S. Geological Survey, in cooperation with the U.S. Department of Energy, began a comprehensive study at the RWMC to determine the potential for and extent of migration of radionuclides from waste pits and trenches through the unsaturated zone to the Snake River Plain aquifer, 177 m below land surface.

This study was conducted to obtain hydrological, meteorological, and geohydrological data which will allow determination of a reliable estimate of the amount of water that infiltrates the surficial sediment and eventually recharges the aquifer. The data will be used to quantify ET rates, soil-moisture content and variability, soil-moisture flux, hydraulic conductivities, soil-moisture velocities, soil temperatures, and soil physical properties.

In 1985, two test trenches and several types of instrumentation were installed in the surficial sediment adjacent to the RWMC to collect hydro-

logical data from undisturbed and disturbed soil. Data collected during 1985-86 were presented by Pittman (1989). During 1987, soil temperature and soil-water potential measurements were recorded hourly and averaged every 12 hours from 28 sensors placed at selected depths from 0.5 to 6.1 m. Biweekly soil-moisture content measurements were collected in 10 neutron-probe access holes using a neutron moisture depth gage. A meteorological station was installed to collect data including incoming and emitted long-wave radiation; incoming and reflected short-wave radiation; air temperature, relative humidity, and windspeed at 1 and 2 m above land surface; wind direction; and precipitation. These data were measured hourly and summarized daily.

Temperatures in undisturbed soil at the test trenches ranged from 20.4 to -1.4 °C, and temperatures in disturbed soil ranged from 21.5 to -4.2 °C. Soil-water potentials in undisturbed soils 3.2 m horizontally from the vertical culverts at the test trenches ranged from the sensor detection limit of -1 bar to about -18 bars. In disturbed soil, soil-water potentials ranged from -1 bar to -24 bars. During 1987, few changes in the soil-moisture profiles were observed at depths below 3 m. The annual precipitation at the test trench area was 176 mm in 1987, about 80 percent of normal. Average daily air temperatures ranged from 26.7 to -14.6 °C.

Samples from neutron-probe access hole 1 and the east lysimeter area were analyzed for grain-size distribution using sieve and pipette methods, and statistical parameters were determined for each sample. Sediment characteristics, including generalized carbonate content, color, roundness and sphericity, and mineralogic and clastic constituents were also determined.

Neutron-probe access hole 1 samples are fine grained, with mean grain diameters ranging from 0.014 to 0.026 mm. All samples are very poorly sorted with skewness ranging from near symmetrical to strongly fine skewed. The samples between 0.3 and 1.2 m below land surface react moderately to strongly with hydrochloric acid; those below 1.5 m react slightly or not at all. Overall, neutron-probe access hole 1 samples are yellow brown in color. Individual bulk samples are subrounded to subangular, with moderate

sphericity. The principal mineralogic and clastic components are quartz, plagioclase, orthoclase, calcite, smectite, illite, kaolinite, dolomite, and basalt fragments.

East lysimeter samples are also fine grained; mean grain diameters ranged from 0.024 to 0.035 mm. These samples are poorly to very poorly sorted. The uppermost samples to about 0.5 m below land surface are fine skewed, whereas samples below 0.5 m are strongly fine skewed. Samples react moderately to strongly with hydrochloric acid, and are yellow-olive grey in color. Individual samples are subrounded to subangular with moderate sphericity. The mineralogic and clastic components of the east lysimeter samples are mainly quartz, plagioclase, orthoclase, calcite, dolomite, smectite, illite, kaolinite, biotite, obsidian, quartzite, and basalt fragments. Magnetite, pyroxene, olivine, and chlorite may also be present.

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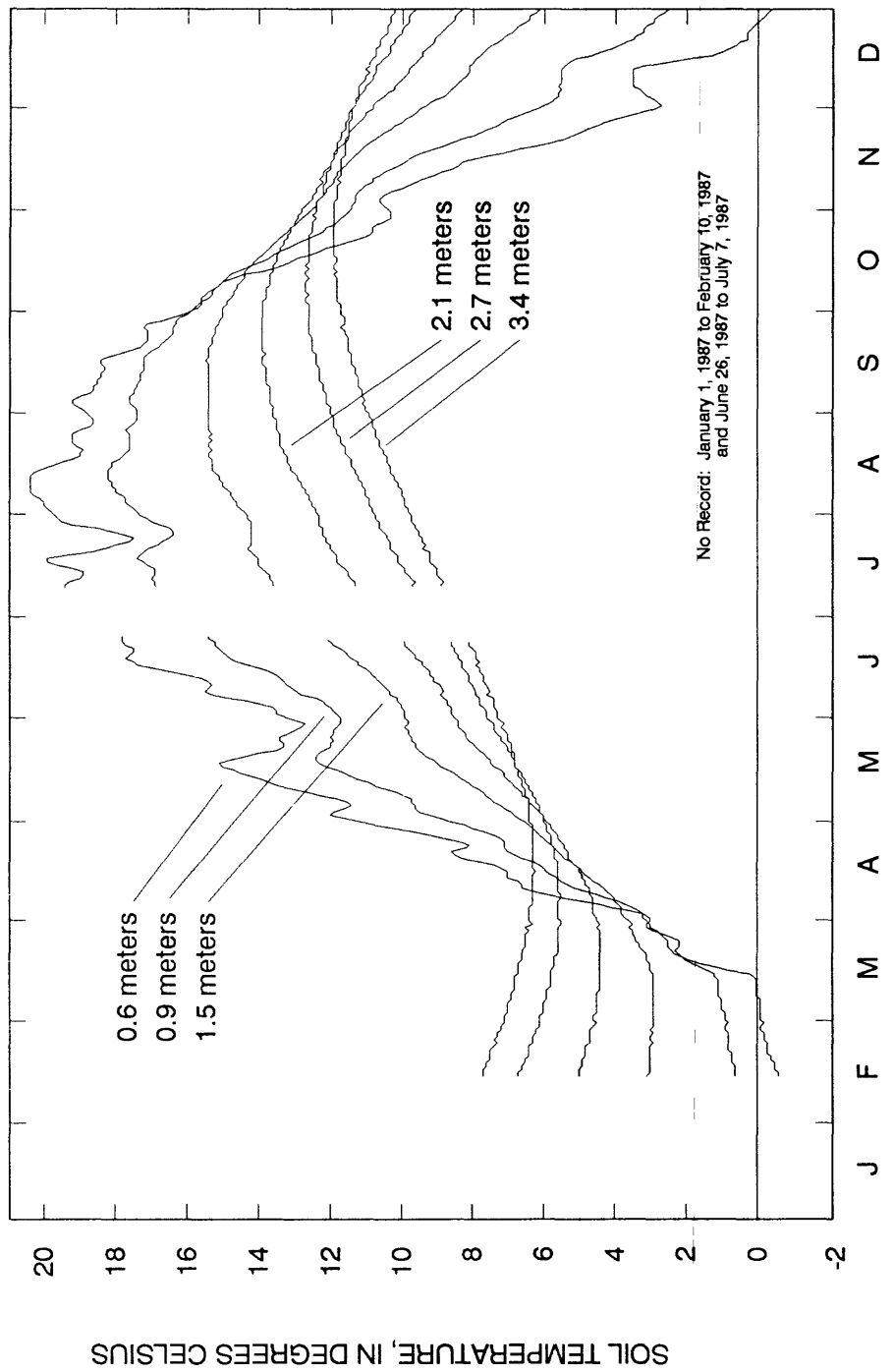


Figure 4.-- Variation of soil temperature with depth and time in undisturbed soil, 3.2 meters from the vertical culvert at the east test trench (noon data only).

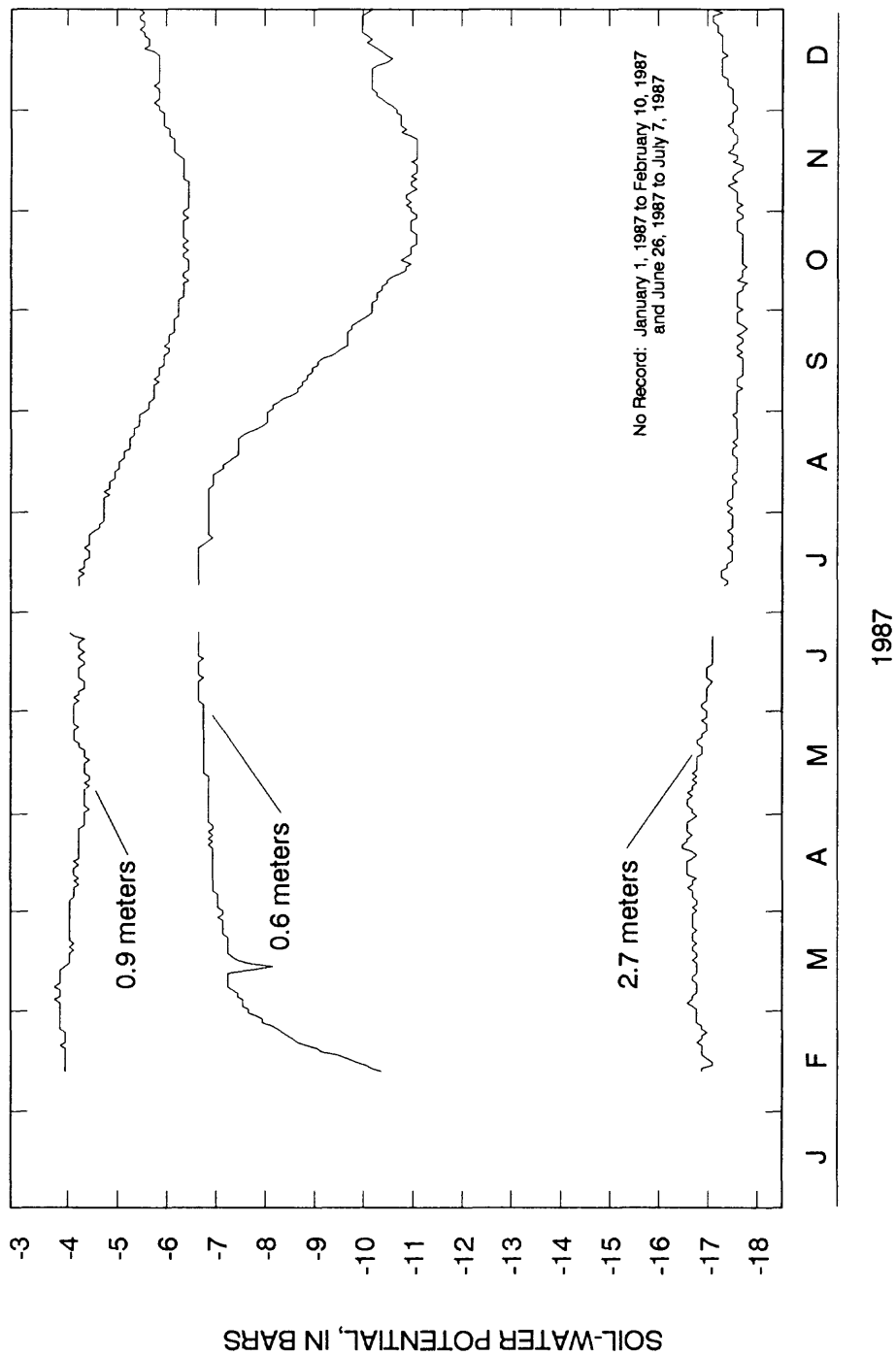


Figure 5.-- Variation of soil-water potential with time and at selected depths in undisturbed soil at the east test trench (noon data only).

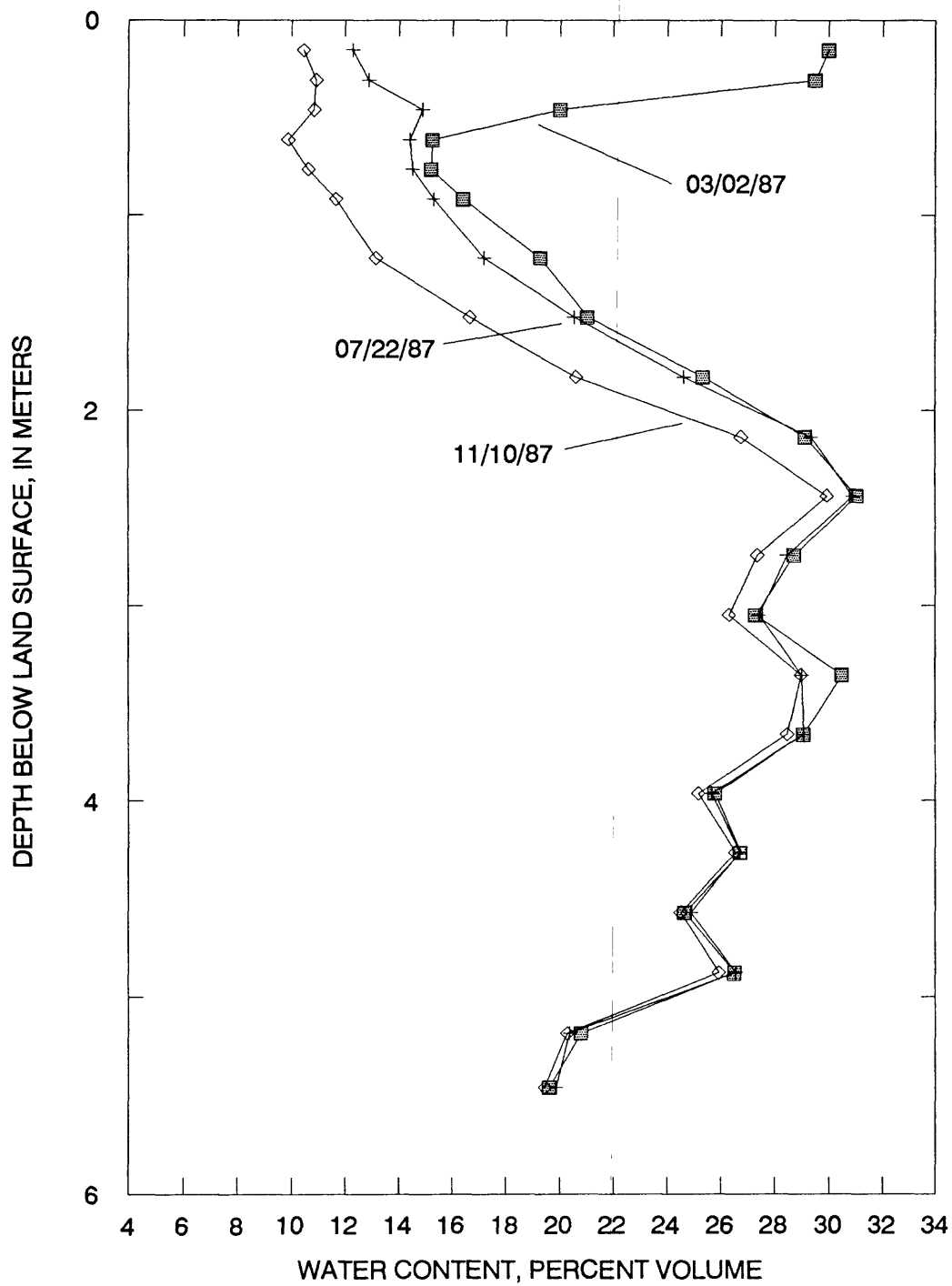


Figure 6.--Variation of soil-moisture content with depth at selected times for neutron-probe access hole 1.

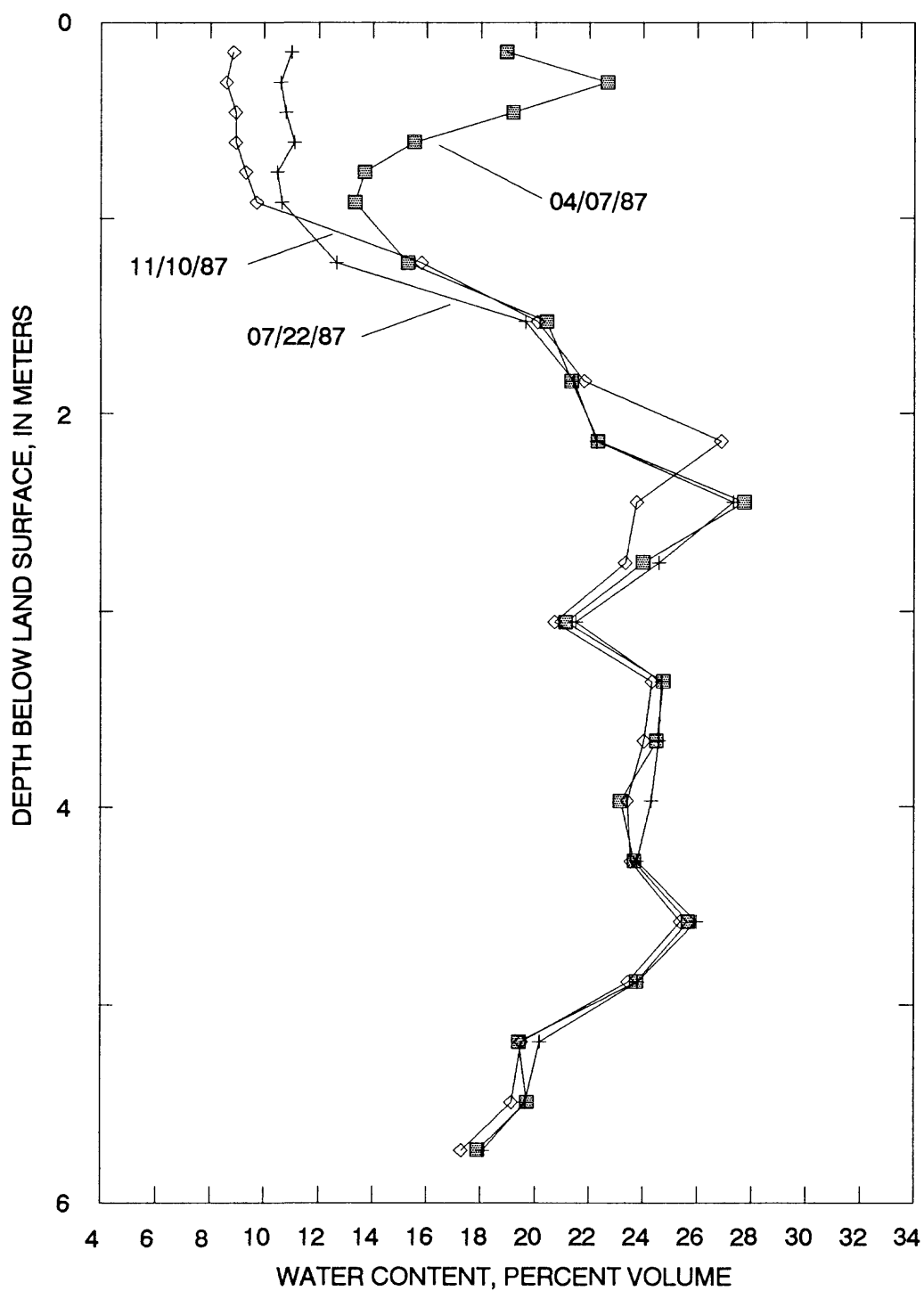


Figure 7.--Variation of soil-moisture content with depth at selected times for neutron-probe access hole 2.

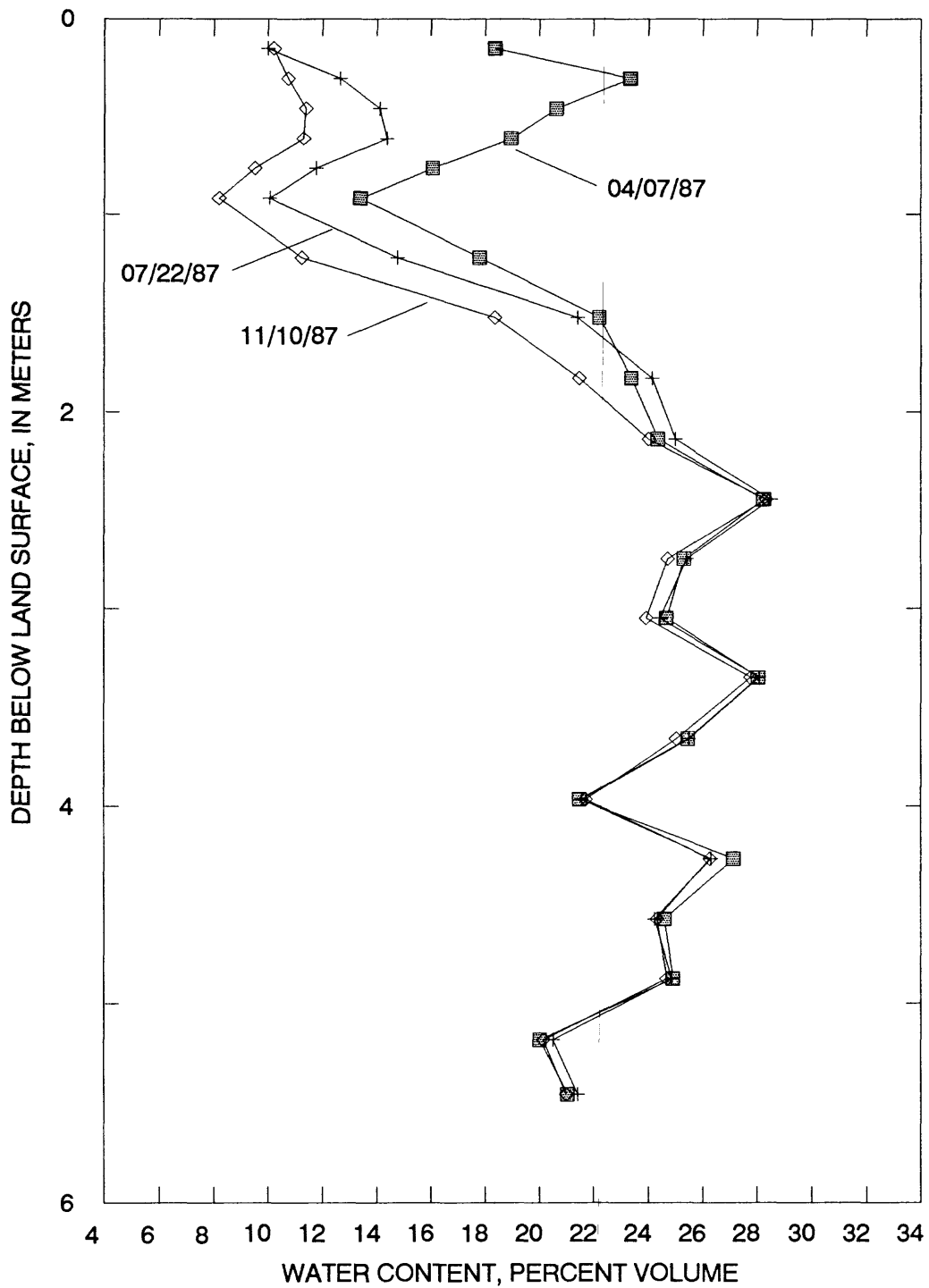


Figure 8.--Variation of soil-moisture content with depth at selected times for neutron-probe access hole 3.

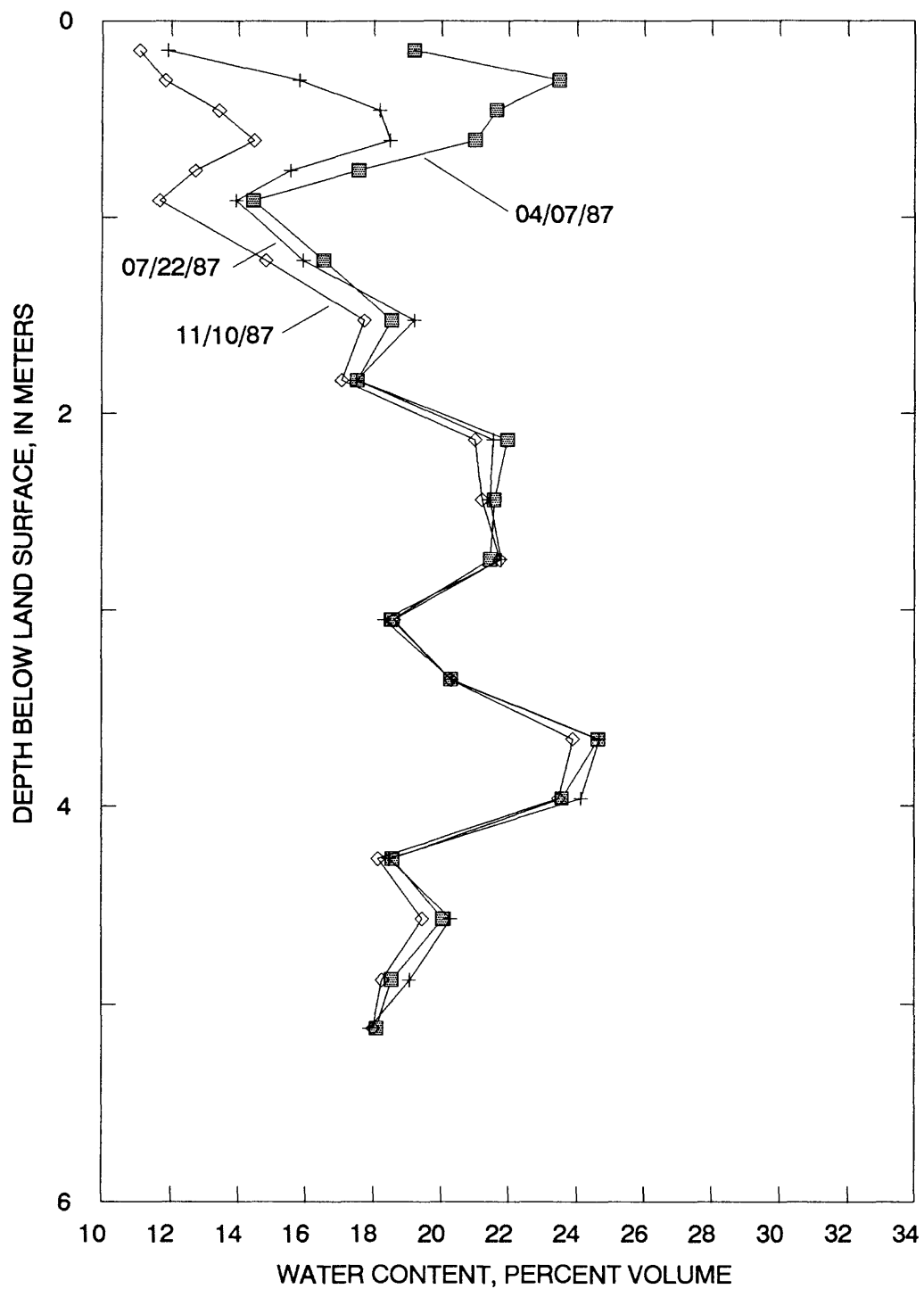


Figure 9.--Variation of soil-moisture content with depth at selected times for neutron-probe access hole 4.

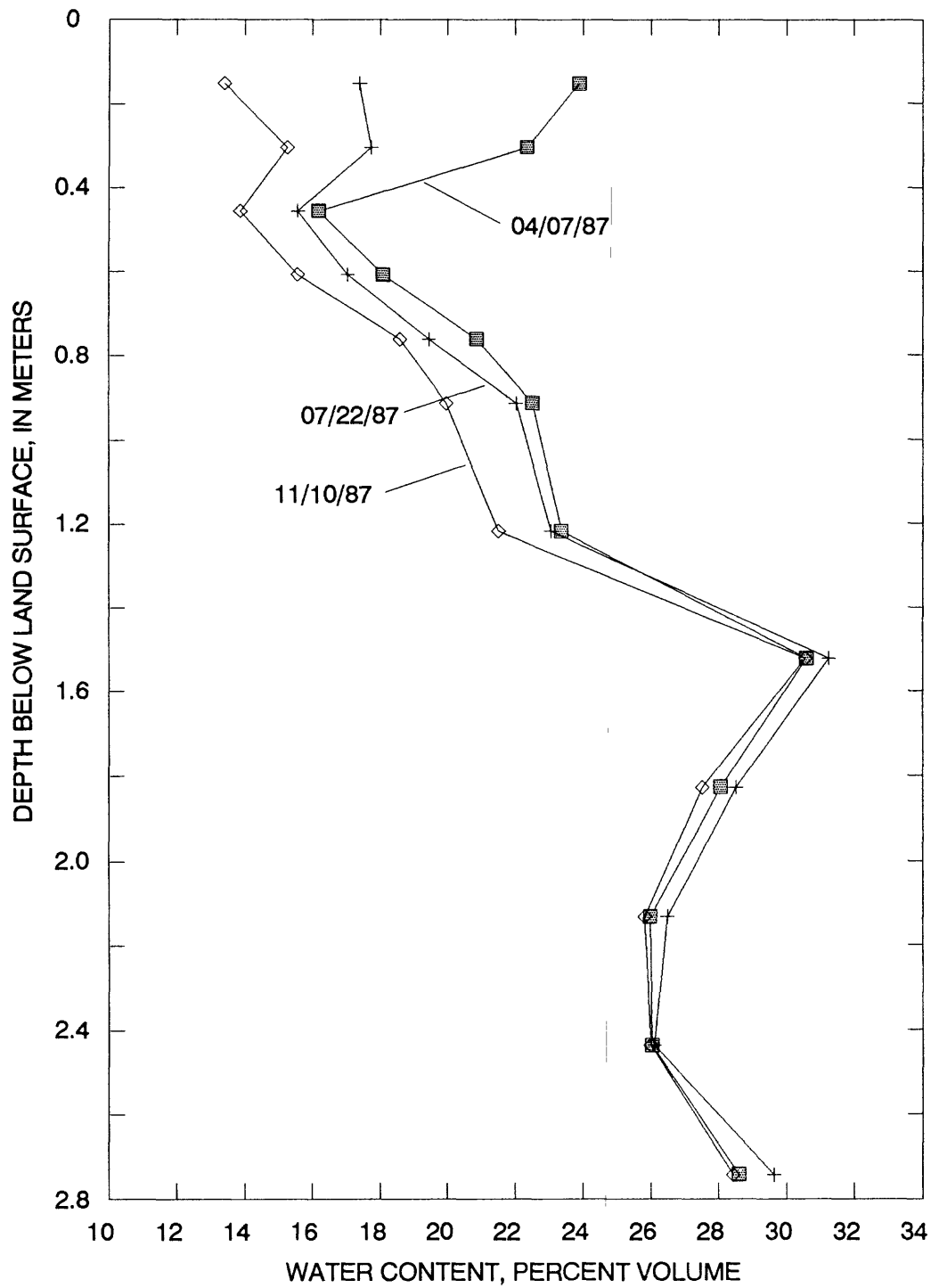


Figure 10.--Variation of soil-moisture content with depth at selected times for neutron-probe access hole 5.

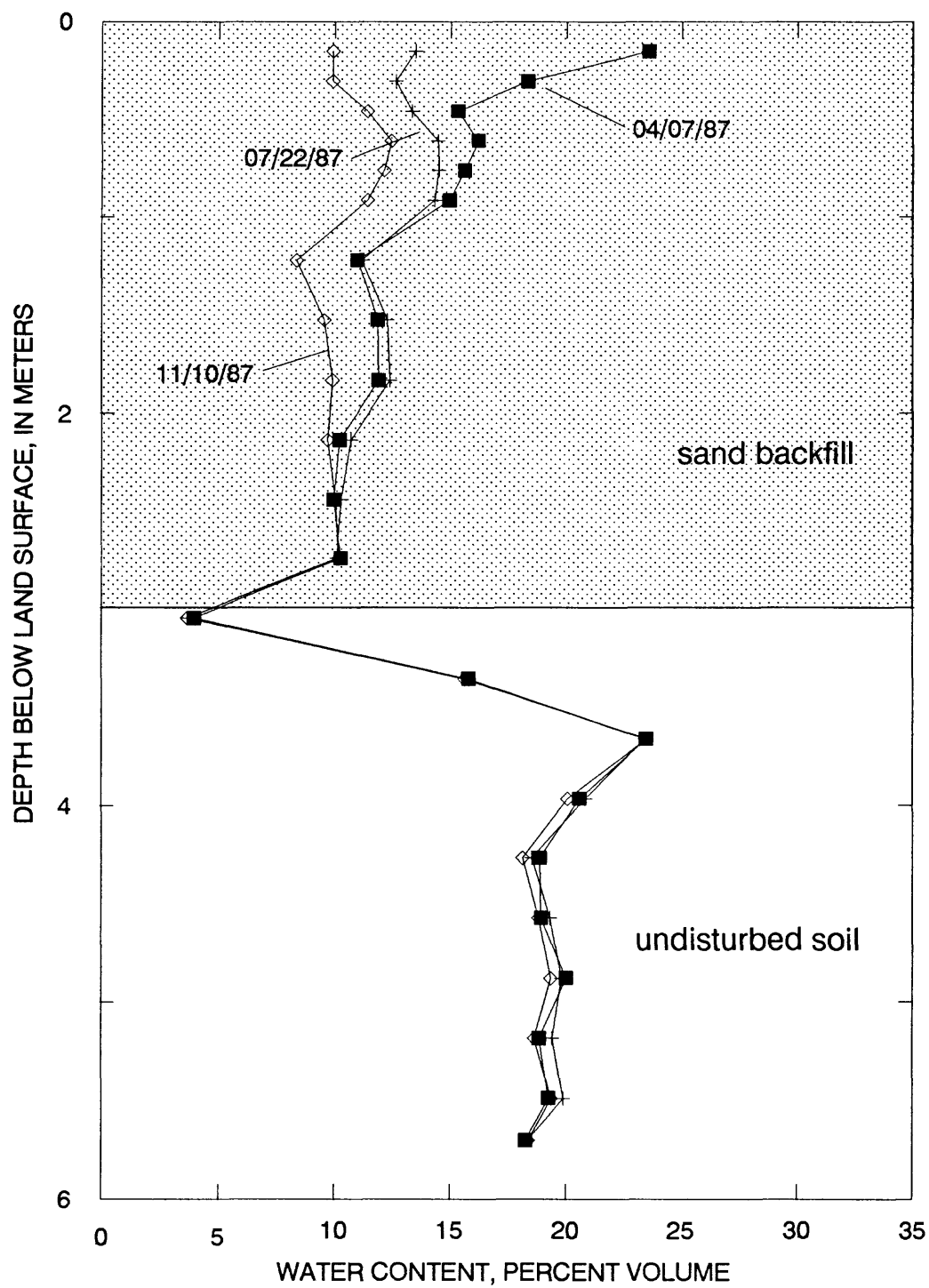


Figure 11.--Variation of soil-moisture content with depth at selected times for neutron-probe access hole 6.

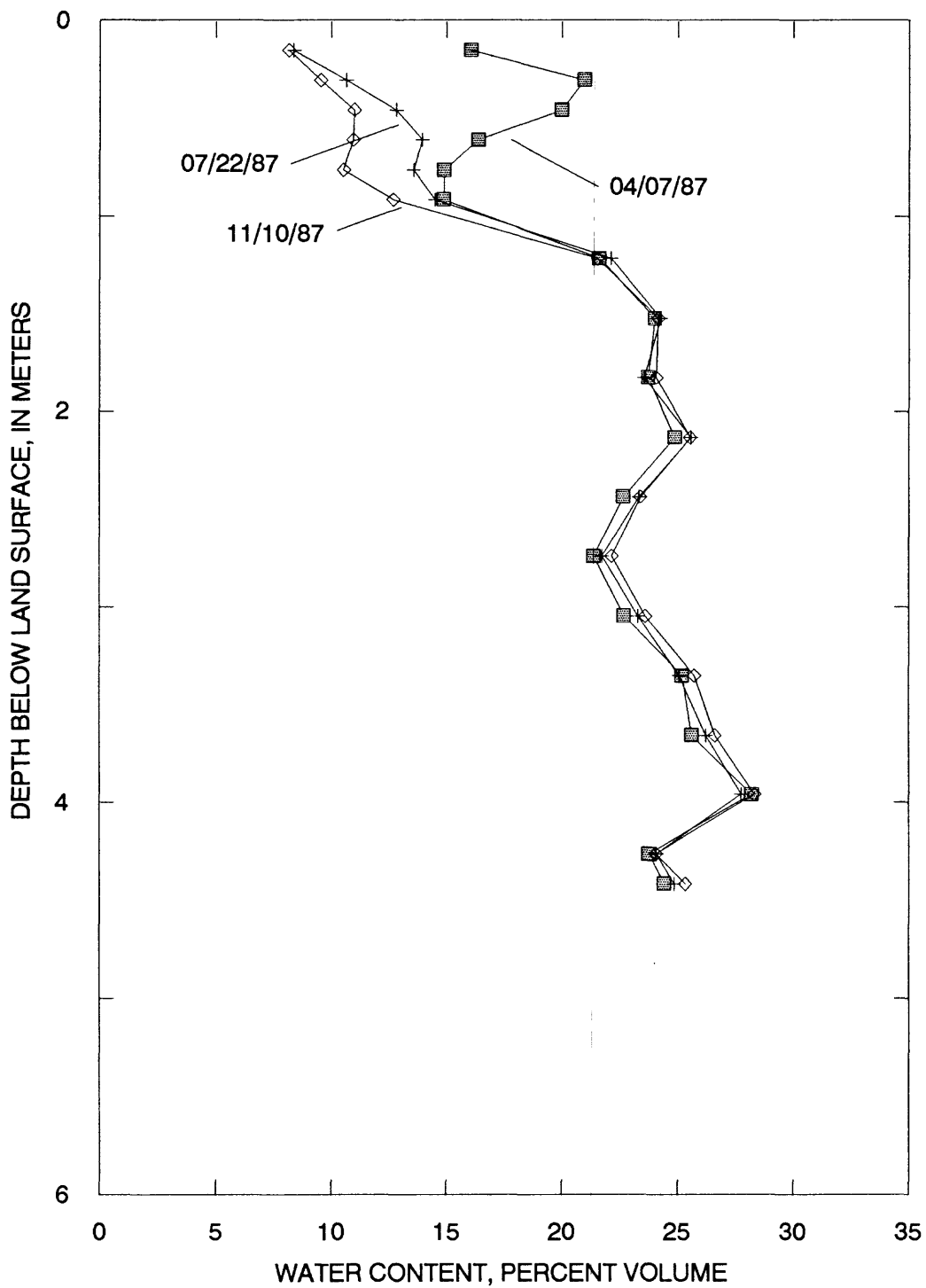


Figure 12.--Variation of soil-moisture content with depth at selected times for neutron-probe access hole 7.

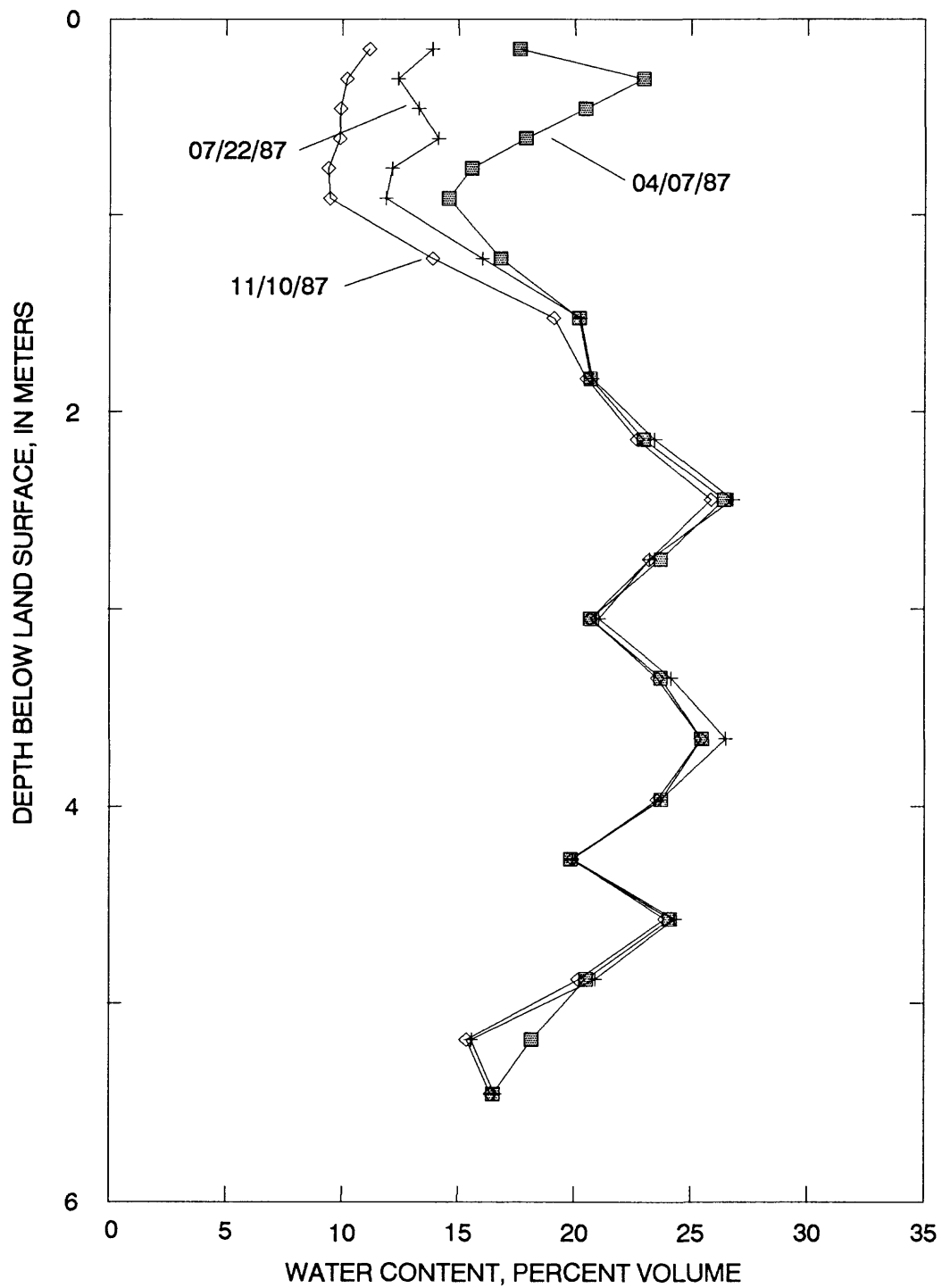


Figure 13.--Variation of soil-moisture content with depth at selected times for neutron-probe access hole 8.

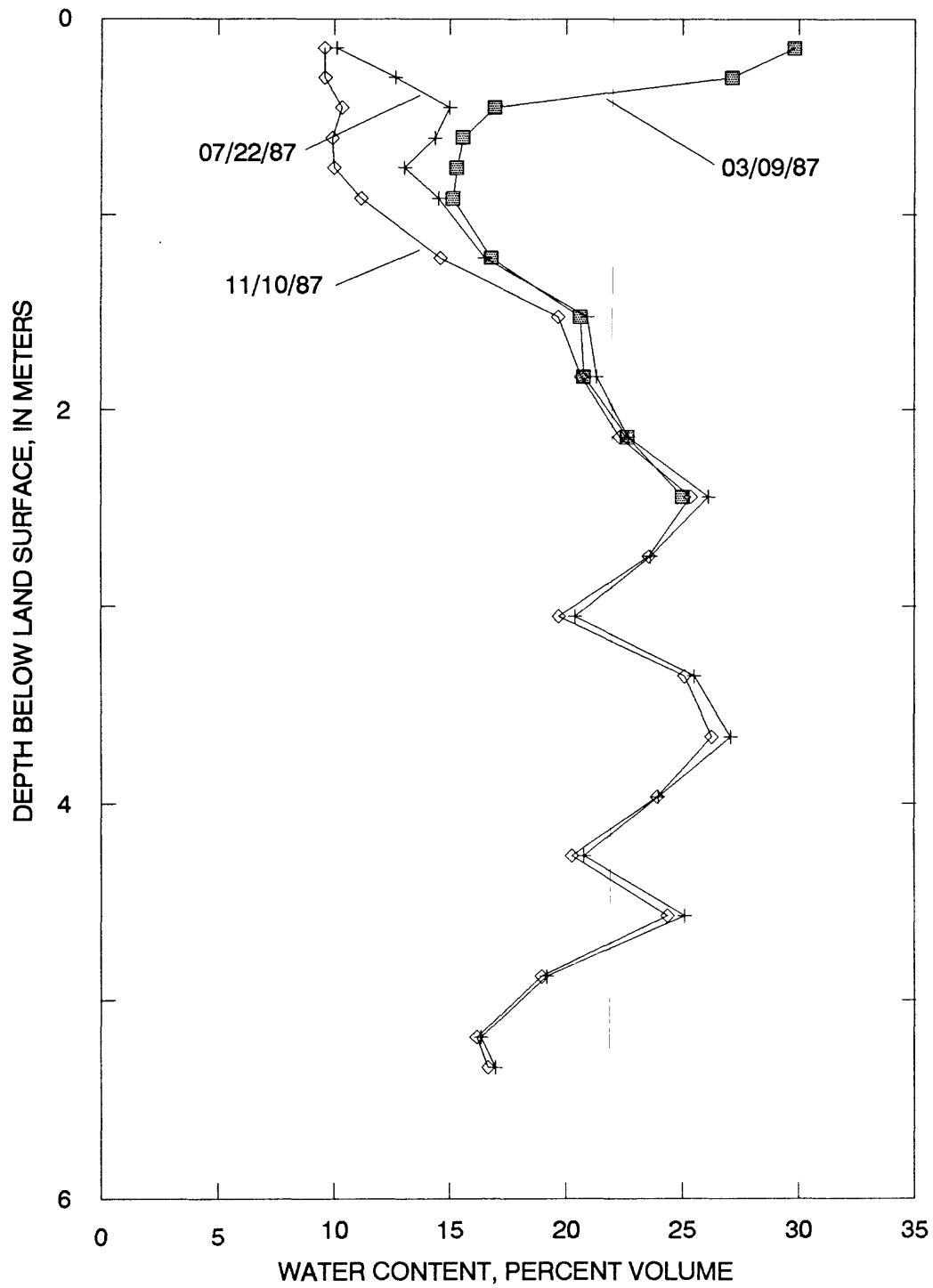


Figure 14.--Variation of soil-moisture content with depth at selected times for neutron-probe access hole 9.

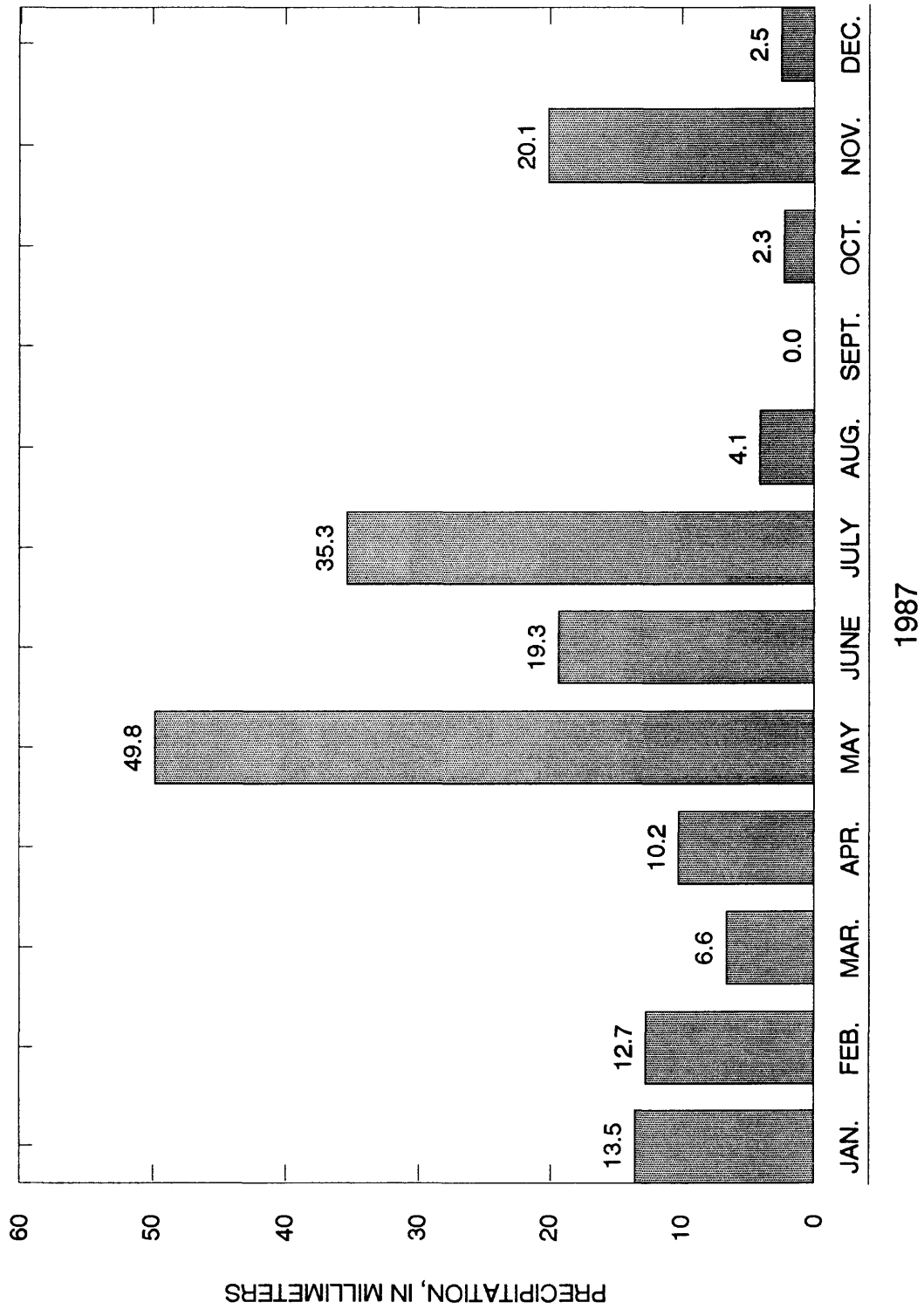


Figure 15.--Precipitation at the test trenches during 1987.

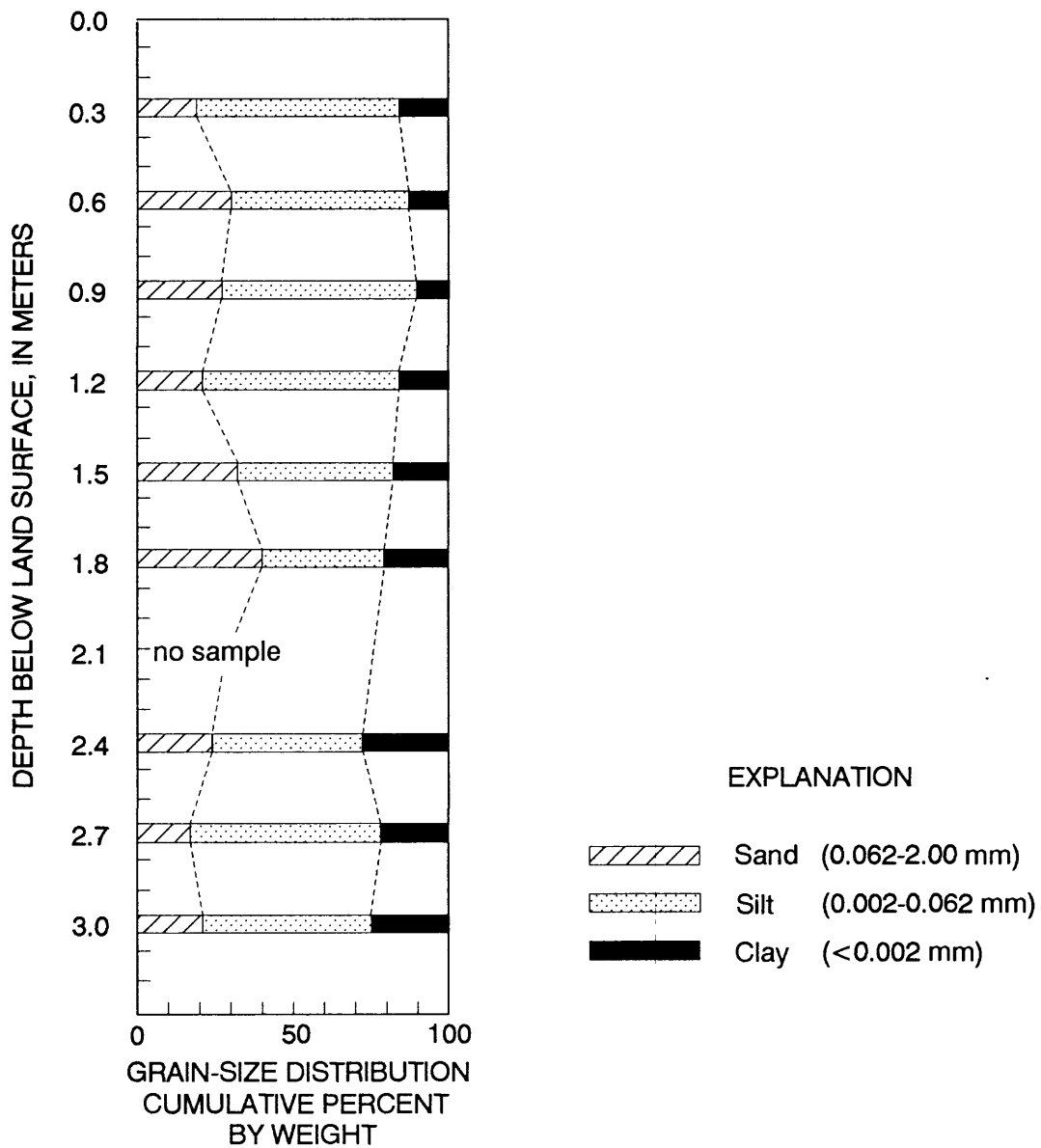


Figure 16.--Distribution of major grain-size classes with depth, neutron-probe access hole 1 samples.

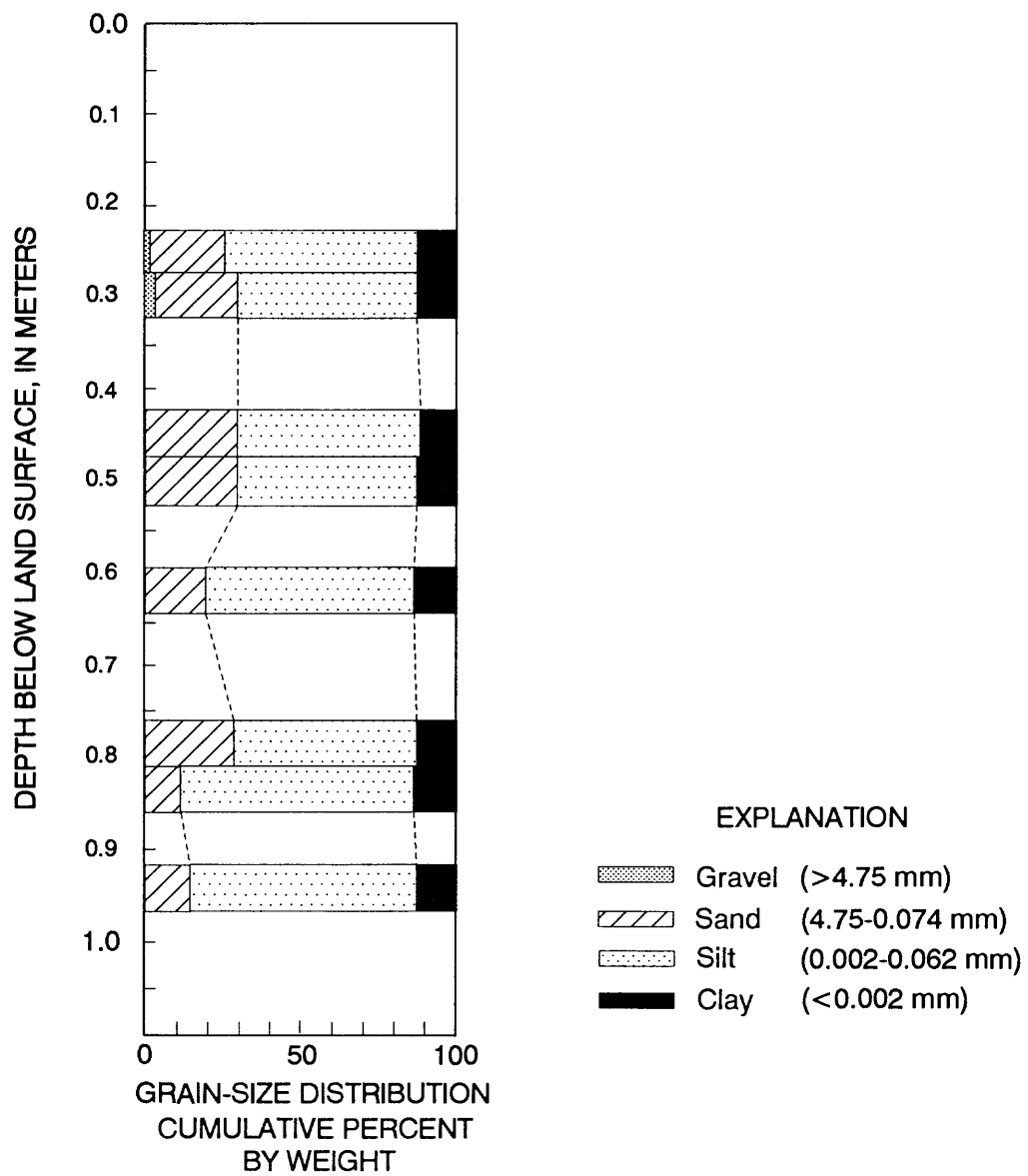


Figure 17.--Distribution of major grain-size classes with depth, east lysimeter samples.

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		0.6			0.9			1.5			2.1		
Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
NO DATA 1/01/87 THROUGH 2/10/87													
02/11/87	0	-0.9	--	-0.7	-2.7	1.6	> -1	3.7	> -1	3.7	> -1	3.7	> -1
02/11/87	1200	-0.8	--	-0.7	-2.6	1.6	> -1	3.7	> -1	3.7	> -1	3.7	> -1
02/12/87	0	-0.8	--	-0.7	-2.5	1.6	> -1	3.7	> -1	3.7	> -1	3.7	> -1
02/12/87	1200	-0.8	--	-0.7	-2.4	1.6	> -1	3.6	> -1	3.6	> -1	3.6	> -1
02/13/87	0	-0.8	--	-0.7	-2.3	1.6	> -1	3.7	> -1	3.7	> -1	3.7	> -1
02/13/87	1200	-0.7	--	-0.6	-2.3	1.6	> -1	3.6	> -1	3.6	> -1	3.6	> -1
02/14/87	0	-0.7	--	-0.6	-2.1	1.6	> -1	3.6	> -1	3.6	> -1	3.6	> -1
02/14/87	1200	-0.7	--	-0.6	-2.0	1.6	> -1	3.6	> -1	3.6	> -1	3.6	> -1
02/15/87	0	-0.6	--	-0.6	-1.8	1.7	> -1	3.6	> -1	3.6	> -1	3.6	> -1
02/15/87	1200	-0.6	--	-0.6	-1.7	1.6	> -1	3.6	> -1	3.6	> -1	3.6	> -1
02/16/87	0	-0.6	--	-0.5	-1.5	1.6	> -1	3.6	> -1	3.6	> -1	3.6	> -1
02/16/87	1200	-0.6	--	-0.5	-1.4	1.6	> -1	3.6	> -1	3.6	> -1	3.6	> -1
02/17/87	0	-0.5	--	-0.5	-1.2	1.7	> -1	3.6	> -1	3.6	> -1	3.6	> -1
02/17/87	1200	-0.5	--	-0.5	-1.2	1.7	> -1	3.6	> -1	3.6	> -1	3.6	> -1
02/18/87	0	-0.5	--	-0.4	-1.0	1.7	> -1	3.6	> -1	3.6	> -1	3.6	> -1
02/18/87	1200	-0.5	--	-0.4	> -1	1.7	> -1	3.6	> -1	3.6	> -1	3.6	> -1
02/19/87	0	-0.4	--	-0.4	> -1	1.7	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/19/87	1200	-0.4	--	-0.4	> -1	1.7	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/20/87	0	-0.4	--	-0.3	> -1	1.7	> -1	3.6	> -1	3.6	> -1	3.6	> -1
02/20/87	1200	-0.4	--	-0.4	> -1	1.7	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/21/87	0	-0.4	--	-0.3	> -1	1.7	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/21/87	1200	-0.3	--	-0.3	> -1	1.7	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/22/87	0	-0.3	--	-0.3	> -1	1.7	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/22/87	1200	-0.3	--	-0.3	> -1	1.7	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/23/87	0	-0.3	--	-0.3	> -1	1.7	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/23/87	1200	-0.3	--	-0.3	> -1	1.7	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/24/87	0	-0.3	--	-0.2	> -1	1.7	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/24/87	1200	-0.3	--	-0.2	> -1	1.8	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/25/87	0	-0.3	--	-0.2	> -1	1.8	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/25/87	1200	-0.2	--	-0.2	> -1	1.8	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/26/87	0	-0.2	--	-0.2	> -1	1.8	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/26/87	1200	-0.2	--	-0.2	> -1	1.8	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/27/87	0	-0.2	--	-0.2	> -1	1.8	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/27/87	1200	-0.2	--	-0.2	> -1	1.8	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/28/87	0	-0.3	--	-0.2	> -1	1.8	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/28/87	1200	-0.3	--	-0.2	> -1	1.8	> -1	3.5	> -1	3.5	> -1	3.5	> -1
02/28/87	0	-0.2	--	-0.1	> -1	1.8	> -1	3.5	> -1	3.5	> -1	3.5	> -1
03/01/87	0	-0.2	--	-0.2	> -1	1.8	> -1	3.5	> -1	3.5	> -1	3.5	> -1

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		0.6			0.9			1.5			2.1		
		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)	
03/01/87	1200	-0.3	--	--	-0.2	> -1	--	1.8	> -1	--	3.5	> -1	--
03/02/87	0	-0.3	--	--	-0.2	> -1	--	1.8	> -1	--	3.5	> -1	--
03/02/87	1200	-0.3	--	--	-0.2	> -1	--	1.8	> -1	--	3.5	> -1	--
03/03/87	0	-0.3	--	--	-0.2	> -1	--	1.9	> -1	--	3.5	> -1	--
03/03/87	1200	-0.3	--	--	-0.1	> -1	--	1.9	> -1	--	3.5	> -1	--
03/04/87	0	-0.3	--	--	-0.1	> -1	--	1.9	> -1	--	3.5	> -1	--
03/04/87	1200	-0.2	--	--	-0.1	> -1	--	1.9	> -1	--	3.4	> -1	--
03/05/87	0	-0.2	--	--	-0.1	> -1	--	1.9	> -1	--	3.5	> -1	--
03/05/87	1200	-0.2	--	--	-0.1	> -1	--	1.9	> -1	--	3.4	> -1	--
03/06/87	0	-0.2	--	--	-0.1	> -1	--	1.9	> -1	--	3.4	> -1	--
03/06/87	1200	-0.2	--	--	-0.1	> -1	--	1.9	> -1	--	3.4	> -1	--
03/07/87	0	-0.2	--	--	-0.1	> -1	--	1.9	> -1	--	3.5	> -1	--
03/07/87	1200	-0.1	--	--	-0.1	> -1	--	1.9	> -1	--	3.4	> -1	--
03/08/87	0	-0.1	--	--	0.0	> -1	--	1.9	> -1	--	3.5	> -1	--
03/08/87	1200	-0.1	--	--	0.0	> -1	--	1.9	> -1	--	3.5	> -1	--
03/09/87	0	-0.1	--	--	0.0	> -1	--	1.9	> -1	--	3.4	> -1	--
03/09/87	1200	-0.1	--	--	0.0	> -1	--	1.9	> -1	--	3.4	> -1	--
03/10/87	0	0.0	--	--	0.1	> -1	--	1.9	> -1	--	3.4	> -1	--
03/10/87	1200	0.0	--	--	0.2	> -1	--	2.0	> -1	--	3.4	> -1	--
03/11/87	0	0.1	--	--	0.3	> -1	--	2.0	> -1	--	3.4	> -1	--
03/11/87	1200	0.3	--	--	0.5	> -1	--	2.0	> -1	--	3.4	> -1	--
03/12/87	0	0.6	--	--	0.6	> -1	--	2.0	> -1	--	3.4	> -1	--
03/12/87	1200	0.8	--	--	0.8	> -1	--	2.0	> -1	--	3.5	> -1	--
03/13/87	0	1.0	--	--	1.0	> -1	--	2.1	> -1	--	3.4	> -1	--
03/13/87	1200	1.2	--	--	1.2	> -1	--	2.1	> -1	--	3.4	> -1	--
03/14/87	0	1.4	--	--	1.4	> -1	--	2.1	> -1	--	3.4	> -1	--
03/14/87	1200	1.6	--	--	1.5	> -1	--	2.2	> -1	--	3.5	> -1	--
03/15/87	0	1.7	--	--	1.6	> -1	--	2.2	> -1	--	3.4	> -1	--
03/15/87	1200	1.8	--	--	1.7	> -1	--	2.3	> -1	--	3.5	> -1	--
03/16/87	0	1.9	--	--	1.7	> -1	--	2.3	> -1	--	3.5	> -1	--
03/16/87	1200	2.0	--	--	1.8	> -1	--	2.4	> -1	--	3.5	> -1	--
03/17/87	0	2.1	--	--	1.9	> -1	--	2.4	> -1	--	3.5	> -1	--
03/17/87	1200	2.1	--	--	2.0	> -1	--	2.5	> -1	--	3.5	> -1	--
03/18/87	0	2.2	--	--	2.2	> -1	--	2.6	> -1	--	3.5	> -1	--
03/18/87	1200	2.4	--	--	2.3	> -1	--	2.7	> -1	--	3.6	> -1	--
03/19/87	0	2.5	--	--	2.4	> -1	--		> -1	--		> -1	--
03/19/87	1200	2.5	--	--	2.4	> -1	--		> -1	--		> -1	--
03/20/87	0	2.5	--	--	2.4	> -1	--		> -1	--		> -1	--

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	0.6				0.9				1.5				2.1			
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
03/20/87	1200		2.5	--	2.4	> -1	2.7	> -1	3.6	> -1	3.6	> -1	3.6	> -1	3.6	> -1
03/21/87	0		2.4	--	2.4	> -1	2.8	> -1	3.6	> -1	3.6	> -1	3.6	> -1	3.6	> -1
03/21/87	1200		2.4	--	2.4	> -1	2.8	> -1	3.6	> -1	3.6	> -1	3.6	> -1	3.6	> -1
03/22/87	0		2.4	--	2.4	> -1	2.8	> -1	3.6	> -1	3.6	> -1	3.6	> -1	3.6	> -1
03/22/87	1200		2.3	--	2.3	> -1	2.9	> -1	3.7	> -1	3.7	> -1	3.7	> -1	3.7	> -1
03/23/87	0		2.3	--	2.3	> -1	2.9	> -1	3.7	> -1	3.7	> -1	3.7	> -1	3.7	> -1
03/23/87	1200		2.3	--	2.3	> -1	2.9	> -1	3.7	> -1	3.7	> -1	3.7	> -1	3.7	> -1
03/24/87	0		2.3	--	2.3	> -1	3.0	> -1	3.7	> -1	3.7	> -1	3.7	> -1	3.7	> -1
03/24/87	1200		2.3	--	2.3	> -1	3.0	> -1	3.7	> -1	3.7	> -1	3.7	> -1	3.7	> -1
03/25/87	0		2.4	--	2.3	> -1	3.0	> -1	3.8	> -1	3.8	> -1	3.8	> -1	3.8	> -1
03/25/87	1200		2.5	--	2.4	> -1	3.0	> -1	3.8	> -1	3.8	> -1	3.8	> -1	3.8	> -1
03/26/87	0		2.6	--	2.5	> -1	3.0	> -1	3.8	> -1	3.8	> -1	3.8	> -1	3.8	> -1
03/26/87	1200		2.7	--	2.5	> -1	3.0	> -1	3.8	> -1	3.8	> -1	3.8	> -1	3.8	> -1
03/27/87	0		2.8	--	2.7	> -1	3.1	> -1	3.8	> -1	3.8	> -1	3.8	> -1	3.8	> -1
03/27/87	1200		2.9	--	2.7	> -1	3.1	> -1	3.8	> -1	3.8	> -1	3.8	> -1	3.8	> -1
03/28/87	0		2.9	--	2.8	> -1	3.1	> -1	3.9	> -1	3.9	> -1	3.9	> -1	3.9	> -1
03/28/87	1200		3.0	--	2.9	> -1	3.2	> -1	3.9	> -1	3.9	> -1	3.9	> -1	3.9	> -1
03/29/87	0		3.1	--	3.0	> -1	3.2	> -1	3.9	> -1	3.9	> -1	3.9	> -1	3.9	> -1
03/29/87	1200		3.0	--	2.9	> -1	3.2	> -1	3.8	> -1	3.8	> -1	3.8	> -1	3.8	> -1
03/30/87	0		3.0	--	2.9	> -1	3.3	> -1	3.9	> -1	3.9	> -1	3.9	> -1	3.9	> -1
03/30/87	1200		2.9	--	2.9	> -1	3.3	> -1	3.9	> -1	3.9	> -1	3.9	> -1	3.9	> -1
03/31/87	0		2.8	--	2.8	> -1	3.3	> -1	3.9	> -1	3.9	> -1	3.9	> -1	3.9	> -1
03/31/87	1200		2.8	--	2.8	> -1	3.3	> -1	3.9	> -1	3.9	> -1	3.9	> -1	3.9	> -1
04/01/87	0		2.9	--	2.8	> -1	3.3	> -1	4.0	> -1	4.0	> -1	4.0	> -1	4.0	> -1
04/01/87	1200		3.0	--	2.9	> -1	3.3	> -1	4.0	> -1	4.0	> -1	4.0	> -1	4.0	> -1
04/02/87	0		3.3	--	3.1	> -1	3.4	> -1	4.0	> -1	4.0	> -1	4.0	> -1	4.0	> -1
04/02/87	1200		3.5	--	3.3	> -1	3.4	> -1	4.0	> -1	4.0	> -1	4.0	> -1	4.0	> -1
04/03/87	0		3.7	--	3.5	> -1	3.4	> -1	4.0	> -1	4.0	> -1	4.0	> -1	4.0	> -1
04/03/87	1200		3.9	--	3.7	> -1	3.4	> -1	4.0	> -1	4.0	> -1	4.0	> -1	4.0	> -1
04/04/87	0		4.1	--	3.8	> -1	3.5	> -1	4.1	> -1	4.1	> -1	4.1	> -1	4.1	> -1
04/04/87	1200		4.3	--	4.0	> -1	3.5	> -1	4.1	> -1	4.1	> -1	4.1	> -1	4.1	> -1
04/05/87	0		4.5	--	4.2	> -1	3.6	> -1	4.1	> -1	4.1	> -1	4.1	> -1	4.1	> -1
04/05/87	1200		4.8	--	4.4	> -1	3.7	> -1	4.1	> -1	4.1	> -1	4.1	> -1	4.1	> -1
04/06/87	0		5.1	--	4.7	> -1	3.8	> -1	4.1	> -1	4.1	> -1	4.1	> -1	4.1	> -1
04/06/87	1200		5.3	--	4.9	> -1	3.8	> -1	4.1	> -1	4.1	> -1	4.1	> -1	4.1	> -1
04/07/87	0		5.6	--	5.1	> -1	3.9	> -1	4.2	> -1	4.2	> -1	4.2	> -1	4.2	> -1
04/07/87	1200		5.8	--	5.3	> -1	4.0	> -1	4.2	> -1	4.2	> -1	4.2	> -1	4.2	> -1
04/08/87	0		6.0	--	5.5	> -1	4.0	> -1	4.2	> -1	4.2	> -1	4.2	> -1	4.2	> -1

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)
04/08/87		1200	6.1	--	--	5.7	> -1	> -1	4.1	> -1	> -1	4.2	> -1	> -1
04/09/87		0	6.3	--	--	5.9	> -1	> -1	4.2	> -1	> -1	4.3	> -1	> -1
04/09/87		1200	6.3	--	--	5.9	> -1	> -1	4.3	> -1	> -1	4.3	> -1	> -1
04/10/87		0	6.3	--	--	6.0	> -1	> -1	4.4	> -1	> -1	4.4	> -1	> -1
04/10/87		1200	6.3	--	--	6.0	> -1	> -1	4.5	> -1	> -1	4.4	> -1	> -1
04/11/87		0	6.4	--	--	6.1	> -1	> -1	4.6	> -1	> -1	4.4	> -1	> -1
04/11/87		1200	6.4	--	--	6.1	> -1	> -1	4.6	> -1	> -1	4.5	> -1	> -1
04/12/87		0	6.6	--	--	6.2	> -1	> -1	4.7	> -1	> -1	4.5	> -1	> -1
04/12/87		1200	6.7	--	--	6.3	> -1	> -1	4.8	> -1	> -1	4.5	> -1	> -1
04/13/87		0	6.7	--	--	6.4	> -1	> -1	4.9	> -1	> -1	4.6	> -1	> -1
04/13/87		1200	6.7	--	--	6.4	> -1	> -1	4.9	> -1	> -1	4.6	> -1	> -1
04/14/87		0	6.7	--	--	6.4	> -1	> -1	5.0	> -1	> -1	4.7	> -1	> -1
04/14/87		1200	6.7	--	--	6.4	> -1	> -1	5.0	> -1	> -1	4.7	> -1	> -1
04/15/87		0	6.8	--	--	6.5	> -1	> -1	5.1	> -1	> -1	4.8	> -1	> -1
04/15/87		1200	6.9	--	--	6.6	> -1	> -1	5.1	> -1	> -1	4.8	> -1	> -1
04/16/87		0	7.0	--	--	6.7	> -1	> -1	5.2	> -1	> -1	4.8	> -1	> -1
04/16/87		1200	7.2	--	--	6.8	> -1	> -1	5.2	> -1	> -1	4.9	> -1	> -1
04/17/87		0	7.4	--	--	7.0	> -1	> -1	5.3	> -1	> -1	4.9	> -1	> -1
04/17/87		1200	7.6	--	--	7.2	> -1	> -1	5.4	> -1	> -1	4.9	> -1	> -1
04/18/87		0	7.8	--	--	7.4	> -1	> -1	5.4	> -1	> -1	5.0	> -1	> -1
04/18/87		1200	8.0	--	--	7.5	> -1	> -1	5.5	> -1	> -1	5.0	> -1	> -1
04/19/87		0	8.2	--	--	7.7	> -1	> -1	5.6	> -1	> -1	5.1	> -1	> -1
04/19/87		1200	8.3	--	--	7.8	> -1	> -1	5.6	> -1	> -1	5.1	> -1	> -1
04/20/87		0	8.4	--	--	8.0	> -1	> -1	5.7	> -1	> -1	5.1	> -1	> -1
04/20/87		1200	8.2	--	--	7.9	> -1	> -1	5.8	> -1	> -1	5.2	> -1	> -1
04/21/87		0	8.0	--	--	7.8	> -1	> -1	5.9	> -1	> -1	5.2	> -1	> -1
04/21/87		1200	7.9	--	--	7.7	> -1	> -1	6.0	> -1	> -1	5.3	> -1	> -1
04/22/87		0	7.8	--	--	7.6	> -1	> -1	6.0	> -1	> -1	5.3	> -1	> -1
04/22/87		1200	7.9	--	--	7.7	> -1	> -1	6.1	> -1	> -1	5.4	> -1	> -1
04/23/87		0	8.2	--	--	7.8	> -1	> -1	6.1	> -1	> -1	5.4	> -1	> -1
04/24/87		0	8.4	--	--	8.0	> -1	> -1	6.2	> -1	> -1	5.5	> -1	> -1
04/25/87		0	8.6	--	--	8.2	> -1	> -1	6.2	> -1	> -1	5.5	> -1	> -1
04/25/87		1200	8.8	--	--	8.3	> -1	> -1	6.3	> -1	> -1	5.6	> -1	> -1
04/26/87		0	9.0	--	--	8.5	> -1	> -1	6.3	> -1	> -1	5.6	> -1	> -1
04/26/87		1200	9.2	--	--	8.7	> -1	> -1	6.4	> -1	> -1	5.6	> -1	> -1
04/27/87		0	9.5	--	--	8.9	> -1	> -1	6.5	> -1	> -1	5.7	> -1	> -1
04/27/87		0	9.6	--	--	9.1	> -1	> -1	6.5	> -1	> -1	5.7	> -1	> -1

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		0.6			0.9			1.5			2.1		
Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)	
04/27/87	1200	9.9	--	--	9.3	> -1	--	6.6	> -1	--	5.7	> -1	--
04/28/87	0	10.2	--	--	9.6	> -1	--	6.7	> -1	--	5.8	> -1	--
04/28/87	1200	10.5	--	--	9.8	> -1	--	6.8	> -1	--	5.8	> -1	--
04/29/87	0	10.6	--	--	10.0	> -1	--	6.9	> -1	--	5.9	> -1	--
04/29/87	1200	10.9	--	--	10.2	> -1	--	7.0	> -1	--	5.9	> -1	--
04/30/87	0	11.1	--	--	10.4	> -1	--	7.1	> -1	--	6.0	> -1	--
04/30/87	1200	11.5	--	--	10.7	> -1	--	7.2	> -1	--	6.0	> -1	--
05/01/87	0	11.6	--	--	10.9	> -1	--	7.3	> -1	--	6.1	> -1	--
05/01/87	1200	11.7	--	--	11.0	> -1	--	7.4	> -1	--	6.1	> -1	--
05/02/87	0	11.6	--	--	11.0	> -1	--	7.5	> -1	--	6.2	> -1	--
05/02/87	1200	11.5	--	--	11.0	> -1	--	7.6	> -1	--	6.2	> -1	--
05/03/87	0	11.3	--	--	10.9	> -1	--	7.8	> -1	--	6.3	> -1	--
05/03/87	1200	11.2	--	--	10.7	> -1	--	7.8	> -1	--	6.3	> -1	--
05/04/87	0	11.0	--	--	10.7	> -1	--	7.9	> -1	--	6.4	> -1	--
05/04/87	1200	11.0	--	--	10.6	> -1	--	7.9	> -1	--	6.5	> -1	--
05/05/87	0	11.0	--	--	10.6	> -1	--	8.0	> -1	--	6.5	> -1	--
05/05/87	1200	11.1	--	--	10.7	> -1	--	8.0	> -1	--	6.6	> -1	--
05/06/87	0	11.3	--	--	10.8	> -1	--	8.1	> -1	--	6.6	> -1	--
05/06/87	1200	11.5	--	--	10.9	> -1	--	8.1	> -1	--	6.7	> -1	--
05/07/87	0	11.7	--	--	11.1	> -1	--	8.2	> -1	--	6.7	> -1	--
05/07/87	1200	11.9	--	--	11.3	> -1	--	8.2	> -1	--	6.8	> -1	--
05/08/87	0	12.1	--	--	11.4	> -1	--	8.3	> -1	--	6.8	> -1	--
05/08/87	1200	12.3	--	--	11.7	> -1	--	8.4	> -1	--	6.9	> -1	--
05/09/87	0	12.5	--	--	11.8	> -1	--	8.4	> -1	--	6.9	> -1	--
05/09/87	1200	12.7	--	--	12.0	> -1	--	8.5	> -1	--	7.0	> -1	--
05/10/87	0	12.9	--	--	12.2	> -1	--	8.6	> -1	--	7.0	> -1	--
05/10/87	1200	13.1	--	--	12.4	> -1	--	8.7	> -1	--	7.1	> -1	--
05/11/87	0	13.2	--	--	12.5	> -1	--	8.8	> -1	--	7.1	> -1	--
05/11/87	1200	13.3	--	--	12.7	> -1	--	8.9	> -1	--	7.2	> -1	--
05/12/87	0	13.3	--	--	12.7	> -1	--	9.0	> -1	--	7.2	> -1	--
05/12/87	1200	13.5	--	--	12.8	> -1	--	9.1	> -1	--	7.3	> -1	--
05/13/87	0	13.6	--	--	13.0	> -1	--	9.1	> -1	--	7.3	> -1	--
05/13/87	1200	13.8	--	--	13.1	> -1	--	9.2	> -1	--	7.4	> -1	--
05/14/87	0	13.9	--	--	13.2	> -1	--	9.3	> -1	--	7.4	> -1	--
05/14/87	1200	14.0	--	--	13.4	> -1	--	9.4	> -1	--	7.5	> -1	--
05/15/87	0	14.1	--	--	13.5	> -1	--	9.5	> -1	--	7.5	> -1	--
05/15/87	1200	14.3	--	--	13.6	> -1	--	9.6	> -1	--	7.6	> -1	--
05/16/87	0	14.4	--	--	13.7	> -1	--	9.6	> -1	--	7.6	> -1	--

