

DRAFT FINAL REPORT

SOUTHAMPTON AQUIFER PROTECTION

STUDY

SUBMITTED TO THE TOWN OF SOUTHAMPTON

NOVEMBER, 1987

WE WEHRAN ENGINEERING
Consulting Engineers

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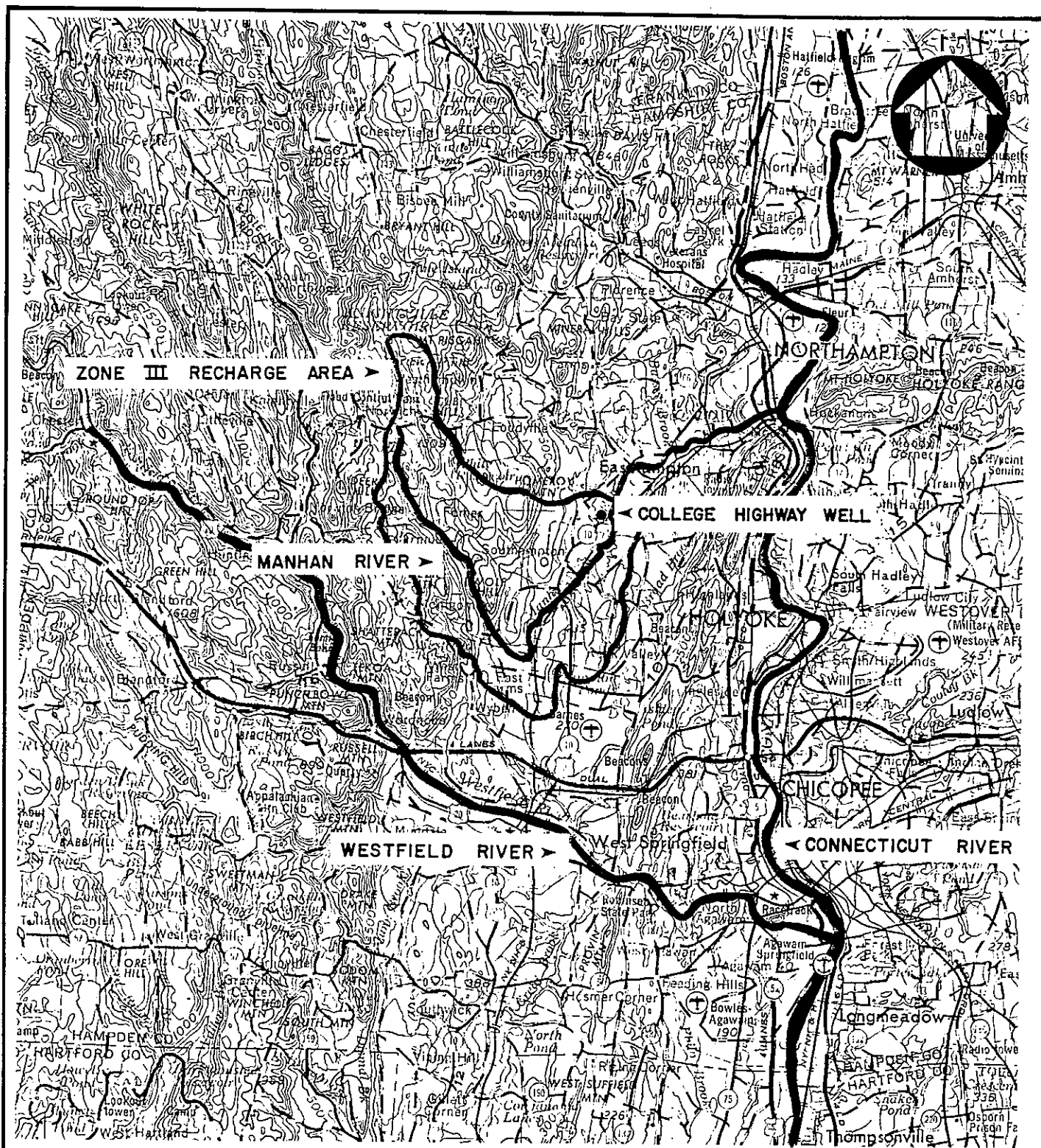
1.0 INTRODUCTION

This report presents the results of an aquifer protection study by Wehran Engineering Corporation (Wehran) for the Town of Southamptton, Massachusetts. The purpose of the study was to delineate the primary recharge areas for the Town's municipal well located off College Highway (State Route 10) just south of the Manhan River Bridge (Figure 1). Knowing the location of the recharge areas, the Town can then take steps to protect them from man-induced contamination.

The designation of recharge areas used in this report follows the Massachusetts Department of Environmental Quality Engineering (DEQE) format. The DEQE's regulations divide the recharge area to a groundwater supply into three separate zones. Zone I is defined as a circle with a radius of 400 feet about the well. Zone II is defined as "that area of an aquifer which contributes water to a well under the most severe recharge and pumping conditions that can realistically be anticipated". Finally, Zone III is defined as "that land area beyond the area of Zone II from which surface water and groundwater drain into Zone II" (DEQE, Hydrogeologic Study Requirements for the Delineation of Zone II and Zone III for New Source Approvals).

To delineate the recharge areas a conceptual model of the aquifer has been developed. From the conceptual model and a series of data points within the aquifer, a numerical flow model has been prepared and calibrated to non-pumping conditions. The model was then used to simulate the pumping conditions necessary to establish the Zone II recharge area.

The conceptual model of the aquifer was developed from a thorough literature review, a field reconnaissance program, an analysis of pump test data collected on the College Highway well and available well log data. The results of the literature review and the pump test analysis were presented in a progress report submitted in March, 1987, and will be summarized in this report.



SCALE 1: 250,000

FIGURE 1 LOCATION MAP

FROM: USGS EASTERN UNITED STATES SERIES; ALBANY SHEET

2.0 AQUIFER HYDROGEOLOGY

2.1 LITERATURE REVIEW (FROM PROGRESS REPORT)

2.1.1 Geology

The study area is underlain by crystalline bedrock in the west and sedimentary bedrock in the east. The crystalline metamorphic bedrock which forms the foothills of the Berkshires extends eastward beneath the sedimentary rock.

In the study area the crystalline bedrock can be divided into two Lower Devonian formations: Waits River Formation in the northwest and the Goshen Formation in the southwest. Both these formations were originally deposited as shallow ocean sediments and have subsequently been metamorphosed and intruded with feldspar-quartz-muscovite pegmatite. The Waits River Formation is described by Zen, et al (1983) as interbedded medium to dark gray, moderately rusty-weathering, highly contorted, unbedded schist and punky weathering calcareous granofels. Zen, et al (1983) describes the Goshen Formation as well bedded micaceous quartzite or quartz schist grading upward into light gray to dark gray carbonaceous aluminous schist.

The sedimentary bedrock found in the eastern portion of the study area is of Upper Triassic and Lower Jurassic age and part of the Sugarloaf Formation which is currently called the New Haven Formation (Walsh, 1987). The New Haven Formation is described by Zen, et al (1983) as a red, pink and gray coarse-grained, locally conglomerate arkose, interbedded with brick-red shaley siltstone and fine grained arkosic sandstone. This formation was deposited in an alluvial environment and exhibits high compaction and little fracturing.

Previous studies (Larsen, 1972; Motts, 1985; and Walsh, 1987), utilizing both geophysical techniques and boring logs, have identified a north-south trending bedrock trough beneath the study area. The trough has been found to be approximately one and one half miles wide and varying from 150 to 200 feet in

depth. This trough has been found to extend north into Northampton and south into Southampton (Larsen, 1972 and Walsh, 1987). It has been postulated by Larsen that this trough was carved out by the retreat of the most recent glacier. Because the crystalline bedrock to the west was more resistant and of high relief it is thought that the erosion of the sedimentary rock along the crystalline-sedimentary contact was enhanced creating this bedrock feature.

The surficial geology of the study area has been described in detail by Larsen (1972), Berndt, et al (1981), Motts (1985) and Walsh (1987). In general, the unconsolidated deposits include Late Wisconsin glacial deposits and post-glacial deposits. As the glacier retreated to the east of the study area meltwater streams transported a large volume of coarse-grained material (stratified drift) into the bedrock trough. This stratified drift varies from fine sand to boulders and was deposited in the bedrock trough up to 170 feet thick in some places. This stratified drift is the water producing aquifer of the area. Above the glaciofluvial deposits are lacustrine sediments composed of fine sand, silt and clay. These were deposited in a glacial lake environment and have been described in the study area as thinly bedded, very fine sand and coarse, medium and fine silt, with a color range from dark gray to light brown. A second lacustrine sediment found in the area is described as coarse, medium and fine varved gray clay with interbeds of coarse, medium and fine light brown silt.

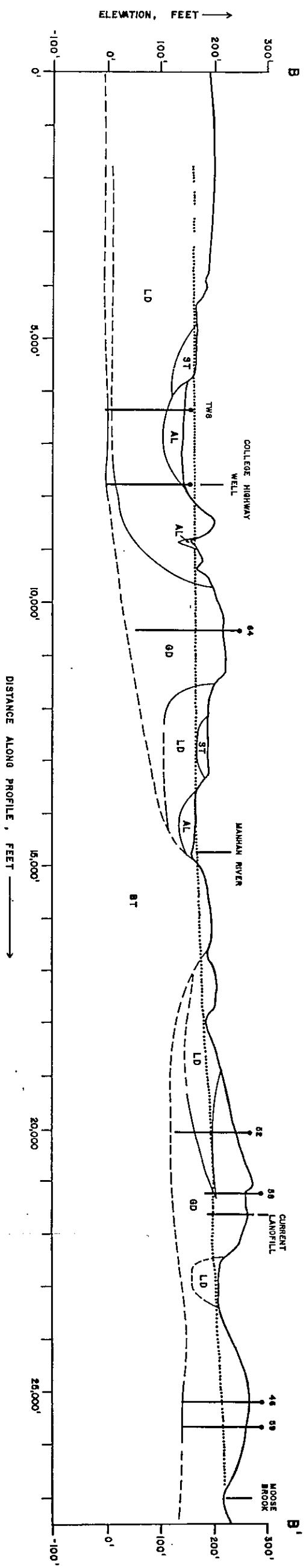
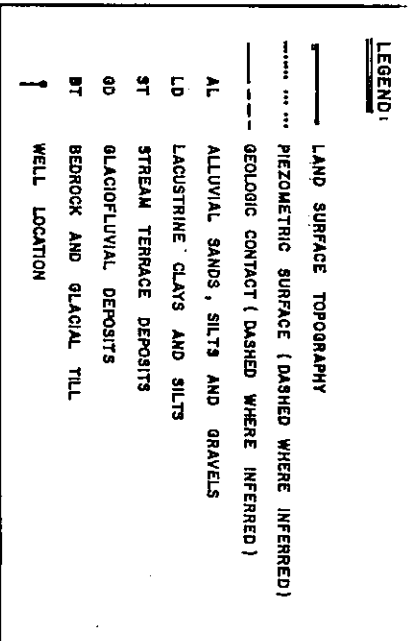
Larsen (1972) found evidence of reglaciation in the study area which caused the deposition of a reddish-brown lodgment till above the glaciofluvial and lacustrine deposits in some areas. This till has been found to have a high ratio of sand. Two other tills, a brown till and a grayish-brown till have been found in the study area. Above the glacial deposits two postglacial deposits are found. Eolian or wind deposits are the uppermost unit, if present, and are composed of orange-brown, medium to fine sand. Alluvium or stream deposits are found along the

current margins of streams in the study area. They are typically composed of fine-grained sand and silt.

For this report the surficial geology has been identified on the basis of these previous reports, boring logs and the site reconnaissance. Plate 1 shows the surficial geology of the Southampton area as previously mapped. In general, this mapping details a glacial till in the upland areas, the lacustrine clay deposits in the Moose Brook and Manhan River Valleys, with more recent alluvium along the flood plains of the Manhan River. Also shown, are the exposed more coarse grained glaciofluvial sand and gravel deposits. Figures 2 and 3 show the two cross-sections depicted on Plate 2 and illustrate the stratigraphy of the study area. Figure 2 is a cross-section through the buried bedrock trough and Figure 3 is a cross-section along the axis of the buried valley extending into the Moose Brook Valley.

2.1.2 Hydrogeology

The aquifer of concern in this study, the Southampton aquifer, is composed of the stratified drift or glaciofluvial deposits in the buried bedrock trough. These deposits have been found to run north-south extensively and vary widely in width and depth (Walsh, 1987). Figures 2 and 3 show cross-sections through the aquifer. Both cross-sections show the lower sand and gravel aquifer to be overlain by the lacustrine clay deposit which results in confined aquifer conditions throughout most of the site. Due to the strong upward gradient of the confined aquifer in the vicinity of the College Highway well, it is unlikely, that under natural conditions, there would be any flow downward through this confining clay layer into the lower aquifer from the surface water. Walsh in his study confirmed this and found that the surficial groundwater in the alluvial and stream terrace deposits was not significant in terms of water supply. The upward gradient would have a significant retarding effect to downward flow in most areas, however, in areas of high, prolonged pumping the piezometric surface may be drawn down below the



confining layer creating localized areas of downward hydraulic gradient. This has the potential for inducing infiltration through the confining layer and increasing the potential for contaminant movement toward the lower aquifer. If this should occur any contaminants would move at an extremely low velocity and many contaminants would be highly retarded by the clay.

* Recharge to the aquifer likely occurs through the exposed glaciofluvial sand and gravel deposits shown on Plate 1. As depicted on the map, there is an areally extensive sand deposit located west of the College Highway well and numerous smaller deposits located to the southwest, south and southeast. These would all represent potential recharge areas of the aquifer. Cross-section A-A' (Figure 2), trends east-west across the study area and illustrates that the potential recharge to the well is from the coarse grained glaciofluvial deposits to the west. Cross-section B-B' (Figure 3) suggests that recharge to the lower aquifer is also from the south. Actual recharge areas would depend on the continuity and nature of the aquifer deposits in these areas.

2.1.3 Summary

The figures and cross-sections provide a pictorial hypothesis of the nature of the Southampton aquifer. They suggest that the majority of recharge is from the west in the area shown on Plate 1 to be overlain by glacial fluvial sands, and possibly to a lesser extent other coarse grained glacial fluvial deposits located south and southeast of the well. This preliminary evaluation also suggests that there is no hydraulic connection under natural (non-stress) conditions between surface waters in the river valley and the deeper confined aquifer of the town well. This hypothesis is generally based on the fact that the piezometric surface at the town well is higher than the adjacent surface waters, indicating a relatively strong upward hydraulic gradient.

2.2 CONCEPTUAL MODEL

The conceptual model of the aquifer system is based on the literature review, field reconnaissance to confirm published geologic contacts, and drillers' logs for domestic water wells. The field reconnaissance of primarily the bedrock/till and outwash deposit contacts confirmed the accuracy of the surficial mapping by Larsen (1972). Drillers' logs were collected from the DEQE Division of Water Resources well completion reports, the U.S. Geologic Survey (USGS), the Tighe and Bond test well report and from personal communication with Mr. Joe Slattery. Mr. Slattery is a cable tool driller who has installed most of the wells screened in sand and gravel in the Southampton area. Fifty-nine logs were collected from the DEQE and USGS files and the Tighe and Bond report. An additional 20 were collected from Mr. Slattery's records. All well logs are presented in Appendix 1. The logs were used to define subsurface stratigraphic conditions and to provide information on hydraulic head both in the glaciofluvial materials and the bedrock. Plate 3, a site map of the study area, shows the locations of the above wells.

* The basic conceptual model for the Southampton aquifer, as previously described, consists of glaciofluvial sands and gravels deposited in a bedrock trough. The aquifer material is overlain in many areas by a confining lacustrine clay layer. Recharge to the aquifer occurs primarily from infiltration into exposed glaciofluvial or outwash deposits and from groundwater flow into the aquifer from the upgradient Moose Brook and Manhan River Valleys. The information collected since the progress report has been used to refine the conceptual model and to better quantify its limits.

The areal dimensions of the aquifer are controlled by geological contacts to the east and west and groundwater divides to the north and south. The bedrock and till units to the east and west are not considered aquifer material because of their low hydraulic conductivity relative to the sand and gravel. The bedrock and till have been combined as one unit in the context of

the aquifer study because available information has shown that their hydraulic conductivities are one to two orders of magnitude less than that of the aquifer; therefore they are considered a reasonable boundary to groundwater flow. From the north, the aquifer extends from its discharge into the Easthampton aquifer, located approximately beneath the confluence of the North Branch with the Manhan River, southward to groundwater divides both located in the Town of Westfield. As can be seen on Plate 3 the southern portion of the aquifer is divided by the uplands in the vicinity of Round Hill such that it is restricted to the Moose Brook and Manhan River Valleys. This delineation of the areal extent of the aquifer is based on previously mapped contacts (Larsen, 1972), and the estimated locations for the southern groundwater divides.

The next dimension of the conceptual model is the definition of the bottom of the aquifer. The information used to delineate the bedrock/till surface comes from test well and domestic well logs. The bedrock surface begins as a well defined trough at the northern end of the aquifer then becomes shallower and broader toward the south. Plate 2 shows the configuration of the bedrock surface and the data points used for contouring the bedrock elevation. At each point the depth to the bedrock surface below ground is presented along with the corresponding elevation relative to mean sea level. As can be seen, the trough splits and extends up the Moose Brook and Manhan Valleys to the south. The bedrock valley generally deepens to the north; however, in the upper Moose Brook Valley a bedrock divide is noted indicating that the bedrock surface there deepens to the south near the brook's headwaters. The accuracy of the contour map is limited by the density of data points and the accuracy of the logs. Dashed contours indicate where the data are limited.

The bedrock elevation provides a clear picture of the bedrock surface; however, a consideration for the depth to bedrock below the ground surface is important in order to understand the continuity of the aquifer. In the vicinity of the

closed 150 foot elevation contour on Plate 2 the bedrock is noted to be only 12 to 20 feet deep. The two wells immediately to the northeast and southwest of that area also show extremely shallow depths to bedrock. Furthermore, Larsen (1972) mapped till at the ground surface in that area (Plate 1). Therefore, this is an important area in that the existence of shallow bedrock indicates thin to nonexistent aquifer materials in this area. Limited aquifer material would tend to restrict the movement of groundwater from the Moose Brook Valley into the main portion of the Southampton aquifer. The data are not dense enough to determine whether the shallow bedrock eliminates groundwater movement from the Moose Brook Valley to the aquifer; however, it can be said that groundwater flow is restricted. The current Southampton landfill is located in the Moose Brook Valley aquifer materials upgradient of the shallow bedrock (Plate 3). For the purposes of the conceptual model it has been assumed that the Moose Brook aquifer materials and therefore, the existing landfill, are hydraulically connected to the Southampton aquifer.

To further refine the conceptual model the location, thickness and continuity of the aquifer materials is necessary. In plan view, as shown on Plate 4, the outwash sands and gravels are exposed to the west, southeast and south of the well. In the subsurface these sands and gravels are deposited on the bedrock/till surface and extend beneath the clays and silts to the center of the bedrock trough (Figures 2 and 3). The thickness of the sand and gravel underlying the clay varies from a few feet to forty feet. Only one test well, conducted by Tighe and Bond (1963), did not encounter this outwash deposit (TW 4); however, this well was located on the eastern flank of the buried valley at the approximate margin of the aquifer. Nine of the collected drilling logs encountered clay and sand/gravel over bedrock. The average thickness of the outwash material is 26.2 feet. The interpretation based on the well logs and the literature is that the sands and gravels are continuous beneath the clay. The one exception to this interpretation is in the

vicinity of the shallow bedrock discussed above. The continuity of the sand and gravel of that area is not clearly defined from the collected data. Therefore, a conservative interpretation has been taken that the sand and gravel is continuous, but thin.

The hydraulic conductivity of the aquifer material is dependent on its grain size and sorting. The more detailed well logs indicate the material coarsens with depth. Generally, sands predominate near the top of the deposit while fine gravels predominate near the bottom. This observation is consistent with the depositional processes of a glaciofluvial environment. Coarser materials are deposited during the initial high energy stages of a glacial river or outwash system. With time the energy lessens and finer materials are laid down. Consequently, the hydraulic conductivity is believed to increase with depth. Few measurements exist to quantify the hydraulic conductivity of the aquifer. Values calculated from the pump test results indicate hydraulic conductivity values ranging from 358 to 462 feet per day (ft/day) or 0.13 to 0.16 centimeters per second (cm/s.) in the vicinity of the pumping well. Sand samples collected on Pomeroy Meadow Road from construction excavations indicated a hydraulic conductivity of approximately 50-100 ft/day ($2-4 \times 10^{-2}$ cm/s) based on visual inspection.

To complete the conceptual model groundwater flow through the aquifer system is presented. The predominant direction of groundwater flow is from south to north as shown on Plate 4, a contour map of the piezometric surface. Data points presented on the map are from the collected well logs. Numbers next to each point are for the elevation in feet above mean sea level (AMSL) of the static water level in the well and the date (in parentheses) when the measurement was made. It should be noted that water levels from both bedrock and sand/gravel wells were used since it appears that the bedrock is in hydraulic connection with the aquifer. As stated the predominant flow direction is from south to north; however, more locally flow is from the recharge areas toward the center of the valley. The relatively

steep gradient from the edge of the aquifer to the center of the valley relative to the gradient along the valley axis indicates increasing hydraulic conductivity with depth. The more highly conductive material at the center of the valley is likely acting as a drain inducing a larger gradient in the shallower, less conductive aquifer materials. In the area of shallow bedrock, groundwater hydraulic connection has been inferred based on a conservative interpretation.

Recharge to the aquifer occurs through the exposed outwash sands and gravels (Plate 4) and from groundwater flowing into the aquifer materials from upper Moose Brook and Manhan River Valley deposits. Infiltration to the exposed aquifer materials is estimated at approximately 15-20 inches per year (in./yr.) (personal communication B. Hanson; USGS) which is about half of the annual precipitation for the area (Walsh, 1987).

In summary, the Southampton aquifer is areally extensive to the north and south and is restricted in the east and west by the buried bedrock trough. The major portion of the aquifer is under confined conditions due to the lacustrine clay deposits (Plate 4). In the areas where the outwash deposits show surface expression (Plate 4) the aquifer is unconfined.

3.0 COLLEGE HIGHWAY WELL

The College Highway well is Southampton's municipal well located in the Southampton aquifer. Identified as the pumping well on the plates and figures, the College Highway well is located 4100 feet southwest of the Easthampton town line, just to the west of College Highway (State Route 10). The pumphouse is situated in a fenced portion of a hayfield.

The well was located in 1963 as the result of a water study performed by Tighe and Bond Consulting Engineers. The total depth of the well is 140 feet and screened in coarse sand, fine gravel aquifer material below 116 feet of lacustrine clay and silt. The well is constructed of an 8-inch diameter casing with an 8-inch diameter screen consisting of 5 feet of 20 slot screen

over 5 feet of 60 slot screen. Tighe and Bond conducted a seven-day constant discharge pump test on the well; pumping at 550 gallons per minute (GPM). The well is currently equipped with a submersible pump capable of pumping 210-220 GPM installed in 1985. The pump is cycled automatically to maintain water pressure in a municipal storage tank. The pump operates a total of approximately 12 hours per day (personal communication with J. Slattery).

In relationship to the Southampton aquifer, the College Highway well is located in the well-defined trough portion of the buried bedrock valley (Plate 2). Under non-pumping conditions the water level in the well (as well as in the surrounding observation wells monitored during the 1963 study) is approximately 17 feet above ground surface indicating artesian or confined aquifer conditions. During the 1963 pump test the water level was drawn down to 86.5 feet below the ground surface. However, heads in observation wells located greater than 190 feet from the well remained above ground surface indicating an upward hydraulic gradient in the vicinity of the well. Currently the well is drawn down to approximately 14 feet below ground surface during each pumping cycle.

A recent analysis of the 1963 pump test data by Wehran provided quantitative results for aquifer coefficients (Appendix 2). Transmissivity values ranged from 7171.2 ft²/day (77.11 cm²/s) to 9244.8 ft²/day (99.41 cm²/s), with a geometric mean of 7,991.6 ft²/day (85.93 cm²/s). Storage coefficient values ranged from 9.1×10^{-6} to 1.5×10^{-4} with a geometric mean of 2.2×10^{-5} . These coefficients are indicative of good to excellent aquifer characteristics.

The water quality of the well is good as determined from the State Purgeable Organics Testing Program (S.P.O.T.) and from several inorganic analyses (Appendix 3). The analytical results indicate no contamination from indicator organic contaminants or from inorganic parameters. It should be noted that only a few water samples have been analyzed in the 24 year history of the

well. It is very difficult to assess the long term water quality.

4.0 ZONE I DELINEATION

By definition the Zone I recharge area is a circle with a 400 foot radius about the production well. For the College Highway well this recharge area is extremely limited hydraulically. The Zone I area is underlain by at least 100 vertical feet of lacustrine clay and silt which effectively separates the aquifer material from the ground surface. The delineation of a Zone I recharge area is intended to provide aquifer protection in close proximity to the production well. The lacustrine deposit provides additional protection to the aquifer from activities at the ground surface.

5.0 ZONE II RECHARGE AREA DELINEATION

The Zone II recharge area is defined by the DEQE as that area from which groundwater flows to the well under the most extreme pumping conditions. these conditions are defined as 180 days of pumping with no recharge to the aquifer. For the purposes of this study a pumping rate of 550 gpm was chosen. This rate was chosen because from the analysis of the Tighe and Bond pump test data it appears to be the maximum sustainable rate that the well can be pumped. At that rate the water level in the well was essentially stabilized at 18 feet above the pump. Currently the Town of Southampton is pumping the well at 210 gpm in approximately 12 hour cycles. The higher pumping rate of 550 gpm also takes into consideration future demands on the well. Therefore, while stressing the aquifer system under these severe simulated drought conditions the recharge area is defined.

To delineate the Zone II recharge area the DEQE recommends utilizing numerical modelling techniques. In many aquifer protection studies the use of a numerical model is critical to defining the Zone II area because under unconfined conditions the recharge area extends radially from the pumping well and the physical boundaries of this often extensive area can only be determined through predictive methods. In the case of the Southampton aquifer physical recharge areas are limited due to the confining lacustrine deposits. During the course of this investigation these recharge areas were delineated based on the observed and previously studied geology of the area, as shown on Plate 3. The recharge area in the vicinity of Pomeroy Meadow Road (named the Pomeroy Recharge Area) is likely the primary source of recharge to the College Highway well and therefore is of utmost importance for protection. Because of the confined nature of the Southampton aquifer the Zone II boundaries calculated by numerical analysis may not extend to the limits of the Pomeroy Recharge Area; however, the protection of this area and the other natural recharge areas is critical to the

maintenance of a pristine aquifer regardless of where the calculated Zone II boundaries lie.

5.1 NUMERICAL MODEL

The McDonald and Harbaugh three-dimensional model (MODFLOW) was used to simulate groundwater flow in the Southampton aquifer (McDonald and Harbaugh, 1984). The model is a modular, three-dimensional finite difference groundwater flow model published in 1984 as an open-file report by the USGS. The model is comprised of a central package or module which is designed to solve the groundwater flow equation for each node or block within a grid with respect to each block surrounding it. Additional modules can be added to the basic package to simulate discrete hydrogeologic conditions that effect groundwater flow. Examples of packages pertinent to the Southampton aquifer are the river, recharge, and pumping well modules. The model is well-documented, providing a clear discussion of the logic and limits associated with each module. The code is written in FORTRAN and designed to run on various types of mainframe and personal computers. The computers used in this study were an IBM-AT personal computer with a FORTRAN compiler and a math coprocessor chip, as well as a micro-VAX 2000 mainframe computer.

In order to predict the Zone II boundaries using MODFLOW, the numerical model was set up based on the conceptual model and calibrated utilizing steady state or non-pumping conditions. Once the numerical model was calibrated to steady state transient or pumping conditions were simulated. The model was then calibrated to the seven day pump test data. Following this transient calibration the model was used to simulate a 180 day pumping period without recharge to obtain the Zone II boundaries.