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)
05/16/87	1200		14.6	--	--	13.9	--	--	9.8	--	--	7.8	--	--
05/17/87	0		14.7	--	--	14.0	--	--	9.9	--	--	7.8	--	--
05/17/87	1200		14.7	--	--	14.1	--	--	10.0	--	--	7.9	--	--
05/18/87	0		14.5	--	--	14.0	--	--	10.0	--	--	7.9	--	--
05/18/87	1200		14.3	--	--	13.9	--	--	10.1	--	--	8.0	--	--
05/19/87	0		14.1	--	--	13.7	--	--	10.2	--	--	8.0	--	--
05/19/87	1200		14.0	--	--	13.6	--	--	10.2	--	--	8.1	--	--
05/20/87	0		13.8	--	--	13.4	--	--	10.3	--	--	8.2	--	--
05/20/87	1200		13.5	--	--	13.3	--	--	10.3	--	--	8.2	--	--
05/21/87	0		13.3	--	--	13.1	--	--	10.3	--	--	8.3	--	--
05/21/87	1200		13.1	--	--	12.9	--	--	10.4	--	--	8.3	--	--
05/22/87	0		13.0	--	--	12.8	--	--	10.4	--	--	8.4	--	--
05/22/87	1200		13.0	--	--	12.7	--	--	10.3	--	--	8.4	--	--
05/23/87	0		13.0	--	--	12.7	--	--	10.4	--	--	8.5	--	--
05/23/87	1200		13.0	--	--	12.7	--	--	10.4	--	--	8.5	--	--
05/24/87	0		13.1	--	--	12.7	--	--	10.4	--	--	8.6	--	--
05/24/87	1200		13.1	--	--	12.7	--	--	10.4	--	--	8.6	--	--
05/25/87	0		13.1	--	--	12.8	--	--	10.4	--	--	8.6	--	--
05/25/87	1200		13.0	--	--	12.7	--	--	10.4	--	--	8.6	--	--
05/26/87	0		12.8	--	--	12.6	--	--	10.4	--	--	8.7	--	--
05/26/87	1200		12.7	--	--	12.5	--	--	10.4	--	--	8.7	--	--
05/27/87	0		12.6	--	--	12.4	--	--	10.4	--	--	8.7	--	--
05/27/87	1200		12.5	--	--	12.3	--	--	10.4	--	--	8.8	--	--
05/28/87	0		12.4	--	--	12.2	--	--	10.4	--	--	8.8	--	--
05/28/87	1200		12.4	--	--	12.2	--	--	10.4	--	--	8.8	--	--
05/29/87	0		12.4	--	--	12.1	--	--	10.4	--	--	8.8	--	--
05/29/87	1200		12.4	--	--	12.1	--	--	10.3	--	--	8.8	--	--
05/30/87	0		12.4	--	--	12.1	--	--	10.3	--	--	8.9	--	--
05/30/87	1200		12.5	--	--	12.2	--	--	10.3	--	--	8.9	--	--
05/31/87	0		12.7	--	--	12.3	--	--	10.3	--	--	8.9	--	--
05/31/87	1200		12.9	--	--	12.5	--	--	10.4	--	--	8.9	--	--
06/01/87	0		13.0	--	--	12.6	--	--	10.4	--	--	9.0	--	--
06/01/87	1200		13.1	--	--	12.7	--	--	10.4	--	--	9.0	--	--
06/02/87	0		13.0	--	--	12.7	--	--	10.4	--	--	9.0	--	--
06/02/87	1200		13.0	--	--	12.7	--	--	10.4	--	--	9.0	--	--
06/03/87	0		13.0	--	--	12.7	--	--	10.4	--	--	9.0	--	--
06/03/87	1200		13.1	--	--	12.7	--	--	10.5	--	--	9.0	--	--
06/04/87	0		13.2	--	--	12.8	--	--	10.5	--	--	9.0	--	--

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		0.6			0.9			1.5			2.1		
Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)	
06/04/87	1200	13.4	--	--	13.0	> -1	--	10.5	> -1	--	9.1	> -1	--
06/05/87	0	13.6	--	--	13.1	> -1	--	10.5	> -1	--	9.1	> -1	--
06/05/87	1200	13.9	--	--	13.4	> -1	--	10.6	> -1	--	9.1	> -1	--
06/06/87	0	14.2	--	--	13.6	> -1	--	10.6	> -1	--	9.1	> -1	--
06/06/87	1200	14.5	--	--	13.8	> -1	--	10.7	> -1	--	9.2	> -1	--
06/07/87	0	14.6	--	--	14.0	> -1	--	10.7	> -1	--	9.2	> -1	--
06/07/87	1200	14.8	--	--	14.2	> -1	--	10.8	> -1	--	9.2	> -1	--
06/08/87	0	15.0	--	--	14.4	> -1	--	10.9	> -1	--	9.2	> -1	--
06/08/87	1200	15.0	--	--	14.5	> -1	--	11.0	> -1	--	9.3	> -1	--
06/09/87	0	14.9	--	--	14.5	> -1	--	11.1	> -1	--	9.3	> -1	--
06/10/87	0	14.9	--	--	14.5	> -1	--	11.2	> -1	--	9.4	> -1	--
06/10/87	1200	14.9	--	--	14.4	> -1	--	11.2	> -1	--	9.4	> -1	--
06/11/87	0	14.9	--	--	14.4	> -1	--	11.3	> -1	--	9.4	> -1	--
06/11/87	1200	15.0	--	--	14.5	> -1	--	11.4	> -1	--	9.5	> -1	--
06/12/87	0	15.0	--	--	14.5	> -1	--	11.4	> -1	--	9.5	> -1	--
06/12/87	1200	15.2	--	--	14.6	> -1	--	11.4	> -1	--	9.6	> -1	--
06/13/87	0	15.3	--	--	14.8	> -1	--	11.5	> -1	--	9.6	> -1	--
06/13/87	1200	15.6	--	--	15.0	> -1	--	11.5	> -1	--	9.6	> -1	--
06/14/87	0	15.8	--	--	15.1	> -1	--	11.6	> -1	--	9.7	> -1	--
06/14/87	1200	16.1	--	--	15.4	> -1	--	11.7	> -1	--	9.7	> -1	--
06/15/87	0	16.3	--	--	15.6	> -1	--	11.7	> -1	--	9.7	> -1	--
06/15/87	1200	16.6	--	--	15.8	> -1	--	11.8	> -1	--	9.8	> -1	--
06/16/87	0	16.8	--	--	16.0	> -1	--	11.9	> -1	--	9.8	> -1	--
06/16/87	1200	17.0	--	--	16.3	> -1	--	12.0	> -1	--	9.9	> -1	--
06/17/87	0	17.0	--	--	16.4	> -1	--	12.1	> -1	--	9.9	> -1	--
06/17/87	1200	17.1	--	--	16.4	> -1	--	12.2	> -1	--	10.0	> -1	--
06/18/87	0	17.1	--	--	16.5	> -1	--	12.2	> -1	--	10.0	> -1	--
06/18/87	1200	17.2	--	--	16.5	> -1	--	12.4	> -1	--	10.1	> -1	--
06/19/87	0	17.1	--	--	16.6	> -1	--	12.4	> -1	--	10.1	> -1	--
06/19/87	1200	17.1	--	--	16.6	> -1	--	12.5	> -1	--	10.2	> -1	--
06/20/87	0	16.9	--	--	16.5	> -1	--	12.6	> -1	--	10.2	> -1	--
06/20/87	1200	16.9	--	--	16.4	> -1	--	12.6	> -1	--	10.3	> -1	--
06/21/87	0	16.8	--	--	16.4	> -1	--	12.7	> -1	--	10.3	> -1	--
06/21/87	1200	16.9	--	--	16.4	> -1	--	12.8	> -1	--	10.4	> -1	--
06/22/87	0	17.0	--	--	16.5	> -1	--	12.8	> -1	--	10.4	> -1	--
06/22/87	1200	17.2	--	--	16.6	> -1	--	12.9	> -1	--	10.5	> -1	--
06/23/87	0	17.3	--	--	16.7	> -1	--	12.9	> -1	--	10.5	> -1	--
06/23/87	1200	17.3	--	--	16.8	> -1	--	12.9	> -1	--	10.6	> -1	--

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		0.6			0.9			1.5			2.1		
		Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
		06/24/87	0	17.2	--	16.7	> -1	13.0	> -1	10.6	> -1		
		06/24/87	1200	17.2	--	16.7	> -1	13.0	> -1	10.7	> -1		
		06/25/87	0	17.1	--	16.7	> -1	13.0	> -1	10.7	> -1		
		06/25/87	1200	17.2	--	16.7	> -1	13.1	> -1	10.8	> -1		
						NO DATA 6/26/87 THROUGH 7/7/87							
		07/08/87	0	18.8	--	18.2	> -1	14.3	> -1	11.8	> -1		
		07/08/87	1200	18.8	--	18.2	> -1	14.3	> -1	11.8	> -1		
		07/09/87	0	18.8	--	18.3	> -1	14.3	> -1	11.9	> -1		
		07/09/87	1200	18.8	--	18.3	> -1	14.4	> -1	11.9	> -1		
		07/10/87	0	18.8	--	18.3	> -1	14.4	> -1	11.9	> -1		
		07/10/87	1200	18.9	--	18.3	> -1	14.5	> -1	12.0	> -1		
		07/11/87	0	18.8	--	18.3	> -1	14.5	> -1	12.1	> -1		
		07/11/87	1200	18.7	--	18.3	> -1	14.6	> -1	12.1	> -1		
		07/12/87	0	18.5	--	18.2	> -1	14.6	> -1	12.1	> -1		
		07/12/87	1200	18.4	--	18.1	> -1	14.6	> -1	12.1	> -1		
		07/13/87	0	18.3	--	17.9	> -1	14.6	> -1	12.1	> -1		
		07/13/87	1200	18.3	--	17.9	> -1	14.7	> -1	12.2	> -1		
		07/14/87	0	18.3	--	17.9	> -1	14.6	> -1	12.2	> -1		
		07/14/87	1200	18.4	--	18.0	> -1	14.7	> -1	12.3	> -1		
		07/15/87	0	18.5	--	18.0	> -1	14.6	> -1	12.3	> -1		
		07/15/87	1200	18.7	--	18.2	> -1	14.7	> -1	12.3	> -1		
		07/16/87	0	18.8	--	18.3	> -1	14.7	> -1	12.3	> -1		
		07/16/87	1200	19.1	--	18.5	> -1	14.7	> -1	12.4	> -1		
		07/17/87	0	19.2	--	18.6	> -1	14.7	> -1	12.4	> -1		
		07/17/87	1200	19.5	--	18.8	> -1	14.8	> -1	12.5	> -1		
		07/18/87	0	19.5	--	18.9	> -1	14.9	> -1	12.5	> -1		
		07/18/87	1200	19.4	--	18.9	> -1	14.9	> -1	12.5	> -1		
		07/19/87	0	19.0	--	18.7	> -1	15.0	> -1	12.5	> -1		
		07/19/87	1200	18.7	--	18.4	> -1	15.0	> -1	12.5	> -1		
		07/20/87	0	18.3	--	18.1	> -1	15.0	> -1	12.6	> -1		
		07/20/87	1200	18.0	--	17.8	> -1	15.0	> -1	12.6	> -1		
		07/21/87	0	17.7	--	17.6	> -1	15.0	> -1	12.6	> -1		
		07/21/87	1200	17.7	--	17.5	> -1	15.1	> -1	12.7	> -1		
		07/22/87	0	17.6	--	17.3	> -1	15.0	> -1	12.7	> -1		
		07/22/87	1200	17.4	--	17.2	> -1	14.9	> -1	12.7	> -1		
		07/23/87	0	17.1	--	17.0	> -1	14.9	> -1	12.7	> -1		
		07/23/87	1200	17.0	--	16.9	> -1	14.9	> -1	12.8	> -1		
		07/24/87	0	16.9	--	16.7	> -1	14.8	> -1	12.8	> -1		

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		0.6			0.9			1.5			2.1		
		Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
07/24/87	1200	17.0	--	16.7	> -1	14.8	> -1	14.8	> -1	12.8	> -1	12.8	> -1
07/25/87	0	17.0	--	16.7	> -1	14.7	> -1	14.7	> -1	12.8	> -1	12.8	> -1
07/25/87	1200	17.3	--	16.9	> -1	14.7	> -1	14.7	> -1	12.8	> -1	12.8	> -1
07/26/87	0	17.4	--	17.0	> -1	14.6	> -1	14.6	> -1	12.8	> -1	12.8	> -1
07/26/87	1200	17.7	--	17.2	> -1	14.7	> -1	14.7	> -1	12.8	> -1	12.8	> -1
07/27/87	0	17.9	--	17.4	> -1	14.6	> -1	14.6	> -1	12.8	> -1	12.8	> -1
07/27/87	1200	18.2	--	17.6	> -1	14.7	> -1	14.7	> -1	12.8	> -1	12.8	> -1
07/28/87	0	18.5	--	17.9	> -1	14.7	> -1	14.7	> -1	12.8	> -1	12.8	> -1
07/28/87	1200	18.8	--	18.1	> -1	14.7	> -1	14.7	> -1	12.8	> -1	12.8	> -1
07/29/87	0	18.9	--	18.3	> -1	14.8	> -1	14.8	> -1	12.8	> -1	12.8	> -1
07/29/87	1200	19.1	--	18.4	> -1	14.8	> -1	14.8	> -1	12.9	> -1	12.9	> -1
07/30/87	0	19.1	--	18.5	> -1	14.9	> -1	14.9	> -1	12.9	> -1	12.9	> -1
07/30/87	1200	19.2	--	18.6	> -1	15.0	> -1	15.0	> -1	12.9	> -1	12.9	> -1
07/31/87	0	19.1	--	18.6	> -1	15.0	> -1	15.0	> -1	12.9	> -1	12.9	> -1
07/31/87	1200	19.2	--	18.7	> -1	15.1	> -1	15.1	> -1	12.9	> -1	12.9	> -1
08/01/87	0	19.2	--	18.7	> -1	15.1	> -1	15.1	> -1	12.9	> -1	12.9	> -1
08/01/87	1200	19.4	--	18.8	> -1	15.2	> -1	15.2	> -1	13.0	> -1	13.0	> -1
08/02/87	0	19.3	--	18.8	> -1	15.2	> -1	15.2	> -1	13.0	> -1	13.0	> -1
08/02/87	1200	19.4	--	18.9	> -1	15.3	> -1	15.3	> -1	13.1	> -1	13.1	> -1
08/03/87	0	19.4	--	18.9	> -1	15.3	> -1	15.3	> -1	13.0	> -1	13.0	> -1
08/03/87	1200	19.5	--	18.9	> -1	15.3	> -1	15.3	> -1	13.1	> -1	13.1	> -1
08/04/87	0	19.4	--	18.9	> -1	15.3	> -1	15.3	> -1	13.1	> -1	13.1	> -1
08/04/87	1200	19.5	--	19.0	> -1	15.4	> -1	15.4	> -1	13.2	> -1	13.2	> -1
08/05/87	0	19.5	--	19.0	> -1	15.4	> -1	15.4	> -1	13.1	> -1	13.1	> -1
08/05/87	1200	19.6	--	19.1	> -1	15.5	> -1	15.5	> -1	13.2	> -1	13.2	> -1
08/06/87	0	19.7	--	19.2	> -1	15.5	> -1	15.5	> -1	13.2	> -1	13.2	> -1
08/06/87	1200	19.8	--	19.2	> -1	15.5	> -1	15.5	> -1	13.3	> -1	13.3	> -1
08/07/87	0	19.8	--	19.3	-1.0	15.6	> -1	15.6	> -1	13.3	> -1	13.3	> -1
08/07/87	1200	19.9	--	19.3	-1.0	15.6	> -1	15.6	> -1	13.3	> -1	13.3	> -1
08/08/87	0	19.9	--	19.4	-1.1	15.7	> -1	15.7	> -1	13.4	> -1	13.4	> -1
08/08/87	1200	19.9	--	19.4	-1.1	15.7	> -1	15.7	> -1	13.4	> -1	13.4	> -1
08/09/87	0	19.8	--	19.4	-1.3	15.7	> -1	15.7	> -1	13.4	> -1	13.4	> -1
08/09/87	1200	19.9	--	19.4	-1.3	15.8	> -1	15.8	> -1	13.5	> -1	13.5	> -1
08/10/87	0	19.9	--	19.4	-1.4	15.8	> -1	15.8	> -1	13.4	> -1	13.4	> -1
08/10/87	1200	20.0	--	19.5	-1.4	15.8	> -1	15.8	> -1	13.5	> -1	13.5	> -1
08/11/87	0	19.9	--	19.4	-1.6	15.8	> -1	15.8	> -1	13.5	> -1	13.5	> -1
08/11/87	1200	20.0	--	19.4	-1.6	15.9	> -1	15.9	> -1	13.6	> -1	13.6	> -1
08/12/87	0	19.9	--	19.5	-1.7	15.9	> -1	15.9	> -1	13.6	> -1	13.6	> -1

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
08/12/87	1200		19.9	--	19.5	-1.7	16.0	> -1	13.6	> -1	13.6	> -1	13.6	> -1
08/13/87	0		19.8	--	19.4	-1.9	16.0	> -1	13.6	> -1	13.6	> -1	13.6	> -1
08/13/87	1200		19.8	--	19.4	-1.9	16.0	> -1	13.7	> -1	13.7	> -1	13.7	> -1
08/14/87	0		19.7	--	19.3	-2.1	16.0	> -1	13.7	> -1	13.7	> -1	13.7	> -1
08/14/87	1200		19.6	--	19.2	-2.1	16.0	> -1	13.7	> -1	13.7	> -1	13.7	> -1
08/15/87	0		19.4	--	19.1	-2.2	16.1	> -1	13.8	> -1	13.8	> -1	13.8	> -1
08/15/87	1200		19.3	--	19.0	-2.3	16.1	> -1	13.8	> -1	13.8	> -1	13.8	> -1
08/16/87	0		19.2	--	18.9	-2.3	16.1	> -1	13.8	> -1	13.8	> -1	13.8	> -1
08/16/87	1200		19.0	--	18.8	-2.4	16.1	> -1	13.8	> -1	13.8	> -1	13.8	> -1
08/17/87	0		18.9	--	18.7	-2.5	16.0	> -1	13.8	> -1	13.8	> -1	13.8	> -1
08/17/87	1200		18.7	--	18.5	-2.5	16.0	> -1	13.8	> -1	13.8	> -1	13.8	> -1
08/18/87	0		18.6	--	18.4	-2.6	16.0	> -1	13.9	> -1	13.9	> -1	13.9	> -1
08/18/87	1200		18.6	--	18.3	-2.7	16.0	> -1	13.9	> -1	13.9	> -1	13.9	> -1
08/19/87	0		18.5	--	18.3	-2.8	15.9	> -1	13.9	> -1	13.9	> -1	13.9	> -1
08/19/87	1200		18.5	--	18.2	-2.8	15.9	> -1	13.9	> -1	13.9	> -1	13.9	> -1
08/20/87	0		18.5	--	18.2	-2.9	15.9	> -1	13.9	> -1	13.9	> -1	13.9	> -1
08/20/87	1200		18.6	--	18.2	-3.0	15.9	> -1	13.9	> -1	13.9	> -1	13.9	> -1
08/21/87	0		18.6	--	18.3	-3.1	15.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/21/87	1200		18.7	--	18.3	-3.0	15.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/22/87	0		18.8	--	18.4	-3.1	15.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/22/87	1200		18.8	--	18.5	-3.2	15.8	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/23/87	0		18.9	--	18.5	-3.4	15.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/23/87	1200		18.9	--	18.5	-3.4	15.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/24/87	0		18.9	--	18.5	-3.4	15.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/24/87	1200		19.0	--	18.6	-3.5	15.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/25/87	0		19.1	--	18.6	-3.6	15.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/25/87	1200		19.0	--	18.6	-3.6	15.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/26/87	0		18.9	--	18.6	-3.7	15.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/26/87	1200		18.7	--	18.4	-3.7	15.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/27/87	0		18.5	--	18.3	-3.8	15.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/27/87	1200		18.4	--	18.1	-3.9	15.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/28/87	0		18.2	--	18.0	-4.0	15.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1
08/28/87	1200		18.2	--	17.9	-4.0	15.9	> -1	14.1	> -1	14.1	> -1	14.1	> -1
08/29/87	0		18.1	--	17.9	-4.2	15.9	> -1	14.1	> -1	14.1	> -1	14.1	> -1
08/29/87	1200		18.2	--	17.9	-4.2	15.9	> -1	14.1	> -1	14.1	> -1	14.1	> -1
08/30/87	0		18.2	--	17.9	-4.3	15.8	> -1	14.1	> -1	14.1	> -1	14.1	> -1
08/30/87	1200		18.3	--	17.9	-4.3	15.8	> -1	14.1	> -1	14.1	> -1	14.1	> -1
08/31/87	0		18.3	--	18.0	-4.4	15.8	> -1	14.1	> -1	14.1	> -1	14.1	> -1

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the West test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	0.6				0.9				1.5				2.1			
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
08/31/87	1200		18.4	--	18.0	-4.4	15.8	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/01/87	0		18.5	--	18.1	-4.6	15.8	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/01/87	1200		18.5	--	18.1	-4.6	15.8	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/02/87	0		18.6	--	18.2	-4.7	15.8	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/02/87	1200		18.7	--	18.3	-4.7	15.8	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/03/87	0		18.7	--	18.3	-4.9	15.8	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/03/87	1200		18.8	--	18.4	-4.9	15.9	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/04/87	0		18.9	--	18.4	-4.9	15.9	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/04/87	1200		18.8	--	18.4	-4.9	15.9	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/05/87	0		18.6	--	18.3	-5.1	15.8	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/05/87	1200		18.5	--	18.2	-5.1	15.9	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/06/87	0		18.3	--	18.1	-5.2	15.9	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/06/87	1200		18.3	--	18.1	-5.2	15.9	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/07/87	0		18.2	--	18.0	-5.4	15.9	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/07/87	1200		18.2	--	17.9	-5.3	15.9	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/08/87	0		18.1	--	17.9	-5.5	15.8	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/08/87	1200		18.1	--	17.9	-5.5	15.9	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/09/87	0		18.1	--	17.8	-5.7	15.8	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/09/87	1200		18.1	--	17.8	-5.7	15.8	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/10/87	0		18.1	--	17.8	-5.8	15.8	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/10/87	1200		18.0	--	17.8	-5.8	15.8	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/11/87	0		18.0	--	17.7	-5.9	15.8	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/11/87	1200		18.0	--	17.7	-5.9	15.8	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/12/87	0		17.9	--	17.7	-6.1	15.8	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/12/87	1200		18.0	--	17.7	-6.1	15.8	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/13/87	0		17.9	--	17.6	-6.2	15.7	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/13/87	1200		17.9	--	17.6	-6.2	15.7	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/14/87	0		17.9	--	17.6	-6.3	15.7	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/14/87	1200		17.9	--	17.6	-6.3	15.7	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/15/87	0		17.9	--	17.6	-6.4	15.7	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/15/87	1200		17.9	--	17.7	-6.4	15.7	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/16/87	0		17.9	--	17.7	-6.5	15.7	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/16/87	1200		18.0	--	17.7	-6.5	15.7	> -1	14.3	> -1	14.3	> -1	14.3	> -1	14.3	> -1
09/17/87	0		17.9	--	17.6	-6.6	15.7	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/17/87	1200		17.8	--	17.6	-6.6	15.7	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/18/87	0		17.6	--	17.4	-6.6	15.7	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/18/87	1200		17.4	--	17.2	-6.7	15.7	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/19/87	0		17.1	--	17.1	-6.7	15.7	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	0.6				0.9				1.5				2.1			
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
09/19/87	1200		17.0	--	16.9	-6.7	15.7	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/20/87	0		16.8	--	16.7	-6.8	15.6	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/20/87	1200		16.7	--	16.7	-6.7	15.6	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/21/87	0		16.6	--	16.6	-6.8	15.5	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/21/87	1200		16.6	--	16.5	-6.8	15.5	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/22/87	0		16.5	--	16.4	-6.8	15.4	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/22/87	1200		16.5	--	16.4	-6.8	15.4	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/23/87	0		16.5	--	16.4	-6.9	15.4	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/23/87	1200		16.5	--	16.4	-7.0	15.4	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/24/87	0		16.5	--	16.3	-7.0	15.3	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/24/87	1200		16.6	--	16.4	-7.0	15.3	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/25/87	0		16.6	--	16.4	-7.1	15.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/25/87	1200		16.6	--	16.4	-7.1	15.3	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/26/87	0		16.6	--	16.4	-7.3	15.2	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/26/87	1200		16.7	--	16.4	-7.3	15.3	> -1	14.2	> -1	14.2	> -1	14.2	> -1	14.2	> -1
09/27/87	0		16.6	--	16.5	-7.3	15.2	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/27/87	1200		16.6	--	16.4	-7.2	15.2	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/28/87	0		16.4	--	16.3	-7.3	15.2	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/28/87	1200		16.2	--	16.1	-7.2	15.2	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/29/87	0		15.9	--	15.9	-7.3	15.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/29/87	1200		15.8	--	15.8	-7.3	15.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/30/87	0		15.6	--	15.6	-7.4	15.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
09/30/87	1200		15.5	--	15.5	-7.4	15.0	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
10/01/87	0		15.3	--	15.3	-7.4	15.0	> -1	14.0	> -1	14.0	> -1	14.0	> -1	14.0	> -1
10/01/87	1200		15.3	--	15.3	-7.3	15.0	> -1	14.1	> -1	14.1	> -1	14.1	> -1	14.1	> -1
10/02/87	0		15.2	--	15.2	-7.4	14.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1	14.0	> -1
10/02/87	1200		15.2	--	15.2	-7.4	14.9	> -1	14.0	> -1	14.0	> -1	14.0	> -1	14.0	> -1
10/03/87	0		15.1	--	15.1	-7.4	14.8	> -1	14.0	> -1	14.0	> -1	14.0	> -1	14.0	> -1
10/03/87	1200		15.1	--	15.0	-7.4	14.8	> -1	13.9	> -1	13.9	> -1	13.9	> -1	13.9	> -1
10/04/87	0		14.9	--	14.9	-7.5	14.7	> -1	14.0	> -1	14.0	> -1	14.0	> -1	14.0	> -1
10/04/87	1200		15.0	--	14.9	-7.5	14.7	> -1	13.9	> -1	13.9	> -1	13.9	> -1	13.9	> -1
10/05/87	0		14.9	--	14.9	-7.5	14.6	> -1	13.9	> -1	13.9	> -1	13.9	> -1	13.9	> -1
10/05/87	1200		15.0	--	14.9	-7.5	14.6	> -1	13.9	> -1	13.9	> -1	13.9	> -1	13.9	> -1
10/06/87	0		14.9	--	14.9	-7.5	14.6	> -1	13.9	> -1	13.9	> -1	13.9	> -1	13.9	> -1
10/06/87	1200		14.9	--	14.8	-7.5	14.5	> -1	13.9	> -1	13.9	> -1	13.9	> -1	13.9	> -1
10/07/87	0		14.8	--	14.8	-7.6	14.5	> -1	13.9	> -1	13.9	> -1	13.9	> -1	13.9	> -1
10/07/87	1200		14.8	--	14.7	-7.6	14.5	> -1	13.9	> -1	13.9	> -1	13.9	> -1	13.9	> -1
10/08/87	0		14.6	--	14.6	-7.6	14.4	> -1	13.8	> -1	13.8	> -1	13.8	> -1	13.8	> -1

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
10/08/87	1200		14.6	--	--	14.6	-7.6	--	14.4	> -1	13.8	> -1	13.8	> -1
10/09/87	0		14.5	--	--	14.5	-7.7	--	14.4	> -1	13.8	> -1	13.8	> -1
10/09/87	1200		14.4	--	--	14.4	-7.7	--	14.4	> -1	13.8	> -1	13.8	> -1
10/10/87	0		14.5	--	--	14.4	-7.6	--	14.3	> -1	13.8	> -1	13.8	> -1
10/10/87	1200		14.4	--	--	14.4	-7.6	--	14.3	> -1	13.8	> -1	13.8	> -1
10/11/87	0		14.3	--	--	14.3	-7.6	--	14.3	> -1	13.8	> -1	13.8	> -1
10/11/87	1200		14.1	--	--	14.2	-7.6	--	14.2	> -1	13.7	> -1	13.7	> -1
10/12/87	0		13.9	--	--	14.0	-7.6	--	14.2	> -1	13.7	> -1	13.7	> -1
10/12/87	1200		13.7	--	--	13.8	-7.7	--	14.2	> -1	13.7	> -1	13.7	> -1
10/13/87	0		13.4	--	--	13.6	-7.7	--	14.1	> -1	13.6	> -1	13.6	> -1
10/13/87	1200		13.2	--	--	13.4	-7.7	--	14.0	> -1	13.6	> -1	13.6	> -1
10/14/87	0		13.0	--	--	13.2	-7.7	--	14.0	> -1	13.7	> -1	13.7	> -1
10/14/87	1200		12.9	--	--	13.0	-7.6	--	13.9	> -1	13.6	> -1	13.6	> -1
10/15/87	0		12.7	--	--	12.9	-7.6	--	13.8	> -1	13.6	> -1	13.6	> -1
10/15/87	1200		12.6	--	--	12.8	-7.6	--	13.8	> -1	13.6	> -1	13.6	> -1
10/16/87	0		12.6	--	--	12.7	-7.5	--	13.8	> -1	13.6	> -1	13.6	> -1
10/16/87	1200		12.5	--	--	12.6	-7.5	--	13.6	> -1	13.5	> -1	13.5	> -1
10/17/87	0		12.4	--	--	12.5	-7.5	--	13.6	> -1	13.5	> -1	13.5	> -1
10/17/87	1200		12.2	--	--	12.4	-7.4	--	13.5	> -1	13.4	> -1	13.4	> -1
10/18/87	0		12.0	--	--	12.2	-7.5	--	13.4	> -1	13.4	> -1	13.4	> -1
10/18/87	1200		11.8	--	--	12.0	-7.4	--	13.4	> -1	13.4	> -1	13.4	> -1
10/19/87	0		11.7	--	--	11.9	-7.4	--	13.3	> -1	13.4	> -1	13.4	> -1
10/19/87	1200		11.6	--	--	11.8	-7.3	--	13.3	> -1	13.3	> -1	13.3	> -1
10/20/87	0		11.5	--	--	11.7	-7.3	--	13.2	> -1	13.3	> -1	13.3	> -1
10/20/87	1200		11.3	--	--	11.6	-7.3	--	13.1	> -1	13.3	> -1	13.3	> -1
10/21/87	0		11.2	--	--	11.4	-7.3	--	13.0	> -1	13.2	> -1	13.2	> -1
10/21/87	1200		11.0	--	--	11.2	-7.3	--	13.0	> -1	13.2	> -1	13.2	> -1
10/22/87	0		10.8	--	--	11.1	-7.2	--	12.9	> -1	13.2	> -1	13.2	> -1
10/22/87	1200		10.6	--	--	10.9	-7.2	--	12.8	> -1	13.1	> -1	13.1	> -1
10/23/87	0		10.5	--	--	10.8	-7.2	--	12.7	> -1	13.1	> -1	13.1	> -1
10/23/87	1200		10.4	--	--	10.6	-7.2	--	12.7	> -1	13.0	> -1	13.0	> -1
10/24/87	0		10.2	--	--	10.5	-7.1	--	12.6	> -1	13.0	> -1	13.0	> -1
10/24/87	1200		10.1	--	--	10.4	-7.1	--	12.5	> -1	13.0	> -1	13.0	> -1
10/25/87	0		10.1	--	--	10.3	-7.0	--	12.5	> -1	13.0	> -1	13.0	> -1
10/25/87	1200		10.1	--	--	10.3	-6.9	--	12.4	> -1	12.9	> -1	12.9	> -1
10/26/87	0		10.1	--	--	10.3	-6.9	--	12.3	> -1	12.9	> -1	12.9	> -1
10/26/87	1200		10.1	--	--	10.2	-6.9	--	12.2	> -1	12.8	> -1	12.8	> -1
10/27/87	0		10.0	--	--	10.2	-6.8	--	12.2	> -1	12.8	> -1	12.8	> -1

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		0.6			0.9			1.5			2.1		
		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)	
10/27/87	1200	10.0	--		10.2	-6.7		12.1	> -1		12.7	> -1	
10/28/87	0	9.9	--		10.1	-6.8		12.0	> -1		12.7	> -1	
10/28/87	1200	9.8	--		10.0	-6.8		12.0	> -1		12.6	> -1	
10/29/87	0	9.7	--		9.9	-6.8		11.9	> -1		12.6	> -1	
10/29/87	1200	9.6	--		9.8	-6.8		11.9	> -1		12.6	> -1	
10/30/87	0	9.5	--		9.7	-6.8		11.8	> -1		12.5	> -1	
10/30/87	1200	9.5	--		9.7	-6.7		11.8	> -1		12.5	> -1	
10/31/87	0	9.5	--		9.6	-6.7		11.7	> -1		12.4	> -1	
10/31/87	1200	9.6	--		9.7	-6.6		11.7	> -1		12.4	> -1	
11/01/87	0	9.7	--		9.8	-6.7		11.6	> -1		12.4	> -1	
11/01/87	1200	9.8	--		9.8	-6.6		11.6	> -1		12.3	> -1	
11/02/87	0	9.8	--		9.9	-6.6		11.5	> -1		12.3	> -1	
11/02/87	1200	9.9	--		10.0	-6.5		11.5	> -1		12.3	> -1	
11/03/87	0	10.0	--		10.1	-6.4		11.5	> -1		12.2	> -1	
11/03/87	1200	10.0	--		10.1	-6.1		11.4	> -1		12.2	> -1	
11/04/87	0	10.0	--		10.1	-6.0		11.4	> -1		12.2	> -1	
11/04/87	1200	10.0	--		10.1	-5.9		11.4	> -1		12.1	> -1	
11/05/87	0	10.1	--		10.2	-5.8		11.4	> -1		12.1	> -1	
11/05/87	1200	10.0	--		10.1	-5.7		11.4	> -1		12.0	> -1	
11/06/87	0	9.9	--		10.1	-5.6		11.3	> -1		12.0	> -1	
11/06/87	1200	9.8	--		9.9	-5.6		11.3	> -1		12.0	> -1	
11/07/87	0	9.6	--		9.8	-5.6		11.3	> -1		12.0	> -1	
11/07/87	1200	9.4	--		9.6	-5.5		11.3	> -1		11.9	> -1	
11/08/87	0	9.3	--		9.5	-5.4		11.2	> -1		11.9	> -1	
11/08/87	1200	9.3	--		9.5	-5.3		11.2	> -1		11.9	> -1	
11/09/87	0	9.2	--		9.4	-5.2		11.2	> -1		11.9	> -1	
11/09/87	1200	9.1	--		9.3	-5.2		11.1	> -1		11.8	> -1	
11/10/87	0	8.9	--		9.2	-5.1		11.0	> -1		11.8	> -1	
11/10/87	1200	8.8	--		9.1	-5.1		11.0	> -1		11.8	> -1	
11/11/87	0	8.6	--		8.9	-5.0		11.0	> -1		11.8	> -1	
11/11/87	1200	8.5	--		8.8	-4.9		10.9	> -1		11.7	> -1	
11/12/87	0	8.4	--		8.7	-4.9		10.9	> -1		11.7	> -1	
11/12/87	1200	8.3	--		8.6	-4.9		10.8	> -1		11.7	> -1	
11/13/87	0	8.1	--		8.4	-4.9		10.8	> -1		11.6	> -1	
11/13/87	1200	8.0	--		8.3	-4.8		10.7	> -1		11.6	> -1	
11/14/87	0	7.9	--		8.2	-4.7		10.6	> -1		11.6	> -1	
11/14/87	1200	7.8	--		8.1	-4.7		10.6	> -1		11.5	> -1	
11/15/87	0	7.8	--		8.1	-4.7		10.5	> -1		11.5	> -1	

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
11/15/87	1200		7.7	--	8.0	-4.6	10.4	> -1	11.5	> -1	11.5	> -1	11.5	> -1
11/16/87	0		7.6	--	7.9	-4.5	10.4	> -1	11.4	> -1	11.4	> -1	11.4	> -1
11/16/87	1200		7.4	--	7.7	-4.6	10.4	> -1	11.4	> -1	11.4	> -1	11.4	> -1
11/17/87	0		7.1	--	7.5	-4.6	10.3	> -1	11.3	> -1	11.3	> -1	11.3	> -1
11/17/87	1200		6.8	--	7.3	-4.5	10.2	> -1	11.3	> -1	11.3	> -1	11.3	> -1
11/18/87	0		6.6	--	7.1	-4.4	10.2	> -1	11.3	> -1	11.3	> -1	11.3	> -1
11/18/87	1200		6.4	--	6.9	-4.3	10.1	> -1	11.2	> -1	11.2	> -1	11.2	> -1
11/19/87	0		6.1	--	6.7	-4.3	10.0	> -1	11.2	> -1	11.2	> -1	11.2	> -1
11/19/87	1200		5.9	--	6.4	-4.3	9.9	> -1	11.2	> -1	11.2	> -1	11.2	> -1
11/20/87	0		5.6	--	6.2	-4.2	9.8	> -1	11.1	> -1	11.1	> -1	11.1	> -1
11/20/87	1200		5.3	--	5.9	-4.2	9.7	> -1	11.1	> -1	11.1	> -1	11.1	> -1
11/21/87	0		5.1	--	5.7	-4.2	9.6	> -1	11.0	> -1	11.0	> -1	11.0	> -1
11/21/87	1200		4.9	--	5.5	-4.2	9.5	> -1	11.0	> -1	11.0	> -1	11.0	> -1
11/22/87	0		4.7	--	5.3	-4.2	9.4	> -1	11.0	> -1	11.0	> -1	11.0	> -1
11/22/87	1200		4.5	--	5.1	-4.1	9.3	> -1	10.9	> -1	10.9	> -1	10.9	> -1
11/23/87	0		4.3	--	4.9	-4.1	9.2	> -1	10.8	> -1	10.8	> -1	10.8	> -1
11/23/87	1200		4.3	--	4.8	-4.1	9.1	> -1	10.8	> -1	10.8	> -1	10.8	> -1
11/24/87	0		4.2	--	4.7	-4.0	9.0	> -1	10.8	> -1	10.8	> -1	10.8	> -1
11/24/87	1200		4.1	--	4.7	-4.1	8.9	> -1	10.7	> -1	10.7	> -1	10.7	> -1
11/25/87	0		4.0	--	4.5	-4.1	8.8	> -1	10.6	> -1	10.6	> -1	10.6	> -1
11/25/87	1200		3.8	--	4.4	-4.1	8.7	> -1	10.6	> -1	10.6	> -1	10.6	> -1
11/26/87	0		3.7	--	4.2	-4.0	8.6	> -1	10.5	> -1	10.5	> -1	10.5	> -1
11/26/87	1200		3.6	--	4.1	-4.0	8.5	> -1	10.5	> -1	10.5	> -1	10.5	> -1
11/27/87	0		3.5	--	4.0	-3.9	8.4	> -1	10.4	> -1	10.4	> -1	10.4	> -1
11/27/87	1200		3.4	--	3.9	-3.9	8.3	> -1	10.3	> -1	10.3	> -1	10.3	> -1
11/28/87	0		3.2	--	3.8	-3.9	8.3	> -1	10.3	> -1	10.3	> -1	10.3	> -1
11/28/87	1200		3.1	--	3.6	-3.8	8.2	> -1	10.2	> -1	10.2	> -1	10.2	> -1
11/29/87	0		2.9	--	3.5	-3.9	8.1	> -1	10.2	> -1	10.2	> -1	10.2	> -1
11/29/87	1200		2.7	--	3.3	-3.9	8.0	> -1	10.1	> -1	10.1	> -1	10.1	> -1
11/30/87	0		2.5	--	3.2	-3.8	7.9	> -1	10.1	> -1	10.1	> -1	10.1	> -1
11/30/87	1200		2.4	--	3.0	-3.8	7.8	> -1	10.0	> -1	10.0	> -1	10.0	> -1
12/01/87	0		2.1	--	2.8	-3.8	7.7	> -1	9.9	> -1	9.9	> -1	9.9	> -1
12/01/87	1200		2.0	--	2.6	-3.6	7.6	> -1	9.9	> -1	9.9	> -1	9.9	> -1
12/02/87	0		1.9	--	2.5	-3.7	7.5	> -1	9.8	> -1	9.8	> -1	9.8	> -1
12/02/87	1200		1.8	--	2.4	-3.7	7.4	> -1	9.8	> -1	9.8	> -1	9.8	> -1
12/03/87	0		1.9	--	2.4	-3.6	7.3	> -1	9.7	> -1	9.7	> -1	9.7	> -1
12/03/87	1200		2.0	--	2.5	-3.6	7.3	> -1	9.7	> -1	9.7	> -1	9.7	> -1
12/04/87	0		2.1	--	2.5	-3.6	7.1	> -1	9.6	> -1	9.6	> -1	9.6	> -1

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		0.6			0.9			1.5			2.1		
		Soil temperature (Celsius)	Soil-water potential (bars)	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Hour
12/04/87	1200	2.2	--	--	2.6	-3.6	--	7.1	> -1	--	9.5	> -1	--
12/05/87	0	2.3	--	--	2.7	-3.6	--	7.0	> -1	--	9.5	> -1	--
12/05/87	1200	2.4	--	--	2.8	-3.7	--	6.9	> -1	--	9.4	> -1	--
12/06/87	0	2.5	--	--	2.9	-3.6	--	6.9	> -1	--	9.4	> -1	--
12/06/87	1200	2.6	--	--	2.9	-3.7	--	6.9	> -1	--	9.3	> -1	--
12/07/87	0	2.6	--	--	3.0	-3.6	--	6.8	> -1	--	9.2	> -1	--
12/07/87	1200	2.7	--	--	3.0	-3.6	--	6.8	> -1	--	9.2	> -1	--
12/08/87	0	2.8	--	--	3.1	-3.6	--	6.7	> -1	--	9.1	> -1	--
12/08/87	1200	2.9	--	--	3.2	-3.5	--	6.7	> -1	--	9.1	> -1	--
12/09/87	0	2.9	--	--	3.1	-3.5	--	6.7	> -1	--	9.0	> -1	--
12/09/87	1200	2.9	--	--	3.2	-3.5	--	6.7	> -1	--	9.0	> -1	--
12/10/87	0	2.9	--	--	3.2	-3.5	--	6.6	> -1	--	8.9	> -1	--
12/10/87	1200	2.9	--	--	3.2	-3.5	--	6.6	> -1	--	8.9	> -1	--
12/11/87	0	2.9	--	--	3.2	-3.4	--	6.6	> -1	--	8.8	> -1	--
12/11/87	1200	2.9	--	--	3.2	-3.3	--	6.6	> -1	--	8.8	> -1	--
12/12/87	0	3.0	--	--	3.2	-3.3	--	6.6	> -1	--	8.8	> -1	--
12/12/87	1200	2.9	--	--	3.2	-3.3	--	6.5	> -1	--	8.7	> -1	--
12/13/87	0	2.9	--	--	3.2	-3.3	--	6.5	> -1	--	8.7	> -1	--
12/13/87	1200	2.9	--	--	3.2	-3.3	--	6.5	> -1	--	8.7	> -1	--
12/14/87	0	2.7	--	--	3.1	-3.3	--	6.5	> -1	--	8.6	> -1	--
12/14/87	1200	2.5	--	--	2.9	-3.2	--	6.5	> -1	--	8.6	> -1	--
12/15/87	0	2.1	--	--	2.7	-3.1	--	6.4	> -1	--	8.5	> -1	--
12/15/87	1200	1.7	--	--	2.4	-3.1	--	6.4	> -1	--	8.5	> -1	--
12/16/87	0	0.9	--	--	1.7	-3.1	--	6.3	> -1	--	8.4	> -1	--
12/16/87	1200	0.5	--	--	1.3	-3.0	--	6.2	> -1	--	8.4	> -1	--
12/17/87	0	0.3	--	--	1.0	-3.0	--	6.1	> -1	--	8.4	> -1	--
12/17/87	1200	0.1	--	--	0.8	-3.0	--	6.0	> -1	--	8.3	> -1	--
12/18/87	0	0.0	--	--	0.7	-3.0	--	5.9	> -1	--	8.3	> -1	--
12/18/87	1200	-0.1	--	--	0.6	-2.9	--	5.8	> -1	--	8.3	> -1	--
12/19/87	0	-0.1	--	--	0.5	-2.9	--	5.7	> -1	--	8.2	> -1	--
12/19/87	1200	-0.2	--	--	0.4	-2.8	--	5.6	> -1	--	8.2	> -1	--
12/20/87	0	-0.2	--	--	0.4	-2.9	--	5.5	> -1	--	8.1	> -1	--
12/20/87	1200	-0.3	--	--	0.3	-2.8	--	5.4	> -1	--	8.1	> -1	--
12/21/87	0	-0.4	--	--	0.2	-2.8	--	5.3	> -1	--	8.0	> -1	--
12/21/87	1200	-0.5	--	--	0.1	-2.8	--	5.3	> -1	--	8.0	> -1	--
12/22/87	0	-0.5	--	--	0.1	-2.8	--	5.2	> -1	--	7.9	> -1	--
12/22/87	1200	-0.5	--	--	0.0	-2.9	--	5.1	> -1	--	7.9	> -1	--
12/23/87	0	-0.5	--	--	0.0	-2.7	--	5.0	> -1	--	7.8	> -1	--
12/23/87	1200	-0.5	--	--	0.0	-2.7	--	5.0	> -1	--	7.8	> -1	--

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		0.6			0.9			1.5			2.1		
Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
12/24/87	0	-0.5	--	0.0	-2.9	5.0	> -1	7.8	> -1				
12/24/87	1200	-0.4	--	0.0	-2.8	4.9	> -1	7.7	> -1				
12/25/87	0	-0.4	--	0.0	-2.8	4.8	> -1	7.6	> -1				
12/25/87	1200	-0.5	--	0.0	-2.8	4.8	> -1	7.6	> -1				
12/26/87	0	-0.6	--	0.0	-2.8	4.7	> -1	7.5	> -1				
12/26/87	1200	-0.6	--	-0.1	-2.8	4.7	> -1	7.5	> -1				
12/27/87	0	-0.7	--	-0.2	-2.7	4.6	> -1	7.4	> -1				
12/27/87	1200	-0.8	--	-0.3	-2.7	4.6	> -1	7.4	> -1				
12/28/87	0	-0.9	--	-0.4	-2.7	4.5	> -1	7.3	> -1				
12/28/87	1200	-1.0	--	-0.5	-2.7	4.5	> -1	7.3	> -1				
12/29/87	0	-1.1	--	-0.6	-2.7	4.4	> -1	7.2	> -1				
12/29/87	1200	-1.2	--	-0.6	-2.7	4.4	> -1	7.2	> -1				
12/30/87	0	-1.3	--	-0.7	-2.7	4.3	> -1	7.1	> -1				
12/30/87	1200	-1.3	--	-0.8	-2.7	4.2	> -1	7.1	> -1				
12/31/87	0	-1.4	--	-0.9	-2.7	4.2	> -1	7.0	> -1				
12/31/87	1200	-1.4	--	-0.9	-2.6	4.1	> -1	7.0	> -1				

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		2.7			3.4			4.0		
Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)
NO DATA 1/01/87 THROUGH 2/10/87										
02/11/87	0	5.7	--	--	6.8	--	--	8.0	--	-13.4
02/11/87	1200	5.7	--	--	6.8	--	--	8.0	--	-13.4
02/12/87	0	5.7	--	--	6.8	--	--	8.0	--	-13.5
02/12/87	1200	5.6	--	--	6.8	--	--	7.9	--	-13.4
02/13/87	0	5.6	--	--	6.8	--	--	7.9	--	-13.5
02/13/87	1200	5.6	--	--	6.8	--	--	7.9	--	-13.5
02/14/87	0	5.6	--	--	6.8	--	--	7.9	--	-13.5
02/14/87	1200	5.5	--	--	6.8	--	--	7.8	--	-13.5
02/15/87	0	5.6	--	--	6.8	--	--	7.9	--	-13.5
02/15/87	1200	5.5	--	--	6.8	--	--	7.8	--	-13.5
02/16/87	0	5.5	--	--	6.8	--	--	7.8	--	-13.5
02/16/87	1200	5.5	--	--	6.8	--	--	7.8	--	-13.5
02/17/87	0	5.5	--	--	6.8	--	--	7.8	--	-13.4
02/17/87	1200	5.5	--	--	6.8	--	--	7.7	--	-13.5
02/18/87	0	5.5	--	--	6.8	--	--	7.7	--	-13.4
02/18/87	1200	5.4	--	--	6.8	--	--	7.7	--	-13.5
02/19/87	0	5.4	--	--	6.8	--	--	7.7	--	-13.4
02/19/87	1200	5.4	--	--	6.8	--	--	7.7	--	-13.5
02/20/87	0	5.4	--	--	6.8	--	--	7.7	--	-13.5
02/20/87	1200	5.4	--	--	6.8	--	--	7.6	--	-13.3
02/21/87	0	5.4	--	--	6.8	--	--	7.6	--	-13.4
02/21/87	1200	5.3	--	--	6.8	--	--	7.6	--	-13.4
02/22/87	0	5.3	--	--	6.8	--	--	7.6	--	-13.3
02/22/87	1200	5.3	--	--	6.8	--	--	7.6	--	-13.4
02/23/87	0	5.3	--	--	6.8	--	--	7.6	--	-13.5
02/23/87	1200	5.3	--	--	6.8	--	--	7.5	--	-13.6
02/24/87	0	5.3	--	--	6.8	--	--	7.5	--	-13.6
02/24/87	1200	5.3	--	--	6.8	--	--	7.5	--	-13.6
02/25/87	0	5.3	--	--	6.8	--	--	7.5	--	-13.6
02/25/87	1200	5.3	--	--	6.8	--	--	7.5	--	-13.5
02/26/87	0	5.2	--	--	6.8	--	--	7.5	--	-13.4
02/26/87	1200	5.2	--	--	6.8	--	--	7.4	--	-13.4
02/27/87	0	5.2	--	--	6.8	--	--	7.4	--	-13.3
02/27/87	1200	5.1	--	--	6.8	--	--	7.4	--	-13.3
02/28/87	0	5.2	--	--	6.8	--	--	7.4	--	-13.3
02/28/87	1200	5.2	--	--	6.8	--	--	7.4	--	-13.3
03/01/87	0	5.2	--	--	6.8	--	--	7.4	--	-13.3

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		2.7		3.4		4.0	
Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
03/01/87	1200	5.1	--	6.8	--	7.4	-13.3
03/02/87	0	5.1	--	6.8	--	7.4	-13.3
03/02/87	1200	5.1	--	6.8	--	7.3	-13.4
03/03/87	0	5.1	--	6.8	--	7.3	-13.3
03/03/87	1200	5.1	--	6.8	--	7.3	-13.3
03/04/87	0	5.1	--	6.8	--	7.3	-13.2
03/04/87	1200	5.1	--	6.8	--	7.3	-13.3
03/05/87	0	5.1	--	6.8	--	7.3	-13.3
03/05/87	1200	5.1	--	6.8	--	7.2	-13.3
03/06/87	0	5.0	--	6.8	--	7.2	-13.4
03/06/87	1200	5.0	--	6.8	--	7.2	-13.3
03/07/87	0	5.0	--	6.8	--	7.2	-13.3
03/07/87	1200	5.0	--	6.8	--	7.2	-13.3
03/08/87	0	5.0	--	6.8	--	7.2	-13.3
03/08/87	1200	5.0	--	6.8	--	7.2	-13.3
03/09/87	0	5.0	--	6.8	--	7.1	-13.3
03/09/87	1200	5.0	--	6.8	--	7.1	-13.4
03/10/87	0	5.0	--	6.8	--	7.1	-13.4
03/10/87	1200	5.0	--	6.8	--	7.1	-13.3
03/11/87	0	5.0	--	6.8	--	7.1	-13.3
03/11/87	1200	5.0	--	6.8	--	7.1	-13.3
03/12/87	0	5.0	--	6.8	--	7.1	-13.2
03/12/87	1200	4.9	--	6.8	--	7.1	-13.2
03/13/87	0	5.0	--	6.8	--	7.1	-13.2
03/13/87	1200	5.0	--	6.8	--	7.0	-13.3
03/14/87	0	4.9	--	6.8	--	7.0	-13.3
03/14/87	1200	4.9	--	6.8	--	7.0	-13.2
03/15/87	0	4.9	--	6.8	--	7.0	-13.3
03/15/87	1200	4.9	--	6.8	--	7.0	-13.3
03/16/87	0	4.9	--	6.8	--	7.0	-13.3
03/16/87	1200	4.9	--	6.8	--	6.9	-13.3
03/17/87	0	4.9	--	6.8	--	7.0	-13.3
03/17/87	1200	4.9	--	6.8	--	6.9	-13.2
03/18/87	0	4.9	--	6.8	--	6.9	-13.2
03/18/87	1200	4.9	--	6.8	--	6.9	-13.4
03/19/87	0	4.9	--	6.8	--	6.9	-13.3
03/19/87	1200	4.9	--	6.8	--	6.9	-13.3
03/20/87	0	4.9	--	6.8	--	6.9	-13.3

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7			3.4			4.0		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)
03/20/87	1200		4.8	--	6.8	--	6.8	--	-13.3
03/21/87	0		4.9	--	6.8	--	6.9	--	-13.3
03/21/87	1200		4.9	--	6.8	--	6.8	--	-13.3
03/22/87	0		4.9	--	6.8	--	6.9	--	-13.3
03/22/87	1200		4.9	--	6.8	--	6.8	--	-13.4
03/23/87	0		4.9	--	6.8	--	6.8	--	-13.3
03/23/87	1200		4.9	--	6.8	--	6.8	--	-13.3
03/24/87	0		4.9	--	6.8	--	6.8	--	-13.3
03/24/87	1200		4.9	--	6.8	--	6.8	--	-13.3
03/25/87	0		4.9	--	6.8	--	6.8	--	-13.3
03/25/87	1200		4.9	--	6.8	--	6.7	--	-13.2
03/26/87	0		4.9	--	6.8	--	6.8	--	-13.3
03/26/87	1200		4.9	--	6.8	--	6.7	--	-13.3
03/27/87	0		4.9	--	6.8	--	6.8	--	-13.2
03/27/87	1200		4.9	--	6.8	--	6.7	--	-13.2
03/28/87	0		4.9	--	6.8	--	6.7	--	-13.3
03/28/87	1200		4.9	--	6.8	--	6.7	--	-13.2
03/29/87	0		4.9	--	6.8	--	6.7	--	-13.2
03/29/87	1200		4.8	--	6.8	--	6.6	--	-13.2
03/30/87	0		4.9	--	6.8	--	6.7	--	-13.1
03/30/87	1200		4.9	--	6.8	--	6.7	--	-13.2
03/31/87	0		4.9	--	6.8	--	6.7	--	-13.1
03/31/87	1200		4.9	--	6.8	--	6.7	--	-13.1
04/01/87	0		4.9	--	6.8	--	6.6	--	-13.1
04/01/87	1200		4.9	--	6.8	--	6.7	--	-13.1
04/02/87	0		4.9	--	6.8	--	6.6	--	-13.1
04/02/87	1200		4.9	--	6.8	--	6.6	--	-13.1
04/03/87	0		4.9	--	6.8	--	6.7	--	-13.2
04/03/87	1200		4.9	--	6.8	--	6.6	--	-13.2
04/04/87	0		4.9	--	6.8	--	6.6	--	-13.2
04/04/87	1200		4.9	--	6.8	--	6.6	--	-13.2
04/05/87	0		5.0	--	6.8	--	6.6	--	-13.2
04/05/87	1200		5.0	--	6.8	--	6.6	--	-13.1
04/06/87	0		5.0	--	6.8	--	6.6	--	-13.2
04/06/87	1200		4.9	--	6.8	--	6.6	--	-13.2
04/07/87	0		5.0	--	6.8	--	6.6	--	-13.2
04/07/87	1200		4.9	--	6.8	--	6.5	--	-13.2
04/08/87	0		5.0	--	6.8	--	6.6	--	-13.2

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7			3.4			4.0		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	
04/08/87	1200		5.0	--	6.8	--	6.6	-13.2	
04/09/87	0		5.0	--	6.8	--	6.6	-13.1	
04/09/87	1200		5.0	--	6.8	--	6.5	-13.2	
04/10/87	0		5.0	--	6.8	--	6.6	-13.2	
04/10/87	1200		5.0	--	6.8	--	6.5	-13.2	
04/11/87	0		5.0	--	6.8	--	6.6	-13.2	
04/11/87	1200		5.0	--	6.8	--	6.5	-13.2	
04/12/87	0		5.0	--	6.8	--	6.5	-13.2	
04/12/87	1200		5.0	--	6.8	--	6.5	-13.2	
04/13/87	0		5.1	--	6.8	--	6.5	-13.1	
04/13/87	1200		5.1	--	6.8	--	6.5	-13.1	
04/14/87	0		5.1	--	6.8	--	6.5	-13.1	
04/14/87	1200		5.1	--	6.8	--	6.5	-13.1	
04/15/87	0		5.1	--	6.8	--	6.5	-13.1	
04/15/87	1200		5.1	--	6.8	--	6.5	-13.1	
04/16/87	0		5.2	--	6.8	--	6.5	-13.1	
04/16/87	1200		5.1	--	6.8	--	6.5	-13.1	
04/17/87	0		5.2	--	6.8	--	6.5	-13.1	
04/17/87	1200		5.2	--	6.8	--	6.5	-13.1	
04/18/87	0		5.2	--	6.8	--	6.5	-13.2	
04/18/87	1200		5.2	--	6.8	--	6.5	-13.2	
04/19/87	0		5.3	--	6.8	--	6.5	-13.3	
04/19/87	1200		5.3	--	6.8	--	6.5	-13.2	
04/20/87	0		5.3	--	6.8	--	6.5	-13.0	
04/20/87	1200		5.3	--	6.8	--	6.5	-13.0	
04/21/87	0		5.3	--	6.8	--	6.5	-13.0	
04/21/87	1200		5.3	--	6.8	--	6.4	-13.0	
04/22/87	0		5.4	--	6.8	--	6.5	-13.0	
04/22/87	1200		5.4	--	6.8	--	6.5	-13.1	
04/23/87	0		5.4	--	6.8	--	6.5	-13.0	
04/23/87	1200		5.4	--	6.8	--	6.5	-13.1	
04/24/87	0		5.4	--	6.8	--	6.5	-13.1	
04/24/87	1200		5.5	--	6.8	--	6.4	-13.1	
04/25/87	0		5.5	--	6.8	--	6.5	-13.0	
04/25/87	1200		5.5	--	6.8	--	6.5	-13.1	
04/26/87	0		5.5	--	6.8	--	6.5	-13.0	
04/26/87	1200		5.6	--	6.8	--	6.5	-13.0	
04/27/87	0		5.5	--	6.8	--	6.5	-12.9	

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7		3.4		4.0	
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
04/27/87	1200		5.6	--	6.8	--
04/28/87	0		5.6	--	6.8	--
04/28/87	1200		5.6	--	6.8	--
04/29/87	0		5.6	--	6.8	--
04/29/87	1200		5.7	--	6.8	--
04/30/87	0		5.7	--	6.8	--
04/30/87	1200		5.7	--	6.8	--
05/01/87	0		5.8	--	6.8	--
05/01/87	1200		5.8	--	6.8	--
05/02/87	0		5.8	--	6.8	--
05/02/87	1200		5.9	--	6.8	--
05/03/87	0		5.9	--	6.8	--
05/03/87	1200		5.9	--	6.8	--
05/04/87	0		5.9	--	6.8	--
05/04/87	1200		5.9	--	6.8	--
05/05/87	0		6.0	--	6.8	--
05/05/87	1200		6.0	--	6.8	--
05/06/87	0		6.0	--	6.8	--
05/06/87	1200		6.0	--	6.8	--
05/07/87	0		6.1	--	6.8	--
05/07/87	1200		6.1	--	6.8	--
05/08/87	0		6.2	--	6.8	--
05/08/87	1200		6.2	--	6.8	--
05/09/87	0		6.2	--	6.8	--
05/09/87	1200		6.2	--	6.8	--
05/10/87	0		6.2	--	6.8	--
05/10/87	1200		6.3	--	6.8	--
05/11/87	0		6.3	--	6.8	--
05/11/87	1200		6.3	--	6.8	--
05/12/87	0		6.4	--	6.8	--
05/12/87	1200		6.4	--	6.8	--
05/13/87	0		6.4	--	6.8	--
05/13/87	1200		6.5	--	6.8	--
05/14/87	0		6.5	--	6.8	--
05/14/87	1200		6.5	--	6.8	--
05/15/87	0		6.5	--	6.8	--
05/15/87	1200		6.6	--	6.8	--
05/16/87	0		6.6	--	6.8	--

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7		3.4		4.0	
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
05/16/87	1200		6.7	--	6.7	-12.9
05/17/87	0		6.7	--	6.7	-13.0
05/17/87	1200		6.8	--	6.7	-12.9
05/18/87	0		6.8	--	6.7	-13.0
05/18/87	1200		6.8	--	6.7	-12.9
05/19/87	0		6.9	--	6.7	-13.0
05/19/87	1200		6.9	--	6.7	-12.9
05/20/87	0		6.9	--	6.7	-12.9
05/20/87	1200		7.0	--	6.7	-13.0
05/21/87	0		7.0	--	6.8	-12.9
05/21/87	1200		7.0	--	6.8	-12.9
05/22/87	0		7.1	--	6.8	-12.9
05/22/87	1200		7.1	--	6.8	-12.9
05/23/87	0		7.1	--	6.8	-12.9
05/23/87	1200		7.2	--	6.8	-12.9
05/24/87	0		7.2	--	6.8	-12.9
05/24/87	1200		7.3	--	6.8	-12.9
05/25/87	0		7.3	--	6.8	-12.9
05/25/87	1200		7.3	--	6.9	-13.0
05/26/87	0		7.4	--	6.9	-12.9
05/26/87	1200		7.4	--	6.9	-13.0
05/27/87	0		7.4	--	6.9	-12.9
05/27/87	1200		7.5	--	6.9	-13.0
05/28/87	0		7.5	--	6.9	-12.9
05/28/87	1200		7.5	--	7.0	-12.9
05/29/87	0		7.6	--	7.0	-12.8
05/29/87	1200		7.6	--	7.0	-12.9
05/30/87	0		7.6	--	7.0	-12.9
05/30/87	1200		7.6	--	7.0	-12.9
05/31/87	0		7.7	--	7.0	-12.9
05/31/87	1200		7.7	--	7.0	-12.9
06/01/87	0		7.7	--	7.1	-12.9
06/01/87	1200		7.7	--	7.1	-12.9
06/02/87	0		7.8	--	7.1	-12.9
06/02/87	1200		7.8	--	7.1	-12.9
06/03/87	0		7.8	--	7.1	-12.8
06/03/87	1200		7.8	--	7.1	-12.8
06/04/87	0		7.8	--	7.1	-12.7

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7			3.4			4.0		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	
	06/04/87	1200	7.9	--	6.8	--	7.2	-12.8	
	06/05/87	0	7.9	--	6.8	--	7.1	-12.8	
	06/05/87	1200	7.9	--	6.8	--	7.2	-12.8	
	06/06/87	0	7.9	--	6.8	--	7.2	-12.8	
	06/06/87	1200	8.0	--	6.8	--	7.2	-12.8	
	06/07/87	0	8.0	--	6.8	--	7.2	-12.8	
	06/07/87	1200	8.0	--	6.8	--	7.3	-12.8	
	06/08/87	0	8.0	--	6.8	--	7.3	-12.8	
	06/08/87	1200	8.1	--	6.8	--	7.3	-13.0	
	06/09/87	0	8.1	--	6.8	--	7.3	-12.9	
	06/10/87	0	8.1	--	6.8	--	7.3	-13.0	
	06/10/87	1200	8.1	--	6.8	--	7.3	-13.0	
	06/11/87	0	8.2	--	6.8	--	7.3	-12.9	
	06/11/87	1200	8.2	--	6.8	--	7.4	-12.9	
	06/12/87	0	8.2	--	6.8	--	7.3	-12.9	
	06/12/87	1200	8.2	--	6.8	--	7.4	-12.9	
	06/13/87	0	8.2	--	6.8	--	7.4	-12.8	
	06/13/87	1200	8.3	--	6.8	--	7.4	-12.9	
	06/14/87	0	8.3	--	6.8	--	7.4	-12.8	
	06/14/87	1200	8.3	--	6.8	--	7.4	-12.8	
	06/15/87	0	8.3	--	6.8	--	7.4	-12.8	
	06/15/87	1200	8.4	--	6.8	--	7.5	-12.9	
	06/16/87	0	8.4	--	6.8	--	7.5	-12.9	
	06/16/87	1200	8.5	--	6.8	--	7.5	-12.9	
	06/17/87	0	8.5	--	6.8	--	7.5	-12.9	
	06/17/87	1200	8.5	--	6.8	--	7.5	-12.9	
	06/18/87	0	8.5	--	6.8	--	7.5	-12.9	
	06/18/87	1200	8.6	--	6.8	--	7.6	-12.9	
	06/19/87	0	8.6	--	6.8	--	7.6	-12.9	
	06/19/87	1200	8.6	--	6.8	--	7.6	-12.9	
	06/20/87	0	8.6	--	6.8	--	7.6	-13.0	
	06/20/87	1200	8.7	--	6.8	--	7.6	-12.9	
	06/21/87	0	8.7	--	6.8	--	7.6	-12.9	
	06/21/87	1200	8.8	--	6.8	--	7.6	-12.9	
	06/22/87	0	8.7	--	6.8	--	7.7	-12.9	
	06/22/87	1200	8.8	--	6.8	--	7.7	-12.9	
	06/23/87	0	8.8	--	6.8	--	7.7	-12.9	
	06/23/87	1200	8.9	--	6.8	--	7.7	-12.9	

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7			3.4			4.0		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)
06/24/87		0	8.9	--	6.8	--	7.7	--	-12.9
06/24/87		1200	8.9	--	6.8	--	7.7	--	-12.8
06/25/87		0	8.9	--	6.8	--	7.7	--	-12.8
06/25/87		1200	9.0	--	6.8	--	7.8	--	-12.9
07/08/87		0	9.8	--	6.8	--	8.2	--	-12.9
07/08/87		1200	9.8	--	6.8	--	8.2	--	-12.9
07/09/87		0	9.9	--	6.8	--	8.2	--	-12.9
07/09/87		1200	9.9	--	6.8	--	8.2	--	-12.9
07/10/87		0	9.9	--	6.8	--	8.2	--	-12.8
07/10/87		1200	10.0	--	6.8	--	8.3	--	-12.9
07/11/87		0	10.0	--	6.8	--	8.3	--	-12.9
07/11/87		1200	10.0	--	6.8	--	8.3	--	-12.8
07/12/87		0	10.1	--	6.8	--	8.3	--	-12.8
07/12/87		1200	10.1	--	6.8	--	8.3	--	-12.8
07/13/87		0	10.1	--	6.8	--	8.3	--	-12.8
07/13/87		1200	10.2	--	6.8	--	8.4	--	-12.7
07/14/87		0	10.1	--	6.8	--	8.4	--	-12.8
07/14/87		1200	10.2	--	6.8	--	8.4	--	-12.8
07/15/87		0	10.2	--	6.8	--	8.4	--	-12.7
07/15/87		1200	10.3	--	6.8	--	8.5	--	-12.8
07/16/87		0	10.3	--	6.8	--	8.4	--	-12.8
07/16/87		1200	10.4	--	6.8	--	8.5	--	-12.8
07/17/87		0	10.3	--	6.8	--	8.5	--	-12.8
07/17/87		1200	10.4	--	6.8	--	8.6	--	-12.8
07/18/87		0	10.4	--	6.8	--	8.6	--	-12.9
07/18/87		1200	10.5	--	6.8	--	8.6	--	-12.8
07/19/87		0	10.5	--	6.8	--	8.6	--	-12.7
07/19/87		1200	10.5	--	6.8	--	8.6	--	-12.7
07/20/87		0	10.5	--	6.8	--	8.6	--	-12.8
07/20/87		1200	10.6	--	6.8	--	8.6	--	-12.8
07/21/87		0	10.6	--	6.8	--	8.6	--	-12.7
07/21/87		1200	10.7	--	6.8	--	8.7	--	-12.7
07/22/87		0	10.7	--	6.8	--	8.7	--	-12.7
07/22/87		1200	10.7	--	6.8	--	8.7	--	-12.7
07/23/87		0	10.7	--	6.8	--	8.7	--	-12.7
07/23/87		1200	10.7	--	6.8	--	8.8	--	-12.7
07/24/87		0	10.7	--	6.8	--	8.8	--	-12.7

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
 [Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7			3.4			4.0		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)
07/24/87	1200		10.8	--	6.8	--	8.8	--	-12.7
07/25/87	0		10.8	--	6.8	--	8.8	--	-12.6
07/25/87	1200		10.8	--	6.8	--	8.8	--	-12.7
07/26/87	0		10.8	--	6.8	--	8.8	--	-12.6
07/26/87	1200		10.9	--	6.8	--	8.9	--	-12.7
07/27/87	0		10.9	--	6.8	--	8.9	--	-12.6
07/27/87	1200		10.9	--	6.8	--	8.9	--	-12.7
07/28/87	0		10.9	--	6.8	--	8.9	--	-12.6
07/28/87	1200		11.0	--	6.8	--	8.9	--	-12.7
07/29/87	0		11.0	--	6.8	--	9.0	--	-12.6
07/29/87	1200		11.0	--	6.8	--	9.0	--	-12.6
07/30/87	0		11.0	--	6.8	--	9.0	--	-12.6
07/30/87	1200		11.1	--	6.8	--	9.0	--	-12.6
07/31/87	0		11.0	--	6.8	--	9.0	--	-12.5
07/31/87	1200		11.1	--	6.8	--	9.1	--	-12.6
08/01/87	0		11.1	--	6.8	--	9.1	--	-12.5
08/01/87	1200		11.1	--	6.8	--	9.1	--	-12.6
08/02/87	0		11.1	--	6.8	--	9.1	--	-12.6
08/02/87	1200		11.2	--	6.8	--	9.1	--	-12.6
08/03/87	0		11.2	--	6.8	--	9.1	--	-12.6
08/03/87	1200		11.2	--	6.8	--	9.2	--	-12.6
08/04/87	0		11.2	--	6.8	--	9.2	--	-12.5
08/04/87	1200		11.3	--	6.8	--	9.2	--	-12.6
08/05/87	0		11.2	--	6.8	--	9.2	--	-12.6
08/05/87	1200		11.3	--	6.8	--	9.2	--	-12.6
08/06/87	0		11.3	--	6.8	--	9.3	--	-12.6
08/06/87	1200		11.3	--	6.8	--	9.3	--	-12.6
08/07/87	0		11.3	--	6.8	--	9.3	--	-12.6
08/07/87	1200		11.4	--	6.8	--	9.3	--	-12.6
08/08/87	0		11.4	--	6.8	--	9.3	--	-12.6
08/08/87	1200		11.4	--	6.8	--	9.3	--	-12.6
08/09/87	0		11.4	--	6.8	--	9.3	--	-12.6
08/09/87	1200		11.5	--	6.8	--	9.4	--	-12.6
08/10/87	0		11.5	--	6.8	--	9.4	--	-12.6
08/10/87	1200		11.5	--	6.8	--	9.4	--	-12.6
08/11/87	0		11.5	--	6.8	--	9.4	--	-12.6
08/11/87	1200		11.6	--	6.8	--	9.4	--	-12.7
08/12/87	0		11.6	--	6.8	--	9.5	--	-12.6

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7		3.4		4.0	
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
08/12/87	1200		11.6	--	9.5	-12.7
08/13/87	0		11.6	--	9.5	-12.6
08/13/87	1200		11.7	--	9.5	-12.6
08/14/87	0		11.7	--	9.5	-12.7
08/14/87	1200		11.7	--	9.5	-12.7
08/15/87	0		11.7	--	9.6	-12.7
08/15/87	1200		11.7	--	9.6	-12.7
08/16/87	0		11.8	--	9.6	-12.7
08/16/87	1200		11.8	--	9.6	-12.6
08/17/87	0		11.8	--	9.6	-12.7
08/17/87	1200		11.8	--	9.6	-12.6
08/18/87	0		11.9	--	9.7	-12.5
08/18/87	1200		11.9	--	9.7	-12.6
08/19/87	0		11.9	--	9.7	-12.5
08/19/87	1200		11.9	--	9.7	-12.5
08/20/87	0		11.9	--	9.7	-12.5
08/20/87	1200		12.0	--	9.7	-12.5
08/21/87	0		12.0	--	9.8	-12.5
08/21/87	1200		12.0	--	9.8	-12.6
08/22/87	0		12.0	--	9.8	-12.5
08/22/87	1200		12.0	--	9.8	-12.5
08/23/87	0		12.1	--	9.8	-12.4
08/23/87	1200		12.1	--	9.9	-12.5
08/24/87	0		12.1	--	9.9	-12.4
08/24/87	1200		12.1	--	9.9	-12.6
08/25/87	0		12.2	--	9.9	-12.6
08/25/87	1200		12.2	--	9.9	-12.6
08/26/87	0		12.2	--	9.9	-12.5
08/26/87	1200		12.2	--	10.0	-12.5
08/27/87	0		12.2	--	10.0	-12.4
08/27/87	1200		12.2	--	10.0	-12.5
08/28/87	0		12.2	--	10.0	-12.4
08/28/87	1200		12.2	--	10.0	-12.5
08/29/87	0		12.2	--	10.0	-12.4
08/29/87	1200		12.3	--	10.0	-12.5
08/30/87	0		12.3	--	10.0	-12.4
08/30/87	1200		12.3	--	10.1	-12.4
08/31/87	0		12.3	--	10.1	-12.4

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7		3.4		4.0	
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
08/31/87	1200		12.3	--	10.1	-12.4
09/01/87	0		12.3	--	10.1	-12.3
09/01/87	1200		12.4	--	10.2	-12.4
09/02/87	0		12.3	--	10.1	-12.3
09/02/87	1200		12.4	--	10.2	-12.5
09/03/87	0		12.3	--	10.2	-12.4
09/03/87	1200		12.4	--	10.2	-12.5
09/04/87	0		12.4	--	10.2	-12.5
09/04/87	1200		12.4	--	10.2	-12.5
09/05/87	0		12.4	--	10.2	-12.5
09/05/87	1200		12.5	--	10.3	-12.5
09/06/87	0		12.4	--	10.3	-12.4
09/06/87	1200		12.5	--	10.3	-12.5
09/07/87	0		12.5	--	10.3	-12.5
09/07/87	1200		12.5	--	10.3	-12.5
09/08/87	0		12.5	--	10.3	-12.4
09/08/87	1200		12.5	--	10.4	-12.4
09/09/87	0		12.5	--	10.3	-12.4
09/09/87	1200		12.5	--	10.4	-12.4
09/10/87	0		12.5	--	10.4	-12.5
09/10/87	1200		12.6	--	10.4	-12.5
09/11/87	0		12.6	--	10.4	-12.4
09/11/87	1200		12.6	--	10.4	-12.5
09/12/87	0		12.6	--	10.4	-12.5
09/12/87	1200		12.6	--	10.5	-12.5
09/13/87	0		12.6	--	10.4	-12.5
09/13/87	1200		12.6	--	10.5	-12.5
09/14/87	0		12.6	--	10.5	-12.5
09/14/87	1200		12.6	--	10.5	-12.5
09/15/87	0		12.6	--	10.5	-12.4
09/15/87	1200		12.7	--	10.6	-12.5
09/16/87	0		12.7	--	10.6	-12.4
09/16/87	1200		12.7	--	10.6	-12.5
09/17/87	0		12.7	--	10.6	-12.4
09/17/87	1200		12.7	--	10.6	-12.4
09/18/87	0		12.7	--	10.6	-12.4
09/18/87	1200		12.7	--	10.6	-12.5
09/19/87	0		12.7	--	10.6	-12.4

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7		3.4		4.0	
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
09/19/87	1200		12.7	--	10.7	-12.4
09/20/87	0		12.7	--	10.6	-12.4
09/20/87	1200		12.7	--	10.7	-12.4
09/21/87	0		12.7	--	10.7	-12.3
09/21/87	1200		12.7	--	10.7	-12.4
09/22/87	0		12.7	--	10.7	-12.3
09/22/87	1200		12.8	--	10.7	-12.4
09/23/87	0		12.7	--	10.7	-12.3
09/23/87	1200		12.8	--	10.7	-12.4
09/24/87	0		12.7	--	10.7	-12.4
09/24/87	1200		12.8	--	10.8	-12.5
09/25/87	0		12.8	--	10.8	-12.5
09/25/87	1200		12.8	--	10.8	-12.5
09/26/87	0		12.8	--	10.8	-12.4
09/26/87	1200		12.8	--	10.8	-12.4
09/27/87	0		12.8	--	10.9	-12.4
09/27/87	1200		12.8	--	10.8	-12.4
09/28/87	0		12.8	--	10.8	-12.3
09/28/87	1200		12.8	--	10.8	-12.3
09/29/87	0		12.8	--	10.8	-12.3
09/29/87	1200		12.8	--	10.8	-12.3
09/30/87	0		12.8	--	10.9	-12.4
09/30/87	1200		12.8	--	10.9	-12.4
10/01/87	0		12.8	--	10.9	-12.3
10/01/87	1200		12.8	--	10.9	-12.4
10/02/87	0		12.8	--	10.9	-12.3
10/02/87	1200		12.8	--	10.9	-12.3
10/03/87	0		12.8	--	10.9	-12.3
10/03/87	1200		12.8	--	10.9	-12.3
10/04/87	0		12.8	--	10.9	-12.3
10/04/87	1200		12.9	--	11.0	-12.3
10/05/87	0		12.8	--	11.0	-12.3
10/05/87	1200		12.8	--	11.0	-12.3
10/06/87	0		12.8	--	11.0	-12.3
10/06/87	1200		12.8	--	11.0	-12.3
10/07/87	0		12.8	--	11.0	-12.3
10/07/87	1200		12.8	--	11.0	-12.3
10/08/87	0		12.8	--	11.0	-12.3

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7			3.4			4.0		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	
	10/08/87	1200	12.8	--	6.8	--	11.0	-12.3	
	10/09/87	0	12.8	--	6.8	--	11.0	-12.3	
	10/09/87	1200	12.8	--	6.8	--	11.1	-12.3	
	10/10/87	0	12.8	--	6.8	--	11.1	-12.3	
	10/10/87	1200	12.8	--	6.8	--	11.1	-12.3	
	10/11/87	0	12.8	--	6.8	--	11.1	-12.3	
	10/11/87	1200	12.8	--	6.8	--	11.0	-12.3	
	10/12/87	0	12.8	--	6.8	--	11.1	-12.3	
	10/12/87	1200	12.8	--	6.8	--	11.1	-12.3	
	10/13/87	0	12.8	--	6.8	--	11.1	-12.3	
	10/13/87	1200	12.8	--	6.8	--	11.1	-12.4	
	10/14/87	0	12.8	--	6.8	--	11.1	-12.3	
	10/14/87	1200	12.8	--	6.8	--	11.1	-12.3	
	10/15/87	0	12.7	--	6.8	--	11.1	-12.3	
	10/15/87	1200	12.8	--	6.8	--	11.1	-12.4	
	10/16/87	0	12.8	--	6.8	--	11.2	-12.2	
	10/16/87	1200	12.7	--	6.8	--	11.1	-12.2	
	10/17/87	0	12.7	--	6.8	--	11.2	-12.2	
	10/17/87	1200	12.7	--	6.8	--	11.1	-12.2	
	10/18/87	0	12.7	--	6.8	--	11.1	-12.2	
	10/18/87	1200	12.7	--	6.8	--	11.2	-12.2	
	10/19/87	0	12.7	--	6.8	--	11.2	-12.2	
	10/19/87	1200	12.7	--	6.8	--	11.2	-12.2	
	10/20/87	0	12.7	--	6.8	--	11.2	-12.2	
	10/20/87	1200	12.7	--	6.8	--	11.2	-12.2	
	10/21/87	0	12.7	--	6.8	--	11.2	-12.2	
	10/21/87	1200	12.7	--	6.8	--	11.2	-12.2	
	10/22/87	0	12.6	--	6.8	--	11.2	-12.2	
	10/22/87	1200	12.6	--	6.8	--	11.2	-12.2	
	10/23/87	0	12.6	--	6.8	--	11.2	-12.2	
	10/23/87	1200	12.6	--	6.8	--	11.2	-12.2	
	10/24/87	0	12.6	--	6.8	--	11.2	-12.2	
	10/24/87	1200	12.6	--	6.8	--	11.2	-12.2	
	10/25/87	0	12.6	--	6.8	--	11.2	-12.1	
	10/25/87	1200	12.5	--	6.8	--	11.2	-12.1	
	10/26/87	0	12.5	--	6.8	--	11.2	-12.2	
	10/26/87	1200	12.5	--	6.8	--	11.2	-12.1	
	10/27/87	0	12.5	--	6.8	--	11.2	-12.1	

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7		3.4		4.0	
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
10/27/87	1200		12.5	--	11.2	-12.1
10/28/87	0		12.5	--	11.2	-12.1
10/28/87	1200		12.5	--	11.2	-12.1
10/29/87	0		12.4	--	11.2	-12.2
10/29/87	1200		12.4	--	11.2	-12.1
10/30/87	0		12.4	--	11.2	-12.1
10/30/87	1200		12.4	--	11.3	-12.1
10/31/87	0		12.4	--	11.3	-12.1
10/31/87	1200		12.3	--	11.3	-12.1
11/01/87	0		12.3	--	11.3	-12.1
11/01/87	1200		12.3	--	11.3	-12.1
11/02/87	0		12.3	--	11.3	-12.1
11/02/87	1200		12.3	--	11.3	-12.1
11/03/87	0		12.2	--	11.3	-12.2
11/03/87	1200		12.2	--	11.3	-12.1
11/04/87	0		12.2	--	11.3	-12.2
11/04/87	1200		12.2	--	11.3	-12.1
11/05/87	0		12.2	--	11.3	-12.0
11/05/87	1200		12.1	--	11.2	-12.0
11/06/87	0		12.1	--	11.2	-12.0
11/06/87	1200		12.1	--	11.2	-12.1
11/07/87	0		12.1	--	11.2	-12.0
11/07/87	1200		12.1	--	11.2	-12.0
11/08/87	0		12.0	--	11.2	-12.0
11/08/87	1200		12.0	--	11.2	-12.0
11/09/87	0		12.0	--	11.2	-12.0
11/09/87	1200		11.9	--	11.2	-12.0
11/10/87	0		11.9	--	11.2	-12.0
11/10/87	1200		11.9	--	11.2	-11.9
11/11/87	0		11.9	--	11.2	-11.9
11/11/87	1200		11.9	--	11.2	-11.9
11/12/87	0		11.9	--	11.2	-11.9
11/12/87	1200		11.8	--	11.2	-11.8
11/13/87	0		11.8	--	11.2	-11.9
11/13/87	1200		11.8	--	11.2	-11.9
11/14/87	0		11.8	--	11.2	-11.9
11/14/87	1200		11.8	--	11.2	-12.0
11/15/87	0		11.8	--	11.2	-11.9

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7			3.4			4.0		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	
	11/15/87	1200	11.7	--	6.8	--	11.1	-11.9	
	11/16/87	0	11.7	--	6.8	--	11.2	-11.9	
	11/16/87	1200	11.7	--	6.8	--	11.2	-11.9	
	11/17/87	0	11.7	--	6.8	--	11.1	-11.9	
	11/17/87	1200	11.6	--	6.8	--	11.1	-11.9	
	11/18/87	0	11.6	--	6.8	--	11.2	-11.7	
	11/18/87	1200	11.6	--	6.8	--	11.1	-11.8	
	11/19/87	0	11.6	--	6.8	--	11.1	-11.7	
	11/19/87	1200	11.6	--	6.8	--	11.1	-11.7	
	11/20/87	0	11.6	--	6.8	--	11.1	-11.7	
	11/20/87	1200	11.5	--	6.8	--	11.1	-11.7	
	11/21/87	0	11.5	--	6.8	--	11.1	-11.8	
	11/21/87	1200	11.5	--	6.8	--	11.1	-11.8	
	11/22/87	0	11.5	--	6.8	--	11.1	-11.8	
	11/22/87	1200	11.4	--	6.8	--	11.1	-11.7	
	11/23/87	0	11.4	--	6.8	--	11.1	-11.7	
	11/23/87	1200	11.4	--	6.8	--	11.1	-11.8	
	11/24/87	0	11.4	--	6.8	--	11.1	-11.7	
	11/24/87	1200	11.3	--	6.8	--	11.1	-11.7	
	11/25/87	0	11.3	--	6.8	--	11.1	-11.7	
	11/25/87	1200	11.3	--	6.8	--	11.1	-11.7	
	11/26/87	0	11.3	--	6.8	--	11.1	-11.7	
	11/26/87	1200	11.2	--	6.8	--	11.0	-11.7	
	11/27/87	0	11.2	--	6.8	--	11.1	-11.7	
	11/27/87	1200	11.2	--	6.8	--	11.0	-11.7	
	11/28/87	0	11.1	--	6.8	--	11.0	-11.7	
	11/28/87	1200	11.1	--	6.8	--	11.0	-11.7	
	11/29/87	0	11.1	--	6.8	--	11.0	-11.7	
	11/29/87	1200	11.0	--	6.8	--	11.0	-11.7	
	11/30/87	0	11.0	--	6.8	--	11.0	-11.7	
	11/30/87	1200	11.0	--	6.8	--	11.0	-11.7	
	12/01/87	0	11.0	--	6.8	--	11.0	-11.7	
	12/01/87	1200	10.9	--	6.8	--	11.0	-11.7	
	12/02/87	0	10.9	--	6.8	--	10.9	-11.7	
	12/02/87	1200	10.8	--	6.8	--	10.9	-11.7	
	12/03/87	0	10.8	--	6.8	--	10.9	-11.7	
	12/03/87	1200	10.8	--	6.8	--	10.9	-11.7	
	12/04/87	0	10.7	--	6.8	--	10.9	-11.7	

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7			3.4			4.0		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	
	12/04/87	1200	10.7	--	6.8	--	10.9	-11.7	
	12/05/87	0	10.7	--	6.8	--	10.9	-11.7	
	12/05/87	1200	10.6	--	6.8	--	10.9	-11.7	
	12/06/87	0	10.6	--	6.8	--	10.9	-11.7	
	12/06/87	1200	10.6	--	6.8	--	10.9	-11.7	
	12/07/87	0	10.5	--	6.8	--	10.8	-11.7	
	12/07/87	1200	10.5	--	6.8	--	10.8	-11.7	
	12/08/87	0	10.4	--	6.8	--	10.8	-11.7	
	12/08/87	1200	10.4	--	6.8	--	10.8	-11.6	
	12/09/87	0	10.4	--	6.8	--	10.8	-11.7	
	12/09/87	1200	10.3	--	6.8	--	10.8	-11.6	
	12/10/87	0	10.3	--	6.8	--	10.8	-11.6	
	12/10/87	1200	10.3	--	6.8	--	10.7	-11.7	
	12/11/87	0	10.2	--	6.8	--	10.8	-11.6	
	12/11/87	1200	10.2	--	6.8	--	10.7	-11.6	
	12/12/87	0	10.2	--	6.8	--	10.7	-11.6	
	12/12/87	1200	10.1	--	6.8	--	10.7	-11.6	
	12/13/87	0	10.1	--	6.8	--	10.7	-11.5	
	12/13/87	1200	10.1	--	6.8	--	10.7	-11.6	
	12/14/87	0	10.0	--	6.8	--	10.7	-11.5	
	12/14/87	1200	10.0	--	6.8	--	10.7	-11.6	
	12/15/87	0	9.9	--	6.8	--	10.6	-11.5	
	12/15/87	1200	9.9	--	6.8	--	10.6	-11.6	
	12/16/87	1200	9.9	--	6.8	--	10.6	-11.5	
	12/17/87	0	9.8	--	6.8	--	10.6	-11.6	
	12/17/87	1200	9.8	--	6.8	--	10.5	-11.5	
	12/18/87	0	9.8	--	6.8	--	10.5	-11.6	
	12/18/87	1200	9.7	--	6.8	--	10.5	-11.5	
	12/19/87	0	9.7	--	6.8	--	10.5	-11.5	
	12/19/87	1200	9.7	--	6.8	--	10.5	-11.5	
	12/20/87	0	9.6	--	6.8	--	10.5	-11.5	
	12/20/87	1200	9.6	--	6.8	--	10.4	-11.4	
	12/21/87	0	9.6	--	6.8	--	10.4	-11.5	
	12/21/87	1200	9.5	--	6.8	--	10.4	-11.4	
	12/22/87	0	9.5	--	6.8	--	10.4	-11.4	
	12/22/87	1200	9.5	--	6.8	--	10.4	-11.5	
	12/23/87	0	9.4	--	6.8	--	10.4	-11.5	
	12/23/87	1200	9.4	--	6.8	--	10.4	-11.5	

Table 1.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7		3.4		4.0	
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
12/24/87		0	9.4	--	10.4	-11.5
12/24/87		1200	9.3	--	10.3	-11.5
12/25/87		0	9.3	--	10.3	-11.5
12/25/87		1200	9.3	--	10.3	-11.4
12/26/87		0	9.2	--	10.3	-11.4
12/26/87		1200	9.2	--	10.2	-11.4
12/27/87		0	9.2	--	10.3	-11.4
12/27/87		1200	9.1	--	10.2	-11.3
12/28/87		0	9.1	--	10.2	-11.4
12/28/87		1200	9.1	--	10.2	-11.4
12/29/87		0	9.0	--	10.2	-11.4
12/29/87		1200	9.0	--	10.2	-11.4
12/30/87		0	8.9	--	10.1	-11.4
12/30/87		1200	8.9	--	10.1	-11.5
12/31/87		0	8.9	--	10.1	-11.3
12/31/87		1200	8.8	--	10.1	-11.4

Table 2. ---Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	3.8			4.1			5.4			6.1		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
					NO DATA 1/01/87 THROUGH 2/10/87							
02/11/87		0	7.3	--	8.0	-8.9	8.7	-4.1	9.2	-11.1		
02/11/87		1200	7.3	--	8.0	-9.0	8.6	-4.1	9.1	-11.1		
02/12/87		0	7.3	--	8.0	-8.9	8.7	-4.1	9.1	-11.0		
02/12/87		1200	7.2	--	7.9	-9.0	8.6	-4.1	9.1	-11.0		
02/13/87		0	7.3	--	7.9	-8.9	8.6	-4.1	9.1	-10.9		
02/13/87		1200	7.2	--	7.9	-9.0	8.6	-4.1	9.1	-10.9		
02/14/87		0	7.2	--	7.9	-9.0	8.6	-4.1	9.1	-11.0		
02/14/87		1200	7.2	--	7.9	-9.0	8.5	-4.1	9.0	-10.9		
02/15/87		0	7.3	--	7.9	-8.9	8.6	-4.1	9.1	-10.7		
02/15/87		1200	7.2	--	7.9	-8.9	8.5	-4.2	9.0	-10.8		
02/16/87		0	7.2	--	7.8	-8.9	8.5	-4.2	9.0	-10.7		
02/16/87		1200	7.2	--	7.8	-8.9	8.5	-4.1	9.0	-10.7		
02/17/87		0	7.1	--	7.8	-8.9	8.5	-4.1	9.0	-10.6		
02/17/87		1200	7.1	--	7.8	-8.9	8.4	-4.2	8.9	-10.6		
02/18/87		0	7.2	--	7.8	-8.9	8.5	-4.1	9.0	-10.5		
02/18/87		1200	7.1	--	7.8	-8.9	8.4	-4.1	9.0	-10.6		
02/19/87		0	7.1	--	7.8	-8.9	8.5	-4.2	9.0	-10.5		
02/19/87		1200	7.1	--	7.8	-8.9	8.5	-4.1	9.0	-10.6		
02/20/87		0	7.1	--	7.8	-8.9	8.5	-4.1	9.0	-10.5		
02/20/87		1200	7.1	--	7.7	-8.8	8.4	-4.2	9.0	-10.4		
02/21/87		0	7.1	--	7.7	-8.8	8.4	-4.2	9.0	-10.4		
02/21/87		1200	7.0	--	7.7	-8.9	8.3	-4.2	8.9	-10.5		
02/22/87		0	7.1	--	7.7	-8.9	8.4	-4.1	9.0	-10.5		
02/22/87		1200	7.1	--	7.7	-8.8	8.4	-4.2	9.0	-10.4		
02/23/87		0	7.0	--	7.7	-9.0	8.4	-4.2	8.9	-10.4		
02/23/87		1200	7.0	--	7.7	-8.9	8.4	-4.1	8.9	-10.4		
02/24/87		0	7.0	--	7.7	-8.9	8.4	-4.1	8.9	-10.4		
02/24/87		1200	7.0	--	7.6	-9.0	8.4	-4.2	9.0	-10.4		
02/25/87		0	6.9	--	7.6	-9.0	8.3	-4.2	8.8	-10.4		
02/25/87		1200	7.0	--	7.7	-8.9	8.3	-4.2	8.9	-10.3		
02/26/87		0	7.0	--	7.6	-8.9	8.3	-4.2	8.9	-10.2		
02/26/87		1200	6.9	--	7.6	-9.0	8.3	-4.1	8.8	-10.3		
02/27/87		0	6.9	--	7.6	-8.9	8.3	-4.2	8.9	-10.1		
02/27/87		1200	6.8	--	7.5	-9.0	8.1	-4.2	8.7	-10.2		
02/28/87		0	6.9	--	7.5	-9.0	8.2	-4.2	8.8	-10.0		
02/28/87		1200	6.8	--	7.6	-9.0	8.2	-4.2	8.8	-10.1		
03/01/87		0	6.9	--	7.5	-9.0	8.3	-4.2	8.9	-10.0		

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	3.8		4.1		5.4		6.1	
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
03/01/87	1200		6.8	--	7.5	-9.0	8.2	-4.2
03/02/87	0		6.9	--	7.5	-9.0	8.3	-4.2
03/02/87	1200		6.8	--	7.5	-9.0	8.2	-4.2
03/03/87	0		6.8	--	7.5	-9.0	8.2	-4.2
03/03/87	1200		6.8	--	7.4	-9.0	8.2	-4.2
03/04/87	0		6.8	--	7.4	-9.0	8.2	-4.2
03/04/87	1200		6.8	--	7.4	-9.0	8.2	-4.2
03/05/87	0		6.8	--	7.4	-9.0	8.2	-4.2
03/05/87	1200		6.7	--	7.4	-9.1	8.1	-4.2
03/06/87	0		6.7	--	7.4	-9.1	8.1	-4.2
03/06/87	1200		6.7	--	7.4	-9.1	8.1	-4.2
03/07/87	0		6.7	--	7.4	-9.1	8.1	-4.2
03/07/87	1200		6.7	--	7.4	-9.2	8.1	-4.2
03/08/87	0		6.8	--	7.4	-9.1	8.1	-4.2
03/08/87	1200		6.7	--	7.4	-9.1	8.1	-4.2
03/09/87	0		6.7	--	7.3	-9.2	8.1	-4.2
03/09/87	1200		6.7	--	7.3	-9.2	8.1	-4.2
03/10/87	0		6.7	--	7.3	-9.2	8.0	-4.2
03/10/87	1200		6.7	--	7.3	-9.2	8.1	-4.2
03/11/87	0		6.7	--	7.3	-9.2	8.1	-4.2
03/11/87	1200		6.6	--	7.3	-9.2	8.0	-4.2
03/12/87	0		6.7	--	7.3	-9.2	8.0	-4.2
03/12/87	1200		6.6	--	7.2	-9.2	8.0	-4.2
03/13/87	0		6.7	--	7.3	-9.2	8.0	-4.2
03/13/87	1200		6.6	--	7.2	-9.3	8.0	-4.2
03/14/87	0		6.6	--	7.2	-9.4	8.0	-4.2
03/14/87	1200		6.6	--	7.2	-9.3	8.0	-4.2
03/15/87	0		6.6	--	7.2	-9.4	8.0	-4.2
03/15/87	1200		6.6	--	7.2	-9.4	8.0	-4.2
03/16/87	0		6.6	--	7.2	-9.4	8.0	-4.2
03/16/87	1200		6.6	--	7.2	-9.4	7.9	-4.2
03/17/87	0		6.6	--	7.2	-9.4	7.9	-4.2
03/17/87	1200		6.6	--	7.2	-9.4	7.9	-4.2
03/18/87	0		6.6	--	7.1	-9.5	7.9	-4.5
03/18/87	1200		6.6	--	7.2	-9.5	7.9	-4.5
03/19/87	0		6.6	--	7.1	-9.5	7.9	-4.5
03/19/87	1200		6.5	--	7.1	-9.5	7.9	-4.5
03/20/87	0		6.6	--	7.2	-9.5	7.9	-4.6

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal
culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential
rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			5.4			6.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
03/20/87	1200		6.5	--	7.1	-9.5	7.8	-4.7	8.5	-8.6	8.5	-8.5	8.5	-8.5
03/21/87	0		6.6	--	7.1	-9.5	7.9	-4.7	8.5	-8.5	8.5	-8.5	8.5	-8.5
03/21/87	1200		6.5	--	7.1	-9.5	7.8	-4.7	8.5	-8.5	8.5	-8.5	8.5	-8.5
03/22/87	0		6.6	--	7.1	-9.5	7.9	-4.8	8.5	-8.5	8.5	-8.5	8.5	-8.5
03/22/87	1200		6.5	--	7.1	-9.5	7.8	-4.8	8.4	-8.4	8.4	-8.4	8.4	-8.4
03/23/87	0		6.5	--	7.1	-9.5	7.8	-4.8	8.5	-8.4	8.5	-8.4	8.5	-8.4
03/23/87	1200		6.5	--	7.1	-9.5	7.8	-4.9	8.4	-8.4	8.4	-8.4	8.4	-8.4
03/24/87	0		6.6	--	7.1	-9.5	7.8	-4.9	8.5	-8.4	8.5	-8.4	8.5	-8.4
03/24/87	1200		6.5	--	7.1	-9.6	7.8	-5.0	8.4	-8.4	8.4	-8.4	8.4	-8.4
03/25/87	0		6.5	--	7.1	-9.6	7.8	-5.1	8.5	-8.3	8.5	-8.3	8.5	-8.3
03/25/87	1200		6.5	--	7.0	-9.5	7.8	-5.2	8.4	-8.3	8.4	-8.3	8.4	-8.3
03/26/87	0		6.6	--	7.1	-9.5	7.8	-5.3	8.5	-8.3	8.5	-8.3	8.5	-8.3
03/26/87	1200		6.5	--	7.1	-9.6	7.8	-5.6	8.4	-8.3	8.4	-8.3	8.4	-8.3
03/27/87	0		6.5	--	7.1	-9.6	7.8	-6.0	8.4	-8.3	8.4	-8.3	8.4	-8.3
03/27/87	1200		6.5	--	7.0	-9.6	7.7	-6.5	8.4	-8.2	8.4	-8.2	8.4	-8.2
03/28/87	0		6.5	--	7.1	-9.5	7.8	-6.9	8.4	-8.1	8.4	-8.1	8.4	-8.1
03/28/87	1200		6.5	--	7.1	-9.6	7.7	-7.1	8.4	-8.2	8.4	-8.2	8.4	-8.2
03/29/87	0		6.5	--	7.1	-9.6	7.8	-7.2	8.4	-8.1	8.4	-8.1	8.4	-8.1
03/29/87	1200		6.4	--	6.9	-9.6	7.6	-7.2	8.3	-8.1	8.3	-8.1	8.3	-8.1
03/30/87	0		6.5	--	7.0	-9.6	7.7	-7.2	8.4	-8.0	8.4	-8.0	8.4	-8.0
03/30/87	1200		6.4	--	7.0	-9.6	7.7	-7.2	8.3	-8.1	8.3	-8.1	8.3	-8.1
03/31/87	0		6.5	--	7.0	-9.6	7.7	-7.2	8.4	-8.0	8.4	-8.0	8.4	-8.0
03/31/87	1200		6.5	--	7.0	-9.6	7.7	-7.2	8.3	-8.1	8.3	-8.1	8.3	-8.1
04/01/87	0		6.5	--	7.0	-9.6	7.7	-7.2	8.4	-8.1	8.4	-8.1	8.4	-8.1
04/01/87	1200		6.5	--	7.0	-9.7	7.7	-7.2	8.3	-8.0	8.3	-8.0	8.3	-8.0
04/02/87	0		6.5	--	7.0	-9.6	7.7	-7.3	8.4	-8.0	8.4	-8.0	8.4	-8.0
04/02/87	1200		6.4	--	7.0	-9.7	7.7	-7.4	8.3	-8.0	8.3	-8.0	8.3	-8.0
04/03/87	0		6.5	--	7.0	-9.7	7.7	-7.4	8.4	-7.9	8.4	-7.9	8.4	-7.9
04/03/87	1200		6.4	--	7.0	-9.8	7.6	-7.5	8.3	-8.0	8.3	-8.0	8.3	-8.0
04/04/87	0		6.5	--	7.0	-9.8	7.7	-7.5	8.3	-8.0	8.3	-8.0	8.3	-8.0
04/04/87	1200		6.4	--	6.9	-9.8	7.6	-7.6	8.3	-7.9	8.3	-7.9	8.3	-7.9
04/05/87	0		6.5	--	7.0	-9.7	7.7	-7.6	8.3	-7.9	8.3	-7.9	8.3	-7.9
04/05/87	1200		6.4	--	6.9	-9.8	7.6	-7.6	8.3	-7.9	8.3	-7.9	8.3	-7.9
04/06/87	0		6.5	--	7.0	-9.8	7.6	-7.6	8.3	-7.8	8.3	-7.8	8.3	-7.8
04/06/87	1200		6.4	--	6.9	-9.8	7.6	-7.7	8.2	-7.8	8.2	-7.8	8.2	-7.8
04/07/87	0		6.5	--	6.9	-9.8	7.6	-7.7	8.3	-7.9	8.3	-7.9	8.3	-7.9
04/07/87	1200		6.4	--	6.9	-9.8	7.6	-7.7	8.2	-7.8	8.2	-7.8	8.2	-7.8
04/08/87	0		6.5	--	6.9	-9.8	7.6	-7.8	8.3	-7.7	8.3	-7.7	8.3	-7.7

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	3.8		4.1		5.4		6.1	
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
04/08/87	1200		6.5	--	6.9	-9.9	7.6	-7.9	8.2	-7.8
04/09/87	0		6.5	--	7.0	-9.8	7.6	-7.9	8.3	-7.8
04/09/87	1200		6.4	--	6.9	-9.9	7.5	-7.9	8.2	-7.8
04/10/87	0		6.5	--	6.9	-9.9	7.6	-7.9	8.2	-7.7
04/10/87	1200		6.4	--	6.9	-9.9	7.6	-7.9	8.2	-7.7
04/11/87	0		6.5	--	6.9	-9.9	7.6	-8.0	8.2	-7.7
04/11/87	1200		6.5	--	6.9	-9.9	7.6	-8.1	8.2	-7.8
04/12/87	0		6.5	--	6.9	-9.9	7.6	-8.2	8.2	-7.8
04/12/87	1200		6.4	--	6.9	-9.9	7.5	-8.3	8.2	-7.7
04/13/87	0		6.5	--	6.9	-9.9	7.6	-8.4	8.2	-7.6
04/13/87	1200		6.4	--	6.9	-10.0	7.5	-8.4	8.1	-7.6
04/14/87	0		6.5	--	6.9	-10.0	7.6	-8.5	8.2	-7.6
04/14/87	1200		6.4	--	6.9	-10.0	7.5	-8.6	8.1	-7.6
04/15/87	0		6.5	--	6.9	-10.0	7.6	-8.6	8.2	-7.6
04/15/87	1200		6.5	--	6.9	-10.0	7.5	-8.8	8.1	-7.5
04/16/87	0		6.6	--	6.9	-10.0	7.5	-8.9	8.2	-7.5
04/16/87	1200		6.5	--	6.9	-10.1	7.5	-9.1	8.1	-7.5
04/17/87	0		6.6	--	6.9	-10.0	7.5	-9.3	8.2	-7.5
04/17/87	1200		6.5	--	6.9	-10.1	7.5	-9.5	8.1	-7.6
04/18/87	0		6.6	--	6.9	-10.0	7.5	-9.5	8.2	-7.5
04/18/87	1200		6.6	--	6.9	-10.1	7.5	-9.7	8.1	-7.6
04/19/87	0		6.6	--	6.9	-10.1	7.5	-10.0	8.1	-7.5
04/19/87	1200		6.5	--	6.9	-10.1	7.5	-10.3	8.1	-7.5
04/20/87	0		6.5	--	6.9	-10.0	7.5	-10.7	8.1	-7.4
04/20/87	1200		6.5	--	6.9	-10.1	7.4	-11.3	8.0	-7.4
04/21/87	0		6.6	--	6.9	-10.1	7.5	-11.7	8.1	-7.3
04/21/87	1200		6.5	--	6.9	-10.1	7.4	-11.7	8.0	-7.4
04/22/87	0		6.6	--	6.9	-10.0	7.5	-11.8	8.1	-7.3
04/22/87	1200		6.6	--	6.9	-10.1	7.4	-11.8	8.0	-7.3
04/23/87	0		6.6	--	6.9	-10.1	7.5	-11.8	8.1	-7.4
04/23/87	1200		6.6	--	6.9	-10.1	7.4	-11.8	8.1	-7.3
04/24/87	0		6.7	--	6.9	-10.1	7.5	-11.8	8.1	-7.2
04/24/87	1200		6.6	--	6.9	-10.2	7.4	-11.8	8.0	-7.3
04/25/87	0		6.7	--	7.0	-10.1	7.5	-11.7	8.1	-7.2
04/25/87	1200		6.6	--	6.9	-10.2	7.4	-11.8	8.0	-7.3
04/26/87	0		6.7	--	6.9	-10.1	7.4	-11.8	8.1	-7.2
04/26/87	1200		6.7	--	6.9	-10.2	7.4	-11.8	8.1	-7.2
04/27/87	0		6.7	--	6.9	-10.1	7.4	-11.8	8.1	-7.2

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal
culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential
rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	3.8			4.1			5.4			6.1		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
	04/27/87	1200	6.7	--	6.9	-10.2	7.4	-11.8	8.0	-7.2		
	04/28/87	0	6.7	--	7.0	-10.1	7.4	-11.7	8.1	-7.1		
	04/28/87	1200	6.7	--	6.9	-10.2	7.4	-11.8	8.0	-7.2		
	04/29/87	0	6.7	--	6.9	-10.2	7.4	-11.8	8.0	-7.2		
	04/29/87	1200	6.7	--	6.9	-10.3	7.4	-11.8	8.0	-7.3		
	04/30/87	0	6.8	--	7.0	-10.3	7.4	-11.8	8.0	-7.3		
	04/30/87	1200	6.8	--	7.0	-10.3	7.4	-11.9	8.0	-7.2		
	05/01/87	0	6.8	--	7.0	-10.3	7.4	-11.9	8.0	-7.2		
	05/01/87	1200	6.7	--	7.0	-10.4	7.4	-11.9	8.0	-7.2		
	05/02/87	0	6.8	--	7.0	-10.4	7.4	-11.9	8.0	-7.3		
	05/02/87	1200	6.7	--	7.0	-10.4	7.4	-11.9	8.0	-7.2		
	05/03/87	0	6.8	--	7.0	-10.3	7.4	-11.9	8.0	-7.2		
	05/03/87	1200	6.8	--	7.0	-10.4	7.4	-11.8	7.9	-7.2		
	05/04/87	0	6.9	--	7.0	-10.3	7.4	-11.8	8.0	-7.1		
	05/04/87	1200	6.8	--	7.0	-10.4	7.4	-11.8	7.9	-7.1		
	05/05/87	0	6.9	--	7.0	-10.4	7.4	-11.8	8.0	-7.1		
	05/05/87	1200	6.8	--	7.0	-10.5	7.4	-11.8	8.0	-7.2		
	05/06/87	0	6.9	--	7.0	-10.4	7.4	-11.8	8.0	-7.1		
	05/06/87	1200	6.9	--	7.0	-10.4	7.4	-11.8	8.0	-7.1		
	05/07/87	0	6.9	--	7.0	-10.4	7.4	-11.8	8.0	-7.1		
	05/07/87	1200	6.9	--	7.1	-10.5	7.4	-11.8	8.0	-7.2		
	05/08/87	0	6.9	--	7.1	-10.4	7.4	-11.8	8.0	-7.1		
	05/08/87	1200	7.0	--	7.1	-10.5	7.4	-11.9	8.0	-7.2		
	05/09/87	0	7.0	--	7.1	-10.5	7.4	-11.9	8.0	-7.1		
	05/09/87	1200	6.9	--	7.1	-10.5	7.4	-11.9	7.9	-7.1		
	05/10/87	0	7.0	--	7.1	-10.6	7.4	-11.9	8.0	-7.1		
	05/10/87	1200	7.0	--	7.1	-10.6	7.4	-11.9	7.9	-7.1		
	05/11/87	0	7.1	--	7.1	-10.5	7.4	-11.9	8.0	-7.0		
	05/11/87	1200	7.0	--	7.1	-10.6	7.4	-11.9	7.9	-7.1		
	05/12/87	0	7.0	--	7.1	-10.5	7.4	-11.9	7.9	-7.2		
	05/12/87	1200	7.1	--	7.1	-10.6	7.4	-12.0	7.9	-7.3		
	05/13/87	0	7.1	--	7.1	-10.6	7.4	-12.0	7.9	-7.2		
	05/13/87	1200	7.1	--	7.2	-10.6	7.4	-11.9	7.9	-7.3		
	05/14/87	0	7.1	--	7.2	-10.6	7.4	-11.9	7.9	-7.2		
	05/14/87	1200	7.1	--	7.2	-10.6	7.4	-12.0	7.9	-7.2		
	05/15/87	0	7.2	--	7.2	-10.6	7.4	-12.0	7.9	-7.2		
	05/15/87	1200	7.2	--	7.2	-10.6	7.4	-12.0	7.9	-7.1		
	05/16/87	0	7.2	--	7.2	-10.6	7.4	-11.9	7.9	-7.1		

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	3.8			4.1			5.4			6.1		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
05/16/87	1200		7.3	--	7.3	-10.6	7.4	-12.0	8.0	-7.2		
05/17/87	0		7.2	--	7.3	-10.7	7.4	-12.0	7.9	-7.3		
05/17/87	1200		7.2	--	7.3	-10.8	7.4	-12.0	7.9	-7.2		
05/18/87	0		7.3	--	7.2	-10.7	7.4	-12.1	7.9	-7.2		
05/18/87	1200		7.3	--	7.3	-10.8	7.4	-12.0	7.9	-7.2		
05/19/87	0		7.3	--	7.3	-10.8	7.4	-12.0	7.9	-7.2		
05/19/87	1200		7.3	--	7.3	-10.8	7.3	-12.1	7.9	-7.3		
05/20/87	0		7.3	--	7.3	-10.8	7.4	-12.0	7.9	-7.1		
05/20/87	1200		7.3	--	7.3	-10.8	7.4	-12.0	7.9	-7.3		
05/21/87	0		7.4	--	7.3	-10.8	7.4	-12.0	7.9	-7.2		
05/21/87	1200		7.3	--	7.3	-10.8	7.4	-12.0	7.9	-7.2		
05/22/87	0		7.4	--	7.4	-10.8	7.4	-12.0	7.9	-7.1		
05/22/87	1200		7.4	--	7.3	-10.8	7.3	-12.0	7.9	-7.1		
05/23/87	0		7.5	--	7.4	-10.8	7.4	-12.0	7.9	-7.1		
05/23/87	1200		7.4	--	7.4	-10.8	7.4	-12.0	7.9	-7.1		
05/24/87	0		7.5	--	7.4	-10.8	7.4	-12.0	7.9	-7.1		
05/24/87	1200		7.5	--	7.4	-10.8	7.4	-12.1	7.9	-7.0		
05/25/87	0		7.5	--	7.5	-10.8	7.4	-12.1	7.9	-7.0		
05/25/87	1200		7.5	--	7.4	-10.9	7.4	-12.1	7.9	-7.0		
05/26/87	0		7.5	--	7.5	-10.9	7.4	-12.1	7.9	-7.0		
05/26/87	1200		7.5	--	7.5	-10.9	7.4	-12.1	7.9	-7.1		
05/27/87	0		7.6	--	7.5	-10.9	7.4	-12.1	7.9	-7.0		
05/27/87	1200		7.6	--	7.5	-10.9	7.4	-12.1	7.9	-7.1		
05/28/87	0		7.6	--	7.5	-10.9	7.4	-12.1	7.9	-7.0		
05/28/87	1200		7.6	--	7.5	-10.9	7.5	-12.1	7.9	-6.9		
05/29/87	0		7.6	--	7.5	-10.8	7.5	-12.0	7.9	-7.0		
05/29/87	1200		7.6	--	7.5	-10.9	7.4	-12.1	7.9	-7.0		
05/30/87	0		7.7	--	7.6	-10.8	7.5	-12.0	7.9	-6.9		
05/30/87	1200		7.6	--	7.5	-10.9	7.4	-12.1	7.9	-7.0		
05/31/87	0		7.7	--	7.6	-10.8	7.5	-12.1	7.9	-6.9		
05/31/87	1200		7.7	--	7.6	-10.8	7.5	-12.1	7.9	-6.9		
06/01/87	0		7.8	--	7.7	-10.9	7.5	-12.1	7.9	-6.9		
06/01/87	1200		7.7	--	7.6	-10.9	7.5	-12.1	7.9	-6.9		
06/02/87	0		7.8	--	7.6	-10.8	7.5	-12.0	7.9	-6.8		
06/02/87	1200		7.7	--	7.6	-10.9	7.5	-12.0	7.9	-6.9		
06/03/87	0		7.8	--	7.6	-10.8	7.5	-12.0	7.9	-6.8		
06/03/87	1200		7.8	--	7.6	-10.8	7.5	-12.0	7.9	-6.8		
06/04/87	0		7.8	--	7.6	-10.8	7.5	-12.0	7.9	-6.7		

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	3.8			4.1			5.4			6.1		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
06/04/87	1200		7.8	--	7.7	-10.8	7.5	-12.0	7.9	-6.8		
06/05/87	0		7.8	--	7.6	-10.9	7.5	-12.0	7.9	-6.8		
06/05/87	1200		7.8	--	7.7	-10.8	7.5	-12.0	7.9	-6.8		
06/06/87	0		7.9	--	7.7	-10.8	7.5	-12.0	7.9	-6.7		
06/06/87	1200		7.9	--	7.7	-10.8	7.5	-12.0	7.9	-6.7		
06/07/87	0		7.9	--	7.7	-10.9	7.5	-12.0	7.9	-6.7		
06/07/87	1200		7.9	--	7.8	-10.8	7.5	-12.0	8.0	-6.7		
06/08/87	0		7.9	--	7.8	-10.8	7.5	-12.0	7.9	-6.7		
06/08/87	1200		7.9	--	7.7	-10.9	7.5	-12.0	7.9	-6.7		
06/09/87	0		8.0	--	7.8	-10.8	7.5	-12.0	7.9	-6.7		
06/10/87	0		8.0	--	7.8	-10.8	7.5	-11.9	8.0	-6.7		
06/10/87	1200		7.9	--	7.8	-10.9	7.5	-12.0	7.9	-6.7		
06/11/87	0		8.0	--	7.8	-10.8	7.5	-12.0	7.9	-6.7		
06/11/87	1200		8.0	--	7.9	-10.8	7.5	-12.0	7.9	-6.7		
06/12/87	0		8.0	--	7.8	-10.8	7.5	-12.0	7.9	-6.7		
06/12/87	1200		8.0	--	7.8	-10.8	7.5	-12.0	7.9	-6.7		
06/13/87	0		8.1	--	7.9	-10.8	7.5	-11.9	7.9	-6.5		
06/13/87	1200		8.1	--	7.9	-10.8	7.5	-12.0	7.9	-6.6		
06/14/87	0		8.1	--	7.9	-10.8	7.5	-11.9	7.9	-6.6		
06/14/87	1200		8.1	--	7.9	-10.8	7.5	-11.9	7.9	-6.6		
06/15/87	0		8.1	--	7.9	-10.8	7.5	-12.0	7.9	-6.6		
06/15/87	1200		8.2	--	8.0	-10.9	7.6	-12.0	8.0	-6.7		
06/16/87	0		8.2	--	8.0	-10.8	7.6	-12.0	8.0	-6.7		
06/16/87	1200		8.2	--	8.0	-10.8	7.6	-11.9	8.0	-6.7		
06/17/87	0		8.2	--	8.0	-10.8	7.6	-12.0	8.0	-6.6		
06/17/87	1200		8.2	--	8.0	-10.9	7.5	-12.0	8.0	-6.6		
06/18/87	0		8.2	--	8.0	-10.8	7.6	-12.0	8.0	-6.6		
06/18/87	1200		8.3	--	8.1	-10.8	7.6	-12.0	8.0	-6.6		
06/19/87	0		8.3	--	8.1	-10.8	7.6	-12.0	8.0	-6.6		
06/19/87	1200		8.3	--	8.0	-10.9	7.6	-12.0	8.0	-6.6		
06/20/87	0		8.3	--	8.1	-10.8	7.6	-12.0	8.0	-6.5		
06/20/87	1200		8.3	--	8.1	-10.9	7.6	-12.0	8.0	-6.6		
06/21/87	0		8.3	--	8.1	-10.9	7.6	-12.0	8.0	-6.6		
06/21/87	1200		8.4	--	8.1	-10.9	7.6	-12.0	8.0	-6.7		
06/22/87	0		8.4	--	8.1	-10.9	7.6	-12.0	8.0	-6.6		
06/22/87	1200		8.4	--	8.2	-10.8	7.6	-12.0	8.0	-6.6		
06/23/87	0		8.5	--	8.2	-10.8	7.6	-12.0	8.0	-6.5		
06/23/87	1200		8.4	--	8.2	-10.9	7.6	-12.0	8.0	-6.6		

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	3.8				4.1				5.4				6.1			
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
	06/24/87	0	8.5	--	8.2	-10.8	7.6	-12.0	8.0	-6.6						
	06/24/87	1200	8.5	--	8.2	-10.8	7.6	-12.0	8.0	-6.6						
	06/25/87	0	8.5	--	8.2	-10.8	7.6	-12.0	8.0	-6.5						
	06/25/87	1200	8.5	--	8.2	-10.8	7.6	-11.9	8.0	-6.5						
	NO DATA 6/26/87 THROUGH 7/7/87															
	07/08/87	0	9.1	--	8.7	-10.9	7.8	-11.9	8.2	-6.5						
	07/08/87	1200	9.1	--	8.7	-10.9	7.8	-11.9	8.1	-6.6						
	07/09/87	0	9.1	--	8.7	-10.9	7.8	-11.9	8.1	-6.6						
	07/09/87	1200	9.1	--	8.7	-10.9	7.8	-11.9	8.1	-6.7						
	07/10/87	0	9.1	--	8.7	-10.9	7.9	-11.8	8.2	-6.5						
	07/10/87	1200	9.2	--	8.8	-10.8	7.9	-11.8	8.2	-6.6						
	07/11/87	0	9.2	--	8.8	-10.8	7.9	-11.8	8.2	-6.6						
	07/11/87	1200	9.2	--	8.8	-10.9	7.9	-11.8	8.1	-6.6						
	07/12/87	0	9.2	--	8.8	-10.8	7.9	-11.7	8.2	-6.5						
	07/12/87	1200	9.2	--	8.8	-10.9	8.0	-11.7	8.2	-6.6						
	07/13/87	0	9.2	--	8.8	-10.9	8.0	-11.7	8.2	-6.5						
	07/13/87	1200	9.3	--	8.8	-10.8	8.0	-11.6	8.2	-6.5						
	07/14/87	0	9.3	--	8.8	-10.9	8.0	-11.7	8.2	-6.5						
	07/14/87	1200	9.3	--	8.9	-10.8	8.0	-11.6	8.2	-6.5						
	07/15/87	0	9.3	--	8.8	-10.9	8.0	-11.6	8.2	-6.5						
	07/15/87	1200	9.3	--	8.9	-10.9	8.1	-11.7	8.2	-6.5						
	07/16/87	0	9.3	--	8.9	-10.9	8.0	-11.7	8.2	-6.5						
	07/16/87	1200	9.5	--	9.0	-10.9	8.1	-11.7	8.3	-6.6						
	07/17/87	0	9.4	--	8.9	-10.9	8.1	-11.7	8.2	-6.6						
	07/17/87	1200	9.5	--	9.1	-10.9	8.1	-11.7	8.3	-6.6						
	07/18/87	0	9.5	--	9.1	-10.9	8.1	-11.6	8.3	-6.6						
	07/18/87	1200	9.5	--	9.0	-10.9	8.1	-11.6	8.2	-6.7						
	07/19/87	0	9.5	--	9.1	-10.9	8.2	-11.5	8.3	-6.6						
	07/19/87	1200	9.5	--	9.0	-10.9	8.2	-11.5	8.3	-6.6						
	07/20/87	0	9.5	--	9.1	-10.9	8.1	-11.5	8.2	-6.6						
	07/20/87	1200	9.5	--	9.1	-10.9	8.1	-11.5	8.3	-6.6						
	07/21/87	0	9.5	--	9.1	-10.9	8.2	-11.5	8.3	-6.7						
	07/21/87	1200	9.6	--	9.1	-10.9	8.2	-11.6	8.3	-6.5						
	07/22/87	0	9.6	--	9.2	-10.8	8.2	-11.5	8.3	-6.6						
	07/22/87	1200	9.6	--	9.2	-10.9	8.2	-11.5	8.3	-6.6						
	07/23/87	0	9.7	--	9.1	-10.9	8.2	-11.5	8.3	-6.6						
	07/23/87	1200	9.7	--	9.2	-10.8	8.2	-11.5	8.3	-6.6						
	07/24/87	0	9.7	--	9.2	-10.9	8.2	-11.5	8.3	-6.6						

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			5.4			6.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
07/24/87	1200		9.7	--	9.2	-10.9	8.3	-11.5	8.3	-11.5	8.3	-6.6		
07/25/87	0		9.7	--	9.2	-10.8	8.3	-11.5	8.3	-11.5	8.3	-6.6		
07/25/87	1200		9.7	--	9.3	-10.8	8.3	-11.5	8.3	-11.5	8.3	-6.7		
07/26/87	0		9.7	--	9.2	-10.8	8.3	-11.5	8.3	-11.5	8.3	-6.6		
07/26/87	1200		9.8	--	9.3	-10.8	8.3	-11.5	8.3	-11.5	8.3	-6.5		
07/27/87	0		9.8	--	9.3	-10.8	8.3	-11.4	8.3	-11.4	8.3	-6.5		
07/27/87	1200		9.8	--	9.3	-10.8	8.4	-11.5	8.4	-11.5	8.4	-6.6		
07/28/87	0		9.8	--	9.3	-10.8	8.4	-11.4	8.4	-11.4	8.4	-6.6		
07/28/87	1200		9.8	--	9.4	-10.8	8.4	-11.4	8.4	-11.4	8.4	-6.6		
07/29/87	0		9.8	--	9.4	-10.8	8.4	-11.4	8.4	-11.4	8.4	-6.6		
07/29/87	1200		9.9	--	9.4	-10.8	8.4	-11.4	8.4	-11.4	8.4	-6.5		
07/30/87	0		9.9	--	9.4	-10.8	8.4	-11.4	8.4	-11.4	8.4	-6.6		
07/30/87	1200		9.9	--	9.4	-10.8	8.4	-11.4	8.4	-11.4	8.4	-6.6		
07/31/87	0		9.9	--	9.4	-10.8	8.4	-11.4	8.4	-11.4	8.4	-6.6		
07/31/87	1200		9.9	--	9.5	-10.8	8.4	-11.4	8.4	-11.4	8.4	-6.6		
08/01/87	0		10.0	--	9.5	-10.8	8.4	-11.4	8.4	-11.4	8.4	-6.5		
08/01/87	1200		10.0	--	9.5	-10.7	8.5	-11.3	8.5	-11.3	8.4	-6.6		
08/02/87	0		10.0	--	9.5	-10.8	8.5	-11.3	8.5	-11.3	8.4	-6.6		
08/02/87	1200		10.0	--	9.5	-10.8	8.5	-11.4	8.5	-11.4	8.4	-6.6		
08/03/87	0		10.0	--	9.5	-10.8	8.5	-11.3	8.5	-11.3	8.5	-6.6		
08/03/87	1200		10.0	--	9.6	-10.7	8.5	-11.3	8.5	-11.3	8.5	-6.7		
08/04/87	0		10.0	--	9.5	-10.8	8.5	-11.3	8.5	-11.3	8.5	-6.5		
08/04/87	1200		10.1	--	9.6	-10.7	8.5	-11.4	8.5	-11.4	8.5	-6.6		
08/05/87	0		10.0	--	9.5	-10.8	8.5	-11.3	8.5	-11.3	8.4	-6.6		
08/05/87	1200		10.1	--	9.6	-10.7	8.6	-11.4	8.5	-11.4	8.5	-6.7		
08/06/87	0		10.2	--	9.6	-10.7	8.6	-11.3	8.5	-11.3	8.5	-6.7		
08/06/87	1200		10.1	--	9.6	-10.7	8.6	-11.4	8.5	-11.4	8.5	-6.7		
08/07/87	0		10.2	--	9.6	-10.8	8.6	-11.4	8.5	-11.4	8.5	-6.7		
08/07/87	1200		10.2	--	9.7	-10.7	8.6	-11.3	8.5	-11.3	8.5	-6.7		
08/08/87	0		10.2	--	9.7	-10.7	8.7	-11.3	8.6	-11.3	8.6	-6.6		
08/08/87	1200		10.2	--	9.7	-10.7	8.6	-11.3	8.5	-11.3	8.5	-6.7		
08/09/87	0		10.2	--	9.7	-10.7	8.6	-11.3	8.5	-11.3	8.5	-6.7		
08/09/87	1200		10.3	--	9.8	-10.7	8.7	-11.3	8.6	-11.3	8.6	-6.7		
08/10/87	0		10.3	--	9.7	-10.7	8.7	-11.4	8.6	-11.4	8.6	-6.7		
08/10/87	1200		10.3	--	9.8	-10.7	8.7	-11.4	8.6	-11.4	8.6	-6.7		
08/11/87	0		10.3	--	9.8	-10.7	8.7	-11.4	8.6	-11.4	8.6	-6.7		
08/11/87	1200		10.3	--	9.8	-10.7	8.7	-11.4	8.6	-11.4	8.6	-6.8		
08/12/87	0		10.4	--	9.9	-10.6	8.8	-11.4	8.6	-11.4	8.6	-6.7		

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			5.4			6.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
08/12/87	1200		10.4	--	9.8	-10.7	8.7	-11.3	8.6	-6.8				
08/13/87	0		10.4	--	9.8	-10.7	8.8	-11.4	8.6	-6.8				
08/13/87	1200		10.4	--	9.9	-10.7	8.8	-11.4	8.6	-6.9				
08/14/87	0		10.4	--	9.9	-10.7	8.8	-11.4	8.6	-6.8				
08/14/87	1200		10.4	--	9.9	-10.7	8.8	-11.4	8.6	-6.9				
08/15/87	0		10.5	--	10.0	-10.7	8.8	-11.4	8.7	-6.8				
08/15/87	1200		10.5	--	9.9	-10.7	8.8	-11.3	8.6	-6.9				
08/16/87	0		10.5	--	10.0	-10.6	8.9	-11.3	8.7	-6.8				
08/16/87	1200		10.5	--	10.0	-10.7	8.9	-11.3	8.7	-6.9				
08/17/87	0		10.6	--	10.0	-10.6	8.9	-11.3	8.7	-6.8				
08/17/87	1200		10.5	--	10.0	-10.6	8.9	-11.3	8.7	-6.9				
08/18/87	0		10.6	--	10.0	-10.6	8.9	-11.3	8.7	-6.8				
08/18/87	1200		10.6	--	10.0	-10.6	8.9	-11.3	8.7	-6.9				
08/19/87	0		10.6	--	10.0	-10.6	8.9	-11.3	8.7	-6.8				
08/19/87	1200		10.6	--	10.1	-10.6	9.0	-11.2	8.7	-6.9				
08/20/87	0		10.6	--	10.0	-10.6	8.9	-11.2	8.7	-6.8				
08/20/87	1200		10.6	--	10.1	-10.6	9.0	-11.2	8.7	-6.9				
08/21/87	0		10.7	--	10.1	-10.6	9.0	-11.2	8.8	-6.8				
08/21/87	1200		10.7	--	10.1	-10.5	9.0	-11.2	8.8	-6.9				
08/22/87	0		10.7	--	10.1	-10.6	9.0	-11.2	8.8	-6.8				
08/22/87	1200		10.7	--	10.1	-10.6	9.0	-11.2	8.8	-6.9				
08/23/87	0		10.7	--	10.2	-10.5	9.0	-11.2	8.8	-6.9				
08/23/87	1200		10.7	--	10.2	-10.5	9.0	-11.1	8.8	-6.9				
08/24/87	0		10.7	--	10.2	-10.5	9.0	-11.2	8.8	-6.9				
08/24/87	1200		10.8	--	10.2	-10.5	9.1	-11.1	8.8	-6.9				
08/25/87	0		10.8	--	10.3	-10.5	9.1	-11.2	8.9	-7.0				
08/25/87	1200		10.8	--	10.2	-10.5	9.1	-11.2	8.8	-7.0				
08/26/87	0		10.8	--	10.3	-10.5	9.1	-11.1	8.8	-6.9				
08/26/87	1200		10.8	--	10.3	-10.5	9.1	-11.1	8.9	-7.0				
08/27/87	0		10.8	--	10.3	-10.5	9.1	-11.1	8.9	-7.0				
08/27/87	1200		10.8	--	10.3	-10.5	9.1	-11.1	8.9	-7.0				
08/28/87	0		10.9	--	10.3	-10.5	9.2	-11.1	8.9	-6.9				
08/28/87	1200		10.9	--	10.3	-10.5	9.2	-11.2	8.9	-7.1				
08/29/87	0		10.9	--	10.3	-10.5	9.2	-11.1	8.9	-6.9				
08/29/87	1200		10.9	--	10.3	-10.5	9.2	-11.1	8.9	-7.0				
08/30/87	0		10.9	--	10.3	-10.5	9.2	-11.1	8.9	-6.9				
08/30/87	1200		10.9	--	10.4	-10.5	9.3	-11.1	8.9	-7.1				
08/31/87	0		10.9	--	10.4	-10.4	9.3	-11.1	8.9	-7.0				

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	3.8			4.1			5.4			6.1		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
08/31/87	1200		11.0	--	10.4	-10.4	9.3	-11.1	8.9	-7.0		
09/01/87	0		11.0	--	10.4	-10.4	9.3	-11.1	8.9	-7.0		
09/01/87	1200		11.0	--	10.4	-10.4	9.3	-11.1	8.9	-7.0		
09/02/87	0		11.0	--	10.4	-10.4	9.3	-11.1	8.9	-7.0		
09/02/87	1200		11.0	--	10.5	-10.4	9.3	-11.1	8.9	-7.1		
09/03/87	0		11.0	--	10.4	-10.5	9.3	-11.1	8.9	-7.1		
09/03/87	1200		11.1	--	10.6	-10.4	9.4	-11.1	9.0	-7.1		
09/04/87	0		11.1	--	10.5	-10.4	9.4	-11.1	9.0	-7.1		
09/04/87	1200		11.1	--	10.5	-10.4	9.4	-11.1	9.0	-7.2		
09/05/87	0		11.1	--	10.5	-10.4	9.4	-11.1	9.0	-7.1		
09/05/87	1200		11.1	--	10.6	-10.4	9.4	-11.1	9.0	-7.2		
09/06/87	0		11.1	--	10.5	-10.4	9.4	-11.1	9.0	-7.2		
09/06/87	1200		11.1	--	10.6	-10.4	9.4	-11.1	9.0	-7.2		
09/07/87	0		11.1	--	10.5	-10.4	9.4	-11.1	9.0	-7.1		
09/07/87	1200		11.1	--	10.6	-10.4	9.5	-11.0	9.1	-7.2		
09/08/87	0		11.1	--	10.6	-10.4	9.5	-11.0	9.0	-7.2		
09/08/87	1200		11.1	--	10.6	-10.4	9.5	-11.1	9.0	-7.2		
09/09/87	0		11.1	--	10.6	-10.4	9.5	-11.0	9.1	-7.2		
09/09/87	1200		11.2	--	10.6	-10.3	9.5	-11.0	9.1	-7.2		
09/10/87	0		11.2	--	10.6	-10.4	9.5	-11.0	9.1	-7.2		
09/10/87	1200		11.2	--	10.7	-10.3	9.5	-11.0	9.1	-7.2		
09/11/87	0		11.2	--	10.7	-10.3	9.5	-11.0	9.1	-7.3		
09/11/87	1200		11.2	--	10.7	-10.3	9.5	-11.1	9.1	-7.3		
09/12/87	0		11.2	--	10.7	-10.4	9.6	-11.0	9.1	-7.2		
09/12/87	1200		11.3	--	10.7	-10.3	9.6	-11.1	9.1	-7.4		
09/13/87	0		11.2	--	10.7	-10.4	9.6	-11.1	9.1	-7.3		
09/13/87	1200		11.3	--	10.7	-10.3	9.6	-11.0	9.1	-7.3		
09/14/87	0		11.3	--	10.7	-10.3	9.6	-11.0	9.1	-7.3		
09/14/87	1200		11.3	--	10.7	-10.3	9.6	-11.0	9.1	-7.4		
09/15/87	0		11.3	--	10.8	-10.3	9.6	-11.0	9.2	-7.3		
09/15/87	1200		11.4	--	10.8	-10.3	9.6	-11.0	9.2	-7.3		
09/16/87	0		11.4	--	10.8	-10.3	9.6	-11.0	9.2	-7.4		
09/16/87	1200		11.4	--	10.9	-10.3	9.7	-11.0	9.2	-7.4		
09/17/87	0		11.4	--	10.8	-10.3	9.7	-11.0	9.2	-7.3		
09/17/87	1200		11.4	--	10.9	-10.3	9.7	-11.0	9.2	-7.4		
09/18/87	0		11.4	--	10.8	-10.3	9.7	-11.0	9.2	-7.4		
09/18/87	1200		11.4	--	10.9	-10.3	9.7	-11.0	9.2	-7.4		
09/19/87	0		11.4	--	10.8	-10.3	9.7	-11.0	9.2	-7.4		

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	3.8			4.1			5.4			6.1		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
09/19/87	1200		11.5	--	10.9	-10.3	9.7	-11.0	9.3	-7.5		
09/20/87	0		11.5	--	10.9	-10.3	9.7	-11.0	9.2	-7.4		
09/20/87	1200		11.5	--	10.9	-10.2	9.7	-11.0	9.3	-7.5		
09/21/87	0		11.5	--	10.9	-10.2	9.7	-10.9	9.3	-7.4		
09/21/87	1200		11.5	--	11.0	-10.2	9.7	-10.9	9.3	-7.5		
09/22/87	0		11.5	--	10.9	-10.2	9.8	-10.9	9.3	-7.4		
09/22/87	1200		11.6	--	11.0	-10.2	9.8	-11.0	9.3	-7.5		
09/23/87	0		11.6	--	11.0	-10.2	9.8	-10.9	9.3	-7.4		
09/23/87	1200		11.6	--	11.0	-10.2	9.8	-11.0	9.3	-7.5		
09/24/87	0		11.6	--	11.0	-10.2	9.8	-10.9	9.3	-7.4		
09/24/87	1200		11.6	--	11.0	-10.2	9.8	-10.9	9.3	-7.5		
09/25/87	0		11.6	--	11.0	-10.2	9.8	-10.9	9.3	-7.5		
09/25/87	1200		11.7	--	11.1	-10.2	9.8	-10.9	9.3	-7.6		
09/26/87	0		11.7	--	11.0	-10.2	9.8	-11.0	9.3	-7.5		
09/26/87	1200		11.7	--	11.2	-10.1	9.9	-10.9	9.4	-7.5		
09/27/87	0		11.8	--	11.2	-10.1	9.9	-10.9	9.4	-7.6		
09/27/87	1200		11.7	--	11.1	-10.2	9.9	-10.9	9.4	-7.5		
09/28/87	0		11.8	--	11.1	-10.1	9.9	-11.0	9.4	-7.5		
09/28/87	1200		11.7	--	11.1	-10.1	9.9	-10.9	9.4	-7.5		
09/29/87	0		11.8	--	11.1	-10.1	9.9	-10.9	9.4	-7.5		
09/29/87	1200		11.8	--	11.2	-10.1	9.9	-10.9	9.4	-7.5		
09/30/87	0		11.8	--	11.2	-10.1	9.9	-10.9	9.4	-7.5		
09/30/87	1200		11.8	--	11.2	-10.1	9.9	-10.9	9.4	-7.6		
10/01/87	0		11.8	--	11.2	-10.1	9.9	-10.9	9.4	-7.5		
10/01/87	1200		11.8	--	11.2	-10.1	10.0	-10.9	9.4	-7.5		
10/02/87	0		11.8	--	11.2	-10.1	10.0	-10.9	9.5	-7.5		
10/02/87	1200		11.9	--	11.3	-10.0	10.0	-10.9	9.5	-7.6		
10/03/87	0		11.9	--	11.2	-10.1	10.0	-10.9	9.5	-7.5		
10/03/87	1200		11.9	--	11.3	-10.0	10.0	-11.0	9.5	-7.6		
10/04/87	0		11.8	--	11.2	-10.1	10.0	-10.9	9.4	-7.5		
10/04/87	1200		11.9	--	11.3	-10.0	10.0	-10.9	9.5	-7.5		
10/05/87	0		11.9	--	11.3	-10.0	10.0	-10.9	9.5	-7.5		
10/05/87	1200		11.9	--	11.4	-10.0	10.0	-10.9	9.5	-7.6		
10/06/87	0		11.9	--	11.3	-10.0	10.0	-10.9	9.5	-7.6		
10/06/87	1200		11.9	--	11.3	-10.0	10.0	-10.9	9.5	-7.6		
10/07/87	0		12.0	--	11.3	-10.0	10.1	-10.9	9.6	-7.6		
10/07/87	1200		12.0	--	11.3	-10.0	10.1	-10.9	9.5	-7.7		
10/08/87	0		11.9	--	11.4	-10.0	10.1	-10.9	9.5	-7.6		

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			5.4			6.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
10/08/87	1200		12.0	--	11.4	-10.0	10.1	-10.9	9.6	-7.6				
10/09/87	0		12.0	--	11.4	-10.0	10.1	-10.9	9.6	-7.6				
10/09/87	1200		12.0	--	11.4	-10.0	10.1	-10.9	9.6	-7.7				
10/10/87	0		12.0	--	11.5	-9.9	10.2	-10.8	9.6	-7.6				
10/10/87	1200		12.0	--	11.5	-9.9	10.1	-10.9	9.6	-7.6				
10/11/87	0		12.0	--	11.4	-9.8	10.2	-10.8	9.6	-7.5				
10/11/87	1200		11.9	--	11.4	-9.9	10.1	-10.8	9.6	-7.6				
10/12/87	0		12.0	--	11.4	-9.9	10.2	-10.9	9.7	-7.6				
10/12/87	1200		12.0	--	11.5	-9.8	10.2	-10.9	9.6	-7.7				
10/13/87	0		11.9	--	11.3	-10.0	10.2	-10.9	9.6	-7.7				
10/13/87	1200		11.9	--	11.4	-9.9	10.2	-10.9	9.6	-7.7				
10/14/87	0		12.0	--	11.5	-9.8	10.3	-10.9	9.7	-7.7				
10/14/87	1200		11.9	--	11.5	-9.8	10.2	-10.9	9.7	-7.7				
10/15/87	0		11.9	--	11.4	-9.9	10.2	-10.9	9.6	-7.7				
10/15/87	1200		11.9	--	11.5	-9.8	10.3	-10.9	9.7	-7.7				
10/16/87	0		12.0	--	11.5	-9.7	10.3	-10.9	9.7	-7.7				
10/16/87	1200		11.9	--	11.5	-9.8	10.2	-10.9	9.7	-7.7				
10/17/87	0		11.9	--	11.4	-9.8	10.3	-10.8	9.7	-7.6				
10/17/87	1200		11.9	--	11.4	-9.7	10.2	-10.9	9.7	-7.6				
10/18/87	0		11.9	--	11.4	-9.8	10.3	-10.9	9.7	-7.7				
10/18/87	1200		11.9	--	11.5	-9.7	10.3	-10.8	9.7	-7.7				
10/19/87	0		11.9	--	11.5	-9.7	10.3	-10.8	9.8	-7.7				
10/19/87	1200		11.9	--	11.5	-9.7	10.3	-10.9	9.7	-7.7				
10/20/87	0		11.9	--	11.4	-9.7	10.3	-10.8	9.8	-7.7				
10/20/87	1200		11.8	--	11.4	-9.7	10.3	-10.9	9.7	-7.7				
10/21/87	0		11.9	--	11.4	-9.7	10.3	-10.9	9.8	-7.6				
10/21/87	1200		11.8	--	11.4	-9.7	10.3	-10.9	9.8	-7.7				
10/22/87	0		11.8	--	11.4	-9.7	10.3	-10.9	9.8	-7.7				
10/22/87	1200		11.8	--	11.5	-9.7	10.3	-10.9	9.8	-7.7				
10/23/87	0		11.8	--	11.4	-9.6	10.4	-10.9	9.8	-7.8				
10/23/87	1200		11.8	--	11.4	-9.6	10.3	-11.0	9.8	-7.8				
10/24/87	0		11.8	--	11.4	-9.6	10.4	-10.9	9.8	-7.8				
10/24/87	1200		11.8	--	11.4	-9.6	10.4	-10.9	9.8	-7.7				
10/25/87	0		11.8	--	11.5	-9.5	10.4	-10.9	9.9	-7.7				
10/25/87	1200		11.8	--	11.4	-9.5	10.4	-10.9	9.8	-7.7				
10/26/87	0		11.7	--	11.4	-9.5	10.4	-10.9	9.8	-7.7				
10/26/87	1200		11.8	--	11.5	-9.4	10.4	-10.9	9.9	-7.6				
10/27/87	0		11.8	--	11.4	-9.5	10.4	-10.9	9.9	-7.6				

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		3.8			4.1			5.4			6.1		
Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
10/27/87	1200	11.8	--	11.4	-9.5	10.4	-10.9	9.9	-7.7	9.9	-7.7	9.9	-7.7
10/28/87	0	11.7	--	11.4	-9.5	10.4	-10.9	9.9	-7.7	9.9	-7.7	9.9	-7.7
10/28/87	1200	11.7	--	11.4	-9.4	10.4	-10.9	9.9	-7.7	9.9	-7.7	9.9	-7.7
10/29/87	0	11.7	--	11.4	-9.5	10.4	-10.9	9.9	-7.7	9.9	-7.7	9.9	-7.7
10/29/87	1200	11.7	--	11.4	-9.5	10.4	-10.9	9.9	-7.7	9.9	-7.7	9.9	-7.7
10/30/87	0	11.7	--	11.4	-9.5	10.4	-10.9	9.9	-7.7	9.9	-7.7	9.9	-7.7
10/30/87	1200	11.7	--	11.4	-9.4	10.5	-10.9	9.9	-7.7	9.9	-7.7	9.9	-7.7
10/31/87	0	11.6	--	11.4	-9.5	10.4	-10.8	9.9	-7.7	9.9	-7.7	9.9	-7.7
10/31/87	1200	11.7	--	11.4	-9.4	10.5	-10.9	9.9	-7.7	9.9	-7.7	9.9	-7.7
11/01/87	0	11.6	--	11.4	-9.4	10.5	-10.9	9.9	-7.7	9.9	-7.7	9.9	-7.7
11/01/87	1200	11.6	--	11.4	-9.4	10.5	-10.8	9.9	-7.8	9.9	-7.8	9.9	-7.8
11/02/87	0	11.6	--	11.4	-9.4	10.5	-10.8	9.9	-7.7	9.9	-7.7	9.9	-7.7
11/02/87	1200	11.6	--	11.4	-9.4	10.5	-10.8	9.9	-7.7	9.9	-7.7	9.9	-7.7
11/03/87	0	11.6	--	11.4	-9.5	10.5	-10.8	9.9	-7.6	9.9	-7.6	9.9	-7.6
11/03/87	1200	11.6	--	11.4	-9.4	10.5	-10.8	9.9	-7.6	9.9	-7.6	9.9	-7.6
11/04/87	0	11.6	--	11.3	-9.4	10.5	-10.8	9.9	-7.5	9.9	-7.5	9.9	-7.5
11/04/87	1200	11.6	--	11.3	-9.3	10.5	-10.8	9.9	-7.6	9.9	-7.6	9.9	-7.6
11/05/87	0	11.6	--	11.4	-9.3	10.5	-10.7	10.0	-7.6	10.0	-7.6	10.0	-7.6
11/05/87	1200	11.6	--	11.3	-9.4	10.4	-10.8	9.9	-7.6	9.9	-7.6	9.9	-7.6
11/06/87	0	11.6	--	11.3	-9.4	10.5	-10.8	10.0	-7.6	10.0	-7.6	10.0	-7.6
11/06/87	1200	11.5	--	11.3	-9.3	10.4	-10.8	10.0	-7.7	10.0	-7.7	10.0	-7.7
11/07/87	0	11.5	--	11.3	-9.4	10.5	-10.8	9.9	-7.6	9.9	-7.6	9.9	-7.6
11/07/87	1200	11.5	--	11.3	-9.4	10.4	-10.8	10.0	-7.6	10.0	-7.6	10.0	-7.6
11/08/87	0	11.5	--	11.3	-9.3	10.5	-10.7	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/08/87	1200	11.5	--	11.3	-9.3	10.5	-10.7	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/09/87	0	11.5	--	11.3	-9.3	10.5	-10.7	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/09/87	1200	11.4	--	11.3	-9.4	10.4	-10.7	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/10/87	0	11.4	--	11.2	-9.4	10.4	-10.7	9.9	-7.6	9.9	-7.6	9.9	-7.6
11/10/87	1200	11.4	--	11.3	-9.2	10.5	-10.6	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/11/87	0	11.4	--	11.3	-9.2	10.4	-10.6	10.0	-7.6	10.0	-7.6	10.0	-7.6
11/11/87	1200	11.4	--	11.3	-9.2	10.4	-10.6	10.0	-7.6	10.0	-7.6	10.0	-7.6
11/12/87	0	11.4	--	11.3	-9.2	10.5	-10.6	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/12/87	1200	11.4	--	11.3	-9.2	10.4	-10.6	10.0	-7.6	10.0	-7.6	10.0	-7.6
11/13/87	0	11.4	--	11.3	-9.2	10.4	-10.6	10.0	-7.6	10.0	-7.6	10.0	-7.6
11/13/87	1200	11.3	--	11.3	-9.3	10.4	-10.7	10.0	-7.7	10.0	-7.7	10.0	-7.7
11/14/87	0	11.3	--	11.3	-9.3	10.4	-10.7	10.0	-7.6	10.0	-7.6	10.0	-7.6
11/14/87	1200	11.3	--	11.2	-9.3	10.4	-10.7	10.0	-7.7	10.0	-7.7	10.0	-7.7
11/15/87	0	11.3	--	11.3	-9.2	10.4	-10.6	10.0	-7.6	10.0	-7.6	10.0	-7.6

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			5.4			6.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
11/15/87	1200	0	11.3	--	11.2	-9.2	10.4	-10.6	10.0	-7.7	10.0	-7.6	10.0	-7.6
11/16/87	1200	0	11.3	--	11.2	-9.2	10.4	-10.6	10.0	-7.6	10.0	-7.6	10.0	-7.6
11/16/87	1200	0	11.3	--	11.3	-9.2	10.4	-10.6	10.0	-7.7	10.0	-7.7	10.0	-7.7
11/17/87	1200	0	11.2	--	11.2	-9.3	10.4	-10.6	10.0	-7.6	10.0	-7.6	10.0	-7.6
11/17/87	1200	0	11.2	--	11.2	-9.2	10.4	-10.6	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/18/87	1200	0	11.3	--	11.2	-9.1	10.5	-10.5	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/18/87	1200	0	11.2	--	11.2	-9.1	10.4	-10.5	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/18/87	1200	0	11.2	--	11.2	-9.1	10.4	-10.5	10.0	-7.4	10.0	-7.4	10.0	-7.4
11/19/87	1200	0	11.2	--	11.2	-9.1	10.4	-10.5	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/19/87	1200	0	11.2	--	11.2	-9.1	10.4	-10.5	10.0	-7.4	10.0	-7.4	10.0	-7.4
11/20/87	1200	0	11.2	--	11.2	-9.1	10.4	-10.5	10.0	-7.4	10.0	-7.4	10.0	-7.4
11/20/87	1200	0	11.1	--	11.2	-9.1	10.4	-10.5	10.0	-7.4	10.0	-7.4	10.0	-7.4
11/21/87	1200	0	11.2	--	11.2	-9.1	10.4	-10.5	10.1	-7.5	10.1	-7.5	10.1	-7.5
11/21/87	1200	0	11.1	--	11.1	-9.2	10.4	-10.5	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/22/87	1200	0	11.1	--	11.1	-9.2	10.4	-10.5	10.1	-7.6	10.1	-7.6	10.1	-7.6
11/22/87	1200	0	11.1	--	11.1	-9.1	10.4	-10.5	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/23/87	1200	0	11.1	--	11.1	-9.1	10.4	-10.5	10.1	-7.5	10.1	-7.5	10.1	-7.5
11/23/87	1200	0	11.0	--	11.1	-9.1	10.4	-10.5	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/24/87	1200	0	11.1	--	11.1	-9.1	10.4	-10.5	10.1	-7.6	10.1	-7.6	10.1	-7.6
11/24/87	1200	0	11.0	--	11.1	-9.1	10.4	-10.4	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/25/87	1200	0	11.0	--	11.1	-9.1	10.5	-10.5	10.1	-7.5	10.1	-7.5	10.1	-7.5
11/25/87	1200	0	11.0	--	11.0	-9.1	10.4	-10.5	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/26/87	1200	0	11.0	--	11.1	-9.1	10.4	-10.4	10.1	-7.4	10.1	-7.4	10.1	-7.4
11/26/87	1200	0	10.9	--	11.0	-9.0	10.4	-10.4	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/27/87	1200	0	11.0	--	11.1	-9.0	10.4	-10.4	10.1	-7.4	10.1	-7.4	10.1	-7.4
11/27/87	1200	0	10.9	--	11.0	-9.0	10.4	-10.4	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/28/87	1200	0	10.9	--	11.0	-9.0	10.4	-10.4	10.1	-7.5	10.1	-7.5	10.1	-7.5
11/28/87	1200	0	10.9	--	11.0	-9.1	10.4	-10.4	10.1	-7.4	10.1	-7.4	10.1	-7.4
11/29/87	1200	0	10.9	--	11.0	-9.1	10.4	-10.5	10.1	-7.5	10.1	-7.5	10.1	-7.5
11/29/87	1200	0	10.8	--	11.0	-9.0	10.4	-10.5	10.0	-7.5	10.0	-7.5	10.0	-7.5
11/30/87	1200	0	10.8	--	11.0	-9.0	10.4	-10.4	10.1	-7.5	10.1	-7.5	10.1	-7.5
11/30/87	1200	0	10.8	--	11.0	-9.0	10.4	-10.4	10.1	-7.5	10.1	-7.5	10.1	-7.5
12/01/87	1200	0	10.8	--	11.0	-9.0	10.4	-10.4	10.1	-7.5	10.1	-7.5	10.1	-7.5
12/01/87	1200	0	10.7	--	10.9	-9.0	10.4	-10.4	10.1	-7.5	10.1	-7.5	10.1	-7.5
12/02/87	1200	0	10.7	--	10.9	-9.0	10.4	-10.4	10.1	-7.5	10.1	-7.5	10.1	-7.5
12/02/87	1200	0	10.7	--	10.9	-9.1	10.4	-10.4	10.1	-7.6	10.1	-7.6	10.1	-7.6
12/03/87	1200	0	10.7	--	10.9	-9.0	10.4	-10.4	10.1	-7.5	10.1	-7.5	10.1	-7.5
12/03/87	1200	0	10.7	--	10.9	-9.0	10.3	-10.5	10.1	-7.5	10.1	-7.5	10.1	-7.5
12/04/87	1200	0	10.7	--	10.8	-9.0	10.4	-10.4	10.1	-7.5	10.1	-7.5	10.1	-7.5

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	3.8			4.1			5.4			6.1		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
12/04/87	1200		10.6	--	10.8	-9.0	10.3	-10.5	10.0	-7.5		
12/05/87	0		10.6	--	10.8	-9.0	10.3	-10.5	10.1	-7.5		
12/05/87	1200		10.6	--	10.8	-9.0	10.3	-10.5	10.1	-7.6		
12/06/87	0		10.6	--	10.8	-9.0	10.3	-10.5	10.1	-7.5		
12/06/87	1200		10.6	--	10.8	-9.0	10.3	-10.5	10.1	-7.5		
12/07/87	0		10.5	--	10.8	-9.0	10.3	-10.4	10.1	-7.5		
12/07/87	1200		10.5	--	10.7	-9.0	10.3	-10.4	10.1	-7.5		
12/08/87	0		10.5	--	10.7	-9.0	10.3	-10.5	10.1	-7.4		
12/08/87	1200		10.5	--	10.8	-8.9	10.3	-10.4	10.1	-7.4		
12/09/87	0		10.4	--	10.6	-8.9	10.3	-10.5	10.1	-7.5		
12/09/87	1200		10.4	--	10.7	-8.9	10.3	-10.4	10.0	-7.4		
12/10/87	0		10.4	--	10.7	-8.9	10.3	-10.5	10.1	-7.4		
12/10/87	1200		10.4	--	10.6	-9.0	10.3	-10.5	10.1	-7.4		
12/11/87	0		10.4	--	10.7	-8.9	10.3	-10.5	10.1	-7.4		
12/11/87	1200		10.3	--	10.6	-8.9	10.2	-10.5	10.0	-7.4		
12/12/87	0		10.4	--	10.6	-8.9	10.3	-10.5	10.1	-7.4		
12/12/87	1200		10.3	--	10.6	-8.9	10.3	-10.5	10.0	-7.4		
12/13/87	0		10.3	--	10.6	-8.9	10.3	-10.5	10.1	-7.4		
12/13/87	1200		10.3	--	10.6	-8.9	10.3	-10.5	10.1	-7.3		
12/14/87	0		10.2	--	10.6	-8.9	10.2	-10.5	10.1	-7.3		
12/14/87	1200		10.2	--	10.6	-8.9	10.2	-10.5	10.1	-7.3		
12/15/87	0		10.2	--	10.5	-8.9	10.2	-10.5	10.0	-7.4		
12/15/87	1200		10.2	--	10.5	-8.8	10.2	-10.5	10.0	-7.4		
12/16/87	0		10.1	--	10.5	-8.8	10.2	-10.4	10.0	-7.4		
12/16/87	1200		10.1	--	10.5	-8.9	10.2	-10.5	10.0	-7.3		
12/17/87	0		10.1	--	10.4	-8.9	10.2	-10.5	10.0	-7.3		
12/17/87	1200		10.1	--	10.4	-8.9	10.2	-10.5	10.0	-7.3		
12/18/87	0		10.1	--	10.4	-8.9	10.2	-10.5	10.0	-7.4		
12/18/87	1200		10.0	--	10.4	-8.9	10.1	-10.5	10.0	-7.4		
12/19/87	0		10.0	--	10.4	-8.9	10.2	-10.5	10.0	-7.3		
12/19/87	1200		10.0	--	10.4	-8.9	10.2	-10.5	10.0	-7.3		
12/20/87	0		10.0	--	10.4	-8.8	10.2	-10.5	10.0	-7.3		
12/20/87	1200		10.0	--	10.4	-8.8	10.2	-10.5	10.0	-7.3		
12/21/87	0		10.0	--	10.3	-8.8	10.2	-10.5	10.0	-7.2		
12/21/87	1200		10.0	--	10.3	-8.8	10.2	-10.5	10.0	-7.3		
12/22/87	0		9.9	--	10.3	-8.8	10.1	-10.5	10.0	-7.2		
12/22/87	1200		9.9	--	10.3	-8.9	10.1	-10.5	10.0	-7.3		
12/23/87	0		9.9	--	10.3	-8.9	10.1	-10.5	10.0	-7.3		
12/23/87	1200		9.9	--	10.3	-8.8	10.1	-10.5	10.0	-7.2		