5.1.1 Grid

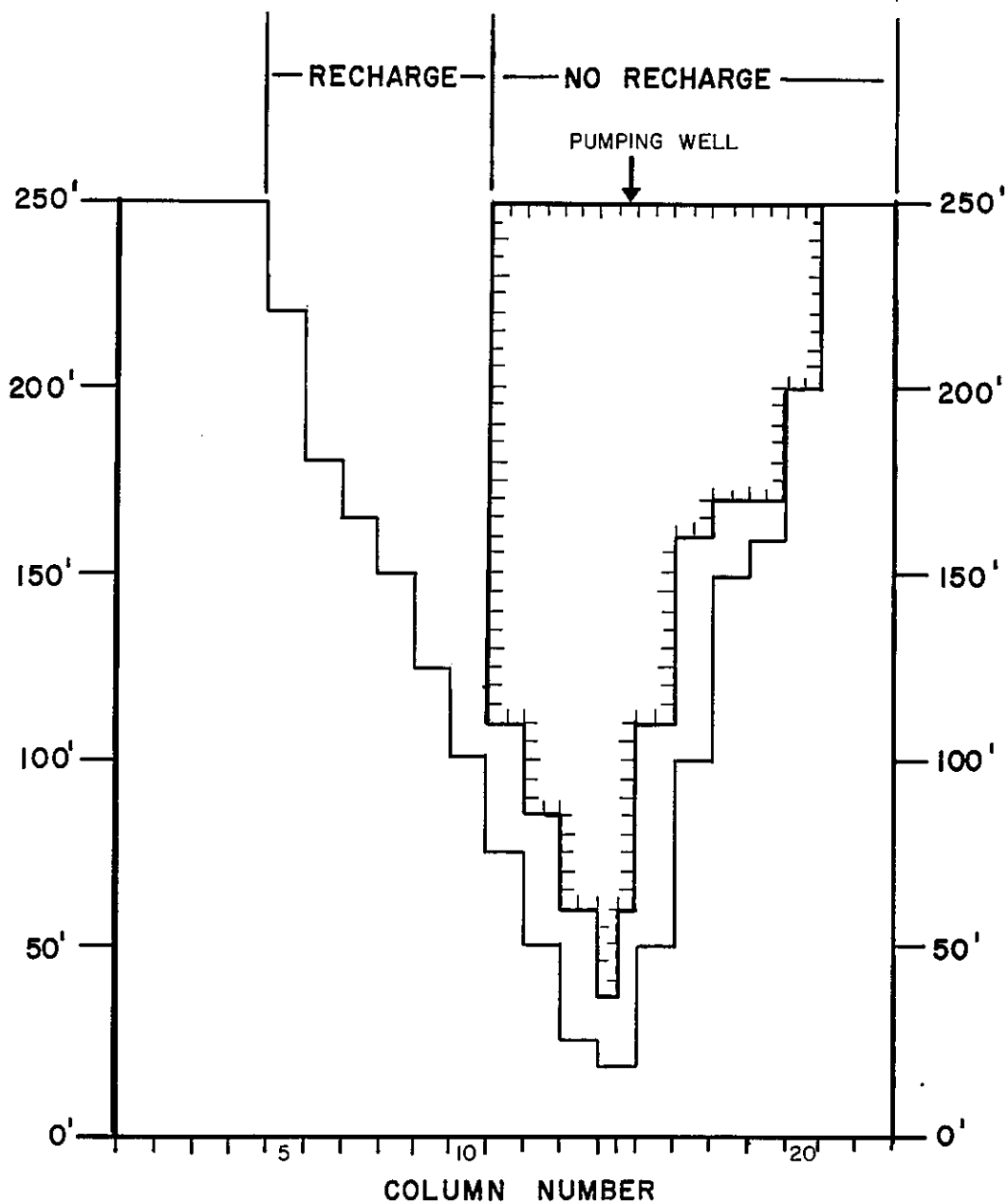
The grid in plan view is an elongated rectangle as shown on Plates 2 and 3. It is 10,500 feet (2.0 miles) wide and 27,000 feet (5.4 miles) long. The grid is discretized into blocks or

nodes 500 feet on a side. In the vicinity where the pumping well and observation wells are in close proximity, the grid is more finely discretized. Columns 14 and 15, out of a total of 20, and rows 15, 16, 17 and 18, out of a total of 56, are 250 feet long to provide greater detail at the pumping well site.

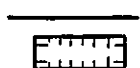
The third dimension of the grid is described by one layer representing the aquifer material bounded laterally and vertically by the lacustrine deposits and bedrock. Active nodes are shown on Plate 2. Where the aquifer material is exposed at the ground surface it receives recharge and is unconfined (Plate 4). The thickness of the aquifer in the recharge areas is defined by the distance from the water table to the bedrock surface. Where the aquifer is overlain by lacustrine deposits it behaves as a confined system. The thickness of the aquifer beneath the lacustrine deposits is 20 feet, which is the thickness of the sand and gravel unit between the lacustrine clay and the bedrock/till at the College Highway well. Although the actual thickness varies, 20 feet was used due to the lack of control to accurately vary it. Figure 4 is a cross section depicting the model configuration in the third dimension showing the aquifer and confining materials.

5.1.2 Boundary Conditions

Boundary conditions define how water moves into and out of the grid horizontally and vertically. The assignment of boundary conditions is based on field conditions and simplifying assumptions. For each boundary condition described, the field conditions and assumptions are presented. In overview, groundwater flow is predominantly horizontal through the sand and gravel filling the bedrock valley. The bedrock/till and the lacustrine clay are assumed to be impermeable and have been designated as inactive or no-flow nodes. Recharge to the system is from precipitation to the sand and gravel recharge areas and groundwater flow into the grid from the south and southwest



LEGEND:



BOTTOM OF ACTIVE NODES
IMPEDING LAYER

WE WEHRAN ENGINEERING
CONSULTING ENGINEERS

FIGURE 4: REPRESENTATIVE MODEL CROSS SECTION (ROW 17)

through the sand and gravel. Groundwater exits the system through the confined sand and gravel to the northeast.

Along the edge of the grid the nodes representing bedrock/till and lacustrine clay and silt are inactive. Both the bedrock/till and lacustrine deposits are considered impermeable because of the large difference in hydraulic conductivity between them and the glaciofluvial sands and gravels. The bedrock is permeable because it does yield water, but the yields are typically one to two orders of magnitude less than the sand and gravel wells. The lacustrine deposits, although not measured, are assumed to have a hydraulic conductivity several orders of magnitude lower than the sand and gravel.

Both active and inactive boundary conditions have been used where the outwash deposits are expected at the grid's edge. Inactive boundary conditions were used where groundwater flow is parallel to the grid edge. A constant head boundary covering four nodes was used at the location of Lyman Pond (Plate 2). At the grid boundary the dammed pond is located in a relatively steep valley. A constant head elevation of 195 feet above mean sea level was used to represent the average groundwater elevation in the vicinity of the pond. General head boundaries were used for the remaining exposed outwash. Theoretically, this boundary condition allows flow in or out of the grid, depending on the elevation of the water table within the grid relative to a constant head at some distance outside the grid. Since no constant head sources were available, a constant head was approximated at 2000 feet beyond the grid edge.

In addition to the boundary conditions, input parameters for recharge, initial heads and hydraulic conductivity are required for steady state simulations with MODFLOW. For the Southampton area a recharge rate of 5 to 22 inches per year (1.32×10^{-8} to 5.81×10^{-8} feet per second) was utilized. The input for initial heads was derived from the piezometric surface contour map (Plate 4). The information used to construct this map came from the collected well log data. The hydraulic conductivity values used

in the numerical simulations were derived from the pump test analysis and observed variations in grain size. These hydraulic conductivity values range from 40 to 462 feet per day (4.63×10^{-4} to 5.4×10^{-3} feet per second). From reviewing the available information it was observed that the hydraulic conductivity of the aquifer varied with depth; therefore, to take into consideration the more transmissive material at the base of the buried valley, the hydraulic conductivity of a strip of nodes along the axis of the valley was increased by a factor of five. A factor of five was chosen based on the observed range in grain size and the typical range in hydraulic conductivity of these materials.

5.1.3 Calibration of the Steady State Simulation

The final results of the steady state simulations are presented in Appendix 4 and illustrated on Plate 6. These results were achieved by varying both the rate of recharge and the hydraulic conductivity values within their ranges in order to best approximate the available field data. The input parameters used for the final calibration run are a recharge rate of 8.8 inches per year a hydraulic conductivity value of 462 feet per day (1×10^{-2} feet per second) at the base of the buried valley and a hydraulic conductivity value of 83 ft per day (1×10^{-3} feet per second) for the remainder of the aquifer. The hydraulic head data are presented on Plate 4. It should be noted that for ten foot contour intervals with the degree of control available for the Southampton aquifer that an acceptable error is ± 15 feet. As can be seen from these two plates the majority of the control points are within this range of error.

A comparison of the equipotential lines on Plates 4 and 6 reveals some differences. The simulated results (Plate 6) indicate more predominant flow parallel to the valley sides and a flatter piezometric surface. This difference is due to the lack of extensive areal variation in the hydraulic conductivity input data. Because of this and the fact that the confined portion of

the aquifer has been assumed to be of constant thickness MODFLOW calculates a constant transmissivity forcing the piezometric surface to flatten. This flattening of the piezometric surface caused an artificial lowering of the piezometric surface at the bedrock/till and outwash deposits contact. Consequently, several nodes at the contact went dry. In order to more accurately represent the information presented on Plate 4 both the hydraulic conductivity and thickness of the aquifer would have to be varied beyond the control limits of the input data. To acquire sufficient data to simulate the conceptual piezometric surface is beyond the scope of this study since a significant number of soil borings would be required throughout the aquifer to obtain the necessary information. However, the preliminary numerical model will conservatively define the Zone II boundaries and in that light is adequate to meet the objectives of the study. Additionally, as previously discussed, the physical recharge areas have been accurately delineated for the Southampton aquifer based on the geology and therefore, those areas which need protection can be defined.

In the future, if more precise numerical simulation is necessary any newly acquired information can readily be incorporated into the preliminary model. When sufficient field information has been collected the preliminary numerical model can be upgraded.

5.1.4 Simulated Pumping Conditions

To further calibrate the preliminary numerical model a transient calibration run simulating the seven day pump test was conducted. The results of this simulation are presented in Appendix 5. To initiate the transient runs the final head values from the steady state simulations were used as initial conditions. Nodes that went dry during the steady state simulation were given their same initial values to commence the transient simulation. The parameters that were varied during the transient calibration were the storage coefficient and the

hydraulic conductivity. The range of these parameters were determined from the pump test analysis. The drawdowns calculated during the transient simulations were compared to the drawdown of the observation wells monitored during the pump test (TW-7, TW-12 and TW-13). The final values from the transient calibration are a storage coefficient of 2.2×10^{-4} , a hydraulic conductivity of 220 feet per day (2.55×10^{-3} feet per second) at the base of the buried valley and a hydraulic conductivity value of 43 ft per day (5×10^{-4} feet per second) for the remainder of the aquifer. The need to reduce the hydraulic conductivity between the steady state and transient calibration runs further confirms the variability and complexity of the aquifer. The results of the final calibration run show drawdowns in the observation wells well within 10 feet of the measured values. It should be noted that these drawdowns represent the average drawdown of a 250 foot square node and therefore, depending upon the actual location of the observation, well within that node the calculated drawdown will be greater or less than the observed value.

The results of the 180 day simulation are also presented in Appendix 5. The extent of the cone of depression from this simulation is illustrated on Plate 7. As can be seen the cone of depression is asymmetrical and extends several thousand feet north and south of the pumping well under these extreme conditions. The asymmetry is the result of the drawdown cone intersecting the bedrock/till surface to the east and west. The cone of depression encompasses the recharge area in the vicinity of Pomeroy Meadow Road. Although the cone of depression approaches the edge of the grid to the south, the symmetry between the north and southern extent of the cone indicates that the grid edge does not greatly effect the cone.

5.2 ZONE II BOUNDARY

The extent of the cone of depression calculated during the 180 day pumping simulation was used to approximate the Zone II boundary presented on Plate 3. As can be seen the Zone II

boundary encompasses the Pomeroy Recharge Area. Although this preliminary model provides only an approximate solution, it is conservative and therefore provides the Town of Southampton with a safe aquifer protection boundary.

6.0 ZONE III RECHARGE AREA DELINEATION

The Zone III recharge area, presented on Plate 5, encompasses the area from which water could flow into Zone II. It consists primarily of the watershed for the Manhan River with groundwater from the Moose Brook Valley. The Zone III extends to the headwaters of the Manhan to the northwest of Southampton and encompasses the Wight and the Tighe and Carmody reservoirs. The majority of the Zone III is bedrock/till uplands where surface water divides mark the boundary with adjacent watersheds. In the south the boundary extends onto the valley floor then wraps around to the bedrock/till hills on the east side of the aquifer. The depicted outline of Zone III on Plate 5 has been dashed where the location of the groundwater divide and the southern boundary has been approximated. Although the surface water divide is well-defined by numerous headwaters and ponds in the vicinity of East Pond, Round Hill and the Pequot Ponds (the Westfield town line), the actual groundwater divide is not easily established due to the relatively level topography. The groundwater divide probably fluctuates northward and southward seasonally depending on recharge rates. The northern boundary of the Zone III is drawn across the Manhan Valley conservatively 4000 feet north of the College Highway well. It should be noted that not all water flowing in Zone III flows into Zone II. Most recharged water discharges to the Manhan River. However, a component of the total recharge moves as groundwater in the Manhan River Valley recharging the Southampton aquifer and eventually flowing into Zone II.

7.0 CURRENT LAND USE AND POTENTIAL SOURCES OF CONTAMINATION

7.1 ZONE I

The Zone I recharge area is a circle with a radius of 400 feet about the current well location. This area is presently Zoned Residential - Neighborhood as shown on Plate 8, the zoning map for the Town of Southampton. The town owns several acres around the well, but not the entire area encompassed by Zone I. The land owned by the town is not being used for any purpose other than to protect the well. The remaining land within the 400 foot radius is cultivated for hay or is wooded.

Two potential sources of contamination are evident in this zone. First, approximately 200 feet north of the College Highway well, a small stream flows northeastward. This stream flows through a farmyard to the southwest and therefore could be subject to a variety of agriculturally related contaminants. College Highway (State Route 10) passes along the boundary of Zone I south and southeast of the well. As with any other major transport route, College Highway is a potential source of contamination from road salt or accidental spills. In a different geological setting these potential sources would be of concern; however, due to the presence of approximately 100 feet of lacustrine clay and silt overlying the aquifer within this zone (Figure 2) these sources do not threaten the Southampton aquifer.

7.2 ZONE II

The Zone II recharge area encompasses the area from which groundwater flows to the College Highway well after 180 days of pumping with no recharge. This area is shown on Plate 3 and covers five different municipal zoning boundaries. The majority of the area, to the west and south of the well, is zoned Residential - Village (minimum lot area 30,000 square feet) with a small area zoned Commercial-Village (minimum lot area 25,000 square feet). North of the well and to the west of the Manhan River the area is zoned Residential - Neighborhood (minimum lot

area 40,000 square feet). Northeast of the well and east of the Manhan River the area is zoned Commercial - Highway (minimum lot area 40,000 square feet). And finally, southeast of the well and east of the Manhan River is an area zoned Residential - Rural (minimum lot area 60,000 square feet).

Approximately half of the Zone II recharge area is underlain by the lacustrine clay and silt unit. It is important to note that this unit thins to the west as illustrated in Figure 2 and provides the aquifer with less protection in these areas. The western edge of the Zone II area overlies the glacial outwash sands and gravels that recharge the Southampton Aquifer in the vicinity of Pomeroy Meadow Road (Pomeroy Recharge Area).

Current land use in the Zone II area is primarily dairy farming, followed by low density residential housing and a village area with two service stations. The area zoned commercial highway is currently at the initial stages of development and consists of a small roadside shopping mall (less than 10 stores).

Four primary, potential sources of contamination have been identified in the Zone II area. These include the old dump (Plate 3), potential agricultural contamination, underground storage tanks (Plate 3) and septic systems. The old dump is of primary concern because it is located in the Pomeroy Recharge Area and because little is known of its construction history, waste types received and closure. Since dairy farming is the primary land use in this zone there is a potential for contamination from agriculturally related chemicals. These would include fertilizers, herbicides and pesticides. Throughout the area a second potential source of contamination is from underground storage tanks. Existing gasoline service stations, with their underground petroleum product storage tanks, are another potential source of contamination to the Southampton aquifer. Septic systems potentially pose a real threat to the aquifer since they are utilized as the exclusive means of sewage disposal throughout the study area. They are considered a

7
main

potential source because of the volume of sewage waste and because of the potential for improperly disposed hazardous waste.

As previously discussed the hydrogeology of the Southampton aquifer with its confining lacustrine deposit and predominantly upward hydraulic gradient prevents these potential contaminants in many areas from affecting aquifer water quality. However, as the lacustrine deposit thins to the west and pinches out exposing the sands and gravels that recharge the aquifer the potential for contamination is of greater concern. Consequently, the western and southwestern portions of the Zone II area are sensitive to potential contamination and therefore, land use in this area needs to be carefully planned.

7.3 ZONE III

Zone III, as previously defined, is the area from which groundwater flows into Zone II. This area is depicted on the watershed map (Plate 5) and encompasses all six of the Town designated zoning boundaries. The zoning boundary not previously discussed is Industrial - Park (minimum lot area 80,000 square feet). In order to simplify the discussion of the large Zone III area, only those land areas and land use practices that could impact the aquifer will be presented.

Obviously the major land areas of concern are the outwash sands and gravels which directly recharge the aquifer. These consist of three areas as shown on Plate 3. The recharge area directly south of the well in the vicinity of Moose Brook Valley is considered the least sensitive of the three areas for two reasons. First, because of the shallow bedrock in the vicinity of the confluence of the Manhan River and Moose Brook there is some question of the degree of connection between the Moose Brook recharge area and the Southampton aquifer. Second, it is the recharge area located furthest from the College Highway well. The two remaining recharge areas shown on the site map (Plate 3) are considered of equal sensitivity.

Current zoning in these three recharge areas is residential (Plate 8). It should be noted that the two areas in town

designated Industrial - Park are not located on the outwash sand and gravel recharge areas but on lacustrine clays and silts and bedrock/till.

There are four current land use practices in the Zone III area which could potentially impact the Southampton aquifer. The current landfill, as shown on Plate 3, is located on the outwash sands and gravels in the Moose Brook recharge area and as previously discussed is conservatively assumed to recharge the Southampton aquifer. As previously mentioned there are two areas zoned Industrial - Park. Neither of these areas is extensively developed; however, due to the potential hazards of some industries these areas should be developed with careful planning. Again, septic systems potentially pose a real threat to the aquifer since they are utilized as the exclusive means of sewage disposal throughout the study area. They are considered a potential source because of the volume of sewage waste and because of the potential for improperly disposed hazardous waste. Finally, underground storage tanks pose an easily overlooked threat to the groundwater. These underground tanks would typically include buried heating oil or fuel tanks and gasoline tanks which can be found in both rural and village settings.

8.0 RECOMMENDATIONS

The Southampton aquifer protection study has consisted of an extensive literature review, an evaluation and mapping of the site hydrogeology, a numerical analysis of the flow regime and an assessment of current land use practices in order to delineate the Southampton aquifer recharge zones and identify those areas which need protection. As a result of this work the DEQE defined recharge areas, Zone I, II and III, have been delineated. Typically, in an unconfined aquifer environment Zone I and Zone II are the most critical areas to protect. The Southampton aquifer differs from this situation in that the aquifer is confined at the municipal well location. Throughout Zone I the aquifer is protected from ground surface by approximately 100 feet of lacustrine clay and silt. In Zone II this clay and silt unit thins to the west until the aquifer materials are exposed at the ground surface. Zone II encompasses the exposed sands and gravels of the Pomeroy Recharge Area, the recharge area in closest proximity to the College Highway well. The remaining sands and gravels which directly recharge the aquifer are located in the DEQE designated Zone III. It is in these areas of exposed outwash sands and gravels, especially the Pomeroy Recharge Area, that protection is most important.

The Southampton aquifer is a productive and high quality source of water and therefore, is an invaluable resource which must be protected. The following are some general guidelines and specific recommendations to aid the Town of Southampton in protecting this resource.

It is recommended that the zoning of the areas delineated as recharge areas on the site map (Plate 3) be modified to identify these areas as Watershed Protection Zones. These Watershed Protection Zones should also include a buffer zone of 1000 feet beyond the contact of the outwash deposits with the lacustrine clay and silt. This buffer provides protection for the area where the lacustrine deposit thins and the aquifer is no longer

confined. Current practices and future development within these Watershed Protection Zones should be under the jurisdiction of the Town of Southampton such that any activities that are detrimental to the aquifer can be prohibited.

The Town of Southampton should also require permits for the development of any large water supply well (greater than a single family dwelling) within the Southampton aquifer as shown on Plate 2. These permits should require that the developer show, following DEQE water supply approval guidelines, that the proposed well will not interfere with the College Highway well nor adversely affect the aquifer.

As previously discussed septic systems provide the sole means of sewage disposal within the Town and therefore, are potential sources of contamination to the aquifer both from the volume of sewage processed and from the possibility of improper disposal of hazardous substances. The impact of septic systems is of particular concern within the Watershed Protection Zones. It is highly recommended that septic systems within these zones be minimized and that any new or existing systems be properly designed and maintained. It would be prudent to consider the development of a municipal sewage treatment system for the buildings located in the Pomeroy Recharge Area as there is a high density of existing development and strong potential for future development in this the most sensitive Watershed Protection Zone. It was beyond the scope of this study to assess the current impact of the development in the Pomeroy Watershed Protection Zone on the Southampton aquifer; however, intuitively because of the hydraulics of the aquifer and the distance from the well this should not be considered a critical situation. But rather the Town should be aware that this is a potential threat and for safe development in the Pomeroy Watershed Protection Zone a sewage treatment facility should be evaluated.

Septic systems are one of the most difficult potential sources of contamination to assess, particularly because of the possibility of improper hazardous substance disposal. To address

this problem and to heighten the awareness of the community to their valuable water resource a public education campaign is recommended. This campaign should be aimed at all levels of the community from school children and households to businesses and industry. This campaign should make the community aware of what a valuable aquifer Southampton has as well as what actions could be detrimental to it. To facilitate this effort, the New England Water Pollution Control Association (NEWPCA) has several educational brochures which are relatively inexpensive, easily understood and could be distributed widely. Enclosed (back pocket) is the NEWPCA brochure on "Hazardous Waste What You Should and Shouldn't Do" which is helpful in outlining what are household hazardous wastes and how to properly dispose of them. The educational campaign should be coordinated with the community hazardous waste clean-up day. The results of this effort should heighten public awareness and reduce the potential for hazardous substances to enter the aquifer from septic systems.

In addition to these guidelines the following specific recommendations are suggested:

1. Annual analysis of the College Highway well water for: volatile organic compounds, pH, specific conductance, calcium, magnesium, potassium, sodium, iron, manganese, chloride, sulphate, fluoride, nitrate, phosphate, RCRA metals and total phenols;
2. Quarterly sampling of the College Highway well water for indicator parameters including pH, specific conductance, chloride, nitrate and iron;
3. The underground petroleum products storage tanks of the two service stations on College Highway as well as any other underground storage tanks in the Watershed Protection Zones should be integrity tested. Sites which are found to have leaking tanks should be remediated immediately;
4. Although the two areas zoned Industrial-Park are not in the Watershed Protection Zones it is recommended that any future development be carefully assessed in terms of potential impact to the Southampton aquifer as both Industrial - Parks are located upgradient of the well;
5. As determined from this study shallow bedrock exists limiting groundwater flow between the Moose Book recharge

area where the current landfill is located and the Southampton aquifer. Because of the landfill's location in a recharge area it is recommended that the landfill not be expanded and that careful monitoring of the groundwater in the vicinity of the landfill be conducted in order to provide an early warning of any contamination problem;

6. The old dump, south of Karen Lane and adjacent to Helen Drive, is located in the Pomeroy Watershed Protection Area and poses a significant threat to the aquifer. Because little is known about this dump it is recommended that groundwater quality monitoring wells be installed downgradient of this site to assess its current and future impact. Based on the results from these wells the necessity for further work or remediation can be addressed.

In conclusion, it is recommended that a meeting be held between the authors of this report and the Town representatives to discuss and clarify the conclusions and recommendations of this report.

9.0 REFERENCES

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APPENDIX 1

DOMESTIC AND TEST WELL LOGS

WATER WELL COMPLETION REPORT

Please print firmly

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2501-14-15-16710

WATER WELL COMPLETION REPORT

Duty Point #4

WELL LOCATION		
Address <u>Lot #3 Camp Lake Rd.</u>		
City/Town <u>Southampton</u>		
G.S. Quadrangle Map _____		
Grid Location _____		
Owner <u>Phil Halaban</u>		
Address <u>Spafid</u>		

WELL USE Domestic ☐ Public ☐ Industrial ☐ Other _____ Method Drilled <u>6/13/85</u> Date Drilled <u>Today</u>	CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From <u>210</u> To <u>215</u> 2) From <u>260</u> To <u>265</u> 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock <u>145</u>
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CASING Length <u>155</u> Diameter <u>6"</u> Type <u>6/15/85</u>	UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____
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STATIC WATER LEVEL Feet below land surface _____ Date measured _____	GRAVEL PACK WELL Yes ☐ No ☒
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WATER QUALITY TESTS MADE Chemical ☐ Biological ☐	PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>6</u> GPM. How measured _____ Recovery _____ feet after _____ hours.
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LOG of FORMATIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%;">Materials</th> <th style="width: 35%;">From</th> <th style="width: 35%;">To</th> </tr> <tr> <td><u>Sand</u></td> <td><u>-</u></td> <td><u>145</u></td> </tr> <tr> <td><u>redstone</u></td> <td><u>145</u></td> <td><u>275</u></td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	Materials	From	To	<u>Sand</u>	<u>-</u>	<u>145</u>	<u>redstone</u>	<u>145</u>	<u>275</u>																			COMMENTS: (On well or water) DRILLER Firm <u>B+G Well Drillers</u> Address _____ City _____ Registration No. _____ Operator's Signature _____
Materials	From	To																										
<u>Sand</u>	<u>-</u>	<u>145</u>																										
<u>redstone</u>	<u>145</u>	<u>275</u>																										

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Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION																																
Address <u>Rte 101 Cold Springs Rd</u>																																
City/Town <u>Southampton</u>																																
G.S. Quadrangle Map _____																																
Grid Location _____																																
Owner <u>Mr. William Osley</u>																																
Address _____																																
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____ CONSOLIDATED WELL Type of Water-bearing Rock <u>Sandstone</u> Water-bearing Zones 1) From <u>205</u> To <u>225</u> 2) From <u>50</u> To <u>52</u> 3) From _____ To _____ 4) From <u>120</u> To <u>124</u> Depth to Bedrock <u>6</u>																																
Method Drilled <u>Rotary</u> Date Drilled <u>12-22-85</u> CASING Length <u>20'</u> Diameter <u>1 1/2"</u> Type <u>BIK 54 MPD</u> UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																																
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GRAVEL PACK WELL Yes ☐ No ☒																																
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																																
PUMP TEST																																
Drawdown _____ feet after pumping _____ days _____ hours at _____ GPM. How measured _____ Recovery _____ feet after _____ hours.																																
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<u>Coarse</u>	<u>0</u>	<u></u>																														
<u>Gravel</u>	<u></u>	<u>6</u>																														
<u>Sandst.</u>	<u>7</u>	<u>130</u>																														
Please print firmly		Operator's Signature _____																														

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Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION			
Address <u>M-112AS + Locals 34 Cold Spg. Rd.</u>			
City/Town <u>Southampton</u>			
G.S. Quadrangle Map _____			
Grid Location _____			
Owner <u>Michael Parenteau</u>			
Address _____			

WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____	CONSOLIDATED WELL Type of Water-bearing Rock <u>Sandstone</u> Water-bearing Zones 1) From <u>65</u> To <u>82</u> 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock <u>4</u>
Method Drilled <u>Cable</u> Date Drilled <u>4/11/85</u>	UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____
CASING Length <u>20</u> Diameter <u>6"</u> Type <u>Steel</u>	STATIC WATER LEVEL Feet below land surface <u>34 ft.</u> Date measured <u>4/20/85</u>
GRAVEL PACK WELL Yes ☐ No ☐	WATER QUALITY TESTS MADE Chemical ☒ Biological ☒

PUMP TEST	
Drawdown <u>90</u> feet after pumping <u>4</u> days _____ hours at <u>10</u> GPM.	How measured <u>Well</u> Recovery <u>40</u> feet after <u>1</u> hours.