Table 2.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	3.8		4.1		5.4		6.1	
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
12/24/87	0		9.9	--	10.3	-8.8	10.1	-7.2
12/24/87	1200		9.8	--	10.2	-8.8	9.9	-7.2
12/25/87	0		9.8	--	10.2	-8.8	10.0	-7.1
12/25/87	1200		9.7	--	10.2	-8.8	10.0	-7.2
12/26/87	0		9.7	--	10.2	-8.8	10.0	-7.1
12/26/87	1200		9.7	--	10.2	-8.8	9.9	-7.2
12/27/87	0		9.7	--	10.2	-8.8	10.0	-7.1
12/27/87	1200		9.6	--	10.1	-8.7	9.9	-7.1
12/28/87	0		9.6	--	10.1	-8.7	10.0	-7.1
12/28/87	1200		9.6	--	10.1	-8.7	9.9	-7.1
12/29/87	0		9.6	--	10.1	-8.8	10.0	-7.1
12/29/87	1200		9.6	--	10.1	-8.8	10.0	-7.2
12/30/87	0		9.6	--	10.0	-8.8	10.0	-7.2
12/30/87	1200		9.5	--	10.0	-8.8	9.9	-7.2
12/31/87	0		9.5	--	10.0	-8.8	9.9	-7.1
12/31/87	1200		9.5	--	10.0	-8.7	9.9	-7.1

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the west test trench
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	0.5			0.6			0.8			0.9		
	Date	Hour	Soil	Soil-water	Soil	Soil-water	Soil	Soil-water	Soil	Soil-water	Soil	Soil-water
			temperature (Celsius)	potential (bars)		temperature (Celsius)		potential (bars)		temperature (Celsius)		potential (bars)
			NO DATA 1/01/87 THROUGH 2/10/87									
	02/11/87	0	-0.6	-2.0	-0.2	> -1	0.0	--	0.6	--	--	--
	02/11/87	1200	-0.5	-1.9	-0.2	> -1	-0.1	--	0.6	--	--	--
	02/12/87	0	-0.4	-1.8	-0.1	> -1	0.0	--	0.6	--	--	--
	02/12/87	1200	-0.4	-1.7	0.0	> -1	0.0	--	0.6	--	--	--
	02/13/87	0	-0.3	-1.6	0.0	> -1	0.1	--	0.7	--	--	--
	02/13/87	1200	-0.3	-1.5	0.1	> -1	0.1	--	0.7	--	--	--
	02/14/87	0	-0.2	-1.5	0.2	> -1	0.1	--	0.7	--	--	--
	02/14/87	1200	-0.1	-1.4	0.2	> -1	0.1	--	0.7	--	--	--
	02/15/87	0	0.1	-1.3	0.3	> -1	0.2	--	0.8	--	--	--
	02/15/87	1200	0.2	-1.2	0.3	> -1	0.2	--	0.8	--	--	--
	02/16/87	0	0.3	-1.2	0.5	> -1	0.2	--	0.8	--	--	--
	02/16/87	1200	0.4	-1.2	0.5	> -1	0.3	--	0.9	--	--	--
	02/17/87	0	0.4	-1.3	0.6	> -1	0.3	--	0.9	--	--	--
	02/17/87	1200	0.5	-1.3	0.6	> -1	0.3	--	0.9	--	--	--
	02/18/87	0	0.6	-1.2	0.8	> -1	0.5	--	1.0	--	--	--
	02/18/87	1200	0.6	-1.2	0.8	> -1	0.5	--	1.0	--	--	--
	02/19/87	0	0.7	-1.2	0.9	> -1	0.6	--	1.1	--	--	--
	02/19/87	1200	0.8	-1.2	0.9	> -1	0.7	--	1.2	--	--	--
	02/20/87	0	0.8	-1.2	1.0	> -1	0.8	--	1.2	--	--	--
	02/20/87	1200	0.8	-1.2	1.0	> -1	0.7	--	1.2	--	--	--
	02/21/87	0	0.8	-1.2	1.0	> -1	0.8	--	1.3	--	--	--
	02/21/87	1200	0.7	-1.3	1.0	> -1	0.8	--	1.2	--	--	--
	02/22/87	0	0.7	-1.2	1.1	> -1	0.9	--	1.3	--	--	--
	02/22/87	1200	0.7	-1.2	1.0	> -1	0.9	--	1.3	--	--	--
	02/23/87	0	0.7	-1.1	1.0	> -1	0.9	--	1.4	--	--	--
	02/23/87	1200	0.7	-1.1	1.0	> -1	1.0	--	1.4	--	--	--
	02/24/87	0	0.7	-1.1	1.0	> -1	1.0	--	1.4	--	--	--
	02/24/87	1200	0.7	-1.1	1.0	> -1	1.0	--	1.5	--	--	--
	02/25/87	0	0.7	-1.1	1.0	> -1	1.0	--	1.4	--	--	--
	02/25/87	1200	0.7	-1.0	1.0	> -1	1.0	--	1.4	--	--	--
	02/26/87	0	0.7	-1.1	1.0	> -1	1.0	--	1.4	--	--	--
	02/26/87	1200	0.6	-1.0	1.0	> -1	0.9	--	1.4	--	--	--
	02/27/87	0	0.7	-1.1	1.0	> -1	1.0	--	1.4	--	--	--
	02/27/87	1200	0.5	-1.1	0.9	> -1	0.8	--	1.3	--	--	--
	02/28/87	0	0.6	-1.0	1.0	> -1	1.0	--	1.4	--	--	--
	02/28/87	1200	0.6	-1.0	1.0	> -1	1.0	--	1.4	--	--	--
	03/01/87	0	0.7	-1.0	1.0	> -1	1.0	--	1.5	--	--	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		0.5			0.6			0.8			0.9		
Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
03/01/87	1200	0.6	-1.0	1.0	> -1	1.0	> -1	1.0	--	1.4	--	--	--
03/02/87	0	0.7	-1.0	1.0	> -1	1.0	> -1	1.0	--	1.5	--	--	--
03/02/87	1200	0.6	-1.0	0.9	> -1	1.0	> -1	1.0	--	1.4	--	--	--
03/03/87	0	0.6	-1.1	1.0	> -1	1.0	> -1	1.0	--	1.5	--	--	--
03/03/87	1200	0.6	-1.1	0.9	> -1	1.0	> -1	1.0	--	1.5	--	--	--
03/04/87	0	0.6	-1.1	1.0	> -1	1.0	> -1	1.0	--	1.5	--	--	--
03/04/87	1200	0.6	-1.1	1.0	> -1	1.0	> -1	1.0	--	1.5	--	--	--
03/05/87	0	0.7	-1.2	1.0	> -1	1.1	> -1	1.1	--	1.5	--	--	--
03/05/87	1200	0.6	-1.0	1.0	> -1	1.0	> -1	1.0	--	1.5	--	--	--
03/06/87	0	0.7	-1.1	1.0	> -1	1.0	> -1	1.0	--	1.5	--	--	--
03/06/87	1200	0.8	-1.1	1.0	> -1	1.0	> -1	1.0	--	1.5	--	--	--
03/07/87	0	1.0	-1.0	1.1	> -1	1.1	> -1	1.1	--	1.6	--	--	--
03/07/87	1200	1.1	-1.0	1.1	> -1	1.1	> -1	1.1	--	1.6	--	--	--
03/08/87	0	1.4	-1.0	1.3	> -1	1.2	> -1	1.2	--	1.6	--	--	--
03/08/87	1200	1.6	-1.0	1.4	> -1	1.1	> -1	1.1	--	1.6	--	--	--
03/09/87	0	1.9	-1.0	1.6	> -1	1.2	> -1	1.2	--	1.6	--	--	--
03/09/87	1200	2.0	-1.0	1.7	> -1	1.2	> -1	1.2	--	1.7	--	--	--
03/10/87	0	2.1	> -1	1.9	> -1	1.3	> -1	1.3	--	1.8	--	--	--
03/10/87	1200	2.3	> -1	2.0	> -1	1.4	> -1	1.4	--	1.8	--	--	--
03/11/87	0	2.5	-1.0	2.2	> -1	1.6	> -1	1.6	--	1.9	--	--	--
03/11/87	1200	2.5	-1.0	2.3	> -1	1.6	> -1	1.6	--	1.9	--	--	--
03/12/87	0	2.7	-1.0	2.4	> -1	1.8	> -1	1.8	--	2.1	--	--	--
03/12/87	1200	2.8	> -1	2.5	> -1	1.9	> -1	1.9	--	2.1	--	--	--
03/13/87	0	2.9	> -1	2.6	> -1	2.1	> -1	2.1	--	2.3	--	--	--
03/13/87	1200	3.1	> -1	2.7	> -1	2.2	> -1	2.2	--	2.4	--	--	--
03/14/87	0	3.2	> -1	2.8	> -1	2.2	> -1	2.2	--	2.4	--	--	--
03/14/87	1200	3.3	> -1	3.0	> -1	2.4	> -1	2.4	--	2.5	--	--	--
03/15/87	0	3.3	> -1	3.1	> -1	2.5	> -1	2.5	--	2.7	--	--	--
03/15/87	1200	3.2	> -1	3.1	> -1	2.6	> -1	2.6	--	2.7	--	--	--
03/16/87	0	3.2	> -1	3.1	> -1	2.7	> -1	2.7	--	2.8	--	--	--
03/16/87	1200	3.1	> -1	3.1	> -1	2.7	> -1	2.7	--	2.8	--	--	--
03/17/87	0	3.2	> -1	3.1	> -1	2.8	> -1	2.8	--	2.9	--	--	--
03/17/87	1200	3.2	> -1	3.1	> -1	2.8	> -1	2.8	--	3.0	--	--	--
03/18/87	0	3.3	> -1	3.2	> -1	2.8	> -1	2.8	--	3.0	--	--	--
03/18/87	1200	3.3	> -1	3.2	> -1	2.9	> -1	2.9	--	3.0	--	--	--
03/19/87	0	3.4	> -1	3.3	> -1	3.0	> -1	3.0	--	3.1	--	--	--
03/19/87	1200	3.4	> -1	3.3	> -1	3.0	> -1	3.0	--	3.1	--	--	--
03/20/87	0	3.4	> -1	3.4	> -1	3.1	> -1	3.1	--	3.2	--	--	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		0.5			0.6			0.8			0.9		
Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
03/20/87	1200	3.3	> -1		3.3	> -1		3.1	--		3.2	--	
03/21/87	0	3.3	> -1		3.3	> -1		3.1	--		3.3	--	
03/21/87	1200	3.2	> -1		3.3	> -1		3.1	--		3.2	--	
03/22/87	0	3.2	> -1		3.3	> -1		3.2	--		3.3	--	
03/22/87	1200	3.1	> -1		3.2	> -1		3.1	--		3.2	--	
03/23/87	0	3.1	> -1		3.2	> -1		3.1	--		3.3	--	
03/23/87	1200	3.1	> -1		3.2	> -1		3.1	--		3.3	--	
03/24/87	0	3.1	> -1		3.2	> -1		3.2	--		3.3	--	
03/24/87	1200	3.1	> -1		3.1	> -1		3.0	--		3.2	--	
03/25/87	0	3.3	> -1		3.2	> -1		3.1	--		3.3	--	
03/25/87	1200	3.3	> -1		3.2	> -1		3.1	--		3.3	--	
03/26/87	0	3.5	> -1		3.4	> -1		3.2	--		3.4	--	
03/26/87	1200	3.6	> -1		3.4	> -1		3.2	--		3.4	--	
03/27/87	0	3.8	> -1		3.5	> -1		3.3	--		3.5	--	
03/27/87	1200	3.8	> -1		3.5	> -1		3.3	--		3.4	--	
03/28/87	0	3.9	> -1		3.7	> -1		3.5	--		3.5	--	
03/28/87	1200	3.9	-1.0		3.7	> -1		3.5	--		3.6	--	
03/29/87	0	3.9	-1.1		3.7	> -1		3.6	--		3.7	--	
03/29/87	1200	3.8	-1.2		3.7	> -1		3.5	--		3.5	--	
03/30/87	0	3.8	-1.2		3.8	> -1		3.7	--		3.7	--	
03/30/87	1200	3.6	-1.2		3.7	> -1		3.6	--		3.6	--	
03/31/87	0	3.5	-1.3		3.6	> -1		3.7	--		3.7	--	
03/31/87	1200	3.5	-1.3		3.6	> -1		3.6	--		3.7	--	
04/01/87	0	3.6	-1.3		3.6	> -1		3.6	--		3.7	--	
04/01/87	1200	3.8	-1.3		3.6	> -1		3.6	--		3.7	--	
04/02/87	0	4.1	-1.3		3.8	> -1		3.7	--		3.8	--	
04/02/87	1200	4.3	-1.4		3.9	> -1		3.8	--		3.8	--	
04/03/87	0	4.6	-1.4		4.1	> -1		3.9	--		3.9	--	
04/03/87	1200	4.8	-1.4		4.2	> -1		4.0	--		3.9	--	
04/04/87	0	5.1	-1.4		4.5	> -1		4.2	--		4.1	--	
04/04/87	1200	5.3	-1.6		4.6	> -1		4.3	--		4.2	--	
04/05/87	0	5.5	-1.5		4.8	> -1		4.5	--		4.3	--	
04/05/87	1200	5.8	-1.5		5.0	> -1		4.6	--		4.4	--	
04/06/87	0	6.1	-1.5		5.2	> -1		4.8	--		4.6	--	
04/06/87	1200	6.4	-1.5		5.4	> -1		4.9	--		4.6	--	
04/07/87	0	6.6	-1.5		5.7	> -1		5.2	--		4.8	--	
04/07/87	1200	6.8	-1.5		5.8	> -1		5.3	--		4.9	--	
04/08/87	0	7.1	-1.5		6.1	> -1		5.6	--		5.2	--	

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.5			0.6			0.8			0.9		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
04/08/87	1200	0	7.2	-1.6	6.2	> -1	5.7	--	5.3	--	--	--	--	--
04/09/87	1200	0	7.4	-1.5	6.4	> -1	5.9	--	5.4	--	--	--	--	--
04/09/87	1200	0	7.3	-1.5	6.5	> -1	5.9	--	5.5	--	--	--	--	--
04/10/87	1200	0	7.3	-1.5	6.6	> -1	6.1	--	5.7	--	--	--	--	--
04/10/87	1200	0	7.3	-1.6	6.6	> -1	6.1	--	5.7	--	--	--	--	--
04/11/87	1200	0	7.3	-1.6	6.7	> -1	6.3	--	5.9	--	--	--	--	--
04/11/87	1200	0	7.4	-1.6	6.7	> -1	6.3	--	5.9	--	--	--	--	--
04/12/87	1200	0	7.6	-1.6	6.8	> -1	6.4	--	6.0	--	--	--	--	--
04/12/87	1200	0	7.6	-1.5	6.9	> -1	6.4	--	6.0	--	--	--	--	--
04/13/87	1200	0	7.6	-1.5	7.0	> -1	6.6	--	6.2	--	--	--	--	--
04/13/87	1200	0	7.6	-1.4	7.0	> -1	6.6	--	6.2	--	--	--	--	--
04/14/87	1200	0	7.6	-1.4	7.0	> -1	6.7	--	6.3	--	--	--	--	--
04/14/87	1200	0	7.6	-1.4	7.0	> -1	6.6	--	6.2	--	--	--	--	--
04/15/87	1200	0	7.7	-1.4	7.1	> -1	6.8	--	6.4	--	--	--	--	--
04/15/87	1200	0	7.8	-1.4	7.1	> -1	6.8	--	6.4	--	--	--	--	--
04/16/87	1200	0	8.0	-1.4	7.3	> -1	6.9	--	6.5	--	--	--	--	--
04/16/87	1200	0	8.1	-1.4	7.3	> -1	6.9	--	6.5	--	--	--	--	--
04/17/87	1200	0	8.4	-1.4	7.5	> -1	7.1	--	6.7	--	--	--	--	--
04/17/87	1200	0	8.6	-1.5	7.6	> -1	7.2	--	6.7	--	--	--	--	--
04/18/87	1200	0	8.8	-1.5	7.9	> -1	7.4	--	6.9	--	--	--	--	--
04/18/87	1200	0	9.0	-1.4	8.0	> -1	7.5	--	7.0	--	--	--	--	--
04/19/87	1200	0	9.2	-1.4	8.2	> -1	7.7	--	7.1	--	--	--	--	--
04/19/87	1200	0	9.3	-1.3	8.3	> -1	7.7	--	7.1	--	--	--	--	--
04/20/87	1200	0	9.3	-1.2	8.4	> -1	7.9	--	7.3	--	--	--	--	--
04/20/87	1200	0	9.2	-1.4	8.4	> -1	7.9	--	7.3	--	--	--	--	--
04/21/87	1200	0	8.9	-1.3	8.4	> -1	8.0	--	7.5	--	--	--	--	--
04/21/87	1200	0	8.8	-1.4	8.3	> -1	7.9	--	7.4	--	--	--	--	--
04/22/87	1200	0	8.8	-1.4	8.3	> -1	8.0	--	7.5	--	--	--	--	--
04/22/87	1200	0	8.8	-1.4	8.2	> -1	7.8	--	7.4	--	--	--	--	--
04/23/87	1200	0	9.0	-1.4	8.3	> -1	7.9	--	7.5	--	--	--	--	--
04/23/87	1200	0	9.2	-1.3	8.4	> -1	7.9	--	7.5	--	--	--	--	--
04/24/87	1200	0	9.5	-1.2	8.6	> -1	8.1	--	7.6	--	--	--	--	--
04/24/87	1200	0	9.7	-1.2	8.7	> -1	8.1	--	7.6	--	--	--	--	--
04/25/87	1200	0	10.0	-1.2	8.9	> -1	8.3	--	7.8	--	--	--	--	--
04/25/87	1200	0	10.2	-1.1	9.0	> -1	8.4	--	7.8	--	--	--	--	--
04/26/87	1200	0	10.4	-1.1	9.3	> -1	8.6	--	8.0	--	--	--	--	--
04/26/87	1200	0	10.7	-1.1	9.4	> -1	8.6	--	8.1	--	--	--	--	--
04/27/87	1200	0	10.9	-1.0	9.7	> -1	9.0	--	8.2	--	--	--	--	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	0.5				0.6				0.8				0.9			
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
04/27/87	1200		11.2	> -1	9.9	> -1	9.1	--	8.4	--	--	--	--	--	--	--
04/28/87	0		11.6	> -1	10.1	> -1	9.4	--	8.6	--	--	--	--	--	--	--
04/28/87	1200		11.8	> -1	10.3	> -1	9.5	--	8.7	--	--	--	--	--	--	--
04/29/87	0		12.1	> -1	10.6	> -1	9.8	--	8.9	--	--	--	--	--	--	--
04/29/87	1200		12.3	> -1	10.8	> -1	9.9	--	9.0	--	--	--	--	--	--	--
04/30/87	0		12.5	> -1	11.0	> -1	10.2	--	9.2	--	--	--	--	--	--	--
04/30/87	1200		12.8	> -1	11.2	> -1	10.3	--	9.4	--	--	--	--	--	--	--
05/01/87	0		13.0	> -1	11.4	> -1	10.6	--	9.6	--	--	--	--	--	--	--
05/01/87	1200		13.0	> -1	11.6	> -1	10.7	--	9.7	--	--	--	--	--	--	--
05/02/87	0		12.9	> -1	11.7	> -1	10.9	--	9.9	--	--	--	--	--	--	--
05/02/87	1200		12.8	> -1	11.7	> -1	10.9	--	10.0	--	--	--	--	--	--	--
05/03/87	0		12.5	> -1	11.6	> -1	11.0	--	10.1	--	--	--	--	--	--	--
05/03/87	1200		12.3	> -1	11.5	> -1	10.9	--	10.0	--	--	--	--	--	--	--
05/04/87	0		12.2	> -1	11.5	> -1	10.9	--	10.1	--	--	--	--	--	--	--
05/04/87	1200		12.1	> -1	11.3	> -1	10.8	--	10.0	--	--	--	--	--	--	--
05/05/87	0		12.2	> -1	11.3	> -1	10.8	--	10.1	--	--	--	--	--	--	--
05/05/87	1200		12.3	> -1	11.3	> -1	10.8	--	10.1	--	--	--	--	--	--	--
05/06/87	0		12.5	> -1	11.5	> -1	10.9	--	10.2	--	--	--	--	--	--	--
05/06/87	1200		12.7	> -1	11.5	> -1	10.9	--	10.1	--	--	--	--	--	--	--
05/07/87	0		13.0	> -1	11.7	> -1	11.0	--	10.3	--	--	--	--	--	--	--
05/07/87	1200		13.3	> -1	11.9	> -1	11.1	--	10.3	--	--	--	--	--	--	--
05/08/87	0		13.5	> -1	12.1	> -1	11.3	--	10.4	--	--	--	--	--	--	--
05/08/87	1200		13.8	> -1	12.3	> -1	11.5	--	10.6	--	--	--	--	--	--	--
05/09/87	0		14.0	> -1	12.5	> -1	11.7	--	10.7	--	--	--	--	--	--	--
05/09/87	1200		14.2	> -1	12.6	> -1	11.8	--	10.8	--	--	--	--	--	--	--
05/10/87	0		14.4	> -1	12.8	> -1	12.0	--	11.0	--	--	--	--	--	--	--
05/10/87	1200		14.6	> -1	13.0	> -1	12.2	--	11.1	--	--	--	--	--	--	--
05/11/87	0		14.8	> -1	13.2	> -1	12.4	--	11.3	--	--	--	--	--	--	--
05/11/87	1200		14.9	> -1	13.3	> -1	12.5	--	11.4	--	--	--	--	--	--	--
05/12/87	0		15.0	> -1	13.5	> -1	12.6	--	11.6	--	--	--	--	--	--	--
05/12/87	1200		15.2	> -1	13.6	> -1	12.8	--	11.7	--	--	--	--	--	--	--
05/13/87	0		15.3	> -1	13.7	> -1	12.9	--	11.8	--	--	--	--	--	--	--
05/13/87	1200		15.5	> -1	13.9	> -1	13.0	--	12.0	--	--	--	--	--	--	--
05/14/87	0		15.6	> -1	14.0	> -1	13.2	--	12.1	--	--	--	--	--	--	--
05/14/87	1200		15.8	> -1	14.1	> -1	13.3	--	12.2	--	--	--	--	--	--	--
05/15/87	0		15.9	> -1	14.3	> -1	13.4	--	12.3	--	--	--	--	--	--	--
05/15/87	1200		16.0	> -1	14.4	> -1	13.6	--	12.4	--	--	--	--	--	--	--
05/16/87	0		16.1	> -1	14.5	> -1	13.7	--	12.6	--	--	--	--	--	--	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal
culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential
rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	0.5				0.6				0.8				0.9			
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
05/16/87	1200		16.3	> -1	14.7	> -1	13.9	--	12.7	--	12.7	--	--	--	--	--
05/17/87	0		16.4	> -1	14.8	> -1	14.0	--	12.8	--	12.8	--	--	--	--	--
05/17/87	1200		16.4	> -1	14.9	> -1	14.1	--	12.9	--	12.9	--	--	--	--	--
05/18/87	0		16.1	> -1	14.9	> -1	14.1	--	13.0	--	13.0	--	--	--	--	--
05/18/87	1200		15.8	> -1	14.8	> -1	14.1	--	13.0	--	13.0	--	--	--	--	--
05/19/87	0		15.6	> -1	14.7	> -1	14.1	--	13.1	--	13.1	--	--	--	--	--
05/19/87	1200		15.3	> -1	14.5	> -1	13.9	--	13.0	--	13.0	--	--	--	--	--
05/20/87	0		15.0	> -1	14.4	> -1	13.8	--	13.0	--	13.0	--	--	--	--	--
05/20/87	1200		14.7	> -1	14.2	> -1	13.7	--	12.9	--	12.9	--	--	--	--	--
05/21/87	0		14.4	> -1	14.0	> -1	13.6	--	12.8	--	12.8	--	--	--	--	--
05/21/87	1200		14.1	> -1	13.7	> -1	13.4	--	12.7	--	12.7	--	--	--	--	--
05/22/87	0		14.0	> -1	13.6	> -1	13.3	--	12.6	--	12.6	--	--	--	--	--
05/22/87	1200		13.9	> -1	13.4	> -1	13.1	--	12.5	--	12.5	--	--	--	--	--
05/23/87	0		13.9	> -1	13.4	> -1	13.1	--	12.5	--	12.5	--	--	--	--	--
05/23/87	1200		14.0	> -1	13.3	> -1	13.0	--	12.3	--	12.3	--	--	--	--	--
05/24/87	0		14.1	> -1	13.4	> -1	13.0	--	12.3	--	12.3	--	--	--	--	--
05/24/87	1200		14.1	> -1	13.4	> -1	13.1	--	12.3	--	12.3	--	--	--	--	--
05/25/87	0		14.1	> -1	13.4	> -1	13.1	--	12.3	--	12.3	--	--	--	--	--
05/25/87	1200		14.0	> -1	13.4	> -1	13.0	--	12.3	--	12.3	--	--	--	--	--
05/26/87	0		13.8	> -1	13.3	> -1	13.0	--	12.3	--	12.3	--	--	--	--	--
05/26/87	1200		13.6	> -1	13.2	> -1	12.9	--	12.2	--	12.2	--	--	--	--	--
05/27/87	0		13.5	> -1	13.1	> -1	12.9	--	12.2	--	12.2	--	--	--	--	--
05/27/87	1200		13.4	> -1	13.0	> -1	12.7	--	12.2	--	12.2	--	--	--	--	--
05/28/87	0		13.3	> -1	12.9	> -1	12.7	--	12.1	--	12.1	--	--	--	--	--
05/28/87	1200		13.2	> -1	12.8	> -1	12.6	--	12.0	--	12.0	--	--	--	--	--
05/29/87	0		13.1	> -1	12.7	> -1	12.6	--	11.9	--	11.9	--	--	--	--	--
05/29/87	1200		13.1	> -1	12.7	> -1	12.4	--	11.9	--	11.9	--	--	--	--	--
05/30/87	0		13.2	> -1	12.7	> -1	12.5	--	12.0	--	12.0	--	--	--	--	--
05/30/87	1200		13.3	> -1	12.7	> -1	12.4	--	11.9	--	11.9	--	--	--	--	--
05/31/87	0		13.6	> -1	12.8	> -1	12.5	--	11.9	--	11.9	--	--	--	--	--
05/31/87	1200		13.7	> -1	12.9	> -1	12.6	--	11.9	--	11.9	--	--	--	--	--
06/01/87	0		13.9	> -1	13.0	> -1	12.7	--	12.0	--	12.0	--	--	--	--	--
06/01/87	1200		13.9	> -1	13.1	> -1	12.7	--	12.1	--	12.1	--	--	--	--	--
06/02/87	0		13.9	> -1	13.1	> -1	12.8	--	12.1	--	12.1	--	--	--	--	--
06/02/87	1200		13.8	> -1	13.1	> -1	12.8	--	12.1	--	12.1	--	--	--	--	--
06/03/87	0		13.8	> -1	13.1	> -1	12.8	--	12.1	--	12.1	--	--	--	--	--
06/03/87	1200		13.9	> -1	13.1	> -1	12.8	--	12.1	--	12.1	--	--	--	--	--
06/04/87	0		14.0	> -1	13.2	> -1	12.9	--	12.2	--	12.2	--	--	--	--	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.5			0.6			0.8			0.9		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
06/04/87	1200		14.3	> -1	13.3	> -1	13.0	--	12.2	--	12.2	--	--	--
06/05/87	0		14.5	> -1	13.4	> -1	13.0	--	12.2	--	12.2	--	--	--
06/05/87	1200		14.9	> -1	13.6	> -1	13.2	--	12.3	--	12.3	--	--	--
06/06/87	0		15.2	> -1	13.9	> -1	13.4	--	12.5	--	12.5	--	--	--
06/06/87	1200		15.5	> -1	14.1	> -1	13.5	--	12.6	--	12.6	--	--	--
06/07/87	0		15.6	> -1	14.3	> -1	13.7	--	12.7	--	12.7	--	--	--
06/07/87	1200		15.9	> -1	14.5	> -1	13.9	--	12.9	--	12.9	--	--	--
06/08/87	0		16.1	> -1	14.7	> -1	14.0	--	13.0	--	13.0	--	--	--
06/08/87	1200		16.1	> -1	14.8	> -1	14.2	--	13.1	--	13.1	--	--	--
06/09/87	0		16.0	> -1	14.9	> -1	14.3	--	13.2	--	13.2	--	--	--
06/10/87	0		16.0	> -1	14.9	> -1	14.4	--	13.4	--	13.4	--	--	--
06/10/87	1200		15.9	> -1	14.9	> -1	14.3	--	13.4	--	13.4	--	--	--
06/11/87	0		15.9	> -1	14.9	> -1	14.4	--	13.5	--	13.5	--	--	--
06/11/87	1200		16.0	> -1	15.0	> -1	14.4	--	13.5	--	13.5	--	--	--
06/12/87	0		16.1	> -1	15.0	> -1	14.4	--	13.5	--	13.5	--	--	--
06/12/87	1200		16.2	> -1	15.1	> -1	14.5	--	13.6	--	13.6	--	--	--
06/13/87	0		16.4	> -1	15.2	> -1	14.6	--	13.6	--	13.6	--	--	--
06/13/87	1200		16.7	> -1	15.3	> -1	14.7	--	13.7	--	13.7	--	--	--
06/14/87	0		16.9	> -1	15.5	> -1	14.8	--	13.8	--	13.8	--	--	--
06/14/87	1200		17.3	> -1	15.7	> -1	15.0	--	13.9	--	13.9	--	--	--
06/15/87	0		17.5	> -1	16.0	> -1	15.2	--	14.0	--	14.0	--	--	--
06/15/87	1200		17.9	> -1	16.2	> -1	15.4	--	14.2	--	14.2	--	--	--
06/16/87	0		18.1	> -1	16.4	> -1	15.6	--	14.4	--	14.4	--	--	--
06/16/87	1200		18.3	> -1	16.6	> -1	15.8	--	14.6	--	14.6	--	--	--
06/17/87	0		18.3	> -1	16.8	--	16.0	--	14.7	--	14.7	--	--	--
06/17/87	1200		18.4	> -1	16.9	--	16.1	--	14.8	--	14.8	--	--	--
06/18/87	0		18.4	> -1	17.0	--	16.2	--	14.9	--	14.9	--	--	--
06/18/87	1200		18.5	> -1	17.0	--	16.3	--	15.0	--	15.0	--	--	--
06/19/87	0		18.5	> -1	17.1	--	16.4	--	15.1	--	15.1	--	--	--
06/19/87	1200		18.4	> -1	17.1	--	16.5	--	15.2	--	15.2	--	--	--
06/20/87	0		18.2	> -1	17.1	--	16.5	--	15.3	--	15.3	--	--	--
06/20/87	1200		18.1	> -1	17.0	--	16.5	--	15.3	--	15.3	--	--	--
06/21/87	0		18.1	> -1	17.0	--	16.5	--	15.3	--	15.3	--	--	--
06/21/87	1200		18.2	> -1	17.0	--	16.5	--	15.3	--	15.3	--	--	--
06/22/87	0		18.3	> -1	17.0	--	16.5	--	15.4	--	15.4	--	--	--
06/22/87	1200		18.5	> -1	17.1	--	16.6	--	15.5	--	15.5	--	--	--
06/23/87	0		18.6	> -1	17.2	--	16.7	--	15.5	--	15.5	--	--	--
06/23/87	1200		18.6	> -1	17.3	--	16.7	--	15.5	--	15.5	--	--	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.5			0.6			0.8			0.9		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
06/24/87	0		18.5	> -1	17.3	--	16.8	--	15.6	--	15.6	--	--	--
06/24/87	1200		18.5	> -1	17.3	--	16.8	--	15.6	--	15.6	--	--	--
06/25/87	0		18.4	> -1	17.3	--	16.8	--	15.6	--	15.6	--	--	--
06/25/87	1200		18.6	> -1	17.3	--	16.8	--	15.7	--	15.7	--	--	--
07/08/87	0		20.2	> -1	NO DATA 6/26/87 THROUGH 7/7/87			--	18.2	--	17.0	--	--	--
07/08/87	1200		20.3	> -1	18.9	--	18.2	--	17.0	--	17.0	--	--	--
07/09/87	0		20.3	> -1	18.9	--	18.3	--	17.1	--	17.1	--	--	--
07/09/87	1200		20.3	> -1	18.9	--	18.3	--	17.1	--	17.1	--	--	--
07/10/87	0		20.1	> -1	18.9	--	18.3	--	17.2	--	17.2	--	--	--
07/10/87	1200		20.1	> -1	18.9	--	18.4	--	17.2	--	17.2	--	--	--
07/11/87	0		20.1	> -1	19.0	--	18.4	--	17.3	--	17.3	--	--	--
07/11/87	1200		19.9	> -1	18.9	--	18.3	--	17.2	--	17.2	--	--	--
07/12/87	0		19.7	> -1	18.8	--	18.3	--	17.2	--	17.2	--	--	--
07/12/87	1200		19.6	> -1	18.7	--	18.2	--	17.2	--	17.2	--	--	--
07/13/87	0		19.4	> -1	18.6	--	18.2	--	17.2	--	17.2	--	--	--
07/13/87	1200		19.4	> -1	18.6	--	18.1	--	17.1	--	17.1	--	--	--
07/14/87	0		19.4	> -1	18.5	--	18.0	--	17.1	--	17.1	--	--	--
07/14/87	1200		19.6	> -1	18.5	--	18.1	--	17.1	--	17.1	--	--	--
07/15/87	0		19.7	> -1	18.5	--	18.0	--	17.0	--	17.0	--	--	--
07/15/87	1200		19.9	> -1	18.7	--	18.1	--	17.1	--	17.1	--	--	--
07/16/87	0		20.1	> -1	18.8	--	18.1	--	17.1	--	17.1	--	--	--
07/16/87	1200		20.4	> -1	18.9	--	18.3	--	17.2	--	17.2	--	--	--
07/17/87	0		20.5	> -1	19.0	--	18.4	--	17.2	--	17.2	--	--	--
07/17/87	1200		20.7	> -1	19.2	--	18.5	--	17.4	--	17.4	--	--	--
07/18/87	0		20.8	> -1	19.3	--	18.6	--	17.4	--	17.4	--	--	--
07/18/87	1200		20.5	> -1	19.4	--	18.7	--	17.5	--	17.5	--	--	--
07/19/87	0		20.1	> -1	19.3	--	18.7	--	17.5	--	17.5	--	--	--
07/19/87	1200		19.6	> -1	19.1	--	18.6	--	17.5	--	17.5	--	--	--
07/20/87	0		19.1	> -1	18.8	--	18.4	--	17.5	--	17.5	--	--	--
07/20/87	1200		18.8	> -1	18.5	--	18.3	--	17.4	--	17.4	--	--	--
07/21/87	0		18.5	> -1	18.3	--	18.1	--	17.2	--	17.2	--	--	--
07/21/87	1200		18.4	> -1	18.1	--	18.0	--	17.2	--	17.2	--	--	--
07/22/87	0		18.3	> -1	18.0	--	17.8	--	17.0	--	17.0	--	--	--
07/22/87	1200		18.1	> -1	17.8	--	17.6	--	16.9	--	16.9	--	--	--
07/23/87	0		17.8	> -1	17.7	--	17.5	--	16.8	--	16.8	--	--	--
07/23/87	1200		17.7	> -1	17.5	--	17.4	--	16.7	--	16.7	--	--	--
07/24/87	0		17.6	> -1	17.4	--	17.2	--	16.6	--	16.6	--	--	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.5		0.6		0.8		0.9	
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
07/24/87	1200		17.7	> -1	17.3	--	17.1	--	16.5	--
07/25/87	0		17.8	> -1	17.3	--	17.1	--	16.4	--
07/25/87	1200		18.1	> -1	17.3	--	17.1	--	16.4	--
07/26/87	0		18.4	> -1	17.4	--	17.1	--	16.3	--
07/26/87	1200		18.7	> -1	17.6	--	17.2	--	16.4	--
07/27/87	0		18.9	> -1	17.7	--	17.3	--	16.4	--
07/27/87	1200		19.3	> -1	17.9	--	17.4	--	16.5	--
07/28/87	0		19.6	> -1	18.1	--	17.6	--	16.6	--
07/28/87	1200		19.8	> -1	18.3	--	17.7	--	16.7	--
07/29/87	0		20.0	> -1	18.5	--	17.9	--	16.8	--
07/29/87	1200		20.1	> -1	18.7	--	18.0	--	16.9	--
07/30/87	0		20.2	> -1	18.8	--	18.1	--	17.1	--
07/30/87	1200		20.2	> -1	18.9	--	18.2	--	17.1	--
07/31/87	0		20.2	> -1	18.9	--	18.3	--	17.2	--
07/31/87	1200		20.2	> -1	19.0	--	18.4	--	17.3	--
08/01/87	0		20.3	> -1	19.1	--	18.5	--	17.4	--
08/01/87	1200		20.4	> -1	19.1	--	18.5	--	17.4	--
08/02/87	0		20.4	> -1	19.2	--	18.5	--	17.4	--
08/02/87	1200		20.4	> -1	19.2	--	18.6	--	17.5	--
08/03/87	0		20.4	> -1	19.3	--	18.6	--	17.5	--
08/03/87	1200		20.5	> -1	19.3	--	18.7	--	17.6	--
08/04/87	0		20.5	> -1	19.3	--	18.7	--	17.6	--
08/04/87	1200		20.6	> -1	19.4	--	18.7	--	17.6	--
08/05/87	0		20.6	> -1	19.4	--	18.7	--	17.6	--
08/05/87	1200		20.7	> -1	19.4	--	18.8	--	17.7	--
08/06/87	0		20.8	> -1	19.5	--	18.9	--	17.8	--
08/06/87	1200		20.9	> -1	19.6	--	18.9	--	17.8	--
08/07/87	0		20.9	> -1	19.6	--	19.0	--	17.9	--
08/07/87	1200		21.0	> -1	19.7	--	19.0	--	17.9	--
08/08/87	0		21.0	> -1	19.7	--	19.1	--	18.0	--
08/08/87	1200		21.0	> -1	19.8	--	19.1	--	18.0	--
08/09/87	0		20.9	> -1	19.8	--	19.1	--	18.0	--
08/09/87	1200		21.0	> -1	19.8	--	19.2	--	18.1	--
08/10/87	0		21.0	> -1	19.8	--	19.2	--	18.1	--
08/10/87	1200		21.0	> -1	19.8	--	19.2	--	18.1	--
08/11/87	0		21.0	> -1	19.9	--	19.3	--	18.2	--
08/11/87	1200		21.0	> -1	19.9	--	19.3	--	18.2	--
08/12/87	0		21.0	> -1	19.9	--	19.3	--	18.2	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.5			0.6			0.8			0.9		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
08/12/87	1200		20.9	> -1	19.9	--	19.3	--	18.2	--	--	--	--	--
08/13/87	0		20.8	> -1	19.8	--	19.3	--	18.2	--	--	--	--	--
08/13/87	1200		20.8	> -1	19.8	--	19.3	--	18.3	--	--	--	--	--
08/14/87	0		20.6	> -1	19.8	--	19.3	--	18.2	--	--	--	--	--
08/14/87	1200		20.5	> -1	19.7	--	19.2	--	18.2	--	--	--	--	--
08/15/87	0		20.3	> -1	19.6	--	19.2	--	18.2	--	--	--	--	--
08/15/87	1200		20.1	> -1	19.5	--	19.1	--	18.1	--	--	--	--	--
08/16/87	0		20.0	> -1	19.4	--	19.0	--	18.1	--	--	--	--	--
08/16/87	1200		19.8	> -1	19.3	--	18.9	--	18.0	--	--	--	--	--
08/17/87	0		19.6	> -1	19.2	--	18.9	--	18.0	--	--	--	--	--
08/17/87	1200		19.5	> -1	19.0	--	18.7	--	17.9	--	--	--	--	--
08/18/87	0		19.3	> -1	18.9	--	18.6	--	17.8	--	--	--	--	--
08/18/87	1200		19.3	> -1	18.8	--	18.5	--	17.7	--	--	--	--	--
08/19/87	0		19.2	> -1	18.7	--	18.5	--	17.7	--	--	--	--	--
08/19/87	1200		19.3	> -1	18.7	--	18.4	--	17.6	--	--	--	--	--
08/20/87	0		19.2	> -1	18.6	--	18.3	--	17.6	--	--	--	--	--
08/20/87	1200		19.3	> -1	18.6	--	18.3	--	17.5	--	--	--	--	--
08/21/87	0		19.4	> -1	18.6	--	18.3	--	17.5	--	--	--	--	--
08/21/87	1200		19.5	> -1	18.7	--	18.3	--	17.5	--	--	--	--	--
08/22/87	0		19.6	> -1	18.7	--	18.4	--	17.5	--	--	--	--	--
08/22/87	1200		19.7	> -1	18.8	--	18.4	--	17.6	--	--	--	--	--
08/23/87	0		19.6	> -1	18.8	--	18.4	--	17.5	--	--	--	--	--
08/23/87	1200		19.7	> -1	18.8	--	18.5	--	17.6	--	--	--	--	--
08/24/87	0		19.7	> -1	18.8	--	18.4	--	17.6	--	--	--	--	--
08/24/87	1200		19.8	> -1	18.9	--	18.5	--	17.6	--	--	--	--	--
08/25/87	0		19.9	> -1	18.9	--	18.5	--	17.6	--	--	--	--	--
08/25/87	1200		19.8	> -1	18.9	--	18.5	--	17.6	--	--	--	--	--
08/26/87	0		19.7	> -1	18.9	--	18.5	--	17.6	--	--	--	--	--
08/26/87	1200		19.5	> -1	18.8	--	18.5	--	17.6	--	--	--	--	--
08/27/87	0		19.2	> -1	18.7	--	18.4	--	17.6	--	--	--	--	--
08/27/87	1200		19.1	> -1	18.6	--	18.3	--	17.6	--	--	--	--	--
08/28/87	0		19.0	> -1	18.5	--	18.2	--	17.5	--	--	--	--	--
08/28/87	1200		18.9	> -1	18.4	--	18.2	--	17.4	--	--	--	--	--
08/29/87	0		18.9	> -1	18.4	--	18.1	--	17.4	--	--	--	--	--
08/29/87	1200		19.0	> -1	18.3	--	18.0	--	17.3	--	--	--	--	--
08/30/87	0		19.0	> -1	18.3	--	18.0	--	17.3	--	--	--	--	--
08/30/87	1200		19.1	> -1	18.4	--	18.0	--	17.3	--	--	--	--	--
08/31/87	0		19.2	> -1	18.4	--	18.0	--	17.3	--	--	--	--	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal
culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential
rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		0.5			0.6			0.8			0.9		
Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
08/31/87	1200	19.3	> -1	18.5	--	18.1	--	17.3	--	--	--	--	--
09/01/87	0	19.4	> -1	18.5	--	18.1	--	17.3	--	17.3	--	17.3	--
09/01/87	1200	19.5	> -1	18.6	--	18.1	--	17.3	--	17.3	--	17.3	--
09/02/87	0	19.5	> -1	18.6	--	18.1	--	17.3	--	17.3	--	17.3	--
09/02/87	1200	19.6	> -1	18.7	--	18.2	--	17.4	--	17.4	--	17.4	--
09/03/87	0	19.7	> -1	18.7	--	18.2	--	17.4	--	17.4	--	17.4	--
09/03/87	1200	19.8	> -1	18.8	--	18.3	--	17.4	--	17.4	--	17.4	--
09/04/87	0	19.8	> -1	18.8	--	18.4	--	17.5	--	17.5	--	17.5	--
09/04/87	1200	19.7	> -1	18.9	--	18.4	--	17.5	--	17.5	--	17.5	--
09/05/87	0	19.5	> -1	18.8	--	18.3	--	17.5	--	17.5	--	17.5	--
09/05/87	1200	19.3	> -1	18.7	--	18.3	--	17.5	--	17.5	--	17.5	--
09/06/87	0	19.2	> -1	18.6	--	18.3	--	17.5	--	17.5	--	17.5	--
09/06/87	1200	19.1	> -1	18.5	--	18.2	--	17.4	--	17.4	--	17.4	--
09/07/87	0	19.0	> -1	18.5	--	18.1	--	17.4	--	17.4	--	17.4	--
09/07/87	1200	19.0	> -1	18.4	--	18.1	--	17.4	--	17.4	--	17.4	--
09/08/87	0	19.0	> -1	18.4	--	18.1	--	17.3	--	17.3	--	17.3	--
09/08/87	1200	19.0	> -1	18.3	--	18.0	--	17.3	--	17.3	--	17.3	--
09/09/87	0	19.0	> -1	18.3	--	18.0	--	17.3	--	17.3	--	17.3	--
09/09/87	1200	19.0	> -1	18.3	--	18.0	--	17.3	--	17.3	--	17.3	--
09/10/87	0	19.0	> -1	18.3	--	17.9	--	17.2	--	17.2	--	17.2	--
09/10/87	1200	18.9	> -1	18.3	--	17.9	--	17.2	--	17.2	--	17.2	--
09/11/87	0	18.9	> -1	18.3	--	17.9	--	17.2	--	17.2	--	17.2	--
09/11/87	1200	18.9	> -1	18.2	--	17.9	--	17.2	--	17.2	--	17.2	--
09/12/87	0	18.9	> -1	18.2	--	17.9	--	17.2	--	17.2	--	17.2	--
09/12/87	1200	18.9	> -1	18.2	--	17.9	--	17.2	--	17.2	--	17.2	--
09/13/87	0	18.8	> -1	18.2	--	17.9	--	17.2	--	17.2	--	17.2	--
09/13/87	1200	18.8	> -1	18.2	--	17.9	--	17.3	--	17.3	--	17.3	--
09/14/87	0	18.8	> -1	18.2	--	17.9	--	17.3	--	17.3	--	17.3	--
09/14/87	1200	18.9	> -1	18.3	--	17.9	--	17.3	--	17.3	--	17.3	--
09/15/87	0	18.9	> -1	18.3	--	18.0	--	17.4	--	17.4	--	17.4	--
09/15/87	1200	19.0	> -1	18.4	--	18.0	--	17.4	--	17.4	--	17.4	--
09/16/87	0	19.0	> -1	18.4	--	18.0	--	17.4	--	17.4	--	17.4	--
09/16/87	1200	19.1	> -1	18.4	--	18.0	--	17.4	--	17.4	--	17.4	--
09/17/87	0	18.9	> -1	18.4	--	18.0	--	17.4	--	17.4	--	17.4	--
09/17/87	1200	18.8	> -1	18.3	--	18.0	--	17.4	--	17.4	--	17.4	--
09/18/87	0	18.6	> -1	18.3	--	18.0	--	17.4	--	17.4	--	17.4	--
09/18/87	1200	18.3	> -1	18.2	--	17.9	--	17.4	--	17.4	--	17.4	--
09/19/87	0	18.1	> -1	18.0	--	17.8	--	17.3	--	17.3	--	17.3	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.5			0.6			0.8			0.9		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
09/19/87	1200		18.0	> -1	17.9	--	17.7	--	17.3	--	17.3	--	--	--
09/20/87	0		17.8	> -1	17.8	--	17.6	--	17.2	--	17.2	--	--	--
09/20/87	1200		17.8	> -1	17.7	--	17.6	--	17.2	--	17.2	--	--	--
09/21/87	0		17.7	> -1	17.7	--	17.5	--	17.2	--	17.2	--	--	--
09/21/87	1200		17.7	> -1	17.6	--	17.4	--	17.1	--	17.1	--	--	--
09/22/87	0		17.7	> -1	17.6	--	17.4	--	17.1	--	17.1	--	--	--
09/22/87	1200		17.7	> -1	17.6	--	17.4	--	17.1	--	17.1	--	--	--
09/23/87	0		17.7	> -1	17.5	--	17.3	--	17.0	--	17.0	--	--	--
09/23/87	1200		17.8	> -1	17.6	--	17.3	--	17.0	--	17.0	--	--	--
09/24/87	0		17.8	> -1	17.6	--	17.3	--	17.0	--	17.0	--	--	--
09/24/87	1200		17.9	> -1	17.6	--	17.3	--	17.0	--	17.0	--	--	--
09/25/87	0		18.0	> -1	17.7	--	17.3	--	17.0	--	17.0	--	--	--
09/25/87	1200		18.0	> -1	17.7	--	17.4	--	17.0	--	17.0	--	--	--
09/26/87	0		18.1	> -1	17.7	--	17.4	--	17.0	--	17.0	--	--	--
09/26/87	1200		18.1	> -1	17.8	--	17.4	--	17.1	--	17.1	--	--	--
09/27/87	0		18.1	> -1	17.8	--	17.5	--	17.1	--	17.1	--	--	--
09/27/87	1200		18.0	> -1	17.7	--	17.4	--	17.1	--	17.1	--	--	--
09/28/87	0		17.8	> -1	17.7	--	17.4	--	17.1	--	17.1	--	--	--
09/28/87	1200		17.5	> -1	17.6	--	17.3	--	17.0	--	17.0	--	--	--
09/29/87	0		17.3	> -1	17.5	--	17.3	--	16.9	--	17.0	--	--	--
09/29/87	1200		17.1	> -1	17.3	--	17.1	--	16.9	--	16.9	--	--	--
09/30/87	0		17.0	> -1	17.2	--	17.0	--	16.8	--	16.9	--	--	--
09/30/87	1200		16.9	> -1	17.1	--	16.9	--	16.8	--	16.8	--	--	--
10/01/87	0		16.8	> -1	17.0	--	16.8	--	16.7	--	16.7	--	--	--
10/01/87	1200		16.7	> -1	16.9	--	16.7	--	16.6	--	16.6	--	--	--
10/02/87	0		16.7	> -1	16.8	--	16.7	--	16.6	--	16.6	--	--	--
10/02/87	1200		16.7	> -1	16.8	--	16.7	--	16.5	--	16.5	--	--	--
10/03/87	0		16.6	> -1	16.7	--	16.6	--	16.5	--	16.5	--	--	--
10/03/87	1200		16.6	> -1	16.7	--	16.6	--	16.4	--	16.4	--	--	--
10/04/87	0		16.5	> -1	16.6	--	16.5	--	16.4	--	16.4	--	--	--
10/04/87	1200		16.5	> -1	16.6	--	16.5	--	16.3	--	16.3	--	--	--
10/05/87	0		16.5	> -1	16.5	--	16.5	--	16.3	--	16.3	--	--	--
10/05/87	1200		16.6	> -1	16.5	--	16.5	--	16.3	--	16.3	--	--	--
10/06/87	0		16.5	> -1	16.5	--	16.5	--	16.3	--	16.3	--	--	--
10/06/87	1200		16.5	> -1	16.5	--	16.5	--	16.3	--	16.3	--	--	--
10/07/87	0		16.4	> -1	16.5	--	16.5	--	16.3	--	16.2	--	--	--
10/07/87	1200		16.4	> -1	16.5	--	16.5	--	16.3	--	16.2	--	--	--
10/07/87	1200		16.3	> -1	16.4	--	16.3	--	16.2	--	16.1	--	--	--
10/08/87	0		16.2	> -1	16.3	--	16.3	--	16.1	--	16.0	--	--	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)		0.5			0.6			0.8			0.9		
		Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
10/08/87	1200	16.1	> -1	16.3	--	16.0	--	15.9	--	15.9	--	--	--
10/09/87	0	16.0	> -1	16.1	--	15.9	--	15.8	--	15.8	--	--	--
10/09/87	1200	16.0	> -1	16.1	--	15.8	--	15.7	--	15.7	--	--	--
10/10/87	0	16.0	> -1	16.0	--	15.8	--	15.7	--	15.7	--	--	--
10/10/87	1200	15.9	> -1	15.9	--	15.7	--	15.5	--	15.5	--	--	--
10/11/87	0	15.7	> -1	15.8	--	15.6	--	15.5	--	15.5	--	--	--
10/11/87	1200	15.5	> -1	15.7	--	15.5	--	15.4	--	15.4	--	--	--
10/12/87	0	15.3	> -1	15.5	--	15.4	--	15.3	--	15.3	--	--	--
10/12/87	1200	15.0	> -1	15.3	--	15.3	--	15.2	--	15.2	--	--	--
10/13/87	0	14.7	> -1	15.1	--	15.0	--	15.0	--	15.0	--	--	--
10/13/87	1200	14.3	-1.0	14.9	--	14.9	--	14.9	--	14.9	--	--	--
10/14/87	0	14.1	-1.0	14.7	--	14.8	--	14.8	--	14.8	--	--	--
10/14/87	1200	13.9	-1.0	14.4	--	14.6	--	14.6	--	14.6	--	--	--
10/15/87	0	13.7	-1.0	14.3	--	14.4	--	14.4	--	14.5	--	--	--
10/15/87	1200	13.5	-1.0	14.1	--	14.2	--	14.3	--	14.3	--	--	--
10/16/87	0	13.5	-1.0	14.0	--	14.2	--	14.2	--	14.3	--	--	--
10/16/87	1200	13.3	> -1	13.8	--	14.0	--	14.1	--	14.1	--	--	--
10/17/87	0	13.2	-1.0	13.7	--	13.9	--	14.0	--	14.0	--	--	--
10/17/87	1200	13.0	-1.1	13.5	--	13.7	--	13.7	--	13.8	--	--	--
10/18/87	0	12.8	-1.2	13.4	--	13.6	--	13.7	--	13.7	--	--	--
10/18/87	1200	12.6	-1.3	13.2	--	13.4	--	13.6	--	13.6	--	--	--
10/19/87	0	12.5	-1.2	13.1	--	13.3	--	13.5	--	13.5	--	--	--
10/19/87	1200	12.3	-1.2	12.9	--	13.2	--	13.4	--	13.4	--	--	--
10/20/87	0	12.2	-1.3	12.8	--	13.1	--	13.3	--	13.3	--	--	--
10/20/87	1200	12.0	-1.4	12.6	--	12.9	--	13.1	--	13.1	--	--	--
10/21/87	0	11.8	-1.5	12.5	--	12.8	--	12.9	--	13.0	--	--	--
10/21/87	1200	11.6	-1.6	12.3	--	12.7	--	12.8	--	13.0	--	--	--
10/22/87	0	11.4	-1.7	12.2	--	12.5	--	12.7	--	12.9	--	--	--
10/22/87	1200	11.2	-1.7	12.0	--	12.4	--	12.5	--	12.6	--	--	--
10/23/87	0	11.1	-1.7	11.8	--	12.2	--	12.4	--	12.6	--	--	--
10/23/87	1200	10.9	-1.7	11.7	--	12.2	--	12.4	--	12.5	--	--	--
10/24/87	0	10.8	-1.8	11.5	--	12.1	--	12.2	--	12.4	--	--	--
10/24/87	1200	10.7	-1.7	11.4	--	11.9	--	12.2	--	12.4	--	--	--
10/25/87	0	10.6	-1.6	11.3	--	11.8	--	12.1	--	12.2	--	--	--
10/25/87	1200	10.6	-1.5	11.2	--	11.7	--	12.1	--	12.1	--	--	--
10/26/87	0	10.6	-1.6	11.2	--	11.6	--	11.7	--	11.9	--	--	--
10/26/87	1200	10.5	-1.5	11.1	--	11.5	--	11.6	--	11.8	--	--	--
10/27/87	0	10.5	-1.6	11.0	--	11.4	--	11.5	--	11.8	--	--	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.5			0.6			0.8			0.9		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
10/27/87	1200		10.4	-1.6	11.0	--	11.3	--	11.6	--	11.6	--	--	--
10/28/87	0		10.4	-1.7	10.9	--	11.3	--	11.6	--	11.6	--	--	--
10/28/87	1200		10.2	-1.8	10.8	--	11.2	--	11.5	--	11.5	--	--	--
10/29/87	0		10.1	-1.9	10.8	--	11.1	--	11.4	--	11.4	--	--	--
10/29/87	1200		10.0	-1.9	10.6	--	11.0	--	11.3	--	11.3	--	--	--
10/30/87	0		10.0	-1.9	10.6	--	10.9	--	11.3	--	11.3	--	--	--
10/30/87	1200		9.9	-1.8	10.5	--	10.8	--	11.2	--	11.2	--	--	--
10/31/87	0		9.9	-1.8	10.4	--	10.7	--	11.1	--	11.1	--	--	--
10/31/87	1200		10.0	-1.6	10.4	--	10.7	--	11.1	--	11.1	--	--	--
11/01/87	0		10.1	-1.6	10.4	--	10.7	--	11.0	--	11.0	--	--	--
11/01/87	1200		10.2	-1.5	10.5	--	10.7	--	11.0	--	11.0	--	--	--
11/02/87	0		10.3	-1.6	10.5	--	10.7	--	11.0	--	11.0	--	--	--
11/02/87	1200		10.3	-1.6	10.5	--	10.7	--	11.0	--	11.0	--	--	--
11/03/87	0		10.3	-1.7	10.6	--	10.7	--	11.0	--	11.0	--	--	--
11/03/87	1200		10.4	-1.7	10.6	--	10.8	--	11.0	--	11.0	--	--	--
11/04/87	0		10.3	-1.8	10.6	--	10.8	--	11.0	--	11.0	--	--	--
11/04/87	1200		10.3	-1.8	10.6	--	10.8	--	11.0	--	11.0	--	--	--
11/05/87	0		10.3	-1.9	10.6	--	10.8	--	11.0	--	11.0	--	--	--
11/05/87	1200		10.3	-1.9	10.5	--	10.8	--	11.0	--	11.0	--	--	--
11/06/87	0		10.1	-2.2	10.5	--	10.8	--	11.0	--	11.0	--	--	--
11/06/87	1200		9.9	-2.4	10.4	--	10.7	--	10.9	--	10.9	--	--	--
11/07/87	0		9.8	-2.5	10.3	--	10.7	--	10.9	--	10.9	--	--	--
11/07/87	1200		9.6	-2.6	10.2	--	10.6	--	10.8	--	10.8	--	--	--
11/08/87	0		9.4	-2.6	10.1	--	10.5	--	10.8	--	10.8	--	--	--
11/08/87	1200		9.4	-2.5	10.0	--	10.4	--	10.7	--	10.7	--	--	--
11/09/87	0		9.4	-2.6	10.0	--	10.3	--	10.6	--	10.6	--	--	--
11/09/87	1200		9.2	-2.7	9.9	--	10.2	--	10.5	--	10.5	--	--	--
11/10/87	0		9.0	-2.9	9.8	--	10.1	--	10.4	--	10.4	--	--	--
11/10/87	1200		8.9	-2.9	9.6	--	10.1	--	10.4	--	10.4	--	--	--
11/11/87	0		8.8	-2.9	9.5	--	10.0	--	10.3	--	10.3	--	--	--
11/11/87	1200		8.6	-2.9	9.4	--	9.8	--	10.2	--	10.2	--	--	--
11/12/87	0		8.5	-3.1	9.3	--	9.7	--	10.1	--	10.1	--	--	--
11/12/87	1200		8.3	-3.2	9.2	--	9.6	--	10.0	--	10.0	--	--	--
11/13/87	0		8.2	-3.4	9.0	--	9.4	--	9.9	--	9.9	--	--	--
11/13/87	1200		8.0	-3.4	8.9	--	9.3	--	9.8	--	9.8	--	--	--
11/14/87	0		7.9	-3.4	8.8	--	9.3	--	9.8	--	9.8	--	--	--
11/14/87	1200		7.8	-3.3	8.7	--	9.2	--	9.6	--	9.6	--	--	--
11/15/87	0		7.8	-3.3	8.6	--	9.1	--	9.6	--	9.6	--	--	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal
culvert at the west test trench--Continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential
rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	0.5			0.6			0.8			0.9		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
11/15/87		1200	7.7	-3.4	8.5	--	9.0	--	9.5	--	9.5	--
11/16/87		0	7.5	-3.7	8.4	--	9.0	--	9.4	--	9.4	--
11/16/87		1200	7.2	-4.1	8.3	--	8.9	--	9.3	--	9.3	--
11/17/87		0	6.9	-4.3	8.0	--	8.7	--	9.2	--	9.2	--
11/17/87		1200	6.6	-4.3	7.8	--	8.5	--	9.1	--	9.1	--
11/18/87		0	6.4	-4.4	7.7	--	8.4	--	9.0	--	9.0	--
11/18/87		1200	6.1	-4.5	7.4	--	8.2	--	8.8	--	8.8	--
11/19/87		0	5.9	-4.5	7.3	--	8.1	--	8.7	--	8.7	--
11/19/87		1200	5.6	-4.7	7.0	--	7.8	--	8.5	--	8.5	--
11/20/87		0	5.4	-4.7	6.9	--	7.7	--	8.4	--	8.4	--
11/20/87		1200	5.1	-4.8	6.6	--	7.5	--	8.2	--	8.2	--
11/21/87		0	4.9	-4.9	6.4	--	7.3	--	8.1	--	8.1	--
11/21/87		1200	4.6	-5.0	6.2	--	7.1	--	7.9	--	7.9	--
11/22/87		0	4.4	-5.1	6.0	--	6.9	--	7.8	--	7.8	--
11/22/87		1200	4.2	-5.0	5.8	--	6.7	--	7.6	--	7.6	--
11/23/87		0	4.1	-5.0	5.6	--	6.5	--	7.4	--	7.4	--
11/23/87		1200	4.0	-4.9	5.5	--	6.3	--	7.3	--	7.3	--
11/24/87		0	4.0	-4.9	5.4	--	6.3	--	7.2	--	7.2	--
11/24/87		1200	3.9	-4.9	5.3	--	6.1	--	7.0	--	7.0	--
11/25/87		0	3.8	-5.1	5.2	--	6.0	--	6.9	--	6.9	--
11/25/87		1200	3.6	-5.2	5.0	--	5.9	--	6.8	--	6.8	--
11/26/87		0	3.5	-5.2	4.9	--	5.8	--	6.7	--	6.7	--
11/26/87		1200	3.3	-5.2	4.8	--	5.6	--	6.5	--	6.5	--
11/27/87		0	3.2	-5.3	4.7	--	5.5	--	6.5	--	6.5	--
11/27/87		1200	3.0	-5.4	4.5	--	5.4	--	6.3	--	6.3	--
11/28/87		0	2.8	-5.6	4.4	--	5.3	--	6.2	--	6.2	--
11/28/87		1200	2.6	-5.7	4.2	--	5.1	--	6.1	--	6.1	--
11/29/87		0	2.4	-5.9	4.0	--	5.0	--	6.0	--	6.0	--
11/29/87		1200	2.2	-6.0	3.8	--	4.8	--	5.8	--	5.8	--
11/30/87		0	2.0	-6.0	3.7	--	4.7	--	5.8	--	5.8	--
11/30/87		1200	1.9	-6.1	3.5	--	4.6	--	5.7	--	5.7	--
12/01/87		0	1.7	-6.2	3.4	--	4.4	--	5.5	--	5.5	--
12/01/87		1200	1.5	-6.2	3.2	--	4.3	--	5.4	--	5.4	--
12/02/87		0	1.4	-6.0	3.1	--	4.1	--	5.2	--	5.2	--
12/02/87		1200	1.5	-5.8	3.0	--	4.0	--	5.1	--	5.1	--
12/03/87		0	1.6	-5.6	2.9	--	3.9	--	5.0	--	5.0	--
12/03/87		1200	1.7	-5.4	2.9	--	3.9	--	5.0	--	5.0	--
12/04/87		0	1.8	-5.3	3.0	--	3.9	--	4.9	--	4.9	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.5			0.6			0.8			0.9		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
12/04/87	1200		2.0	-5.2	3.0	--	--	--	3.8	--	4.9	--	--	--
12/05/87	0		2.2	-5.1	3.1	--	--	--	3.9	--	4.9	--	--	--
12/05/87	1200		2.3	-5.2	3.2	--	--	--	3.9	--	4.8	--	--	--
12/06/87	0		2.4	-5.3	3.3	--	--	--	4.0	--	4.9	--	--	--
12/06/87	1200		2.5	-5.3	3.3	--	--	--	4.0	--	4.9	--	--	--
12/07/87	0		2.5	-5.4	3.4	--	--	--	4.1	--	4.9	--	--	--
12/07/87	1200		2.7	-5.3	3.4	--	--	--	4.1	--	5.0	--	--	--
12/08/87	0		2.8	-5.2	3.5	--	--	--	4.2	--	5.0	--	--	--
12/08/87	1200		2.9	-5.3	3.6	--	--	--	4.2	--	5.0	--	--	--
12/09/87	0		3.0	-5.5	3.7	--	--	--	4.2	--	5.0	--	--	--
12/09/87	1200		2.9	-5.8	3.7	--	--	--	4.2	--	5.0	--	--	--
12/10/87	0		2.9	-5.9	3.7	--	--	--	4.2	--	5.0	--	--	--
12/10/87	1200		2.9	-6.2	3.7	--	--	--	4.3	--	5.0	--	--	--
12/11/87	0		2.9	-6.2	3.7	--	--	--	4.3	--	5.0	--	--	--
12/11/87	1200		2.8	-6.2	3.7	--	--	--	4.2	--	5.0	--	--	--
12/12/87	0		2.8	-6.4	3.7	--	--	--	4.3	--	5.0	--	--	--
12/12/87	1200		2.8	-6.5	3.7	--	--	--	4.2	--	4.9	--	--	--
12/13/87	0		2.8	-6.6	3.7	--	--	--	4.3	--	5.0	--	--	--
12/13/87	1200		2.7	-6.9	3.6	--	--	--	4.3	--	5.0	--	--	--
12/14/87	0		2.6	-7.3	3.6	--	--	--	4.2	--	4.9	--	--	--
12/14/87	1200		2.3	-8.0	3.5	--	--	--	4.1	--	4.8	--	--	--
12/15/87	0		1.9	-8.9	3.3	--	--	--	4.0	--	4.7	--	--	--
12/15/87	1200		1.5	-9.5	3.1	--	--	--	3.8	--	4.6	--	--	--
12/16/87	1200		0.6	-10.3	2.5	--	--	--	3.3	--	4.3	--	--	--
12/17/87	0		0.2	-10.6	2.2	--	--	--	3.1	--	4.2	--	--	--
12/17/87	1200		-0.2	-10.6	1.9	--	--	--	2.8	--	4.0	--	--	--
12/18/87	0		-0.3	-10.5	1.6	--	--	--	2.6	--	3.8	--	--	--
12/18/87	1200		-0.5	-10.3	1.4	--	--	--	2.4	--	3.6	--	--	--
12/19/87	0		-0.5	-10.5	1.3	--	--	--	2.2	--	3.5	--	--	--
12/19/87	1200		-0.6	-10.5	1.2	--	--	--	2.1	--	3.3	--	--	--
12/20/87	0		-0.7	-10.6	1.1	--	--	--	2.0	--	3.2	--	--	--
12/20/87	1200		-0.7	-10.4	0.9	--	--	--	1.9	--	3.1	--	--	--
12/21/87	0		-0.8	-10.9	0.9	--	--	--	1.8	--	3.0	--	--	--
12/21/87	1200		-0.8	-11.2	0.8	--	--	--	1.7	--	3.0	--	--	--
12/22/87	0		-0.9	-11.3	0.7	--	--	--	1.6	--	2.9	--	--	--
12/22/87	1200		-1.0	-11.3	0.6	--	--	--	1.6	--	2.8	--	--	--
12/23/87	0		-0.9	-11.4	0.6	--	--	--	1.5	--	2.7	--	--	--
12/23/87	1200		-0.9	-11.4	0.5	--	--	--	1.5	--	2.7	--	--	--

Table 3.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the west test trench--Continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	0.5				0.6				0.8				0.9			
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
12/24/87		0	-0.7	-11.5	0.6	--	1.5	--	2.7	--	--	--	--	--	--	--
12/24/87		1200	-0.9	-11.7	0.5	--	1.4	--	2.5	--	--	--	--	--	--	--
12/25/87		0	-0.8	-12.1	0.5	--	1.4	--	2.5	--	--	--	--	--	--	--
12/25/87		1200	-0.9	-12.6	0.5	--	1.3	--	2.4	--	--	--	--	--	--	--
12/26/87		0	-1.0	-13.1	0.4	--	1.3	--	2.4	--	--	--	--	--	--	--
12/26/87		1200	-1.1	-13.7	0.3	--	1.2	--	2.3	--	--	--	--	--	--	--
12/27/87		0	-1.2	-14.1	0.3	--	1.3	--	2.3	--	--	--	--	--	--	--
12/27/87		1200	-1.3	-14.7	0.2	--	1.1	--	2.2	--	--	--	--	--	--	--
12/28/87		0	-1.4	-15.2	0.1	--	1.1	--	2.2	--	--	--	--	--	--	--
12/28/87		1200	-1.5	-15.7	0.0	--	1.0	--	2.1	--	--	--	--	--	--	--
12/29/87		0	-1.6	-16.3	-0.1	--	0.9	--	2.1	--	--	--	--	--	--	--
12/29/87		1200	-1.7	-16.9	-0.2	--	0.9	--	2.0	--	--	--	--	--	--	--
12/30/87		0	-1.8	-17.4	-0.2	--	0.8	--	2.0	--	--	--	--	--	--	--
12/30/87		1200	-1.9	-17.7	-0.3	--	0.7	--	1.9	--	--	--	--	--	--	--
12/31/87		0	-1.9	-18.0	-0.4	--	0.6	--	1.8	--	--	--	--	--	--	--
12/31/87		1200	-1.9	-18.2	-0.4	--	0.6	--	1.7	--	--	--	--	--	--	--

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.6		0.9		1.5		2.1	
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
					NO DATA 1/1/87 THROUGH 2/10/87					
02/11/87		0	-0.6	-10.6	0.6	-4.2	3.1	-11.6	5.1	-8.1
02/11/87		1200	-0.6	-10.5	0.6	-4.1	3.1	-11.6	5.0	-8.1
02/12/87		0	-0.6	-10.4	0.6	-4.1	3.1	-11.6	5.0	-8.1
02/12/87		1200	-0.6	-10.3	0.6	-4.1	3.0	-11.6	5.0	-8.1
02/13/87		0	-0.6	-10.3	0.6	-4.1	3.0	-11.6	5.0	-8.1
02/13/87		1200	-0.5	-10.2	0.6	-4.1	3.0	-11.6	5.0	-8.1
02/14/87		0	-0.5	-10.1	0.6	-4.1	3.0	-11.6	5.0	-8.1
02/14/87		1200	-0.5	-10.0	0.6	-4.1	3.0	-11.6	4.9	-8.2
02/15/87		0	-0.4	-9.9	0.7	-4.1	3.0	-11.5	5.0	-8.2
02/15/87		1200	-0.5	-9.8	0.7	-4.1	3.0	-11.6	4.9	-8.2
02/16/87		0	-0.4	-9.7	0.7	-4.1	3.0	-11.6	4.9	-8.2
02/16/87		1200	-0.4	-9.6	0.7	-4.1	3.0	-11.6	4.9	-8.1
02/17/87		0	-0.4	-9.5	0.7	-4.1	3.0	-11.5	4.8	-8.0
02/17/87		1200	-0.4	-9.3	0.7	-4.1	3.0	-11.5	4.8	-8.1
02/18/87		0	-0.3	-9.3	0.7	-4.1	3.0	-11.5	4.8	-8.1
02/18/87		1200	-0.3	-9.2	0.7	-4.1	3.0	-11.5	4.8	-8.1
02/19/87		0	-0.3	-9.1	0.7	-4.1	3.0	-11.4	4.8	-7.9
02/19/87		1200	-0.3	-9.0	0.8	-4.0	3.0	-11.4	4.8	-8.0
02/20/87		0	-0.2	-8.9	0.8	-4.1	3.0	-11.5	4.8	-7.9
02/20/87		1200	-0.3	-8.8	0.8	-4.1	3.0	-11.5	4.8	-7.8
02/21/87		0	-0.2	-8.7	0.8	-4.1	3.0	-11.4	4.8	-7.9
02/21/87		1200	-0.3	-8.7	0.8	-4.1	2.9	-11.5	4.7	-8.0
02/22/87		0	-0.2	-8.6	0.8	-4.1	3.0	-11.5	4.7	-7.9
02/22/87		1200	-0.2	-8.6	0.8	-4.1	3.0	-11.5	4.7	-7.9
02/23/87		0	-0.2	-8.6	0.8	-4.0	2.9	-11.5	4.7	-8.0
02/23/87		1200	-0.2	-8.5	0.8	-4.1	3.0	-11.5	4.7	-7.9
02/24/87		0	-0.2	-8.4	0.8	-4.1	2.9	-11.5	4.7	-8.0
02/24/87		1200	-0.2	-8.4	0.8	-4.0	2.9	-11.5	4.7	-8.0
02/25/87		0	-0.2	-8.4	0.8	-4.1	2.9	-11.5	4.6	-8.0
02/25/87		1200	-0.1	-8.3	0.9	-4.0	3.0	-11.4	4.7	-8.0
02/26/87		0	-0.1	-8.2	0.9	-4.0	3.0	-11.4	4.7	-8.0
02/26/87		1200	-0.1	-8.1	0.9	-4.0	2.9	-11.4	4.6	-7.9
02/27/87		0	-0.1	-8.2	0.9	-4.0	2.9	-11.4	4.6	-7.9
02/27/87		1200	-0.2	-8.1	0.8	-4.0	2.9	-11.4	4.5	-7.9
02/28/87		0	-0.1	-8.0	0.9	-4.0	2.9	-11.4	4.6	-7.9
02/28/87		1200	-0.1	-8.0	0.9	-4.0	2.9	-11.4	4.6	-7.8
03/01/87		0	-0.1	-7.9	1.0	-4.0	3.0	-11.4	4.6	-7.8

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
03/01/87	1200		-0.1	-7.8	0.9	-4.0	2.9	-11.4	4.6	-7.8				
03/02/87	0		-0.1	-7.8	1.0	-4.0	2.9	-11.4	4.6	-7.8				
03/02/87	1200		-0.1	-7.8	0.9	-4.0	2.9	-11.4	4.5	-7.8				
03/03/87	0		-0.1	-7.8	1.0	-4.0	2.9	-11.4	4.6	-7.7				
03/03/87	1200		-0.1	-7.7	1.0	-4.0	2.9	-11.3	4.5	-7.7				
03/04/87	0		-0.1	-7.7	1.0	-4.0	2.9	-11.3	4.5	-7.7				
03/04/87	1200		-0.1	-7.7	1.0	-4.0	2.9	-11.3	4.5	-7.7				
03/05/87	0		-0.1	-7.7	1.0	-4.0	2.9	-11.3	4.5	-7.7				
03/05/87	1200		-0.1	-7.7	1.0	-3.9	2.9	-11.3	4.5	-7.7				
03/06/87	0		-0.1	-7.7	1.0	-4.0	2.9	-11.3	4.5	-7.7				
03/06/87	1200		-0.1	-7.6	1.0	-4.0	2.9	-11.3	4.5	-7.6				
03/07/87	0		0.0	-7.6	1.1	-3.9	2.9	-11.3	4.5	-7.7				
03/07/87	1200		0.0	-7.6	1.1	-4.0	2.9	-11.3	4.5	-7.7				
03/08/87	0		0.0	-7.5	1.1	-4.0	3.0	-11.3	4.5	-7.7				
03/08/87	1200		0.0	-7.5	1.1	-4.0	2.9	-11.3	4.5	-7.7				
03/09/87	0		0.0	-7.5	1.1	-4.0	2.9	-11.3	4.4	-7.6				
03/09/87	1200		0.0	-7.4	1.1	-3.9	2.9	-11.3	4.4	-7.5				
03/10/87	0		0.0	-7.4	1.1	-3.9	3.0	-11.3	4.5	-7.6				
03/10/87	1200		0.0	-7.4	1.1	-4.0	2.9	-11.3	4.4	-7.6				
03/11/87	0		0.0	-7.4	1.1	-4.0	2.9	-11.3	4.4	-7.5				
03/11/87	1200		0.0	-7.4	1.1	-4.0	2.9	-11.3	4.4	-7.4				
03/12/87	0		0.1	-7.4	1.2	-4.0	3.0	-11.3	4.4	-7.4				
03/12/87	1200		0.0	-7.4	1.1	-4.0	2.9	-11.3	4.4	-7.4				
03/13/87	0		0.1	-7.4	1.2	-4.0	3.0	-11.3	4.4	-7.3				
03/13/87	1200		0.1	-7.4	1.2	-4.0	2.9	-11.3	4.4	-7.4				
03/14/87	0		0.1	-7.4	1.2	-4.0	2.9	-11.3	4.4	-7.3				
03/14/87	1200		0.2	-7.8	1.2	-4.0	2.9	-11.3	4.4	-7.4				
03/15/87	0		0.5	-8.4	1.3	-4.1	3.0	-11.3	4.4	-7.3				
03/15/87	1200		0.8	-8.3	1.4	-4.1	3.0	-11.3	4.4	-7.4				
03/16/87	0		1.1	-8.1	1.5	-4.1	2.9	-11.4	4.4	-7.4				
03/16/87	1200		1.2	-7.8	1.6	-4.2	3.0	-11.4	4.4	-7.3				
03/17/87	0		1.4	-7.6	1.7	-4.2	3.0	-11.4	4.4	-7.3				
03/17/87	1200		1.6	-7.6	1.8	-4.2	3.0	-11.4	4.4	-7.3				
03/18/87	0		1.7	-7.5	1.8	-4.2	3.0	-11.3	4.4	-7.3				
03/18/87	1200		1.9	-7.5	2.0	-4.2	3.1	-11.4	4.4	-7.3				
03/19/87	0		2.0	-7.4	2.0	-4.2	3.1	-11.4	4.4	-7.3				
03/19/87	1200		2.1	-7.4	2.1	-4.2	3.1	-11.4	4.4	-7.4				
03/20/87	0		2.2	-7.4	2.2	-4.3	3.2	-11.4	4.4	-7.3				