LOG of FORMATIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Materials</th> <th style="width: 20%;">From</th> <th style="width: 20%;">To</th> </tr> </thead> <tbody> <tr> <td><u>Sand</u></td> <td><u>0</u></td> <td><u>4</u></td> </tr> <tr> <td><u>Sandst.</u></td> <td><u>5</u></td> <td><u>100</u></td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Materials	From	To	<u>Sand</u>	<u>0</u>	<u>4</u>	<u>Sandst.</u>	<u>5</u>	<u>100</u>																									COMMENTS: (On well or water) DRILLER Firm <u>J.L. Slattery Inc</u> Address _____ City _____ Registration No. _____ Operator's Signature _____
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Office use only

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עפ"י משיקול הדעת



WATER WELL COMPLETION REPORT

WELL LOCATION			Office use only																														
Address <u>Lot #2 County Rd</u>																																	
City/Town <u>Hampton</u>																																	
G.S. Quadrangle Map _____																																	
Grid Location _____																																	
Owner <u>Phil Hallahan</u>																																	
Address _____																																	
WELL USE Domestic ☐ Public ☐ Industrial ☐ Other _____		CONSOLIDATED WELL Type of Water-bearing Rock <u>redstone</u> Water-bearing Zones 1) From <u>115</u> To <u>125</u> 2) From <u>235</u> To <u>245</u> 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock <u>118</u>																															
Method Drilled <u>Rotary</u> Date Drilled <u>8-29-85</u>		UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																															
CASING Length <u>120</u> Diameter <u>6"</u> Type <u>Steel</u>																																	
STATIC WATER LEVEL Feet below land surface <u>12'</u> Date measured <u>8/30/85</u>																																	
GRAVEL PACK WELL Yes ☐ No ☒																																	
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																																	
PUMP TEST																																	
Drawdown _____ feet after pumping _____ days _____ hours at <u>10</u> GPM. How measured _____ Recovery _____ feet after _____ hours.																																	
LOG of FORMATIONS <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th>Materials</th><th>From</th><th>To</th></tr></thead><tbody><tr><td>gravel</td><td>-</td><td>28'</td></tr><tr><td>sand</td><td>28'</td><td>118'</td></tr><tr><td>redstone</td><td>118'</td><td>245'</td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>		Materials	From	To	gravel	-	28'	sand	28'	118'	redstone	118'	245'																			COMMENTS: (On well or water) _____ _____ _____ DRILLER Firm <u>B+G Well Drilling Inc.</u> Address _____ City _____ Registration No. _____ Operator's Signature _____	
Materials	From	To																															
gravel	-	28'																															
sand	28'	118'																															
redstone	118'	245'																															

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Data Point #10

WATER WELL COMPLETION REPORT OFF MAP

WELL LOCATION		
Address <u>Crooked Ledge Rd.</u>		
City/Town <u>Southampton</u>		
G.S. Quadrangle Map _____		
Grid Location _____		
Owner <u>Bert Clinton</u>		
Address _____		

WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____ Method Drilled <u>Cable</u> Date Drilled <u>11-9-84</u>	CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From _____ To _____ 2) From _____ To _____ 3) From _____ To _____ 4) From <u>2</u> To _____ Depth to Bedrock _____
CASING Length <u>21'</u> Diameter <u>6"</u> Type <u>Steel</u>	UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____
STATIC WATER LEVEL Feet below land surface <u>18'</u> Date measured <u>11-9-84</u>	
GRAVEL PACK WELL Yes ☐ No ☐	
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐	

PUMP TEST	
Drawdown _____ feet after pumping _____ days _____ hours at <u>12</u> GPM.	
How measured _____ Recovery _____ feet after _____ hours.	

LOG of FORMATIONS <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%; text-align: left;">Materials</th> <th style="width: 30%; text-align: left;">From</th> <th style="width: 30%; text-align: left;">To</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	Materials	From	To																															COMMENTS: (On well or water) <u>Depth of well 159'</u> DRILLER Firm <u>Aqua Well Drill</u> Address _____ City _____ Registration No. _____ Operator's Signature _____
Materials	From	To																																

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WATER WELL COMPLETION REPORT

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Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION																																
Address <u>East St.</u>																																
City/Town <u>Southampton</u>																																
G.S. Quadrangle Map _____																																
Grid Location _____																																
Owner <u>Henry Scheidele</u>																																
Address _____																																
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____																																
CONSOLIDATED WELL Type of Water-bearing Rock <u>Red</u> Water-bearing Zones 1) From <u>130</u> To <u>840</u> 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock <u>130</u>																																
CASING Length <u>1417</u> Diameter <u>6"</u> Type <u>1715</u>																																
STATIC WATER LEVEL Feet below land surface <u>70</u> Date measured <u>4-21-87</u>																																
GRAVEL PACK WELL Yes ☐ No ☒																																
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																																
UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																																
PUMP TEST Blown test w/ n/g <u>1 G.P.M.</u> Drawdown _____ feet after pumping _____ days _____ hours at _____ GPM. How measured _____ Recovery _____ feet after _____ hours.																																
LOG of FORMATIONS <table border="1"> <thead> <tr> <th>Materials</th> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr> <td>Sand</td> <td>0</td> <td>90</td> </tr> <tr> <td>G.</td> <td>90</td> <td>130</td> </tr> <tr> <td>Red rock</td> <td>130</td> <td>840</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			Materials	From	To	Sand	0	90	G.	90	130	Red rock	130	840																		
Materials	From	To																														
Sand	0	90																														
G.	90	130																														
Red rock	130	840																														
COMMENTS: (On well or water) <u>Hard fractured well to</u> <u>inclosed flow to 1 G.P.M.</u>																																
DRILLER Firm <u>Kiki Henshaw</u> Address _____ City _____ Registration No. _____																																
Operator's Signature _____																																

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Data Point #15

WATER WELL COMPLETION REPORT

WELL LOCATION				
Address <u>East St</u>				
City/Town <u>Southampton</u>				
G.S. Quadrangle Map _____				
Grid Location _____				
Owner <u>Austin Wudhans</u>				
Address _____				

WELL USE	CONSOLIDATED WELL
Domestic ☒ Public ☐ Industrial ☐ Other _____	Type of Water-bearing Rock <u>Red rock</u> Water-bearing Zones 1) From <u>108</u> To <u>585</u> 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock <u>108</u>
Method Drilled <u>air</u> Date Drilled <u>5.4.86</u>	

CASING	UNCONSOLIDATED WELL
Length <u>113</u> Diameter <u>6"</u> Type <u>1716</u>	Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____

STATIC WATER LEVEL	GRAVEL PACK WELL
Feet below land surface <u>60-80</u> Date measured <u>5.8.86</u>	Yes ☐ No ☒

WATER QUALITY TESTS MADE	PUMP TEST
Chemical ☐ Biological ☐	<u>blown test + w/pump test 1 GPM</u> Drawdown _____ feet after pumping _____ days _____ hours at _____ GPM. How measured _____ Recovery _____ feet after _____ hours.

LOG of FORMATIONS	COMMENTS: (On well or water)																														
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Materials</th> <th style="width: 30%;">From</th> <th style="width: 40%;">To</th> </tr> </thead> <tbody> <tr> <td><u>Sand</u></td> <td><u>0</u></td> <td><u>108</u></td> </tr> <tr> <td><u>red rock</u></td> <td><u>108</u></td> <td><u>585</u></td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Materials	From	To	<u>Sand</u>	<u>0</u>	<u>108</u>	<u>red rock</u>	<u>108</u>	<u>585</u>																						DRILLER Firm <u>Kirke Henshaw</u> Address _____ City _____ Registration No. _____ Operator's Signature _____
Materials	From	To																													
<u>Sand</u>	<u>0</u>	<u>108</u>																													
<u>red rock</u>	<u>108</u>	<u>585</u>																													

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Date Point #16

Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION			<table border="1" style="width: 100%; height: 100%;"><tr><td style="width: 50%; height: 50%;"></td><td style="width: 50%; height: 50%;"></td></tr><tr><td style="width: 50%; height: 50%;"></td><td style="width: 50%; height: 50%;"></td></tr></table>																																	
Address <u>Edward Ave.</u>																																				
City/Town <u>Southampton</u>																																				
G.S. Quadrangle Map _____																																				
Grid Location _____																																				
Owner <u>Ed. Guinner</u>																																				
Address _____																																				
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____		CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From <u>445</u> To <u>465</u> 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock <u>60</u>																																		
Method Drilled <u>Rotary</u> Date Drilled _____		UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																																		
CASING Length <u>81</u> Diameter <u>6"</u> Type <u>5H pipe</u>																																				
STATIC WATER LEVEL Feet below land surface _____ Date measured _____																																				
GRAVEL PACK WELL Yes ☐ No ☒																																				
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐		office use only																																		
PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>2.5</u> GPM. How measured <u>on test</u> Recovery _____ feet after _____ hours.																																				
<table border="1" style="width: 100%;"><thead><tr><th colspan="3">LOG of FORMATIONS</th></tr><tr><th>Materials</th><th>From</th><th>To</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>			LOG of FORMATIONS			Materials	From	To																												COMMENTS: (On well or water) _____ _____ DRILLER Firm <u>F & R Seales</u> Address _____ City _____ Registration No. _____ Operator's Signature _____
LOG of FORMATIONS																																				
Materials	From	To																																		
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Data Point #18

Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT OFF MAP

WELL LOCATION																																
Address <u>Fomer Rd</u>																																
City/Town <u>Southampton</u>																																
G.S. Quadrangle Map _____																																
Grid Location _____																																
Owner <u>Glass Houses of Richard Pike</u>																																
Address <u>Southampton</u>																																
WELL USE																																
Domestic ☐ Public ☒ Industrial ☐																																
Other _____																																
CONSOLIDATED WELL																																
Type of Water-bearing Rock _____																																
Water-bearing Zones																																
1) From <u>285</u> To <u>305</u>																																
2) From _____ To _____																																
3) From _____ To _____																																
4) From _____ To _____																																
Depth to Bedrock <u>45</u>																																
UNCONSOLIDATED WELL																																
Water-bearing Materials																																
Sand: fine ☐ medium ☐ coarse ☐																																
Gravel: fine ☐ medium ☐ coarse ☐																																
Screen:																																
Slot # _____ length _____ from _____ to _____																																
Split Screen (or 2nd screen)																																
Slot # _____ length _____ from _____ to _____																																
Depth To Bedrock _____																																
WELL USE																																
Domestic ☐ Public ☒ Industrial ☐																																
Other _____																																
Method Drilled <u>10/13/86</u>																																
Date Drilled <u>Pottery</u>																																
CASING																																
Length <u>62'</u> Diameter <u>6"</u>																																
Type _____																																
STATIC WATER LEVEL																																
Feet below land surface <u>10</u>																																
Date measured <u>10/13/86</u>																																
GRAVEL PACK WELL																																
Yes ☐ No ☒																																
WATER QUALITY TESTS MADE																																
Chemical ☐ Biological ☐																																
PUMP TEST																																
Drawdown _____ feet after pumping _____ days _____ hours at <u>4</u> GPM.																																
How measured <u>air test</u> Recovery _____ feet after _____ hours.																																
LOG of FORMATIONS																																
Materials From To																																
<table border="1"><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>																																
COMMENTS: (On well or water)																																
DRILLER																																
Firm <u>F+R Scales</u>																																
Address _____																																
City _____																																
Registration No. _____																																
Operator's Signature _____																																

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WATER WELL COMPLETION REPORT

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Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION		
Address <u>Gilbert Rd</u>		
City/Town <u>Southampton</u>		
G.S. Quadrangle Map _____		
Grid Location _____		
Owner <u>Paul Lussier</u>		
Address <u>1416 Pomasoy Rd</u>		
WELL USE		
Domestic ☒ Public ☐ Industrial ☐		
Other _____		
Method Drilled <u>Rotary</u>		
Date Drilled <u>2-12-86</u>		
CASING		
Length <u>60'</u> Diameter <u>6"</u>		
Type <u>box steel</u>		
STATIC WATER LEVEL		
Feet below land surface <u>30'</u>		
Date measured <u>2-12-87</u>		
GRAVEL PACK WELL		
Yes ☐ No ☒		
WATER QUALITY TESTS MADE		
Chemical ☐ Biological ☐		
CONSOLIDATED WELL		
Type of Water-bearing Rock _____		
Water-bearing Zones		
1) From _____ To _____		
2) From _____ To _____		
3) From _____ To _____		
4) From _____ To _____		
Depth to Bedrock _____		
UNCONSOLIDATED WELL		
Water-bearing Materials		
Sand: fine ☐ medium ☒ coarse ☐		
Gravel: fine ☐ medium ☐ coarse ☐		
Screen:		
Slot # <u>30</u> length <u>4'</u> from <u>60'</u> to <u>64'</u>		
Split Screen (or 2nd screen)		
Slot # _____ length _____ from _____ to _____		
Depth To Bedrock _____		
PUMP TEST		
Drawdown _____ feet after pumping _____ days _____ hours at <u>10</u> GPM.		
How measured <u>in test</u> Recovery _____ feet after _____ hours		
LOG of FORMATIONS		
Materials	From	To
<u>sub soil</u>	<u>0</u>	<u>5</u>
<u>bedrock</u>		
<u>gravel</u>	<u>5</u>	<u>25</u>
<u>f. sand</u>	<u>25</u>	<u>50</u>
<u>m. sand</u>	<u>50</u>	<u>65</u>
COMMENTS: (On well or water)		
DRILLER		
Firm <u>F+R Seales</u>		
Address _____		
City _____		
Registration No. _____		
Operator's Signature _____		

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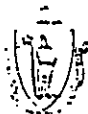
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WATER WELL COMPLETION REPORT

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Data Point #23

Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION		
Address	Lot 44 Glendale Rd / Glendale Rd	
City/Town	Southampton	
G.S. Quadrangle Map		
Grid Location		
Owner	Hampshire Homesteads	
Address	East Hampton	
WELL USE		
Domestic ☒	Public ☐	Industrial ☐
Other _____		
CONSOLIDATED WELL		
Type of Water-bearing Rock _____		
Water-bearing Zones		
1) From 460/205 To 480/225		
2) From _____ To _____		
3) From _____ To _____		
4) From _____ To _____		
Depth to Bedrock 44/23		
CASING -		
Length 62'4"	Diameter 6'6"	
Type Steel		
STATIC WATER LEVEL		
Feet below land surface N.M./60'		
Date measured N.M./5.13.86		
GRAVEL PACK WELL		
Yes ☐ No ☒		
WATER QUALITY TESTS MADE		
Chemical ☐ Biological ☐		
UNCONSOLIDATED WELL		
Water-bearing Materials		
Sand: fine ☐ medium ☐ coarse ☐		
Gravel: fine ☐ medium ☐ coarse ☐		
Screen:		
Slot # _____ length _____ from _____ to _____		
Split Screen (or 2nd screen)		
Slot # _____ length _____ from _____ to _____		
Depth To Bedrock _____		
PUMP TEST		
Drawdown _____ feet after pumping _____ days _____ hours at 2/12 GPM.		
How measured <u>aut test</u> Recovery _____ feet after _____ hours.		
LOG of FORMATIONS		
Materials	From	To
COMMENTS: (On well or water)		
DRILLER		
Firm F + R Scales		
Address _____		
City _____		
Registration No. _____		
Operator's Signature _____		

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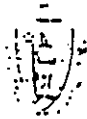
Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION			
Address <u>Glendale Road</u>			
City/Town <u>Southampton</u>			
G.S. Quadrangle Map _____			
Grid Location _____			
Owner <u>Richard Truehart</u>			
Address _____			
WELL USE		CONSOLIDATED WELL	
Domestic ☒ Public ☐ Industrial ☐		Type of Water-bearing Rock _____	
Other _____		Water-bearing Zones	
Method Drilled <u>Rotary</u>		1) From <u>365</u> To <u>385</u>	
Date Drilled <u>4.30.87</u>		2) From _____ To _____	
		3) From _____ To _____	
		4) From <u>4</u> To _____	
CASING		Depth to Bedrock <u>20'</u>	
Length <u>42'</u> Diameter <u>6"</u>			
Type <u>Steel</u>		UNCONSOLIDATED WELL	
STATIC WATER LEVEL		Water-bearing Materials	
Feet below land surface <u>10'</u>		• Sand: fine ☐ medium ☐ coarse ☐	
Date measured <u>4.30.87</u>		Gravel: fine ☐ medium ☐ coarse ☐	
GRAVEL PACK WELL		Screen:	
Yes ☐ No ☐		Slot # _____ length _____ from _____ to _____	
WATER QUALITY TESTS MADE		Split Screen (for 2nd screen)	
Chemical ☐ Biological ☐		Slot # _____ length _____ from _____ to _____	
		Depth To Bedrock _____	
PUMP TEST			
Drawdown _____ feet after pumping _____ days _____ hours at <u>4</u> GPM.			
How measured <u>Air Test</u> Recovery _____ feet after _____ hours.			
LOG of FORMATIONS		COMMENTS: (On well or water)	
Materials	From	To	office use only
DRILLER			Operator's Signature
Firm <u>F + R Scales, Inc.</u>			
Address _____			
City _____			
Registration No. _____			

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Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION																																				
Address <u>Glendale Woods</u>																																				
City/Town <u>Southampton</u>																																				
G.S. Quadrangle Map _____																																				
Grid Location _____																																				
Owner <u>Roland White</u>																																				
Address _____																																				
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____ CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From <u>225</u> To <u>245</u> 2) From _____ To _____ 3) From _____ To _____ 4) From <u>4</u> To _____ Depth to Bedrock <u>8'</u>																																				
WELL USE Method Drilled <u>Rotary</u> Date Drilled <u>5-5-87</u> UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																																				
CASING Length <u>31'</u> Diameter <u>6"</u> Type <u>Steel</u> STATIC WATER LEVEL Feet below land surface _____ Date measured _____																																				
GRAVEL PACK WELL Yes ☐ No ☐ WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																																				
PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>8</u> GPM. How measured <u>Air Test</u> Recovery _____ feet after _____ hours.																																				
LOG of FORMATIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Materials</th> <th style="width: 10%;">From</th> <th style="width: 10%;">To</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		Materials	From	To																															COMMENTS: (On well or water)	
Materials	From	To																																		
DRILLER Firm <u>F + R scales Inc.</u> Address _____ City _____ Registration No. _____		Operator's Signature _____																																		

Please print name

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WATER WELL COMPLETION REPORT

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2011-11-18



Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION																															
Address <u>Hawthorne Rd Drive</u>																															
City/Town <u>Southampton</u>																															
G.S. Quadrangle Map _____																															
Grid Location _____																															
Owner <u>Lloyd Carswell</u>																															
Address <u>Maddhan Rd, Southampton</u>																															
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____		CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From _____ To _____ 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock _____																													
Method Drilled <u>Rotary</u> Date Drilled <u>2-18-87</u>																															
CASING Length <u>210'</u> Diameter <u>6"</u> Type <u>61K Steel</u>																															
STATIC WATER LEVEL Feet below land surface <u>40'</u> Date measured <u>2-18-87</u>																															
GRAVEL PACK WELL Yes ☐ No ☒		UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☒ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # <u>30</u> length <u>5</u> from <u>210</u> to <u>215</u> Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock <u>216</u>																													
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																															
PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>40</u> GPM. How measured <u>Gas Test</u> Recovery _____ feet after _____ hours.																															
LOG of FORMATIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Materials</th> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr> <td>4' Sand</td> <td>0</td> <td>30</td> </tr> <tr> <td>Silt + clay</td> <td>35</td> <td>180</td> </tr> <tr> <td>4' to med'</td> <td></td> <td></td> </tr> <tr> <td>Sand</td> <td>180</td> <td>216</td> </tr> <tr> <td>Red. rk.</td> <td></td> <td>216</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			Materials	From	To	4' Sand	0	30	Silt + clay	35	180	4' to med'			Sand	180	216	Red. rk.		216											
Materials	From	To																													
4' Sand	0	30																													
Silt + clay	35	180																													
4' to med'																															
Sand	180	216																													
Red. rk.		216																													
COMMENTS: (On well or water) _____ _____ _____		office use only																													
DRILLER Firm <u>F+R. Scales</u> Address _____ City _____ Registration No. <u>463</u>																															
Operator's Signature _____																															
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258-14-65-0071.02

WATER WELL COMPLETION REPORT

2511-10-45-2071E1



Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION			
Address <u>Hawthorne Drive</u>			
City/Town <u>Southampton</u>			
G.S. Quadrangle Map _____			
Grid Location _____			
Owner <u>Robert Graham (Geffen)</u>			
Address <u>Southampton</u>			
WELL USE		CONSOLIDATED WELL	
Domestic ☐ Public ☐ Industrial ☐ Other _____		Type of Water-bearing Rock _____ Water-bearing Zones 1) From _____ To _____ 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock _____	
Method Drilled <u>Rotary</u> Date Drilled <u>9/30/80</u>			
CASING		UNCONSOLIDATED WELL	
Length <u>220</u> Diameter <u>6"</u> Type <u>Steel</u>		Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # <u>20</u> length <u>4</u> from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____	
STATIC WATER LEVEL			
Feet below land surface <u>38'</u> Date measured <u>10/14/86</u>			
GRAVEL PACK WELL			
Yes ☐ No ☐			
WATER QUALITY TESTS MADE			
Chemical ☐ Biological ☐			
PUMP TEST			
Drawdown _____ feet after pumping _____ days <u>2</u> hours at <u>25</u> GPM. How measured _____ Recovery _____ feet after _____ hours			
LOG of FORMATIONS		COMMENTS: (On well or water)	
Materials	From	To	OFFICE USE ONLY DRILLER Firm <u>F+R Seales, Inc.</u> Address _____ City _____ Registration No. _____ Operator's Signature _____
<u>Sand</u>	<u>0</u>	<u>20</u>	
<u>silt+clay</u>	<u>21</u>	<u>25</u>	
<u>clay</u>	<u>25</u>	<u>25</u>	
<u>med</u>	<u>216</u>	<u>22</u>	
<u>Sand</u>	<u>22</u>	<u>22</u>	

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250-10-05-007101

WATER WELL COMPLETION REPORT

25th, 14-65-2072, 101



Duty Point # 31

Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT *No such Street*

WELL LOCATION		
Address	<i>Lot #11 Spring Rd June D.</i>	
City/Town	<i>Southampton Southampton</i>	
G.S. Quadrangle Map		
Grid Location		
Owner	<i>Edward Guinness Jr.</i>	
Address		

WELL USE	CONSOLIDATED WELL
Domestic ☒ Public ☐ Industrial ☐ Other _____	Type of Water-bearing Rock _____ Water-bearing Zones 1) From <i>325</i> To <i>345</i> 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock <i>30</i>
Method Drilled <i>Rotary</i> Date Drilled <i>5-21-86</i>	
CASING - Length <i>49'</i> Diameter <i>6"</i> Type <i>BIK Steel</i>	UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____
STATIC WATER LEVEL Feet below land surface <i>40'</i> Date measured <i>5-21-86</i>	
GRAVEL PACK WELL Yes ☐ No ☒	
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐	

PUMP TEST	
Drawdown _____ feet after pumping _____ days _____ hours at <i>5</i> GPM.	
How measured <i>Air-lift</i> Recovery _____ feet after _____ hours.	

LOG of FORMATIONS			COMMENTS: (On well or water)
Materials	From	To	
			office use only DRILLER Firm <i>F+R Scales.</i> Address _____ City _____ Registration No. _____ Operator's Signature _____

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WATER WELL COMPLETION REPORT OFF MAP

WELL LOCATION			
Address <u>Lead mine Rd.</u>			
City/Town <u>Southampton</u>			
G.S. Quadrangle Map _____			
Grid Location _____			
Owner <u>Dave Truehart</u>			
Address _____			

WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____ Method Drilled <u>Air rotary</u> Date Drilled <u>8.1.84</u> CASING Length _____ Diameter <u>6"</u> Type <u>171b</u> STATIC WATER LEVEL Feet below land surface <u>10</u> Date measured <u>8.1.84</u> GRAVEL PACK WELL Yes ☐ No ☒ WATER QUALITY TESTS MADE Chemical ☐ Biological ☐	CONSOLIDATED WELL Type of Water-bearing Rock <u>gley</u> Water-bearing Zones 1) From <u>20</u> To <u>180</u> 2) From _____ To _____ 3) From _____ To _____ 4) From <u>2</u> To _____ Depth to Bedrock <u>1</u> UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____
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blown test pump TEST Drawdown _____ feet after pumping _____ days _____ hours at _____ GPM. How measured _____ Recovery _____ feet after _____ hours.		office use only																											
LOG OF FORMATIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Materials</th> <th style="width: 20%;">From</th> <th style="width: 20%;">To</th> </tr> </thead> <tbody> <tr> <td><u>topsoil</u></td> <td><u>0</u></td> <td><u>1</u></td> </tr> <tr> <td><u>gley</u></td> <td><u>1</u></td> <td><u>180</u></td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Materials		From	To	<u>topsoil</u>	<u>0</u>	<u>1</u>	<u>gley</u>	<u>1</u>	<u>180</u>																			COMMENTS: (On well or water) _____ _____ DRILLER Firm <u>Kiike Henshaw</u> Address _____ City _____ Registration No. _____ Operator's Signature _____
Materials	From		To																										
<u>topsoil</u>	<u>0</u>		<u>1</u>																										
<u>gley</u>	<u>1</u>		<u>180</u>																										

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Data Point #33

Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION																																
Address <u>Middle Rd</u>																																
City/Town <u>Southampton</u>																																
G.S. Quadrangle Map _____																																
Grid Location _____																																
Owner <u>Mike Baskin</u>																																
Address _____																																
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____		CONSOLIDATED WELL Type of Water-bearing Rock <u>rd</u> Water-bearing Zones 1) From <u>90</u> To <u>100</u> 2) From <u>130</u> To <u>140</u> 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock <u>10</u>																														
Method Drilled <u>air</u>																																
Date Drilled <u>3-23-87</u>																																
CASING Length <u>28</u> Diameter <u>10"</u> Type <u>17 lb</u>																																
STATIC WATER LEVEL Feet below land surface _____ Date measured _____		UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																														
GRAVEL PACK WELL Yes ☐ No ☒																																
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																																
PUMP TEST <u>36 PM</u> Drawdown _____ feet after pumping _____ days _____ hours at _____ GPM. How measured _____ Recovery _____ feet after _____ hours.																																
LOG of FORMATIONS <table border="1"><thead><tr><th>Materials</th><th>From</th><th>To</th></tr></thead><tbody><tr><td></td><td>0</td><td>10</td></tr><tr><td>Red rock</td><td>10</td><td>260</td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>		Materials	From	To		0	10	Red rock	10	260																						COMMENTS: (On well or water) _____ _____ _____ DRILLER Firm <u>Kurke Henshaw</u> Address _____ City _____ Registration No. _____ Operator's Signature _____
Materials	From	To																														
	0	10																														
Red rock	10	260																														

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WATER WELL COMPLETION REPORT

WELL LOCATION			<table border="1" style="width: 100%; height: 100%;"><tr><td style="width: 50%; height: 50%;"></td><td style="width: 50%; height: 50%;"></td></tr><tr><td style="width: 50%; height: 50%;"></td><td style="width: 50%; height: 50%;"></td></tr></table>																																	
Address <u>Mullins Woods</u>																																				
City/Town <u>Southampton</u>																																				
G.S. Quadrangle Map _____																																				
Grid Location _____																																				
Owner <u>Edward Gillman Jr.</u>																																				
Address _____																																				
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____		CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From <u>365</u> To <u>385</u> 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock <u>113</u>																																		
Method Drilled <u>hammer</u> Date Drilled _____		UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																																		
CASING Length <u>130</u> Diameter <u>6"</u> Type <u>steel</u>																																				
STATIC WATER LEVEL Feet below land surface _____ Date measured <u>9-11-85</u>																																				
GRAVEL PACK WELL Yes ☐ No ☐																																				
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐		PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>3</u> GPM. How measured <u>on test</u> Recovery _____ feet after _____ hours.																																		
<table border="1" style="width: 100%;"><thead><tr><th colspan="3">LOG of FORMATIONS</th></tr><tr><th>Materials</th><th>From</th><th>To</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>			LOG of FORMATIONS			Materials	From	To																												office use only DRILLER Firm <u>F+R Scales.</u> Address _____ City _____ Registration No. _____ Operator's Signature _____
LOG of FORMATIONS																																				
Materials	From	To																																		
COMMENTS: (On well or water) _____ _____																																				

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37

Data Point #35

WELL LOCATION		
Address <u>Lot 3, Montgomery Rd</u>		
City/Town _____		
G.S. Quadrangle Map _____		
Grid Location _____		
Owner <u>Alfred Faniere</u>		
Address _____		

WELL USE Domestic ☐ Public ☐ Industrial ☐ Other _____	CONSOLIDATED WELL Type of Water-bearing Rock <u>granite</u> Water-bearing Zones 1) From <u>80</u> To <u>100</u> 2) From _____ To _____ 3) From _____ To _____ 4) From <u>4</u> To _____ Depth to Bedrock <u>10</u>
Method Drilled <u>Rotary</u> Date Drilled <u>11/29/88</u>	UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____
CASING Length <u>21'</u> Diameter <u>6"</u> Type <u>Steel</u>	STATIC WATER LEVEL Feet below land surface <u>10</u> Date measured <u>11/29/88</u>
GRAVEL PACK WELL Yes ☐ No ☒	WATER QUALITY TESTS MADE Chemical ☐ Biological ☐

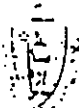
PUMP TEST	
Drawdown _____ feet after pumping _____ days _____ hours at <u>15</u> GPM.	
How measured <u>air</u>	Recovery _____ feet after _____ hours.