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
03/20/87		1200	2.2	-7.4	2.3	-4.3	3.1	-11.4	4.4	-7.3				
03/21/87		0	2.3	-7.4	2.4	-4.2	3.2	-11.4	4.4	-7.4				
03/21/87		1200	2.3	-7.4	2.4	-4.2	3.2	-11.4	4.4	-7.3				
03/22/87		0	2.3	-7.4	2.5	-4.2	3.3	-11.4	4.4	-7.4				
03/22/87		1200	2.2	-7.4	2.5	-4.3	3.3	-11.5	4.4	-7.4				
03/23/87		0	2.2	-7.4	2.5	-4.2	3.3	-11.4	4.4	-7.4				
03/23/87		1200	2.2	-7.4	2.5	-4.2	3.3	-11.4	4.4	-7.4				
03/24/87		0	2.2	-7.4	2.6	-4.2	3.4	-11.4	4.4	-7.4				
03/24/87		1200	2.2	-7.4	2.5	-4.2	3.4	-11.4	4.4	-7.2				
03/25/87		0	2.4	-7.4	2.6	-4.2	3.4	-11.4	4.5	-7.2				
03/25/87		1200	2.4	-7.3	2.6	-4.2	3.4	-11.4	4.4	-7.3				
03/26/87		0	2.6	-7.3	2.7	-4.2	3.5	-11.4	4.5	-7.5				
03/26/87		1200	2.6	-7.3	2.7	-4.2	3.5	-11.4	4.4	-7.4				
03/27/87		0	2.8	-7.3	2.8	-4.2	3.5	-11.4	4.5	-7.4				
03/27/87		1200	2.9	-7.3	2.8	-4.2	3.5	-11.4	4.4	-7.5				
03/28/87		0	3.0	-7.3	2.9	-4.2	3.6	-11.4	4.5	-7.4				
03/28/87		1200	3.1	-7.3	3.0	-4.2	3.6	-11.4	4.5	-7.3				
03/29/87		0	3.1	-7.3	3.0	-4.2	3.6	-11.3	4.5	-7.3				
03/29/87		1200	3.1	-7.3	3.0	-4.2	3.5	-11.4	4.4	-7.3				
03/30/87		0	3.2	-7.3	3.2	-4.2	3.7	-11.3	4.6	-7.3				
03/30/87		1200	3.0	-7.2	3.1	-4.2	3.6	-11.3	4.5	-7.2				
03/31/87		0	3.0	-7.3	3.2	-4.2	3.7	-11.4	4.6	-7.2				
03/31/87		1200	3.0	-7.3	3.2	-4.2	3.7	-11.3	4.5	-7.2				
04/01/87		0	3.1	-7.4	3.2	-4.2	3.7	-11.3	4.6	-7.3				
04/01/87		1200	3.2	-7.3	3.2	-4.2	3.8	-11.3	4.6	-7.2				
04/02/87		0	3.4	-7.2	3.3	-4.1	3.8	-11.3	4.6	-7.3				
04/02/87		1200	3.6	-7.2	3.3	-4.2	3.8	-11.3	4.6	-7.2				
04/03/87		0	3.9	-7.2	3.4	-4.2	3.8	-11.3	4.6	-7.1				
04/03/87		1200	4.1	-7.2	3.5	-4.2	3.8	-11.4	4.6	-7.3				
04/04/87		0	4.3	-7.2	3.6	-4.2	3.9	-11.4	4.6	-7.2				
04/04/87		1200	4.4	-7.2	3.7	-4.2	3.9	-11.4	4.6	-7.4				
04/05/87		0	4.7	-7.2	3.8	-4.2	3.9	-11.4	4.6	-7.4				
04/05/87		1200	4.9	-7.2	3.9	-4.3	4.0	-11.4	4.6	-7.5				
04/06/87		0	5.2	-7.2	4.1	-4.2	4.0	-11.4	4.7	-7.3				
04/06/87		1200	5.4	-7.2	4.2	-4.3	4.0	-11.3	4.6	-7.4				
04/07/87		0	5.7	-7.2	4.4	-4.3	4.1	-11.3	4.6	-7.2				
04/07/87		1200	5.9	-7.1	4.5	-4.3	4.1	-11.3	4.7	-7.4				
04/08/87		0	6.1	-7.2	4.7	-4.3	4.2	-11.3	4.7	-7.3				

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
 [Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
04/08/87	1200	0	6.3	-7.1	4.8	-4.3	4.2	-11.3	4.7	-7.4	4.7	-7.2	4.8	-7.2
04/09/87	1200	0	6.5	-7.1	5.0	-4.4	4.3	-11.3	4.8	-7.2	4.8	-7.2	4.8	-7.2
04/09/87	1200	0	6.6	-7.1	5.1	-4.4	4.3	-11.3	4.7	-6.9	4.7	-6.9	4.7	-6.9
04/10/87	1200	0	6.6	-7.1	5.2	-4.4	4.4	-11.3	4.8	-6.9	4.8	-6.9	4.8	-6.9
04/10/87	1200	0	6.6	-7.1	5.3	-4.3	4.4	-11.3	4.8	-7.0	4.8	-7.0	4.8	-7.0
04/11/87	1200	0	6.7	-7.1	5.4	-4.3	4.5	-11.4	4.8	-7.0	4.8	-7.0	4.8	-7.0
04/11/87	1200	0	6.7	-7.1	5.5	-4.4	4.6	-11.3	4.8	-6.9	4.8	-6.9	4.8	-6.9
04/12/87	1200	0	6.9	-7.1	5.6	-4.4	4.7	-11.3	4.9	-6.7	4.9	-6.7	4.9	-6.7
04/12/87	1200	0	7.0	-7.1	5.6	-4.3	4.7	-11.3	4.9	-6.6	4.9	-6.6	4.9	-6.6
04/13/87	1200	0	7.0	-7.1	5.7	-4.4	4.8	-11.3	4.9	-6.5	4.9	-6.5	4.9	-6.5
04/13/87	1200	0	7.0	-7.1	5.8	-4.3	4.8	-11.3	4.9	-6.4	4.9	-6.4	4.9	-6.4
04/14/87	1200	0	7.0	-7.1	5.9	-4.3	4.9	-11.2	5.0	-6.3	5.0	-6.3	5.0	-6.3
04/14/87	1200	0	7.0	-7.1	5.9	-4.3	4.9	-11.3	5.0	-6.4	5.0	-6.4	5.0	-6.4
04/15/87	1200	0	7.1	-7.1	6.0	-4.4	5.0	-11.3	5.0	-6.3	5.0	-6.3	5.0	-6.3
04/15/87	1200	0	7.2	-7.1	6.0	-4.4	5.0	-11.3	5.0	-6.3	5.0	-6.3	5.0	-6.3
04/16/87	1200	0	7.3	-7.1	6.1	-4.4	5.1	-11.3	5.1	-6.1	5.1	-6.1	5.1	-6.1
04/16/87	1200	0	7.4	-7.1	6.1	-4.3	5.1	-11.3	5.1	-6.1	5.1	-6.1	5.1	-6.1
04/17/87	1200	0	7.7	-7.1	6.2	-4.3	5.2	-11.3	5.2	-6.0	5.2	-6.0	5.2	-6.0
04/17/87	1200	0	7.8	-7.1	6.3	-4.4	5.2	-11.3	5.2	-6.1	5.2	-6.1	5.2	-6.1
04/18/87	1200	0	8.1	-7.1	6.4	-4.4	5.3	-11.3	5.3	-6.1	5.3	-6.1	5.3	-6.1
04/18/87	1200	0	8.3	-7.1	6.4	-4.4	5.4	-11.3	5.3	-6.2	5.3	-6.2	5.3	-6.2
04/19/87	1200	0	8.4	-7.1	6.7	-4.4	5.4	-11.4	5.3	-6.1	5.3	-6.1	5.3	-6.1
04/19/87	1200	0	8.5	-7.1	6.8	-4.4	5.5	-11.3	5.3	-6.2	5.3	-6.2	5.3	-6.2
04/19/87	1200	0	8.7	-7.0	6.9	-4.4	5.5	-11.3	5.3	-6.1	5.3	-6.1	5.3	-6.1
04/20/87	1200	0	8.6	-7.1	7.0	-4.4	5.6	-11.3	5.3	-6.0	5.3	-6.0	5.3	-6.0
04/20/87	1200	0	8.4	-7.1	7.1	-4.4	5.7	-11.2	5.4	-6.0	5.4	-6.0	5.4	-6.0
04/21/87	1200	0	8.2	-7.0	7.1	-4.4	5.7	-11.2	5.4	-6.0	5.4	-6.0	5.4	-6.0
04/21/87	1200	0	8.2	-7.1	7.1	-4.4	5.8	-11.3	5.5	-6.0	5.5	-6.0	5.5	-6.0
04/22/87	1200	0	8.1	-7.1	7.1	-4.4	5.8	-11.3	5.5	-6.1	5.5	-6.1	5.5	-6.1
04/22/87	1200	0	8.2	-7.0	7.1	-4.4	5.9	-11.3	5.5	-6.0	5.5	-6.0	5.5	-6.0
04/23/87	1200	0	8.2	-7.0	7.1	-4.4	5.9	-11.3	5.5	-6.0	5.5	-6.0	5.5	-6.0
04/23/87	1200	0	8.4	-7.0	7.1	-4.4	5.9	-11.2	5.5	-6.2	5.5	-6.2	5.5	-6.2
04/24/87	1200	0	8.6	-7.1	7.2	-4.3	6.0	-11.3	5.6	-6.1	5.6	-6.1	5.6	-6.1
04/24/87	1200	0	8.8	-7.1	7.2	-4.4	6.0	-11.3	5.6	-6.0	5.6	-6.0	5.6	-6.0
04/25/87	1200	0	9.1	-7.1	7.4	-4.4	6.1	-11.2	5.7	-6.0	5.7	-6.0	5.7	-6.0
04/25/87	1200	0	9.2	-7.0	7.4	-4.4	6.1	-11.2	5.6	-6.1	5.6	-6.1	5.6	-6.1
04/26/87	1200	0	9.5	-7.0	7.6	-4.4	6.1	-11.2	5.7	-5.9	5.7	-5.9	5.7	-5.9
04/26/87	1200	0	9.7	-7.1	7.7	-4.4	6.2	-11.2	5.7	-6.0	5.7	-6.0	5.7	-6.0
04/27/87	1200	0	9.9	-7.0	7.8	-4.4	6.2	-11.2	5.7	-5.9	5.7	-5.9	5.7	-5.9

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
04/27/87	1200		10.2	-7.1	8.0	-4.5	6.3	-11.2	5.8	-6.0				
04/28/87	0		10.5	-7.0	8.2	-4.4	6.4	-11.1	5.8	-5.9				
04/28/87	1200		10.7	-7.0	8.2	-4.5	6.4	-11.2	5.8	-6.0				
04/29/87	0		10.9	-7.1	8.4	-4.5	6.4	-11.2	5.9	-6.1				
04/29/87	1200		11.1	-7.0	8.6	-4.5	6.5	-11.2	5.9	-6.1				
04/30/87	0		11.4	-7.1	8.7	-4.5	6.6	-11.2	5.9	-6.1				
04/30/87	1200		11.6	-7.0	8.9	-4.5	6.7	-11.2	6.0	-6.1				
05/01/87	0		11.9	-7.0	9.1	-4.5	6.7	-11.2	6.0	-6.1				
05/01/87	1200		12.0	-7.0	9.2	-4.5	6.8	-11.2	6.0	-6.1				
05/02/87	0		12.0	-7.0	9.4	-4.6	6.9	-11.2	6.1	-6.2				
05/02/87	1200		11.9	-7.0	9.5	-4.6	6.9	-11.2	6.1	-6.1				
05/03/87	0		11.7	-7.0	9.6	-4.5	7.1	-11.2	6.2	-6.2				
05/03/87	1200		11.6	-7.0	9.6	-4.5	7.1	-11.2	6.2	-6.1				
05/04/87	0		11.5	-7.0	9.7	-4.5	7.2	-11.1	6.3	-6.1				
05/04/87	1200		11.4	-7.0	9.6	-4.5	7.2	-11.1	6.3	-6.2				
05/05/87	0		11.5	-7.0	9.7	-4.5	7.4	-11.1	6.3	-6.2				
05/05/87	1200		11.5	-7.0	9.7	-4.5	7.4	-11.1	6.4	-6.3				
05/06/87	0		11.7	-7.0	9.7	-4.5	7.5	-11.1	6.5	-6.2				
05/06/87	1200		11.8	-7.0	9.7	-4.5	7.5	-11.1	6.4	-6.2				
05/07/87	0		12.0	-7.0	9.9	-4.4	7.6	-11.1	6.5	-6.3				
05/07/87	1200		12.2	-7.0	9.9	-4.5	7.6	-11.1	6.6	-6.3				
05/08/87	0		12.4	-7.0	10.0	-4.5	7.7	-11.1	6.6	-6.2				
05/08/87	1200		12.6	-7.0	10.1	-4.5	7.7	-11.2	6.6	-6.2				
05/09/87	0		12.8	-7.0	10.3	-4.5	7.8	-11.1	6.7	-6.2				
05/09/87	1200		13.0	-7.0	10.4	-4.6	7.8	-11.1	6.7	-6.3				
05/10/87	0		13.2	-7.0	10.5	-4.5	7.9	-11.1	6.7	-6.3				
05/10/87	1200		13.4	-7.0	10.7	-4.5	8.0	-11.1	6.8	-6.3				
05/11/87	0		13.6	-6.9	10.8	-4.5	8.1	-11.1	6.9	-6.3				
05/11/87	1200		13.7	-7.0	10.9	-4.6	8.1	-11.1	6.9	-6.4				
05/12/87	0		13.8	-7.0	11.0	-4.5	8.2	-11.1	6.9	-6.3				
05/12/87	1200		13.9	-7.0	11.2	-4.6	8.3	-11.1	7.0	-6.2				
05/13/87	0		14.0	-6.9	11.2	-4.5	8.3	-11.1	7.0	-6.2				
05/13/87	1200		14.2	-6.9	11.4	-4.5	8.4	-11.1	7.1	-6.1				
05/14/87	0		14.3	-7.0	11.5	-4.5	8.5	-11.1	7.1	-6.2				
05/14/87	1200		14.5	-6.9	11.6	-4.5	8.5	-11.1	7.1	-6.2				
05/15/87	0		14.6	-6.9	11.7	-4.5	8.6	-11.1	7.2	-6.1				
05/15/87	1200		14.7	-6.9	11.8	-4.5	8.7	-11.1	7.2	-6.1				
05/16/87	0		14.8	-6.9	11.9	-4.5	8.7	-11.1	7.3	-6.2				

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)	
05/16/87	1200		15.0	-6.9		12.1	-4.5		8.9	-11.1		7.4	-6.1	
05/17/87	0		15.1	-6.9		12.2	-4.6		8.9	-11.1		7.4	-6.3	
05/17/87	1200		15.1	-6.9		12.3	-4.6		9.0	-11.1		7.5	-6.3	
05/18/87	0		15.0	-6.9		12.3	-4.6		9.1	-11.1		7.5	-6.3	
05/18/87	1200		14.8	-6.9		12.4	-4.5		9.1	-11.1		7.5	-6.4	
05/19/87	0		14.6	-6.9		12.4	-4.5		9.2	-11.1		7.6	-6.5	
05/19/87	1200		14.4	-6.9		12.4	-4.5		9.3	-11.1		7.6	-6.5	
05/20/87	0		14.2	-6.9		12.4	-4.5		9.4	-11.1		7.7	-6.5	
05/20/87	1200		14.0	-6.9		12.3	-4.5		9.4	-11.0		7.7	-6.6	
05/21/87	0		13.8	-6.9		12.3	-4.4		9.5	-11.0		7.8	-6.6	
05/21/87	1200		13.5	-6.9		12.2	-4.4		9.5	-11.1		7.8	-6.6	
05/22/87	0		13.4	-6.9		12.2	-4.4		9.6	-11.0		7.9	-6.7	
05/22/87	1200		13.3	-6.9		12.0	-4.4		9.6	-11.0		7.9	-6.6	
05/23/87	0		13.3	-6.9		12.0	-4.4		9.7	-11.0		8.0	-6.7	
05/23/87	1200		13.3	-6.9		12.0	-4.3		9.6	-11.1		8.0	-6.7	
05/24/87	0		13.4	-6.9		12.0	-4.4		9.7	-11.0		8.1	-6.8	
05/24/87	1200		13.4	-6.9		11.9	-4.3		9.7	-11.0		8.1	-6.8	
05/25/87	0		13.5	-6.9		12.0	-4.3		9.8	-11.0		8.2	-6.9	
05/25/87	1200		13.4	-6.9		12.0	-4.3		9.7	-11.0		8.2	-6.9	
05/26/87	0		13.3	-6.9		12.0	-4.3		9.8	-11.0		8.2	-7.0	
05/26/87	1200		13.2	-6.9		11.9	-4.3		9.8	-11.0		8.2	-7.0	
05/27/87	0		13.1	-6.9		11.9	-4.3		9.8	-11.0		8.3	-6.9	
05/27/87	1200		13.0	-6.9		11.9	-4.4		9.8	-11.0		8.3	-7.0	
05/28/87	0		12.9	-6.9		11.8	-4.3		9.8	-10.9		8.3	-7.0	
05/28/87	1200		12.8	-6.9		11.8	-4.3		9.9	-11.0		8.4	-7.0	
05/29/87	0		12.8	-6.9		11.7	-4.3		9.9	-10.9		8.4	-6.9	
05/29/87	1200		12.7	-6.9		11.7	-4.3		9.8	-10.9		8.4	-7.0	
05/30/87	0		12.8	-6.9		11.7	-4.3		9.9	-10.9		8.5	-7.0	
05/30/87	1200		12.9	-6.9		11.7	-4.3		9.8	-10.9		8.4	-7.1	
05/31/87	0		13.1	-6.9		11.7	-4.2		9.9	-10.9		8.5	-7.0	
05/31/87	1200		13.2	-6.9		11.7	-4.3		9.9	-10.9		8.5	-7.0	
06/01/87	0		13.4	-6.9		11.8	-4.3		10.0	-10.9		8.6	-7.1	
06/01/87	1200		13.5	-6.9		11.8	-4.3		9.9	-10.9		8.6	-7.1	
06/02/87	0		13.5	-6.9		11.9	-4.3		9.9	-10.8		8.6	-7.0	
06/02/87	1200		13.5	-6.9		11.9	-4.3		9.9	-10.8		8.6	-7.1	
06/03/87	0		13.5	-6.9		11.9	-4.3		9.9	-10.8		8.6	-7.1	
06/03/87	1200		13.6	-6.9		12.0	-4.3		10.0	-10.8		8.6	-7.0	
06/04/87	0		13.7	-6.8		12.0	-4.3		10.0	-10.8		8.6	-7.0	

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
06/04/87	1200		13.9	-6.8	12.1	-4.4	10.0	-10.8	8.7	-7.0				
06/05/87	0		14.0	-6.8	12.1	-4.3	10.0	-10.8	8.7	-7.1				
06/05/87	1200		14.3	-6.8	12.2	-4.3	10.1	-10.8	8.7	-7.1				
06/06/87	0		14.6	-6.8	12.3	-4.4	10.1	-10.8	8.8	-7.1				
06/06/87	1200		14.9	-6.8	12.4	-4.4	10.1	-10.7	8.8	-7.1				
06/07/87	0		15.1	-6.9	12.6	-4.4	10.2	-10.7	8.8	-7.1				
06/07/87	1200		15.3	-6.8	12.8	-4.4	10.3	-10.7	8.9	-7.1				
06/08/87	0		15.5	-6.8	12.9	-4.4	10.3	-10.7	8.9	-7.1				
06/08/87	1200		15.5	-6.8	12.9	-4.5	10.3	-10.8	8.8	-7.1				
06/09/87	0		15.5	-6.8	13.1	-4.4	10.4	-10.7	8.9	-7.2				
06/10/87	0		15.4	-6.8	13.3	-4.4	10.5	-10.7	9.0	-7.3				
06/10/87	1200		15.3	-6.8	13.2	-4.5	10.5	-10.7	8.9	-7.3				
06/11/87	0		15.4	-6.9	13.3	-4.5	10.6	-10.7	9.0	-7.3				
06/11/87	1200		15.4	-6.9	13.3	-4.4	10.6	-10.7	9.1	-7.3				
06/12/87	0		15.5	-6.8	13.3	-4.4	10.6	-10.6	9.0	-7.3				
06/12/87	1200		15.6	-6.8	13.4	-4.4	10.7	-10.6	9.1	-7.3				
06/13/87	0		15.7	-6.8	13.5	-4.4	10.8	-10.5	9.1	-7.3				
06/13/87	1200		16.0	-6.8	13.5	-4.4	10.8	-10.6	9.2	-7.3				
06/14/87	0		16.2	-6.8	13.6	-4.4	10.8	-10.6	9.2	-7.3				
06/14/87	1200		16.5	-6.8	13.7	-4.4	10.9	-10.6	9.2	-7.3				
06/15/87	0		16.7	-6.8	13.8	-4.5	10.9	-10.6	9.2	-7.3				
06/15/87	1200		17.0	-6.8	14.0	-4.5	11.0	-10.7	9.3	-7.4				
06/16/87	0		17.2	-6.9	14.2	-4.4	11.1	-10.6	9.4	-7.4				
06/16/87	1200		17.4	-6.8	14.3	-4.5	11.2	-10.6	9.4	-7.4				
06/17/87	0		17.5	-6.8	14.4	-4.5	11.2	-10.6	9.4	-7.5				
06/17/87	1200		17.5	-6.9	14.6	-4.4	11.2	-10.6	9.4	-7.5				
06/18/87	0		17.6	-6.9	14.7	-4.4	11.3	-10.6	9.5	-7.4				
06/18/87	1200		17.7	-6.8	14.8	-4.4	11.4	-10.6	9.6	-7.4				
06/19/87	0		17.7	-6.8	14.9	-4.4	11.4	-10.5	9.6	-7.4				
06/19/87	1200		17.6	-6.8	14.9	-4.5	11.5	-10.5	9.6	-7.5				
06/20/87	0		17.6	-6.8	15.0	-4.4	11.6	-10.5	9.6	-7.5				
06/20/87	1200		17.5	-6.8	15.0	-4.4	11.6	-10.5	9.7	-7.6				
06/21/87	0		17.4	-6.8	15.0	-4.4	11.7	-10.5	9.7	-7.5				
06/21/87	1200		17.5	-6.8	15.1	-4.4	11.7	-10.5	9.8	-7.6				
06/22/87	0		17.6	-6.8	15.1	-4.4	11.8	-10.5	9.8	-7.5				
06/22/87	1200		17.7	-6.8	15.2	-4.4	11.9	-10.4	9.9	-7.6				
06/23/87	0		17.8	-6.8	15.2	-4.4	11.9	-10.4	9.9	-7.5				
06/23/87	1200		17.8	-6.8	15.2	-4.5	12.0	-10.4	9.9	-7.6				

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
06/24/87	0		17.8	-6.8	15.3	-4.4	12.0	-10.4	9.9	-7.5				
06/24/87	1200		17.8	-6.8	15.4	-4.3	12.1	-10.2	10.0	-7.7				
06/25/87	0		17.7	-6.8	15.4	-4.2	12.1	-10.2	10.0	-7.7				
06/25/87	1200		17.8	-6.8	15.4	-4.2	12.2	-10.2	10.1	-7.7				
07/08/87	0		19.3	-6.9	16.8	-4.4	NO DATA 6/26/87 THROUGH 7/7/87			-9.8	11.1	-6.9		
07/08/87	1200		19.3	-6.8	16.7	-4.4	13.4	-9.8	11.1	-6.7				
07/09/87	0		19.3	-6.8	16.8	-4.4	13.4	-9.7	11.1	-6.7				
07/09/87	1200		19.4	-6.8	16.8	-4.4	13.4	-9.7	11.2	-6.8				
07/10/87	0		19.4	-6.8	16.9	-4.4	13.5	-9.7	11.2	-6.8				
07/10/87	1200		19.4	-6.8	16.9	-4.4	13.6	-9.7	11.3	-7.0				
07/11/87	0		19.4	-6.8	17.0	-4.4	13.6	-9.7	11.3	-7.0				
07/11/87	1200		19.3	-6.8	16.9	-4.4	13.6	-9.7	11.3	-7.0				
07/12/87	0		19.1	-6.8	16.9	-4.4	13.6	-9.7	11.3	-6.9				
07/12/87	1200		19.0	-6.8	17.0	-4.4	13.7	-9.6	11.4	-6.8				
07/13/87	0		18.9	-6.8	16.9	-4.4	13.7	-9.6	11.4	-6.8				
07/13/87	1200		18.9	-6.8	16.9	-4.5	13.7	-9.6	11.5	-6.8				
07/14/87	0		18.8	-6.8	16.8	-4.4	13.7	-9.6	11.4	-6.7				
07/14/87	1200		18.9	-6.8	16.9	-4.4	13.8	-9.6	11.5	-6.6				
07/15/87	0		19.0	-6.8	16.8	-4.4	13.8	-9.6	11.5	-6.3				
07/15/87	1200		19.2	-6.8	16.9	-4.5	13.9	-9.7	11.6	-6.4				
07/16/87	0		19.3	-6.8	16.9	-4.5	13.8	-9.6	11.6	-6.5				
07/16/87	1200		19.6	-6.8	17.1	-4.5	14.0	-9.6	11.7	-6.3				
07/17/87	0		19.7	-6.8	17.0	-4.5	13.9	-9.6	11.6	-6.1				
07/17/87	1200		19.9	-6.8	17.2	-4.5	14.0	-9.6	11.8	-6.0				
07/18/87	0		20.0	-6.8	17.3	-4.6	14.0	-9.6	11.8	-5.9				
07/18/87	1200		19.9	-6.8	17.4	-4.6	14.0	-9.6	11.8	-6.0				
07/19/87	0		19.6	-6.8	17.4	-4.5	14.1	-9.6	11.8	-6.0				
07/19/87	1200		19.3	-6.8	17.3	-4.6	14.1	-9.6	11.8	-5.9				
07/20/87	0		18.9	-6.8	17.3	-4.6	14.1	-9.6	11.8	-5.6				
07/20/87	1200		18.6	-6.8	17.2	-4.6	14.2	-9.6	11.9	-5.7				
07/21/87	0		18.4	-6.8	17.1	-4.5	14.1	-9.6	11.9	-5.8				
07/21/87	1200		18.3	-6.8	17.1	-4.5	14.3	-9.6	12.0	-6.1				
07/22/87	0		18.2	-6.9	16.9	-4.5	14.3	-9.6	12.0	-6.0				
07/22/87	1200		18.0	-6.9	16.8	-4.6	14.2	-9.6	12.0	-6.0				
07/23/87	0		17.8	-6.9	16.7	-4.5	14.2	-9.6	12.0	-5.9				
07/23/87	1200		17.6	-7.0	16.7	-4.6	14.2	-9.6	12.1	-6.0				
07/24/87	0		17.5	-7.0	16.5	-4.6	14.2	-9.6	12.1	-6.2				

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
07/24/87	1200		17.5	-7.1	16.5	-4.6	14.2	-9.6	12.1	-6.4	12.1	-6.4	12.1	-6.4
07/25/87	0		17.5	-7.0	16.4	-4.6	14.2	-9.6	12.1	-6.3	12.1	-6.3	12.1	-6.3
07/25/87	1200		17.7	-7.0	16.4	-4.6	14.2	-9.6	12.2	-6.4	12.2	-6.4	12.2	-6.4
07/26/87	0		17.9	-7.1	16.3	-4.7	14.2	-9.6	12.1	-6.3	12.1	-6.3	12.1	-6.3
07/26/87	1200		18.1	-7.0	16.4	-4.7	14.2	-9.6	12.2	-6.4	12.2	-6.4	12.2	-6.4
07/27/87	0		18.3	-7.0	16.4	-4.7	14.1	-9.6	12.2	-6.5	12.2	-6.5	12.2	-6.5
07/27/87	1200		18.6	-7.0	16.5	-4.8	14.2	-9.6	12.2	-6.7	12.2	-6.7	12.2	-6.7
07/28/87	0		18.9	-7.0	16.6	-4.8	14.2	-9.6	12.2	-6.6	12.2	-6.6	12.2	-6.6
07/28/87	1200		19.2	-7.0	16.7	-4.8	14.2	-9.6	12.3	-6.7	12.3	-6.7	12.3	-6.7
07/29/87	0		19.4	-7.0	16.8	-4.9	14.2	-9.6	12.3	-6.6	12.3	-6.6	12.3	-6.6
07/29/87	1200		19.5	-7.0	17.0	-4.9	14.2	-9.6	12.3	-6.7	12.3	-6.7	12.3	-6.7
07/30/87	0		19.6	-7.0	17.1	-4.8	14.3	-9.6	12.3	-6.8	12.3	-6.8	12.3	-6.8
07/30/87	1200		19.6	-7.0	17.1	-4.9	14.3	-9.6	12.3	-6.9	12.3	-6.9	12.3	-6.9
07/31/87	0		19.6	-7.0	17.2	-4.9	14.3	-9.6	12.3	-6.9	12.3	-6.9	12.3	-6.9
07/31/87	1200		19.7	-7.0	17.3	-4.9	14.3	-9.6	12.3	-7.1	12.3	-7.1	12.3	-7.1
08/01/87	0		19.7	-7.0	17.3	-4.9	14.4	-9.5	12.4	-7.1	12.4	-7.1	12.4	-7.1
08/01/87	1200		19.8	-7.0	17.4	-4.9	14.4	-9.5	12.4	-7.1	12.4	-7.1	12.4	-7.1
08/02/87	0		19.8	-7.0	17.4	-4.9	14.4	-9.5	12.4	-7.2	12.4	-7.2	12.4	-7.2
08/02/87	1200		19.9	-7.0	17.5	-4.9	14.5	-9.5	12.4	-7.3	12.4	-7.3	12.4	-7.3
08/03/87	0		19.9	-7.0	17.5	-4.9	14.5	-9.5	12.4	-7.3	12.4	-7.3	12.4	-7.3
08/03/87	1200		20.0	-7.0	17.6	-4.9	14.6	-9.5	12.5	-7.4	12.5	-7.4	12.5	-7.4
08/04/87	0		19.9	-7.0	17.6	-4.9	14.5	-9.5	12.5	-7.3	12.5	-7.3	12.5	-7.3
08/04/87	1200		20.0	-7.0	17.7	-4.9	14.6	-9.5	12.5	-7.4	12.5	-7.4	12.5	-7.4
08/05/87	0		20.0	-7.0	17.7	-4.9	14.6	-9.5	12.5	-7.4	12.5	-7.4	12.5	-7.4
08/05/87	1200		20.1	-7.0	17.7	-4.9	14.7	-9.4	12.6	-7.5	12.6	-7.5	12.6	-7.5
08/06/87	0		20.2	-7.0	17.8	-4.9	14.7	-9.4	12.6	-7.4	12.6	-7.4	12.6	-7.4
08/06/87	1200		20.3	-7.0	17.8	-5.0	14.8	-9.4	12.6	-7.6	12.6	-7.6	12.6	-7.6
08/07/87	0		20.3	-7.0	17.9	-4.9	14.8	-9.4	12.6	-7.4	12.6	-7.4	12.6	-7.4
08/07/87	1200		20.4	-7.0	18.0	-4.9	14.8	-9.4	12.7	-7.4	12.7	-7.4	12.7	-7.4
08/08/87	0		20.4	-7.0	18.0	-4.9	14.9	-9.3	12.7	-7.5	12.7	-7.5	12.7	-7.5
08/08/87	1200		20.4	-7.0	18.0	-5.0	14.9	-9.4	12.7	-7.7	12.7	-7.7	12.7	-7.7
08/09/87	0		20.3	-7.1	18.0	-4.9	14.9	-9.3	12.7	-7.6	12.7	-7.6	12.7	-7.6
08/09/87	1200		20.4	-7.1	18.1	-5.0	15.0	-9.4	12.8	-7.7	12.8	-7.7	12.8	-7.7
08/10/87	0		20.4	-7.1	18.1	-5.0	15.0	-9.4	12.8	-7.9	12.8	-7.9	12.8	-7.9
08/10/87	1200		20.4	-7.1	18.1	-5.0	15.0	-9.4	12.8	-7.9	12.8	-7.9	12.8	-7.9
08/11/87	0		20.4	-7.1	18.1	-5.1	15.0	-9.4	12.8	-8.1	12.8	-8.1	12.8	-8.1
08/11/87	1200		20.4	-7.1	18.2	-5.1	15.1	-9.3	12.9	-8.1	12.9	-8.1	12.9	-8.1
08/12/87	0		20.4	-7.1	18.2	-5.1	15.1	-9.3	13.0	-8.0	13.0	-8.0	13.0	-8.0

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
08/12/87	1200		20.4		-7.1	18.2		-5.1	15.1		12.9		-8.2	
08/13/87	0		20.3		-7.2	18.2		-5.1	15.2		13.0		-8.2	
08/13/87	1200		20.3		-7.2	18.2		-5.1	15.2		13.0		-8.6	
08/14/87	0		20.2		-7.2	18.2		-5.1	15.2		13.0		-8.5	
08/14/87	1200		20.1		-7.3	18.2		-5.2	15.3		13.1		-8.6	
08/15/87	0		20.0		-7.3	18.2		-5.2	15.3		13.1		-8.7	
08/15/87	1200		19.8		-7.3	18.1		-5.2	15.3		13.1		-8.8	
08/16/87	0		19.7		-7.4	18.1		-5.2	15.3		13.2		-8.8	
08/16/87	1200		19.5		-7.4	18.1		-5.2	15.3		13.2		-8.9	
08/17/87	0		19.4		-7.5	18.0		-5.3	15.4		13.2		-8.8	
08/17/87	1200		19.2		-7.5	17.9		-5.3	15.3		13.2		-8.9	
08/18/87	0		19.1		-7.5	17.9		-5.3	15.4		13.2		-8.8	
08/18/87	1200		19.0		-7.6	17.8		-5.3	15.4		13.2		-8.8	
08/19/87	0		19.0		-7.6	17.7		-5.3	15.4		13.3		-8.8	
08/19/87	1200		19.0		-7.6	17.7		-5.3	15.4		13.3		-8.9	
08/20/87	0		18.9		-7.6	17.6		-5.3	15.3		13.3		-8.8	
08/20/87	1200		18.9		-7.6	17.6		-5.4	15.3		13.3		-8.9	
08/21/87	0		19.0		-7.6	17.6		-5.4	15.4		13.4		-8.9	
08/21/87	1200		19.1		-7.6	17.6		-5.4	15.4		13.4		-8.9	
08/22/87	0		19.2		-7.6	17.6		-5.4	15.4		13.4		-8.9	
08/22/87	1200		19.2		-7.6	17.6		-5.4	15.4		13.4		-8.9	
08/23/87	0		19.2		-7.6	17.6		-5.5	15.3		13.4		-8.8	
08/23/87	1200		19.2		-7.6	17.6		-5.4	15.3		13.4		-8.9	
08/24/87	0		19.2		-7.6	17.6		-5.5	15.3		13.4		-8.9	
08/24/87	1200		19.2		-7.7	17.6		-5.5	15.3		13.4		-9.1	
08/25/87	0		19.4		-7.7	17.7		-5.5	15.4		13.5		-9.0	
08/25/87	1200		19.2		-7.8	17.6		-5.5	15.3		13.4		-9.2	
08/26/87	0		19.2		-7.9	17.7		-5.5	15.4		13.5		-9.2	
08/26/87	1200		19.0		-8.0	17.7		-5.5	15.4		13.5		-9.3	
08/27/87	0		18.9		-8.1	17.6		-5.5	15.4		13.5		-9.5	
08/27/87	1200		18.7		-8.1	17.6		-5.6	15.4		13.5		-9.5	
08/28/87	0		18.7		-8.2	17.5		-5.5	15.4		13.5		-9.4	
08/28/87	1200		18.6		-8.2	17.5		-5.6	15.4		13.5		-9.5	
08/29/87	0		18.6		-8.2	17.4		-5.6	15.4		13.5		-9.5	
08/29/87	1200		18.6		-8.2	17.4		-5.6	15.4		13.5		-9.5	
08/30/87	0		18.6		-8.2	17.4		-5.6	15.4		13.5		-9.4	
08/30/87	1200		18.7		-8.2	17.4		-5.6	15.4		13.6		-9.3	
08/31/87	0		18.8		-8.2	17.4		-5.7	15.4		13.6		-9.3	

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
08/31/87	1200		18.8	-8.2		17.4	-5.7		15.4	-9.0	13.6	-9.3		
09/01/87	0		18.9	-8.2		17.4	-5.7		15.4	-9.0	13.6	-9.2		
09/01/87	1200		18.9	-8.3		17.4	-5.8		15.4	-9.0	13.6	-9.1		
09/02/87	0		19.0	-8.3		17.4	-5.7		15.3	-8.9	13.6	-9.0		
09/02/87	1200		19.1	-8.3		17.5	-5.8		15.4	-8.9	13.6	-9.1		
09/03/87	0		19.1	-8.3		17.4	-5.8		15.3	-8.9	13.6	-9.0		
09/03/87	1200		19.2	-8.4		17.6	-5.8		15.4	-8.9	13.7	-9.0		
09/04/87	0		19.3	-8.4		17.6	-5.8		15.4	-9.0	13.7	-9.0		
09/04/87	1200		19.2	-8.5		17.6	-5.9		15.4	-9.0	13.7	-9.0		
09/05/87	0		19.1	-8.6		17.5	-5.9		15.4	-9.0	13.6	-8.8		
09/05/87	1200		19.0	-8.7		17.6	-5.9		15.4	-8.9	13.7	-8.8		
09/06/87	0		18.8	-8.7		17.5	-5.9		15.4	-9.0	13.7	-8.8		
09/06/87	1200		18.7	-8.8		17.5	-5.9		15.4	-9.0	13.7	-8.7		
09/07/87	0		18.6	-8.8		17.5	-5.9		15.4	-8.9	13.7	-8.7		
09/07/87	1200		18.6	-8.8		17.5	-5.9		15.4	-9.0	13.7	-8.6		
09/08/87	0		18.6	-8.8		17.4	-5.9		15.4	-8.9	13.7	-8.5		
09/08/87	1200		18.6	-8.9		17.4	-5.9		15.4	-8.9	13.7	-8.6		
09/09/87	0		18.5	-8.9		17.3	-5.9		15.4	-8.9	13.7	-8.6		
09/09/87	1200		18.5	-8.9		17.4	-6.0		15.4	-8.8	13.8	-8.6		
09/10/87	0		18.5	-8.9		17.3	-6.0		15.4	-8.9	13.7	-8.5		
09/10/87	1200		18.5	-9.0		17.3	-5.9		15.4	-8.9	13.8	-8.7		
09/11/87	0		18.5	-9.0		17.3	-6.0		15.4	-8.9	13.8	-8.4		
09/11/87	1200		18.4	-9.0		17.3	-6.0		15.4	-8.9	13.8	-8.5		
09/12/87	0		18.4	-9.0		17.3	-6.0		15.4	-8.8	13.8	-8.3		
09/12/87	1200		18.4	-9.1		17.3	-6.0		15.4	-8.9	13.8	-8.4		
09/13/87	0		18.3	-9.1		17.2	-6.0		15.4	-8.8	13.8	-8.3		
09/13/87	1200		18.3	-9.1		17.2	-6.0		15.4	-8.9	13.8	-8.4		
09/14/87	0		18.3	-9.2		17.2	-6.0		15.4	-8.8	13.8	-8.3		
09/14/87	1200		18.3	-9.2		17.2	-6.1		15.4	-8.8	13.8	-8.4		
09/15/87	0		18.4	-9.2		17.2	-6.1		15.4	-8.6	13.8	-8.3		
09/15/87	1200		18.4	-9.2		17.2	-6.1		15.4	-8.5	13.8	-8.3		
09/16/87	0		18.4	-9.3		17.2	-6.1		15.4	-8.0	13.9	-8.1		
09/16/87	1200		18.4	-9.3		17.2	-6.1		15.5	--	13.9	-8.2		
09/17/87	0		18.3	-9.4		17.2	-6.1		15.4	--	13.9	-8.0		
09/17/87	1200		18.2	-9.5		17.2	-6.1		15.4	--	13.9	-8.0		
09/18/87	0		18.1	-9.5		17.1	-6.1		15.4	--	13.9	-8.0		
09/18/87	1200		17.9	-9.6		17.1	-6.2		15.4	--	13.8	-8.0		
09/19/87	0		17.7	-9.7		17.0	-6.2		15.3	--	13.8	-8.0		

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
09/19/87	1200		17.6	-9.7	17.0	-6.2	15.4	--	13.9	--	13.9	-7.9	13.9	-7.9
09/20/87	0		17.4	-9.8	16.9	-6.2	15.3	--	13.9	--	13.9	-7.9	13.9	-7.9
09/20/87	1200		17.3	-9.8	16.8	-6.1	15.4	--	13.9	--	13.9	-7.8	13.9	-7.8
09/21/87	0		17.2	-9.8	16.7	-6.2	15.3	--	13.9	--	13.9	-7.9	13.9	-7.9
09/21/87	1200		17.2	-9.8	16.7	-6.2	15.3	--	13.9	--	13.9	-7.9	13.9	-7.9
09/22/87	0		17.1	-9.8	16.6	-6.1	15.3	--	13.9	--	13.9	-7.8	13.9	-7.8
09/22/87	1200		17.1	-9.8	16.6	-6.2	15.3	--	13.9	--	13.9	-7.9	13.9	-7.9
09/23/87	0		17.1	-9.8	16.5	-6.2	15.3	--	13.9	--	13.9	-7.8	13.9	-7.8
09/23/87	1200		17.1	-9.8	16.5	-6.2	15.3	--	13.9	--	13.9	-7.9	13.9	-7.9
09/24/87	0		17.0	-9.8	16.4	-6.2	15.2	--	13.9	--	13.9	-7.7	13.9	-7.7
09/24/87	1200		17.1	-9.8	16.4	-6.3	15.2	--	13.9	--	13.9	-7.7	13.9	-7.7
09/25/87	0		17.1	-9.8	16.4	-6.3	15.2	--	13.9	--	13.9	-7.7	13.9	-7.7
09/25/87	1200		17.1	-9.9	16.4	-6.3	15.2	--	13.9	--	13.9	-7.8	13.9	-7.8
09/26/87	0		17.1	-9.9	16.3	-6.3	15.1	--	13.9	--	13.9	-7.7	13.9	-7.7
09/26/87	1200		17.2	-9.9	16.4	-6.3	15.2	--	13.9	--	13.9	-7.8	13.9	-7.8
09/27/87	0		17.2	-9.9	16.4	-6.3	15.2	--	14.0	--	14.0	-7.7	14.0	-7.7
09/27/87	1200		17.1	-10.0	16.3	-6.3	15.1	--	13.9	--	13.9	-7.8	13.9	-7.8
09/28/87	0		16.9	-10.1	16.3	-6.3	15.1	--	13.9	--	13.9	-7.7	13.9	-7.7
09/28/87	1200		16.7	-10.1	16.3	-6.3	15.1	--	13.9	--	13.9	-7.6	13.9	-7.6
09/29/87	0		16.6	-10.2	16.2	-6.3	15.1	--	13.9	--	13.9	-7.6	13.9	-7.6
09/29/87	1200		16.4	-10.2	16.2	-6.4	15.0	--	13.9	--	13.9	-7.6	13.9	-7.6
09/30/87	0		16.2	-10.3	16.1	-6.3	15.0	--	13.9	--	13.9	-7.4	13.9	-7.4
09/30/87	1200		16.1	-10.3	16.0	-6.4	15.0	--	13.9	--	13.9	-7.4	13.9	-7.4
10/01/87	0		16.0	-10.3	15.9	-6.4	15.0	--	13.8	--	13.8	-7.4	13.8	-7.4
10/01/87	1200		15.9	-10.3	15.9	-6.4	15.0	--	13.9	--	13.9	-7.6	13.9	-7.6
10/02/87	0		15.9	-10.3	15.8	-6.4	15.0	--	13.9	--	13.9	-7.4	13.9	-7.4
10/02/87	1200		15.8	-10.3	15.7	-6.4	15.0	--	13.9	--	13.9	-7.5	13.9	-7.5
10/03/87	0		15.7	-10.3	15.6	-6.4	14.9	--	13.8	--	13.8	-7.4	13.8	-7.4
10/03/87	1200		15.7	-10.3	15.6	-6.4	14.9	--	13.9	--	13.9	-7.5	13.9	-7.5
10/04/87	0		15.6	-10.3	15.5	-6.4	14.8	--	13.9	--	13.9	-7.4	13.9	-7.4
10/04/87	1200		15.6	-10.4	15.6	-6.4	14.9	--	13.9	--	13.9	-7.4	13.9	-7.4
10/05/87	0		15.6	-10.3	15.5	-6.4	14.8	--	13.8	--	13.8	-7.4	13.8	-7.4
10/05/87	1200		15.6	-10.4	15.4	-6.5	14.8	--	13.8	--	13.8	-7.5	13.8	-7.5
10/06/87	0		15.5	-10.4	15.4	-6.4	14.7	--	13.8	--	13.8	-7.5	13.8	-7.5
10/06/87	1200		15.5	-10.4	15.3	-6.5	14.7	--	13.8	--	13.8	-7.5	13.8	-7.5
10/07/87	0		15.4	-10.4	15.3	-6.5	14.7	--	13.8	--	13.8	-7.4	13.8	-7.4
10/07/87	1200		15.4	-10.5	15.3	-6.5	14.7	--	13.8	--	13.8	-7.5	13.8	-7.5
10/08/87	0		15.2	-10.5	15.2	-6.5	14.6	--	13.7	--	13.7	-7.4	13.7	-7.4

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
10/08/87	1200	0	15.2	-10.5	15.2	-6.5	14.6	--	13.8	--	13.8	--	13.8	-7.4
10/09/87	1200	0	15.1	-10.6	15.1	-6.5	14.6	--	13.7	--	13.7	--	13.7	-7.4
10/09/87	1200	0	15.1	-10.6	15.1	-6.5	14.6	--	13.7	--	13.7	--	13.7	-7.5
10/10/87	1200	0	15.1	-10.5	15.1	-6.5	14.6	--	13.8	--	13.8	--	13.8	-7.4
10/10/87	1200	0	15.0	-10.6	15.0	-6.6	14.5	--	13.7	--	13.7	--	13.7	-7.5
10/11/87	1200	0	14.9	-10.7	15.0	-6.5	14.5	--	13.7	--	13.7	--	13.7	-7.4
10/11/87	1200	0	14.7	-10.7	14.9	-6.5	14.4	--	13.7	--	13.7	--	13.7	-7.5
10/12/87	1200	0	14.6	-10.8	14.8	-6.5	14.4	--	13.7	--	13.7	--	13.7	-7.3
10/12/87	1200	0	14.4	-10.9	14.8	-6.5	14.4	--	13.7	--	13.7	--	13.7	-7.6
10/13/87	1200	0	14.1	-10.9	14.6	-6.5	14.3	--	13.6	--	13.6	--	13.6	-7.5
10/13/87	1200	0	13.9	-11.0	14.6	-6.6	14.4	--	13.6	--	13.6	--	13.6	-7.4
10/14/87	1200	0	13.8	-11.0	14.5	-6.6	14.4	--	13.7	--	13.7	--	13.7	-7.4
10/14/87	1200	0	13.6	-11.0	14.4	-6.6	14.3	--	13.6	--	13.6	--	13.6	-7.4
10/15/87	1200	0	13.4	-11.0	14.2	-6.5	14.2	--	13.6	--	13.6	--	13.6	-7.4
10/15/87	1200	0	13.3	-11.1	14.2	-6.6	14.2	--	13.6	--	13.6	--	13.6	-7.5
10/16/87	1200	0	13.3	-11.0	14.1	-6.5	14.2	--	13.6	--	13.6	--	13.6	-7.3
10/16/87	1200	0	13.1	-10.9	13.9	-6.6	14.1	--	13.5	--	13.5	--	13.5	-7.4
10/17/87	1200	0	13.0	-11.0	13.9	-6.6	14.1	--	13.5	--	13.5	--	13.5	-7.4
10/17/87	1200	0	12.9	-11.0	13.7	-6.5	14.0	--	13.5	--	13.5	--	13.5	-7.4
10/18/87	1200	0	12.7	-11.1	13.6	-6.6	13.9	--	13.5	--	13.5	--	13.5	-7.4
10/18/87	1200	0	12.6	-11.1	13.6	-6.5	13.9	--	13.5	--	13.5	--	13.5	-7.4
10/19/87	1200	0	12.4	-11.1	13.5	-6.5	13.9	--	13.5	--	13.5	--	13.5	-7.4
10/19/87	1200	0	12.3	-11.1	13.4	-6.6	13.8	--	13.4	--	13.4	--	13.4	-7.6
10/20/87	1200	0	12.2	-11.1	13.3	-6.5	13.8	--	13.4	--	13.4	--	13.4	-7.4
10/20/87	1200	0	12.1	-11.1	13.2	-6.5	13.7	--	13.4	--	13.4	--	13.4	-7.5
10/21/87	1200	0	11.9	-11.2	13.1	-6.5	13.7	--	13.4	--	13.4	--	13.4	-7.3
10/21/87	1200	0	11.7	-11.2	13.0	-6.5	13.6	--	13.3	--	13.3	--	13.3	-7.4
10/22/87	1200	0	11.6	-11.2	12.9	-6.5	13.6	--	13.3	--	13.3	--	13.3	-7.4
10/22/87	1200	0	11.4	-11.2	12.8	-6.6	13.5	--	13.3	--	13.3	--	13.3	-7.5
10/23/87	1200	0	11.3	-11.2	12.7	-6.5	13.5	--	13.3	--	13.3	--	13.3	-7.4
10/23/87	1200	0	11.1	-11.2	12.6	-6.5	13.4	--	13.2	--	13.2	--	13.2	-7.5
10/24/87	1200	0	11.0	-11.2	12.4	-6.6	13.3	--	13.2	--	13.2	--	13.2	-7.5
10/24/87	1200	0	10.9	-11.2	12.4	-6.5	13.3	--	13.2	--	13.2	--	13.2	-7.5
10/25/87	1200	0	10.9	-11.2	12.3	-6.5	13.3	--	13.2	--	13.2	--	13.2	-7.3
10/25/87	1200	0	10.8	-11.1	12.2	-6.5	13.2	--	13.1	--	13.1	--	13.1	-7.3
10/26/87	1200	0	10.8	-11.2	12.1	-6.5	13.1	--	13.1	--	13.1	--	13.1	-7.2
10/26/87	1200	0	10.8	-11.1	12.1	-6.5	13.1	--	13.1	--	13.1	--	13.1	-7.3
10/27/87	1200	0	10.7	-11.1	12.0	-6.5	13.0	--	13.1	--	13.1	--	13.1	-7.3

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
10/27/87	1200		10.7	-11.1	11.9	-6.5	13.0	--	13.0	--	13.0	-7.3	13.0	-7.3
10/28/87	0		10.6	-11.2	11.9	-6.5	12.9	--	12.9	--	13.0	-7.3	13.0	-7.3
10/28/87	1200		10.5	-11.1	11.8	-6.5	12.9	--	12.9	--	13.0	-7.3	13.0	-7.3
10/29/87	0		10.4	-11.2	11.7	-6.5	12.8	--	12.8	--	12.9	-7.3	12.9	-7.3
10/29/87	1200		10.3	-11.2	11.7	-6.6	12.8	--	12.8	--	12.9	-7.3	12.9	-7.3
10/30/87	0		10.3	-11.2	11.6	-6.5	12.7	--	12.7	--	12.9	-7.2	12.9	-7.2
10/30/87	1200		10.3	-11.2	11.6	-6.5	12.7	--	12.7	--	12.9	-7.3	12.9	-7.3
10/31/87	0		10.2	-11.1	11.5	-6.5	12.6	--	12.6	--	12.8	-7.3	12.8	-7.3
10/31/87	1200		10.3	-11.1	11.5	-6.5	12.6	--	12.6	--	12.8	-7.1	12.8	-7.1
11/01/87	0		10.3	-11.1	11.4	-6.5	12.5	--	12.5	--	12.8	-7.2	12.8	-7.2
11/01/87	1200		10.4	-11.1	11.4	-6.6	12.5	--	12.5	--	12.8	-7.2	12.8	-7.2
11/02/87	0		10.5	-11.1	11.4	-6.6	12.5	--	12.5	--	12.7	-7.3	12.7	-7.3
11/02/87	1200		10.5	-11.0	11.4	-6.6	12.4	--	12.4	--	12.7	-7.2	12.7	-7.2
11/03/87	0		10.5	-11.0	11.3	-6.6	12.4	--	12.4	--	12.6	-7.3	12.6	-7.3
11/03/87	1200		10.6	-11.1	11.3	-6.6	12.4	--	12.4	--	12.6	-7.3	12.6	-7.3
11/04/87	0		10.6	-11.0	11.3	-6.6	12.3	--	12.3	--	12.6	-7.2	12.6	-7.2
11/04/87	1200		10.6	-11.0	11.3	-6.6	12.3	--	12.3	--	12.5	-7.2	12.5	-7.2
11/05/87	0		10.6	-11.0	11.4	-6.6	12.3	--	12.3	--	12.6	-7.0	12.6	-7.0
11/05/87	1200		10.5	-11.0	11.3	-6.6	12.2	--	12.2	--	12.5	-7.2	12.5	-7.2
11/06/87	0		10.4	-11.1	11.3	-6.6	12.2	--	12.2	--	12.5	-7.2	12.5	-7.2
11/06/87	1200		10.3	-11.1	11.2	-6.6	12.1	--	12.1	--	12.4	-7.1	12.4	-7.1
11/07/87	0		10.1	-11.1	11.2	-6.6	12.1	--	12.1	--	12.4	-7.2	12.4	-7.2
11/07/87	1200		10.0	-11.2	11.1	-6.6	12.1	--	12.1	--	12.4	-7.1	12.4	-7.1
11/08/87	0		9.8	-11.2	11.1	-6.6	12.0	--	12.0	--	12.3	-7.1	12.3	-7.1
11/08/87	1200		9.8	-11.1	11.0	-6.6	12.0	--	12.0	--	12.3	-7.0	12.3	-7.0
11/09/87	0		9.8	-11.0	11.0	-6.5	12.0	--	12.0	--	12.3	-7.1	12.3	-7.1
11/09/87	1200		9.6	-11.1	10.8	-6.6	11.9	--	11.9	--	12.2	-7.1	12.2	-7.1
11/10/87	0		9.5	-11.1	10.7	-6.6	11.9	--	11.9	--	12.2	-7.0	12.2	-7.0
11/10/87	1200		9.4	-11.2	10.8	-6.5	11.9	--	11.9	--	12.3	-6.9	12.3	-6.9
11/11/87	0		9.3	-11.1	10.7	-6.5	11.9	--	11.9	--	12.2	-6.9	12.2	-6.9
11/11/87	1200		9.1	-11.1	10.6	-6.5	11.8	--	11.8	--	12.2	-6.9	12.2	-6.9
11/12/87	0		9.0	-11.2	10.5	-6.5	11.8	--	11.8	--	12.2	-7.0	12.2	-7.0
11/12/87	1200		8.9	-11.2	10.5	-6.5	11.8	--	11.8	--	12.2	-7.0	12.2	-7.0
11/13/87	0		8.7	-11.2	10.4	-6.5	11.7	--	11.7	--	12.1	-7.0	12.1	-7.0
11/13/87	1200		8.6	-11.2	10.3	-6.5	11.7	--	11.7	--	12.1	-7.1	12.1	-7.1
11/14/87	0		8.5	-11.2	10.2	-6.5	11.6	--	11.6	--	12.1	-7.1	12.1	-7.1
11/14/87	1200		8.4	-11.2	10.1	-6.5	11.6	--	11.6	--	12.0	-7.1	12.0	-7.1
11/15/87	0		8.4	-11.1	10.0	-6.4	11.6	--	11.6	--	12.0	-6.9	12.0	-6.9

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	0.6				0.9				1.5				2.1			
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
11/15/87	1200		8.3	-11.1	9.9	-6.5	11.5	--	12.0	--	12.0	--	12.0	--	12.0	-6.9
11/16/87	0		8.2	-11.2	9.9	-6.5	11.4	--	11.4	--	11.4	--	11.4	--	11.4	-6.8
11/16/87	1200		8.0	-11.2	9.8	-6.5	11.4	--	11.4	--	11.9	--	11.9	--	11.9	-6.8
11/17/87	0		7.7	-11.2	9.7	-6.5	11.3	--	11.3	--	11.9	--	11.9	--	11.9	-7.0
11/17/87	1200		7.5	-11.2	9.6	-6.4	11.3	--	11.3	--	11.9	--	11.9	--	11.9	-7.0
11/18/87	0		7.3	-11.2	9.5	-6.4	11.3	--	11.3	--	11.9	--	11.9	--	11.9	-6.8
11/18/87	1200		7.1	-11.2	9.4	-6.3	11.2	--	11.2	--	11.8	--	11.8	--	11.8	-6.9
11/19/87	0		6.9	-11.1	9.2	-6.3	11.2	--	11.2	--	11.8	--	11.8	--	11.8	-6.9
11/19/87	1200		6.7	-11.2	9.1	-6.3	11.1	--	11.1	--	11.8	--	11.8	--	11.8	-6.8
11/20/87	0		6.5	-11.2	9.0	-6.3	11.1	--	11.1	--	11.8	--	11.8	--	11.8	-6.9
11/20/87	1200		6.2	-11.2	8.8	-6.3	11.0	--	11.0	--	11.7	--	11.7	--	11.7	-6.8
11/21/87	0		6.0	-11.2	8.7	-6.3	10.9	--	10.9	--	11.7	--	11.7	--	11.7	-7.0
11/21/87	1200		5.8	-11.2	8.6	-6.3	10.9	--	10.9	--	11.6	--	11.6	--	11.6	-6.9
11/22/87	0		5.6	-11.2	8.4	-6.2	10.8	--	10.8	--	11.6	--	11.6	--	11.6	-6.8
11/22/87	1200		5.4	-11.2	8.3	-6.3	10.7	--	10.7	--	11.6	--	11.6	--	11.6	-6.8
11/23/87	0		5.3	-11.1	8.2	-6.2	10.7	--	10.7	--	11.6	--	11.6	--	11.6	-6.9
11/23/87	1200		5.2	-11.1	8.0	-6.2	10.6	--	10.6	--	11.5	--	11.5	--	11.5	-6.9
11/24/87	0		5.1	-11.0	7.9	-6.2	10.5	--	10.5	--	11.5	--	11.5	--	11.5	-6.7
11/24/87	1200		5.0	-10.9	7.8	-6.2	10.5	--	10.5	--	11.5	--	11.5	--	11.5	-6.8
11/25/87	0		4.9	-11.0	7.7	-6.2	10.4	--	10.4	--	11.4	--	11.4	--	11.4	-6.8
11/25/87	1200		4.8	-11.0	7.6	-6.2	10.3	--	10.3	--	11.4	--	11.4	--	11.4	-6.8
11/26/87	0		4.7	-10.9	7.5	-6.2	10.3	--	10.3	--	11.4	--	11.4	--	11.4	-6.9
11/26/87	1200		4.5	-10.9	7.3	-6.1	10.2	--	10.2	--	11.3	--	11.3	--	11.3	-6.8
11/27/87	0		4.4	-10.9	7.3	-6.1	10.1	--	10.1	--	11.3	--	11.3	--	11.3	-6.6
11/27/87	1200		4.3	-10.9	7.2	-6.1	10.0	--	10.0	--	11.2	--	11.2	--	11.2	-6.7
11/28/87	0		4.2	-10.9	7.1	-6.1	9.9	--	9.9	--	11.2	--	11.2	--	11.2	-6.8
11/28/87	1200		4.0	-10.9	7.0	-6.1	9.9	--	9.9	--	11.1	--	11.1	--	11.1	-6.8
11/29/87	0		3.8	-10.9	6.9	-6.1	9.8	--	9.8	--	11.1	--	11.1	--	11.1	-6.7
11/29/87	1200		3.6	-10.9	6.7	-6.1	9.7	--	9.7	--	11.0	--	11.0	--	11.0	-6.7
11/30/87	0		3.5	-10.9	6.6	-6.0	9.7	--	9.7	--	11.0	--	11.0	--	11.0	-6.8
11/30/87	1200		3.3	-10.8	6.5	-6.1	9.6	--	9.6	--	11.0	--	11.0	--	11.0	-6.6
12/01/87	0		3.1	-10.8	6.4	-6.0	9.5	--	9.5	--	10.9	--	10.9	--	10.9	-6.7
12/01/87	1200		2.9	-10.8	6.2	-6.0	9.5	--	9.5	--	10.8	--	10.8	--	10.8	-6.8
12/02/87	0		2.8	-10.8	6.1	-6.0	9.4	--	9.4	--	10.8	--	10.8	--	10.8	-6.7
12/02/87	1200		2.7	-10.7	6.0	-6.0	9.3	--	9.3	--	10.8	--	10.8	--	10.8	-6.7
12/03/87	0		2.7	-10.7	5.9	-6.0	9.2	--	9.2	--	10.7	--	10.7	--	10.7	-6.7
12/03/87	1200		2.8	-10.6	5.8	-5.9	9.2	--	9.2	--	10.7	--	10.7	--	10.7	-6.6
12/04/87	0		2.8	-10.5	5.7	-6.0	9.1	--	9.1	--	10.6	--	10.6	--	10.6	-6.8

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
12/04/87	1200		2.9	-10.5	5.7	-6.0	9.0	--	10.6	--	10.6	--	10.6	-6.6
12/05/87	0		3.0	-10.5	5.6	-6.0	8.9	--	10.5	--	10.5	--	10.5	-6.7
12/05/87	1200		3.1	-10.4	5.6	-6.0	8.8	--	10.5	--	10.5	--	10.5	-6.6
12/06/87	0		3.1	-10.4	5.6	-6.0	8.8	--	10.4	--	10.4	--	10.4	-6.6
12/06/87	1200		3.2	-10.4	5.6	-6.0	8.7	--	10.4	--	10.4	--	10.4	-6.6
12/07/87	0		3.2	-10.4	5.5	-6.0	8.6	--	10.3	--	10.3	--	10.3	-6.6
12/07/87	1200		3.3	-10.3	5.5	-6.0	8.6	--	10.2	--	10.2	--	10.2	-6.6
12/08/87	0		3.4	-10.3	5.5	-5.9	8.5	--	10.2	--	10.2	--	10.2	-6.5
12/08/87	1200		3.5	-10.3	5.6	-5.9	8.5	--	10.2	--	10.2	--	10.2	-6.6
12/09/87	0		3.5	-10.3	5.5	-6.0	8.4	--	10.1	--	10.1	--	10.1	-6.6
12/09/87	1200		3.5	-10.3	5.5	-6.0	8.4	--	10.1	--	10.1	--	10.1	-6.6
12/10/87	0		3.5	-10.3	5.5	-6.0	8.3	--	10.0	--	10.0	--	10.0	-6.6
12/10/87	1200		3.5	-10.3	5.5	-6.0	8.3	--	10.0	--	10.0	--	10.0	-6.6
12/11/87	0		3.5	-10.3	5.5	-6.0	8.3	--	9.9	--	9.9	--	9.9	-6.6
12/11/87	1200		3.5	-10.3	5.5	-6.0	8.2	--	9.9	--	9.9	--	9.9	-6.5
12/12/87	0		3.5	-10.3	5.5	-6.0	8.2	--	9.8	--	9.8	--	9.8	-6.4
12/12/87	1200		3.5	-10.3	5.5	-6.0	8.1	--	9.8	--	9.8	--	9.8	-6.4
12/13/87	0		3.5	-10.3	5.5	-6.0	8.1	--	9.8	--	9.8	--	9.8	-6.4
12/13/87	1200		3.5	-10.3	5.5	-6.0	8.1	--	9.7	--	9.7	--	9.7	-6.4
12/14/87	0		3.3	-10.3	5.4	-6.0	8.1	--	9.7	--	9.7	--	9.7	-6.4
12/14/87	1200		3.2	-10.4	5.4	-6.0	8.1	--	9.7	--	9.7	--	9.7	-6.4
12/15/87	0		2.9	-10.5	5.3	-6.0	8.0	--	9.6	--	9.6	--	9.6	-6.4
12/15/87	1200		2.6	-10.6	5.3	-6.0	8.0	--	9.6	--	9.6	--	9.6	-6.4
12/16/87	0		1.9	-10.7	5.1	-6.0	7.9	--	9.5	--	9.5	--	9.5	-6.5
12/17/87	0		1.6	-10.7	4.9	-5.9	7.8	--	9.5	--	9.5	--	9.5	-6.4
12/17/87	1200		1.3	-10.6	4.7	-6.0	7.8	--	9.4	--	9.4	--	9.4	-6.4
12/18/87	0		1.1	-10.5	4.6	-5.9	7.8	--	9.4	--	9.4	--	9.4	-6.3
12/18/87	1200		1.0	-10.5	4.4	-5.9	7.7	--	9.4	--	9.4	--	9.4	-6.4
12/19/87	0		0.9	-10.4	4.3	-5.8	7.6	--	9.3	--	9.3	--	9.3	-6.4
12/19/87	1200		0.8	-10.4	4.1	-5.7	7.6	--	9.3	--	9.3	--	9.3	-6.3
12/20/87	0		0.7	-10.3	4.0	-5.8	7.5	--	9.3	--	9.3	--	9.3	-6.3
12/20/87	1200		0.6	-10.3	3.9	-5.8	7.5	--	9.2	--	9.2	--	9.2	-6.3
12/21/87	0		0.5	-10.3	3.8	-5.7	7.4	--	9.2	--	9.2	--	9.2	-6.4
12/21/87	1200		0.5	-10.2	3.7	-5.8	7.3	--	9.1	--	9.1	--	9.1	-6.3
12/22/87	0		0.4	-10.3	3.6	-5.8	7.2	--	9.1	--	9.1	--	9.1	-6.3
12/22/87	1200		0.3	-10.3	3.5	-5.8	7.2	--	9.1	--	9.1	--	9.1	-6.4
12/23/87	0		0.3	-10.2	3.5	-5.7	7.1	--	9.0	--	9.0	--	9.0	-6.3
12/23/87	1200		0.3	-10.2	3.4	-5.7	7.1	--	9.0	--	9.0	--	9.0	-6.3

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.6			0.9			1.5			2.1		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
12/24/87		0	0.3	-10.2	3.4	-5.7	7.0	--	9.0	-6.4				
12/24/87		1200	0.3	-10.1	3.2	-5.7	6.9	--	8.9	-6.2				
12/25/87		0	0.3	-10.1	3.2	-5.7	6.9	--	8.9	-6.3				
12/25/87		1200	0.2	-10.1	3.2	-5.6	6.8	--	8.8	-6.2				
12/26/87		0	0.2	-10.1	3.1	-5.7	6.7	--	8.8	-6.2				
12/26/87		1200	0.1	-10.1	3.1	-5.7	6.7	--	8.7	-6.2				
12/27/87		0	0.1	-10.1	3.0	-5.6	6.6	--	8.7	-6.1				
12/27/87		1200	0.0	-10.1	2.9	-5.7	6.5	--	8.6	-6.2				
12/28/87		0	0.0	-10.1	2.9	-5.6	6.5	--	8.6	-6.2				
12/28/87		1200	-0.1	-10.1	2.9	-5.6	6.4	--	8.5	-6.2				
12/29/87		0	-0.2	-10.1	2.8	-5.6	6.4	--	8.5	-6.1				
12/29/87		1200	-0.2	-10.1	2.8	-5.6	6.4	--	8.5	-6.2				
12/30/87		0	-0.3	-10.1	2.7	-5.7	6.3	--	8.4	-6.1				
12/30/87		1200	-0.3	-10.2	2.6	-5.7	6.2	--	8.4	-6.1				
12/31/87		0	-0.4	-10.2	2.6	-5.6	6.2	--	8.3	-6.1				
12/31/87		1200	-0.4	-10.3	2.5	-5.6	6.1	--	8.3	-6.1				

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	2.7			3.4		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
			NO DATA 1/1/87 THROUGH 2/10/87			
	02/11/87	0	6.8	-17.1	7.8	-15.6
	02/11/87	1200	6.7	-17.0	7.7	-15.6
	02/12/87	0	6.7	-17.0	7.8	-15.5
	02/12/87	1200	6.7	-17.0	7.7	-15.6
	02/13/87	0	6.7	-17.0	7.7	-15.6
	02/13/87	1200	6.6	-17.2	7.7	-15.7
	02/14/87	0	6.6	-17.2	7.7	-15.8
	02/14/87	1200	6.6	-17.2	7.6	-15.8
	02/15/87	0	6.6	-17.1	7.7	-15.7
	02/15/87	1200	6.5	-17.1	7.6	-15.8
	02/16/87	0	6.5	-17.1	7.6	-15.8
	02/16/87	1200	6.5	-17.0	7.5	-15.8
	02/17/87	0	6.5	-17.0	7.5	-15.7
	02/17/87	1200	6.4	-17.0	7.5	-15.7
	02/18/87	0	6.5	-17.0	7.5	-15.7
	02/18/87	1200	6.4	-17.0	7.5	-15.8
	02/19/87	0	6.4	-17.0	7.5	-15.7
	02/19/87	1200	6.4	-17.0	7.5	-15.7
	02/20/87	0	6.4	-16.9	7.5	-15.7
	02/20/87	1200	6.4	-16.9	7.4	-15.7
	02/21/87	0	6.4	-16.9	7.4	-15.7
	02/21/87	1200	6.3	-17.0	7.3	-15.8
	02/22/87	0	6.3	-17.0	7.4	-15.8
	02/22/87	1200	6.3	-17.0	7.4	-15.8
	02/23/87	0	6.3	-17.1	7.3	-15.9
	02/23/87	1200	6.3	-17.1	7.3	-15.9
	02/24/87	0	6.3	-17.1	7.3	-16.0
	02/24/87	1200	6.2	-17.0	7.3	-15.9
	02/25/87	0	6.2	-17.1	7.2	-15.9
	02/25/87	1200	6.2	-17.0	7.2	-15.8
	02/26/87	0	6.2	-17.0	7.2	-15.7
	02/26/87	1200	6.1	-16.9	7.2	-15.8
	02/27/87	0	6.2	-17.0	7.2	-15.8
	02/27/87	1200	6.1	-16.9	7.1	-15.8
	02/28/87	0	6.1	-16.9	7.1	-15.8
	02/28/87	1200	6.1	-16.9	7.1	-15.8
	03/01/87	0	6.1	-16.9	7.1	-15.7

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; ---indicates no data]

Depth (meters)	2.7			3.4		
	Date	Hour	Soil	Soil-water	Soil	Soil-water
			temperature (Celsius)	potential (bars)	temperature (Celsius)	potential (bars)
	03/01/87	1200	6.1	-16.9	7.1	-15.8
	03/02/87	0	6.1	-16.9	7.1	-15.8
	03/02/87	1200	6.0	-16.9	7.0	-15.8
	03/03/87	0	6.1	-16.8	7.1	-15.8
	03/03/87	1200	6.0	-16.8	7.0	-15.7
	03/04/87	0	6.0	-16.8	7.0	-15.7
	03/04/87	1200	6.0	-16.7	7.0	-15.7
	03/05/87	0	6.0	-16.8	7.0	-15.7
	03/05/87	1200	6.0	-16.8	7.0	-15.7
	03/06/87	0	5.9	-16.8	6.9	-15.8
	03/06/87	1200	5.9	-16.8	6.9	-15.7
	03/07/87	0	5.9	-16.9	6.9	-15.7
	03/07/87	1200	5.9	-16.9	6.9	-15.8
	03/08/87	0	5.9	-16.8	6.9	-15.7
	03/08/87	1200	5.9	-16.9	6.9	-15.8
	03/09/87	0	5.9	-16.9	6.9	-15.8
	03/09/87	1200	5.9	-16.9	6.8	-15.7
	03/10/87	0	5.9	-16.8	6.9	-15.7
	03/10/87	1200	5.8	-16.9	6.8	-15.7
	03/11/87	0	5.9	-16.8	6.9	-15.7
	03/11/87	1200	5.8	-16.8	6.8	-15.7
	03/12/87	0	5.9	-16.8	6.8	-15.6
	03/12/87	1200	5.8	-16.8	6.8	-15.7
	03/13/87	0	5.8	-16.8	6.8	-15.7
	03/13/87	1200	5.8	-16.9	6.8	-15.9
	03/14/87	0	5.8	-16.8	6.7	-15.8
	03/14/87	1200	5.8	-16.9	6.7	-15.9
	03/15/87	0	5.8	-16.9	6.8	-15.8
	03/15/87	1200	5.8	-16.9	6.7	-16.0
	03/16/87	0	5.8	-16.9	6.7	-15.9
	03/16/87	1200	5.7	-16.9	6.7	-16.0
	03/17/87	0	5.8	-16.9	6.7	-15.9
	03/17/87	1200	5.7	-16.8	6.7	-15.9
	03/18/87	0	5.7	-16.9	6.6	-15.9
	03/18/87	1200	5.7	-16.9	6.6	-16.0
	03/19/87	0	5.7	-16.9	6.6	-16.1
	03/19/87	1200	5.7	-16.9	6.6	-16.0
	03/20/87	0	5.7	-16.9	6.6	-15.9

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	2.7			3.4		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
03/20/87	1200		5.6	-16.8	6.6	-15.9
03/21/87	0		5.7	-16.8	6.6	-15.9
03/21/87	1200		5.6	-16.8	6.6	-15.9
03/22/87	0		5.7	-16.8	6.6	-15.9
03/22/87	1200		5.6	-16.9	6.5	-16.0
03/23/87	0		5.6	-16.8	6.6	-15.8
03/23/87	1200		5.6	-16.8	6.5	-16.0
03/24/87	0		5.6	-16.8	6.6	-15.9
03/24/87	1200		5.6	-16.8	6.5	-15.9
03/25/87	0		5.6	-16.8	6.5	-15.8
03/25/87	1200		5.6	-16.8	6.5	-15.9
03/26/87	0		5.6	-16.8	6.5	-15.9
03/26/87	1200		5.6	-16.9	6.5	-15.9
03/27/87	0		5.6	-16.9	6.5	-15.9
03/27/87	1200		5.6	-16.8	6.4	-15.9
03/28/87	0		5.6	-16.8	6.5	-15.9
03/28/87	1200		5.6	-16.8	6.5	-15.9
03/29/87	0		5.6	-16.8	6.4	-15.9
03/29/87	1200		5.5	-16.8	6.3	-15.8
03/30/87	0		5.6	-16.7	6.5	-15.8
03/30/87	1200		5.5	-16.8	6.4	-15.8
03/31/87	0		5.6	-16.8	6.4	-15.8
03/31/87	1200		5.6	-16.8	6.4	-15.8
04/01/87	0		5.6	-16.7	6.4	-15.8
04/01/87	1200		5.6	-16.9	6.4	-15.8
04/02/87	0		5.6	-16.7	6.4	-15.7
04/02/87	1200		5.6	-16.8	6.4	-15.7
04/03/87	0		5.6	-16.7	6.4	-15.8
04/03/87	1200		5.6	-16.9	6.4	-15.8
04/04/87	0		5.6	-16.9	6.4	-15.8
04/04/87	1200		5.6	-16.9	6.3	-15.8
04/05/87	0		5.6	-16.9	6.4	-15.7
04/05/87	1200		5.6	-16.8	6.3	-15.7
04/06/87	0		5.6	-16.7	6.4	-15.7
04/06/87	1200		5.5	-16.8	6.3	-15.7
04/07/87	0		5.6	-16.7	6.3	-15.7
04/07/87	1200		5.5	-16.8	6.3	-15.7
04/08/87	0		5.6	-16.7	6.3	-15.6

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	2.7		3.4			
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
	04/08/87	1200	5.6	-16.7	6.3	-15.7
	04/09/87	0	5.6	-16.7	6.4	-15.6
	04/09/87	1200	5.6	-16.8	6.3	-15.6
	04/10/87	0	5.6	-16.7	6.3	-15.6
	04/10/87	1200	5.6	-16.8	6.3	-15.6
	04/11/87	0	5.6	-16.8	6.3	-15.6
	04/11/87	1200	5.6	-16.9	6.3	-15.7
	04/12/87	0	5.6	-16.8	6.3	-15.6
	04/12/87	1200	5.6	-16.7	6.3	-15.7
	04/13/87	0	5.6	-16.7	6.3	-15.6
	04/13/87	1200	5.6	-16.7	6.3	-15.6
	04/14/87	0	5.6	-16.6	6.3	-15.5
	04/14/87	1200	5.6	-16.7	6.2	-15.5
	04/15/87	0	5.7	-16.8	6.3	-15.6
	04/15/87	1200	5.6	-16.7	6.3	-15.5
	04/16/87	0	5.7	-16.7	6.3	-15.5
	04/16/87	1200	5.6	-16.7	6.3	-15.4
	04/17/87	0	5.7	-16.7	6.3	-15.4
	04/17/87	1200	5.6	-16.8	6.3	-15.6
	04/18/87	0	5.7	-16.8	6.3	-15.5
	04/18/87	1200	5.7	-16.9	6.3	-15.5
	04/19/87	0	5.7	-16.9	6.3	-15.5
	04/19/87	1200	5.7	-16.8	6.3	-15.4
	04/20/87	0	5.7	-16.7	6.3	-15.3
	04/20/87	1200	5.7	-16.6	6.3	-15.2
	04/21/87	0	5.8	-16.6	6.3	-15.2
	04/21/87	1200	5.7	-16.6	6.3	-15.2
	04/22/87	0	5.8	-16.6	6.3	-15.2
	04/22/87	1200	5.8	-16.7	6.3	-15.2
	04/23/87	0	5.8	-16.6	6.3	-15.2
	04/23/87	1200	5.8	-16.7	6.3	-15.1
	04/24/87	0	5.8	-16.7	6.3	-15.1
	04/24/87	1200	5.8	-16.8	6.3	-15.1
	04/25/87	0	5.9	-16.7	6.4	-15.1
	04/25/87	1200	5.8	-16.7	6.3	-15.1
	04/26/87	0	5.9	-16.7	6.3	-15.1
	04/26/87	1200	5.9	-16.7	6.3	-15.0
	04/27/87	0	5.9	-16.7	6.3	-15.0