LOG of FORMATIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Materials</th> <th style="width: 10%;">From</th> <th style="width: 10%;">To</th> </tr> </thead> <tbody> <tr> <td><u>hardpan</u></td> <td><u>0</u></td> <td><u>10</u></td> </tr> <tr> <td><u>granite</u></td> <td><u>10</u></td> <td><u>100</u></td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Materials	From	To	<u>hardpan</u>	<u>0</u>	<u>10</u>	<u>granite</u>	<u>10</u>	<u>100</u>																									COMMENTS: (On well or water) DRILLER Firm <u>Tri-State Well</u> Address _____ City <u>Holbrook</u> Registration No. <u>1308</u> Operator's Signature _____
Materials	From	To																																
<u>hardpan</u>	<u>0</u>	<u>10</u>																																
<u>granite</u>	<u>10</u>	<u>100</u>																																

Office use only

Phanerogamium

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WATER WELL COMPLETION REPORT OFF MAP

WELL LOCATION		
Address <u>Montgomery Rd</u>		
City/Town <u>Southampton</u>		
G.S. Quadrangle Map _____		
Grid Location _____		
Owner <u>Tom Lavellie</u>		
Address _____		

WELL USE	CONSOLIDATED WELL
Domestic ☒ Public ☐ Industrial ☐	Type of Water-bearing Rock <u>Granite</u>
Other _____	Water-bearing Zones
Method Drilled _____	1) From <u>280</u> To <u>295</u>
Date Drilled _____	2) From <u>320</u> To <u>340</u>
	3) From _____ To _____
	4) From _____ To _____
	Depth to Bedrock _____

CASING	UNCONSOLIDATED WELL
Length <u>67'</u> Diameter <u>6"</u>	Water-bearing Materials
Type <u>Steel</u>	Sand: fine ☐ medium ☐ coarse ☐
	Gravel: fine ☐ medium ☐ coarse ☐
	Screen:
	Slot # _____ length _____ from _____ to _____
	Split Screen (for 2nd screen)
	Slot # _____ length _____ from _____ to _____
	Depth To Bedrock _____

STATIC WATER LEVEL	GRAVEL PACK WELL
Feet below land surface <u>50'</u>	Yes ☐ No ☒
Date measured <u>5-27-85</u>	

WATER QUALITY TESTS MADE
Chemical ☐ Biological ☐

PUMP TEST		
Drawdown _____ feet after pumping _____ days _____ hours at _____ GPM.		
How measured _____ Recovery _____ feet after _____ hours.		

LOG of FORMATIONS			COMMENTS: (On well or water)
Materials	From	To	
<u>hardpan</u>	<u>0</u>	<u>50</u>	
<u>granite</u>	<u>50</u>	<u>340</u>	

DRILLER
Firm <u>Tri State</u>
Address _____
City _____
Registration No. _____
Operator's Signature _____

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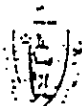


WATER WELL COMPLETION REPORT OFFHAM

WELL LOCATION																																			
Address <u>Russellville Rd</u>																																			
City/Town <u>Southampton</u>																																			
G.S. Quadrangle Map _____																																			
Grid Location _____																																			
Owner <u>John Dwyer</u>																																			
Address _____																																			
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____		CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From _____ To _____ 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock _____																																	
Method Drilled <u>Cable</u> Date Drilled <u>5-26-83</u>		UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																																	
CASING - Length <u>32'6"</u> Diameter <u>6"</u> Type <u>Steel</u>																																			
STATIC WATER LEVEL Feet below land surface <u>15'</u> Date measured <u>5-26-83</u>																																			
GRAVEL PACK WELL Yes ☐ No ☐		PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>12</u> GPM. How measured _____ Recovery _____ feet after _____ hours.																																	
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																																			
LOG of FORMATIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Materials</th> <th style="width: 30%;">From</th> <th style="width: 30%;">To</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		Materials	From	To																															COMMENTS: (On well or water) <u>depth of well 154'</u>
Materials	From	To																																	
DRILLER Firm <u>Aqua Well Drill</u> Address _____ City _____ Registration No. _____		office use only																																	
Signature _____																																			

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מסמך מיוחד



Date Point #40

Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT OFF-HAP

WELL LOCATION			<table border="1"><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>								
Address <u>Russellville Rd</u>											
City/Town <u>Southampton</u>											
G.S. Quadrangle Map _____											
Grid Location _____											
Owner <u>George Gebhardt</u>											
Address <u>144 Yorko</u>											
WELL USE		CONSOLIDATED WELL									
Domestic ☒ Public ☐ Industrial ☐		Type of Water-bearing Rock _____									
Other _____		Water-bearing Zones									
Method Drilled <u>Rotary</u>		1) From <u>205</u> To <u>225</u>									
Date Drilled <u>12-20-86</u>		2) From _____ To _____									
		3) From _____ To _____									
		4) From _____ To _____									
CASING		Depth to Bedrock <u>43'</u>									
Length <u>61'</u> Diameter <u>6"</u>											
Type <u>blk steel</u>											
STATIC WATER LEVEL		UNCONSOLIDATED WELL									
Feet below land surface _____		Water-bearing Materials									
Date measured _____		Sand: fine ☐ medium ☐ coarse ☐									
		Gravel: fine ☐ medium ☐ coarse ☐									
GRAVEL PACK WELL		Screen:									
Yes ☐ No ☒		Slot # _____ length _____ from _____ to _____									
WATER QUALITY TESTS MADE		Split Screen (or 2nd screen)									
Chemical ☐ Biological ☐		Slot # _____ length _____ from _____ to _____									
		Depth To Bedrock _____									
PUMP TEST											
Drawdown _____ feet after pumping _____ days _____ hours at <u>6</u> GPM.											
How measured <u>air test</u> Recovery _____ feet after _____ hours.											
LOG of FORMATIONS		COMMENTS: (On well or water)									
Materials From To											
		DRILLER									
		Firm <u>F+R Scales</u>									
		Address _____									
		City _____									
		Registration No. _____									
		Operator's Signature _____									

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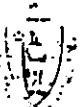
WATER WELL COMPLETION REPORT OFF MAP

WELL LOCATION Address <u>Russellville Road</u> City/Town <u>Southampton</u> G.S. Quadrangle Map _____ Grid Location _____ Owner <u>Mr. Peloguin</u> Address _____																																
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____ Method Drilled <u>ROTARY</u> Date Drilled <u>12-22-86</u>	CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From <u>305</u> To <u>325</u> 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock <u>21</u>																															
CASING Length <u>41'</u> Diameter <u>6"</u> Type <u>BLK STEEL</u>	UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																															
STATIC WATER LEVEL Feet below land surface _____ Date measured _____	GRAVEL PACK WELL Yes ☐ No ☒																															
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐	PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>5</u> GPM. How measured <u>air test</u> Recovery _____ feet after _____ hours.																															
LOG of FORMATIONS Materials From To <table border="1"><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>																															COMMENTS: (On well or water) _____ _____ DRILLER Firm <u>F+R Scales</u> Address _____ City _____ Registration No. _____ Operator's Signature _____	office use only

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2 more wells
on lots
#576
42 43



Data Point # 45

Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION Address <u>Lot #2 Strong Rd / Strong Rd.</u> City/Town <u>Southampton</u> G.S. Quadrangle Map _____ Grid Location _____ Owner <u>Edward Guinner Jr.</u> Address _____																															
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____	CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From <u>285/225</u> To <u>305/245</u> 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock <u>55/55</u>																														
Method Drilled <u>Rotary</u> Date Drilled <u>5-10-86</u> <u>5-9-86</u>	UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																														
CASING Length <u>71/73'</u> Diameter <u>6 1/8"</u> Type <u>Steel</u>																															
STATIC WATER LEVEL Feet below land surface <u>100'</u> Date measured <u>5-21-86</u>	PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>4/4</u> GPM. How measured <u>air test</u> Recovery _____ feet after _____ hours.																														
GRAVEL PACK WELL Yes ☐ No ☒																															
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																															
LOG of FORMATIONS Materials From To <table border="1"><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>																															COMMENTS: (On well or water) _____ _____ DRILLER Firm <u>F+R Scales</u> Address _____ City _____ Registration No. _____ Operator's Signature _____

Please print name

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Data Point # 46

Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION																																	
Address <u>Strong Rd</u>																																	
City/Town <u>Southampton</u>																																	
G.S. Quadrangle Map _____																																	
Grid Location _____																																	
Owner <u>Robert Labrie</u>																																	
Address _____																																	
WELL USE Domestic ☐ Public ☒ Industrial ☐ Other _____		CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From <u>385</u> To <u>405</u> 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock <u>130</u>																															
Method Drilled <u>Rotary</u>																																	
Date Drilled <u>5-21-86</u>																																	
CASING - Length <u>153</u> Diameter <u>6"</u> Type <u>stl pipe</u>																																	
STATIC WATER LEVEL Feet below land surface _____ Date measured _____		UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																															
GRAVEL PACK WELL Yes ☐ No ☒																																	
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																																	
PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>8</u> GPM. How measured <u>an test</u> Recovery _____ feet after _____ hours.			LOG of FORMATIONS <table border="1"><thead><tr><th>Materials</th><th>From</th><th>To</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>	Materials	From	To																											
Materials	From	To																															
COMMENTS: (On well or water) _____ _____ _____																																	
DRILLER Firm <u>F+R Seales</u> Address _____ City _____ Registration No. _____																																	
Operator's Signature _____																																	
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WATER WELL COMPLETION REPORT

WELL LOCATION			
Address: <u>Lot #3 Strong Rd.</u>			
City/Town: <u>Southampton</u>			
G.S. Quadrangle Map: _____			
Grid Location: _____			
Owner: <u>T+D Builders</u>		Address: _____	

WELL USE Domestic ☐ Public ☐ Industrial ☐ Other: _____ Method Drilled: <u>Rotary</u> Date Drilled: <u>5/11/87</u>	CONSOLIDATED WELL Type of Water-bearing Rock: <u>Red rock</u> Water-bearing Zones 1) From <u>280</u> To <u>281</u> 2) From _____ To _____ 3) From _____ To _____ 4) From <u>*</u> To _____ Depth to Bedrock: _____
--	---

CASING Length: <u>97</u> Diameter: <u>6"</u> Type: <u>Steel</u>	UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock: _____
---	--

STATIC WATER LEVEL Feet below land surface: <u>11'</u> Date measured: <u>5/12/87</u>	GRAVEL PACK WELL Yes ☐ No ☐
--	--

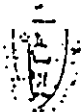
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐	PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>1</u> GPM. How measured: <u>avi</u> Recovery _____ feet after _____ hours.
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LOG of FORMATIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Materials</th> <th style="width: 20%;">From</th> <th style="width: 20%;">To</th> </tr> </thead> <tbody> <tr> <td><u>sand</u></td> <td><u>0</u></td> <td><u>12</u></td> </tr> <tr> <td><u>red rk</u></td> <td><u>12</u></td> <td><u>400</u></td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Materials	From	To	<u>sand</u>	<u>0</u>	<u>12</u>	<u>red rk</u>	<u>12</u>	<u>400</u>																									COMMENTS: (On well or water) DRILLER Firm: <u>Tri State Well</u> Address: <u>51 Norwood Terr</u> City: <u>Holyoke</u> Registration No.: <u>308</u> Operator's Signature _____
Materials	From	To																																
<u>sand</u>	<u>0</u>	<u>12</u>																																
<u>red rk</u>	<u>12</u>	<u>400</u>																																

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WATER WELL COMPLETION REPORT

WELL LOCATION		
Address <u>Valley Rd Lot #2</u>		
City/Town <u>Southampton</u>		
G.S. Quadrangle Map _____		
Grid Location _____		
Owner <u>Brooks Causewell</u>		
Address _____		

WELL USE	CONSOLIDATED WELL
Domestic ☐ Public ☐ Industrial ☐	Type of Water-bearing Rock <u>Red rock</u>
Other _____	Water-bearing Zones
Method Drilled <u>Rotary</u>	1) From <u>250</u> To <u>255</u>
Date Drilled <u>10-11-80</u>	2) From _____ To _____
	3) From _____ To _____
	4) From _____ To _____
	Depth to Bedrock <u>50'</u>

CASING	UNCONSOLIDATED WELL
Length <u>63'</u> Diameter <u>6"</u>	Water-bearing Materials
Type <u>Steel</u>	Sand: fine ☐ medium ☐ coarse ☐
	Gravel: fine ☐ medium ☐ coarse ☐
	Screen:
	Slot # _____ length _____ from _____ to _____
	Split Screen (or 2nd screen)
	Slot # _____ length _____ from _____ to _____
	Depth To Bedrock _____

STATIC WATER LEVEL	GRAVEL PACK WELL
Feet below land surface <u>12'</u>	Yes ☐ No ☐
Date measured <u>10-11-80</u>	

WATER QUALITY TESTS MADE	PUMP TEST
Chemical ☐ Biological ☐	Drawdown _____ feet after pumping _____ days _____ hours at <u>12</u> GPM.
	How measured <u>air</u> Recovery _____ feet after _____ hours.

LOG of FORMATIONS	COMMENTS: (On well or water)
Materials From To	
<u>hardpan</u> 0 <u>50</u>	
<u>red rock</u> 50 <u>260</u>	

DRILLER
Firm <u>Tri State Well Drill</u>
Address _____
City _____
Registration No. _____
Operator's Signature _____

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Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION																																			
Address <u>Lot 9 White Leaf Rd.</u>																																			
City/Town <u>Southampton</u>																																			
G.S. Quadrangle Map _____																																			
Grid Location _____																																			
Owner <u>John D. Florek</u>																																			
Address <u>26 Miller St. Westfield</u>																																			
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____																																			
CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From _____ To _____ 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock _____																																			
CASING Length <u>111</u> Diameter <u>6"</u> Type <u>17 lb</u>																																			
STATIC WATER LEVEL Feet below land surface <u>35'</u> Date measured <u>2-23-87</u>																																			
GRAVELPACK WELL Yes ☒ No ☐																																			
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																																			
UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☒ coarse ☐ Screen: <u>none</u> Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock <u>126'</u>																																			
PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at _____ GPM. How measured _____ Recovery _____ feet after _____ hours.																																			
LOG of FORMATIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Materials</th> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr> <td>Sand</td> <td>0</td> <td>98</td> </tr> <tr> <td>Gravel</td> <td>98</td> <td>120</td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		Materials	From	To	Sand	0	98	Gravel	98	120																									COMMENTS: (On well or water)
Materials	From	To																																	
Sand	0	98																																	
Gravel	98	120																																	
DRILLER Firm <u>Kuske Henshaw</u> Address _____ City _____ Registration No. _____		office use only																																	
Operator's Signature _____																																			

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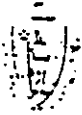
Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION Address <u>White Oak Rd</u> City/Town <u>Southampton</u> G.S. Quadrangle Map _____ Grid Location _____ Owner <u>Joe Sampson</u> Address <u>Westfield</u>																																
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____																																
CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From _____ To _____ 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock _____		UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☒ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # <u>12</u> length <u>3</u> from <u>64</u> to <u>67</u> Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																														
CASING Length <u>67'</u> Diameter <u>2"</u> Type <u>PVC</u>																																
STATIC WATER LEVEL Feet below land surface <u>37'</u> Date measured <u>9/86</u>		GRAVEL PACK WELL Yes ☐ No ☒																														
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																																
PUMP TEST Drawdown _____ feet after pumping _____ days <u>2</u> hours at <u>6</u> GPM. How measured _____ Recovery _____ feet after _____ hours																																
LOG of FORMATIONS <table border="1"> <thead> <tr> <th>Materials</th> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr> <td>F sand</td> <td>40</td> <td>60</td> </tr> <tr> <td>m sand</td> <td>60</td> <td>67</td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		Materials	From	To	F sand	40	60	m sand	60	67																						COMMENTS: (On well or water)
Materials	From	To																														
F sand	40	60																														
m sand	60	67																														
DRILLER Firm <u>C.E. Pratt + Sons</u> Address _____ City _____ Registration No. <u>262</u>																																
Please print firmly		Operator's Signature _____																														

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Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION																																
Address _____																																
City/Town <u>Southampton</u>																																
G.S. Quadrangle Map _____																																
Grid Location _____																																
Owner <u>Robert Labrie</u>																																
Address _____																																
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____ CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From _____ To _____ 2) From _____ To _____ 3) From _____ To _____ 4) From <u>2</u> To _____ Depth to Bedrock _____																																
CASING Method Drilled _____ Date Drilled _____ Length _____ Diameter _____ Type _____ UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # <u>30</u> length <u>4'</u> from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																																
STATIC WATER LEVEL Feet below land surface _____ Date measured _____ GRAVEL PACK WELL Yes ☐ No ☐																																
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐ PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>30</u> GPM. How measured _____ Recovery _____ feet after _____ hours.																																
LOG of FORMATIONS <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 5px;">Materials</th> <th style="padding: 5px;">From</th> <th style="padding: 5px;">To</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Sand</td> <td style="padding: 5px;">0'</td> <td style="padding: 5px;">40'</td> </tr> <tr> <td style="padding: 5px;">Clay</td> <td style="padding: 5px;">40'</td> <td style="padding: 5px;">70'</td> </tr> <tr> <td style="padding: 5px;">Sand + Gravel</td> <td style="padding: 5px;">70'</td> <td style="padding: 5px;">110'</td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table> COMMENTS: (On well or water)			Materials	From	To	Sand	0'	40'	Clay	40'	70'	Sand + Gravel	70'	110'																		
Materials	From	To																														
Sand	0'	40'																														
Clay	40'	70'																														
Sand + Gravel	70'	110'																														
DRILLER Firm <u>J. Slattery</u> Address _____ City _____ Registration No. _____ Operator's Signature																																

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WATER WELL COMPLETION REPORT

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צפון מדינת ישראל



Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION																																			
Address _____																																			
City/Town <u>Southampton</u>																																			
G.S. Quadrangle Map _____																																			
Grid Location _____																																			
Owner _____																																			
Address _____																																			
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____ CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From _____ To _____ 2) From _____ To _____ 3) From _____ To _____ 4) From <u>2</u> To _____ Depth to Bedrock _____																																			
CASING Length _____ Diameter _____ Type _____ UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # <u>10</u> length <u>4'</u> from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																																			
STATIC WATER LEVEL Feet below land surface _____ Date measured _____ GRAVEL PACK WELL Yes ☐ No ☐																																			
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐ PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>10</u> GPM. How measured _____ Recovery _____ feet after _____ hours.																																			
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Materials	From	To																																	
Clay																																			
Sand		100'																																	

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WATER WELL COMPLETION REPORT

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מכתב 457-157



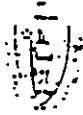
Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION																															
Address _____																															
City/Town <u>Southampton</u>																															
G.S. Quadrangle Map _____																															
Grid Location _____																															
Owner _____																															
Address _____																															
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____		CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From _____ To _____ 2) From _____ To _____ 3) From _____ To _____ 4) From _____ To _____ Depth to Bedrock _____																													
Method Drilled _____ Date Drilled _____																															
CASING Length _____ Diameter _____ Type _____																															
STATIC WATER LEVEL Feet below land surface <u>48'</u> Date measured <u>9-4-79</u>																															
GRAVEL PACK WELL Yes ☐ No ☐		UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																													
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DRILLER Firm <u>J. Slattery</u> Address _____ City _____ Registration No. _____																															
_____ _____ _____																															
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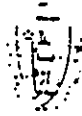
WATER WELL COMPLETION REPORT

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G.S. Quadrangle Map _____																																			
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Owner _____																																			
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WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____ CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From _____ To _____ 2) From _____ To _____ 3) From _____ To _____ 4) From <u>2</u> To _____ Depth to Bedrock <u>60'6"</u>																																			
CASING Method Drilled _____ Date Drilled _____ Length _____ Diameter _____ Type _____ UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																																			
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WATER WELL COMPLETION REPORT

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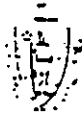
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City/Town <u>Southampton</u>																																								
U.S. Quadrangle Map _____																																								
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Method Drilled _____ Date Drilled _____																																								
CASING Length _____ Diameter _____ Type _____																																								
STATIC WATER LEVEL Feet below land surface <u>40'</u> Date measured _____																																								
GRAVEL PACK WELL Yes ☐ No ☐																																								
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐			UNCONSOLIDATED WELL Water-bearing Materials * Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # <u>20</u> length <u>4'</u> from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																																					
PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>20</u> GPM. How measured _____ Recovery _____ feet after _____ hours.																																								
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DISTANCE FROM



Department of Environmental Management/Division of Water Resources.

WATER WELL COMPLETION REPORT

WELL LOCATION		
Address <u>Lot #10</u>		
City/Town <u>Southampton</u>		
G.S. Quadrangle Map _____		
Grid Location _____		
Owner _____		
Address _____		

WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____ Method Drilled _____ Date Drilled _____	CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From _____ To _____ 2) From _____ To _____ 3) From _____ To _____ 4) From <u>2'</u> To _____ Depth to Bedrock <u>12'</u>
CASING Length <u>22'</u> Diameter _____ Type _____	UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____
STATIC WATER LEVEL Feet below land surface <u>35'</u> Date measured _____	GRAVEL PACK WELL Yes ☐ No ☐
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐	

PUMP TEST	
Drawdown _____ feet after pumping _____ days _____ hours at <u>10</u> GPM.	
How measured _____ Recovery _____ feet after _____ hours.	

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WATER WELL COMPLETION REPORT

Phase four: *imagine*

צפון ספרד

WATER WELL COMPLETION REPORT

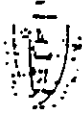
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WATER WELL COMPLETION REPORT

Plate 1000 Twenty

מקדש ירושלים



Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

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DRILLER Firm <u>J. Slattery</u> Address _____ City _____ Registration No. _____																												
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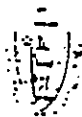
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WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																																			
PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>14</u> GPM. How measured _____ Recovery _____ feet after _____ hours.																																			
LOG of FORMATIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Materials</th> <th style="width: 20%;">From</th> <th style="width: 20%;">To</th> </tr> </thead> <tbody> <tr> <td>Clay + Hardpan</td> <td></td> <td></td> </tr> <tr> <td>Gravel</td> <td></td> <td>55'</td> </tr> <tr><td> </td><td></td><td></td></tr> <tr><td> </td><td></td><td></td></tr> <tr><td> </td><td></td><td></td></tr> <tr><td> </td><td></td><td></td></tr> <tr><td> </td><td></td><td></td></tr> <tr><td> </td><td></td><td></td></tr> <tr><td> </td><td></td><td></td></tr> <tr><td> </td><td></td><td></td></tr> </tbody> </table>		Materials	From	To	Clay + Hardpan			Gravel		55'																									office use only
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COMMENTS: (On well or water) _____ _____ _____																																			
DRILLER Firm <u>J. Stattery</u> Address _____ City _____ Registration No. _____																																			
_____ Operator's Signature																																			

Please print name

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Department of Environmental Management/Division of Water Resources

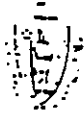
WATER WELL COMPLETION REPORT

WELL LOCATION																																			
Address _____																																			
City/Town <u>Southampton</u>																																			
G.S. Quadrangle Map _____																																			
Grid Location _____																																			
Owner _____																																			
Address _____																																			
WELL USE Domestic ☒ Public ☐ Industrial ☐ Other _____ CONSOLIDATED WELL Type of Water-bearing Rock _____ Water-bearing Zones 1) From _____ To _____ 2) From _____ To _____ 3) From _____ To _____ 4) From <u>2</u> To _____ Depth to Bedrock _____																																			
CASING Length _____ Diameter _____ Type _____ UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																																			
STATIC WATER LEVEL Feet below land surface <u>12'</u> Date measured _____ GRAVEL PACK WELL Yes ☐ No ☐																																			
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																																			
PUMP TEST Drawdown _____ feet after pumping _____ days _____ hours at <u>14</u> GPM. How measured _____ Recovery _____ feet after _____ hours.																																			
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DRILLER Firm <u>J. Slattery</u> Address _____ City _____ Registration No. _____ OPERATOR'S SIGNATURE _____																																			

Please print name

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office use only



Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION																																			
Address _____																																			
City/Town <u>Southampton</u>																																			
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Method Drilled _____																																			
Date Drilled _____																																			
CASING Length _____ Diameter _____ Type _____																																			
STATIC WATER LEVEL Feet below land surface <u>43'</u> Date measured <u>6.6.79</u>		UNCONSOLIDATED WELL Water-bearing Materials Sand: fine ☐ medium ☐ coarse ☐ Gravel: fine ☐ medium ☐ coarse ☐ Screen: Slot # _____ length _____ from _____ to _____ Split Screen (or 2nd screen) Slot # _____ length _____ from _____ to _____ Depth To Bedrock _____																																	
GRAVEL PACK WELL Yes ☐ No ☐																																			
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																																			
PUMP TEST Drawdown <u>4'</u> feet after pumping _____ days <u>6</u> hours at <u>10</u> GPM. How measured _____ Recovery <u>Static test</u> after <u>1</u> hours.																																			
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DRILLER Firm <u>T. Slattery</u> Address _____ City _____ Registration No. _____																																			
_____ Operator's Signature																																			

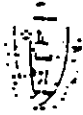
Please print name

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WATER WELL COMPLETION REPORT

Phrynosoma munit *luciviv*

מסמך מס' 447



Department of Environmental Management/Division of Water Resources

WATER WELL COMPLETION REPORT

WELL LOCATION																																			
Address _____																																			
City/Town <u>Southampton</u>																																			
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CASING Length <u>127'</u> Diameter _____ Type _____																																			
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GRAVEL PACK WELL Yes ☐ No ☐																																			
WATER QUALITY TESTS MADE Chemical ☐ Biological ☐																																			
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Materials	From	To																																	
Clean Sand	0	117'																																	
Ledge	117'	155'																																	
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DRILLER Firm <u>J. Slattery</u> Address _____ City _____ Registration No. _____																																			
_____ Operator's Signature																																			

Please print name

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WATER WELL COMPLETION REPORT

Phone number 10000

מקדש: 1000

WATER WELL COMPLETION REPORT

Pls. see serial 100000

צמח משה-החדש

WATER WELL COMPLETION REPORT

Flowchart Summary

מסמך מס' 1000

Hole #5 - North of Manhan River crossing of Rte 10
above of Glendale Rd., east side of Rte. 10.

depth	
from	to
0	6 clay
6	10 coarse sand, fine gravel
10	60 silt and clay
60	67 clay and gravel
Refusal	

Remarks: no circulation

Hole #6 - Szczypa property north of Glendale Rd. and west of
Routes 10.

depth	
from	to
0	6 silt and clay
6	11 fine-medium gravel
11	110 silt and clay
110	118 coarse sand - fine gravel
118	123 clay and gravel
Refusal	

Remarks: Exposed 7' of screen at bottom of well; pumped
10 gpm but water did not clear up; apparently
silt and clay got into the water-producing strata
during driving.

Hole #7 - Szczypa property north of Glendale Rd. and west of
Route 10.

depth	
from	to
0	10 silt and clay
10	25 coarse sand, fine gravel
25	115 fine silt and clay
115	123 medium coarse gravel
Refusal	

Remarks: Exposed 6' of screen at bottom of well. Well
pumped 50 gpm and flows 25 gpm. Static water
level in test well was 18'-6" above ground level.

Hole #8 - Szczypka property north of Glendale Rd. and west of
Route 10.

3.

depth		
from	-	to
0	10	silt and clay
10	25	coarse sand
25	138	silt and clay
138	140	coarse sand
Refusal		

Remarks: Well not productive. This well, as shown on the location plan, is to the north of the wells that were found to be productive.

Hole #9 - Szczypka property north of Glendale Rd. and west of
Route 10.

depth		
from	-	to
0	62	clay
62	116	silt and clay
116	123	medium-coarse sand, fine gravel
123	130	medium-coarse sand, fine gravel
130	137	medium-coarse sand, fine gravel
137	140	coarse sand, fine gravel
Refusal		

Remarks: Exposed 10' of screen at the bottom of the well. 5' of screen was #30 slot and 5' of screen was #20 slot. The well pumped 65 gpm and flows continuously at the rate of 40 gpm. Static water level was determined to be 20 ft. above ground level. In test pumping this well, the flow never ceased even momentarily when the pump was shut down. It would appear as if in pumping the well at the rate of 65 gpm the hydraulic grade would not be drawn down to ground level.

Hole #10 - On west side of Riverdale Rd. on property Szczypka
adjacent to small brook draining valley to Marham River.

depth		
from	-	to
0	10	silt and clay
10	20	sand and gravel
20	38	silt
38	48	clay
48	56	fine-medium sand
56	63	medium-coarse sand
63	68	coarse sand, fine gravel
58	72	coarse sand, fine gravel
Refusal		

Remarks: Exposed 12' of screen at bottom of well and pumped 60 gpm. Well flows 20 gpm. Static water level was determined to be 5' 6" above ground level.

Hole #11 - on Garstka property in valley of brook draining easterly slope of Pomeroy Mt. in easterly end of old meadow east of Glendale Road.

depth	
from	to
0	7 coarse gravel
7	20 medium coarse sand
20	38 fine gray sand
38	40 red clay and gravel
Refusal	

Remarks: Exposed 12 ft. of screen at bottom of well and pumped only 10 gpm. Static water level was 2 ft. below ground surface; circulation was poor; well not productive.

Hole #12 - Szczypa property north of Glendale Rd. and west of Route 10.

depth	
from	to
0	104 clay
104	109 fine-medium sand
109	139 very fine silty sand
139	146 fine-medium sand
146	153 medium-coarse sand
153	161 medium-coarse sand
Refusal	

Exposed 9 ft. of #20 slot screen at bottom of well and Pumped 75 gpm. Well flows 50 gpm. Static water level is 17 ft. above ground.

APPENDIX 2

PUMP TEST ANALYSIS

PUMP TEST EVALUATION

The data was analyzed utilizing both the Theis curve matching method and the Cooper-Jacob straight line method for transient behavior in a confined aquifer.

1. Theis Method

Using the Theis equation:

$$s = \frac{Q}{4 \pi T} \int_u^{\infty} \frac{e^{-u} du}{u} = \frac{Q}{4 \pi T} W(u)$$

$$\text{where } u = \frac{r^2 S}{4 T t}$$

s = drawdown (units of length)

Q = discharge rate (units of length³/time)

T = transmissivity (length²/time)

S = storativity

t = time (units of time)

W(u) = well function (listed in Table 4.1 in Bouwer)

From this we get the following two equations:

$$s = \frac{Q}{4 \pi T} W(u)$$

$$\text{and } \frac{r^2}{t} = \frac{4 T}{S} u$$

Where the left hand side is dependent on actual field data, and the right hand is made up of aquifer constants and functions of u.

Rearranging these we get:

$$T = \frac{Q}{4 \pi s} W(u) \quad \text{and} \quad S = \frac{4T}{r^2/t} u$$

First, the relationship of $W(u)$ and u is plotted on log-log paper (this is our type curve), and the relationship of the field data as s vs. r^2/t is plotted on log-log paper.

Then, overlaying the two plots to find a curve match. This establishes the scale transformation between s and $W(u)$, and between r^2/t and u .

Our match point gives us a set of coordinates for s , $W(u)$, r^2/t and u which can be plugged back in our equation to solve for T and S .

2. Cooper-Jacob Method:

In the Theis Equation, the well function can be expanded in series form:

$$\int_u^\infty \frac{e^{-u}}{u} du \cong \left[-0.5772 - \ln u + u - \frac{u^2}{2.2!} + \frac{u^3}{3.3!} + \dots + (-1)^{n-1} \frac{u^n}{n-n!} \right]$$

(Egn. 4.24 Bouwer)

$$\text{where } u = \frac{r^2 S}{4Tt}$$

If r^2 is small or t is large, then u is small and the series can be adequately approximated by the first two terms.

$$\text{Then } s = \frac{Q}{4\pi T} \left[-0.5772 - \ln \left(\frac{r^2 S}{4Tt} \right) \right]$$

or rewritten in terms of $\log_{10}$

$$s = \frac{2.30}{4\pi T} \log_{10} \frac{2.25 It}{r^2 S} \quad (\text{Egn. 4.26 Bouwer})$$

This equation indicates a linear relationship between s and $\log t$.

By plotting s vs. t on semi-log paper, and extending the straight line portion of the curve through the x-axis we can use the $s=0$ intercept as

$$s = 0 = \frac{2.30}{4\pi T} \log_{10} \frac{2.25 It_0}{r^2 S} \quad (\text{Egn. 5.9 Bouwer})$$

where t_0 is t at $s = 0$

and raising 10 to the power of each side of the equality gives

$$1 = \frac{2.25 It_0}{r^2 S}$$

$$\text{from which } S = \frac{2.25 It_0}{r^2} \quad (\text{Egn 5.11})$$

Also, considering the difference in drawdown over 1 cycle of the time scale allows us to say:

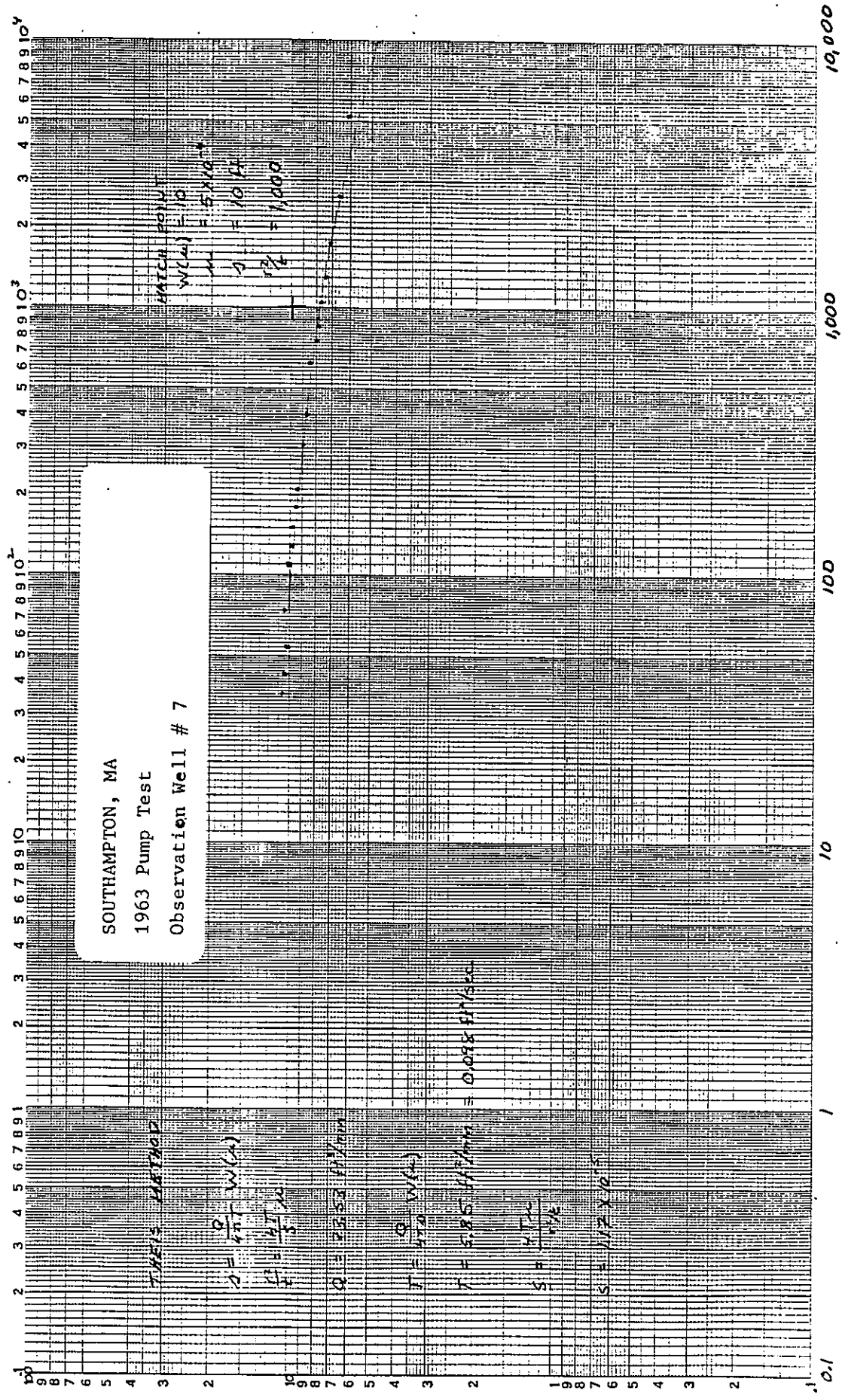
$$s_1 - s_2 = \frac{2.30}{4\pi T} \left[\log_{10} \frac{2.25 It_1}{r^2 S} - \log_{10} \frac{2.25 It_2}{r^2 S} \right] = \frac{2.30}{4\pi T} (1)$$

so,

$$T = \frac{2.30}{4\pi(s_1 - s_2)} \quad (\text{Egn. 5.13 Bouwer})$$

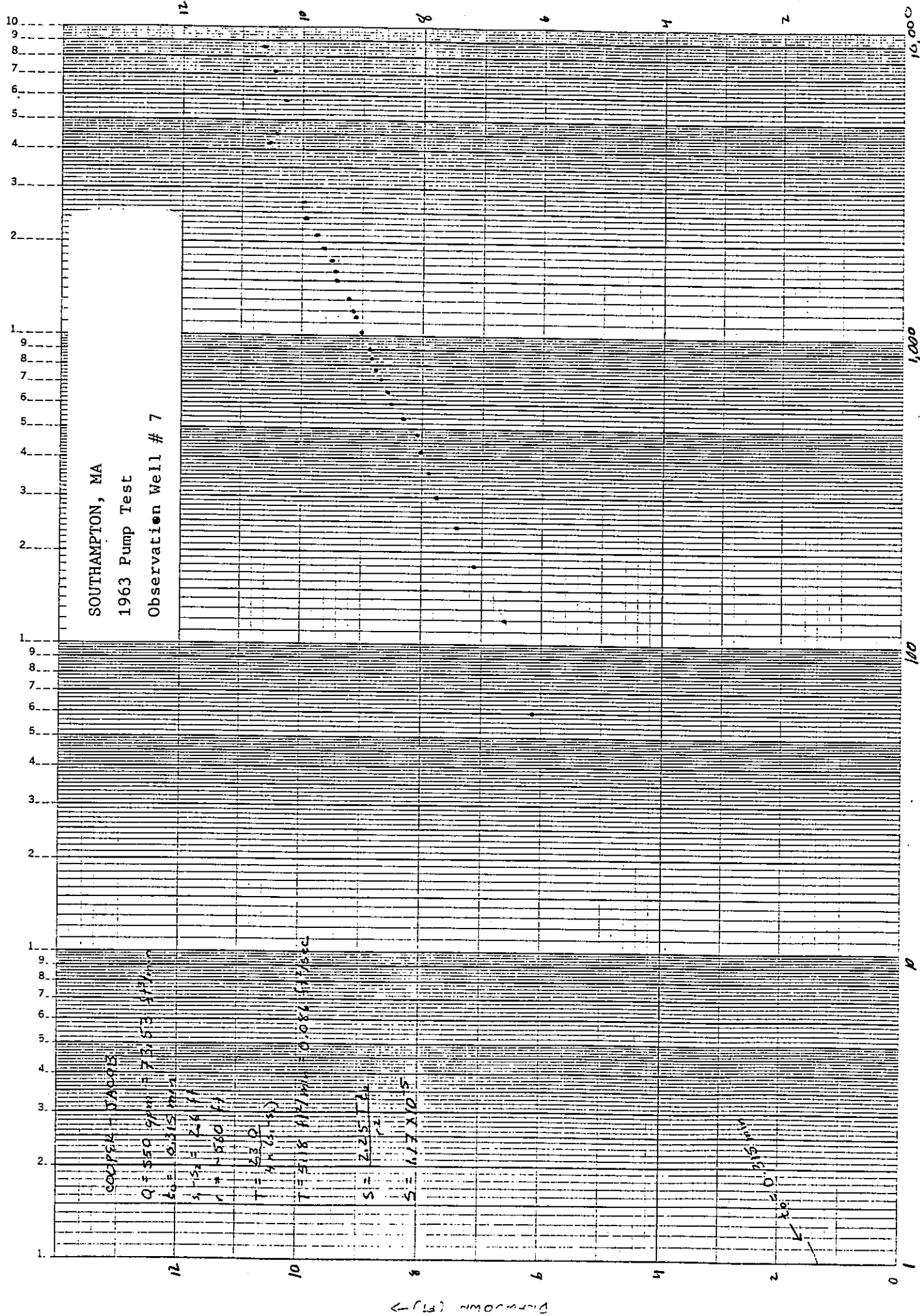
By first solving for T , we can then go back to $S = \frac{2.25 It_0}{r^2}$

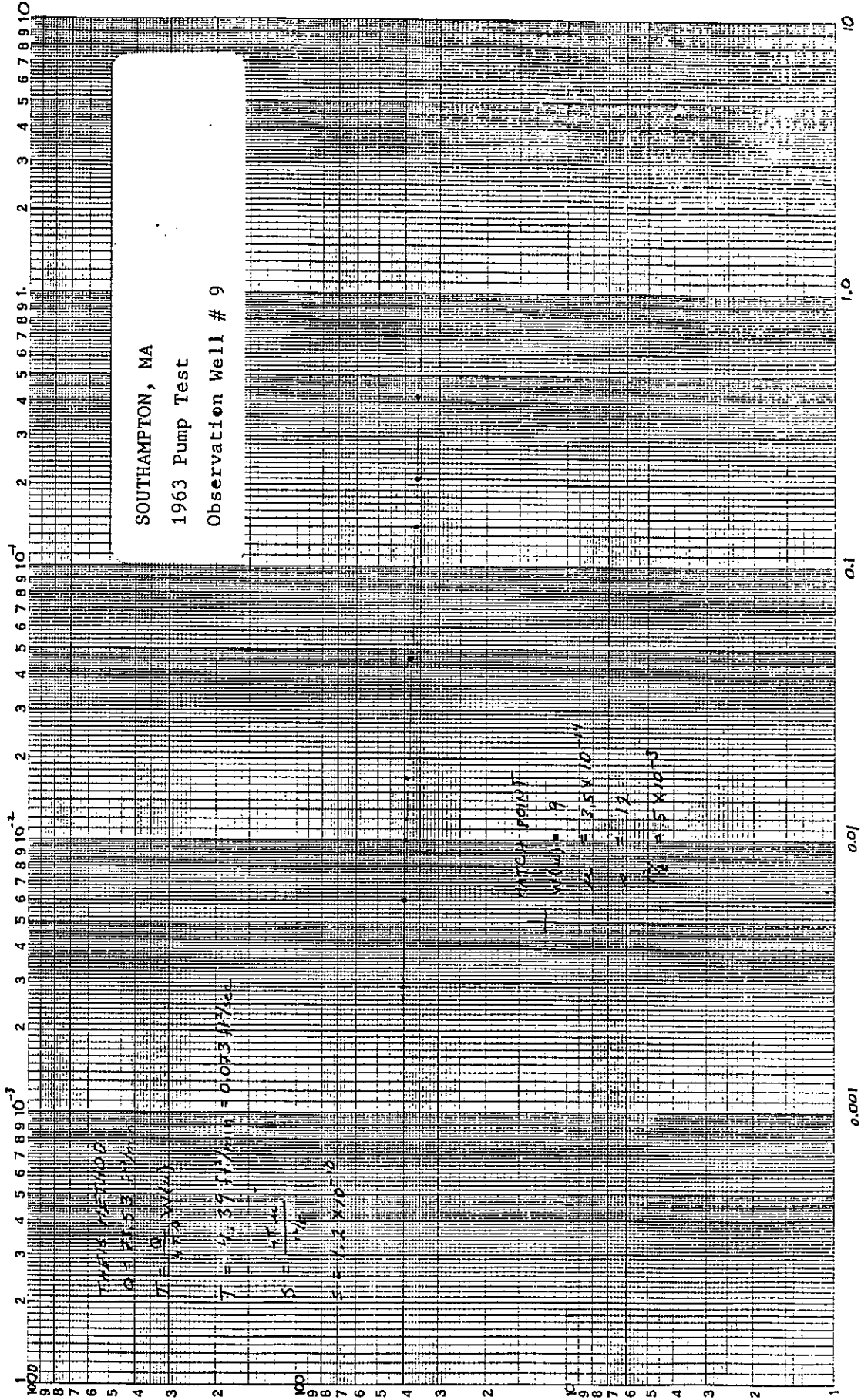
and solve for S .