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
 [Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	2.7		3.4			
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
	04/27/87	1200	5.9	-16.7	6.3	-15.0
	04/28/87	0	6.0	-16.6	6.4	-15.0
	04/28/87	1200	5.9	-16.7	6.3	-15.0
	04/29/87	0	6.0	-16.7	6.4	-15.0
	04/29/87	1200	6.0	-16.8	6.4	-15.0
	04/30/87	0	6.0	-16.8	6.4	-15.0
	04/30/87	1200	6.0	-16.9	6.4	-15.0
	05/01/87	0	6.1	-16.8	6.4	-15.1
	05/01/87	1200	6.0	-16.8	6.4	-15.1
	05/02/87	0	6.1	-16.9	6.4	-15.1
	05/02/87	1200	6.1	-16.8	6.4	-15.1
	05/03/87	0	6.1	-16.8	6.4	-15.0
	05/03/87	1200	6.1	-16.7	6.4	-15.0
	05/04/87	0	6.2	-16.7	6.5	-14.9
	05/04/87	1200	6.1	-16.7	6.4	-15.0
	05/05/87	0	6.2	-16.7	6.5	-15.0
	05/05/87	1200	6.2	-16.7	6.4	-14.9
	05/06/87	0	6.3	-16.7	6.5	-14.9
	05/06/87	1200	6.2	-16.8	6.4	-14.8
	05/07/87	0	6.3	-16.7	6.5	-14.8
	05/07/87	1200	6.3	-16.7	6.5	-14.8
	05/08/87	0	6.3	-16.7	6.5	-14.8
	05/08/87	1200	6.3	-16.8	6.5	-14.8
	05/09/87	0	6.4	-16.8	6.5	-14.8
	05/09/87	1200	6.4	-16.8	6.5	-14.8
	05/10/87	0	6.4	-16.8	6.5	-14.8
	05/10/87	1200	6.4	-16.9	6.6	-14.7
	05/11/87	0	6.5	-16.9	6.6	-14.8
	05/11/87	1200	6.5	-16.8	6.6	-14.9
	05/12/87	0	6.5	-16.8	6.6	-15.1
	05/12/87	1200	6.5	-16.9	6.6	-15.2
	05/13/87	0	6.5	-16.9	6.6	-15.3
	05/13/87	1200	6.6	-16.8	6.7	-15.3
	05/14/87	0	6.6	-16.9	6.7	-15.4
	05/14/87	1200	6.6	-16.9	6.7	-15.5
	05/15/87	0	6.6	-16.8	6.7	-15.4
	05/15/87	1200	6.7	-16.9	6.7	-15.5
	05/16/87	0	6.7	-16.9	6.7	-15.5

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	2.7				3.4			
	Date	Hour	Soil		Soil			
			temperature (Celsius)	Soil-water potential (bars)	temperature (Celsius)	Soil-water potential (bars)		
	05/16/87	1200	6.8	-16.9	6.8	-15.5		
	05/17/87	0	6.8	-17.0	6.8	-15.5		
	05/17/87	1200	6.8	-16.9	6.8	-15.6		
	05/18/87	0	6.8	-16.9	6.8	-15.6		
	05/18/87	1200	6.8	-16.9	6.8	-15.6		
	05/19/87	0	6.9	-16.9	6.8	-15.6		
	05/19/87	1200	6.9	-17.0	6.8	-15.6		
	05/20/87	0	6.9	-17.0	6.8	-15.6		
	05/20/87	1200	6.9	-17.0	6.8	-15.7		
	05/21/87	0	7.0	-17.0	6.9	-15.6		
	05/21/87	1200	7.0	-17.0	6.9	-15.7		
	05/22/87	0	7.1	-16.9	6.9	-15.6		
	05/22/87	1200	7.0	-16.9	6.9	-15.7		
	05/23/87	0	7.1	-16.9	7.0	-15.6		
	05/23/87	1200	7.1	-16.9	6.9	-15.6		
	05/24/87	0	7.2	-16.9	7.0	-15.6		
	05/24/87	1200	7.2	-17.0	7.0	-15.6		
	05/25/87	0	7.3	-17.0	7.1	-15.6		
	05/25/87	1200	7.2	-17.0	7.0	-15.7		
	05/26/87	0	7.3	-17.1	7.1	-15.7		
	05/26/87	1200	7.3	-17.1	7.0	-15.8		
	05/27/87	0	7.4	-17.1	7.1	-15.7		
	05/27/87	1200	7.4	-17.1	7.1	-15.6		
	05/28/87	0	7.4	-17.1	7.1	-15.5		
	05/28/87	1200	7.4	-17.1	7.2	-15.4		
	05/29/87	0	7.5	-17.0	7.2	-15.5		
	05/29/87	1200	7.4	-17.0	7.1	-15.4		
	05/30/87	0	7.5	-17.0	7.2	-15.3		
	05/30/87	1200	7.5	-17.1	7.2	-15.3		
	05/31/87	0	7.6	-17.0	7.3	-15.3		
	05/31/87	1200	7.6	-17.1	7.3	-15.3		
	06/01/87	0	7.7	-17.1	7.3	-15.2		
	06/01/87	1200	7.6	-17.1	7.3	-15.2		
	06/02/87	0	7.7	-17.0	7.3	-15.1		
	06/02/87	1200	7.6	-17.0	7.3	-15.0		
	06/03/87	0	7.7	-17.0	7.3	-14.8		
	06/03/87	1200	7.7	-17.0	7.4	-14.9		
	06/04/87	0	7.7	-17.0	7.4	-14.8		

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	2.7		3.4	
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)
06/04/87	1200	7.8	-17.1	-14.8
06/05/87	0	7.8	-17.0	-14.7
06/05/87	1200	7.8	-17.1	-14.6
06/06/87	0	7.8	-17.0	-14.6
06/06/87	1200	7.8	-17.1	-14.5
06/07/87	0	7.9	-17.1	-14.5
06/07/87	1200	7.9	-17.1	-14.4
06/08/87	0	7.9	-17.1	-14.5
06/08/87	1200	7.9	-17.1	-14.4
06/09/87	0	8.0	-17.1	-14.4
06/10/87	0	8.0	-17.1	-14.3
06/10/87	1200	8.0	-17.2	-14.3
06/11/87	0	8.1	-17.1	-14.3
06/11/87	1200	8.1	-17.1	-14.2
06/12/87	0	8.0	-17.2	-14.2
06/12/87	1200	8.1	-17.1	-14.2
06/13/87	0	8.1	-17.1	-14.0
06/14/87	0	8.2	-17.1	-14.0
06/15/87	0	8.2	-17.1	-14.1
06/15/87	1200	8.2	-17.2	-14.1
06/16/87	0	8.3	-17.2	-14.1
06/16/87	1200	8.3	-17.2	-14.0
06/17/87	0	8.3	-17.2	-14.0
06/17/87	1200	8.3	-17.2	-14.0
06/18/87	0	8.4	-17.2	-13.9
06/18/87	1200	8.4	-17.2	-13.9
06/19/87	0	8.4	-17.2	-13.9
06/19/87	1200	8.4	-17.1	-13.9
06/20/87	0	8.5	-17.2	-14.0
06/20/87	1200	8.5	-17.2	-14.0
06/21/87	0	8.5	-17.2	-13.9
06/21/87	1200	8.5	-17.2	-14.0
06/22/87	0	8.6	-17.2	-13.9
06/22/87	1200	8.6	-17.2	-13.9
06/23/87	0	8.6	-17.2	-13.9
06/23/87	1200	8.6	-17.2	-13.9

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	2.7		3.4	
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)
06/24/87		0	8.6	-17.2
06/24/87		1200	8.7	-17.2
06/25/87		0	8.7	-17.1
06/25/87		1200	8.8	-17.2
07/08/87		0	9.5	-17.3
07/08/87		1200	9.5	-17.4
07/09/87		0	9.5	-17.5
07/09/87		1200	9.6	-17.4
07/10/87		0	9.6	-17.5
07/10/87		1200	9.7	-17.5
07/11/87		0	9.7	-17.4
07/11/87		1200	9.6	-17.5
07/12/87		0	9.7	-17.4
07/12/87		1200	9.7	-17.4
07/13/87		0	9.7	-17.4
07/13/87		1200	9.8	-17.4
07/14/87		0	9.8	-17.4
07/14/87		1200	9.9	-17.4
07/15/87		0	9.8	-17.5
07/15/87		1200	9.9	-17.5
07/16/87		0	9.9	-17.6
07/16/87		1200	10.0	-17.5
07/17/87		0	9.9	-17.5
07/17/87		1200	10.1	-17.6
07/18/87		0	10.1	-17.5
07/18/87		1200	10.1	-17.6
07/19/87		0	10.1	-17.6
07/19/87		1200	10.1	-17.5
07/20/87		0	10.1	-17.6
07/20/87		1200	10.2	-17.6
07/21/87		0	10.2	-17.6
07/21/87		1200	10.3	-17.5
07/22/87		0	10.3	-17.5
07/22/87		1200	10.3	-17.6
07/23/87		0	10.3	-17.6
07/23/87		1200	10.3	-17.6
07/24/87		0	10.3	-17.6

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	2.7			3.4		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
07/24/87	1200		10.4	-17.6	9.4	-13.6
07/25/87	0		10.4	-17.6	9.4	-13.7
07/25/87	1200		10.4	-17.6	9.5	-13.7
07/26/87	0		10.4	-17.6	9.5	-13.7
07/26/87	1200		10.5	-17.5	9.5	-13.7
07/27/87	0		10.5	-17.6	9.5	-13.7
07/27/87	1200		10.6	-17.6	9.6	-13.7
07/28/87	0		10.6	-17.6	9.6	-13.7
07/28/87	1200		10.6	-17.6	9.6	-13.8
07/29/87	0		10.6	-17.6	9.7	-13.7
07/29/87	1200		10.7	-17.5	9.7	-13.7
07/30/87	0		10.7	-17.6	9.7	-13.6
07/30/87	1200		10.7	-17.6	9.7	-13.7
07/31/87	0		10.7	-17.6	9.7	-13.7
07/31/87	1200		10.7	-17.5	9.8	-13.7
08/01/87	0		10.8	-17.5	9.8	-13.7
08/01/87	1200		10.8	-17.6	9.8	-13.8
08/02/87	0		10.8	-17.6	9.8	-13.7
08/02/87	1200		10.8	-17.6	9.8	-13.7
08/03/87	0		10.8	-17.6	9.8	-13.7
08/03/87	1200		10.9	-17.5	9.9	-13.7
08/04/87	0		10.8	-17.6	9.8	-13.7
08/04/87	1200		10.9	-17.5	9.9	-13.7
08/05/87	0		10.8	-17.6	9.9	-13.8
08/05/87	1200		10.9	-17.6	9.9	-13.8
08/06/87	0		11.0	-17.6	10.0	-13.8
08/06/87	1200		11.0	-17.6	10.0	-13.8
08/07/87	0		11.0	-17.5	10.0	-13.8
08/07/87	1200		11.0	-17.6	10.0	-13.7
08/08/87	0		11.1	-17.6	10.1	-13.7
08/08/87	1200		11.0	-17.6	10.0	-13.7
08/09/87	0		11.0	-17.6	10.0	-13.7
08/09/87	1200		11.1	-17.6	10.1	-13.7
08/10/87	0		11.1	-17.6	10.1	-13.8
08/10/87	1200		11.1	-17.7	10.1	-13.8
08/11/87	0		11.1	-17.7	10.1	-13.8
08/11/87	1200		11.2	-17.6	10.2	-13.8
08/12/87	0		11.2	-17.6	10.2	-13.8

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	2.7			3.4		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
08/12/87	1200		11.2	-17.6	10.2	-13.8
08/13/87	0		11.2	-17.6	10.2	-13.9
08/13/87	1200		11.3	-17.7	10.3	-13.8
08/14/87	0		11.3	-17.7	10.3	-13.9
08/14/87	1200		11.3	-17.7	10.3	-13.8
08/15/87	0		11.4	-17.7	10.3	-13.8
08/15/87	1200		11.4	-17.7	10.3	-13.8
08/16/87	0		11.4	-17.6	10.4	-13.7
08/16/87	1200		11.4	-17.7	10.4	-13.7
08/17/87	0		11.5	-17.6	10.4	-13.7
08/17/87	1200		11.4	-17.7	10.4	-13.8
08/18/87	0		11.5	-17.6	10.4	-13.6
08/18/87	1200		11.5	-17.6	10.4	-13.7
08/19/87	0		11.5	-17.6	10.5	-13.7
08/19/87	1200		11.6	-17.6	10.5	-13.7
08/20/87	0		11.5	-17.6	10.5	-13.7
08/20/87	1200		11.6	-17.6	10.5	-13.7
08/21/87	0		11.6	-17.7	10.5	-13.6
08/21/87	1200		11.6	-17.7	10.6	-13.7
08/22/87	0		11.7	-17.6	10.6	-13.7
08/22/87	1200		11.7	-17.6	10.6	-13.6
08/23/87	0		11.7	-17.6	10.6	-13.6
08/23/87	1200		11.7	-17.7	10.6	-13.6
08/24/87	0		11.7	-17.7	10.6	-13.7
08/24/87	1200		11.7	-17.7	10.7	-13.7
08/25/87	0		11.8	-17.7	10.8	-13.6
08/25/87	1200		11.8	-17.7	10.7	-13.6
08/26/87	0		11.8	-17.7	10.7	-13.5
08/26/87	1200		11.8	-17.7	10.7	-13.6
08/27/87	0		11.8	-17.7	10.8	-13.5
08/27/87	1200		11.9	-17.7	10.8	-13.6
08/28/87	0		11.9	-17.7	10.8	-13.5
08/28/87	1200		11.9	-17.7	10.8	-13.6
08/29/87	0		11.9	-17.7	10.8	-13.6
08/29/87	1200		11.9	-17.7	10.8	-13.6
08/30/87	0		11.9	-17.7	10.8	-13.6
08/30/87	1200		11.9	-17.6	10.9	-13.6
08/31/87	0		12.0	-17.6	10.9	-13.6

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	2.7			3.4		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
	08/31/87	1200	12.0	-17.7	10.9	-13.5
	09/01/87	0	12.0	-17.6	11.0	-13.5
	09/01/87	1200	12.0	-17.7	11.0	-13.5
	09/02/87	0	12.0	-17.6	11.0	-13.6
	09/02/87	1200	12.0	-17.7	11.0	-13.6
	09/03/87	0	12.0	-17.8	10.9	-13.7
	09/03/87	1200	12.1	-17.7	11.1	-13.6
	09/04/87	0	12.1	-17.7	11.1	-13.6
	09/04/87	1200	12.1	-17.7	11.0	-13.7
	09/05/87	0	12.1	-17.7	11.0	-13.6
	09/05/87	1200	12.1	-17.7	11.1	-13.6
	09/06/87	0	12.1	-17.7	11.0	-13.6
	09/06/87	1200	12.1	-17.7	11.1	-13.6
	09/07/87	0	12.1	-17.7	11.1	-13.7
	09/07/87	1200	12.2	-17.8	11.1	-13.6
	09/08/87	0	12.2	-17.7	11.1	-13.7
	09/08/87	1200	12.2	-17.7	11.2	-13.7
	09/09/87	0	12.2	-17.8	11.1	-13.7
	09/09/87	1200	12.2	-17.7	11.2	-13.8
	09/10/87	0	12.2	-17.7	11.2	-13.8
	09/10/87	1200	12.3	-17.7	11.2	-13.8
	09/11/87	0	12.3	-17.7	11.2	-13.8
	09/11/87	1200	12.3	-17.8	11.2	-13.9
	09/12/87	0	12.3	-17.7	11.3	-13.9
	09/12/87	1200	12.3	-17.8	11.3	-14.0
	09/13/87	0	12.3	-17.8	11.3	-14.0
	09/13/87	1200	12.3	-17.8	11.3	-14.0
	09/14/87	0	12.3	-17.8	11.3	-14.0
	09/14/87	1200	12.3	-17.8	11.3	-14.0
	09/15/87	0	12.4	-17.8	11.3	-14.0
	09/15/87	1200	12.4	-17.8	11.4	-14.0
	09/16/87	0	12.4	-17.8	11.4	-14.0
	09/16/87	1200	12.4	-17.8	11.4	-14.1
	09/17/87	0	12.4	-17.8	11.4	-14.1
	09/17/87	1200	12.4	-17.7	11.4	-14.2
	09/18/87	0	12.4	-17.7	11.4	-14.2
	09/18/87	1200	12.4	-17.8	11.4	-14.2
	09/19/87	0	12.4	-17.8	11.4	-14.3

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	2.7			3.4		
	Date	Hour	Soil	Soil-water	Soil	Soil-water
			temperature (Celsius)	potential (bars)	temperature (Celsius)	potential (bars)
	09/19/87	1200	12.5	-17.7	11.5	-14.3
	09/20/87	0	12.4	-17.7	11.4	-14.3
	09/20/87	1200	12.5	-17.7	11.5	-14.3
	09/21/87	0	12.5	-17.7	11.5	-14.3
	09/21/87	1200	12.5	-17.8	11.5	-14.3
	09/22/87	0	12.5	-17.7	11.5	-14.3
	09/22/87	1200	12.5	-17.8	11.5	-14.4
	09/23/87	0	12.5	-17.7	11.5	-14.4
	09/23/87	1200	12.5	-17.7	11.5	-14.4
	09/24/87	0	12.5	-17.7	11.5	-14.5
	09/24/87	1200	12.6	-17.8	11.6	-14.5
	09/25/87	0	12.5	-17.8	11.6	-14.6
	09/25/87	1200	12.6	-17.9	11.6	-14.6
	09/26/87	0	12.5	-17.8	11.6	-14.6
	09/26/87	1200	12.6	-17.8	11.7	-14.6
	09/27/87	0	12.6	-17.8	11.7	-14.5
	09/27/87	1200	12.6	-17.7	11.6	-14.6
	09/28/87	0	12.6	-17.8	11.6	-14.6
	09/28/87	1200	12.6	-17.7	11.6	-14.6
	09/29/87	0	12.6	-17.7	11.6	-14.6
	09/29/87	1200	12.6	-17.7	11.6	-14.6
	09/30/87	0	12.6	-17.7	11.7	-14.6
	09/30/87	1200	12.6	-17.7	11.7	-14.7
	10/01/87	0	12.6	-17.8	11.7	-14.6
	10/01/87	1200	12.6	-17.8	11.7	-14.7
	10/02/87	0	12.6	-17.8	11.7	-14.6
	10/02/87	1200	12.6	-17.7	11.7	-14.6
	10/03/87	0	12.6	-17.7	11.7	-14.6
	10/03/87	1200	12.6	-17.7	11.7	-14.7
	10/04/87	0	12.6	-17.7	11.7	-14.7
	10/04/87	1200	12.7	-17.7	11.8	-14.7
	10/05/87	0	12.7	-17.7	11.8	-14.7
	10/05/87	1200	12.7	-17.7	11.8	-14.7
	10/06/87	0	12.7	-17.7	11.8	-14.8
	10/06/87	1200	12.6	-17.7	11.8	-14.8
	10/07/87	0	12.7	-17.7	11.8	-14.8
	10/07/87	1200	12.7	-17.8	11.8	-14.9
	10/08/87	0	12.6	-17.8	11.8	-14.8

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
 [temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	2.7				3.4	
	Date	Hour	Soil	Soil-water	Soil	Soil-water
			temperature (Celsius)	potential (bars)		
	10/08/87	1200	12.7	-17.8	11.8	-14.8
	10/09/87	0	12.7	-17.8	11.8	-14.7
	10/09/87	1200	12.7	-17.9	11.8	-14.7
	10/10/87	0	12.7	-17.8	11.9	-14.7
	10/10/87	1200	12.7	-17.7	11.8	-14.7
	10/11/87	0	12.7	-17.7	11.8	-14.6
	10/11/87	1200	12.6	-17.8	11.8	-14.7
	10/12/87	0	12.7	-17.8	11.8	-14.6
	10/12/87	1200	12.7	-17.8	11.9	-14.7
	10/13/87	0	12.6	-17.9	11.8	-14.8
	10/13/87	1200	12.7	-17.8	11.8	-14.7
	10/14/87	0	12.7	-17.8	11.9	-14.7
	10/14/87	1200	12.6	-17.9	11.9	-14.7
	10/15/87	0	12.6	-17.9	11.8	-14.8
	10/15/87	1200	12.7	-17.8	11.9	-14.7
	10/16/87	0	12.7	-17.8	11.9	-14.7
	10/16/87	1200	12.6	-17.8	11.8	-14.7
	10/17/87	0	12.7	-17.8	11.9	-14.8
	10/17/87	1200	12.6	-17.8	11.8	-14.7
	10/18/87	0	12.6	-17.8	11.8	-14.7
	10/18/87	1200	12.6	-17.8	11.9	-14.8
	10/19/87	0	12.7	-17.8	11.9	-14.7
	10/19/87	1200	12.6	-17.8	11.9	-14.7
	10/20/87	0	12.6	-17.8	11.9	-14.7
	10/20/87	1200	12.6	-17.8	11.9	-14.7
	10/21/87	0	12.6	-17.8	11.9	-14.7
	10/21/87	1200	12.6	-17.8	11.9	-14.8
	10/22/87	0	12.6	-17.8	11.9	-14.7
	10/22/87	1200	12.6	-17.8	11.9	-14.8
	10/23/87	0	12.6	-17.9	11.9	-14.8
	10/23/87	1200	12.6	-17.8	11.9	-14.8
	10/24/87	0	12.5	-17.9	11.9	-14.8
	10/24/87	1200	12.6	-17.8	11.9	-14.8
	10/25/87	0	12.6	-17.7	11.9	-14.7
	10/25/87	1200	12.5	-17.7	11.9	-14.8
	10/26/87	0	12.5	-17.7	11.9	-14.7
	10/26/87	1200	12.5	-17.7	11.9	-14.8
	10/27/87	0	12.5	-17.8	11.9	-14.8

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --Indicates no data]

Depth (meters)	2.7			3.4		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
10/27/87	1200		12.5	-17.7	11.9	-14.8
10/28/87	0		12.5	-17.7	11.9	-14.8
10/28/87	1200		12.5	-17.7	11.9	-14.8
10/29/87	0		12.5	-17.8	11.9	-14.8
10/29/87	1200		12.4	-17.8	11.9	-14.8
10/30/87	0		12.4	-17.9	11.9	-14.8
10/30/87	1200		12.5	-17.8	11.9	-14.8
10/31/87	0		12.4	-17.8	11.9	-14.8
10/31/87	1200		12.4	-17.7	11.9	-14.8
11/01/87	0		12.4	-17.7	11.9	-14.8
11/01/87	1200		12.4	-17.7	11.9	-14.9
11/02/87	0		12.4	-17.7	11.9	-14.8
11/02/87	1200		12.4	-17.8	11.9	-14.8
11/03/87	0		12.4	-17.7	11.9	-14.6
11/03/87	1200		12.4	-17.7	11.9	-14.7
11/04/87	0		12.3	-17.7	11.8	-14.6
11/04/87	1200		12.3	-17.7	11.8	-14.6
11/05/87	0		12.3	-17.7	11.9	-14.7
11/05/87	1200		12.2	-17.7	11.8	-14.8
11/06/87	0		12.3	-17.8	11.8	-14.8
11/06/87	1200		12.2	-17.7	11.8	-14.8
11/07/87	0		12.2	-17.7	11.8	-14.7
11/07/87	1200		12.2	-17.6	11.8	-14.8
11/08/87	0		12.2	-17.7	11.8	-14.6
11/08/87	1200		12.2	-17.5	11.8	-14.6
11/09/87	0		12.2	-17.5	11.8	-14.5
11/09/87	1200		12.1	-17.7	11.7	-14.7
11/10/87	0		12.1	-17.7	11.7	-14.6
11/10/87	1200		12.1	-17.6	11.8	-14.5
11/11/87	0		12.1	-17.6	11.8	-14.6
11/11/87	1200		12.1	-17.6	11.7	-14.6
11/12/87	0		12.1	-17.7	11.7	-14.6
11/12/87	1200		12.0	-17.7	11.7	-14.7
11/13/87	0		12.0	-17.8	11.7	-14.7
11/13/87	1200		12.0	-17.8	11.7	-14.7
11/14/87	0		12.0	-17.8	11.7	-14.8
11/14/87	1200		12.0	-17.8	11.7	-14.7
11/15/87	0		12.0	-17.7	11.7	-14.7

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	2.7			3.4		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
11/15/87	1200		12.0	-17.6	11.7	-14.6
11/16/87	0		12.0	-17.7	11.7	-14.7
11/16/87	1200		11.9	-17.7	11.7	-14.7
11/17/87	0		11.9	-17.7	11.6	-14.8
11/17/87	1200		11.9	-17.7	11.6	-14.6
11/18/87	0		11.9	-17.6	11.7	-14.6
11/18/87	1200		11.9	-17.5	11.6	-14.5
11/19/87	0		11.9	-17.5	11.6	-14.5
11/19/87	1200		11.8	-17.6	11.6	-14.5
11/20/87	0		11.8	-17.6	11.6	-14.6
11/20/87	1200		11.8	-17.6	11.6	-14.6
11/21/87	0		11.8	-17.7	11.6	-14.7
11/21/87	1200		11.8	-17.7	11.6	-14.8
11/22/87	0		11.8	-17.7	11.6	-14.6
11/22/87	1200		11.7	-17.7	11.5	-14.7
11/23/87	0		11.7	-17.7	11.6	-14.6
11/23/87	1200		11.7	-17.7	11.5	-14.7
11/24/87	0		11.7	-17.6	11.5	-14.6
11/24/87	1200		11.7	-17.6	11.5	-14.6
11/25/87	0		11.7	-17.6	11.6	-14.6
11/25/87	1200		11.6	-17.6	11.5	-14.7
11/26/87	0		11.7	-17.5	11.5	-14.6
11/26/87	1200		11.6	-17.5	11.5	-14.6
11/27/87	0		11.6	-17.5	11.5	-14.6
11/27/87	1200		11.6	-17.6	11.5	-14.6
11/28/87	0		11.5	-17.6	11.4	-14.6
11/28/87	1200		11.5	-17.6	11.4	-14.6
11/29/87	0		11.5	-17.7	11.4	-14.7
11/29/87	1200		11.5	-17.6	11.4	-14.6
11/30/87	0		11.5	-17.6	11.4	-14.6
11/30/87	1200		11.5	-17.6	11.4	-14.6
12/01/87	0		11.4	-17.6	11.4	-14.6
12/01/87	1200		11.4	-17.7	11.4	-14.6
12/02/87	0		11.4	-17.7	11.3	-14.6
12/02/87	1200		11.3	-17.7	11.3	-14.6
12/03/87	0		11.3	-17.6	11.3	-14.6
12/03/87	1200		11.3	-17.6	11.3	-14.6
12/04/87	0		11.2	-17.6	11.3	-14.5

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	2.7			3.4		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
12/04/87	1200		11.2	-17.6	11.3	-14.6
12/05/87	0		11.2	-17.6	11.3	-14.5
12/05/87	1200		11.2	-17.6	11.2	-14.6
12/06/87	0		11.1	-17.6	11.2	-14.5
12/06/87	1200		11.1	-17.6	11.2	-14.5
12/07/87	0		11.1	-17.6	11.2	-14.5
12/07/87	1200		11.0	-17.6	11.2	-14.6
12/08/87	0		11.0	-17.5	11.1	-14.5
12/08/87	1200		11.0	-17.5	11.2	-14.4
12/09/87	0		10.9	-17.6	11.0	-14.6
12/09/87	1200		10.9	-17.5	11.1	-14.5
12/10/87	0		10.9	-17.4	11.0	-14.5
12/10/87	1200		10.8	-17.5	11.0	-14.5
12/11/87	0		10.8	-17.5	11.0	-14.4
12/11/87	1200		10.8	-17.4	11.0	-14.4
12/12/87	0		10.8	-17.4	11.0	-14.4
12/12/87	1200		10.7	-17.4	10.9	-14.4
12/13/87	0		10.7	-17.4	11.0	-14.3
12/13/87	1200		10.7	-17.4	11.0	-14.4
12/14/87	0		10.7	-17.5	10.9	-14.4
12/14/87	1200		10.7	-17.4	10.9	-14.4
12/15/87	0		10.6	-17.4	10.8	-14.4
12/15/87	1200		10.6	-17.4	10.9	-14.3
12/16/87	0		10.5	-17.4	10.8	-14.3
12/16/87	1200		10.5	-17.5	10.8	-14.3
12/17/87	0		10.4	-17.5	10.7	-14.3
12/17/87	1200		10.4	-17.4	10.7	-14.2
12/18/87	0		10.3	-17.4	10.7	-14.2
12/18/87	1200		10.3	-17.5	10.7	-14.2
12/19/87	0		10.3	-17.4	10.7	-14.2
12/19/87	1200		10.3	-17.4	10.7	-14.2
12/20/87	0		10.3	-17.4	10.6	-14.2
12/20/87	1200		10.2	-17.4	10.6	-14.1
12/21/87	0		10.2	-17.4	10.6	-14.2
12/21/87	1200		10.2	-17.4	10.6	-14.1
12/22/87	0		10.2	-17.4	10.6	-14.2
12/22/87	1200		10.1	-17.4	10.5	-14.2
12/23/87	0		10.1	-17.4	10.5	-14.1
12/23/87	1200		10.1	-17.4	10.5	-14.1

Table 4.--Temperature and soil-water potential for undisturbed soil, 3.2 meters from the vertical culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	2.7				3.4	
	Date	Hour	Soil	Soil-water	Soil	Soil-water
			temperature (Celsius)	potential (bars)	temperature (Celsius)	potential (bars)
	12/24/87	0	10.1	-17.3	10.6	-14.1
	12/24/87	1200	10.0	-17.3	10.4	-14.0
	12/25/87	0	10.0	-17.3	10.5	-13.9
	12/25/87	1200	10.0	-17.3	10.4	-14.0
	12/26/87	0	10.0	-17.3	10.4	-13.9
	12/26/87	1200	9.9	-17.3	10.4	-13.9
	12/27/87	0	9.9	-17.2	10.4	-13.9
	12/27/87	1200	9.8	-17.2	10.3	-14.0
	12/28/87	0	9.9	-17.2	10.3	-13.9
	12/28/87	1200	9.8	-17.2	10.3	-13.9
	12/29/87	0	9.8	-17.3	10.3	-13.9
	12/29/87	1200	9.8	-17.2	10.3	-13.9
	12/30/87	0	9.7	-17.3	10.2	-13.9
	12/30/87	1200	9.7	-17.4	10.2	-13.9
	12/31/87	0	9.6	-17.3	10.2	-13.8
	12/31/87	1200	9.6	-17.2	10.2	-13.8

Table 5.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	3.8				4.1				4.4				5.0			
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
02/11/87	0		7.6	-14.9	8.2	-7.0	NO DATA 1/1/87 THROUGH 2/10/87									
02/11/87	1200		7.6	-14.9	8.2	-7.0	8.2	-3.8	9.0	-8.6	8.9	-8.6	8.9	-8.6	8.9	-8.6
02/12/87	0		7.6	-14.9	8.2	-7.1	8.4	-3.8	9.0	-8.5	9.0	-8.5	9.0	-8.5	9.0	-8.5
02/12/87	1200		7.6	-14.9	8.2	-7.0	8.3	-3.8	8.9	-8.6	8.9	-8.6	8.9	-8.6	8.9	-8.6
02/13/87	0		7.5	-14.8	8.1	-7.0	8.1	-3.8	8.9	-8.6	8.9	-8.6	8.9	-8.6	8.9	-8.6
02/13/87	1200		7.5	-14.9	8.1	-7.1	8.2	-3.8	8.8	-8.6	8.8	-8.6	8.8	-8.6	8.8	-8.6
02/14/87	0		7.5	-15.0	8.1	-7.1	8.3	-3.8	8.9	-8.6	8.9	-8.6	8.9	-8.6	8.9	-8.6
02/14/87	1200		7.5	-15.1	8.1	-7.0	8.2	-3.8	8.8	-8.6	8.8	-8.6	8.8	-8.6	8.8	-8.6
02/15/87	0		7.5	-15.0	8.1	-7.0	8.3	-3.8	8.9	-8.5	8.9	-8.5	8.9	-8.5	8.9	-8.5
02/15/87	1200		7.4	-15.0	8.0	-7.1	8.2	-3.9	8.8	-8.6	8.8	-8.6	8.8	-8.6	8.8	-8.6
02/16/87	0		7.4	-15.0	8.0	-7.0	8.2	-3.9	8.8	-8.6	8.8	-8.6	8.8	-8.6	8.8	-8.6
02/16/87	1200		7.4	-15.0	8.0	-7.0	8.2	-3.9	8.8	-8.6	8.8	-8.6	8.8	-8.6	8.8	-8.6
02/17/87	0		7.4	-14.9	8.0	-7.0	8.1	-3.8	8.8	-8.5	8.8	-8.5	8.8	-8.5	8.8	-8.5
02/17/87	1200		7.3	-14.9	8.0	-6.9	8.0	-3.8	8.6	-8.5	8.6	-8.5	8.6	-8.5	8.6	-8.5
02/18/87	0		7.4	-15.0	8.0	-6.9	8.2	-3.8	8.8	-8.5	8.8	-8.5	8.8	-8.5	8.8	-8.5
02/18/87	1200		7.3	-14.9	7.9	-6.9	8.1	-3.8	8.7	-8.6	8.7	-8.6	8.7	-8.6	8.7	-8.6
02/19/87	0		7.4	-14.9	8.0	-6.9	8.1	-3.8	8.7	-8.6	8.7	-8.6	8.7	-8.6	8.7	-8.6
02/19/87	1200		7.3	-15.0	7.9	-7.1	8.1	-3.8	8.7	-8.6	8.7	-8.6	8.7	-8.6	8.7	-8.6
02/20/87	0		7.3	-14.9	7.9	-7.0	8.1	-3.8	8.8	-8.5	8.8	-8.5	8.8	-8.5	8.8	-8.5
02/20/87	1200		7.3	-14.8	7.9	-6.9	8.1	-3.7	8.7	-8.5	8.7	-8.5	8.7	-8.5	8.7	-8.5
02/21/87	0		7.3	-14.9	7.9	-7.0	8.1	-3.8	8.7	-8.5	8.7	-8.5	8.7	-8.5	8.7	-8.5
02/21/87	1200		7.2	-14.9	7.9	-7.0	8.0	-3.8	8.6	-8.6	8.6	-8.6	8.6	-8.6	8.6	-8.6
02/22/87	0		7.3	-15.0	7.9	-7.0	8.0	-3.8	8.7	-8.5	8.7	-8.5	8.7	-8.5	8.7	-8.5
02/22/87	1200		7.2	-15.0	7.8	-7.1	8.0	-3.8	8.6	-8.6	8.6	-8.6	8.6	-8.6	8.6	-8.6
02/23/87	0		7.2	-15.0	7.8	-7.0	7.9	-3.8	8.6	-8.6	8.6	-8.6	8.6	-8.6	8.6	-8.6
02/23/87	1200		7.2	-15.0	7.8	-7.0	8.0	-3.8	8.7	-8.6	8.7	-8.6	8.7	-8.6	8.7	-8.6
02/24/87	0		7.2	-15.1	7.8	-7.1	8.0	-3.8	8.6	-8.5	8.6	-8.5	8.6	-8.5	8.6	-8.5
02/24/87	1200		7.1	-15.1	7.7	-7.1	8.0	-3.9	8.6	-8.6	8.6	-8.6	8.6	-8.6	8.6	-8.6
02/25/87	0		7.1	-15.0	7.7	-7.0	7.8	-3.9	8.5	-8.6	8.5	-8.6	8.5	-8.6	8.5	-8.6
02/25/87	1200		7.2	-15.0	7.8	-7.0	7.9	-3.8	8.5	-8.5	8.5	-8.5	8.5	-8.5	8.5	-8.5
02/26/87	0		7.2	-15.1	7.7	-6.9	7.9	-3.8	8.6	-8.6	8.6	-8.6	8.6	-8.6	8.6	-8.6
02/26/87	1200		7.1	-15.0	7.7	-6.9	7.9	-3.9	8.5	-8.5	8.5	-8.5	8.5	-8.5	8.5	-8.5
02/27/87	0		7.1	-14.9	7.7	-6.9	7.9	-3.8	8.6	-8.5	8.6	-8.5	8.6	-8.5	8.6	-8.5
02/27/87	1200		7.1	-14.9	7.7	-6.9	7.7	-3.9	8.4	-8.5	8.4	-8.5	8.4	-8.5	8.4	-8.5
02/28/87	0		7.1	-14.8	7.7	-7.0	7.8	-3.8	8.5	-8.4	8.5	-8.4	8.5	-8.4	8.5	-8.4
02/28/87	1200		7.0	-15.0	7.6	-6.9	7.8	-3.8	8.4	-8.5	8.4	-8.5	8.4	-8.5	8.4	-8.5
03/01/87	0		7.1	-15.0	7.6	-6.9	7.8	-3.8	8.5	-8.5	8.5	-8.5	8.5	-8.5	8.5	-8.5

Table 5.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			4.4			5.0		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
03/01/87	1200		7.0	-15.0	7.6	-7.0	7.8	-3.8	8.5	-8.5	8.5	-8.5	8.5	-8.5
03/02/87	0		7.1	-15.0	7.6	-6.9	7.8	-3.8	8.5	-8.5	8.5	-8.5	8.5	-8.5
03/02/87	1200		7.0	-15.0	7.6	-6.9	7.7	-3.8	8.4	-8.4	8.4	-8.4	8.4	-8.4
03/03/87	0		7.0	-15.0	7.6	-6.9	7.8	-3.9	8.5	-8.4	8.5	-8.4	8.5	-8.4
03/03/87	1200		7.0	-15.0	7.6	-7.0	7.7	-3.8	8.4	-8.4	8.4	-8.4	8.4	-8.4
03/04/87	0		7.0	-15.0	7.6	-6.8	7.7	-3.8	8.4	-8.4	8.4	-8.4	8.4	-8.4
03/04/87	1200		7.0	-14.9	7.6	-6.9	7.7	-3.8	8.4	-8.5	8.4	-8.5	8.4	-8.5
03/05/87	0		7.0	-15.0	7.6	-6.8	7.7	-3.8	8.4	-8.4	8.4	-8.4	8.4	-8.4
03/05/87	1200		6.9	-14.9	7.5	-6.9	7.7	-3.9	8.3	-8.4	8.3	-8.4	8.3	-8.4
03/06/87	0		6.9	-15.0	7.5	-6.9	7.7	-3.9	8.3	-8.4	8.3	-8.4	8.3	-8.4
03/06/87	1200		6.9	-15.0	7.5	-6.9	7.6	-3.8	8.3	-8.5	8.3	-8.5	8.3	-8.5
03/07/87	0		6.9	-15.0	7.5	-6.9	7.7	-3.9	8.3	-8.4	8.3	-8.4	8.3	-8.4
03/07/87	1200		6.9	-15.0	7.5	-6.9	7.6	-3.8	8.3	-8.4	8.3	-8.4	8.3	-8.4
03/08/87	0		6.9	-15.1	7.5	-6.9	7.7	-3.8	8.4	-8.4	8.4	-8.4	8.4	-8.4
03/08/87	1200		6.9	-15.0	7.5	-7.0	7.7	-3.8	8.3	-8.5	8.3	-8.5	8.3	-8.5
03/09/87	0		6.8	-15.1	7.4	-7.0	7.6	-3.9	8.3	-8.4	8.3	-8.4	8.3	-8.4
03/09/87	1200		6.8	-15.0	7.4	-7.0	7.6	-3.9	8.3	-8.4	8.3	-8.4	8.3	-8.4
03/10/87	0		6.9	-15.0	7.5	-7.0	7.6	-3.8	8.3	-8.4	8.3	-8.4	8.3	-8.4
03/10/87	1200		6.8	-15.1	7.4	-6.9	7.5	-3.9	8.2	-8.4	8.2	-8.4	8.2	-8.4
03/11/87	0		6.8	-15.1	7.4	-7.0	7.6	-4.0	8.3	-8.4	8.3	-8.4	8.3	-8.4
03/11/87	1200		6.8	-15.1	7.4	-6.9	7.5	-3.9	8.2	-8.4	8.2	-8.4	8.2	-8.4
03/12/87	0		6.8	-15.2	7.4	-6.9	7.6	-3.9	8.3	-8.4	8.3	-8.4	8.3	-8.4
03/12/87	1200		6.8	-15.1	7.3	-6.9	7.5	-3.9	8.2	-8.4	8.2	-8.4	8.2	-8.4
03/13/87	0		6.8	-15.1	7.4	-6.9	7.6	-3.9	8.3	-8.4	8.3	-8.4	8.3	-8.4
03/13/87	1200		6.8	-15.1	7.3	-7.0	7.5	-3.9	8.2	-8.4	8.2	-8.4	8.2	-8.4
03/14/87	0		6.7	-15.2	7.3	-7.0	7.5	-3.9	8.2	-8.5	8.2	-8.5	8.2	-8.5
03/14/87	1200		6.7	-15.3	7.3	-7.0	7.5	-3.9	8.1	-8.4	8.1	-8.4	8.1	-8.4
03/15/87	0		6.8	-15.2	7.3	-7.0	7.5	-3.8	8.2	-8.4	8.2	-8.4	8.2	-8.4
03/15/87	1200		6.7	-15.3	7.3	-7.0	7.5	-3.8	8.2	-8.4	8.2	-8.4	8.2	-8.4
03/16/87	0		6.7	-15.3	7.3	-7.0	7.5	-3.9	8.2	-8.4	8.2	-8.4	8.2	-8.4
03/16/87	1200		6.7	-15.3	7.3	-7.0	7.5	-3.9	8.2	-8.4	8.2	-8.4	8.2	-8.4
03/17/87	0		6.8	-15.4	7.3	-7.1	7.4	-3.8	8.1	-8.4	8.1	-8.4	8.1	-8.4
03/17/87	1200		6.7	-15.3	7.3	-7.0	7.5	-3.9	8.2	-8.4	8.2	-8.4	8.2	-8.4
03/18/87	0		6.7	-15.3	7.2	-7.0	7.4	-3.9	8.1	-8.3	8.1	-8.3	8.1	-8.3
03/18/87	1200		6.7	-15.4	7.2	-7.2	7.4	-3.9	8.1	-8.4	8.1	-8.4	8.1	-8.4
03/19/87	0		6.7	-15.5	7.2	-7.2	7.4	-3.9	8.1	-8.4	8.1	-8.4	8.1	-8.4
03/19/87	1200		6.7	-15.5	7.2	-7.2	7.4	-4.0	8.1	-8.4	8.1	-8.4	8.1	-8.4
03/20/87	0		6.7	-15.4	7.2	-7.2	7.4	-3.9	8.1	-8.4	8.1	-8.4	8.1	-8.4

Table 5.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; ---indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			4.4			5.0		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
03/20/87	1200		6.7	-15.4	7.2	-7.2	7.3	-3.9	8.0	-8.4				
03/21/87	0		6.7	-15.4	7.2	-7.1	7.4	-3.9	8.1	-8.4				
03/21/87	1200		6.7	-15.5	7.2	-7.2	7.4	-3.9	8.0	-8.3				
03/22/87	0		6.7	-15.5	7.2	-7.1	7.4	-3.9	8.1	-8.4				
03/22/87	1200		6.6	-15.5	7.1	-7.2	7.3	-4.0	8.0	-8.4				
03/23/87	0		6.7	-15.5	7.2	-7.1	7.3	-3.9	8.0	-8.3				
03/23/87	1200		6.7	-15.5	7.1	-7.2	7.3	-3.9	8.0	-8.3				
03/24/87	0		6.7	-15.5	7.2	-7.1	7.4	-4.0	8.1	-8.3				
03/24/87	1200		6.6	-15.5	7.1	-7.1	7.3	-4.0	7.9	-8.4				
03/25/87	0		6.7	-15.5	7.2	-7.1	7.4	-3.9	8.0	-8.3				
03/25/87	1200		6.6	-15.5	7.1	-7.1	7.2	-4.0	7.9	-8.4				
03/26/87	0		6.7	-15.5	7.2	-7.0	7.4	-4.0	8.0	-8.4				
03/26/87	1200		6.6	-15.6	7.1	-7.1	7.3	-3.9	8.0	-8.3				
03/27/87	0		6.7	-15.5	7.1	-7.1	7.3	-3.9	8.0	-8.3				
03/27/87	1200		6.6	-15.6	7.1	-7.1	7.2	-3.9	7.9	-8.3				
03/28/87	0		6.7	-15.5	7.1	-7.0	7.3	-3.9	8.0	-8.3				
03/28/87	1200		6.6	-15.5	7.1	-7.1	7.3	-3.9	7.9	-8.3				
03/29/87	0		6.6	-15.6	7.0	-7.1	7.3	-3.9	7.9	-8.3				
03/29/87	1200		6.5	-15.5	7.0	-7.1	7.1	-4.0	7.8	-8.3				
03/30/87	0		6.6	-15.5	7.1	-7.0	7.3	-3.9	8.0	-8.3				
03/30/87	1200		6.6	-15.5	7.0	-7.0	7.2	-4.0	7.8	-8.3				
03/31/87	0		6.6	-15.5	7.1	-7.0	7.3	-3.9	8.0	-8.2				
03/31/87	1200		6.6	-15.5	7.1	-7.1	7.2	-4.0	7.9	-8.3				
04/01/87	0		6.6	-15.5	7.1	-7.0	7.3	-4.0	7.9	-8.3				
04/01/87	1200		6.6	-15.5	7.0	-7.1	7.2	-4.0	7.9	-8.3				
04/02/87	0		6.6	-15.6	7.1	-7.0	7.3	-3.9	7.9	-8.3				
04/02/87	1200		6.6	-15.6	7.0	-7.1	7.2	-4.0	7.8	-8.4				
04/03/87	0		6.6	-15.6	7.1	-7.1	7.3	-3.9	7.9	-8.4				
04/03/87	1200		6.6	-15.7	7.0	-7.1	7.2	-4.0	7.8	-8.4				
04/04/87	0		6.6	-15.8	7.0	-7.1	7.2	-3.9	7.9	-8.3				
04/04/87	1200		6.6	-15.7	7.0	-7.1	7.2	-3.9	7.8	-8.4				
04/05/87	0		6.6	-15.7	7.0	-7.1	7.2	-4.0	7.9	-8.4				
04/05/87	1200		6.6	-15.7	7.0	-7.1	7.2	-4.0	7.8	-8.4				
04/06/87	0		6.6	-15.6	7.0	-7.1	7.2	-3.9	7.9	-8.3				
04/06/87	1200		6.5	-15.7	7.0	-7.1	7.2	-3.9	7.8	-8.4				
04/07/87	0		6.6	-15.7	7.0	-7.0	7.2	-3.9	7.8	-8.3				
04/07/87	1200		6.6	-15.7	7.0	-7.1	7.2	-3.9	7.8	-8.3				
04/07/87	0		6.5	-15.8	6.9	-7.1	7.1	-3.9	7.8	-8.3				
04/08/87	0		6.6	-15.7	7.0	-7.0	7.2	-3.9	7.8	-8.3				

Table 5.---Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	3.8		4.1		4.4		5.0	
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
04/08/87		1200	6.6	-15.8	7.0	-7.1	7.2	-3.9	7.8	-8.3
04/09/87		0	6.6	-15.8	7.0	-7.1	7.2	-3.9	7.9	-8.3
04/09/87		1200	6.5	-15.8	6.9	-7.1	7.1	-4.0	7.7	-8.3
04/10/87		0	6.6	-15.8	7.0	-7.0	7.1	-4.0	7.8	-8.3
04/10/87		1200	6.5	-15.9	6.9	-7.1	7.1	-4.0	7.7	-8.3
04/11/87		0	6.6	-15.9	6.9	-7.1	7.1	-4.0	7.8	-8.3
04/11/87		1200	6.6	-16.0	6.9	-7.1	7.1	-4.0	7.8	-8.3
04/12/87		0	6.6	-16.0	7.0	-7.1	7.1	-3.9	7.8	-8.3
04/12/87		1200	6.6	-16.0	6.9	-7.2	7.1	-4.0	7.7	-8.4
04/13/87		0	6.6	-15.9	6.9	-7.1	7.2	-4.0	7.8	-8.3
04/13/87		1200	6.6	-16.0	6.9	-7.1	7.1	-3.9	7.7	-8.4
04/14/87		0	6.6	-15.9	6.9	-7.1	7.1	-3.9	7.8	-8.3
04/14/87		1200	6.5	-16.0	6.9	-7.1	7.0	-3.9	7.6	-8.3
04/15/87		0	6.6	-16.0	6.9	-7.1	7.1	-3.9	7.8	-8.3
04/15/87		1200	6.5	-16.1	6.9	-7.1	7.1	-4.0	7.7	-8.3
04/16/87		0	6.6	-16.1	6.9	-7.0	7.2	-3.9	7.8	-8.3
04/16/87		1200	6.6	-16.1	6.9	-7.1	7.1	-3.9	7.7	-8.4
04/17/87		0	6.6	-16.2	6.9	-7.1	7.2	-3.9	7.7	-8.3
04/17/87		1200	6.6	-16.2	6.9	-7.2	7.1	-4.0	7.6	-8.4
04/18/87		0	6.6	-16.3	6.9	-7.2	7.1	-3.9	7.8	-8.4
04/18/87		1200	6.6	-16.4	6.9	-7.2	7.1	-3.9	7.7	-8.5
04/19/87		0	6.6	-16.4	6.9	-7.2	7.1	-3.9	7.7	-8.4
04/19/87		1200	6.6	-16.3	6.9	-7.2	7.0	-3.9	7.6	-8.4
04/20/87		0	6.6	-16.2	6.9	-7.1	7.1	-3.9	7.7	-8.4
04/20/87		1200	6.6	-16.3	6.9	-7.1	7.0	-3.9	7.6	-8.5
04/21/87		0	6.7	-16.1	6.9	-7.1	7.1	-3.9	7.7	-8.4
04/21/87		1200	6.6	-16.3	6.9	-7.1	7.0	-4.0	7.6	-8.4
04/22/87		0	6.7	-16.3	6.9	-7.1	7.1	-4.0	7.7	-8.4
04/22/87		1200	6.6	-16.3	6.9	-7.2	7.0	-4.0	7.6	-8.4
04/23/87		0	6.7	-16.4	6.9	-7.2	7.1	-4.0	7.7	-8.4
04/23/87		1200	6.6	-16.5	6.9	-7.2	7.1	-4.0	7.6	-8.5
04/24/87		0	6.7	-16.5	6.9	-7.2	7.0	-4.0	7.7	-8.5
04/24/87		1200	6.6	-16.5	6.9	-7.2	7.1	-4.0	7.6	-8.5
04/25/87		0	6.7	-16.4	6.9	-7.2	7.1	-4.0	7.7	-8.5
04/25/87		1200	6.6	-16.6	6.9	-7.3	7.0	-4.0	7.6	-8.5
04/26/87		0	6.7	-16.5	6.9	-7.2	7.1	-4.0	7.7	-8.5
04/26/87		1200	6.7	-16.5	6.9	-7.2	7.1	-4.0	7.6	-8.5
04/27/87		0	6.7	-16.4	6.9	-7.2	7.1	-4.0	7.6	-8.5

Table 5.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			4.4			5.0		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
04/27/87	1200		6.7	-16.5	6.9	-7.2	7.1	-4.0	7.6	-8.5				
04/28/87	0		6.8	-16.5	6.9	-7.2	7.1	-4.0	7.7	-8.5				
04/28/87	1200		6.7	-16.7	6.9	-7.4	7.1	-4.0	7.6	-8.6				
04/29/87	0		6.7	-16.6	6.9	-7.3	7.1	-4.0	7.6	-8.6				
04/29/87	1200		6.7	-16.7	6.9	-7.3	7.1	-4.0	7.6	-8.6				
04/30/87	0		6.7	-16.7	6.9	-7.3	7.1	-4.0	7.6	-8.6				
04/30/87	1200		6.8	-16.8	6.9	-7.4	7.1	-3.9	7.6	-8.6				
05/01/87	0		6.8	-16.8	6.9	-7.4	7.1	-4.0	7.7	-8.6				
05/01/87	1200		6.7	-16.9	6.9	-7.4	7.1	-4.0	7.6	-8.6				
05/02/87	0		6.8	-16.9	6.9	-7.4	7.1	-4.0	7.6	-8.7				
05/02/87	1200		6.8	-16.9	6.9	-7.4	7.0	-4.0	7.6	-8.7				
05/03/87	0		6.8	-16.9	7.0	-7.3	7.1	-4.0	7.6	-8.7				
05/03/87	1200		6.8	-16.9	6.9	-7.3	7.0	-4.0	7.5	-8.7				
05/04/87	0		6.8	-16.9	7.0	-7.3	7.1	-3.9	7.6	-8.6				
05/04/87	1200		6.8	-16.8	6.9	-7.2	7.0	-4.0	7.5	-8.7				
05/05/87	0		6.8	-17.0	6.9	-7.2	7.1	-4.0	7.6	-8.7				
05/05/87	1200		6.8	-17.0	6.9	-7.3	7.1	-4.0	7.6	-8.7				
05/06/87	0		6.9	-17.0	7.0	-7.2	7.2	-3.9	7.7	-8.6				
05/06/87	1200		6.8	-17.0	6.9	-7.2	7.1	-4.0	7.6	-8.8				
05/07/87	0		6.9	-17.1	7.0	-7.2	7.2	-4.0	7.6	-8.7				
05/07/87	1200		6.9	-17.2	7.0	-7.3	7.1	-4.0	7.6	-8.8				
05/08/87	0		6.9	-17.2	7.0	-7.3	7.2	-4.0	7.6	-8.7				
05/08/87	1200		6.9	-17.3	7.0	-7.3	7.2	-4.0	7.6	-8.8				
05/09/87	0		6.9	-17.2	7.0	-7.4	7.2	-4.0	7.6	-8.8				
05/09/87	1200		6.9	-17.4	7.0	-7.4	7.1	-4.0	7.6	-8.8				
05/10/87	0		6.9	-17.3	7.0	-7.4	7.2	-4.0	7.6	-8.8				
05/10/87	1200		7.0	-17.3	7.0	-7.4	7.2	-4.0	7.6	-8.9				
05/11/87	0		7.0	-17.3	7.0	-7.4	7.2	-4.0	7.6	-8.8				
05/11/87	1200		7.0	-17.5	7.0	-7.5	7.2	-4.0	7.6	-8.9				
05/12/87	0		7.0	-17.5	7.0	-7.5	7.2	-3.9	7.6	-8.9				
05/12/87	1200		7.0	-17.6	7.0	-7.5	7.2	-4.0	7.6	-8.9				
05/13/87	0		7.0	-17.7	7.0	-7.5	7.2	-3.9	7.6	-8.9				
05/13/87	1200		7.1	-17.6	7.1	-7.4	7.2	-3.9	7.6	-8.9				
05/14/87	0		7.1	-17.6	7.1	-7.5	7.2	-4.0	7.6	-8.9				
05/14/87	1200		7.1	-17.6	7.1	-7.4	7.2	-4.0	7.6	-8.9				
05/15/87	0		7.1	-17.6	7.1	-7.4	7.2	-4.0	7.6	-8.9				
05/15/87	1200		7.1	-17.7	7.1	-7.5	7.2	-4.0	7.6	-9.0				
05/16/87	0		7.1	-17.8	7.1	-7.6	7.2	-4.0	7.6	-9.0				

Table 5.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --- indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			4.4			5.0		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
05/16/87	1200		7.2	-17.7	7.2	-7.5	7.3	-4.0	7.7	-9.0	7.7	-9.0	7.7	-9.0
05/17/87	0		7.2	-17.9	7.1	-7.5	7.3	-4.0	7.6	-9.0	7.6	-9.0	7.6	-9.0
05/17/87	1200		7.2	-17.9	7.2	-7.6	7.3	-4.0	7.7	-9.1	7.7	-9.1	7.7	-9.1
05/18/87	0		7.2	-17.9	7.1	-7.6	7.3	-4.0	7.6	-9.1	7.6	-9.1	7.6	-9.1
05/18/87	1200		7.2	-17.9	7.1	-7.6	7.3	-4.1	7.6	-9.1	7.6	-9.1	7.6	-9.1
05/19/87	0		7.2	-18.0	7.2	-7.6	7.3	-4.1	7.7	-9.1	7.7	-9.1	7.7	-9.1
05/19/87	1200		7.2	-18.0	7.2	-7.6	7.3	-4.1	7.6	-9.2	7.6	-9.2	7.6	-9.2
05/20/87	0		7.3	-18.0	7.2	-7.6	7.3	-4.1	7.6	-9.1	7.6	-9.1	7.6	-9.1
05/20/87	1200		7.3	-18.1	7.2	-7.6	7.3	-4.0	7.6	-9.2	7.6	-9.2	7.6	-9.2
05/21/87	0		7.3	-18.1	7.2	-7.6	7.4	-4.1	7.7	-9.2	7.7	-9.2	7.7	-9.2
05/21/87	1200		7.3	-18.1	7.2	-7.7	7.3	-4.0	7.6	-9.2	7.6	-9.2	7.6	-9.2
05/22/87	0		7.4	-18.1	7.2	-7.6	7.4	-4.0	7.7	-9.1	7.7	-9.1	7.7	-9.1
05/22/87	1200		7.3	-18.1	7.2	-7.6	7.3	-4.0	7.6	-9.2	7.6	-9.2	7.6	-9.2
05/23/87	0		7.4	-18.1	7.3	-7.6	7.4	-3.9	7.7	-9.1	7.7	-9.1	7.7	-9.1
05/23/87	1200		7.3	-18.1	7.3	-7.6	7.4	-4.0	7.6	-9.2	7.6	-9.2	7.6	-9.2
05/24/87	0		7.4	-18.1	7.3	-7.6	7.4	-3.9	7.7	-9.2	7.7	-9.2	7.7	-9.2
05/24/87	1200		7.4	-18.2	7.3	-7.7	7.4	-4.0	7.7	-9.3	7.7	-9.3	7.7	-9.3
05/25/87	0		7.5	-18.2	7.4	-7.7	7.5	-4.0	7.7	-9.2	7.7	-9.2	7.7	-9.2
05/25/87	1200		7.4	-18.3	7.3	-7.8	7.4	-4.0	7.7	-9.3	7.7	-9.3	7.7	-9.3
05/26/87	0		7.5	-18.3	7.4	-7.7	7.5	-4.0	7.7	-9.3	7.7	-9.3	7.7	-9.3
05/26/87	1200		7.4	-18.4	7.3	-7.8	7.4	-4.0	7.6	-9.4	7.6	-9.4	7.6	-9.4
05/27/87	0		7.5	-18.4	7.4	-7.8	7.5	-3.9	7.7	-9.3	7.7	-9.3	7.7	-9.3
05/27/87	1200		7.5	-18.5	7.4	-7.8	7.5	-3.9	7.7	-9.4	7.7	-9.4	7.7	-9.4
05/28/87	0		7.5	-18.4	7.4	-7.8	7.5	-3.9	7.7	-9.3	7.7	-9.3	7.7	-9.3
05/28/87	1200		7.5	-18.3	7.4	-7.8	7.6	-3.9	7.7	-9.3	7.7	-9.3	7.7	-9.3
05/29/87	0		7.6	-18.3	7.5	-7.7	7.6	-3.9	7.7	-9.3	7.7	-9.3	7.7	-9.3
05/29/87	1200		7.5	-18.4	7.4	-7.7	7.5	-3.9	7.6	-9.4	7.6	-9.4	7.6	-9.4
05/30/87	0		7.6	-18.3	7.5	-7.7	7.6	-3.9	7.7	-9.3	7.7	-9.3	7.7	-9.3
05/30/87	1200		7.5	-18.4	7.4	-7.7	7.5	-3.9	7.7	-9.4	7.7	-9.4	7.7	-9.4
05/31/87	0		7.6	-18.4	7.5	-7.7	7.6	-3.9	7.7	-9.4	7.7	-9.4	7.7	-9.4
05/31/87	1200		7.7	-18.5	7.5	-7.9	7.6	-3.9	7.8	-9.5	7.8	-9.5	7.8	-9.5
06/01/87	0		7.7	-18.4	7.6	-7.7	7.7	-3.8	7.8	-9.4	7.8	-9.4	7.8	-9.4
06/01/87	1200		7.6	-18.4	7.6	-7.7	7.6	-3.9	7.7	-9.5	7.7	-9.5	7.7	-9.5
06/02/87	0		7.7	-18.3	7.6	-7.7	7.6	-3.9	7.7	-9.5	7.7	-9.5	7.7	-9.5
06/02/87	1200		7.6	-18.3	7.6	-7.7	7.6	-3.9	7.7	-9.5	7.7	-9.5	7.7	-9.5
06/03/87	0		7.7	-18.3	7.6	-7.7	7.6	-3.9	7.7	-9.5	7.7	-9.5	7.7	-9.5
06/03/87	1200		7.7	-18.3	7.6	-7.7	7.6	-3.9	7.7	-9.5	7.7	-9.5	7.7	-9.5
06/04/87	0		7.7	-18.3	7.6	-7.7	7.6	-3.8	7.7	-9.4	7.7	-9.4	7.7	-9.4

Table 5.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)		3.8			4.1			4.4			5.0		
Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
06/04/87	1200	7.7	-18.3	7.7	-7.8	7.7	-7.8	7.7	-3.9	7.8	-9.5	7.8	-9.5
06/05/87	0	7.7	-18.4	7.6	-7.8	7.6	-7.8	7.6	-3.9	7.7	-9.5	7.7	-9.5
06/05/87	1200	7.7	-18.5	7.7	-7.7	7.7	-7.7	7.7	-3.8	7.8	-9.5	7.8	-9.5
06/06/87	0	7.8	-18.4	7.7	-7.8	7.7	-7.8	7.7	-3.9	7.8	-9.5	7.8	-9.5
06/06/87	1200	7.8	-18.5	7.7	-7.8	7.7	-7.8	7.7	-3.8	7.8	-9.6	7.8	-9.6
06/07/87	0	7.8	-18.5	7.8	-7.8	7.8	-7.8	7.7	-3.9	7.8	-9.6	7.8	-9.6
06/07/87	1200	7.9	-18.4	7.8	-7.8	7.8	-7.8	7.8	-3.9	7.9	-9.6	7.9	-9.6
06/08/87	0	7.8	-18.5	7.8	-7.8	7.8	-7.8	7.7	-3.9	7.8	-9.6	7.8	-9.6
06/08/87	1200	7.8	-18.6	7.8	-7.8	7.8	-7.8	7.7	-4.0	7.8	-9.6	7.8	-9.6
06/09/87	0	7.9	-18.5	7.8	-7.8	7.8	-7.8	7.8	-3.9	7.8	-9.6	7.8	-9.6
06/09/87	1200	8.0	-18.5	7.9	-7.9	7.9	-7.9	7.8	-3.9	7.9	-9.6	7.9	-9.6
06/10/87	0	7.9	-18.7	7.8	-7.9	7.8	-7.9	7.7	-3.9	7.8	-9.7	7.8	-9.7
06/10/87	1200	7.9	-18.6	7.9	-7.8	7.9	-7.8	7.8	-3.9	7.9	-9.6	7.9	-9.6
06/11/87	0	8.0	-18.6	7.9	-7.8	7.9	-7.8	7.8	-3.9	7.9	-9.7	7.9	-9.7
06/11/87	1200	8.0	-18.6	7.9	-7.8	7.9	-7.8	7.8	-3.9	7.9	-9.6	7.8	-9.6
06/12/87	0	7.9	-18.6	7.9	-7.8	7.9	-7.8	7.8	-3.9	7.8	-9.7	7.8	-9.7
06/12/87	1200	7.9	-18.6	7.9	-7.9	7.9	-7.9	7.8	-3.9	7.9	-9.7	7.9	-9.7
06/13/87	0	8.0	-18.7	8.0	-7.8	8.0	-7.8	7.8	-3.8	7.9	-9.7	7.9	-9.7
06/13/87	1200	8.0	-18.6	8.0	-7.7	8.0	-7.7	7.8	-3.9	7.9	-9.6	7.9	-9.6
06/14/87	0	8.0	-18.6	8.0	-7.8	8.0	-7.8	7.9	-3.9	7.9	-9.8	7.9	-9.8
06/14/87	1200	8.0	-18.7	7.9	-7.7	7.9	-7.7	7.9	-3.9	7.9	-9.7	7.9	-9.7
06/15/87	0	8.1	-18.8	8.0	-7.8	8.0	-7.8	7.9	-3.8	7.9	-9.8	7.9	-9.8
06/15/87	1200	8.1	-18.8	8.0	-7.7	8.0	-7.7	8.0	-3.8	7.9	-9.8	7.9	-9.8
06/16/87	0	8.2	-18.8	8.1	-7.8	8.1	-7.8	8.0	-3.9	8.0	-9.9	8.0	-9.9
06/16/87	1200	8.1	-18.8	8.0	-7.7	8.0	-7.7	7.9	-3.9	7.9	-9.9	7.9	-9.9
06/17/87	0	8.1	-18.8	8.0	-7.9	8.0	-7.9	7.9	-3.9	7.9	-9.9	7.9	-9.9
06/17/87	1200	8.2	-18.7	8.1	-7.8	8.1	-7.8	8.0	-3.9	7.9	-9.8	7.9	-9.8
06/18/87	0	8.2	-18.9	8.1	-7.9	8.1	-7.9	8.0	-3.9	8.0	-9.9	8.0	-9.9
06/18/87	1200	8.2	-18.8	8.1	-7.7	8.1	-7.7	8.0	-3.9	8.0	-9.8	8.0	-9.8
06/19/87	0	8.2	-18.9	8.1	-7.8	8.1	-7.8	7.9	-3.9	7.9	-9.9	7.9	-9.9
06/19/87	1200	8.2	-19.0	8.1	-7.8	8.1	-7.8	8.0	-3.9	8.0	-10.0	8.0	-10.0
06/20/87	0	8.2	-19.0	8.1	-7.9	8.1	-7.9	8.0	-3.9	7.9	-10.0	7.9	-10.0
06/20/87	1200	8.2	-19.0	8.1	-7.9	8.1	-7.9	8.0	-3.9	7.9	-9.9	7.9	-9.9
06/21/87	0	8.3	-19.0	8.2	-7.9	8.2	-7.9	8.0	-3.9	8.0	-10.0	8.0	-10.0
06/21/87	1200	8.3	-19.0	8.2	-7.8	8.2	-7.8	8.0	-3.9	8.0	-10.0	8.0	-10.0
06/22/87	0	8.4	-19.1	8.2	-7.8	8.2	-7.8	8.1	-3.9	8.0	-10.0	8.0	-10.0
06/22/87	1200	8.4	-19.0	8.2	-7.8	8.2	-7.8	8.1	-3.9	8.0	-10.0	8.0	-10.0
06/23/87	0	8.3	-19.1	8.3	-7.9	8.2	-7.9	8.0	-4.0	8.0	-10.0	8.0	-10.0

Table 5.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			4.4			5.0		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)
06/24/87	0		8.3	-19.1	8.2	-7.9	8.1	-3.9	8.0	-10.0				
06/24/87	1200		8.4	-19.1	8.3	-7.9	8.1	-3.9	8.0	-10.0				
06/25/87	0		8.4	-19.0	8.2	-7.8	8.1	-3.9	8.0	-10.0				
06/25/87	1200		8.4	-19.1	8.3	-7.8	8.2	-3.9	8.0	-10.1				
07/08/87	0		9.0	-19.7	8.8	-8.2	8.5	-3.7	8.3	-10.1				
07/08/87	1200		9.0	-19.8	8.7	-8.2	8.5	-3.9	8.3	-10.3				
07/09/87	0		9.0	-19.8	8.7	-8.2	8.5	-4.0	8.3	-10.2				
07/09/87	1200		9.0	-19.9	8.7	-8.2	8.5	-3.9	8.3	-10.4				
07/10/87	0		9.0	-19.9	8.8	-8.0	8.6	-3.9	8.3	-10.3				
07/10/87	1200		9.1	-19.9	8.9	-8.0	8.6	-3.9	8.4	-10.3				
07/11/87	0		9.1	-19.9	8.9	-8.0	8.7	-3.8	8.4	-10.4				
07/11/87	1200		9.1	-19.9	8.8	-7.8	8.6	-3.8	8.3	-10.4				
07/12/87	0		9.1	-19.8	8.8	-7.8	8.6	-3.7	8.3	-10.3				
07/12/87	1200		9.1	-19.9	8.9	-7.8	8.7	-3.8	8.4	-10.3				
07/13/87	0		9.1	-19.9	8.8	-7.7	8.6	-3.8	8.3	-10.3				
07/13/87	1200		9.2	-19.8	8.9	-7.7	8.7	-3.7	8.4	-10.4				
07/14/87	0		9.1	-20.0	8.8	-7.6	8.6	-3.7	8.3	-10.4				
07/14/87	1200		9.2	-19.9	8.9	-7.6	8.7	-3.7	8.4	-10.4				
07/15/87	0		9.2	-19.9	8.9	-7.6	8.7	-3.7	8.4	-10.4				
07/15/87	1200		9.3	-19.9	8.9	-7.7	8.8	-3.7	8.4	-10.5				
07/16/87	0		9.2	-20.0	8.9	-7.7	8.7	-3.7	8.4	-10.5				
07/16/87	1200		9.4	-20.0	9.0	-7.6	8.9	-3.7	8.5	-10.5				
07/17/87	0		9.3	-20.1	8.9	-7.7	8.8	-3.7	8.4	-10.5				
07/17/87	1200		9.4	-20.1	9.1	-7.6	8.9	-3.7	8.4	-10.6				
07/18/87	0		9.4	-20.1	9.1	-7.6	8.9	-3.7	8.5	-10.6				
07/18/87	1200		9.4	-20.1	9.0	-7.6	8.9	-3.7	8.5	-10.6				
07/19/87	0		9.4	-20.0	9.0	-7.5	8.9	-3.6	8.5	-10.6				
07/19/87	1200		9.4	-20.0	9.0	-7.5	8.9	-3.7	8.5	-10.6				
07/20/87	0		9.4	-20.1	9.1	-7.5	8.9	-3.6	8.5	-10.6				
07/20/87	1200		9.4	-20.0	9.1	-7.5	8.9	-3.6	8.5	-10.6				
07/21/87	0		9.4	-20.1	9.1	-7.5	8.9	-3.6	8.5	-10.6				
07/21/87	1200		9.6	-20.2	9.2	-7.5	9.0	-3.6	8.6	-10.6				
07/22/87	0		9.5	-20.1	9.2	-7.5	9.0	-3.6	8.6	-10.7				
07/22/87	1200		9.5	-20.2	9.1	-7.5	8.9	-3.7	8.5	-10.6				
07/23/87	0		9.5	-20.1	9.2	-7.4	9.0	-3.6	8.6	-10.6				
07/23/87	1200		9.6	-20.1	9.2	-7.4	9.0	-3.7	8.6	-10.6				
07/24/87	0		9.5	-20.1	9.2	-7.4	9.0	-3.6	8.6	-10.7				

Table 5.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			4.4			5.0		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
07/24/87	1200	0	9.6	-20.1	9.2	-7.5	9.0	-3.6	8.6	-10.7	8.6	-10.7	8.6	-10.7
07/25/87	1200	0	9.6	-20.1	9.2	-7.4	9.0	-3.6	8.6	-10.7	8.6	-10.7	8.6	-10.7
07/26/87	1200	0	9.6	-20.1	9.2	-7.3	9.0	-3.7	8.6	-10.6	8.6	-10.6	8.6	-10.6
07/26/87	1200	0	9.7	-20.2	9.3	-7.3	9.1	-3.6	8.6	-10.7	8.6	-10.7	8.6	-10.7
07/27/87	1200	0	9.6	-20.2	9.3	-7.3	9.1	-3.6	8.6	-10.6	8.6	-10.6	8.6	-10.6
07/27/87	1200	0	9.7	-20.1	9.3	-7.3	9.1	-3.6	8.7	-10.7	8.7	-10.7	8.7	-10.7
07/28/87	1200	0	9.7	-20.2	9.3	-7.2	9.1	-3.6	8.7	-10.6	8.7	-10.6	8.7	-10.6
07/28/87	1200	0	9.7	-20.2	9.4	-7.2	9.1	-3.6	8.7	-10.8	8.7	-10.8	8.7	-10.8
07/29/87	1200	0	9.7	-20.2	9.4	-7.2	9.2	-3.6	8.7	-10.7	8.7	-10.7	8.7	-10.7
07/29/87	1200	0	9.8	-20.1	9.4	-7.2	9.2	-3.6	8.7	-10.8	8.7	-10.8	8.7	-10.8
07/30/87	1200	0	9.8	-20.1	9.5	-7.2	9.2	-3.6	8.8	-10.7	8.8	-10.7	8.8	-10.7
07/30/87	1200	0	9.8	-20.2	9.4	-7.1	9.2	-3.6	8.7	-10.8	8.7	-10.8	8.7	-10.8
07/31/87	1200	0	9.8	-20.2	9.4	-7.1	9.2	-3.5	8.7	-10.7	8.7	-10.7	8.7	-10.7
07/31/87	1200	0	9.8	-20.2	9.5	-7.1	9.2	-3.6	8.8	-10.8	8.8	-10.8	8.8	-10.8
08/01/87	1200	0	9.8	-20.2	9.5	-7.1	9.3	-3.6	8.8	-10.7	8.8	-10.7	8.8	-10.7
08/01/87	1200	0	9.9	-20.1	9.5	-7.1	9.3	-3.6	8.8	-10.8	8.8	-10.8	8.8	-10.8
08/01/87	1200	0	9.9	-20.2	9.5	-7.0	9.3	-3.6	8.8	-10.8	8.8	-10.8	8.8	-10.8
08/02/87	1200	0	9.9	-20.2	9.5	-7.0	9.3	-3.6	8.8	-10.8	8.8	-10.8	8.8	-10.8
08/03/87	1200	0	9.9	-20.2	9.5	-7.0	9.3	-3.5	8.8	-10.8	8.8	-10.8	8.8	-10.8
08/03/87	1200	0	10.0	-20.2	9.6	-7.0	9.3	-3.5	8.9	-10.8	8.9	-10.8	8.9	-10.8
08/04/87	1200	0	9.9	-20.2	9.5	-7.0	9.3	-3.5	8.8	-10.7	8.8	-10.7	8.8	-10.7
08/04/87	1200	0	10.0	-20.2	9.6	-7.1	9.4	-3.6	8.9	-10.8	8.9	-10.8	8.9	-10.8
08/05/87	1200	0	9.9	-20.3	9.5	-7.1	9.3	-3.6	8.8	-10.8	8.8	-10.8	8.8	-10.8
08/05/87	1200	0	10.0	-20.2	9.6	-7.2	9.4	-3.6	8.9	-10.8	8.9	-10.8	8.9	-10.8
08/06/87	1200	0	10.1	-20.2	9.7	-7.1	9.4	-3.5	8.9	-10.8	8.9	-10.8	8.9	-10.8
08/06/87	1200	0	10.0	-20.2	9.6	-7.2	9.4	-3.6	8.9	-10.9	8.9	-10.9	8.9	-10.9
08/07/87	1200	0	10.0	-20.2	9.7	-7.2	9.4	-3.5	8.9	-10.8	8.9	-10.8	8.9	-10.8
08/07/87	1200	0	10.1	-20.3	9.7	-7.2	9.5	-3.6	8.9	-10.8	8.9	-10.8	8.9	-10.8
08/07/87	1200	0	10.1	-20.2	9.7	-7.1	9.5	-3.6	9.0	-10.8	9.0	-10.8	9.0	-10.8
08/08/87	1200	0	10.1	-20.1	9.7	-7.1	9.5	-3.6	8.9	-10.8	8.9	-10.8	8.9	-10.8
08/08/87	1200	0	10.1	-20.1	9.7	-7.1	9.5	-3.6	8.9	-10.8	8.9	-10.8	8.9	-10.8
08/09/87	1200	0	10.1	-20.2	9.7	-7.0	9.4	-3.5	8.9	-10.9	8.9	-10.9	8.9	-10.9
08/09/87	1200	0	10.2	-20.2	9.8	-7.1	9.5	-3.6	9.0	-10.9	9.0	-10.9	9.0	-10.9
08/10/87	1200	0	10.2	-20.1	9.7	-7.1	9.5	-3.6	9.0	-10.9	9.0	-10.9	9.0	-10.9
08/10/87	1200	0	10.2	-20.2	9.8	-7.1	9.5	-3.6	9.0	-10.9	9.0	-10.9	9.0	-10.9
08/11/87	1200	0	10.2	-20.2	9.8	-7.1	9.5	-3.6	9.0	-10.9	9.0	-10.9	9.0	-10.9
08/11/87	1200	0	10.2	-20.3	9.8	-7.1	9.6	-3.6	9.0	-10.9	9.0	-10.9	9.0	-10.9
08/12/87	1200	0	10.3	-20.2	9.9	-7.0	9.6	-3.6	9.1	-10.9	9.1	-10.9	9.1	-10.9

Table 5.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench---continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			4.4			5.0		
			Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)	
08/12/87	1200		10.3	-20.3		9.8	-7.0		9.6	-3.6		9.0	-11.0	
08/13/87	0		10.3	-20.3		9.8	-7.1		9.6	-3.6		9.0	-11.0	
08/13/87	1200		10.3	-20.3		9.9	-7.1		9.7	-3.5		9.1	-11.0	
08/14/87	0		10.3	-20.4		9.9	-7.0		9.7	-3.5		9.1	-11.0	
08/14/87	1200		10.3	-20.4		9.9	-7.0		9.7	-3.5		9.1	-11.0	
08/15/87	0		10.4	-20.3		10.0	-7.0		9.7	-3.5		9.1	-10.9	
08/15/87	1200		10.4	-20.4		9.9	-6.9		9.7	-3.5		9.1	-11.0	
08/16/87	0		10.4	-20.4		10.0	-6.9		9.7	-3.5		9.1	-11.0	
08/16/87	1200		10.4	-20.4		10.0	-6.8		9.7	-3.5		9.1	-11.0	
08/17/87	0		10.5	-20.3		10.0	-6.9		9.8	-3.4		9.2	-11.0	
08/17/87	1200		10.4	-20.3		10.0	-6.8		9.7	-3.5		9.1	-11.0	
08/18/87	0		10.5	-20.2		10.1	-6.9		9.8	-3.4		9.2	-10.9	
08/18/87	1200		10.5	-20.2		10.1	-6.9		9.8	-3.5		9.2	-11.0	
08/19/87	0		10.5	-20.2		10.1	-6.8		9.8	-3.4		9.2	-10.9	
08/19/87	1200		10.5	-20.3		10.1	-6.8		9.8	-3.4		9.2	-11.0	
08/20/87	0		10.5	-20.3		10.1	-6.8		9.8	-3.4		9.2	-11.0	
08/20/87	1200		10.5	-20.4		10.1	-6.8		9.8	-3.4		9.2	-11.0	
08/21/87	0		10.6	-20.3		10.2	-6.6		9.9	-3.4		9.3	-11.0	
08/21/87	1200		10.6	-20.2		10.2	-6.6		9.9	-3.5		9.3	-11.1	
08/22/87	0		10.6	-20.2		10.2	-6.5		9.9	-3.5		9.3	-11.0	
08/22/87	1200		10.6	-20.2		10.2	-6.5		10.0	-3.5		9.3	-11.0	
08/23/87	0		10.6	-20.2		10.2	-6.4		9.9	-3.5		9.3	-11.0	
08/23/87	1200		10.6	-20.2		10.3	-6.4		10.0	-3.5		9.3	-11.0	
08/24/87	0		10.6	-20.2		10.2	-6.4		9.9	-3.5		9.3	-11.1	
08/24/87	1200		10.7	-20.3		10.3	-6.3		10.0	-3.5		9.3	-11.1	
08/25/87	0		10.8	-20.2		10.4	-6.3		10.1	-3.4		9.4	-11.0	
08/25/87	1200		10.7	-20.3		10.3	-6.3		10.0	-3.5		9.3	-11.1	
08/26/87	0		10.7	-20.4		10.3	-6.2		10.0	-3.4		9.4	-11.1	
08/26/87	1200		10.7	-20.3		10.3	-6.1		10.0	-3.5		9.4	-11.1	
08/27/87	0		10.8	-20.4		10.3	-6.2		10.1	-3.5		9.4	-11.1	
08/27/87	1200		10.8	-20.3		10.4	-6.1		10.1	-3.5		9.4	-11.1	
08/28/87	0		10.8	-20.4		10.3	-6.1		10.1	-3.4		9.4	-11.1	
08/28/87	1200		10.8	-20.4		10.4	-6.2		10.1	-3.5		9.4	-11.1	
08/29/87	0		10.8	-20.4		10.4	-6.2		10.1	-3.3		9.4	-11.1	
08/29/87	1200		10.8	-20.4		10.4	-6.1		10.1	-3.4		9.4	-11.1	
08/30/87	0		10.8	-20.4		10.4	-6.1		10.1	-3.5		9.4	-11.1	
08/30/87	1200		10.8	-20.3		10.4	-6.1		10.1	-3.5		9.4	-11.2	
08/31/87	0		10.9	-20.2		10.5	-6.0		10.2	-3.5		9.5	-11.1	