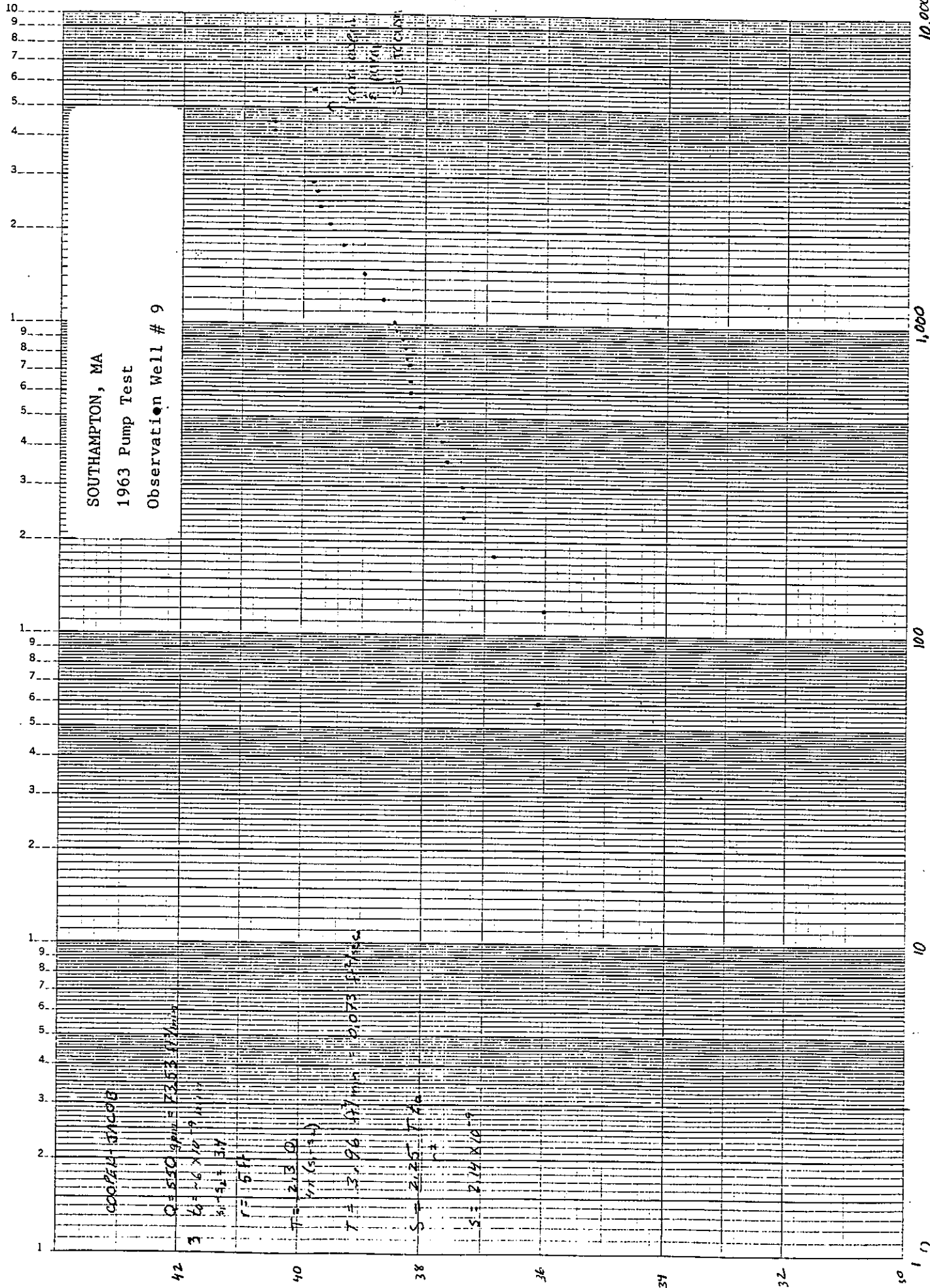
drawdown (ft) ↓

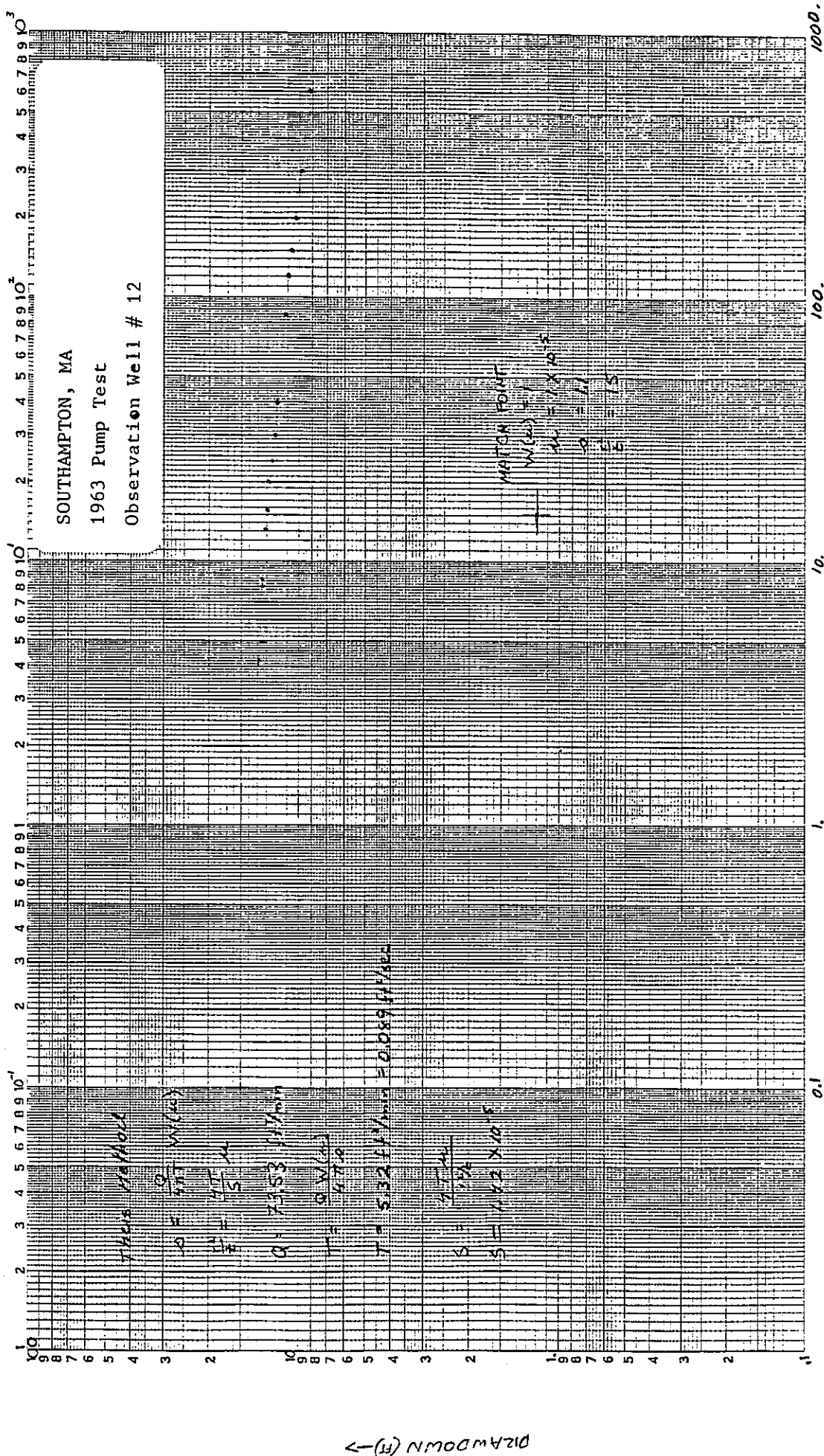
$r^2/2 \rightarrow$





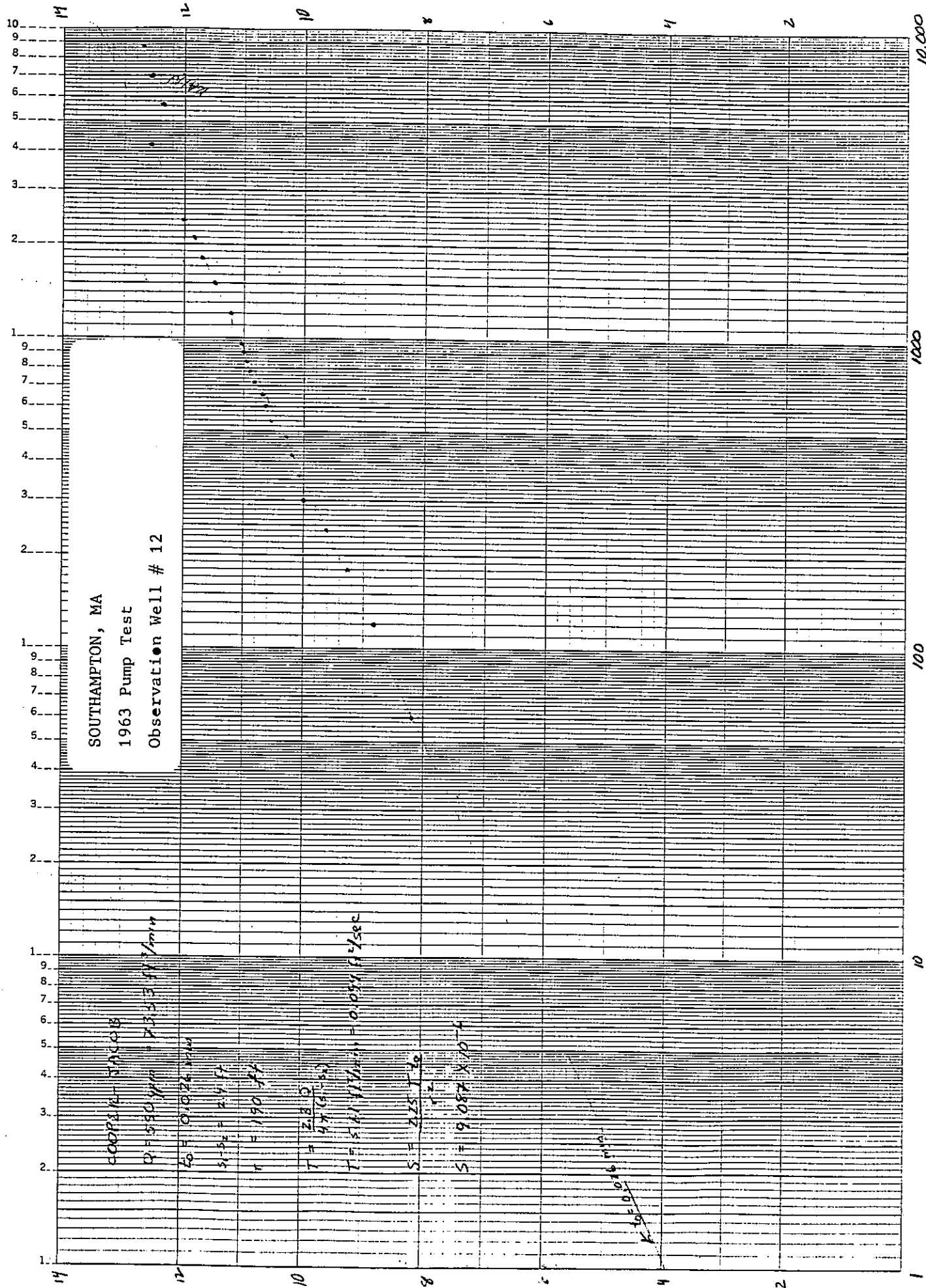
46 6010





$t \rightarrow$

46 6010



SOUTHAMPTON, MA

1963 Pump Test

Observation Well # 13

COOPER-1450B

$Q = 580 \text{ gpm} = 73.53 \text{ ft}^3/\text{min}$

$t_0 = 1 \text{ min}$

$s_1 - s_2 = 2.7 \text{ ft}$

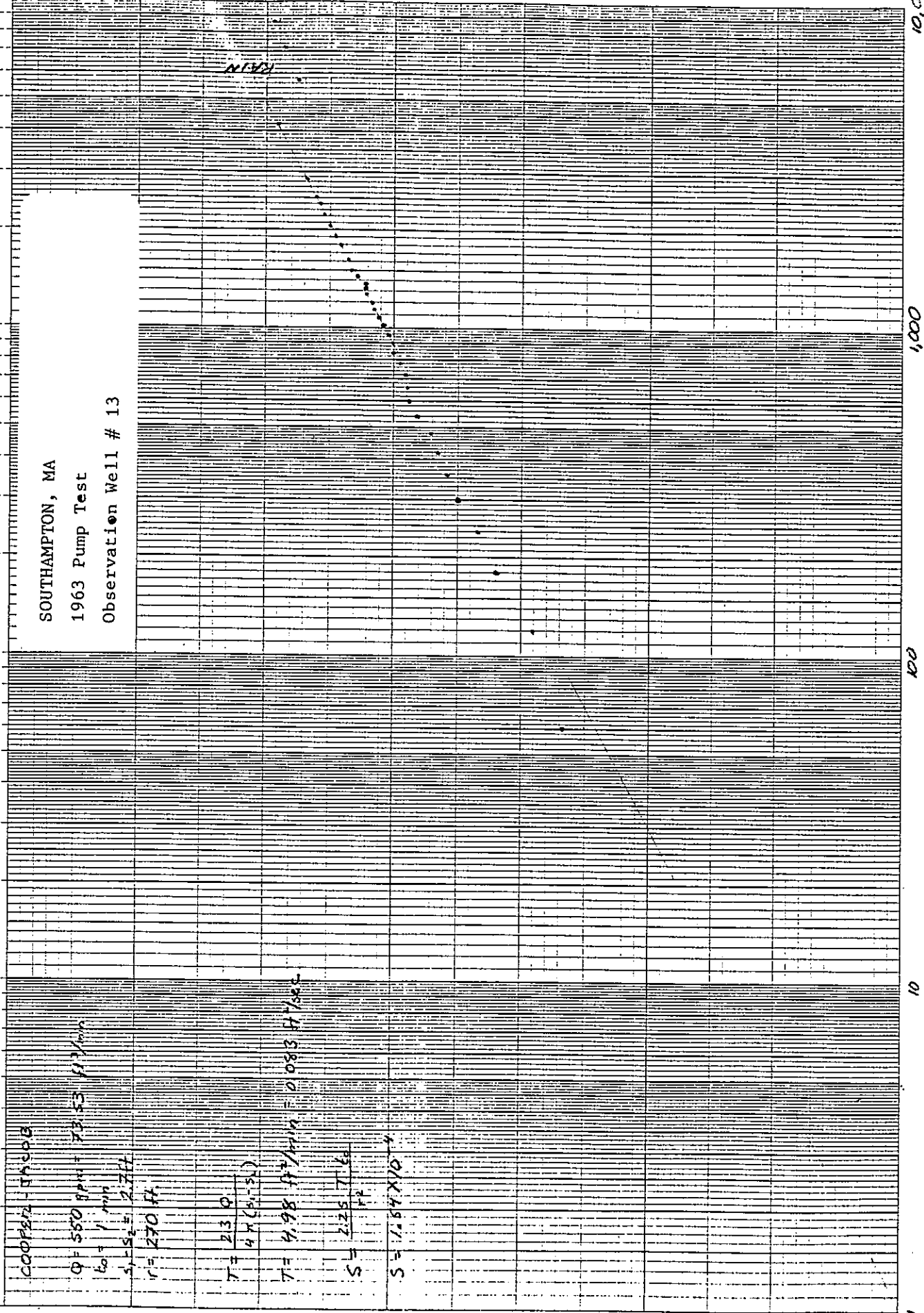
$r = 270 \text{ ft}$

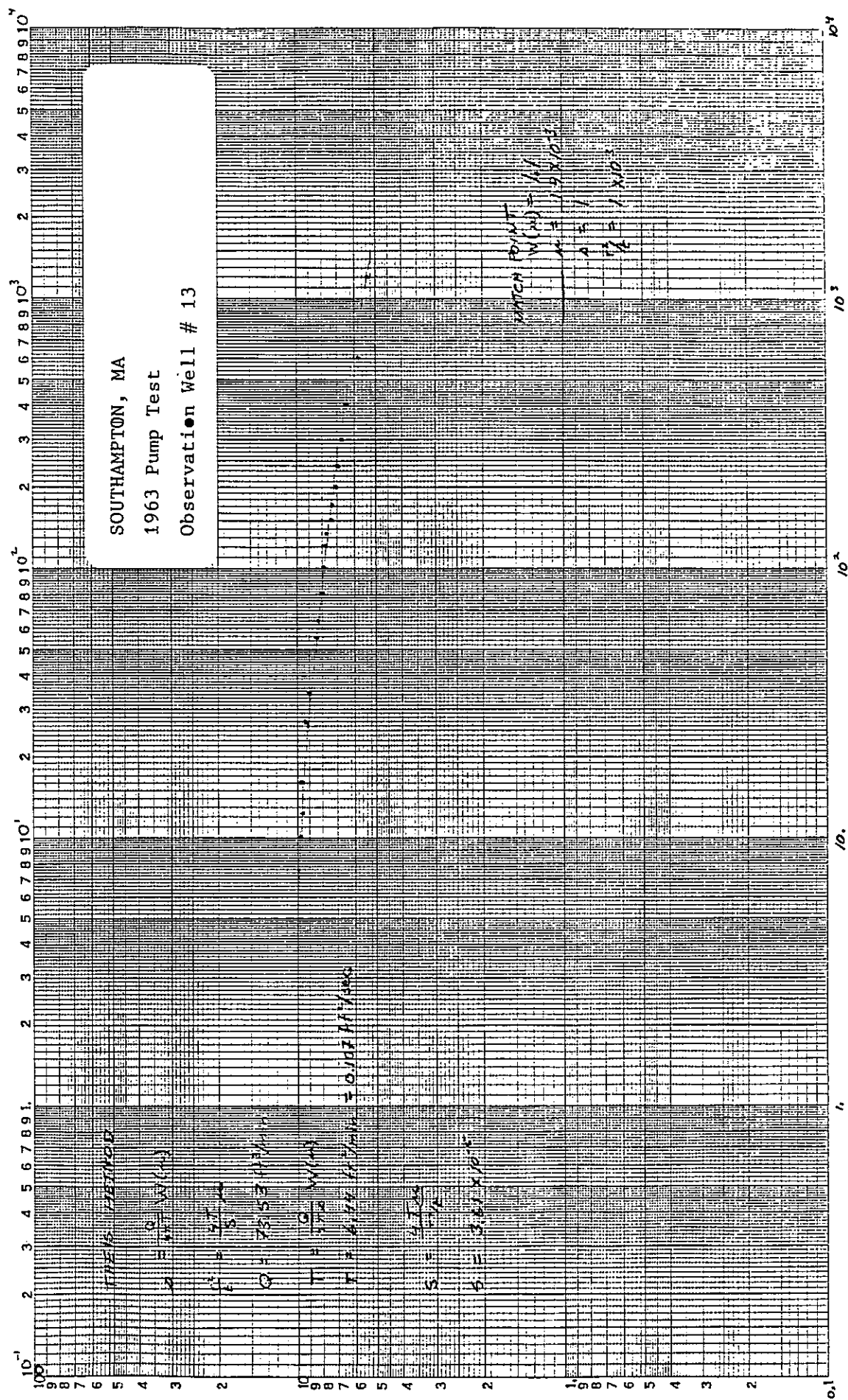
$T = \frac{23.0}{4 \pi (0.15)}$

$T = 4.98 \text{ ft}^2/\text{min} = 0.083 \text{ ft}^2/\text{sec}$

$S = \frac{2.25 \cdot 7.6}{r^2}$

$S = 1.84 \times 10^{-4}$





APPENDIX 3
WATER QUALITY

Lab AMHERST

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

SOUTHAMPTON

WATER ANALYSIS (Parts Per Million)

(city or town)

Source A TEST WELL (R.E. CHAPMAN FOR TOWN) TEST WELL NO. 7

Source B #2 2 1/2" TEST WELL NO. 9

Source C FROM #10 - 2 1/2 TEST WELL AT RIVERDALE RD. WELL FLOWS

Source D

Source E

Source F

	A	B	C	D	E	F
Sample No.	16109	16111	16114			
Date of Collection	1/14/63	1/16/63	1/16/63			
Date of Receipt	"	"	1/17/63			
Turbidity	0	0	0			
Sediment	-	-	-			
Color	2	3	3			
Odor - Cold	1	1	1			
Suspended total Solids loss						
Free Ammonia	.018	.036	.020			
Tot. Alb. Ammonia	.014	.034	.014			
Kjeldahl Nitrogen						
Nitrogen-Nitrates	0.9	.60	.90			
Nitrites	.000	.000	.000			
Chlorides	2.2	1.8	2.8			
Hardness	26	18	24			
Alkalinity-M.O. phth	26	18	20			
pH	7.8	6.6	6.6			
Iron	.06	.12	.14			
Manganese						
Fluorides						
Fluorides CO ₂	3	6	8			
Oxygen Consumed						
Diss. Oxygen -ppm OF - % Sat.						
B.O.D.						
Date of Receipt	1/14	1/16	1/17			
Coliform - MPN	0	0	0			
Tubes - pos./neg.						
Plate Count OC.						
Microscopical Std. Units per cc						
Collector	Swett	Swett	McDonnell			

Lab **AMHERST**MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH
WATER ANALYSIS (Parts Per Million)**SOUTHAMPTON**
(city or town)

Source A **2 1/2" TEST HOLE (MAX SZCZEPKA PROPERTY)**
 Source B **WELL PUMP TEST**
 Source C **8" TEST WELL OFF ROUTE #10**
 Source D **8" TEST WELL**
 Source E **END OF PUMPING TEST DIRECT FROM DISCHARGE OF TEST WELL**
 Source F **(Iron Bacteria) Sphaerotilus natans var. fusca 2/40 ml**

	A	B	C	D	E	F
Sample No.	16169	16189	16196	16198	16199	
Date of Collection	2/21/63	3/13/63	3/15/63	3/18/63	3/20/63	
Date of Receipt	"	"	"	"	"	
Turbidity	0	0	0	0	0	
Sediment	-	-	-	-	-	
Color	3	3	2	5	3	
Odor - Cold	2	2	2	2	2	
Suspended total Solids loss						
Free Ammonia	.012	.010	.020	.010	.010	
Tot. Alb. Ammonia	.008	.030	.020	.014	.012	
Kjeldahl Nitrogen						
Nitrogen-Nitrates	.70	.75	.65	1.0	1.0	
Nitrites	.000	.000	.000	.000	.000	
Chlorides	1.8	2.2	1.8	2.2	2.0	
Hardness	26	20	20	24	22	
Alkalinity-M.O. phth	28	20	22	20	20	
pH	7.4	6.8	6.8	6.8	6.8	
Iron	.06	.02	.07	.10	.05	
Manganese						
Free Ammonia CO ₂	2.0	5.0	5.0	5.0	4.0	
Oxygen Consumed						
Diss. Oxygen -ppm OF - % Sat.						
B.O.D.						
Date of Receipt				3/18	3/20	
Coliform - MPN				0	0	
Tubes - pos./neg.						
Plate Count cc.						
Microscopical						
Std. Units per cc						
Collector				McDonnell	A.I.	

9
W 22

THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER SUPPLY ANALYSIS (REQ. 1-1-1100)

Southampton

COLLECTOR

SOURCE A G.P. Well. Tap at Well nr. Glendale Rd. 276-016

SOURCE B

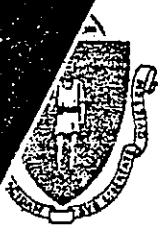
SOURCE C

SOURCE D

SOURCE E

SOURCE F

	A	B	C	D	E	F
SAMPLE NO.	564584					
DATE OF COLLECTION	5/7/83					
DATE OF RECEIPT	5/16/83					
TURBIDITY	0.8					
SEDIMENT	0					
COLOR	15					
ODOR	0					
pH	6.6					
ALKALINITY-TOTAL (CaCO ₃)	7					
HARDNESS (CaCO ₃)	10					
CALCIUM (Ca)	3.1					
MAGNESIUM (Mg)	0.5					
SODIUM (Na)	2.5					
POTASSIUM (K)	0.3					
IRON (Fe)	.13					
MANGANESE (Mn)	.00					
SULFATE (SO ₄)	5					
CHLORIDE (Cl)	3.0					
PEC. COND. (micromhos/cm)	35					
NITROGEN (AMMONIA)	.01					
NITROGEN (NITRATE)	0.0					
NITROGEN (NITRITE)	.000					
COPPER (Cu)	.12					



RECEIVED

The Commonwealth of Massachusetts
Department Of Environmental Quality Engineering
University of Mass.

Lawrence Experiment Station

37 Phalluck Street, Lawrence, Massachusetts 01843

SOURCE A - G. P. Hall near Glendale Road - 276-01G

SOURCE B -

SOURCE C -

SOURCE D -

SOURCE E -

COLLECTOR

DATE COLLECTED

DATE RECEIVED

SOUTHAMPTON

J. Moynihan

February 5, 1980

February 7, 1980

SPOT PROGRAM

	A	B	C	D	E
SAMPLE NO.	000117				
DATE ANALYZED	2/12/80				
Methylene Chloride	nd				
1,1 Dichloroethylene	nd				
1,2 Transdichloroethylene	nd				
Chloroform	nd				
1,2 Dichloroethane	nd				
1,1,1 Trichloroethane	nd				
Carbon tetrachloride	nd				
Bromodichloromethane	nd				
Trichloroethylene	nd				
Dibromochloromethane	nd				
Bromoform	nd				
Tetrachloroethylene	nd				

Concentrations reported as micrograms per liter - nd: none detected



SPOT PROGRAM

The Commonwealth of Massachusetts

Department Of Environmental Quality Engineering

Lawrence Experiment Station

GAS CHROMATOGRAPHY-MASS SPECTROMETRY ANALYSIS
OF PURGEABLE ORGANICS

NOV 23 1984

SAMPLE NUMBER	013664	CITY/TOWN	SOUTHAMPTON
COLLECTOR	A. I.	COLLECTED	October 4, 1984
RECEIVED	October 10, 1984	ANALYZED	October 16, 1984
SOURCE	SPOT G. D. Well		

APPROVED BY

JMP

☐ No purgeable organic compounds detected.

	ug/l		ug/l
Trichloroethylene	3.5		

The sample was analyzed according to the EPA procedure, "Method 624-Organics by Purge and Trap". Only those organic compounds which have a significant vapor pressure in aqueous solution at room temperature and thus are amenable to partition by purging are detected by this procedure.

L1 = less than 1.0 ug/l L5 = less than 5.0 ug/l L10 = less than 10 ug/l

*No standard available for quantitation. The mass spectrum obtained was compared to a mass spectral index and a mass spectral data base for identification.

REMARKS:



SPOT PROGRAM

The Commonwealth of Massachusetts

FILE COPY

Department Of Environmental Quality Engineering

Lawrence Experiment Station

37 Phalluck Street, Lawrence, Massachusetts 01843

GAS CHROMATOGRAPHY-MASS SPECTROMETRY ANALYSIS
OF PURGEABLE ORGANICS

FEB 18 1987

Section
of Environmental
Quality Engineering

SAMPLE NUMBER 025378

COLLECTOR Prendergast

RECEIVED 1/27/87

CITY/TOWN SOUTHAMPTON

COLLECTED 1/21/87

ANALYZED 1/28/87

SOURCE Southampton Water Dept. - College Highway Well (Rt. 10)
tap in well house

APPROVED BY: R.J. 2-12-87

☒ No purgeable organic compounds detected, <1.0 ug/L

	ug/L		ug/L

The sample was analyzed according to the EPA procedure, "Method 624-Organics by Purge and Trap". Only those organic compounds which have a significant vapor pressure in aqueous solution at room temperature and thus are amenable to partition by purging are detected by this procedure.

L1 = less than 1.0 ug/L L5 = less than 5.0 ug/L L10 = less than 10 ug/L

*No standard available for quantitation. The mass spectrum was compared to a mass spectral index and a mass spectral data base for identification.

REMARKS:

APPENDIX 4
CALIBRATION RUN

SOUTHAMPTON AQUIFER SIMULATION

3-D Model

1 LAYERS 56 ROWS 22 COLUMNS
1 STRESS PERIOD(S) IN SIMULATION
MODEL TIME UNIT IS SECONDS

I/O UNITS:

ELEMENT OF IUNIT: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
I/O UNIT: 11 12 0 14 0 0 17 18 19 0 0 22 0 0 0 0 0 0 0 0 0 0 0

BAS1 -- BASIC MODEL PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 1
ARRAYS RHS AND BUFF WILL SHARE MEMORY.
START HEAD WILL BE SAVED
11170 ELEMENTS IN X ARRAY ARE USED BY BAS
11170 ELEMENTS OF X ARRAY USED OUT OF 56000

BCF1 -- BLOCK-CENTERED FLOW PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 11
STEADY-STATE SIMULATION
LAYER AQUIFER TYPE

1 3

3697 ELEMENTS IN X ARRAY ARE USED BY BCF
14867 ELEMENTS OF X ARRAY USED OUT OF 56000

WEL1 -- WELL PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM 12
MAXIMUM OF 3 WELLS

12 ELEMENTS IN X ARRAY ARE USED FOR WELLS
14879 ELEMENTS OF X ARRAY USED OUT OF 56000

RCH1 -- RECHARGE PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 18
OPTION 1 -- RECHARGE TO TOP LAYER
1232 ELEMENTS OF X ARRAY USED FOR RECHARGE
16111 ELEMENTS OF X ARRAY USED OUT OF 56000

RIV1 -- RIVER PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 14
MAXIMUM OF 9 RIVER NODES
54 ELEMENTS IN X ARRAY ARE USED FOR RIVERS
16165 ELEMENTS OF X ARRAY USED OUT OF 56000

GH1 -- GH1 PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 17
MAXIMUM OF 13 HEAD-DEPENDENT BOUNDARY NODES
CELL-BY-CELL FLOW WILL BE PRINTED WHEN ICBCFL NOT 0
65 ELEMENTS IN X ARRAY ARE USED FOR HEAD-DEPENDENT BOUNDARIES
16230 ELEMENTS OF X ARRAY USED OUT OF 56000

SIP1 -- STRONGLY IMPLICIT PROCEDURE SOLUTION PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 19
MAXIMUM OF 750 ITERATIONS ALLOWED FOR CLOSURE
5 ITERATION PARAMETERS
7933 ELEMENTS IN X ARRAY ARE USED BY SIP
24163 ELEMENTS OF X ARRAY USED OUT OF 56000

BOUNDARY ARRAY FOR LAYER 1 WILL BE READ ON UNIT 1 USING FORMAT: (2014)

	1 11 21	2 12 22	3 13	4 14	5 15	6 16	7 17	8 18	9 19	10 20
1	0 1 1	0 1 1	0 1	0 1	0 1	0 1	0 1	1 1	1 1	1 1
2	0 1 1	0 1 1	0 1	0 1	0 1	0 1	1 1	1 1	1 1	1 1
3	0 1 1	0 1 1	0 1	0 1	0 1	0 1	1 1	1 1	1 1	1 1
4	0 1 1	0 1 1	0 1	0 1	0 1	0 1	1 1	1 1	1 1	1 1
5	0 1 1	0 1 1	0 1	0 1	0 1	0 1	1 1	1 1	1 1	1 1
6	0 1 1	0 1 1	0 1	0 1	0 1	0 1	0 1	1 1	1 1	1 1
7	0 1 1	0 1 1	0 1	0 1	0 1	0 1	0 1	0 1	1 1	1 1
8	0 1 1	0 1 1	0 1	0 1	1 1	1 1	1 1	1 1	1 1	1 1
9	0 1 1	0 1 0	0 1	0 1	1 1	1 1	1 1	1 1	1 1	1 1
10	0 1 0	0 1 0	0 1	0 1	1 1	1 1	1 1	1 1	1 1	1 1
11	0 1 0	0 1 0	0 1	0 1	0 1	1 1	1 1	1 1	1 1	1 1
12	0 1 0	0 1 0	0 1	0 1	0 1	1 1	1 1	1 1	1 1	1 1

0	0	0	0	0	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1
1	0								
0	0	0	0	0	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1
1	0								
0	0	0	0	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1
0	0								
0	0	0	0	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	0
0	0								
0	0	0	0	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	0
0	0								
0	0	0	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	0
0	0								
0	0	0	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	0	0
0	0								
0	0	0	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	0	0
0	0								
0	0	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	0	0	0
0	0								
0	0	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	0	0	0
0	0								
0	0	0	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1
1	0								
0	0	0	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1
1	0								

28	0 1 0	0 1 0	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1
29	0 1 0	0 1 0	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1
30	0 1 0	0 1 0	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 0 0
31	0 1 0	0 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
32	0 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
33	0 1 0	1 0 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
34	0 1 0	1 0 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
35	-1 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	0 0 0	0 0 0	1 0 0
36	-1 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	0 0 0	0 0 0	1 0 0
37	-1 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	0 0 0	0 0 0	1 0 0
38	-1 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
39	-1 1 0	1 1 0	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
40	-1 1 0	1 1 0	0 1 1	0 1 1	1 1 1	1 1 0	1 0 0	1 0 0	1 0 0	1 0 0
41	-1 1 0	1 1 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0
42	-1 1 0	0 1 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0

43	0	0	0	0	0	1	1	1	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								
44	0	0	0	0	0	0	1	1	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								
45	0	0	0	0	0	0	1	1	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								
46	0	0	0	0	0	0	0	1	1	1
	1	0	0	0	0	0	0	0	0	0
	0	0								
47	0	0	0	0	0	0	0	1	1	1
	1	0	0	0	0	0	0	0	0	0
	0	0								
48	0	0	0	0	0	0	0	0	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								
49	0	0	0	0	0	0	0	0	1	1
	1	1	1	0	0	0	0	0	0	0
	0	0								
50	0	0	0	0	0	0	0	0	1	1
	1	1	1	1	1	0	0	0	0	0
	0	0								
51	0	0	0	0	0	0	0	1	1	1
	1	1	1	1	1	1	0	0	0	0
	0	0								
52	0	0	0	0	0	0	0	1	1	1
	1	1	1	1	1	1	0	0	0	0
	0	0								
53	0	0	0	0	0	0	0	1	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								
54	0	0	0	0	0	0	0	1	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								
55	0	0	0	0	0	0	0	1	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								
56	0	0	0	0	0	0	0	1	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								

AQUIFER HEAD WILL BE SET TO 999.99 AT ALL NO-FLOW NODES (IBOUND=0).

INITIAL HEAD FOR LAYER 1 WILL BE READ ON UNIT 1 USING FORMAT:

(10F8.0)

	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22								
1	1000. 173.0 157.0	1000. 173.0 158.0	1000. 173.0	1000. 173.0	1000. 174.0	1000. 172.0	1000. 169.0	200.0 166.0	173.0 160.0	173.0 158.0
2	1000. 173.0 160.0	1000. 172.0 159.0	1000. 172.0	1000. 172.0	1000. 171.0	1000. 171.0	210.0 169.0	200.0 166.0	173.0 163.0	173.0 161.0
3	1000. 173.0 162.0	1000. 172.0 159.0	1000. 172.0	1000. 172.0	1000. 171.0	1000. 170.0	210.0 169.0	200.0 167.0	173.0 165.0	173.0 163.0
4	1000. 173.0 164.0	1000. 172.0 164.0	1000. 172.0	1000. 172.0	1000. 171.0	1000. 170.0	210.0 169.0	200.0 168.0	173.0 166.0	173.0 165.0
5	1000. 173.0 166.0	1000. 173.0 166.0	1000. 172.0	1000. 172.0	1000. 172.0	1000. 171.0	210.0 170.0	200.0 169.0	195.0 168.0	174.0 167.0
6	1000. 174.0 167.0	1000. 173.0 168.0	1000. 173.0	1000. 172.0	1000. 172.0	1000. 172.0	1000. 171.0	200.0 170.0	175.0 169.0	174.0 168.0
7	1000. 174.0 169.0	1000. 174.0 169.0	1000. 173.0	1000. 173.0	1000. 173.0	250.0 172.0	235.0 172.0	200.0 171.0	176.0 170.0	175.0 169.0
8	1000. 175.0 170.0	1000. 174.0 169.0	1000. 174.0	1000. 174.0	256.0 174.0	250.0 173.0	225.0 173.0	200.0 172.0	176.0 171.0	175.0 171.0
9	1000. 176.0 171.0	1000. 175.0 1000.	1000. 175.0	1000. 175.0	250.0 174.0	240.0 174.0	225.0 174.0	200.0 173.0	177.0 172.0	176.0 172.0
10	1000. 177.0 1000.	1000. 176.0 1000.	1000. 176.0	1000. 175.0	255.0 175.0	240.0 175.0	220.0 175.0	178.0 174.0	177.0 174.0	177.0 173.0
11	1000. 178.0 1000.	1000. 177.0 1000.	1000. 177.0	1000. 176.0	1000. 176.0	240.0 176.0	215.0 176.0	179.0 175.0	178.0 175.0	178.0 174.0
12	1000. 178.0 1000.	1000. 178.0 1000.	1000. 178.0	1000. 177.0	1000. 177.0	230.0 177.0	181.0 176.0	180.0 176.0	179.0 176.0	178.0 175.0
13	1000. 179.0	1000. 178.0	1000. 178.0	1000. 178.0	1000. 178.0	230.0 178.0	181.0 177.0	180.0 177.0	180.0 177.0	179.0 176.0

	190.0	1000.								
14	1000. 179.0 190.0	1000. 179.0 1000.	1000. 179.0	1000. 179.0	1000. 179.0	220.0 179.0	181.0 178.0	181.0 178.0	180.0 177.0	180.0 185.0
15	1000. 180.0 1000.	1000. 180.0 1000.	1000. 179.0	1000. 179.0	240.0 179.0	220.0 179.0	182.0 179.0	181.0 178.0	181.0 178.0	181.0 178.0
16	1000. 181.0 1000.	1000. 180.0 1000.	1000. 180.0	1000. 180.0	240.0 180.0	215.0 180.0	182.0 179.0	182.0 179.0	182.0 179.0	181.0 1000.
17	1000. 181.0 1000.	1000. 181.0 1000.	1000. 180.0	1000. 180.0	240.0 180.0	184.0 180.0	183.0 180.0	182.0 179.0	182.0 179.0	182.0 1000.
18	1000. 182.0 1000.	1000. 181.0 1000.	1000. 181.0	240.0 180.0	230.0 180.0	184.0 180.0	183.0 180.0	183.0 180.0	182.0 180.0	182.0 1000.
19	1000. 182.0 1000.	1000. 182.0 1000.	1000. 181.0	240.0 181.0	230.0 181.0	184.0 181.0	184.0 181.0	183.0 180.0	183.0 180.0	182.0 1000.
20	1000. 183.0 1000.	1000. 182.0 1000.	1000. 182.0	240.0 182.0	210.0 182.0	185.0 182.0	184.0 181.0	184.0 181.0	183.0 1000.	183.0 1000.
21	1000. 183.0 1000.	1000. 183.0 1000.	1000. 183.0	187.0 182.0	186.0 182.0	186.0 182.0	185.0 182.0	184.0 182.0	184.0 1000.	184.0 1000.
22	1000. 184.0 1000.	1000. 184.0 1000.	230.0 183.0	200.0 183.0	187.0 183.0	186.0 183.0	186.0 183.0	185.0 1000.	185.0 1000.	184.0 1000.
23	1000. 185.0 1000.	1000. 184.0 1000.	230.0 184.0	200.0 184.0	187.0 184.0	187.0 184.0	186.0 184.0	186.0 1000.	185.0 1000.	185.0 1000.
24	1000. 185.0 1000.	1000. 185.0 1000.	230.0 185.0	200.0 185.0	188.0 184.0	187.0 184.0	187.0 185.0	186.0 1000.	186.0 1000.	185.0 1000.
25	1000. 186.0 230.0	1000. 185.0 250.0	1000. 185.0	189.0 185.0	188.0 185.0	188.0 185.0	187.0 185.0	187.0 186.0	186.0 186.0	186.0 187.0
26	1000. 186.0 240.0	1000. 186.0 1000.	1000. 186.0	189.0 186.0	189.0 186.0	188.0 186.0	188.0 186.0	187.0 186.0	187.0 186.0	186.0 220.0
27	1000. 187.0 250.0	1000. 187.0 1000.	1000. 187.0	189.0 186.0	189.0 186.0	189.0 186.0	188.0 186.0	188.0 186.0	187.0 187.0	187.0 187.0
28	1000. 188.0	1000. 187.0	1000. 187.0	189.0 187.0	189.0 187.0	189.0 187.0	189.0 187.0	188.0 187.0	188.0 187.0	188.0 230.0

	1000.	1000.								
44	1000.	1000.	1000.	1000.	1000.	1000.	199.0	199.0	199.0	199.0
	199.0	250.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
45	1000.	1000.	1000.	1000.	1000.	1000.	199.0	199.0	199.0	200.0
	200.0	200.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
46	1000.	1000.	1000.	1000.	1000.	1000.	1000.	200.0	200.0	200.0
	200.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
47	1000.	1000.	1000.	1000.	1000.	1000.	1000.	200.0	201.0	201.0
	201.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
48	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	201.0	202.0
	202.0	203.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
49	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	202.0	203.0
	203.0	204.0	205.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
50	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	204.0	204.0
	205.0	205.0	206.0	206.0	206.0	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
51	1000.	1000.	1000.	1000.	1000.	1000.	1000.	206.0	205.0	205.0
	206.0	206.0	206.0	206.0	206.0	206.0	1000.	1000.	1000.	1000.
	1000.	1000.								
52	1000.	1000.	1000.	1000.	1000.	1000.	1000.	206.0	206.0	206.0
	206.0	206.0	206.0	206.0	206.0	206.0	1000.	1000.	1000.	1000.
	1000.	1000.								
53	1000.	1000.	1000.	1000.	1000.	1000.	1000.	207.0	207.0	207.0
	207.0	207.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
54	1000.	1000.	1000.	1000.	1000.	1000.	1000.	207.0	207.0	207.0
	207.0	207.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
55	1000.	1000.	1000.	1000.	1000.	1000.	1000.	207.0	208.0	208.0
	207.0	207.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
56	1000.	1000.	1000.	1000.	1000.	1000.	1000.	208.0	208.0	208.0
	208.0	207.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								

HEAD PRINT FORMAT IS FORMAT NUMBER 0 DRAWDOWN PRINT FORMAT IS FORMAT NUMBER 0

HEADS WILL BE SAVED ON UNIT 23 DRAWDOWNS WILL BE SAVED ON UNIT 0

OUTPUT CONTROL IS SPECIFIED EVERY TIME STEP

[illegible]

52	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	2.8650E-03	2.8650E-03	2.8650E-03
	2.8650E-03	2.8650E-03	2.8650E-03	2.8650E-03	2.8650E-03	2.8650E-03	2.8650E-03	3.8200E-08	3.8200E-08	3.8200E-08
	3.8200E-08	3.8200E-08								
53	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	2.8650E-03	2.8650E-03	2.8650E-03
	2.8650E-03	2.8650E-03	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08
	3.8200E-08	3.8200E-08								
54	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	2.8650E-03	2.8650E-03	2.8650E-03
	2.8650E-03	2.8650E-03	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08
	3.8200E-08	3.8200E-08								
55	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	2.8650E-03	2.8650E-03	2.8650E-03
	2.8650E-03	2.8650E-03	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08
	3.8200E-08	3.8200E-08								
56	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	2.8650E-03	2.8650E-03	2.8650E-03
	2.8650E-03	2.8650E-03	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08	3.8200E-08
	3.8200E-08	3.8200E-08								

BOTTOM FOR LAYER 1 WILL BE READ ON UNIT 11 USING FORMAT: (10f8.0)

	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22								
1	250.0	250.0	250.0	250.0	250.0	250.0	250.0	180.0	150.0	100.0
	50.00	0.0000E+00	-20.00	-30.00	-40.00	-50.00	-50.00	-40.00	-30.00	-20.00
	-10.00	0.0000E+00								
2	250.0	250.0	250.0	250.0	250.0	250.0	190.0	180.0	150.0	100.0
	50.00	0.0000E+00	-20.00	-30.00	-40.00	-500.0	-50.00	-40.00	-30.00	-20.00
	0.0000E+00	0.0000E+00								
3	250.0	250.0	250.0	250.0	250.0	220.0	190.0	180.0	150.0	100.0
	50.00	0.0000E+00	-20.00	-25.00	-30.00	-40.00	-50.00	-40.00	-25.00	0.0000E+00
	0.0000E+00	25.00								
4	250.0	250.0	250.0	250.0	250.0	220.0	190.0	180.0	150.0	100.0
	50.00	0.0000E+00	-20.00	-25.00	-30.00	-30.00	-40.00	-40.00	-20.00	0.0000E+00
	25.00	35.00								
5	250.0	250.0	250.0	250.0	250.0	250.0	190.0	180.0	175.0	125.0
	50.00	0.0000E+00	-20.00	-25.00	-30.00	-35.00	-30.00	-25.00	-20.00	0.0000E+00
	25.00	50.00								
6	250.0	250.0	250.0	250.0	250.0	250.0	250.0	180.0	170.0	125.0
	50.00	0.0000E+00	-20.00	-25.00	-30.00	-35.00	-30.00	-20.00	0.0000E+00	25.00
	50.00	100.0								
7	250.0	250.0	250.0	200.0	255.0	230.0	215.0	180.0	170.0	125.0
	50.00	0.0000E+00	-20.00	-25.00	-30.00	-35.00	-20.00	0.0000E+00	25.00	50.00
	100.0	125.0								
8	250.0	250.0	250.0	250.0	235.0	230.0	205.0	180.0	150.0	100.0

	50.00	0.0000E+00	-20.00	-25.00	-30.00	-25.00	-20.00	0.0000E+00	50.00	100.0
	150.0	150.0								
9	250.0	250.0	250.0	250.0	230.0	220.0	205.0	180.0	150.0	100.0
	50.00	0.0000E+00	-15.00	-20.00	-25.00	-20.00	0.0000E+00	25.00	50.00	100.0
	150.0	250.0								
10	250.0	250.0	250.0	250.0	235.0	220.0	200.0	175.0	150.0	100.0
	50.00	0.0000E+00	-15.00	-20.00	-20.00	-15.00	0.0000E+00	50.00	100.0	125.0
	150.0	250.0								
11	250.0	250.0	250.0	250.0	250.0	220.0	195.0	175.0	150.0	100.0
	50.00	0.0000E+00	-10.00	-15.00	-15.00	0.0000E+00	50.00	75.00	100.0	125.0
	250.0	250.0								
12	250.0	250.0	250.0	250.0	250.0	200.0	180.0	165.0	150.0	100.0
	50.00	0.0000E+00	-10.00	-5.000	0.0000E+00	0.0000E+00	50.00	100.0	125.0	150.0
	250.0	250.0								
13	250.0	250.0	250.0	250.0	250.0	200.0	175.0	150.0	125.0	100.0
	75.00	50.00	0.0000E+00	-5.000	0.0000E+00	25.00	50.00	100.0	125.0	150.0
	170.0	225.0								
14	250.0	250.0	250.0	250.0	250.0	200.0	175.0	150.0	125.0	100.0
	75.00	50.00	0.0000E+00	-5.000	0.0000E+00	50.00	100.0	125.0	150.0	175.0
	170.0	225.0								
15	250.0	250.0	250.0	250.0	220.0	200.0	175.0	150.0	125.0	100.0
	75.00	50.00	0.0000E+00	-5.000	0.0000E+00	50.00	100.0	125.0	150.0	165.0
	250.0	250.0								
16	250.0	250.0	250.0	250.0	220.0	195.0	175.0	150.0	125.0	100.0
	75.00	50.00	25.00	0.0000E+00	0.0000E+00	50.00	100.0	150.0	160.0	200.0
	250.0	250.0								
17	250.0	250.0	250.0	250.0	220.0	180.0	165.0	150.0	125.0	100.0
	75.00	50.00	25.00	8.000	8.000	50.00	100.0	150.0	160.0	200.0
	250.0	250.0								
18	250.0	250.0	250.0	220.0	200.0	180.0	165.0	150.0	125.0	100.0
	75.00	50.00	25.00	10.00	25.00	50.00	100.0	150.0	160.0	250.0
	250.0	250.0								
19	250.0	250.0	250.0	220.0	200.0	180.0	165.0	150.0	125.0	100.0
	75.00	50.00	25.00	10.00	25.00	50.00	100.0	150.0	160.0	250.0
	250.0	250.0								
20	250.0	250.0	250.0	210.0	190.0	175.0	165.0	150.0	125.0	100.0
	75.00	50.00	25.00	15.00	25.00	50.00	100.0	150.0	200.0	250.0
	250.0	250.0								
21	250.0	250.0	210.0	180.0	175.0	170.0	165.0	150.0	125.0	100.0
	75.00	50.00	35.00	20.00	35.00	50.00	100.0	150.0	200.0	250.0
	250.0	250.0								
22	250.0	250.0	210.0	180.0	175.0	170.0	165.0	150.0	125.0	100.0
	75.00	50.00	35.00	20.00	35.00	50.00	100.0	150.0	200.0	250.0
	250.0	250.0								
23	250.0	250.0	210.0	180.0	175.0	170.0	150.0	125.0	100.0	80.00

	65.00	50.00	40.00	30.00	40.00	50.00	100.0	150.0	200.0	250.0
	250.0	250.0								
24	250.0	250.0	210.0	180.0	175.0	170.0	150.0	125.0	100.0	80.00
	65.00	50.00	40.00	35.00	40.00	50.00	100.0	150.0	200.0	250.0
	250.0	250.0								
25	250.0	250.0	200.0	175.0	170.0	170.0	150.0	125.0	100.0	80.00
	65.00	50.00	40.00	40.00	50.00	75.00	100.0	150.0	180.0	185.0
	210.0	230.0								
26	250.0	250.0	200.0	175.0	170.0	170.0	150.0	125.0	100.0	80.00
	65.00	50.00	50.00	50.00	75.00	100.0	125.0	150.0	180.0	200.0
	220.0	250.0								
27	250.0	250.0	200.0	175.0	170.0	165.0	150.0	125.0	100.0	90.00
	80.00	70.00	65.00	75.00	85.00	100.0	125.0	150.0	170.0	180.0
	200.0	200.0								
28	250.0	250.0	200.0	175.0	170.0	165.0	150.0	125.0	100.0	90.00
	85.00	80.00	80.00	100.0	100.0	125.0	150.0	170.0	180.0	200.0
	250.0	200.0								
29	250.0	250.0	200.0	240.0	170.0	165.0	150.0	125.0	100.0	90.00
	85.00	90.00	100.0	100.0	125.0	150.0	170.0	180.0	200.0	210.0
	250.0	250.0								
30	250.0	250.0	200.0	175.0	160.0	150.0	135.0	120.0	100.0	95.00
	85.00	100.0	125.0	150.0	150.0	160.0	170.0	180.0	210.0	250.0
	250.0	250.0								
31	250.0	240.0	180.0	175.0	170.0	150.0	135.0	120.0	100.0	90.00
	100.0	100.0	150.0	150.0	150.0	180.0	190.0	205.0	250.0	250.0
	250.0	250.0								
32	250.0	180.0	175.0	170.0	150.0	140.0	125.0	115.0	100.0	95.00
	100.0	150.0	170.0	150.0	150.0	180.0	190.0	205.0	250.0	250.0
	250.0	250.0								
33	250.0	180.0	175.0	170.0	150.0	140.0	130.0	110.0	100.0	100.0
	150.0	200.0	160.0	160.0	160.0	180.0	190.0	210.0	250.0	250.0
	250.0	250.0								
34	250.0	180.0	175.0	150.0	140.0	130.0	120.0	115.0	110.0	110.0
	150.0	200.0	170.0	175.0	175.0	180.0	205.0	210.0	250.0	250.0
	250.0	250.0								
35	180.0	175.0	150.0	140.0	130.0	125.0	130.0	150.0	150.0	115.0
	120.0	150.0	150.0	150.0	150.0	180.0	180.0	250.0	250.0	250.0
	250.0	250.0								
36	180.0	150.0	140.0	135.0	130.0	125.0	135.0	150.0	150.0	120.0
	120.0	125.0	150.0	150.0	180.0	180.0	180.0	250.0	250.0	250.0
	250.0	250.0								
37	150.0	140.0	135.0	135.0	135.0	130.0	130.0	150.0	150.0	140.0
	135.0	125.0	130.0	150.0	150.0	180.0	210.0	250.0	250.0	250.0
	250.0	250.0								
38	140.0	140.0	140.0	150.0	150.0	150.0	140.0	135.0	135.0	136.0

	136.0 250.0	140.0 250.0	150.0	150.0	150.0	180.0	220.0	230.0	250.0	250.0
39	140.0 140.0 250.0	150.0 150.0 250.0	150.0 185.0	200.0 175.0	175.0 180.0	160.0 190.0	150.0 220.0	135.0 230.0	138.0 250.0	138.0 250.0
40	150.0 150.0 250.0	180.0 175.0 250.0	200.0 180.0	203.0 180.0	180.0 190.0	175.0 210.0	150.0 250.0	150.0 250.0	140.0 250.0	140.0 250.0
41	175.0 150.0 250.0	180.0 180.0 250.0	200.0 250.0	200.0 250.0	180.0 250.0	175.0 250.0	160.0 250.0	150.0 250.0	145.0 250.0	140.0 250.0
42	175.0 150.0 250.0	250.0 180.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	175.0 250.0	175.0 250.0	155.0 250.0	150.0 250.0	145.0 250.0
43	250.0 150.0 250.0	250.0 200.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	175.0 250.0	150.0 250.0	145.0 250.0
44	250.0 150.0 250.0	250.0 200.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	165.0 250.0	150.0 250.0
45	250.0 175.0 250.0	250.0 180.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	240.0 250.0	180.0 250.0	175.0 250.0	165.0 250.0	150.0 250.0
46	250.0 175.0 250.0	250.0 250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	175.0 250.0	175.0 250.0	150.0 250.0
47	250.0 180.0 250.0	250.0 225.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	150.0 250.0
48	250.0 150.0 250.0	250.0 180.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	200.0 250.0	175.0 250.0	150.0 250.0
49	250.0 175.0 250.0	250.0 180.0 250.0	250.0 200.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	175.0 250.0
50	250.0 170.0 250.0	250.0 180.0 250.0	250.0 190.0	250.0 200.0	250.0 200.0	250.0 200.0	250.0 250.0	190.0 250.0	175.0 250.0	175.0 250.0
51	250.0 150.0 250.0	250.0 150.0 250.0	250.0 180.0	250.0 185.0	250.0 190.0	250.0 200.0	250.0 240.0	180.0 250.0	175.0 250.0	175.0 250.0
52	250.0 150.0 250.0	250.0 150.0 250.0	250.0 170.0	250.0 185.0	250.0 190.0	250.0 200.0	250.0 240.0	180.0 250.0	174.0 250.0	175.0 250.0
53	250.0	250.0	250.0	250.0	250.0	250.0	250.0	180.0	175.0	175.0

	150.0	150.0	165.0	180.0	200.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
54	250.0	250.0	250.0	250.0	250.0	250.0	250.0	180.0	175.0	175.0
	150.0	150.0	200.0	200.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
55	250.0	250.0	250.0	250.0	250.0	250.0	250.0	180.0	175.0	175.0
	150.0	150.0	200.0	200.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
56	250.0	250.0	250.0	250.0	250.0	250.0	250.0	200.0	180.0	160.0
	140.0	150.0	200.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								

TOP FOR LAYER 1 WILL BE READ ON UNIT 11 USING FORMAT: (10f8.0)

	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22								
1	250.0	250.0	250.0	250.0	250.0	250.0	250.0	200.0	195.0	190.0
	110.0	60.00	10.00	-10.00	-20.00	-30.00	-30.00	-20.00	-10.00	0.0000E+00
	10.00	20.00								
2	250.0	250.0	250.0	250.0	250.0	250.0	210.0	200.0	195.0	190.0
	110.0	60.00	10.00	-10.00	-20.00	-300.0	-30.00	-20.00	-10.00	10.00
	20.00	20.00								
3	250.0	250.0	250.0	250.0	250.0	240.0	210.0	200.0	195.0	190.0
	110.0	60.00	10.00	-5.000	-10.00	-20.00	-30.00	-15.00	10.00	20.00
	35.00	45.00								
4	250.0	250.0	250.0	250.0	250.0	240.0	210.0	200.0	195.0	190.0
	110.0	60.00	10.00	-5.000	-10.00	-10.00	-20.00	-10.00	10.00	35.00
	45.00	55.00								
5	250.0	250.0	250.0	250.0	250.0	250.0	210.0	200.0	195.0	190.0
	70.00	60.00	10.00	-5.000	-10.00	-15.00	-10.00	-5.000	10.00	35.00
	60.00	70.00								
6	250.0	250.0	250.0	250.0	250.0	250.0	250.0	200.0	193.0	190.0
	70.00	60.00	10.00	-5.000	-10.00	-15.00	-10.00	10.00	35.00	60.00
	110.0	120.0								
7	250.0	250.0	250.0	310.0	274.0	250.0	235.0	200.0	193.0	189.0
	70.00	60.00	10.00	-5.000	-10.00	-15.00	10.00	35.00	60.00	110.0
	135.0	145.0								
8	250.0	250.0	250.0	250.0	256.0	250.0	225.0	200.0	190.0	185.0
	110.0	60.00	10.00	-5.000	-10.00	-5.000	10.00	60.00	110.0	160.0
	170.0	170.0								
9	250.0	250.0	250.0	250.0	250.0	240.0	225.0	200.0	190.0	120.0
	110.0	60.00	10.00	0.0000E+00	-5.000	10.00	35.00	60.00	110.0	160.0

	170.0	250.0								
10	250.0 70.00 170.0	250.0 60.00 250.0	250.0 10.00	250.0 0.0000E+00	255.0 0.0000E+00	240.0 10.00	220.0 60.00	195.0 110.0	190.0 135.0	180.0 145.0
11	250.0 110.0 250.0	250.0 60.00 250.0	250.0 10.00	250.0 5.000	250.0 10.00	240.0 60.00	215.0 85.00	197.0 110.0	190.0 135.0	180.0 145.0
12	250.0 170.0 250.0	250.0 60.00 250.0	250.0 10.00	250.0 15.00	250.0 20.00	230.0 60.00	210.0 110.0	195.0 135.0	185.0 160.0	180.0 170.0
13	250.0 175.0 180.0	250.0 85.00 235.0	250.0 60.00	250.0 15.00	250.0 35.00	230.0 60.00	200.0 110.0	195.0 135.0	185.0 160.0	179.0 180.0
14	250.0 110.0 185.0	250.0 85.00 235.0	250.0 60.00	250.0 15.00	250.0 60.00	220.0 110.0	200.0 135.0	190.0 160.0	160.0 185.0	135.0 195.0
15	250.0 110.0 250.0	250.0 85.00 250.0	250.0 60.00	250.0 15.00	240.0 60.00	220.0 110.0	198.0 135.0	190.0 160.0	185.0 175.0	135.0 175.0
16	250.0 110.0 250.0	250.0 85.00 250.0	250.0 60.00	250.0 35.00	240.0 60.00	215.0 110.0	197.0 160.0	190.0 170.0	185.0 170.0	135.0 210.0
17	250.0 110.0 250.0	250.0 85.00 250.0	250.0 60.00	250.0 35.00	240.0 60.00	210.0 110.0	195.0 160.0	190.0 170.0	180.0 170.0	175.0 210.0
18	250.0 110.0 250.0	250.0 85.00 250.0	250.0 60.00	240.0 35.00	230.0 60.00	200.0 110.0	195.0 160.0	190.0 170.0	180.0 170.0	175.0 250.0
19	250.0 170.0 250.0	250.0 85.00 250.0	250.0 60.00	240.0 35.00	230.0 60.00	210.0 110.0	194.0 160.0	188.0 170.0	180.0 170.0	175.0 250.0
20	250.0 170.0 250.0	250.0 85.00 250.0	250.0 60.00	240.0 35.00	210.0 60.00	198.0 110.0	194.0 160.0	188.0 170.0	180.0 210.0	175.0 250.0
21	250.0 110.0 250.0	250.0 85.00 250.0	220.0 60.00	230.0 45.00	200.0 60.00	195.0 110.0	190.0 160.0	185.0 170.0	180.0 210.0	175.0 250.0
22	250.0 170.0 250.0	250.0 170.0 250.0	230.0 60.00	200.0 45.00	197.0 60.00	193.0 110.0	190.0 120.0	185.0 170.0	180.0 210.0	175.0 250.0
23	250.0 170.0 250.0	250.0 170.0 250.0	230.0 60.00	200.0 50.00	197.0 60.00	193.0 110.0	187.0 120.0	183.0 170.0	177.0 210.0	173.0 250.0
24	250.0 170.0	250.0 170.0	230.0 60.00	200.0 55.00	195.0 60.00	190.0 110.0	185.0 120.0	180.0 170.0	177.0 210.0	173.0 250.0

	250.0	250.0								
25	250.0 90.00 230.0	250.0 75.00 250.0	200.0 60.00	197.0 60.00	193.0 85.00	190.0 110.0	185.0 160.0	180.0 190.0	175.0 195.0	170.0 205.0
26	250.0 90.00 240.0	250.0 75.00 250.0	200.0 70.00	197.0 85.00	193.0 110.0	190.0 135.0	184.0 160.0	180.0 190.0	175.0 200.0	110.0 220.0
27	250.0 100.0 250.0	250.0 90.00 310.0	200.0 85.00	197.0 95.00	193.0 110.0	188.0 135.0	183.0 160.0	180.0 190.0	135.0 200.0	110.0 220.0
28	250.0 105.0 260.0	250.0 100.0 310.0	200.0 110.0	197.0 120.0	193.0 135.0	185.0 160.0	180.0 180.0	160.0 190.0	135.0 210.0	110.0 230.0
29	250.0 105.0 250.0	250.0 110.0 250.0	300.0 120.0	250.0 135.0	180.0 160.0	180.0 180.0	175.0 190.0	160.0 210.0	135.0 230.0	110.0 240.0
30	250.0 110.0 250.0	250.0 135.0 250.0	210.0 160.0	185.0 170.0	185.0 170.0	170.0 180.0	160.0 190.0	145.0 200.0	130.0 225.0	115.0 250.0
31	250.0 120.0 250.0	250.0 160.0 250.0	190.0 170.0	190.0 190.0	185.0 190.0	180.0 200.0	160.0 215.0	145.0 225.0	130.0 250.0	110.0 250.0
32	250.0 160.0 250.0	190.0 180.0 250.0	190.0 190.0	185.0 200.0	180.0 190.0	160.0 200.0	150.0 215.0	135.0 225.0	125.0 250.0	115.0 250.0
33	250.0 170.0 250.0	190.0 220.0 250.0	190.0 220.0	185.0 210.0	180.0 200.0	160.0 200.0	150.0 200.0	140.0 230.0	120.0 250.0	160.0 250.0
34	250.0 170.0 250.0	190.0 220.0 250.0	190.0 210.0	185.0 200.0	160.0 185.0	150.0 215.0	140.0 220.0	135.0 230.0	130.0 250.0	160.0 250.0
35	200.0 177.0 250.0	190.0 177.0 250.0	185.0 190.0	160.0 190.0	150.0 200.0	145.0 190.0	150.0 200.0	170.0 250.0	170.0 250.0	145.0 250.0
36	200.0 178.0 250.0	190.0 178.0 250.0	160.0 179.0	155.0 190.0	150.0 200.0	145.0 190.0	155.0 200.0	170.0 250.0	170.0 250.0	179.0 250.0
37	198.0 155.0 250.0	160.0 180.0 250.0	155.0 180.0	155.0 185.0	155.0 190.0	150.0 200.0	150.0 230.0	170.0 250.0	170.0 250.0	160.0 250.0
38	197.0 156.0 250.0	160.0 160.0 250.0	160.0 185.0	170.0 190.0	170.0 190.0	170.0 200.0	160.0 240.0	155.0 250.0	155.0 250.0	156.0 250.0
39	195.0 160.0	170.0 210.0	170.0 220.0	210.0 210.0	195.0 200.0	185.0 210.0	170.0 240.0	160.0 250.0	158.0 250.0	158.0 250.0

	250.0	250.0								
40	196.0	220.0	220.0	223.0	190.0	195.0	185.0	170.0	160.0	160.0
	185.0	195.0	190.0	200.0	210.0	230.0	250.0	250.0	250.0	250.0
	250.0	250.0								
41	200.0	250.0	220.0	220.0	190.0	190.0	185.0	170.0	165.0	160.0
	210.0	220.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
42	200.0	250.0	250.0	250.0	250.0	185.0	195.0	185.0	170.0	165.0
	210.0	210.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
43	250.0	250.0	250.0	250.0	250.0	190.0	190.0	197.0	192.0	195.0
	210.0	210.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
44	250.0	250.0	250.0	250.0	250.0	250.0	190.0	194.0	192.0	195.0
	210.0	210.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
45	250.0	250.0	250.0	250.0	250.0	250.0	190.0	195.0	185.0	195.0
	200.0	260.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
46	250.0	250.0	250.0	250.0	250.0	250.0	250.0	185.0	195.0	185.0
	200.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
47	250.0	250.0	250.0	250.0	250.0	250.0	250.0	190.0	195.0	190.0
	200.0	225.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
48	250.0	250.0	250.0	250.0	250.0	250.0	250.0	210.0	196.0	194.0
	197.0	200.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
49	250.0	250.0	250.0	250.0	250.0	250.0	250.0	190.0	196.0	195.0
	198.0	200.0	220.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
50	250.0	250.0	250.0	250.0	250.0	250.0	250.0	190.0	197.0	196.0
	198.0	200.0	220.0	230.0	240.0	210.0	250.0	250.0	250.0	250.0
	250.0	250.0								
51	250.0	250.0	250.0	250.0	250.0	250.0	250.0	190.0	197.0	196.0
	198.0	200.0	212.0	230.0	240.0	275.0	280.0	250.0	250.0	250.0
	250.0	250.0								
52	250.0	250.0	250.0	250.0	250.0	250.0	250.0	200.0	198.0	197.0
	200.0	220.0	230.0	245.0	250.0	278.0	285.0	250.0	250.0	250.0
	250.0	250.0								
53	250.0	250.0	250.0	250.0	250.0	250.0	250.0	200.0	199.0	198.0
	220.0	225.0	185.0	190.0	210.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
54	250.0	250.0	250.0	250.0	250.0	250.0	250.0	220.0	199.0	198.0
	200.0	225.0	210.0	210.0	250.0	250.0	250.0	250.0	250.0	250.0

	250.0	250.0								
55	250.0	250.0	250.0	250.0	250.0	250.0	250.0	200.0	199.0	199.0
	200.0	225.0	210.0	210.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
56	250.0	250.0	250.0	250.0	250.0	250.0	250.0	220.0	200.0	200.0
	200.0	225.0	210.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								

SOLUTION BY THE STRONGLY IMPLICIT PROCEDURE

MAXIMUM ITERATIONS ALLOWED FOR CLOSURE = 750
 ACCELERATION PARAMETER = 0.50000
 HEAD CHANGE CRITERION FOR CLOSURE = 0.10000E-02
 SIP HEAD CHANGE PRINTOUT INTERVAL = 999

CALCULATE ITERATION PARAMETERS FROM MODEL CALCULATED WSEED

INITIAL TIME STEP SIZE = 86400.00

1 WELLS

LAYER	ROW	COL	STRESS RATE	WELL NO.
1	17	15	0.00000E+00	1

RECHARGE WILL BE READ ON UNIT 18 USING FORMAT: (20F4.0)

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22								

[illegible]

[illegible]