Table 5.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			4.4			5.0		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
08/31/87	08/31/87	1200	10.9	-20.3	10.5	-6.0	10.2	-3.5	9.5	-11.1	9.5	-11.1	9.5	-11.1
09/01/87	09/01/87	0	10.9	-20.3	10.5	-6.0	10.2	-3.4	9.5	-11.1	9.5	-11.1	9.5	-11.1
09/01/87	09/01/87	1200	10.9	-20.3	10.5	-5.9	10.2	-3.4	9.5	-11.2	9.5	-11.2	9.5	-11.2
09/02/87	09/02/87	0	10.9	-20.3	10.5	-5.9	10.2	-3.3	9.5	-11.1	9.5	-11.1	9.5	-11.1
09/02/87	09/02/87	1200	10.9	-20.3	10.5	-5.9	10.2	-3.4	9.5	-11.2	9.5	-11.2	9.5	-11.2
09/03/87	09/03/87	0	10.9	-20.4	10.5	-5.9	10.2	-3.4	9.5	-11.2	9.5	-11.2	9.5	-11.2
09/03/87	09/03/87	1200	11.0	-20.4	10.6	-5.9	10.3	-3.4	9.6	-11.3	9.6	-11.3	9.6	-11.3
09/04/87	09/04/87	0	11.0	-20.4	10.6	-5.9	10.3	-3.5	9.6	-11.2	9.6	-11.2	9.6	-11.2
09/04/87	09/04/87	1200	11.0	-20.3	10.6	-5.9	10.3	-3.4	9.5	-11.3	9.5	-11.3	9.5	-11.3
09/05/87	09/05/87	0	10.9	-20.3	10.5	-5.9	10.2	-3.5	9.5	-11.2	9.5	-11.2	9.5	-11.2
09/05/87	09/05/87	1200	11.0	-20.3	10.6	-5.9	10.3	-3.4	9.6	-11.2	9.6	-11.2	9.6	-11.2
09/06/87	09/06/87	0	11.0	-20.3	10.6	-6.0	10.3	-3.5	9.6	-11.3	9.6	-11.3	9.6	-11.3
09/06/87	09/06/87	1200	11.0	-20.3	10.6	-6.1	10.3	-3.4	9.6	-11.2	9.6	-11.2	9.6	-11.2
09/07/87	09/07/87	0	11.0	-20.3	10.6	-6.1	10.3	-3.4	9.6	-11.2	9.6	-11.2	9.6	-11.2
09/07/87	09/07/87	1200	11.1	-20.3	10.7	-6.2	10.4	-3.4	9.6	-11.2	9.6	-11.2	9.6	-11.2
09/08/87	09/08/87	0	11.1	-20.2	10.7	-6.1	10.4	-3.3	9.6	-11.2	9.6	-11.2	9.6	-11.2
09/08/87	09/08/87	1200	11.1	-20.3	10.7	-6.0	10.4	-3.5	9.6	-11.2	9.6	-11.2	9.6	-11.2
09/09/87	09/09/87	0	11.1	-20.3	10.7	-6.0	10.4	-3.4	9.6	-11.2	9.6	-11.2	9.6	-11.2
09/09/87	09/09/87	1200	11.1	-20.2	10.7	-6.0	10.4	-3.4	9.7	-11.2	9.7	-11.2	9.7	-11.2
09/10/87	09/10/87	0	11.1	-20.3	10.7	-6.0	10.4	-3.4	9.6	-11.2	9.6	-11.2	9.6	-11.2
09/10/87	09/10/87	1200	11.1	-20.3	10.7	-6.0	10.4	-3.4	9.7	-11.2	9.7	-11.2	9.7	-11.2
09/11/87	09/11/87	0	11.1	-20.2	10.7	-5.9	10.4	-3.4	9.7	-11.2	9.7	-11.2	9.7	-11.2
09/11/87	09/11/87	1200	11.1	-20.3	10.8	-6.0	10.4	-3.4	9.7	-11.2	9.7	-11.2	9.7	-11.2
09/12/87	09/12/87	0	11.2	-20.2	10.8	-5.9	10.5	-3.4	9.7	-11.2	9.7	-11.2	9.7	-11.2
09/12/87	09/12/87	1200	11.2	-20.3	10.8	-5.9	10.5	-3.4	9.7	-11.3	9.7	-11.3	9.7	-11.3
09/13/87	09/13/87	0	11.1	-20.3	10.7	-5.8	10.4	-3.4	9.7	-11.2	9.7	-11.2	9.7	-11.2
09/13/87	09/13/87	1200	11.2	-20.3	10.8	-5.9	10.5	-3.4	9.7	-11.3	9.7	-11.3	9.7	-11.3
09/14/87	09/14/87	0	11.2	-20.3	10.8	-5.8	10.5	-3.4	9.7	-11.3	9.7	-11.3	9.7	-11.3
09/14/87	09/14/87	1200	11.2	-20.3	10.8	-5.8	10.5	-3.4	9.7	-11.3	9.7	-11.3	9.7	-11.3
09/15/87	09/15/87	0	11.2	-20.1	10.8	-5.8	10.5	-3.3	9.8	-11.2	9.8	-11.2	9.8	-11.2
09/15/87	09/15/87	1200	11.3	-20.2	10.9	-5.7	10.5	-3.4	9.8	-11.2	9.8	-11.2	9.8	-11.2
09/16/87	09/16/87	0	11.2	-20.2	10.9	-5.7	10.5	-3.4	9.8	-11.2	9.8	-11.2	9.8	-11.2
09/16/87	09/16/87	1200	11.3	-20.2	10.9	-5.5	10.6	-3.3	9.9	-11.3	9.9	-11.3	9.9	-11.3
09/17/87	09/17/87	0	11.3	-20.2	10.9	-5.5	10.6	-3.3	9.8	-11.2	9.8	-11.2	9.8	-11.2
09/17/87	09/17/87	1200	11.3	-20.1	10.9	-5.5	10.6	-3.3	9.8	-11.3	9.8	-11.3	9.8	-11.3
09/18/87	09/18/87	0	11.3	-20.1	10.9	-5.5	10.6	-3.2	9.8	-11.2	9.8	-11.2	9.8	-11.2
09/18/87	09/18/87	1200	11.3	-20.1	10.9	-5.5	10.6	-3.2	9.8	-11.3	9.8	-11.3	9.8	-11.3
09/19/87	09/19/87	0	11.2	-20.2	10.9	-5.6	10.5	-3.4	9.8	-11.2	9.8	-11.2	9.8	-11.2

Table 5.--Temperature and soil-water potential for undisturbed soil beneath the horizontal
culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential
rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	3.8			4.1			4.4			5.0		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
09/19/87	1200		11.3	-20.1	10.9	-5.5	10.6	-3.3	9.9	-11.2	9.9	-11.2
09/20/87	0		11.3	-20.1	10.9	-5.5	10.6	-3.3	9.8	-11.2	9.8	-11.2
09/20/87	1200		11.3	-20.0	10.9	-5.5	10.6	-3.3	9.9	-11.2	9.9	-11.2
09/21/87	0		11.3	-20.1	10.9	-5.5	10.6	-3.3	9.9	-11.1	9.9	-11.1
09/21/87	1200		11.3	-20.0	11.0	-5.4	10.6	-3.2	9.9	-11.2	9.9	-11.2
09/22/87	0		11.3	-20.0	10.9	-5.5	10.6	-3.2	9.9	-11.2	9.9	-11.2
09/22/87	1200		11.4	-20.1	11.0	-5.4	10.7	-3.2	9.9	-11.2	9.9	-11.2
09/23/87	0		11.3	-20.0	11.0	-5.4	10.7	-3.1	9.9	-11.1	9.9	-11.1
09/23/87	1200		11.4	-20.0	11.0	-5.5	10.7	-3.2	9.9	-11.2	9.9	-11.2
09/24/87	0		11.3	-20.1	11.0	-5.5	10.7	-3.2	9.9	-11.2	9.9	-11.2
09/24/87	1200		11.4	-20.0	11.0	-5.4	10.7	-3.1	10.0	-11.3	10.0	-11.3
09/25/87	0		11.4	-20.0	11.0	-5.3	10.7	-3.1	10.0	-11.2	10.0	-11.2
09/25/87	1200		11.4	-20.1	11.0	-5.3	10.7	-3.1	10.0	-11.3	10.0	-11.3
09/26/87	0		11.4	-20.0	11.0	-5.2	10.7	-3.1	9.9	-11.2	9.9	-11.2
09/26/87	1200		11.5	-20.0	11.1	-5.2	10.8	-3.1	10.0	-11.2	10.0	-11.2
09/27/87	0		11.5	-20.0	11.1	-5.1	10.8	-3.1	10.1	-11.2	10.1	-11.2
09/27/87	1200		11.4	-20.0	11.0	-5.0	10.7	-3.1	10.0	-11.3	10.0	-11.3
09/28/87	0		11.4	-19.9	11.0	-5.1	10.8	-3.1	10.0	-11.2	10.0	-11.2
09/28/87	1200		11.4	-19.8	11.0	-5.1	10.7	-3.1	10.0	-11.2	10.0	-11.2
09/29/87	0		11.4	-19.8	11.1	-5.2	10.8	-3.1	10.0	-11.2	10.0	-11.2
09/29/87	1200		11.4	-19.8	11.1	-5.2	10.8	-3.1	10.0	-11.2	10.0	-11.2
09/30/87	0		11.4	-19.8	11.1	-5.2	10.8	-3.1	10.0	-11.2	10.0	-11.2
09/30/87	1200		11.5	-19.8	11.1	-5.2	10.8	-3.1	10.0	-11.2	10.0	-11.2
10/01/87	0		11.5	-19.8	11.1	-5.3	10.8	-3.1	10.1	-11.2	10.1	-11.2
10/01/87	1200		11.5	-19.8	11.1	-5.1	10.8	-3.1	10.1	-11.2	10.1	-11.2
10/02/87	0		11.5	-19.9	11.1	-5.2	10.8	-3.1	10.1	-11.2	10.1	-11.2
10/02/87	1200		11.5	-19.9	11.2	-5.1	10.8	-3.1	10.1	-11.3	10.1	-11.3
10/03/87	0		11.5	-19.9	11.1	-5.1	10.8	-3.1	10.1	-11.2	10.1	-11.2
10/03/87	1200		11.5	-19.8	11.2	-5.1	10.9	-3.1	10.1	-11.2	10.1	-11.2
10/04/87	0		11.4	-19.8	11.1	-5.1	10.8	-3.1	10.0	-11.3	10.0	-11.3
10/04/87	1200		11.6	-19.8	11.2	-5.2	10.9	-3.1	10.2	-11.3	10.2	-11.3
10/05/87	0		11.5	-19.7	11.2	-5.1	10.9	-3.0	10.1	-11.3	10.1	-11.3
10/05/87	1200		11.6	-19.7	11.2	-5.0	10.9	-3.1	10.1	-11.2	10.1	-11.2
10/06/87	0		11.5	-19.8	11.2	-5.0	10.9	-3.1	10.1	-11.3	10.1	-11.3
10/06/87	1200		11.5	-19.7	11.2	-5.0	10.9	-3.1	10.1	-11.3	10.1	-11.3
10/07/87	0		11.5	-19.7	11.2	-5.0	10.9	-3.0	10.2	-11.2	10.2	-11.2
10/07/87	1200		11.6	-19.7	11.2	-4.9	10.9	-3.1	10.2	-11.3	10.2	-11.3
10/08/87	0		11.5	-19.8	11.2	-4.9	10.9	-3.0	10.1	-11.3	10.1	-11.3

Table 5.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	3.8			4.1			4.4			5.0		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
10/08/87	1200		11.6	-19.7	11.2	-4.9	10.9	-3.0	10.2	-11.3	10.2	-11.3
10/09/87	0		11.5	-19.7	11.2	-5.0	10.9	-3.0	10.2	-11.3	10.2	-11.3
10/09/87	1200		11.6	-19.6	11.2	-4.9	10.9	-3.1	10.2	-11.3	10.2	-11.3
10/10/87	0		11.6	-19.6	11.3	-4.9	11.0	-3.0	10.3	-11.3	10.3	-11.3
10/10/87	1200		11.6	-19.6	11.3	-4.9	11.0	-3.1	10.2	-11.3	10.2	-11.3
10/11/87	0		11.6	-19.5	11.3	-4.9	11.0	-3.1	10.2	-11.2	10.2	-11.2
10/11/87	1200		11.5	-19.6	11.2	-4.9	10.9	-3.1	10.2	-11.3	10.2	-11.3
10/12/87	0		11.6	-19.5	11.3	-4.9	11.0	-3.1	10.2	-11.3	10.2	-11.3
10/12/87	1200		11.6	-19.5	11.3	-4.9	11.0	-3.1	10.3	-11.4	10.3	-11.4
10/13/87	0		11.5	-19.6	11.2	-4.9	10.9	-3.1	10.1	-11.3	10.1	-11.3
10/13/87	1200		11.6	-19.5	11.3	-4.9	11.0	-3.0	10.2	-11.3	10.2	-11.3
10/14/87	0		11.6	-19.5	11.3	-4.9	11.0	-3.1	10.3	-11.3	10.3	-11.3
10/14/87	1200		11.6	-19.5	11.3	-4.9	11.0	-3.0	10.2	-11.3	10.2	-11.3
10/15/87	0		11.5	-19.4	11.2	-5.0	10.9	-3.1	10.2	-11.3	10.2	-11.3
10/15/87	1200		11.6	-19.4	11.3	-4.9	11.0	-3.0	10.3	-11.3	10.3	-11.3
10/16/87	0		11.7	-19.3	11.4	-4.9	11.1	-3.1	10.4	-11.2	10.4	-11.2
10/16/87	1200		11.6	-19.3	11.3	-4.8	11.0	-3.0	10.3	-11.3	10.3	-11.3
10/17/87	0		11.6	-19.3	11.3	-4.8	11.0	-3.0	10.3	-11.3	10.3	-11.3
10/17/87	1200		11.5	-19.3	11.3	-4.8	11.0	-3.0	10.2	-11.3	10.2	-11.3
10/18/87	0		11.5	-19.4	11.3	-4.8	11.0	-3.0	10.3	-11.3	10.3	-11.3
10/18/87	1200		11.6	-19.3	11.3	-4.8	11.0	-3.1	10.3	-11.2	10.3	-11.2
10/19/87	0		11.6	-19.3	11.3	-4.8	11.1	-3.0	10.4	-11.2	10.4	-11.2
10/19/87	1200		11.6	-19.4	11.3	-4.7	11.0	-3.0	10.3	-11.3	10.3	-11.3
10/20/87	0		11.6	-19.3	11.3	-4.8	11.0	-3.0	10.3	-11.2	10.3	-11.2
10/20/87	1200		11.6	-19.4	11.3	-4.7	11.0	-3.0	10.3	-11.3	10.3	-11.3
10/21/87	0		11.6	-19.4	11.3	-4.7	11.0	-3.0	10.3	-11.3	10.3	-11.3
10/21/87	1200		11.6	-19.5	11.3	-4.7	11.0	-3.0	10.3	-11.3	10.3	-11.3
10/22/87	0		11.6	-19.5	11.3	-4.7	11.0	-3.0	10.3	-11.3	10.3	-11.3
10/22/87	1200		11.6	-19.5	11.3	-4.7	11.0	-3.0	10.3	-11.3	10.3	-11.3
10/23/87	0		11.6	-19.4	11.4	-4.8	11.1	-3.0	10.4	-11.2	10.4	-11.2
10/23/87	1200		11.6	-19.5	11.4	-4.7	11.0	-3.0	10.3	-11.4	10.3	-11.4
10/24/87	0		11.6	-19.5	11.3	-4.7	11.0	-3.0	10.3	-11.3	10.3	-11.3
10/24/87	1200		11.7	-19.3	11.4	-4.7	11.1	-3.0	10.4	-11.3	10.4	-11.3
10/25/87	0		11.7	-19.3	11.4	-4.7	11.1	-2.9	10.4	-11.2	10.4	-11.2
10/25/87	1200		11.7	-19.3	11.4	-4.7	11.1	-3.0	10.4	-11.3	10.4	-11.3
10/26/87	0		11.7	-19.3	11.4	-4.7	11.1	-3.0	10.4	-11.2	10.4	-11.2
10/26/87	1200		11.7	-19.2	11.4	-4.6	11.1	-3.0	10.4	-11.2	10.4	-11.2
10/27/87	0		11.7	-19.3	11.4	-4.6	11.1	-3.0	10.4	-11.2	10.4	-11.2

Table 5.---Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench---continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			4.4			5.0		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
10/27/87	1200		11.7	-19.3	11.4	-4.6	11.1	-3.0	10.4	-11.2	10.4	-11.2	10.4	-11.2
10/28/87	0		11.7	-19.3	11.4	-4.6	11.1	-2.9	10.4	-11.3	10.4	-11.3	10.4	-11.3
10/28/87	1200		11.7	-19.3	11.4	-4.6	11.1	-3.0	10.4	-11.3	10.4	-11.3	10.4	-11.3
10/29/87	0		11.7	-19.4	11.4	-4.6	11.1	-3.0	10.4	-11.3	10.4	-11.3	10.4	-11.3
10/29/87	1200		11.7	-19.3	11.4	-4.6	11.1	-2.9	10.4	-11.3	10.4	-11.3	10.4	-11.3
10/30/87	0		11.7	-19.3	11.4	-4.6	11.1	-2.9	10.4	-11.3	10.4	-11.3	10.4	-11.3
10/30/87	1200		11.7	-19.3	11.5	-4.6	11.2	-3.0	10.5	-11.3	10.5	-11.3	10.5	-11.3
10/31/87	0		11.7	-19.2	11.4	-4.6	11.1	-3.0	10.4	-11.3	10.4	-11.3	10.4	-11.3
10/31/87	1200		11.7	-19.2	11.5	-4.6	11.2	-3.0	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/01/87	0		11.7	-19.3	11.4	-4.6	11.1	-3.0	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/01/87	1200		11.7	-19.2	11.5	-4.6	11.2	-3.0	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/02/87	0		11.7	-19.2	11.5	-4.6	11.2	-2.9	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/02/87	1200		11.7	-19.1	11.5	-4.5	11.2	-2.9	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/03/87	0		11.7	-19.2	11.5	-4.5	11.2	-3.0	10.5	-11.2	10.5	-11.2	10.5	-11.2
11/03/87	1200		11.7	-19.1	11.5	-4.5	11.2	-3.0	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/04/87	0		11.7	-19.0	11.5	-4.4	11.2	-3.0	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/04/87	1200		11.7	-19.0	11.5	-4.4	11.2	-3.0	10.5	-11.2	10.5	-11.2	10.5	-11.2
11/05/87	0		11.8	-19.0	11.5	-4.3	11.2	-2.9	10.6	-11.3	10.6	-11.3	10.6	-11.3
11/05/87	1200		11.7	-19.0	11.4	-4.3	11.1	-2.9	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/06/87	0		11.7	-19.0	11.5	-4.3	11.2	-2.9	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/06/87	1200		11.7	-19.0	11.5	-4.3	11.2	-2.9	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/07/87	0		11.7	-18.9	11.5	-4.3	11.2	-2.9	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/07/87	1200		11.7	-18.9	11.5	-4.2	11.2	-2.9	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/08/87	0		11.7	-18.9	11.5	-4.3	11.2	-2.9	10.5	-11.2	10.5	-11.2	10.5	-11.2
11/08/87	1200		11.7	-18.8	11.5	-4.2	11.2	-2.9	10.5	-11.2	10.5	-11.2	10.5	-11.2
11/09/87	0		11.7	-18.8	11.5	-4.2	11.2	-2.9	10.5	-11.2	10.5	-11.2	10.5	-11.2
11/09/87	1200		11.6	-18.9	11.4	-4.2	11.1	-2.9	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/10/87	0		11.5	-19.0	11.4	-4.2	11.1	-2.9	10.4	-11.3	10.4	-11.3	10.4	-11.3
11/10/87	1200		11.7	-18.9	11.5	-4.1	11.2	-2.8	10.5	-11.2	10.5	-11.2	10.5	-11.2
11/11/87	0		11.7	-18.8	11.5	-4.1	11.2	-2.8	10.6	-11.2	10.6	-11.2	10.6	-11.2
11/11/87	1200		11.6	-18.7	11.4	-4.2	11.2	-2.9	10.5	-11.2	10.5	-11.2	10.5	-11.2
11/12/87	0		11.7	-18.6	11.5	-4.2	11.2	-2.8	10.5	-11.2	10.5	-11.2	10.5	-11.2
11/12/87	1200		11.6	-18.6	11.5	-4.2	11.2	-2.8	10.5	-11.2	10.5	-11.2	10.5	-11.2
11/13/87	0		11.6	-18.6	11.4	-4.1	11.2	-2.8	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/13/87	1200		11.6	-18.6	11.4	-4.1	11.2	-2.8	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/14/87	0		11.6	-18.6	11.4	-4.1	11.2	-2.8	10.6	-11.3	10.6	-11.3	10.6	-11.3
11/14/87	1200		11.6	-18.5	11.4	-4.1	11.2	-2.8	10.5	-11.3	10.5	-11.3	10.5	-11.3
11/15/87	0		11.6	-18.5	11.4	-4.1	11.2	-2.9	10.6	-11.3	10.6	-11.3	10.6	-11.3

Table 5. ---Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench---continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			4.4			5.0		
			Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)	
11/15/87	1200		11.5	-18.3		11.4	-4.0		11.1	-2.8		10.5	-11.2	
11/16/87	0		11.5	-18.3		11.4	-4.0		11.2	-2.8		10.6	-11.2	
11/16/87	1200		11.5	-18.2		11.4	-4.0		11.2	-2.8		10.6	-11.2	
11/17/87	0		11.4	-18.2		11.3	-4.0		11.1	-2.8		10.5	-11.3	
11/17/87	1200		11.4	-18.1		11.4	-3.9		11.1	-2.8		10.5	-11.2	
11/18/87	0		11.5	-17.9		11.4	-3.8		11.2	-2.8		10.6	-11.2	
11/18/87	1200		11.4	-17.9		11.4	-3.7		11.1	-2.9		10.5	-11.1	
11/19/87	0		11.4	-17.7		11.4	-3.7		11.2	-2.9		10.6	-11.1	
11/19/87	1200		11.4	-17.6		11.3	-3.6		11.1	-2.9		10.5	-11.1	
11/20/87	0		11.4	-17.6		11.3	-3.7		11.1	-2.8		10.6	-11.1	
11/20/87	1200		11.4	-17.7		11.3	-3.6		11.1	-2.9		10.6	-11.1	
11/21/87	0		11.3	-17.7		11.3	-3.6		11.1	-2.9		10.6	-11.1	
11/21/87	1200		11.3	-17.6		11.3	-3.6		11.1	-2.8		10.5	-11.2	
11/22/87	0		11.3	-17.5		11.3	-3.6		11.1	-2.9		10.6	-11.1	
11/22/87	1200		11.3	-17.4		11.3	-3.6		11.1	-2.9		10.6	-11.1	
11/23/87	0		11.3	-17.4		11.3	-3.6		11.1	-2.8		10.6	-11.1	
11/23/87	1200		11.2	-17.4		11.2	-3.5		11.0	-2.8		10.5	-11.1	
11/24/87	0		11.2	-17.3		11.2	-3.5		11.1	-2.9		10.6	-11.1	
11/24/87	1200		11.2	-17.2		11.2	-3.5		11.0	-2.8		10.5	-11.0	
11/25/87	0		11.2	-17.2		11.2	-3.5		11.1	-2.8		10.6	-11.0	
11/25/87	1200		11.1	-17.2		11.2	-3.5		11.0	-2.8		10.5	-11.0	
11/26/87	0		11.1	-17.0		11.2	-3.4		11.0	-2.8		10.6	-10.9	
11/26/87	1200		11.1	-17.1		11.1	-3.4		10.9	-2.9		10.5	-11.0	
11/27/87	0		11.1	-17.0		11.2	-3.4		11.0	-2.9		10.6	-11.0	
11/27/87	1200		11.1	-16.9		11.1	-3.3		10.9	-2.8		10.5	-11.0	
11/28/87	0		11.0	-16.9		11.1	-3.4		10.9	-2.8		10.5	-10.9	
11/28/87	1200		11.0	-16.9		11.1	-3.4		10.9	-2.8		10.5	-11.0	
11/29/87	0		11.0	-16.9		11.1	-3.3		10.9	-2.8		10.6	-10.9	
11/29/87	1200		10.9	-16.9		11.1	-3.3		10.9	-2.9		10.5	-10.9	
11/30/87	0		10.9	-16.7		11.1	-3.3		10.9	-2.8		10.6	-10.9	
11/30/87	1200		10.9	-16.6		11.0	-3.3		10.9	-2.8		10.6	-10.9	
12/01/87	0		10.8	-16.6		11.0	-3.3		10.9	-2.9		10.5	-10.9	
12/01/87	1200		10.8	-16.5		11.0	-3.2		10.8	-2.9		10.5	-10.8	
12/02/87	0		10.8	-16.5		11.0	-3.3		10.8	-2.9		10.5	-10.8	
12/02/87	1200		10.8	-16.6		10.9	-3.3		10.8	-2.9		10.5	-10.8	
12/03/87	0		10.7	-16.5		10.9	-3.2		10.8	-2.8		10.5	-10.8	
12/03/87	1200		10.7	-16.4		10.9	-3.2		10.8	-2.8		10.5	-10.7	
12/04/87	0		10.7	-16.4		10.9	-3.2		10.8	-2.9		10.5	-10.8	

Table 5.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	3.8			4.1			4.4			5.0		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
12/04/87	1200		10.7	-16.4	10.9	-3.1	10.9	-3.1	10.7	-3.0	10.5	-10.8	10.5	-10.7
12/05/87	0		10.7	-16.5	10.9	-3.1	10.9	-3.1	10.7	-2.9	10.5	-10.7	10.5	-10.7
12/05/87	1200		10.6	-16.4	10.8	-3.1	10.8	-3.1	10.7	-3.0	10.5	-10.7	10.5	-10.7
12/06/87	0		10.6	-16.4	10.8	-3.1	10.8	-3.1	10.7	-2.9	10.5	-10.7	10.5	-10.7
12/06/87	1200		10.6	-16.4	10.8	-3.1	10.8	-3.1	10.7	-3.0	10.5	-10.7	10.5	-10.7
12/07/87	0		10.5	-16.4	10.8	-3.1	10.8	-3.1	10.7	-3.0	10.5	-10.7	10.5	-10.7
12/07/87	1200		10.5	-16.3	10.7	-3.1	10.7	-3.1	10.7	-2.9	10.4	-10.6	10.4	-10.6
12/08/87	0		10.5	-16.2	10.7	-3.0	10.7	-3.0	10.7	-3.0	10.5	-10.6	10.5	-10.6
12/08/87	1200		10.5	-16.2	10.7	-3.1	10.7	-3.1	10.7	-3.0	10.5	-10.6	10.5	-10.6
12/09/87	0		10.3	-16.3	10.6	-3.1	10.6	-3.1	10.5	-3.0	10.3	-10.6	10.3	-10.6
12/09/87	1200		10.4	-16.2	10.6	-3.0	10.6	-3.0	10.6	-3.0	10.4	-10.6	10.4	-10.6
12/10/87	0		10.4	-16.2	10.6	-3.0	10.6	-3.0	10.6	-3.0	10.4	-10.5	10.4	-10.5
12/10/87	1200		10.3	-16.3	10.5	-3.0	10.5	-3.0	10.5	-3.0	10.4	-10.6	10.4	-10.6
12/11/87	0		10.3	-16.1	10.5	-2.9	10.5	-2.9	10.5	-3.0	10.4	-10.5	10.4	-10.5
12/11/87	1200		10.3	-16.1	10.5	-2.9	10.5	-2.9	10.5	-3.0	10.3	-10.5	10.3	-10.5
12/12/87	0		10.3	-16.1	10.5	-3.0	10.5	-3.0	10.5	-3.0	10.4	-10.4	10.4	-10.4
12/12/87	1200		10.2	-16.0	10.5	-2.9	10.5	-2.9	10.5	-3.0	10.3	-10.5	10.3	-10.5
12/13/87	0		10.2	-16.0	10.5	-2.9	10.5	-2.9	10.5	-3.0	10.4	-10.4	10.4	-10.4
12/13/87	1200		10.2	-16.0	10.4	-2.9	10.4	-2.9	10.5	-3.0	10.4	-10.4	10.4	-10.4
12/14/87	0		10.1	-15.9	10.4	-2.9	10.4	-2.9	10.5	-3.0	10.3	-10.4	10.3	-10.4
12/14/87	1200		10.2	-15.8	10.4	-2.8	10.4	-2.8	10.5	-2.9	10.3	-10.3	10.3	-10.3
12/15/87	0		10.1	-15.9	10.3	-2.9	10.3	-2.9	10.4	-3.0	10.3	-10.4	10.3	-10.4
12/15/87	1200		10.1	-15.9	10.3	-2.9	10.3	-2.9	10.4	-3.0	10.3	-10.3	10.3	-10.3
12/16/87	0		10.0	-15.7	10.3	-2.8	10.3	-2.8	10.4	-3.0	10.3	-10.3	10.3	-10.3
12/16/87	1200		9.9	-15.8	10.2	-2.9	10.2	-2.9	10.4	-3.0	10.2	-10.3	10.2	-10.3
12/17/87	0		9.9	-15.7	10.2	-2.8	10.2	-2.8	10.3	-3.0	10.2	-10.2	10.2	-10.2
12/17/87	1200		9.9	-15.6	10.2	-2.7	10.2	-2.7	10.4	-2.9	10.3	-10.2	10.3	-10.2
12/18/87	0		9.8	-15.7	10.1	-2.7	10.1	-2.7	10.3	-3.0	10.2	-10.3	10.2	-10.3
12/18/87	1200		9.8	-15.5	10.1	-2.6	10.1	-2.6	10.3	-3.0	10.2	-10.2	10.2	-10.2
12/19/87	0		9.8	-15.6	10.1	-2.7	10.1	-2.7	10.3	-3.0	10.2	-10.2	10.2	-10.2
12/19/87	1200		9.8	-15.5	10.1	-2.7	10.1	-2.7	10.3	-2.9	10.2	-10.2	10.2	-10.2
12/20/87	0		9.7	-15.5	10.0	-2.6	10.0	-2.6	10.2	-3.0	10.2	-10.2	10.2	-10.2
12/20/87	1200		9.7	-15.4	10.0	-2.6	10.0	-2.6	10.2	-3.0	10.2	-10.2	10.2	-10.2
12/21/87	0		9.7	-15.4	10.0	-2.7	10.0	-2.7	10.2	-2.9	10.2	-10.2	10.2	-10.2
12/21/87	1200		9.7	-15.4	10.0	-2.7	10.0	-2.7	10.2	-2.9	10.2	-10.2	10.2	-10.2
12/22/87	0		9.6	-15.4	9.9	-2.6	9.9	-2.6	10.2	-3.0	10.2	-10.1	10.2	-10.1
12/22/87	1200		9.6	-15.4	9.9	-2.6	9.9	-2.6	10.2	-3.0	10.2	-10.1	10.2	-10.1
12/23/87	0		9.6	-15.5	9.9	-2.6	9.9	-2.6	10.2	-3.0	10.2	-10.1	10.2	-10.1
12/23/87	1200		9.6	-15.4	9.9	-2.6	9.9	-2.6	10.2	-3.0	10.2	-10.1	10.2	-10.1

Table 5.--Temperature and soil-water potential for undisturbed soil beneath the horizontal culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; -- indicates no data]

Depth (meters)	3.8			4.1			4.4			5.0		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
12/24/87		0	9.5	-15.4	9.9	-2.7	10.2	-3.0	10.2	-10.1		
12/24/87		1200	9.5	-15.3	9.8	-2.6	10.1	-2.9	10.1	-10.1		
12/25/87		0	9.5	-15.2	9.8	-2.5	10.1	-2.9	10.2	-10.0		
12/25/87		1200	9.4	-15.2	9.7	-2.6	10.0	-3.0	10.1	-10.1		
12/26/87		0	9.4	-15.1	9.7	-2.4	10.1	-3.0	10.1	-10.0		
12/26/87		1200	9.3	-15.0	9.7	-2.5	10.0	-2.9	10.1	-10.0		
12/27/87		0	9.3	-15.0	9.7	-2.5	10.1	-2.9	10.1	-10.0		
12/27/87		1200	9.3	-14.9	9.6	-2.5	9.9	-3.0	10.0	-10.0		
12/28/87		0	9.3	-15.0	9.6	-2.5	10.0	-2.9	10.1	-9.9		
12/28/87		1200	9.2	-15.0	9.6	-2.5	10.0	-2.9	10.0	-9.9		
12/29/87		0	9.1	-14.9	9.5	-2.5	10.0	-2.9	10.0	-9.9		
12/29/87		1200	9.2	-14.9	9.6	-2.5	9.9	-2.9	10.0	-9.9		
12/30/87		0	9.1	-14.8	9.5	-2.5	9.9	-3.0	10.1	-9.9		
12/30/87		1200	9.1	-14.8	9.5	-2.5	9.9	-2.9	10.0	-9.9		
12/31/87		0	9.0	-14.8	9.4	-2.5	9.9	-3.0	10.0	-9.9		
12/31/87		1200	9.0	-14.7	9.4	-2.4	9.9	-3.0	10.0	-9.8		

Table 6.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	0.5			0.8			0.9		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	
					NO DATA 1/1/87 THROUGH 2/10/87				
02/11/87	0		-1.6	-9.4	-0.3	-19.5	0.9	-8.1	
02/11/87	1200		-1.6	-9.3	-0.3	-19.4	0.8	-8.2	
02/12/87	0		-1.5	-9.0	-0.2	-19.4	0.9	-8.1	
02/12/87	1200		-1.6	-8.9	-0.3	-19.4	0.8	-8.1	
02/13/87	0		-1.5	-8.6	-0.2	-19.4	0.9	-8.1	
02/13/87	1200		-1.5	-8.4	-0.2	-19.4	0.8	-8.1	
02/14/87	0		-1.4	-8.1	-0.2	-19.5	0.9	-8.2	
02/14/87	1200		-1.4	-7.8	-0.2	-19.5	0.9	-8.2	
02/15/87	0		-1.3	-7.3	0.0	-19.3	1.0	-8.1	
02/15/87	1200		-1.3	-6.9	-0.2	-19.3	0.9	-8.2	
02/16/87	0		-1.3	-6.5	-0.1	-19.3	0.9	-8.2	
02/16/87	1200		-1.2	-6.3	0.0	-19.2	0.9	-8.2	
02/17/87	0		-1.2	-6.1	0.0	-19.1	0.9	-8.1	
02/17/87	1200		-1.2	-5.8	-0.1	-19.0	0.8	-8.1	
02/18/87	0		-1.0	-5.7	0.1	-18.9	1.0	-8.2	
02/18/87	1200		-1.0	-5.5	0.1	-18.9	0.9	-8.2	
02/19/87	0		-0.9	-5.5	0.2	-18.8	1.0	-8.1	
02/19/87	1200		-0.8	-5.4	0.2	-18.8	1.1	-8.1	
02/20/87	0		-0.7	-5.3	0.3	-18.6	1.1	-8.2	
02/20/87	1200		-0.7	-5.3	0.3	-18.5	1.1	-8.1	
02/21/87	0		-0.6	-5.4	0.4	-18.4	1.1	-8.1	
02/21/87	1200		-0.7	-5.7	0.3	-18.4	1.0	-8.1	
02/22/87	0		-0.7	-5.9	0.5	-18.4	1.1	-8.1	
02/22/87	1200		-0.7	-6.1	0.4	-18.5	1.1	-8.2	
02/23/87	0		-0.8	-6.2	0.4	-18.5	1.1	-8.2	
02/23/87	1200		-0.7	-6.2	0.5	-18.5	1.2	-8.2	
02/24/87	0		-0.7	-6.2	0.5	-18.6	1.2	-8.1	
02/24/87	1200		-0.7	-6.2	0.5	-18.6	1.2	-8.1	
02/25/87	0		-0.8	-6.3	0.4	-18.6	1.1	-8.1	
02/25/87	1200		-0.7	-6.2	0.5	-18.6	1.2	-8.1	
02/26/87	0		-0.7	-6.3	0.5	-18.5	1.2	-8.1	
02/26/87	1200		-0.7	-6.3	0.5	-18.5	1.2	-8.1	
02/27/87	0		-0.7	-6.4	0.6	-18.4	1.3	-8.1	
02/27/87	1200		-0.9	-6.4	0.4	-18.4	1.1	-8.1	
02/28/87	0		-0.8	-6.5	0.5	-18.4	1.2	-8.1	
02/28/87	1200		-0.9	-6.8	0.4	-18.5	1.2	-8.2	
03/01/87	0		-0.9	-7.0	0.5	-18.5	1.3	-8.0	

Table 6.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.5			0.8			0.9		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)
03/01/87	1200		-0.9	-7.2	0.5	-18.6	1.3	-8.1			
03/02/87	0		-0.9	-7.3	0.5	-18.7	1.4	-8.0			
03/02/87	1200		-1.0	-7.3	0.4	-18.7	1.3	-8.0			
03/03/87	0		-0.9	-7.1	0.5	-18.7	1.4	-8.0			
03/03/87	1200		-0.9	-6.8	0.4	-18.6	1.4	-8.0			
03/04/87	0		-0.8	-6.5	0.5	-18.5	1.4	-8.0			
03/04/87	1200		-0.7	-6.3	0.5	-18.4	1.4	-8.0			
03/05/87	0		-0.6	-6.2	0.5	-18.4	1.5	-8.1			
03/05/87	1200		-0.6	-6.0	0.5	-18.4	1.4	-8.1			
03/06/87	0		-0.5	-5.7	0.5	-18.3	1.4	-8.0			
03/06/87	1200		-0.4	-5.5	0.6	-18.2	1.4	-8.0			
03/07/87	0		-0.1	-5.0	0.7	-18.0	1.5	-8.0			
03/07/87	1200		0.2	-4.2	0.7	-17.9	1.5	-8.0			
03/08/87	0		0.6	-3.6	0.9	-17.5	1.6	-7.9			
03/08/87	1200		1.1	-3.1	1.0	-17.3	1.6	-7.9			
03/09/87	0		1.4	-2.8	1.1	-16.8	1.6	-7.9			
03/09/87	1200		1.6	-2.8	1.3	-16.3	1.6	-7.9			
03/10/87	0		1.9	-2.8	1.6	-15.9	1.8	-7.8			
03/10/87	1200		2.1	-2.6	1.6	-15.6	1.7	-7.8			
03/11/87	0		2.2	-2.8	1.9	-15.4	1.9	-7.8			
03/11/87	1200		2.4	-2.7	2.0	-15.2	1.9	-7.8			
03/12/87	0		2.6	-2.8	2.2	-15.1	2.1	-7.8			
03/12/87	1200		2.7	-2.7	2.2	-15.0	2.1	-7.8			
03/13/87	0		2.8	-2.9	2.4	-14.8	2.3	-7.8			
03/13/87	1200		3.0	-2.6	2.5	-14.8	2.3	-7.8			
03/14/87	0		3.1	-2.7	2.6	-14.7	2.4	-7.8			
03/14/87	1200		3.2	-2.7	2.7	-14.6	2.5	-7.8			
03/15/87	0		3.2	-3.2	2.9	-14.6	2.7	-7.7			
03/15/87	1200		3.2	-3.3	2.9	-14.6	2.7	-7.8			
03/16/87	0		3.1	-3.8	3.0	-14.8	2.8	-7.8			
03/16/87	1200		3.0	-3.9	3.0	-14.8	2.8	-7.7			
03/17/87	0		3.1	-4.0	3.1	-14.9	3.0	-7.8			
03/17/87	1200		3.2	-3.7	3.1	-14.9	3.0	-7.7			
03/18/87	0		3.2	-3.8	3.1	-14.9	3.1	-7.7			
03/18/87	1200		3.4	-3.5	3.1	-15.0	3.1	-7.8			
03/19/87	0		3.4	-3.4	3.2	-15.0	3.2	-7.8			
03/19/87	1200		3.5	-3.5	3.2	-15.0	3.2	-7.8			
03/20/87	0		3.4	-4.0	3.3	-14.9	3.3	-7.7			

Table 6.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	0.5			0.8			0.9		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	
03/20/87	1200		3.2	-4.2	3.3	-15.0	3.3	-7.7	
03/21/87	0		3.1	-4.6	3.3	-15.1	3.4	-7.7	
03/21/87	1200		3.0	-4.7	3.3	-15.3	3.4	-7.8	
03/22/87	0		2.9	-5.1	3.3	-15.5	3.5	-7.7	
03/22/87	1200		2.7	-5.1	3.2	-15.9	3.4	-7.8	
03/23/87	0		2.6	-5.3	3.2	-16.0	3.5	-7.8	
03/23/87	1200		2.6	-5.2	3.1	-16.3	3.4	-7.8	
03/24/87	0		2.6	-5.2	3.2	-16.4	3.5	-7.8	
03/24/87	1200		2.7	-4.5	3.0	-16.5	3.4	-7.7	
03/25/87	0		2.8	-4.3	3.1	-16.4	3.5	-7.8	
03/25/87	1200		2.9	-3.9	3.0	-16.5	3.4	-7.8	
03/26/87	0		3.1	-4.0	3.2	-16.4	3.6	-7.8	
03/26/87	1200		3.3	-3.5	3.1	-16.4	3.5	-7.8	
03/27/87	0		3.4	-3.5	3.3	-16.3	3.6	-7.8	
03/27/87	1200		3.5	-3.3	3.2	-16.2	3.5	-7.7	
03/28/87	0		3.5	-3.7	3.4	-15.9	3.7	-7.7	
03/28/87	1200		3.6	-3.5	3.4	-15.8	3.7	-7.7	
03/29/87	0		3.5	-3.8	3.4	-15.7	3.7	-7.7	
03/29/87	1200		3.4	-4.1	3.3	-15.7	3.6	-7.7	
03/30/87	0		3.3	-4.7	3.6	-15.9	3.8	-7.7	
03/30/87	1200		3.0	-5.0	3.4	-15.9	3.7	-7.7	
03/31/87	0		3.0	-5.3	3.5	-16.1	3.9	-7.7	
03/31/87	1200		3.1	-4.5	3.4	-16.4	3.8	-7.7	
04/01/87	0		3.2	-4.2	3.5	-16.4	3.9	-7.7	
04/01/87	1200		3.6	-3.2	3.4	-16.5	3.8	-7.7	
04/02/87	0		3.9	-2.8	3.6	-16.2	3.9	-7.8	
04/02/87	1200		4.3	-2.1	3.6	-15.8	3.8	-7.8	
04/03/87	0		4.6	-2.1	3.8	-15.3	4.0	-7.7	
04/03/87	1200		4.8	-1.8	3.9	-15.0	3.9	-7.7	
04/04/87	0		5.0	-1.9	4.1	-14.7	4.1	-7.7	
04/04/87	1200		5.2	-1.6	4.2	-14.4	4.1	-7.7	
04/05/87	0		5.5	-1.5	4.4	-14.1	4.2	-7.6	
04/05/87	1200		5.9	-1.0	4.5	-13.9	4.3	-7.6	
04/06/87	0		6.3	> -1	4.8	-13.5	4.4	-7.5	
04/06/87	1200		6.7	> -1	4.9	-13.1	4.5	-7.5	
04/07/87	0		6.9	> -1	5.1	-12.7	4.6	-7.5	
04/07/87	1200		7.2	> -1	5.3	-12.4	4.7	-7.5	
04/08/87	0		7.3	> -1	5.6	-12.0	4.9	-7.4	

Table 6.---Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	0.5			0.8			0.9		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	
04/08/87		1200	7.5	> -1	5.7	-12.0	5.0	-7.5	
04/09/87		0	7.6	> -1	5.9	-11.8	5.2	-7.4	
04/09/87		1200	7.5	> -1	5.9	-11.7	5.1	-7.4	
04/10/87		0	7.3	> -1	6.1	-11.7	5.3	-7.4	
04/10/87		1200	7.4	> -1	6.1	-12.0	5.4	-7.3	
04/11/87		0	7.4	> -1	6.3	-12.3	5.5	-7.3	
04/11/87		1200	7.6	> -1	6.3	-12.5	5.6	-7.4	
04/12/87		0	7.8	> -1	6.4	-12.7	5.7	-7.4	
04/12/87		1200	7.8	> -1	6.4	-12.6	5.7	-7.4	
04/13/87		0	7.7	> -1	6.6	-12.5	5.8	-7.3	
04/13/87		1200	7.6	> -1	6.5	-12.6	5.8	-7.4	
04/14/87		0	7.6	> -1	6.7	-12.5	6.0	-7.3	
04/14/87		1200	7.6	> -1	6.5	-12.7	5.9	-7.3	
04/15/87		0	7.7	> -1	6.7	-12.5	6.1	-7.3	
04/15/87		1200	7.9	> -1	6.6	-12.6	6.1	-7.3	
04/16/87		0	8.1	> -1	6.8	-12.4	6.2	-7.3	
04/16/87		1200	8.4	> -1	6.8	-12.3	6.2	-7.3	
04/17/87		0	8.7	> -1	7.0	-12.2	6.3	-7.3	
04/17/87		1200	9.0	> -1	7.1	-12.3	6.3	-7.4	
04/18/87		0	9.2	> -1	7.3	-12.1	6.5	-7.3	
04/18/87		1200	9.5	> -1	7.5	-11.8	6.5	-7.3	
04/19/87		0	9.6	> -1	7.6	-11.6	6.6	-7.4	
04/19/87		1200	9.7	> -1	7.6	-11.4	6.6	-7.3	
04/20/87		0	9.6	> -1	7.9	-11.2	6.8	-7.3	
04/20/87		1200	9.1	> -1	7.8	-11.2	6.8	-7.2	
04/21/87		0	8.7	> -1	8.0	-11.3	7.0	-7.2	
04/21/87		1200	8.6	> -1	7.8	-11.7	7.0	-7.2	
04/22/87		0	8.5	> -1	7.8	-11.8	7.1	-7.1	
04/22/87		1200	8.7	> -1	7.7	-12.2	7.0	-7.2	
04/23/87		0	8.9	> -1	7.8	-12.2	7.1	-7.2	
04/23/87		1200	9.4	> -1	7.8	-12.2	7.1	-7.3	
04/24/87		0	9.7	> -1	8.0	-12.0	7.2	-7.2	
04/24/87		1200	10.1	> -1	8.0	-11.9	7.2	-7.2	
04/25/87		0	10.3	> -1	8.3	-11.5	7.4	-7.2	
04/25/87		1200	10.7	> -1	8.3	-11.4	7.3	-7.2	
04/26/87		0	10.9	> -1	8.6	-10.9	7.5	-7.1	
04/26/87		1200	11.3	> -1	8.7	-10.7	7.5	-7.0	
04/27/87		0	11.5	> -1	8.9	-10.3	7.7	-6.8	

Table 6.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench---continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.5			0.8			0.9		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)
04/27/87	1200		11.9	> -1	9.1	-10.2	7.8	-6.9			
04/28/87	0		12.2	> -1	9.4	-9.8	8.0	-6.9			
04/28/87	1200		12.5	> -1	9.5	-9.6	8.0	-6.8			
04/29/87	0		12.6	> -1	9.8	-9.3	8.2	-6.8			
04/29/87	1200		13.0	> -1	9.9	-9.2	8.3	-6.8			
04/30/87	0		13.2	> -1	10.2	-8.9	8.5	-6.8			
04/30/87	1200		13.6	> -1	10.4	-8.7	8.6	-6.8			
05/01/87	0		13.7	> -1	10.6	-8.4	8.8	-6.7			
05/01/87	1200		13.6	> -1	10.7	-8.3	8.9	-6.7			
05/02/87	0		13.3	> -1	10.9	-8.3	9.0	-6.6			
05/02/87	1200		12.9	> -1	10.8	-8.4	9.1	-6.7			
05/03/87	0		12.5	> -1	10.9	-8.5	9.3	-6.6			
05/03/87	1200		12.4	> -1	10.8	-8.6	9.3	-6.5			
05/04/87	0		12.2	> -1	10.9	-8.7	9.5	-6.5			
05/04/87	1200		12.2	> -1	10.7	-9.0	9.4	-6.5			
05/05/87	0		12.3	> -1	10.8	-9.1	9.6	-6.5			
05/05/87	1200		12.5	> -1	10.7	-9.3	9.5	-6.5			
05/06/87	0		12.7	> -1	10.8	-9.3	9.6	-6.5			
05/06/87	1200		13.0	> -1	10.8	-9.4	9.6	-6.5			
05/07/87	0		13.3	> -1	10.9	-9.2	9.7	-6.5			
05/07/87	1200		13.7	> -1	11.0	-9.2	9.7	-6.6			
05/08/87	0		13.9	> -1	11.2	-9.0	9.8	-6.5			
05/08/87	1200		14.3	> -1	11.3	-8.9	9.9	-6.5			
05/09/87	0		14.4	> -1	11.6	-8.7	10.0	-6.5			
05/09/87	1200		14.8	> -1	11.7	-8.5	10.0	-6.5			
05/10/87	0		14.9	> -1	11.9	-8.3	10.2	-6.5			
05/10/87	1200		15.3	> -1	12.0	-8.1	10.3	-6.4			
05/11/87	0		15.4	> -1	12.3	-8.0	10.5	-6.4			
05/11/87	1200		15.4	> -1	12.3	-7.8	10.5	-6.4			
05/12/87	0		15.4	> -1	12.5	-7.7	10.7	-6.4			
05/12/87	1200		15.7	> -1	12.6	-7.7	10.8	-6.3			
05/13/87	0		15.8	> -1	12.7	-7.5	10.9	-6.3			
05/13/87	1200		16.1	> -1	12.9	-7.4	11.0	-6.2			
05/14/87	0		16.2	> -1	13.0	-7.3	11.1	-6.2			
05/14/87	1200		16.4	> -1	13.1	-7.3	11.2	-6.1			
05/15/87	0		16.4	> -1	13.3	-7.1	11.4	-6.2			
05/15/87	1200		16.7	> -1	13.4	-7.2	11.5	-6.2			
05/16/87	0		16.7	> -1	13.5	-7.0	11.5	-6.2			

Table 6.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.5			0.8			0.9		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)
05/16/87	1200		17.0	> -1	13.7	-7.0	11.7	-6.1			
05/17/87	0		17.0	> -1	13.8	-6.9	11.8	-6.1			
05/17/87	1200		16.7	> -1	13.9	-6.9	11.9	-6.1			
05/18/87	0		16.2	> -1	13.9	-6.9	12.0	-6.0			
05/18/87	1200		15.8	> -1	13.8	-7.0	12.1	-6.1			
05/19/87	0		15.4	> -1	13.8	-7.2	12.2	-6.0			
05/19/87	1200		15.1	> -1	13.6	-7.5	12.1	-6.0			
05/20/87	0		14.7	> -1	13.6	-7.6	12.2	-6.0			
05/20/87	1200		14.4	> -1	13.4	-7.9	12.2	-6.0			
05/21/87	0		14.0	> -1	13.3	-8.1	12.2	-6.0			
05/21/87	1200		13.9	> -1	13.1	-8.6	12.1	-6.0			
05/22/87	0		13.8	> -1	13.0	-8.9	12.2	-5.9			
05/22/87	1200		13.9	> -1	12.8	-9.3	12.0	-5.9			
05/23/87	0		13.9	> -1	12.8	-9.5	12.0	-6.0			
05/23/87	1200		14.2	> -1	12.7	-9.8	11.9	-5.9			
05/24/87	0		14.3	> -1	12.8	-10.0	11.9	-5.8			
05/24/87	1200		14.4	> -1	12.8	-10.1	11.9	-5.8			
05/25/87	0		14.4	> -1	12.9	-10.1	11.9	-5.7			
05/25/87	1200		14.1	> -1	12.8	-10.2	11.8	-5.7			
05/26/87	0		13.8	> -1	12.8	-10.4	11.9	-5.8			
05/26/87	1200		13.6	> -1	12.6	-10.7	11.8	-5.8			
05/27/87	0		13.4	> -1	12.7	-10.9	11.9	-5.7			
05/27/87	1200		13.4	> -1	12.5	-11.2	11.8	-5.6			
05/28/87	0		13.2	> -1	12.5	-11.5	11.8	-5.5			
05/28/87	1200		13.2	> -1	12.4	-11.7	11.8	-5.4			
05/29/87	0		13.1	> -1	12.4	-11.8	11.7	-5.3			
05/29/87	1200		13.2	> -1	12.2	-12.1	11.6	-5.3			
05/30/87	0		13.3	> -1	12.3	-12.0	11.7	-5.4			
05/30/87	1200		13.7	> -1	12.2	-12.1	11.6	-5.5			
05/31/87	0		13.9	> -1	12.4	-11.8	11.6	-5.5			
05/31/87	1200		14.2	> -1	12.5	-11.6	11.6	-5.5			
06/01/87	0		14.3	> -1	12.6	-11.3	11.7	-5.5			
06/01/87	1200		14.4	> -1	12.6	-11.0	11.6	-5.4			
06/02/87	0		14.2	> -1	12.7	-10.9	11.7	-5.4			
06/02/87	1200		14.2	> -1	12.7	-10.9	11.7	-5.3			
06/03/87	0		14.1	> -1	12.8	-10.7	11.7	-5.4			
06/03/87	1200		14.4	> -1	12.8	-10.8	11.7	-5.3			
06/04/87	0		14.5	> -1	12.8	-10.6	11.8	-5.4			

Table 6.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench---continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	0.5			0.8			0.9		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	
06/04/87	1200		15.0	> -1	12.9	-10.6	11.8	-5.3	
06/05/87	0		15.2	> -1	13.0	-10.3	11.8	-5.3	
06/05/87	1200		15.8	> -1	13.2	-10.1	11.9	-5.3	
06/06/87	0		16.1	> -1	13.4	-9.6	12.0	-5.3	
06/06/87	1200		16.4	> -1	13.5	-9.3	12.0	-5.3	
06/07/87	0		16.5	> -1	13.7	-8.9	12.1	-5.3	
06/07/87	1200		16.9	> -1	13.9	-8.7	12.3	-5.3	
06/08/87	0		16.9	> -1	14.0	-8.4	12.3	-5.2	
06/08/87	1200		16.7	> -1	14.1	-8.0	12.4	-5.2	
06/09/87	0		16.5	> -1	14.3	-8.1	12.5	-5.2	
06/10/87	0		16.4	> -1	14.4	-8.3	12.8	-5.1	
06/10/87	1200		16.4	> -1	14.3	-8.4	12.7	-5.1	
06/11/87	0		16.3	> -1	14.4	-8.5	12.9	-5.1	
06/11/87	1200		16.6	> -1	14.4	-8.5	12.9	-5.1	
06/12/87	0		16.6	> -1	14.4	-8.5	12.9	-5.1	
06/12/87	1200		16.9	> -1	14.5	-8.5	13.0	-5.1	
06/13/87	0		17.1	> -1	14.6	-8.3	13.1	-5.1	
06/13/87	1200		17.6	> -1	14.7	-8.3	13.1	-5.1	
06/14/87	0		17.8	> -1	14.9	-8.1	13.2	-5.1	
06/14/87	1200		18.3	> -1	15.0	-7.9	13.3	-5.0	
06/15/87	0		18.5	> -1	15.2	-7.7	13.4	-5.0	
06/15/87	1200		19.0	> -1	15.5	-7.5	13.5	-4.9	
06/16/87	0		19.1	> -1	15.7	-7.3	13.6	-4.8	
06/16/87	1200		19.3	> -1	15.9	-7.2	13.8	-4.8	
06/17/87	0		19.2	> -1	16.0	-7.0	13.9	-4.8	
06/17/87	1200		19.2	> -1	16.1	-7.0	14.0	-4.8	
06/18/87	0		19.1	> -1	16.2	-6.9	14.1	-4.7	
06/18/87	1200		19.3	> -1	16.3	-6.9	14.3	-4.7	
06/19/87	0		19.1	> -1	16.4	-6.9	14.3	-4.6	
06/19/87	1200		18.9	> -1	16.4	-7.0	14.4	-4.6	
06/20/87	0		18.6	> -1	16.4	-7.0	14.5	-4.5	
06/20/87	1200		18.7	> -1	16.3	-7.2	14.5	-4.6	
06/21/87	0		18.5	> -1	16.3	-7.2	14.6	-4.5	
06/21/87	1200		18.8	> -1	16.3	-7.3	14.6	-4.5	
06/22/87	0		18.9	> -1	16.4	-7.3	14.7	-4.5	
06/22/87	1200		19.2	> -1	16.5	-7.4	14.8	-4.5	
06/23/87	0		19.2	> -1	16.6	-7.3	14.8	-4.5	
06/23/87	1200		19.1	> -1	16.6	-7.3	14.8	-4.5	

Table 6.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)		0.5			0.8			0.9		
Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)	
06/24/87	0	18.8	> -1		16.6	-7.4		14.8	-4.4	
06/24/87	1200	18.9	> -1		16.6	-7.4		14.9	-4.4	
06/25/87	0	18.8	> -1		16.6	-7.5		14.9	-4.4	
06/25/87	1200	19.2	> -1		16.7	-7.6		15.0	-4.4	
NO DATA 6/26/87 THROUGH 7/7/87										
07/08/87	0	20.8	--		18.2	-7.3		16.4	-4.4	
07/08/87	1200	20.8	--		18.0	-7.3		16.4	-4.3	
07/09/87	0	20.7	--		18.1	-7.3		16.4	-4.2	
07/09/87	1200	20.7	--		18.1	-7.4		16.4	-4.2	
07/10/87	0	20.5	--		18.3	-7.4		16.5	-4.2	
07/10/87	1200	20.7	--		18.4	-7.4		16.6	-4.3	
07/11/87	0	20.5	--		18.4	-7.5		16.6	-4.2	
07/11/87	1200	20.3	--		18.3	-7.5		16.5	-4.2	
07/12/87	0	19.9	--		18.3	-7.6		16.6	-4.2	
07/12/87	1200	19.8	--		18.2	-7.7		16.6	-4.2	
07/13/87	0	19.5	--		18.1	-7.9		16.5	-4.1	
07/13/87	1200	19.7	--		18.0	-8.1		16.6	-4.2	
07/14/87	0	19.6	--		17.9	-8.2		16.5	-4.1	
07/14/87	1200	20.0	--		18.0	-8.3		16.6	-4.1	
07/15/87	0	20.1	--		18.0	-8.2		16.5	-4.1	
07/15/87	1200	20.6	--		18.1	-8.3		16.5	-4.2	
07/16/87	0	20.7	--		18.2	-8.1		16.5	-4.2	
07/16/87	1200	21.2	--		18.5	-8.0		16.7	-4.2	
07/17/87	0	21.2	--		18.5	-7.9		16.6	-4.2	
07/17/87	1200	21.5	--		18.8	-7.7		16.8	-4.1	
07/18/87	0	21.4	--		18.9	-7.6		16.8	-4.1	
07/18/87	1200	20.9	--		18.9	-7.5		16.8	-4.1	
07/19/87	0	20.1	--		18.8	-7.6		16.9	-4.1	
07/19/87	1200	19.5	--		18.6	-7.8		16.8	-4.2	
07/20/87	0	18.9	--		18.4	-8.2		16.9	-4.1	
07/20/87	1200	18.6	--		18.2	-8.6		16.9	-4.1	
07/21/87	0	18.2	--		17.9	-8.8		16.8	-4.1	
07/21/87	1200	18.3	--		17.8	-9.2		16.8	-4.1	
07/22/87	0	18.2	--		17.6	-9.6		16.7	-4.0	
07/22/87	1200	17.9	--		17.4	-10.1		16.5	-4.1	
07/23/87	0	17.6	--		17.3	-10.6		16.5	-4.1	
07/23/87	1200	17.7	--		17.1	-11.2		16.4	-4.1	
07/24/87	0	17.5	--		17.0	-11.5		16.3	-4.1	

Table 6.---Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	0.5			0.8			0.9		
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)
07/24/87	1200		17.8	--	16.9	-11.7	16.3	-4.1	
07/25/87	0		17.9	--	16.9	-11.7	16.2	-4.1	
07/25/87	1200		18.5	--	16.9	-11.5	16.1	-4.1	
07/26/87	0		18.7	--	17.0	-11.0	16.0	-4.1	
07/26/87	1200		19.2	--	17.1	-10.6	16.1	-4.0	
07/27/87	0		19.4	--	17.2	-10.0	16.0	-3.9	
07/27/87	1200		20.0	--	17.4	-9.6	16.1	-3.8	
07/28/87	0		20.3	--	17.6	-9.1	16.1	-3.8	
07/28/87	1200		20.6	--	17.8	-8.8	16.2	-3.9	
07/29/87	0		20.7	--	18.0	-8.4	16.3	-3.9	
07/29/87	1200		20.8	--	18.2	-8.1	16.3	-3.8	
07/30/87	0		20.8	--	18.4	-7.9	16.5	-3.8	
07/30/87	1200		20.9	--	18.4	-7.7	16.5	-3.8	
07/31/87	0		20.6	--	18.5	-7.6	16.5	-3.8	
07/31/87	1200		20.7	--	18.6	-7.7	16.6	-3.8	
08/01/87	0		20.7	--	18.6	-7.6	16.7	-3.8	
08/01/87	1200		20.9	--	18.6	-7.6	16.8	-3.8	
08/02/87	0		20.7	--	18.7	-7.5	16.8	-3.8	
08/02/87	1200		20.9	--	18.7	-7.6	16.9	-3.8	
08/03/87	0		20.8	--	18.8	-7.4	16.9	-3.8	
08/03/87	1200		21.0	--	18.8	-7.6	17.0	-3.8	
08/04/87	0		20.8	--	18.8	-7.4	17.0	-3.8	
08/04/87	1200		21.0	--	18.9	-7.4	17.1	-3.8	
08/05/87	0		20.9	--	18.8	-7.5	17.0	-3.8	
08/05/87	1200		21.1	--	18.9	-7.5	17.1	-3.8	
08/06/87	0		21.2	--	19.0	-7.4	17.2	-3.7	
08/06/87	1200		21.4	--	19.0	-7.4	17.2	-3.7	
08/07/87	0		21.3	--	19.1	-7.3	17.2	-3.7	
08/07/87	1200		21.4	--	19.2	-7.2	17.3	-3.7	
08/08/87	0		21.3	--	19.2	-7.1	17.4	-3.7	
08/08/87	1200		21.3	--	19.1	-7.1	17.4	-3.7	
08/09/87	0		21.1	--	19.1	-7.1	17.4	-3.8	
08/09/87	1200		21.3	--	19.2	-7.1	17.5	-3.7	
08/10/87	0		21.2	--	19.2	-7.1	17.5	-3.7	
08/10/87	1200		21.4	--	19.2	-7.1	17.5	-3.8	
08/11/87	0		21.2	--	19.2	-7.1	17.5	-3.8	
08/11/87	1200		21.3	--	19.2	-7.2	17.6	-3.8	
08/12/87	0		21.2	--	19.3	-7.1	17.6	-3.8	

Table 6.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.5			0.8			0.9		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)
08/12/87	1200		21.1	--	19.2	-7.3	17.6	-3.8			
08/13/87	0		20.9	--	19.2	-7.2	17.6	-3.8			
08/13/87	1200		20.9	--	19.2	-7.4	17.7	-3.7			
08/14/87	0		20.7	--	19.2	-7.6	17.6	-3.7			
08/14/87	1200		20.5	--	19.1	-7.8	17.6	-3.9			
08/15/87	0		20.3	--	19.1	-8.0	17.7	-3.8			
08/15/87	1200		20.2	--	18.9	-8.2	17.6	-3.9			
08/16/87	0		20.0	--	18.9	-8.4	17.6	-3.8			
08/16/87	1200		19.8	--	18.7	-8.6	17.6	-3.9			
08/17/87	0		19.5	--	18.7	-8.8	17.6	-3.9			
08/17/87	1200		19.4	--	18.5	-9.2	17.5	-3.9			
08/18/87	0		19.2	--	18.4	-9.4	17.5	-3.9			
08/18/87	1200		19.2	--	18.3	-9.6	17.4	-3.9			
08/19/87	0		19.1	--	18.3	-9.6	17.3	-3.9			
08/19/87	1200		19.3	--	18.2	-9.8	17.3	-4.0			
08/20/87	0		19.2	--	18.2	-9.8	17.2	-4.1			
08/20/87	1200		19.3	--	18.2	-9.8	17.2	-4.1			
08/21/87	0		19.4	--	18.2	-9.6	17.2	-4.2			
08/21/87	1200		19.7	--	18.2	-9.5	17.2	-4.2			
08/22/87	0		19.7	--	18.3	-9.1	17.1	-4.3			
08/22/87	1200		19.8	--	18.3	-9.0	17.1	-4.3			
08/23/87	0		19.7	--	18.3	-8.9	17.1	-4.4			
08/23/87	1200		19.8	--	18.3	-8.9	17.1	-4.4			
08/24/87	0		19.7	--	18.3	-8.8	17.1	-4.5			
08/24/87	1200		19.9	--	18.4	-8.8	17.1	-4.5			
08/25/87	0		19.9	--	18.5	-8.7	17.2	-4.5			
08/25/87	1200		19.7	--	18.4	-8.6	17.1	-4.5			
08/26/87	0		19.4	--	18.4	-8.8	17.2	-4.5			
08/26/87	1200		19.2	--	18.4	-9.0	17.2	-4.6			
08/27/87	0		18.9	--	18.3	-9.3	17.2	-4.6			
08/27/87	1200		18.7	--	18.2	-9.7	17.1	-4.7			
08/28/87	0		18.6	--	18.1	-9.9	17.1	-4.7			
08/28/87	1200		18.6	--	18.0	-10.2	17.1	-4.8			
08/29/87	0		18.6	--	17.9	-10.2	17.0	-4.9			
08/29/87	1200		18.8	--	17.8	-10.4	17.0	-5.0			
08/30/87	0		18.8	--	17.8	-10.1	16.9	-5.1			
08/30/87	1200		19.0	--	17.9	-10.1	16.9	-5.1			
08/31/87	0		19.1	--	17.9	-9.8	16.9	-5.2			

Table 6.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench---continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	0.5				0.8				0.9			
	Date	Hour	Soil		Soil		Soil		Soil			
			temperature (Celsius)	Soil-water potential (bars)	temperature (Celsius)	Soil-water potential (bars)	temperature (Celsius)	Soil-water potential (bars)	temperature (Celsius)	Soil-water potential (bars)		
	08/31/87	1200	19.3	--	17.9	-9.7	16.9	-5.2				
	09/01/87	0	19.3	--	18.0	-9.5	16.9	-5.3				
	09/01/87	1200	19.4	--	18.0	-9.5	16.9	-5.4				
	09/02/87	0	19.4	--	18.0	-9.2	16.9	-5.5				
	09/02/87	1200	19.5	--	18.1	-9.2	16.9	-5.5				
	09/03/87	0	19.5	--	18.0	-9.1	16.9	-5.6				
	09/03/87	1200	19.7	--	18.2	-9.1	17.0	-5.7				
	09/04/87	0	19.7	--	18.2	-8.9	17.0	-5.8				
	09/04/87	1200	19.5	--	18.2	-8.9	17.0	-5.8				
	09/05/87	0	19.1	--	18.2	-9.0	17.0	-5.9				
	09/05/87	1200	19.1	--	18.1	-9.3	17.0	-5.9				
	09/06/87	0	18.8	--	18.0	-9.5	17.0	-6.0				
	09/06/87	1200	18.8	--	18.0	-9.8	17.0	-6.0				
	09/07/87	0	18.6	--	17.9	-9.8	16.9	-6.1				
	09/07/87	1200	18.7	--	17.9	-10.1	17.0	-6.2				
	09/08/87	0	18.6	--	17.9	-10.1	16.9	-6.3				
	09/08/87	1200	18.6	--	17.8	-10.2	16.9	-6.4				
	09/09/87	0	18.6	--	17.8	-10.2	16.9	-6.5				
	09/09/87	1200	18.7	--	17.7	-10.1	16.9	-6.6				
	09/10/87	0	18.5	--	17.7	-10.0	16.8	-6.6				
	09/10/87	1200	18.6	--	17.7	-10.1	16.8	-6.8				
	09/11/87	0	18.5	--	17.7	-10.0	16.8	-6.9				
	09/11/87	1200	18.5	--	17.6	-10.1	16.8	-6.9				
	09/12/87	0	18.4	--	17.6	-10.0	16.8	-7.0				
	09/12/87	1200	18.4	--	17.6	-10.1	16.8	-7.1				
	09/13/87	0	18.3	--	17.5	-10.1	16.7	-7.2				
	09/13/87	1200	18.4	--	17.5	-10.2	16.7	-7.3				
	09/14/87	0	18.3	--	17.5	-10.2	16.7	-7.4				
	09/14/87	1200	18.4	--	17.4	-10.2	16.6	-7.5				
	09/15/87	0	18.4	--	17.5	-10.0	16.7	-7.4				
	09/15/87	1200	18.5	--	17.5	-10.0	16.7	-7.6				
	09/16/87	0	18.5	--	17.5	-9.9	16.7	-7.7				
	09/16/87	1200	18.5	--	17.5	-9.8	16.7	-7.7				
	09/17/87	0	18.3	--	17.5	-9.7	16.7	-7.8				
	09/17/87	1200	18.1	--	17.4	-9.8	16.6	-7.8				
	09/18/87	0	17.7	--	17.4	-10.0	16.6	-7.8				
	09/18/87	1200	17.4	--	17.2	-10.4	16.6	-7.9				
	09/19/87	0	17.0	--	17.1	-10.8	16.5	-7.9				

Table 6.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench--continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.5		0.8		0.9	
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
09/19/87	1200		17.0	--	17.0	-11.1	16.6	-7.9
09/20/87	0		16.8	--	16.9	-11.4	16.4	-8.1
09/20/87	1200		16.8	--	16.8	-11.5	16.4	-8.1
09/21/87	0		16.6	--	16.7	-11.4	16.3	-8.1
09/21/87	1200		16.7	--	16.6	-11.4	16.3	-8.2
09/22/87	0		16.6	--	16.5	-11.3	16.2	-8.3
09/22/87	1200		16.7	--	16.4	-11.3	16.2	-8.3
09/23/87	0		16.6	--	16.4	-11.1	16.1	-8.4
09/23/87	1200		16.7	--	16.4	-11.1	16.1	-8.5
09/24/87	0		16.7	--	16.3	-10.9	16.0	-8.5
09/24/87	1200		16.8	--	16.3	-10.7	16.0	-8.5
09/25/87	0		16.8	--	16.3	-10.6	16.0	-8.5
09/25/87	1200		16.9	--	16.3	-10.6	15.9	-8.6
09/26/87	0		16.8	--	16.3	-10.3	15.9	-8.6
09/26/87	1200		16.9	--	16.4	-10.3	15.9	-8.6
09/27/87	0		16.9	--	16.4	-10.3	16.0	-8.6
09/27/87	1200		16.7	--	16.3	-10.2	15.8	-8.6
09/28/87	0		16.3	--	16.3	-10.3	15.8	-8.6
09/28/87	1200		16.0	--	16.1	-10.6	15.8	-8.6
09/29/87	0		15.7	--	16.1	-10.9	15.8	-8.6
09/29/87	1200		15.5	--	15.9	-11.2	15.7	-8.6
09/30/87	0		15.3	--	15.8	-11.4	15.7	-8.6
09/30/87	1200		15.2	--	15.7	-11.6	15.6	-8.7
10/01/87	0		15.0	--	15.5	-11.6	15.5	-8.7
10/01/87	1200		15.0	--	15.4	-11.6	15.5	-8.9
10/02/87	0		15.0	--	15.4	-11.5	15.4	-8.8
10/02/87	1200		15.0	--	15.3	-11.5	15.3	-8.9
10/03/87	0		14.8	--	15.2	-11.4	15.2	-8.8
10/03/87	1200		14.8	--	15.1	-11.4	15.2	-8.9
10/04/87	0		14.6	--	15.0	-11.3	15.1	-8.9
10/04/87	1200		14.7	--	15.1	-11.3	15.1	-8.9
10/05/87	0		14.7	--	15.0	-11.3	15.0	-8.9
10/05/87	1200		14.9	--	14.9	-11.4	15.0	-8.9
10/06/87	0		14.8	--	14.9	-11.1	14.9	-8.9
10/06/87	1200		14.7	--	14.9	-11.0	14.9	-9.0
10/07/87	0		14.6	--	14.8	-11.0	14.9	-8.9
10/07/87	1200		14.5	--	14.8	-11.0	14.8	-8.9
10/08/87	0		14.2	--	14.7	-11.0	14.7	-8.9

Table 6.---Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench---continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.5			0.8			0.9		
			Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)	
10/08/87	1200		14.2	--		14.6	-11.3		14.7	-9.0	
10/09/87	0		14.1	--		14.6	-11.3		14.7	-8.9	
10/09/87	1200		14.2	--		14.5	-11.4		14.6	-9.0	
10/10/87	0		14.2	--		14.5	-11.3		14.7	-9.0	
10/10/87	1200		14.1	--		14.4	-11.3		14.6	-8.9	
10/11/87	0		13.9	--		14.4	-11.2		14.5	-8.9	
10/11/87	1200		13.6	--		14.2	-11.3		14.4	-8.9	
10/12/87	0		13.2	--		14.2	-11.5		14.4	-8.9	
10/12/87	1200		12.9	--		14.1	-11.8		14.3	-8.9	
10/13/87	0		12.4	--		13.8	-12.1		14.2	-9.1	
10/13/87	1200		12.2	--		13.7	-12.4		14.2	-9.0	
10/14/87	0		12.1	--		13.6	-12.4		14.1	-9.0	
10/14/87	1200		12.0	--		13.4	-12.5		14.0	-9.2	
10/15/87	0		11.8	--		13.2	-12.4		13.8	-9.2	
10/15/87	1200		11.8	--		13.1	-12.4		13.8	-9.1	
10/16/87	0		11.8	--		13.1	-12.2		13.8	-9.1	
10/16/87	1200		11.7	--		12.9	-12.2		13.6	-9.1	
10/17/87	0		11.5	--		12.9	-12.2		13.6	-9.1	
10/17/87	1200		11.2	--		12.7	-12.5		13.5	-9.2	
10/18/87	0		10.9	--		12.6	-12.6		13.5	-9.2	
10/18/87	1200		10.8	--		12.6	-12.8		13.5	-9.1	
10/19/87	0		10.7	--		12.5	-12.8		13.6	-9.1	
10/19/87	1200		10.7	--		12.4	-12.9		13.5	-9.0	
10/20/87	0		10.5	--		12.3	-12.9		13.4	-8.9	
10/20/87	1200		10.3	--		12.2	-12.9		13.4	-8.9	
10/21/87	0		10.1	--		12.1	-13.0		13.3	-8.8	
10/21/87	1200		9.9	--		12.0	-13.2		13.3	-8.7	
10/22/87	0		9.6	--		11.9	-13.3		13.2	-8.6	
10/22/87	1200		9.5	--		11.8	-13.4		13.2	-8.5	
10/23/87	0		9.4	--		11.7	-13.5		13.1	-8.4	
10/23/87	1200		9.3	--		11.5	-13.5		13.0	-8.3	
10/24/87	0		9.1	--		11.4	-13.5		12.9	-8.2	
10/24/87	1200		9.1	--		11.4	-13.5		12.9	-8.2	
10/25/87	0		9.2	--		11.3	-13.4		12.9	-8.0	
10/25/87	1200		9.3	--		11.2	-13.2		12.8	-7.8	
10/26/87	0		9.3	--		11.2	-13.0		12.7	-7.6	
10/26/87	1200		9.3	--		11.2	-13.0		12.7	-7.5	
10/27/87	0		9.3	--		11.1	-12.7		12.6	-7.4	

Table 6.---Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.5			0.8			0.9		
			Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)		Soil temperature (Celsius)	Soil-water potential (bars)	
10/27/87	1200		9.3	--		11.1	-12.7		12.6	-7.3	
10/28/87	0		9.1	--		11.1	-12.7		12.5	-7.1	
10/28/87	1200		9.0	--		11.0	-12.7		12.5	-7.1	
10/29/87	0		8.9	--		11.0	-12.7		12.4	-7.0	
10/29/87	1200		8.8	--		10.9	-12.9		12.4	-7.0	
10/30/87	0		8.7	--		10.8	-12.8		12.4	-6.7	
10/30/87	1200		8.8	--		10.8	-12.9		12.4	-6.7	
10/31/87	0		8.9	--		10.7	-12.7		12.3	-6.6	
10/31/87	1200		9.2	--		10.8	-12.6		12.3	-6.6	
11/01/87	0		9.4	--		10.8	-12.3		12.2	-6.6	
11/01/87	1200		9.6	--		10.8	-12.1		12.3	-6.5	
11/02/87	0		9.7	--		10.9	-11.7		12.2	-6.4	
11/02/87	1200		9.9	--		11.0	-11.4		12.2	-6.4	
11/03/87	0		10.0	--		11.0	-10.9		12.2	-6.4	
11/03/87	1200		10.1	--		11.1	-11.1		12.2	-6.4	
11/04/87	0		10.1	--		11.1	-10.3		12.2	-6.3	
11/04/87	1200		10.2	--		11.2	-10.6		12.2	-6.1	
11/05/87	0		10.2	--		11.2	-10.7		12.2	-6.0	
11/05/87	1200		10.0	--		11.1	-10.8		12.0	-6.1	
11/06/87	0		9.8	--		11.1	-10.8		12.1	-5.9	
11/06/87	1200		9.4	--		11.1	-11.2		12.1	-5.9	
11/07/87	0		9.2	--		11.0	-11.1		12.1	-5.9	
11/07/87	1200		9.0	--		10.9	-11.6		12.1	-5.9	
11/08/87	0		9.0	--		10.9	-11.4		12.1	-5.9	
11/08/87	1200		9.0	--		10.8	-11.5		12.1	-5.9	
11/09/87	0		9.0	--		10.8	-11.2		12.0	-6.0	
11/09/87	1200		8.8	--		10.6	-11.0		11.9	-6.0	
11/10/87	0		8.4	--		10.5	-11.1		11.8	-5.8	
11/10/87	1200		8.3	--		10.5	-11.9		11.9	-5.7	
11/11/87	0		8.2	--		10.4	-12.0		11.8	-5.7	
11/11/87	1200		8.1	--		10.1	-11.9		11.5	-5.6	
11/12/87	0		8.0	--		10.1	-11.8		11.4	-5.6	
11/12/87	1200		7.7	--		9.9	-12.0		11.3	-5.6	
11/13/87	0		7.5	--		9.8	-12.0		11.2	-5.5	
11/13/87	1200		7.4	--		9.7	-12.0		11.1	-5.5	
11/14/87	0		7.4	--		9.6	-12.1		11.0	-5.6	
11/14/87	1200		7.4	--		9.4	-12.1		10.8	-5.8	
11/15/87	0		7.3	--		9.3	-12.0		10.7	-5.7	

Table 6.---Temperature and soil-water potential for disturbed soil above the horizontal
culvert at the east test trench---continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential
rounded to the nearest tenth of a bar; --Indicates no data]

Depth (meters)	Date	Hour	0.5			0.8			0.9		
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil-water potential (bars)
	11/15/87	1200	7.2	--	--	9.2	-11.9	-11.9	10.5	-5.5	-5.5
	11/16/87	0	6.9	--	--	9.1	-11.9	-11.9	10.5	-5.4	-5.4
	11/16/87	1200	6.5	--	--	9.0	-12.0	-12.0	10.3	-5.5	-5.5
	11/17/87	0	6.1	--	--	8.7	-12.3	-12.3	10.1	-5.5	-5.5
	11/17/87	1200	5.8	--	--	8.6	-12.5	-12.5	10.0	-5.6	-5.6
	11/18/87	0	5.6	--	--	8.5	-12.4	-12.4	10.0	-5.6	-5.6
	11/18/87	1200	5.2	--	--	8.2	-12.6	-12.6	9.7	-5.3	-5.3
	11/19/87	0	5.0	--	--	8.0	-12.6	-12.6	9.7	-5.4	-5.4
	11/19/87	1200	4.6	--	--	7.8	-12.7	-12.7	9.4	-5.3	-5.3
	11/20/87	0	4.2	--	--	7.6	-12.9	-12.9	9.4	-5.4	-5.4
	11/20/87	1200	3.9	--	--	7.3	-13.2	-13.2	9.2	-5.3	-5.3
	11/21/87	0	3.6	--	--	7.1	-13.3	-13.3	9.0	-5.3	-5.3
	11/21/87	1200	3.2	--	--	6.8	-13.4	-13.4	8.8	-5.3	-5.3
	11/22/87	0	3.0	--	--	6.7	-13.4	-13.4	8.7	-5.3	-5.3
	11/22/87	1200	2.8	--	--	6.4	-13.5	-13.5	8.5	-5.3	-5.3
	11/23/87	0	2.7	--	--	6.2	-13.5	-13.5	8.4	-5.4	-5.4
	11/23/87	1200	2.7	--	--	6.0	-13.4	-13.4	8.2	-5.4	-5.4
	11/24/87	0	2.7	--	--	5.9	-13.3	-13.3	8.1	-5.3	-5.3
	11/24/87	1200	2.5	--	--	5.8	-13.1	-13.1	7.9	-5.4	-5.4
	11/25/87	0	2.4	--	--	5.7	-13.1	-13.1	7.8	-5.4	-5.4
	11/25/87	1200	2.1	--	--	5.5	-13.1	-13.1	7.6	-5.4	-5.4
	11/26/87	0	2.1	--	--	5.4	-13.1	-13.1	7.5	-5.3	-5.3
	11/26/87	1200	1.9	--	--	5.2	-13.1	-13.1	7.3	-5.3	-5.3
	11/27/87	0	1.9	--	--	5.2	-13.0	-13.0	7.2	-5.1	-5.1
	11/27/87	1200	1.7	--	--	5.0	-13.1	-13.1	7.1	-5.2	-5.2
	11/28/87	0	1.5	--	--	4.9	-13.0	-13.0	6.9	-5.2	-5.2
	11/28/87	1200	1.3	--	--	4.7	-13.1	-13.1	6.8	-5.2	-5.2
	11/29/87	0	1.1	--	--	4.6	-13.1	-13.1	6.7	-5.3	-5.3
	11/29/87	1200	0.8	--	--	4.4	-13.2	-13.2	6.5	-5.2	-5.2
	11/30/87	0	0.6	--	--	4.3	-13.2	-13.2	6.4	-5.2	-5.2
	11/30/87	1200	0.5	--	--	4.2	-13.3	-13.3	6.3	-5.2	-5.2
	12/01/87	0	0.2	--	--	4.0	-13.3	-13.3	6.2	-5.1	-5.1
	12/01/87	1200	0.0	--	--	3.8	-13.3	-13.3	6.0	-5.2	-5.2
	12/02/87	0	0.0	--	--	3.7	-13.4	-13.4	5.9	-5.2	-5.2
	12/02/87	1200	0.1	--	--	3.6	-13.4	-13.4	5.8	-5.2	-5.2
	12/03/87	0	0.3	--	--	3.5	-13.2	-13.2	5.7	-5.1	-5.1
	12/03/87	1200	0.6	--	--	3.4	-13.0	-13.0	5.6	-5.1	-5.1
	12/04/87	0	0.8	--	--	3.5	-12.9	-12.9	5.6	-5.1	-5.1

Table 6.---Temperature and soil-water potential for disturbed soil above the horizontal
culvert at the east test trench---continued
[Temperature values rounded to the nearest tenth of a degree; soil-water potential
rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	Date	Hour	0.5		0.8		0.9	
			Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
12/04/87	1200		1.0	--	3.5	-12.6	5.4	-5.1
12/05/87	0		1.3	--	3.6	-12.5	5.4	-5.1
12/05/87	1200		1.4	--	3.6	-12.3	5.4	-5.1
12/06/87	0		1.6	--	3.7	-12.1	5.4	-5.1
12/06/87	1200		1.7	--	3.7	-12.0	5.3	-5.1
12/07/87	0		1.8	--	3.8	-12.0	5.4	-5.1
12/07/87	1200		1.8	--	3.8	-11.9	5.3	-5.0
12/08/87	0		1.9	--	3.9	-11.9	5.4	-5.0
12/08/87	1200		2.1	--	4.0	-11.7	5.4	-5.0
12/09/87	0		2.0	--	3.9	-11.7	5.3	-5.0
12/09/87	1200		2.1	--	4.0	-11.7	5.3	-5.0
12/10/87	0		2.1	--	4.0	-11.7	5.3	-5.0
12/10/87	1200		2.1	--	4.0	-11.6	5.3	-5.0
12/11/87	0		2.2	--	4.1	-11.6	5.4	-4.9
12/11/87	1200		2.1	--	4.0	-11.6	5.3	-4.9
12/12/87	0		2.2	--	4.1	-11.5	5.4	-4.9
12/12/87	1200		2.1	--	4.0	-11.6	5.3	-4.9
12/13/87	0		2.1	--	4.1	-11.6	5.4	-4.9
12/13/87	1200		1.9	--	4.0	-11.6	5.3	-4.9
12/14/87	0		1.4	--	3.9	-11.7	5.3	-4.8
12/14/87	1200		1.0	--	3.8	-11.9	5.3	-4.8
12/15/87	0		0.2	--	3.6	-12.2	5.2	-4.8
12/15/87	1200		-0.4	--	3.4	-12.5	5.1	-4.9
12/16/87	1200		-1.4	--	2.9	-13.0	4.9	-4.8
12/17/87	0		-1.7	--	2.6	-13.2	4.8	-4.8
12/17/87	1200		-2.0	--	2.3	-13.2	4.6	-4.8
12/18/87	0		-2.0	--	2.2	-13.2	4.6	-4.8
12/18/87	1200		-2.1	--	1.9	-13.3	4.3	-4.9
12/19/87	0		-2.1	--	1.8	-13.1	4.2	-4.9
12/19/87	1200		-2.2	--	1.6	-13.1	4.1	-4.9
12/20/87	0		-2.2	--	1.5	-12.9	4.0	-4.9
12/20/87	1200		-2.2	--	1.3	-12.8	3.8	-4.8
12/21/87	0		-2.2	--	1.3	-12.7	3.7	-4.8
12/21/87	1200		-2.3	--	1.2	-12.7	3.6	-4.9
12/22/87	0		-2.4	--	1.1	-12.7	3.5	-4.8
12/22/87	1200		-2.3	--	1.1	-12.7	3.4	-4.8
12/23/87	0		-2.3	--	1.0	-12.6	3.3	-4.8
12/23/87	1200		-2.2	--	1.0	-12.5	3.3	-4.8

Table 6.--Temperature and soil-water potential for disturbed soil above the horizontal culvert at the east test trench--continued
[temperature values rounded to the nearest tenth of a degree; soil-water potential rounded to the nearest tenth of a bar; --indicates no data]

Depth (meters)	0.5		0.8		0.9	
	Date	Hour	Soil temperature (Celsius)	Soil-water potential (bars)	Soil temperature (Celsius)	Soil-water potential (bars)
12/24/87		0	-2.0	--	1.0	-12.3
12/24/87		1200	-2.1	--	0.8	-12.2
12/25/87		0	-2.1	--	0.9	-12.1
12/25/87		1200	-2.3	--	0.8	-12.1
12/26/87		0	-2.4	--	0.8	-12.1
12/26/87		1200	-2.6	--	0.7	-12.2
12/27/87		0	-2.6	--	0.7	-12.2
12/27/87		1200	-2.8	--	0.5	-12.2
12/28/87		0	-2.9	--	0.5	-12.2
12/28/87		1200	-3.1	--	0.4	-12.2
12/29/87		0	-3.2	--	0.3	-12.2
12/29/87		1200	-3.3	--	0.2	-12.3
12/30/87		0	-3.4	--	0.1	-12.2
12/30/87		1200	-3.5	--	0.0	-12.3
12/31/87		0	-3.5	--	-0.1	-12.2
12/31/87		1200	-3.5	--	-0.1	-12.1
					3.3	-4.8
					3.0	-4.8
					3.1	-4.7
					2.9	-4.7
					2.9	-4.6
					2.8	-4.6
					2.8	-4.7
					2.6	-4.7
					2.7	-4.6
					2.5	-4.6
					2.5	-4.7
					2.5	-4.7
					2.4	-4.6
					2.3	-4.7
					2.3	-4.8
					2.2	-4.7

Table 7.---Volumetric moisture content of soil at neutron-probe access hole 1
[Moisture content in percent volume]

Date	Depth below land surface, in meters																		
	0.2	0.3	0.5	0.6	0.8	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.4	3.7	4.0	4.3	4.6	4.9
01/08/87	10	13	13	13	14	16	19	21	25	30	31	29	27	30	29	25	27	24	26
01/26/87	11	13	13	13	15	16	19	21	25	29	31	29	27	30	29	25	26	24	26
02/02/87	11	13	13	13	15	16	19	21	25	29	31	--	--	--	--	--	--	--	--
02/09/87	18	13	13	13	15	15	19	21	25	29	31	--	--	--	--	--	--	--	--
02/17/87	29	28	15	13	15	16	19	21	26	29	32	--	--	--	--	--	--	--	--
03/02/87	30	30	20	15	15	16	19	21	25	29	31	29	27	31	29	26	27	25	27
03/09/87	26	30	21	17	16	16	19	21	25	29	31	--	--	--	--	--	--	--	--
03/16/87	21	27	25	20	17	16	19	21	25	29	31	--	--	--	--	--	--	--	--
03/23/87	19	26	25	21	17	16	19	21	25	29	31	--	--	--	--	--	--	--	--
03/31/87	18	25	24	21	18	17	19	22	25	29	31	--	--	--	--	--	--	--	--
04/07/87	16	25	24	21	19	17	19	21	25	29	31	29	27	30	29	26	27	25	26
04/17/87	15	24	24	21	19	18	19	21	25	29	30	--	--	--	--	--	--	--	--
04/27/87	15	23	24	21	19	18	19	21	26	29	31	--	--	--	--	--	--	--	--
05/04/87	13	22	24	20	18	18	19	21	25	29	31	--	--	--	--	--	--	--	--
05/14/87	10	20	22	20	18	17	19	21	26	29	31	--	--	--	--	--	--	--	--
05/20/87	22	28	24	20	18	17	19	21	25	29	31	29	27	30	29	25	26	25	26
05/28/87	19	26	25	21	19	17	19	22	25	30	31	--	--	--	--	--	--	--	--
06/09/87	14	24	24	21	19	17	18	21	24	29	31	--	--	--	--	--	--	--	--
06/26/87	8	18	20	18	17	16	18	21	25	28	30	--	--	--	--	--	--	--	--
07/02/87	9	16	19	17	16	16	18	21	25	29	30	--	--	--	--	--	--	--	--
07/22/87	12	13	15	14	15	15	17	21	25	29	31	29	27	29	29	26	27	25	27
08/14/87	6	12	13	13	13	14	16	20	24	29	31	--	--	--	--	--	--	--	--
09/01/87	5	12	12	11	12	13	15	19	22	28	31	--	--	--	--	--	--	--	--
09/24/87	4	11	11	10	11	12	14	18	21	28	31	--	--	--	--	--	--	--	--
11/10/87	10	11	11	10	11	12	13	17	21	27	30	27	26	29	29	25	27	25	26

Table 8.--Volumetric moisture content of soil at neutron-probe access hole 2
[Moisture content in percent volume]

Date	Depth below land surface, in meters																					
	0.2	0.3	0.5	0.6	0.8	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.4	3.7	4.0	4.3	4.6	4.9	5.2	5.5	5.7
01/08/87	11	12	12	13	13	13	15	20	22	23	27	24	21	24	25	24	24	26	24	20	20	18
01/26/87	12	12	12	12	13	14	15	20	22	23	27	24	21	25	24	24	24	26	24	20	20	17
02/02/87	12	12	12	13	13	13	15	20	21	23	27	--	--	--	--	--	--	--	--	--	--	--
02/09/87	12	12	11	13	13	13	15	20	21	22	27	--	--	--	--	--	--	--	--	--	--	--
02/17/87	27	20	12	13	13	14	15	20	22	23	27	--	--	--	--	--	--	--	--	--	--	--
03/02/87	27	21	13	13	13	14	15	20	21	22	28	24	21	25	24	24	24	26	24	20	20	17
03/09/87	28	23	13	13	13	14	15	20	21	22	27	--	--	--	--	--	--	--	--	--	--	--
03/16/87	24	24	16	13	13	14	15	20	21	22	27	--	--	--	--	--	--	--	--	--	--	--
03/23/87	22	24	18	13	13	13	15	20	21	22	27	--	--	--	--	--	--	--	--	--	--	--
03/31/87	20	23	18	14	13	13	15	20	21	22	27	--	--	--	--	--	--	--	--	--	--	--
04/07/87	19	23	19	16	14	13	15	20	21	22	28	24	21	25	25	23	24	26	24	19	20	18
04/17/87	15	21	19	15	14	13	15	20	21	22	27	--	--	--	--	--	--	--	--	--	--	--
04/27/87	15	20	18	16	14	14	15	20	21	22	27	--	--	--	--	--	--	--	--	--	--	--
05/04/87	12	17	17	16	14	14	15	20	21	22	27	--	--	--	--	--	--	--	--	--	--	--
05/14/87	8	14	15	15	13	13	15	20	22	22	27	--	--	--	--	--	--	--	--	--	--	--
05/20/87	23	19	15	15	13	13	15	20	21	22	27	24	21	24	25	24	24	26	24	19	20	18
05/28/87	20	20	16	15	13	13	15	20	21	22	27	--	--	--	--	--	--	--	--	--	--	--
06/09/87	14	17	16	15	13	13	15	19	22	22	27	--	--	--	--	--	--	--	--	--	--	--
06/26/87	7	12	13	13	12	11	13	19	21	22	27	--	--	--	--	--	--	--	--	--	--	--
07/02/87	8	11	12	12	11	12	14	20	21	22	27	--	--	--	--	--	--	--	--	--	--	--
07/22/87	11	11	11	11	10	11	13	20	21	22	27	25	22	25	25	24	24	26	24	20	20	18
08/14/87	6	10	11	11	10	10	11	19	21	23	27	--	--	--	--	--	--	--	--	--	--	--
09/01/87	5	9	10	10	10	10	11	18	21	22	28	--	--	--	--	--	--	--	--	--	--	--
09/24/87	4	9	9	9	9	9	10	17	20	23	27	--	--	--	--	--	--	--	--	--	--	--
11/10/87	9	9	9	9	9	10	16	20	22	27	24	23	21	24	24	23	24	25	23	20	19	17

Table 9.--Volumetric moisture content of soil at neutron-probe access hole 3
[Moisture content in percent volume]

Date	Depth below land surface, in meters																				
	0.2	0.3	0.5	0.6	0.8	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.4	3.7	4.0	4.3	4.6	4.9	5.2	5.5
01/08/87	10	13	15	17	15	13	17	22	24	25	29	25	25	28	25	21	26	25	25	20	21
01/26/87	11	13	15	17	15	13	18	22	23	24	28	25	24	28	25	22	26	25	25	20	21
02/02/87	12	14	16	18	15	13	17	22	23	24	29	--	--	--	--	--	--	--	--	--	--
02/09/87	13	14	16	17	15	13	18	22	23	24	28	--	--	--	--	--	--	--	--	--	--
02/17/87	25	18	16	18	15	14	18	23	24	25	29	--	--	--	--	--	--	--	--	--	--
03/02/87	25	20	16	18	16	14	18	23	23	25	29	26	25	28	25	22	27	25	25	20	21
03/09/87	27	20	16	18	16	14	18	22	23	25	29	--	--	--	--	--	--	--	--	--	--
03/16/87	23	23	17	18	16	14	18	22	23	25	28	--	--	--	--	--	--	--	--	--	--
03/23/87	21	24	18	18	15	13	18	22	23	24	28	--	--	--	--	--	--	--	--	--	--
03/31/87	20	24	19	18	16	14	17	22	23	24	28	--	--	--	--	--	--	--	--	--	--
04/07/87	18	23	21	19	16	13	18	22	23	24	28	25	25	28	25	21	27	25	25	20	21
04/17/87	16	22	21	19	16	13	18	22	23	24	28	--	--	--	--	--	--	--	--	--	--
04/27/87	15	21	20	19	16	14	18	22	23	24	28	--	--	--	--	--	--	--	--	--	--
05/04/87	13	20	20	19	16	13	18	22	23	24	28	--	--	--	--	--	--	--	--	--	--
05/14/87	9	17	19	19	15	13	18	23	23	24	29	--	--	--	--	--	--	--	--	--	--
05/20/87	24	21	18	18	15	13	17	22	23	24	28	25	24	28	26	21	27	24	25	20	21
05/28/87	20	22	20	18	15	13	17	22	23	25	28	--	--	--	--	--	--	--	--	--	--
06/09/87	14	19	19	18	15	13	17	22	23	24	29	--	--	--	--	--	--	--	--	--	--
06/26/87	8	14	16	16	13	11	16	21	23	24	28	--	--	--	--	--	--	--	--	--	--
07/02/87	9	13	16	16	13	11	16	22	23	25	28	--	--	--	--	--	--	--	--	--	--
07/22/87	10	13	14	14	12	10	15	21	24	25	29	25	24	28	26	22	26	24	25	21	21
08/14/87	6	12	13	13	11	9	13	21	23	24	29	--	--	--	--	--	--	--	--	--	--
09/01/87	5	11	12	12	11	8	12	20	23	25	29	--	--	--	--	--	--	--	--	--	--
09/24/87	5	11	12	12	10	8	12	19	22	25	28	--	--	--	--	--	--	--	--	--	--
11/10/87	10	11	11	11	10	8	11	18	21	24	28	25	24	28	25	22	26	24	25	20	21

Table 10.--Volumetric moisture content of soil at neutron-probe access hole 4
[Moisture content in percent volume]

Date	Depth below land surface, in meters																			
	0.2	0.3	0.5	0.6	0.8	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.4	3.7	4.0	4.3	4.6	4.9	5.1
01/08/87	13	17	19	20	16	13	16	19	18	22	21	22	19	20	24	23	18	19	18	18
01/26/87	14	17	19	20	17	13	16	19	17	22	21	22	19	20	24	23	18	20	18	18
02/02/87	15	17	19	20	17	14	16	19	18	22	21	--	--	--	--	--	--	--	--	--
02/09/87	14	17	19	20	17	14	16	19	17	21	21	--	--	--	--	--	--	--	--	--
02/17/87	21	18	20	21	17	14	16	19	18	22	22	--	--	--	--	--	--	--	--	--
03/02/87	22	18	20	21	18	14	16	19	18	22	21	22	19	20	24	24	18	20	19	18
03/09/87	26	20	19	21	18	14	16	19	17	21	21	--	--	--	--	--	--	--	--	--
03/16/87	23	23	20	21	18	14	16	19	17	22	21	--	--	--	--	--	--	--	--	--
03/23/87	21	23	21	21	18	14	16	19	17	21	21	--	--	--	--	--	--	--	--	--
03/31/87	20	23	21	21	17	14	16	18	17	21	21	--	--	--	--	--	--	--	--	--
04/07/87	19	24	22	21	18	14	17	19	18	22	22	21	19	20	25	24	19	20	19	18
04/17/87	18	22	21	21	18	15	16	18	17	21	21	--	--	--	--	--	--	--	--	--
04/27/87	18	23	21	21	18	15	16	19	17	21	22	--	--	--	--	--	--	--	--	--
05/04/87	17	22	22	21	18	15	17	19	17	21	21	--	--	--	--	--	--	--	--	--
05/14/87	14	21	22	21	18	15	16	19	17	22	21	--	--	--	--	--	--	--	--	--
05/20/87	22	22	21	21	18	15	16	19	17	22	22	21	19	20	24	24	18	20	18	18
05/28/87	20	22	21	21	18	15	17	19	17	22	22	--	--	--	--	--	--	--	--	--
06/09/87	17	22	21	21	18	15	16	19	17	21	21	--	--	--	--	--	--	--	--	--
06/26/87	11	19	20	20	17	15	16	19	17	21	21	--	--	--	--	--	--	--	--	--
07/02/87	11	18	19	19	16	15	16	18	17	21	22	--	--	--	--	--	--	--	--	--
07/22/87	12	16	18	19	16	14	16	19	18	22	21	22	18	20	25	24	18	20	19	18
08/14/87	7	14	17	17	16	13	16	19	18	22	22	--	--	--	--	--	--	--	--	--
09/01/87	6	13	16	17	14	13	16	19	18	22	22	--	--	--	--	--	--	--	--	--
09/24/87	5	12	14	16	14	12	16	18	17	21	22	--	--	--	--	--	--	--	--	--
11/10/87	11	12	13	14	13	12	15	18	17	21	21	22	19	20	24	24	18	19	18	18

Table 11.---Volumetric moisture content of soil at neutron-probe access hole 5
[Moisture content in percent volume]

Date	Depth below land surface, in meters											
	0.2	0.3	0.5	0.6	0.8	0.9	1.2	1.5	1.8	2.1	2.4	2.7
01/08/87	17	18	16	17	20	22	23	31	28	26	26	29
01/26/87	17	18	16	17	20	22	23	31	28	25	26	29
02/02/87	17	18	16	17	21	22	23	30	28	26	26	29
02/09/87	17	18	15	17	20	22	23	30	27	26	26	28
02/17/87	21	18	16	18	21	22	23	31	28	26	26	29
03/02/87	21	19	16	18	21	22	23	31	28	26	26	29
03/09/87	25	19	16	18	21	22	23	31	28	26	26	29
03/16/87	25	20	16	17	21	22	23	30	27	26	26	29
03/23/87	25	21	15	17	21	22	23	30	28	26	26	28
03/31/87	24	21	16	18	21	22	23	31	28	26	26	29
04/07/87	24	22	16	18	21	23	23	31	28	26	26	29
04/17/87	22	22	16	18	21	22	23	30	28	25	26	28
04/27/87	23	22	16	18	21	22	23	31	28	26	26	29
05/04/87	21	22	16	18	21	22	23	31	28	26	26	29
05/14/87	20	21	16	18	21	22	23	31	28	26	26	29
05/20/87	29	22	16	17	21	22	23	31	28	26	26	29
05/28/87	28	23	16	18	21	23	23	31	28	26	27	30
06/09/87	25	23	17	18	21	22	23	31	28	26	26	29
06/26/87	19	21	16	17	20	22	23	30	28	26	26	29
07/02/87	18	20	16	17	20	22	23	31	27	26	26	28
07/22/87	17	18	16	17	19	22	23	31	29	26	26	30
08/14/87	15	18	15	16	20	21	22	31	28	26	26	29
09/01/87	14	17	14	16	20	21	22	31	28	26	26	29
09/24/87	13	16	15	16	19	20	22	30	27	26	26	29
11/10/87	13	15	14	16	19	20	22	31	28	26	26	28

Table 12.--Volumetric moisture content of soil at neutron-probe access hole 6
[Moisture content in percent volume]

Date	Depth below land surface, in meters																					
	0.2	0.3	0.5	0.6	0.8	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.4	3.7	4.0	4.3	4.6	4.9	5.2	5.5	5.7
01/08/87	15	13	15	16	16	15	11	12	12	10	9	10	4	16	23	21	19	19	20	19	20	18
01/26/87	15	13	14	16	16	15	11	11	12	10	10	10	4	16	24	21	18	19	20	19	20	19
02/02/87	15	13	14	16	16	15	11	12	12	10	10	--	--	--	--	--	--	--	--	--	--	--
02/09/87	15	13	15	16	16	14	10	11	12	10	9	--	--	--	--	--	--	--	--	--	--	--
02/17/87	22	14	14	16	16	15	11	11	12	10	10	--	--	--	--	--	--	--	--	--	--	--
03/02/87	23	14	14	16	16	15	11	12	12	10	10	10	4	16	24	21	19	19	20	19	20	19
03/09/87	26	16	15	16	16	15	11	12	12	10	10	--	--	--	--	--	--	--	--	--	--	--
03/16/87	25	17	15	16	16	15	11	12	12	10	10	--	--	--	--	--	--	--	--	--	--	--
03/23/87	24	18	14	16	16	15	11	12	12	10	10	--	--	--	--	--	--	--	--	--	--	--
03/31/87	24	18	15	16	16	15	11	11	12	10	10	--	--	--	--	--	--	--	--	--	--	--
04/07/87	24	18	15	16	16	15	11	12	12	10	10	10	4	16	24	21	19	19	20	19	19	18
04/17/87	21	18	16	16	16	15	11	12	12	10	10	--	--	--	--	--	--	--	--	--	--	--
04/27/87	22	18	16	16	16	15	11	12	12	10	10	--	--	--	--	--	--	--	--	--	--	--
05/04/87	20	18	16	16	16	15	11	12	12	10	10	--	--	--	--	--	--	--	--	--	--	--
05/14/87	19	18	16	16	15	15	11	12	12	10	10	--	--	--	--	--	--	--	--	--	--	--
05/20/87	28	21	16	16	15	15	11	12	12	10	12	10	4	16	23	20	19	19	19	18	19	18
05/28/87	25	20	16	16	16	15	11	12	12	11	10	--	--	--	--	--	--	--	--	--	--	--
06/09/87	21	20	17	16	16	15	11	12	12	10	11	--	--	--	--	--	--	--	--	--	--	--
06/26/87	13	14	16	17	16	15	11	11	11	11	9	--	--	--	--	--	--	--	--	--	--	--
07/02/87	13	13	14	16	16	15	11	12	12	10	9	--	--	--	--	--	--	--	--	--	--	--
07/22/87	14	13	13	15	15	14	11	12	12	11	10	10	4	16	23	21	19	19	20	19	20	18
08/14/87	11	12	13	14	13	14	10	11	12	11	10	--	--	--	--	--	--	--	--	--	--	--
09/01/87	10	12	12	13	13	12	9	9	10	10	10	--	--	--	--	--	--	--	--	--	--	--
09/24/87	8	11	12	13	13	12	8	10	10	10	10	--	--	--	--	--	--	--	--	--	--	--
11/10/87	10	10	11	12	12	11	8	10	10	10	10	10	4	16	24	20	18	19	19	19	19	18

Table 13.--Volumetric moisture content of soil at neutron-probe access hole 7
[Moisture content in percent volume]

Date	Depth below land surface, in meters																	
	0.2	0.3	0.5	0.6	0.8	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.4	3.7	4.0	4.3	4.4
01/08/87	8	12	15	16	14	14	22	24	23	25	23	21	23	25	26	28	24	25
01/26/87	9	12	15	16	14	15	22	24	24	25	23	21	22	25	26	28	23	24
02/02/87	9	12	16	16	14	15	22	24	24	25	23	--	--	--	--	--	--	--
02/09/87	10	12	15	16	14	15	21	24	23	25	22	--	--	--	--	--	--	--
02/17/87	21	19	16	16	15	15	22	24	23	25	23	--	--	--	--	--	--	--
03/02/87	22	20	16	16	15	15	22	24	24	25	23	22	23	25	26	28	23	24
03/09/87	21	21	16	16	14	15	21	24	24	25	23	--	--	--	--	--	--	--
03/16/87	20	22	17	16	15	14	21	24	24	25	23	--	--	--	--	--	--	--
03/23/87	18	22	18	17	15	15	21	24	24	25	23	--	--	--	--	--	--	--
03/31/87	18	22	19	16	14	15	21	23	24	25	23	--	--	--	--	--	--	--
04/07/87	16	21	20	16	15	15	22	24	24	25	23	21	23	25	26	28	24	24
04/17/87	13	19	20	17	14	15	21	24	24	25	22	--	--	--	--	--	--	--
04/27/87	12	18	20	18	15	15	22	24	24	25	23	--	--	--	--	--	--	--
05/04/87	11	16	19	17	15	15	22	24	24	25	22	--	--	--	--	--	--	--
05/14/87	8	13	18	17	15	15	22	24	24	25	23	--	--	--	--	--	--	--
05/20/87	16	14	17	17	15	15	22	24	24	25	23	22	23	25	26	28	24	25
05/28/87	13	14	18	17	14	15	22	25	25	25	23	--	--	--	--	--	--	--
06/09/87	10	13	17	17	14	14	22	24	24	25	23	--	--	--	--	--	--	--
06/26/87	6	10	14	15	14	15	22	24	23	25	23	--	--	--	--	--	--	--
07/02/87	7	10	14	15	14	15	22	24	24	25	23	--	--	--	--	--	--	--
07/22/87	8	11	13	14	14	15	22	24	24	26	23	22	23	25	26	28	24	25
08/14/87	5	10	12	12	12	14	22	24	24	25	23	--	--	--	--	--	--	--
09/01/87	5	10	11	12	11	14	22	24	24	25	23	--	--	--	--	--	--	--
09/24/87	4	9	11	11	11	11	21	23	23	25	23	--	--	--	--	--	--	--
11/10/87	8	10	11	11	11	13	22	24	24	26	23	22	24	26	27	28	24	25

Table 14.--Volumetric moisture content of soil at neutron-probe access hole 8
[Moisture content in percent volume]

Date	Depth below land surface, in meters																				
	0.2	0.3	0.5	0.6	0.8	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.4	3.7	4.0	4.3	4.6	4.9	5.2	5.5
01/08/87	12	14	16	17	15	14	17	20	21	23	26	23	20	23	26	24	20	24	20	16	16
01/26/87	13	14	16	17	16	15	17	20	21	23	26	24	20	24	25	24	20	24	21	16	17
02/02/87	13	15	16	17	16	15	17	20	21	23	26	--	--	--	--	--	--	--	--	--	--
02/09/87	15	14	16	17	16	15	16	20	21	22	26	--	--	--	--	--	--	--	--	--	--
02/17/87	25	16	17	18	16	15	17	21	21	23	27	--	--	--	--	--	--	--	--	--	--
03/02/87	27	17	17	17	15	15	17	21	21	23	26	24	20	24	26	24	20	24	21	16	17
03/09/87	28	20	16	17	16	14	17	21	21	23	26	--	--	--	--	--	--	--	--	--	--
03/16/87	23	23	17	17	15	14	16	20	21	23	26	--	--	--	--	--	--	--	--	--	--
03/23/87	21	23	19	17	16	15	17	20	20	23	26	--	--	--	--	--	--	--	--	--	--
03/31/87	18	23	19	17	15	14	16	20	20	23	26	--	--	--	--	--	--	--	--	--	--
04/07/87	18	23	20	18	16	15	17	20	21	23	26	24	21	24	25	24	20	24	21	18	16
04/17/87	15	21	20	17	15	14	17	20	21	22	26	--	--	--	--	--	--	--	--	--	--
04/27/87	13	20	20	18	16	15	17	20	21	23	26	--	--	--	--	--	--	--	--	--	--
05/04/87	11	20	19	18	15	14	17	20	21	23	26	--	--	--	--	--	--	--	--	--	--
05/14/87	7	16	18	18	15	15	17	20	21	23	26	--	--	--	--	--	--	--	--	--	--
05/20/87	25	25	19	18	16	15	17	20	21	23	26	23	21	24	25	24	20	24	21	16	16
05/28/87	21	23	20	18	16	14	17	20	21	23	26	--	--	--	--	--	--	--	--	--	--
06/09/87	13	20	20	18	15	15	17	20	21	23	26	--	--	--	--	--	--	--	--	--	--
06/26/87	7	14	16	15	14	13	16	20	20	23	26	--	--	--	--	--	--	--	--	--	--
07/02/87	9	12	15	14	13	13	16	20	21	23	26	--	--	--	--	--	--	--	--	--	--
07/22/87	14	12	13	14	12	12	16	20	21	23	27	23	21	24	26	24	20	24	21	16	17
08/14/87	5	11	12	12	11	11	15	20	21	23	26	--	--	--	--	--	--	--	--	--	--
09/01/87	5	10	11	11	10	10	14	19	21	23	26	--	--	--	--	--	--	--	--	--	--
09/24/87	3	10	10	10	9	9	14	19	21	23	26	--	--	--	--	--	--	--	--	--	--
11/10/87	11	10	10	10	9	9	14	19	21	23	26	23	21	24	25	24	20	24	20	15	16

Table 15.--Volumetric moisture content of soil at neutron-probe access hole 9
[Moisture content in percent volume]

Date	Depth below land surface, in meters																				
	0.2	0.3	0.5	0.6	0.8	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.4	3.7	4.0	4.3	4.6	4.9	5.2	5.3
01/08/87	11	14	15	15	14	15	17	21	21	22	25	23	20	25	26	24	21	24	19	17	17
01/26/87	11	14	16	16	15	16	17	21	21	22	25	23	19	25	26	24	21	24	19	17	17
02/02/87	13	14	16	16	15	16	17	21	21	22	25	--	--	--	--	--	--	--	--	--	--
02/09/87	13	13	15	15	15	16	17	20	21	23	25	--	--	--	--	--	--	--	--	--	--
02/17/87	27	24	16	16	15	16	17	21	21	23	26	--	--	--	--	--	--	--	--	--	--
03/02/87	28	25	17	15	16	16	17	21	21	23	25	23	20	25	27	24	21	25	19	17	17
03/09/87	30	27	17	16	15	15	17	21	21	23	25	--	--	--	--	--	--	--	--	--	--
03/16/87	24	27	21	16	15	15	17	21	21	22	25	--	--	--	--	--	--	--	--	--	--
03/23/87	21	26	22	16	15	15	17	21	21	23	25	--	--	--	--	--	--	--	--	--	--
03/31/87	20	26	22	17	15	15	17	20	20	22	25	--	--	--	--	--	--	--	--	--	--
04/07/87	20	26	22	18	15	16	17	21	21	23	25	24	20	26	27	24	21	24	19	17	17
04/17/87	16	25	21	18	15	15	17	20	21	22	25	--	--	--	--	--	--	--	--	--	--
04/27/87	17	24	21	18	15	15	17	21	21	22	25	--	--	--	--	--	--	--	--	--	--
05/04/87	15	23	21	17	15	16	17	21	21	23	26	--	--	--	--	--	--	--	--	--	--
05/14/87	11	21	20	17	16	16	17	21	21	23	25	--	--	--	--	--	--	--	--	--	--
05/20/87	23	24	20	17	15	16	17	21	21	22	25	24	20	26	27	24	20	24	19	16	17
05/28/87	20	24	21	17	15	15	17	20	21	23	25	--	--	--	--	--	--	--	--	--	--
06/09/87	16	22	21	17	15	15	16	21	21	23	26	--	--	--	--	--	--	--	--	--	--
06/26/87	8	17	19	16	15	15	17	21	21	22	25	--	--	--	--	--	--	--	--	--	--
07/02/87	9	15	18	16	14	14	17	20	20	22	25	--	--	--	--	--	--	--	--	--	--
07/22/87	10	13	15	14	13	15	17	21	21	23	26	24	20	26	27	24	21	25	19	16	17
08/14/87	5	11	12	13	12	13	16	20	21	23	26	--	--	--	--	--	--	--	--	--	--
09/01/87	4	10	12	11	11	13	16	21	21	23	26	--	--	--	--	--	--	--	--	--	--
09/24/87	3	10	11	11	11	12	15	20	20	23	25	--	--	--	--	--	--	--	--	--	--
11/10/87	10	10	10	10	10	11	15	20	21	22	25	24	20	25	26	24	20	24	19	16	17

Table 16.--Volumetric moisture content of soil at neutron-probe access hole 10
[Moisture content in percent volume]

Date	Depth below land surface, in meters																	
	0.2	0.3	0.5	0.6	0.8	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.4	3.7	4.0	4.3	4.6
11/09/87	27	32	30	26	19	11	14	20	21	24	23	26	27	27	26	29	24	21
11/10/87	28	31	29	25	19	12	14	20	21	24	23	26	27	27	26	29	24	21

Table 17.--Daily summaries of selected meteorological data at the test trench area

Date	Incoming long-wave radiation (W/m ²)	Emitted long-wave radiation (W/m ²)	Incoming short-wave radiation (W/m ²)	Reflected short-wave radiation (W/m ²)	Air temperature 1 meter above ground (Celsius)	Relative humidity 1 meter above ground (percent)	Air temperature 2 meters above ground (Celsius)	Relative humidity 2 meters above ground (percent)	Wind speed 1 meter above ground (m/s)	Wind speed 2 meters above ground (m/s)	Wind direction (degrees)	Precipitation (millimeters)
08/06/87	1039.2	1282.4	1199.6	213.4	26.5	12.6	26.7	12.7	4.7	6.3	242	0.00
08/07/87	1560.4	1880.3	1370.7	248.9	21.0	16.0	21.2	15.8	2.9	3.8	233	0.00
08/08/87	1583.1	1830.8	1149.4	208.1	18.2	30.6	18.4	30.3	1.6	2.1	143	0.00
08/09/87	1609.9	1880.3	1332.1	239.4	19.8	34.1	20.0	34.0	1.4	1.8	161	0.00
08/10/87	1669.8	1861.7	1163.3	231.2	20.2	27.3	20.6	26.8	1.7	2.2	167	0.00
08/11/87	1694.5	1830.8	989.5	183.5	20.3	27.8	20.7	27.3	2.3	2.9	226	0.00
08/12/87	1566.6	1822.5	1330.7	252.0	19.6	25.0	19.9	24.7	3.3	4.4	243	0.00
08/13/87	1572.8	1783.3	1086.1	203.5	18.1	24.6	18.3	24.4	3.7	3.7	216	0.00
08/14/87	1696.6	1719.3	117.4	117.4	16.7	25.5	16.9	25.3	2.8	3.6	239	0.00
08/15/87	1552.1	1723.4	1021.9	193.0	15.2	52.1	15.2	51.8	3.2	4.2	229	0.00
08/16/87	1554.2	1671.8	900.1	177.1	14.6	49.8	14.7	49.6	4.0	5.1	242	0.00
08/17/87	1440.5	1715.2	1290.2	251.4	14.6	29.0	14.7	28.7	3.0	3.9	244	0.00
08/18/87	1455.1	1752.3	1256.2	233.3	15.4	19.5	15.4	19.4	2.3	2.9	224	0.00
08/19/87	1510.8	1785.4	1234.5	256.6	16.9	18.6	17.1	18.3	2.3	3.1	234	0.00
08/20/87	1694.5	1814.3	970.7	196.7	19.3	17.0	19.7	16.6	1.7	2.3	200	0.00
08/21/87	1762.7	1876.2	1026.8	212.2	22.3	15.6	22.6	15.5	3.5	4.5	247	0.00
08/22/87	1775.0	1801.9	604.3	128.1	20.2	22.9	20.5	22.7	2.1	2.7	213	0.00
08/23/87	1696.6	1820.4	977.3	208.5	19.6	41.4	19.8	41.0	2.3	2.9	85	0.00
08/24/87	1713.1	1822.5	925.9	185.4	20.4	38.4	20.5	38.0	2.4	3.1	111	0.25
08/25/87	1676.0	1704.9	692.5	133.9	15.6	64.3	15.8	63.0	1.8	2.2	122	3.81
08/26/87	1572.8	1642.9	990.1	180.8	13.2	63.3	13.4	62.1	1.8	2.3	147	0.00
08/27/87	1566.6	1686.3	1075.6	205.4	13.7	53.6	14.0	52.4	1.4	1.8	95	0.00
08/28/87	1649.1	1748.2	1098.5	210.9	15.7	38.9	16.0	37.5	1.4	1.7	142	0.00
08/29/87	1585.2	1797.7	1211.8	220.4	17.8	33.4	18.1	32.4	1.4	1.6	220	0.00
08/30/87	1614.0	1830.8	1146.1	209.7	19.7	24.1	20.1	23.6	1.4	1.8	196	0.00
08/31/87	1597.5	1828.7	1159.8	214.7	19.6	20.5	20.0	19.7	1.3	1.7	195	0.00
09/01/87	1595.5	1824.6	1160.4	215.1	19.3	22.3	20.0	21.6	1.2	1.6	174	0.00
09/02/87	1628.5	1837.0	1101.4	205.6	19.8	18.6	20.3	18.2	1.2	1.8	198	0.00
09/03/87	1673.9	1841.1	993.6	193.6	21.2	20.8	21.6	20.5	2.9	3.8	226	0.00
09/04/87	1579.0	1682.2	539.5	118.1	16.5	22.3	16.9	22.3	3.9	5.1	221	0.00
09/05/87	1500.5	1688.4	1052.2	213.0	12.7	29.1	12.8	28.9	1.4	1.9	192	0.00
09/06/87	1467.5	1702.8	1096.4	222.9	14.0	35.5	14.2	35.5	1.7	2.2	178	0.00
09/07/87	1506.7	1740.0	1087.9	218.4	15.8	25.6	16.2	25.3	1.2	1.6	174	0.00
09/08/87	1533.6	1744.1	1075.3	218.6	16.3	30.1	16.6	30.1	1.6	2.1	165	0.00
09/09/87	1535.6	1752.3	1048.5	213.6	17.0	25.2	17.4	24.9	1.5	2.0	214	0.00
09/10/87	1539.7	1721.4	918.9	190.1	16.0	21.1	16.3	20.2	1.5	2.0	230	0.00
09/11/87	1554.2	1744.1	1005.2	209.1	16.4	21.0	17.0	20.0	1.3	1.7	123	0.00
09/12/87	1533.6	1719.3	982.9	206.2	15.5	26.0	16.1	24.8	1.4	1.9	118	0.00
09/13/87	1539.7	1744.1	982.7	205.2	16.8	22.9	17.2	22.4	1.4	1.9	165	0.00
09/14/87	1591.3	1783.3	989.1	209.3	18.3	18.9	18.7	18.7	1.6	2.1	192	0.00

Table 17.--Daily summaries of selected meteorological data at the test trench area--continued

Date	Incoming long-wave radiation (W/m2)	Emitted long-wave radiation (W/m2)	Incoming short-wave radiation (W/m2)	Reflected short-wave radiation (W/m2)	Air tem- perature 1 meter above ground (Celsius)	Relative humidity 1 meter above ground (percent)	Air tem- perature 2 meters above ground (Celsius)	Relative humidity 2 meters above ground (percent)	Wind speed 1 meter above ground (m/s)	Wind speed 2 meters above ground (m/s)	Wind direction (degrees)	Precipitation (millimeters)
09/15/87	1560.4	1756.5	956.9	202.5	17.4	25.4	17.7	25.1	2.1	2.7	214	0.00
09/16/87	1508.8	1709.0	922.0	200.8	16.1	31.2	16.3	30.8	3.1	4.0	223	0.00
09/17/87	1291.7	1587.2	979.8	217.1	9.7	29.9	9.8	29.8	2.7	3.4	212	0.00
09/18/87	1286.1	1541.8	975.0	216.3	7.1	27.9	7.8	27.1	1.3	1.6	197	0.00
09/19/87	1431.4	1620.2	940.4	202.7	10.6	21.7	11.1	21.3	1.4	1.8	211	0.00
09/20/87	1433.2	1649.1	921.0	202.7	12.7	19.6	13.4	19.4	1.3	1.6	197	0.00
09/21/87	1463.4	1661.5	890.6	196.9	13.6	18.9	14.2	18.6	1.2	1.5	193	0.00
09/22/87	1508.8	1690.4	882.2	192.0	15.4	18.6	16.0	18.3	1.2	1.6	203	0.00
09/23/87	1535.6	1711.1	886.7	194.4	16.5	17.9	17.1	17.3	1.1	1.4	200	0.00
09/24/87	1554.2	1719.3	867.5	191.1	16.8	18.7	17.4	18.0	1.0	1.4	203	0.00
09/25/87	1550.1	1715.2	861.1	192.4	16.7	18.5	17.3	17.9	1.3	1.7	204	0.00
09/26/87	1525.3	1690.4	782.9	175.2	16.2	18.5	16.6	18.3	2.4	3.2	221	0.00
09/27/87	1372.4	1562.4	793.0	182.9	11.4	25.5	11.7	25.4	4.6	5.9	238	0.00
09/28/87	1286.1	1504.7	871.0	197.1	6.4	29.8	6.9	29.6	1.0	1.2	214	0.00
09/29/87	1338.9	1535.6	865.6	197.3	8.2	26.4	8.8	26.2	1.0	1.3	208	0.00
09/30/87	1398.6	1576.9	848.9	191.8	10.8	22.3	11.5	22.1	1.0	1.3	184	0.00
10/01/87	1426.4	1607.9	844.4	192.6	12.2	21.2	12.8	21.0	1.2	1.5	206	0.00
10/02/87	1424.6	1607.9	826.6	188.7	12.8	19.5	13.5	19.2	1.1	1.4	200	0.00
10/03/87	1392.8	1585.2	829.9	191.3	11.6	18.9	12.4	18.6	1.1	1.4	212	0.00
10/04/87	1444.8	1642.9	807.2	186.2	14.8	16.9	15.3	16.7	2.2	2.9	224	0.00
10/05/87	1502.6	1642.9	690.8	158.3	15.0	19.0	15.3	19.0	2.2	2.9	224	0.00
10/06/87	1380.2	1574.8	781.4	181.4	11.2	20.6	11.7	19.0	1.3	1.7	215	0.00
10/07/87	1377.3	1545.9	731.9	173.2	10.2	21.0	10.9	20.5	1.1	1.4	175	0.00
10/08/87	1412.0	1564.5	727.4	176.5	10.6	21.7	11.2	21.0	1.1	1.5	204	0.00
10/09/87	1475.8	1597.5	725.9	175.7	12.4	20.0	12.9	19.6	1.3	1.8	206	0.00
10/10/87	1402.7	1537.7	656.6	160.2	9.9	21.8	10.2	21.6	1.7	2.3	132	0.00
10/11/87	1199.2	1426.2	742.8	182.7	4.5	29.4	5.5	28.7	1.0	1.3	105	0.00
10/12/87	1185.6	1409.3	745.9	184.1	3.7	21.0	5.0	20.6	0.9	1.1	145	0.00
10/13/87	1463.4	1395.9	230.6	49.8	4.0	19.9	4.8	19.7	0.8	0.9	159	0.00
10/14/87	1486.1	1482.0	371.9	83.0	9.1	25.7	9.7	25.3	1.7	2.2	134	0.00
10/15/87	1277.4	1448.9	698.0	172.1	6.2	29.8	6.8	29.2	2.2	2.8	221	0.00
10/16/87	1276.4	1457.2	695.6	169.7	6.6	28.7	7.0	28.6	2.1	2.7	174	0.00
10/17/87	1180.6	1352.7	699.1	171.9	1.1	30.4	2.1	29.9	1.0	1.3	176	0.00
10/18/87	1276.0	1412.6	660.3	160.8	4.5	25.3	5.2	25.2	1.8	2.2	230	0.00
10/19/87	1309.4	1437.6	639.8	157.5	6.3	24.4	7.0	24.0	1.6	2.0	209	0.00
10/20/87	1169.5	1347.6	656.6	163.9	1.4	30.3	2.4	29.2	1.0	1.2	217	0.00
10/21/87	1181.0	1339.7	650.4	162.6	0.8	27.4	1.9	26.6	0.9	1.1	190	0.00
10/22/87	1212.0	1370.3	644.6	162.4	2.8	25.0	3.8	24.3	1.3	1.6	215	0.00
10/23/87	1221.5	1361.4	623.1	154.8	2.6	25.6	3.7	24.8	0.8	0.9	199	0.00
10/24/87	1325.3	1393.8	560.6	135.8	3.6	36.2	4.5	35.8	1.2	1.5	176	0.00

Table 17.--Daily summaries of selected meteorological data at the test trench area--continued

Date	Incoming long-wave radiation (W/m ²)	Emitted long-wave radiation (W/m ²)	Incoming short-wave radiation (W/m ²)	Reflected short-wave radiation (W/m ²)	Air temperature 1 meter above ground (Celsius)	Relative humidity 1 meter above ground (percent)	Air temperature 2 meters above ground (Celsius)	Relative humidity 2 meters above ground (percent)	Wind speed 1 meter above ground (m/s)	Wind speed 2 meters above ground (m/s)	Wind direction (degrees)	Precipitation (millimeters)
10/25/87	1500.5	1438.0	441.7	90.5	7.7	80.0	8.1	78.0	1.6	2.0	192	2.29
10/26/87	1407.9	1433.2	617.6	134.4	7.1	67.5	7.5	65.8	1.6	1.9	234	0.00
10/27/87	1261.3	1403.3	611.2	131.7	5.8	57.3	6.4	55.6	1.1	1.3	215	0.00
10/28/87	1226.2	1362.0	605.0	134.5	3.3	50.9	4.3	49.0	0.9	1.1	166	0.00
10/29/87	1281.7	1382.9	588.2	130.7	4.3	40.1	5.4	38.1	0.9	1.1	176	0.00
10/30/87	1448.9	1441.5	464.6	99.2	6.9	44.2	7.6	43.2	1.3	1.7	169	0.00
10/31/87	1632.6	1502.6	283.0	57.9	10.3	75.8	10.4	74.8	1.8	2.1	191	0.00
11/01/87	1579.0	1479.9	296.8	59.8	9.3	75.7	9.7	74.8	0.9	0.9	185	0.00
11/02/87	1663.6	1455.1	124.5	18.9	8.5	91.6	8.8	89.4	0.9	1.1	129	8.38
11/03/87	1671.8	1461.3	118.2	16.1	9.1	92.1	9.0	90.4	0.9	0.6	119	7.62
11/04/87	1614.0	1444.6	258.0	38.9	8.1	90.2	8.3	88.1	2.7	0.5	230	0.25
11/05/87	1486.1	1401.2	267.7	42.9	6.3	84.5	6.8	82.6	0.9	0.8	138	0.00
11/06/87	1347.2	1331.7	552.5	96.0	3.5	78.4	4.3	75.9	1.1	1.5	146	0.00
11/07/87	1562.4	1357.1	87.0	12.2	4.9	91.4	5.2	88.4	1.1	1.4	212	3.05
11/08/87	1431.4	1389.9	501.1	77.3	6.3	84.8	6.4	83.0	1.4	1.6	243	0.00
11/09/87	1431.2	1299.5	212.8	30.5	2.3	91.2	2.7	89.3	1.4	1.8	99	0.00
11/10/87	1387.8	1257.4	484.8	75.1	2.5	83.0	3.2	81.2	1.6	2.0	194	0.00
11/11/87	1484.0	1273.9	197.1	29.0	4.0	89.1	4.4	86.8	1.7	1.1	216	0.00
11/12/87	1384.1	1201.2	275.3	44.6	0.1	91.4	0.7	88.8	0.8	1.0	144	0.00
11/13/87	1469.6	1249.5	148.4	19.3	2.7	90.4	3.1	88.1	1.4	1.7	167	0.51
11/14/87	1525.3	1295.6	179.2	24.3	4.8	90.6	5.0	88.2	2.3	2.9	209	0.00
11/15/87	1275.8	1213.4	172.3	25.4	1.4	80.6	1.9	77.6	2.5	3.1	205	0.00
11/16/87	1085.3	1129.4	461.7	83.4	-3.3	65.2	-2.4	62.0	1.4	1.7	209	0.00
11/17/87	1169.3	1162.9	344.1	64.9	-1.7	81.8	-0.8	79.8	2.0	2.4	227	0.00
11/18/87	1002.5	1123.8	478.6	92.1	-3.6	52.2	-2.6	49.8	1.0	1.2	232	0.00
11/19/87	1004.8	1054.1	480.9	87.1	-7.7	70.6	-6.2	68.1	0.7	0.8	161	0.00
11/20/87	1099.7	1093.9	457.8	83.4	-5.1	65.7	-3.7	63.0	0.9	1.1	139	0.00
11/21/87	1055.3	1075.1	458.8	84.5	-5.4	62.1	-4.0	59.6	1.0	1.2	161	0.00
11/22/87	1158.3	1137.1	442.5	88.0	-2.3	65.9	-1.4	63.2	1.5	1.9	226	0.00
11/23/87	1190.7	1159.8	406.4	80.3	-2.1	80.9	-1.3	79.0	1.4	1.6	214	0.00
11/24/87	1174.2	1095.8	298.7	62.6	-5.1	86.0	-4.1	83.9	1.2	1.5	225	0.00
11/25/87	1255.9	1066.1	211.4	47.8	-7.7	88.3	-6.7	86.2	0.7	0.8	90	0.00
11/26/87	1171.5	1096.6	378.7	174.8	-3.7	77.4	-2.5	74.0	0.9	1.0	147	0.25
11/27/87	1008.9	1041.7	440.9	159.6	-6.5	71.9	-5.4	70.1	1.0	1.2	238	0.00
11/28/87	1165.1	1025.6	218.6	88.7	-9.2	87.9	-7.9	86.2	0.8	0.9	130	0.00
11/29/87	1063.2	1030.8	474.9	135.8	-7.6	75.4	-6.1	73.3	1.0	1.2	146	0.00
11/30/87	1075.3	1035.5	391.5	106.9	-7.6	71.9	-6.3	69.6	0.7	0.7	162	0.00
12/01/87	1151.7	1054.1	406.8	100.6	-7.2	75.4	-6.1	74.0	0.6	0.7	142	0.00
12/16/87	796.1	735.6	341.4	59.3	-13.4	69.7	-12.0	67.9	0.6	0.6	133	0.00
12/17/87	854.7	714.6	148.4	71.5	-10.4	87.8	-9.1	84.8	0.4	0.4	61	0.00

Table 17.--Daily summaries of selected meteorological data at the test trench area--continued

Date	Incoming long-wave radiation (W/m2)	Emitted long-wave radiation (W/m2)	Incoming short-wave radiation (W/m2)	Reflected short-wave radiation (W/m2)	Air temperature 1 meter above ground (Celsius)	Relative humidity 1 meter above ground (percent)	Air temperature 2 meters above ground (Celsius)	Relative humidity 2 meters above ground (percent)	Wind speed 1 meter above ground (m/s)	Wind speed 2 meters above ground (m/s)	Wind direction (degrees)	Precipitation (millimeters)
12/18/87	762.7	733.3	324.3	166.0	-6.6	84.7	-5.0	82.1	0.6	0.6	191	0.00
12/19/87	955.8	854.3	199.6	112.5	-11.5	89.4	-10.1	87.7	0.5	0.5	215	0.00
12/20/87	1097.7	1123.8	420.6	155.8	-8.4	83.0	-7.1	81.4	0.7	0.8	254	0.00
12/21/87	1154.8	1079.3	259.4	125.0	-12.5	84.3	-11.1	82.9	0.5	0.5	155	0.00
12/22/87	1226.6	1169.7	252.4	111.2	-5.8	86.3	-4.6	83.9	1.0	1.2	222	0.00
12/23/87	1348.1	1179.2	122.6	66.8	-5.7	92.1	-4.6	89.5	0.7	0.8	184	2.29
12/24/87	1080.4	1087.3	245.2	173.4	-9.4	69.2	-7.8	66.8	0.4	0.4	130	0.25
12/25/87	860.0	963.3	408.5	219.8	-16.4	62.1	-14.6	60.0	0.4	0.4	0.00	0.00
12/26/87	1012.4	1033.4	390.7	208.7	-14.6	74.1	-13.0	72.8	0.4	0.4	211	0.00
12/27/87	976.3	1012.0	404.8	206.2	-14.9	72.8	-13.3	72.3	0.4	0.4	0.00	0.00
12/28/87	972.3	1008.5	414.7	204.8	-15.2	73.0	-13.7	72.6	0.4	0.4	185	0.00
12/29/87	1040.0	1037.6	375.4	195.7	-13.8	74.2	-11.8	73.1	0.4	0.4	132	0.00
12/30/87	1102.9	1108.4	375.2	193.0	-8.2	77.8	-6.7	75.9	0.4	0.5	186	0.00
12/31/87	1182.1	1115.4	251.2	186.6	-8.6	92.6	-7.3	90.0	0.4	0.4	208	0.00

Table 18.--Grain-size distribution for soil samples from neutron-probe access hole 1

Sample depth, in meters below land surface		0.3	0.6	0.9	1.2	1.5	1.8	2.4	2.7	3.0
Grade limits										
millimeters	Phi units	Grade name								
		Weight percent in each grade limit category								
>2.00	<-1.0	Gravel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1.00-2.00	0.0 to -1.0	Sand	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
0.50-1.00	1.0 to 0.0	Sand	0.2	0.2	0.0	0.0	0.1	0.0	0.2	0.0
0.25-0.50	2.0 to 1.0	Sand	3.0	4.7	4.9	1.1	12.1	3.6	1.7	2.7
0.125-0.25	3.0 to 2.0	Sand	6.5	11.5	10.0	6.4	18.2	10.5	6.7	9.1
0.062-0.125	4.0 to 3.0	Sand	9.1	13.7	12.0	13.0	9.5	9.8	8.9	9.4
0.031-0.062	5.0 to 4.0	Silt	30.5	19.8	25.3	34.0	15.2	24.2	22.5	21.5
0.016-0.031	6.0 to 5.0	Silt	14.1	13.2	16.8	12.1	2.2	8.1	18.0	8.6
0.008-0.016	7.0 to 6.0	Silt	7.0	13.2	8.4	7.3	10.9	8.1	4.5	12.9
0.004-0.008	8.0 to 7.0	Silt	11.7	4.4	8.4	4.8	8.7	2.0	6.8	2.1
0.002-0.004	9.0 to 8.0	Silt	2.3	6.6	4.2	4.8	2.2	6.1	8.9	8.6
<0.002	>9.0	Clay	15.2	12.1	9.5	15.8	20.6	27.3	21.4	24.7
Totals			99.6	99.5	99.5	99.3	99.7	99.7	99.6	99.6

Table 19.--Statistical parameters based on grain-size distribution of neutron-probe access hole 1 soil samples
[Verbal limits from Folk, 1980]

Sample depth below land surface	Statistical parameters					
	Graphic Mean (M_z)		Inclusive Graphic Standard Deviation (σ_1)		Inclusive Graphic Skewness (Sk_1)	
	Value	Verbal limits	Value	Verbal limits	Value	Verbal limits
(meters)	(millimeters)	(Phi units)	(Phi units)	(dimensionless)		
0.3	0.017	5.9	2.4	very poorly sorted	+0.38	strongly fine skewed
0.6	0.023	5.4	2.5	very poorly sorted	+0.21	fine skewed
0.9	0.026	5.3	2.3	very poorly sorted	+0.21	fine skewed
1.2	0.017	5.9	2.3	very poorly sorted	+0.46	strongly fine skewed
1.5	0.018	5.8	2.8	very poorly sorted	-0.01	near symmetrical
1.8	0.025	5.3	2.9	very poorly sorted	+0.28	fine skewed
2.4	0.017	5.9	2.6	very poorly sorted	+0.25	fine skewed
2.7	0.014	6.2	2.4	very poorly sorted	+0.24	fine skewed
3.0	0.014	6.2	2.5	very poorly sorted	+0.12	fine skewed

Table 20.--Grain-size distribution for soil samples from the east lysimeter area

Sample depth, in meters below land surface		0.22-0.27	0.27-0.32	0.42-0.47	0.47-0.52	0.59-0.64	0.76-0.81	0.81-0.86	0.93-0.98
Grade limits									
millimeters	Phi units	Grade name		Weight percent in each grade limit category					
>4.75	<-2.25	Gravel		1.2	2.4	0.0	0.0	0.0	0.0
0.425-4.75	1.25 to -2.25	Sand		2.0	1.4	1.3	1.6	1.2	0.6
0.074-0.425	3.75 to 1.25	Sand		22.2	26.0	28.3	29.7	19.2	11.8
0.062-0.074	4.0 to 3.75	Silt		7.8	9.1	7.7	4.5	12.9	13.6
0.031-0.062	5.0 to 4.0	Silt		24.6	22.7	26.7	26.9	24.6	26.9
0.016-0.031	6.0 to 5.0	Silt		17.9	13.3	12.3	15.8	15.3	17.5
0.008-0.016	7.0 to 6.0	Silt		7.4	8.7	8.7	5.3	8.0	10.6
0.004-0.008	8.0 to 7.0	Silt		3.7	5.3	3.6	4.6	6.0	6.3
0.002-0.004	9.0 to 8.0	Clay		4.5	2.7	4.3	2.6	4.0	3.8
<0.002	>9.0	Clay		8.6	8.3	6.8	8.9	9.0	8.9
Totals				99.9	99.9	99.7	99.9	99.9	100.0

Table 21.--Statistical parameters based on grain-size distribution of east lysimeter soil samples
[Verbal limits from Folk, 1980]

Sample depth below land surface	Statistical parameters					
	Graphic Mean (M_z)		Inclusive Graphic Standard Deviation (σ_1)		Inclusive Graphic Skewness (Sk_1)	
	(millimeters)	(Phi units)	Value	Verbal limits	Value	Verbal limits
(meters)	(millimeters)	(Phi units)	(Phi units)		(dimensionless)	
0.22-0.27	0.032	5.0	2.2	very poorly sorted	+0.20	fine skewed
0.27-0.32	0.035	4.8	2.2	very poorly sorted	+0.23	fine skewed
0.42-0.47	0.035	4.8	2.0	very poorly sorted	+0.29	fine skewed
0.47-0.52	0.034	4.9	2.1	very poorly sorted	+0.29	fine skewed
0.59-0.64	0.026	5.3	2.1	very poorly sorted	+0.31	strongly fine skewed
0.76-0.81	0.034	4.9	2.0	very poorly sorted	+0.31	strongly fine skewed
0.81-0.86	0.024	5.4	1.9	poorly sorted	+0.43	strongly fine skewed
0.93-0.98	0.024	5.4	1.9	poorly sorted	+0.36	strongly fine skewed

Table 22.--Sediment characteristics for soil samples from neutron-probe access hole 1, 0.3 meter sample depth [Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbein and Sloss (1963, p. 111); minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	moderate	10YR 5/2, med. yellow brown	0.3, subangular	0.7	quartz calcite plagioclase orthoclase dolomite smectite illite kaolinite basalt fragments chert chlorite ?
>4.00	--	--	--	--	
2.00-4.00	--	--	--	--	
1.00-2.00	--	--	--	--	
0.50-1.00	moderate	10YR 7/2, pale orange-yellow brown	0.3, subangular	0.9	
0.25-0.50	moderate	10YR 5/2, med. yellow brown	0.3, subangular	0.7	
0.125-0.25	strong	10YR 6/2, pale yellow brown	0.3, subangular	0.7	
0.062-0.125	strong	10YR 7/2, pale orange-yellow brown	0.3, subangular	0.5	
<0.062	strong	10YR 7/2, pale orange-yellow brown	0.3, subangular	0.5	

Table 23.--Sediment characteristics for soil samples from neutron-probe access hole 1, 0.6 meter sample depth
[Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbein and Sloss (1963, p. 111);
minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular
microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	moderate	10YR 5/2, med. yellow brown	0.5, subrounded	0.7	quartz plagioclase calcite dolomite smectite basalt fragments chert illite ? kaolinite ?
>4.00 2.00-4.00	-- --	-- --	-- --	-- --	
1.00-2.00	slight	10YR 3/2, dark greyish brown	0.5, subrounded	0.7	
0.50-1.00	moderate	10YR 6/2, pale yellow brown	0.5, subrounded	0.7	
0.25-0.50	moderate	10YR 5/2, med. yellow brown	0.5, subrounded	0.5	
0.125-0.25	moderate	10YR 5/2, med. yellow brown	0.5, subrounded	0.5	
0.062-0.125	strong	10YR 5/2, med. yellow brown	0.3, subangular	0.5	
<0.062	strong	10YR 6/2, pale yellow brown	0.3, subangular	0.5	

Table 24.--Sediment characteristics for soil samples from neutron-probe access hole 1, 0.9 meter sample depth [Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbein and Sloss (1963, p. 111); minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	moderate	10YR 5/2, med. yellow brown	0.5, subrounded	0.7	quartz calcite plagioclase orthoclase ¹ clay minerals basalt fragments quartzite pebbles
>4.00 2.00-4.00	-- --	-- --	-- --	-- --	
1.00-2.00	slight	10YR 2/2, dusky yellow brown	0.7, rounded	0.9	
0.50-1.00	slight	10YR 2/2, dusky yellow brown	0.3, subangular	0.5	
0.25-0.50	slight	10YR 5/2, med. yellow brown	0.3, subangular	0.5	
0.125-0.25	moderate	10YR 5/2, med. yellow brown	0.7, subrounded	0.7	
0.062-0.125	moderate	10YR 6/2, pale yellow brown	0.7, subrounded	0.7	
<0.062	strong	10YR 7/2, pale orange-yellow brown	0.3, subangular	0.5	

¹ clay minerals were indicated on the X-ray diffractogram; further analysis is needed to differentiate individual minerals

Table 25.--Sediment characteristics for soil samples from neutron-probe access hole 1, 1.2 meter sample depth [Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbein and Sloss (1963, p. 111); minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	moderate	10YR 6/2, pale yellow brown	0.3, subangular	0.5	quartz calcite plagioclase dolomite smectite illite basalt fragments
>4.00	--	--	--	--	
2.00-4.00	--	--	--	--	
1.00-2.00	--	--	--	--	
0.50-1.00	slight	10YR 6/2, pale yellow brown	0.5, subrounded	0.7	
0.25-0.50	moderate	5YR 7/1, light yellow-olive grey	0.3, subangular	0.5	
0.125-0.25	moderate	10YR 5/2, med. yellow brown	0.3, subangular	0.7	
0.062-0.125	moderate	10YR 6/2, pale yellow brown	0.3, subangular	0.5	
<0.062	moderate	10YR 7/2, pale orange-yellow brown	0.3, subangular	0.5	

Table 26.--Sediment characteristics for soil samples from neutron-probe access hole 1, 1.5 meter sample depth
[Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbein and Sloss (1963, p. 111);
minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular
microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	slight	10YR 5/2, med. yellow brown	0.5, subangular	0.7	quartz plagioclase calcite muscovite basalt fragments quartzite ? smectite ? orthoclase ?
>4.00 2.00-4.00	-- --	-- --	-- --	-- --	
1.00-2.00	slight	10YR 4/2, dark yellow brown	0.7, rounded	0.7	
0.50-1.00	slight	10YR 5/2, med. yellow brown	0.7, rounded	0.7	
0.25-0.50	slight	10YR 5/2, med. yellow brown	0.3, subangular	0.5	
0.125-0.25	very slight	10YR 5/2, med. yellow brown	0.1, angular	0.7	
0.062-0.125	slight	10YR 6/2, pale yellow brown	0.3, subangular	0.7	
<0.062	slight	10YR 7/2, pale orange-yellow brown	0.1, angular	0.5	

Table 27.--Sediment characteristics for soil samples from neutron-probe access hole 1, 1.8 meter sample depth
[Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbain and Sloss (1963, p. 111);
minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular
microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	slight	10YR 6/2, pale yellow brown	0.3, subangular	0.5	quartz plagioclase calcite smectite illite kaolinite basalt fragments
>4.00	--	--	--	--	
2.00-4.00	--	--	--	--	
1.00-2.00	--	--	--	--	
0.50-1.00	none	10YR 6/2, pale yellow brown	0.1, angular	0.7	
0.25-0.50	slight	10YR 6/2, pale yellow brown	0.3, subangular	0.5	
0.125-0.25	slight	10YR 5/2, med. yellow brown	0.3, subangular	0.5	
0.062-0.125	slight	10YR 7/2, pale orange-yellow brown	0.3, subangular	0.5	
<0.062	none	10YR 5/2, med. yellow brown	0.3, subangular	0.3	

Table 28.--Sediment characteristics for soil samples from neutron-probe access hole 1, 2.4 meter sample depth [Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbein and Sloss (1963, p. 111); minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	none	10YR 6/2, pale yellow brown	0.3, subangular	0.5	quartz plagioclase pyroxene orthoclase illite smectite kaolinite muscovite basalt fragments
>4.00	--	--	--	--	
2.00-4.00	--	--	--	--	
1.00-2.00	--	--	--	--	
0.50-1.00	--	--	--	--	
0.25-0.50	none	10YR 6/2, pale yellow brown	0.5, subrounded	0.7	
0.125-0.25	none	10YR 6/2, pale yellow brown	0.3, subangular	0.5	
0.062-0.125	none	10YR 6/2, pale yellow brown	0.3, subangular	0.5	
<0.062	none	10YR 7/2, pale orange-yellow brown	0.3, subangular	0.5	

Table 29.--Sediment characteristics for soil samples from neutron-probe access hole 1, 2.7 meter sample depth [Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbain and Sloss (1963, p. 111); minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	slight	10YR 5/2, med. yellow brown	0.3, subangular	0.5	quartz plagioclase pyroxene orthoclase smectite illite kaolinite calcite basalt fragments
>4.00	--	--	--	--	
2.00-4.00	--	--	--	--	
1.00-2.00	--	--	--	--	
0.50-1.00	none	10YR 5/2, med. yellow brown	0.3, subangular	0.5	
0.25-0.50	slight	10YR 6/2, pale yellow brown	0.3, subangular	0.5	
0.125-0.25	slight	10YR 5/2, med. yellow brown	0.3, subangular	0.5	
0.062-0.125	slight	10YR 6/2, pale yellow brown	0.3, subangular	0.5	
<0.062	none	10YR 5/2, med. yellow brown	0.1, angular	0.3	

Table 30.--Sediment characteristics for soil samples from neutron-probe access hole 1, 3.0 meter sample depth
[Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbein and Sloss (1963, p. 111);
minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular
microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	none	10YR 6/2, pale yellow brown	0.3, subangular	0.5	quartz plagioclase pyroxene orthoclase illite smectite mixed-layer clays kaolinite muscovite basalt fragments
>4.00	--	--	--	--	
2.00-4.00	--	--	--	--	
1.00-2.00	--	--	--	--	
0.50-1.00	--	--	--	--	
0.25-0.50	none	10YR 6/2, pale yellow brown	0.5, subrounded	0.7	
0.125-0.25	none	10YR 6/2, pale yellow brown	0.7, rounded	0.7	
0.062-0.125	none	10YR 6/2, pale yellow brown	0.3, subangular	0.7	
<0.062	none	10YR 7/2, pale orange-yellow brown	0.3, subangular	0.5	

Table 31.--Sediment characteristics for soil samples from the east lysimeter area, 0.22-0.27 meter sample depth
[Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbein and Sloss (1963, p. 111); minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	strong	5Y 6/2, yellow-olive grey	0.5, subrounded	0.7	quartz plagioclase orthoclase dolomite calcite smectite illite kaolinite obsidian basalt fragments quartzite pyroxene ?
>4.75	very slight	5GY 4/2, med. green grey	0.9, well rounded	0.7	
0.425-4.75	strong	5Y 5/1, med. olive grey	0.3, subangular	0.5	
0.074-0.425	strong	5Y 6/2, yellow-olive grey	0.5, subrounded	0.7	
<0.074	strong	5Y 6/2, yellow-olive grey	0.5, subrounded	0.7	

Table 32.--Sediment characteristics for soil samples from the east lysimeter area, 0.27-0.32 meter sample depth [Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbein and Sloss (1963, p. 111); minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	strong	5Y 6/2, yellow-olive grey	0.3, subangular	0.5	quartz plagioclase calcite dolomite biotite ¹ clay minerals quartzite basalt fragments obsidian pyroxene ? magnetite ?
>4.75	very slight	5Y 4/1, olive grey	0.5, subrounded	0.5	
0.425-4.75	strong	5Y 4/2, med. olive grey	0.3, subangular	0.5	
0.074-0.425	strong	5Y 6/2, olive-yellow grey	0.3, subangular	0.5	
<0.074	strong	5Y 7/2, yellow grey	0.1, angular	0.3	

¹ clay minerals were indicated on the X-ray diffractogram; further analysis is needed to differentiate individual minerals

Table 33.--Sediment characteristics for soil samples from the east lysimeter area, 0.42-0.47 meter sample depth
[Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbein and Sloss (1963, p. 111);
minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular
microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	strong	5Y 6/2, yellow-olive grey	0.5, subrounded	0.5	quartz plagioclase orthoclase calcite dolomite ¹ clay minerals basalt fragments quartzite magnetite ? pyroxene ?
>4.75	--	--	--	--	--
0.425-4.75	strong	5Y 4/1, olive grey	0.5, subrounded	0.5	
0.074-0.425	strong	5Y 6/2, olive-yellow grey	0.5, subrounded	0.5	
<0.074	strong	5Y 7/2, yellow grey	0.7, rounded	0.9	

¹ clay minerals were indicated on the X-ray diffractogram; further analysis is needed to differentiate individual minerals

Table 34.--Sediment characteristics for soil samples from the east lysimeter area, 0.47-0.52 meter sample depth [Color--from Geological Society of America Rock-Color Chart (1980)]; roundness and sphericity from Krumbein and Sloss (1963, p. 111); minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	strong	5Y 6/2, yellow-olive grey	0.5, subrounded	0.5	plagioclase quartz calcite dolomite orthoclase biotite ¹ clay minerals basalt fragments obsidian magnetite ? pyroxene ?
>4.75	--	--	--	--	
0.425-4.75	strong	5Y 5/1, med. olive grey	0.5, subrounded	0.5	
0.074-0.425	strong	5Y 6/2, olive-yellow grey	0.3, subangular	0.5	
<0.074	strong	5Y 7/2, yellow grey	0.5, subrounded	0.5	

¹ clay minerals were indicated on the X-ray diffractogram; further analysis is needed to differentiate individual minerals

Table 35.--Sediment characteristics for soil samples from the east lysimeter area, 0.59-0.64 meter sample depth [Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbein and Sloss (1963, p. 111); minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	moderate	5Y 4/2, med. olive grey	0.3, subangular	0.5	quartz plagioclase orthoclase calcite dolomite biotite ¹ clay minerals basalt fragments obsidian pyroxene ?
>4.75	none	5Y 3/2, olive grey	0.3, subangular	0.3	
0.425-4.75	slight	5Y 4/2, med. olive grey	0.3, subangular	0.5	
0.074-0.425	moderate	5Y 5/1, med. olive grey	0.5, subrounded	0.7	
<0.074	strong	5Y 6/2, yellow-olive grey	0.3, subangular	0.5	

¹clay minerals were indicated on the X-ray diffractogram; further analysis is needed to differentiate individual minerals

Table 36.--Sediment characteristics for soil samples from the east lysimeter area, 0.76-0.81 meter sample depth
[Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbein and Sloss (1963, p. 111); minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	--	--	--	--	quartz plagioclase orthoclase calcite dolomite smectite illite kaolinite obsidian basalt fragments chlorite ? pyroxene ?
>4.75	--	--	--	--	
0.425-4.75	moderate	5Y 6/1, light olive grey	0.3, subangular	0.5	
0.074-0.425	strong	10YR 7/2, pale orange-yellow brown	0.5, subrounded	0.5	
<0.074	strong	10YR 6/2, pale yellow brown	0.5, subrounded	0.5	

Table 37.--Sediment characteristics for soil samples from the east lysimeter area, 0.81-0.86 meter sample depth [Color--from Geological Society of America Rock-Color Chart (1980)]; roundness and sphericity from Krumbein and Sloss (1963, p. 111); minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	--	--	--	--	quartz calcite plagioclase orthoclase dolomite ¹ clay minerals basalt fragments pyroxene ?
>4.75	--	--	--	--	
0.425-4.75	moderate	5Y 6/2, yellow olive grey	0.3, subangular	0.7	
0.074-0.425	moderate-strong	5Y 6/2, yellow olive grey	0.7, rounded	0.9	
<0.074	moderate-strong	10YR 7/2, pale yellow-orange brown	0.3, subangular	0.5	

¹ clay minerals indicated on X-ray diffractogram; further analysis is needed to differentiate individual minerals

Table 38.--Sediment characteristics for soil samples from the east lysimeter area, 0.93-0.98 meter sample depth
[Color--from Geological Society of America Rock-Color Chart (1980); roundness and sphericity from Krumbein and Sloss (1963, p. 111);
minerals and clasts comprising the bulk sample were identified by X-ray diffraction and visual determination using a binocular
microscope; ? indicates uncertainty of mineral or clast identification; -- indicates no sample within the given grade limits.]

Grade limits (millimeters)	Reaction to 10% hydrochloric acid solution	Color	Roundness	Sphericity	Mineralogic and clastic components of the bulk sample
Bulk sample	--	--	--	--	quartz plagioclase orthoclase calcite dolomite smectite illite kaolinite basalt fragments quartzite obsidian olivine ? pyroxene ?
>4.75	--	--	--	--	
0.425-4.75	moderate	5Y 4/2, med. olive grey	0.3, subangular	0.5	
0.074-0.425	moderate-strong	5Y 5/1, med. olive grey	0.5, subrounded	0.7	
<0.074	strong	5Y 6/2, yellow olive grey	0.3, subangular	0.5	