14	1000. 3.010 2.517	1000. 4.361 1000.	1000. 5.902	1000. 6.618	1000. 7.135	18.97 6.325	-3.329 6.322	-1.590 5.179	0.6069 4.888	1.809 3.081
15	1000. 3.547 1000.	1000. 5.140 1000.	1000. 6.931	1000. 6.997	19.94 7.623	19.35 7.492	-2.442 7.142	-0.7077 5.931	1.165 4.742	2.142 4.425
16	1000. 4.120 1000.	1000. 5.827 1000.	1000. 6.877	1000. 8.463	19.97 9.349	17.11 8.584	-2.748 7.969	0.1249 6.684	0.9751 5.542	2.720 1000.
17	1000. 3.541 1000.	1000. 5.359 1000.	1000. 7.551	1000. 8.781	1.0000E+30 11.38	-4.636 8.490	-2.084 7.639	-0.1310 7.288	1.826 6.208	2.374 1000.
18	1000. 3.916 1000.	1000. 5.711 1000.	1000. 6.836	19.80 8.418	26.32 9.479	-4.750 8.572	-2.246 8.021	0.6560 6.774	1.636 6.848	3.137 1000.
19	1000. 4.225 1000.	1000. 5.494 1000.	1000. 6.486	19.96 7.391	27.07 7.856	-3.689 6.922	-1.368 6.819	0.3677 6.845	2.328 6.345	2.832 1000.
20	1000. 3.437 1000.	1000. 5.041 1000.	1000. 5.672	29.72 6.260	10.09 6.661	-2.444 5.841	-0.5132 6.041	0.9964 6.312	2.784 1000.	3.142 1000.
21	1000. 3.211 1000.	1000. 4.380 1000.	1000. 4.774	-3.223 5.268	-2.582 5.628	-0.9775 4.864	0.5188 5.440	1.648 6.188	2.133 1000.	3.155 1000.
22	1000. 3.083 1000.	1000. 3.778 1000.	19.29 3.830	-2.417 4.380	-1.584 3.662	0.5060 3.846	1.565 4.283	2.245 1000.	2.460 1000.	3.359 1000.
23	1000. 3.300 1000.	1000. 2.819 1000.	19.42 3.313	-1.807 2.641	3.0212E-02 2.813	0.9086 2.919	1.616 2.847	1.854 1000.	2.802 1000.	2.597 1000.
24	1000. 2.607 1000.	1000. 2.973 1000.	19.53 1.866	-8.8013E-02 1.892	0.4821 1.933	1.051 2.091	2.449 1.279	2.430 1000.	2.200 1000.	2.892 1000.
25	1000. 2.432 16.14	1000. 1.587 18.85	1000. 1.237	1.043 1.054	0.8517 0.9871	1.995 0.9728	2.094 -0.4216	1.859 -2.007	2.475 -5.632	2.040 -9.379
26	1000. 0.9779 1000.	1000. 0.9128 1000.	1000. 0.6360	1.300 0.4935	1.922 0.4159	1.762 -0.8053	1.596 -0.9883	2.175 -3.130	1.643 -4.562	1.996 1000.
27	1000. 0.5778 40.94	1000. -0.6048 1000.	1000. -0.9140	1.344 -0.9878	1.815 -1.134	1.403 -1.353	1.984 -2.523	1.392 -4.656	1.642 -6.642	0.6880 -10.62
28	1000. -0.7361 1000.	1000. -1.018 1000.	1000. -1.259	1.291 -1.418	1.578 -1.515	1.941 -1.637	1.299 -2.692	0.5275 -5.089	0.5497 -8.230	0.4402 23.04

29	1000. -0.9443 1000.	1000. -1.322 1000.	1000. -2.494	1000. -2.584	1.087 -2.619	0.3168 -2.757	0.5518 -3.987	0.6609 -6.455	-0.4291 24.41	-0.6189 28.61
30	1000. -1.985 1000.	1000. -2.445 1000.	1000. -2.618	9.9594E-02 -2.780	0.4157 -2.878	0.5966 -3.011	-0.2135 -4.051	-0.1620 -5.267	-0.3081 14.62	-0.5737 1000.
31	1000. -1.832 1000.	1000. -2.193 1000.	-0.5063 -2.629	-0.2765 -3.079	-6.9290E-02 -3.109	7.3959E-02 -4.232	0.1386 -6.007	-0.8950 18.59	-1.060 1000.	-1.390 1000.
32	1000. -2.392 1000.	-0.8605 -2.738 1000.	-0.7359 -3.648	-0.6007 -3.811	-0.5117 -3.855	-0.4027 -4.129	-0.4050 -6.290	-0.5343 16.76	-1.741 1000.	-2.162 1000.
33	1000. -1.861 1000.	-9.8724E-03 1000. 1000.	4.5074E-02 -4.566	-0.9083 -4.507	-0.8344 -4.510	-0.8411 -4.775	-0.8894 -6.373	-1.036 18.75	-1.337 1000.	-1.759 1000.
34	1000. -2.763 1000.	-0.2250 1000. 1000.	-0.1765 -4.046	-0.1651 -3.992	-0.1693 -4.108	-1.239 -4.411	-1.300 13.09	-1.340 16.77	-1.743 1000.	-2.341 1000.
35	0.0000E+00 -2.779 1000.	-0.4528 -3.272 1000.	-0.3186 -3.387	-0.3631 -4.410	-0.5066 -4.497	-0.6459 -3.773	-0.7330 -4.427	1000. 1000.	1000. 1000.	-2.409 1000.
36	0.0000E+00 -3.240 1000.	-0.2772 -3.641 1000.	-0.2806 -3.839	-0.5282 -3.914	-0.8482 -3.989	-1.105 -4.245	-1.252 -4.545	1000. 1000.	1000. 1000.	-3.050 1000.
37	0.0000E+00 -2.761 1000.	-0.4075 -3.071 1000.	1.0773E-02 -3.299	-0.6209 -3.410	-1.253 -3.511	-0.6731 -3.704	-0.9185 19.35	1000. 1000.	1000. 1000.	-2.529 1000.
38	0.0000E+00 -3.314 1000.	-0.2414 -3.582 1000.	-0.6479 -3.719	-0.7130 -3.852	-0.8701 -3.925	-1.416 -4.139	-1.830 19.77	-1.466 17.89	-1.829 1000.	-3.012 1000.
39	0.0000E+00 -2.723 1000.	0.3092 -4.037 1000.	1000. -4.225	1000. -4.380	-1.730 -4.468	-1.993 -4.876	-1.312 19.88	-1.647 19.39	-1.954 1000.	-2.316 1000.
40	0.0000E+00 -2.795 1000.	0.1390 -3.020 1000.	1000. -4.301	1000. -4.604	-1.094 5.168	-1.301 19.84	-1.538 1000.	-1.797 1000.	-2.120 1000.	-2.484 1000.
41	0.0000E+00 -2.897 1000.	-5.3406E-04 -3.088 1000.	1000. 1000.	1000. 1000.	-1.347 1000.	-1.558 1000.	-1.754 1000.	-1.991 1000.	-2.267 1000.	-2.602 1000.
42	0.0000E+00 -1.874 1000.	1000. -2.074 1000.	1000. 1000.	1000. 1000.	1000. 1000.	-1.830 1000.	-0.9656 1000.	-1.141 1000.	-1.356 1000.	-1.624 1000.
43	1000. -1.746 1000.	1000. 15.92 1000.	1000. 1000.	1000. 1000.	1000. 1000.	-0.9772 1000.	-1.099 1000.	-1.247 1000.	-1.413 1000.	-1.574 1000.

44	1000. -1.645 1000.	1000. -0.8660 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	-1.194 1000.	-1.270 1000.	-1.385 1000.	-1.508 1000.
45	1000. -0.5097 1000.	1000. -0.6688 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	-1.206 1000.	-1.215 1000.	-0.2755 1000.	-0.3831 1000.
46	1000. -0.3336 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	-5.3421E-02 1000.	-6.0913E-02 1000.	-0.2125 1000.
47	1000. 0.7056 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	0.1723 1000.	0.3416 1000.	-4.1290E-02 1000.
48	1000. 0.4960 1000.	1000. 1.051 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	0.3431 1000.	2.8641E-02 1000.
49	1000. 0.9264 1000.	1000. 1.426 1000.	1000. 1.650	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	-0.1511 1000.	0.6565 1000.
50	1000. 1.035 1000.	1000. 1.594 1000.	1000. 2.095	1000. 1.788	1000. 1.625	1000. 1000.	1000. 1000.	1000. 1000.	0.6343 1000.	0.7271 1000.
51	1000. 1.220 1000.	1000. 1.962 1000.	1000. 1.749	1000. 1.574	1000. 1.457	1000. 2.176	1000. 1000.	0.4977 1000.	0.1754 1000.	1.683 1000.
52	1000. 1.613 1000.	1000. 1.520 1000.	1000. 1.543	1000. 1.461	1000. 1.375	1000. 2.140	1000. 1000.	0.7988 1000.	0.9737 1000.	0.7997 1000.
53	1000. 2.039 1000.	1000. 2.034 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1.142 1000.	1.129 1000.	1.033 1000.
54	1000. 1.502 1000.	1000. 1.573 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1.586 1000.	1.469 1000.	1.174 1000.
55	1000. 2.061 1000.	1000. 1.208 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1.205 1000.	1.972 1000.	1.532 1000.
56	1000. 1.829 1000.	1000. 2.004 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1.881 1000.	1.678 1000.	1.348 1000.

VOLUMETRIC BUDGET FOR ENTIRE MODEL AT END OF TIME STEP150 IN STRESS PERIOD 1

CUMULATIVE VOLUMES

L**3

RATES FOR THIS TIME STEP

L**3/T

IN:

 STORAGE = 0.58069E+08
 CONSTANT HEAD = 0.24571E+06
 WELLS = 0.00000E+00
 RIVER LEAKAGE = 0.20708E+07
 HEAD DEP BOUNDS = 0.10015E+08

 TOTAL IN = 0.70400E+08

 OUT:

 STORAGE = 0.22365E+08
 CONSTANT HEAD = 0.10432E+07
 WELLS = 0.19059E+08
 RIVER LEAKAGE = 0.39234E+07
 HEAD DEP BOUNDS = 0.23623E+08

 TOTAL OUT = 0.70013E+08

 IN - OUT = 0.38692E+06

 PERCENT DISCREPANCY = 0.55

IN:

 STORAGE = 2.1851
 CONSTANT HEAD = 0.27843E-01
 WELLS = 0.00000E+00
 RIVER LEAKAGE = 0.14850
 HEAD DEP BOUNDS = 0.68729

 TOTAL IN = 3.0487

 OUT:

 STORAGE = 0.27513E-02
 CONSTANT HEAD = 0.55447E-01
 WELLS = 1.2255
 RIVER LEAKAGE = 0.22469
 HEAD DEP BOUNDS = 1.4930

 TOTAL OUT = 3.0014

 IN - OUT = 0.47358E-01

 PERCENT DISCREPANCY = 1.57

TIME SUMMARY AT END OF TIME STEP150 IN STRESS PERIOD 1					
	SECONDS	MINUTES	HOURS	DAYS	YEARS
TIME STEP LENGTH	0.202852E+07	33808.6	563.477	23.4782	0.642798E-01
STRESS PERIOD TIME	0.155520E+08	259199.	4319.99	180.000	0.492812
TOTAL SIMULATION TIME	0.155520E+08	259199.	4319.99	180.000	0.492812


```

55  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  2.3200E-08  2.3200E-08  2.3200E-08
    2.3200E-08  2.3200E-08  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00
    0.0000E+00  0.0000E+00

56  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  2.3200E-08  2.3200E-08  2.3200E-08
    2.3200E-08  2.3200E-08  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00
    0.0000E+00  0.0000E+00
  
```

9 RIVER REACHES

LAYER	ROW	COL	STAGE	CONDUCTANCE	BOTTOM ELEVATION	RIVER REACH
1	56	10	212.0	0.2800E-01	210.0	1
1	55	10	211.0	0.2800E-01	209.0	2
1	54	10	209.0	0.2800E-01	207.0	3
1	53	9	207.0	0.2800E-01	205.0	4
1	52	9	206.0	0.2800E-01	204.0	5
1	51	9	204.0	0.2800E-01	202.0	6
1	50	9	202.0	0.2800E-01	200.0	7
1	49	9	200.0	0.2800E-01	198.0	8
1	48	9	198.0	0.2800E-01	196.0	9

13 HEAD-DEPENDENT BOUNDARY NODES

LAYER	ROW	COL	ELEVATION	CONDUCTANCE	BOUND NO.
1	1	16	172.0	0.3420	1
1	1	17	169.0	0.3420	2
1	1	18	166.0	999.1	3
1	1	19	160.0	999.1	4
1	1	20	158.0	999.1	5
1	1	21	157.0	999.1	6
1	1	22	158.0	999.1	7
1	2	22	159.0	999.1	8
1	3	22	159.0	999.1	9
1	4	22	164.0	999.1	10
1	5	22	166.0	999.1	11
1	6	22	168.0	999.1	12
1	1	15	174.0	999.1	13

AVERAGE SEED = 0.00068953
 MINIMUM SEED = 0.00000003

5 ITERATION PARAMETERS CALCULATED FROM AVERAGE SEED:

0.0000000E+00 0.8379539E+00 0.9737411E+00 0.9957448E+00 0.9993105E+00

```

*****NODE 5 8 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 3 TIME STEP = 1 STRESS PERIOD = 1
*****NODE 6 8 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 3 TIME STEP = 1 STRESS PERIOD = 1
*****NODE 5 9 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 3 TIME STEP = 1 STRESS PERIOD = 1
*****NODE 6 9 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 3 TIME STEP = 1 STRESS PERIOD = 1
  
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[illegible]

*****NODE 6 12 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 4 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 6 13 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 4 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 6 14 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 4 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 6 15 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 4 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 6 16 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 4 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 5 18 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 4 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 5 19 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 4 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 4 20 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 4 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 5 20 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 4 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 20 29 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 4 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 19 30 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 4 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 18 31 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 4 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 15 40 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 4 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 16 40 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 4 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 8 1 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 5 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 8 2 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 5 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 8 3 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 6 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 8 4 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 6 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 8 5 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 6 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 7 12 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 6 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 8 9 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 7 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 21 25 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 7 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 19 29 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 7 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 20 26 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 8 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 20 28 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 8 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 17 31 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 9 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 12 43 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 9 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 21 27 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 12 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 17 32 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 12 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 12 44 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 12 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 8 6 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 15 TIME STEP = 1 STRESS PERIOD = 1

*****NODE 8 8 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 52 TIME STEP = 1 STRESS PERIOD = 1

68 ITERATIONS FOR TIME STEP 1 IN STRESS PERIOD 1

MAXIMUM HEAD CHANGE FOR EACH ITERATION:

HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL

-24.67	(1, 44, 12)	-22.45	(1, 10, 5)	-22.85	(1, 20, 4)	4.133	(1, 39, 13)	-4.899	(1, 9, 8)
30.13	(1, 6, 8)	-16.88	(1, 6, 8)	-8.439	(1, 6, 8)	-4.599	(1, 6, 8)	4.197	(1, 6, 8)
-3.587	(1, 6, 8)	4.355	(1, 8, 8)	-3.660	(1, 8, 8)	-2.278	(1, 6, 8)	0.9601	(1, 8, 8)
-1.429	(1, 8, 8)	55.47	(1, 8, 8)	-29.44	(1, 8, 8)	-14.77	(1, 8, 8)	-7.262	(1, 8, 8)
-3.405	(1, 8, 8)	0.3596	(1, 8, 8)	-0.7244	(1, 8, 8)	4.004	(1, 8, 8)	-3.581	(1, 8, 8)
-0.1329	(1, 27, 20)	-0.2413	(1, 8, 8)	0.7454	(1, 8, 8)	-1.257	(1, 8, 8)	49.83	(1, 8, 8)
-26.65	(1, 8, 8)	-13.32	(1, 8, 8)	-6.585	(1, 8, 8)	-2.986	(1, 8, 8)	2.789	(1, 8, 8)
-2.861	(1, 8, 8)	4.182	(1, 8, 8)	-3.667	(1, 8, 8)	-0.1892	(1, 8, 8)	0.5598	(1, 8, 8)
-1.024	(1, 8, 8)	11.83	(1, 8, 8)	-7.636	(1, 8, 8)	-3.592	(1, 8, 8)	-0.7479E-02	(1, 8, 8)
0.1942E-01	(1, 8, 8)	-0.4866E-01	(1, 8, 8)	0.1282	(1, 8, 8)	-0.2979	(1, 8, 8)	0.9765	(1, 8, 8)
-1.508	(1, 8, 8)	-0.4314E-01	(1, 8, 9)	-0.4245E-01	(1, 8, 9)	-0.8038E-02	(1, 7, 9)	-0.1866E-01	(1, 8, 9)
0.2476E-01	(1, 5, 9)	-0.1120E-01	(1, 5, 9)	-0.3309E-02	(1, 7, 9)	-0.7607E-02	(1, 8, 9)	-0.2190E-02	(1, 19, 19)
0.7699E-02	(1, 5, 9)	-0.3740E-02	(1, 5, 9)	-0.1405E-02	(1, 8, 9)	-0.1142E-02	(1, 19, 19)	-0.2147E-02	(1, 8, 9)
0.3810E-02	(1, 5, 9)	-0.1541E-02	(1, 5, 9)	-0.5327E-03	(1, 19, 19)				

HEAD/DRAWDOWN PRINTOUT FLAG = 1 TOTAL BUDGET PRINTOUT FLAG = 1 CELL-BY-CELL FLOW TERM FLAG = 0

OUTPUT FLAGS FOR ALL LAYERS ARE THE SAME:

HEAD PRINTOUT	DRAWDOWN PRINTOUT	HEAD SAVE	DRAWDOWN SAVE
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1	1	1	0
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HEAD IN LAYER 1 AT END OF TIME STEP 1 IN STRESS PERIOD 1

31

	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22								
1	1000. 172.7 157.0	1000. 172.6 158.0	1000. 172.6	1000. 173.3	1000. 174.0	1000. 171.6	1000. 169.0	1.0000E+30 166.0	173.1 160.0	172.9 158.0
2	1000. 172.7 159.9	1000. 172.4 159.0	1000. 172.2	1000. 171.9	1000. 171.4	1000. 170.8	1.0000E+30 169.1	1.0000E+30 166.3	173.1 163.2	172.9 161.1
3	1000. 172.7 161.7	1000. 172.3 159.0	1000. 172.0	1000. 171.6	1000. 171.2	1000. 170.5	1.0000E+30 168.8	1.0000E+30 166.9	173.2 165.1	173.0 163.4
4	1000. 172.8 164.4	1000. 172.4 164.0	1000. 172.1	1000. 171.7	1000. 171.3	1000. 170.5	1.0000E+30 169.2	1.0000E+30 167.7	173.3 166.5	173.2 165.5
5	1000. 173.1 166.4	1000. 172.6 166.0	1000. 172.3	1000. 172.0	1000. 171.6	1000. 171.0	1.0000E+30 169.9	1.0000E+30 168.7	175.7 167.7	173.6 166.9
6	1000. 173.7 167.5	1000. 173.1 168.0	1000. 172.8	1000. 172.4	1000. 172.1	1000. 171.6	1000. 170.7	1.0000E+30 169.9	175.2 168.9	174.3 167.9
7	1000. 174.4 168.7	1000. 173.7 168.6	1000. 173.4	1000. 173.1	1000. 172.8	1000. 172.3	1000. 171.6	1000. 171.0	175.7 170.1	174.9 169.3
8	1000. 175.1 170.0	1000. 174.5 169.4	1000. 174.1	1000. 173.8	1.0000E+30 173.6	1.0000E+30 173.2	1.0000E+30 172.6	1.0000E+30 172.0	176.1 171.3	175.5 170.8
9	1000. 175.6 171.1	1000. 175.2 1000.	1000. 174.9	1000. 174.6	1.0000E+30 174.4	1.0000E+30 174.1	1.0000E+30 173.6	1.0000E+30 172.9	176.8 172.5	176.3 171.9
10	1000. 176.7 1000.	1000. 176.1 1000.	1000. 175.7	1000. 175.5	1.0000E+30 175.3	1.0000E+30 175.0	1.0000E+30 174.6	178.5 174.0	177.6 173.6	177.4 173.2
11	1000. 177.6 1000.	1000. 177.0 1000.	1000. 176.6	1000. 176.3	1000. 176.1	1.0000E+30 176.0	1.0000E+30 175.6	179.0 175.1	178.2 174.8	177.9 174.5
12	1000. 178.3 1000.	1000. 177.8 1000.	1000. 177.6	1000. 177.2	1000. 177.0	1.0000E+30 176.7	1.0000E+30 176.4	179.6 176.1	179.0 175.8	178.5 175.6
13	1000. 178.8 176.4	1000. 178.5 1000.	1000. 178.4	1000. 178.2	1000. 178.0	1.0000E+30 177.7	180.9 177.2	180.2 177.0	179.7 176.6	179.1 176.3

14	1000. 179.5 176.6	1000. 179.2 1000.	1000. 179.0	1000. 178.9	1000. 178.8	1.0000E+30 178.7	181.5 178.3	180.9 177.9	180.5 177.5	180.0 177.0
15	1000. 180.3 1000.	1000. 179.8 1000.	1000. 179.4	1000. 179.4	1.0000E+30 179.3	1.0000E+30 179.3	182.1 179.1	181.6 178.5	181.3 178.1	180.8 177.7
16	1000. 180.8 1000.	1000. 180.2 1000.	1000. 179.8	1000. 179.8	1.0000E+30 179.7	1.0000E+30 179.6	182.6 179.5	182.0 179.0	181.7 178.6	181.4 1000.
17	1000. 181.3 1000.	1000. 180.6 1000.	1000. 180.2	1000. 180.1	1.0000E+30 180.0	184.0 180.0	183.0 179.9	182.4 179.5	182.0 179.2	181.8 1000.
18	1000. 181.8 1000.	1000. 181.1 1000.	1000. 180.6	1.0000E+30 180.5	1.0000E+30 180.4	184.2 180.4	183.3 180.3	182.8 180.0	182.4 179.6	182.2 1000.
19	1000. 182.3 1000.	1000. 181.7 1000.	1000. 181.2	1.0000E+30 181.1	1.0000E+30 181.0	184.6 180.9	183.8 180.8	183.3 180.6	182.9 180.1	182.6 1000.
20	1000. 182.9 1000.	1000. 182.4 1000.	1000. 182.0	1.0000E+30 181.8	1.0000E+30 181.7	185.3 181.7	184.5 181.5	184.0 181.4	183.6 1000.	183.2 1000.
21	1000. 183.6 1000.	1000. 183.3 1000.	1000. 182.8	187.5 182.6	187.0 182.5	186.1 182.4	185.3 182.2	184.7 181.8	184.3 1000.	184.0 1000.
22	1000. 184.3 1000.	1000. 184.0 1000.	1.0000E+30 183.6	187.7 183.3	187.2 183.2	186.5 183.1	185.9 183.0	185.3 1000.	184.9 1000.	184.6 1000.
23	1000. 184.7 1000.	1000. 184.5 1000.	1.0000E+30 184.2	188.0 184.0	187.6 183.9	186.9 183.8	186.3 183.8	185.9 1000.	185.5 1000.	185.1 1000.
24	1000. 185.1 1000.	1000. 184.9 1000.	1.0000E+30 184.8	188.4 184.7	188.0 184.6	187.4 184.5	186.8 184.7	186.3 1000.	185.9 1000.	185.5 1000.
25	1000. 185.7 1.0000E+30	1000. 185.4 1.0000E+30	1000. 185.4	188.7 185.3	188.4 185.3	187.8 185.2	187.2 185.5	186.8 185.9	186.4 186.4	186.0 187.4
26	1000. 186.4 1.0000E+30	1000. 186.1 1000.	1000. 186.0	189.0 185.9	188.7 185.9	188.3 185.9	187.8 186.0	187.3 186.2	187.0 186.6	186.6 1.0000E+30
27	1000. 187.1 1.0000E+30	1000. 186.8 1000.	1000. 186.7	189.3 186.6	189.1 186.5	188.8 186.5	188.3 186.5	187.9 186.6	187.6 186.8	187.3 187.2
28	1000. 187.8 1000.	1000. 187.5 1000.	1000. 187.3	189.5 187.2	189.5 187.2	189.3 187.1	188.9 187.0	188.5 186.9	188.3 186.9	188.0 1.0000E+30

29	1000. 188.4 1000.	1000. 188.2 1000.	1000. 188.0	1000. 187.8	190.2 187.7	189.9 187.6	189.5 187.5	189.2 187.4	188.9 1.0000E+30	188.7 1.0000E+30
30	1000. 189.0 1000.	1000. 188.8 1000.	1000. 188.6	191.8 188.6	191.2 188.5	190.8 188.2	190.2 187.9	189.8 187.9	189.6 1.0000E+30	189.3 1000.
31	1000. 189.6 1000.	1000. 189.3 1000.	193.2 189.3	192.6 189.3	192.0 189.3	191.4 189.1	190.9 1.0000E+30	190.5 1.0000E+30	190.2 1000.	189.9 1000.
32	1000. 190.2 1000.	194.4 189.8 1000.	193.9 189.8	193.3 189.8	192.8 189.8	192.2 189.8	191.6 1.0000E+30	191.1 1.0000E+30	190.8 1000.	190.6 1000.
33	1000. 191.0 1000.	195.0 1000. 1000.	194.6 190.4	194.1 190.4	193.4 190.3	192.9 190.4	192.3 190.4	191.7 1.0000E+30	191.3 1000.	191.2 1000.
34	1000. 191.8 1000.	196.1 1000. 1000.	195.5 191.1	194.9 191.0	194.3 191.0	193.7 191.0	193.1 1.0000E+30	192.1 1.0000E+30	191.7 1000.	191.7 1000.
35	200.0 192.5 1000.	197.7 192.4 1000.	196.4 191.8	195.6 191.6	195.0 191.7	194.6 191.7	194.3 192.2	1000. 1000.	1000. 1000.	192.4 1000.
36	200.0 192.9 1000.	198.0 192.8 1000.	196.9 192.5	196.1 192.4	195.6 192.4	195.3 192.4	195.1 192.4	1000. 1000.	1000. 1000.	193.0 1000.
37	198.0 193.5 1000.	197.5 193.3 1000.	196.9 193.1	196.4 193.0	196.1 193.0	195.8 193.0	195.7 1.0000E+30	1000. 1000.	1000. 1000.	193.7 1000.
38	197.0 194.7 1000.	196.6 194.1 1000.	196.6 193.5	196.5 193.4	196.4 193.4	196.3 193.3	196.3 1.0000E+30	196.3 1.0000E+30	196.0 1000.	195.1 1000.
39	195.0 195.5 1000.	195.6 195.1 1000.	1000. 194.3	1000. 193.9	196.6 193.8	196.6 193.7	196.6 1.0000E+30	196.5 1.0000E+30	196.3 1000.	195.9 1000.
40	196.0 196.2 1000.	195.8 195.7 1000.	1000. 194.9	1000. 194.5	196.8 1.0000E+30	196.8 1.0000E+30	196.9 1000.	196.8 1000.	196.7 1000.	196.5 1000.
41	198.0 196.9 1000.	196.9 196.6 1000.	1000. 1000.	1000. 1000.	196.9 1000.	197.1 1000.	197.2 1000.	197.3 1000.	197.2 1000.	197.1 1000.
42	200.0 197.6 1000.	1000. 197.2 1000.	1000. 1000.	1000. 1000.	1000. 1000.	197.5 1000.	197.6 1000.	197.7 1000.	197.8 1000.	197.8 1000.
43	1000. 198.3 1000.	1000. 1.0000E+30 1000.	1000. 1000.	1000. 1000.	1000. 1000.	197.8 1000.	198.0 1000.	198.3 1000.	198.4 1000.	198.4 1000.

44	1000. 198.9 1000.	1000. 1.0000E+30 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	198.6 1000.	198.8 1000.	198.9 1000.	199.0 1000.
45	1000. 199.6 1000.	1000. 199.7 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	199.0 1000.	199.2 1000.	199.5 1000.	199.6 1000.
46	1000. 200.5 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	199.9 1000.	200.2 1000.	200.3 1000.
47	1000. 201.5 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	200.4 1000.	200.8 1000.	201.2 1000.
48	1000. 202.5 1000.	1000. 203.2 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	201.2 1000.	202.0 1000.
49	1000. 203.5 1000.	1000. 204.1 1000.	1000. 204.9	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	202.2 1000.	202.9 1000.
50	1000. 204.7 1000.	1000. 205.1 1000.	1000. 205.6	1000. 205.8	1000. 206.0	1000. 1000.	1000. 1000.	1000. 1000.	203.5 1000.	204.1 1000.
51	1000. 205.6 1000.	1000. 205.8 1000.	1000. 205.9	1000. 206.1	1000. 206.2	1000. 206.4	1000. 1000.	205.5 1000.	204.9 1000.	205.2 1000.
52	1000. 206.2 1000.	1000. 206.2 1000.	1000. 206.1	1000. 206.2	1000. 206.2	1000. 206.4	1000. 1000.	206.2 1000.	206.0 1000.	206.1 1000.
53	1000. 206.7 1000.	1000. 206.7 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	206.8 1000.	206.7 1000.	206.7 1000.
54	1000. 207.1 1000.	1000. 207.0 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	207.2 1000.	207.2 1000.	207.4 1000.
55	1000. 207.5 1000.	1000. 207.3 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	207.5 1000.	207.6 1000.	207.8 1000.
56	1000. 207.6 1000.	1000. 207.5 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	207.7 1000.	207.8 1000.	207.9 1000.

HEAD WILL BE SAVED ON UNIT 23 AT END OF TIME STEP 1, STRESS PERIOD 1

	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22								
1	1000. 0.2931 -5.1880E-04	1000. 0.4324 0.0000E+00	1000. 0.3546	1000. -0.2523	1000. 5.7983E-04	1000. 0.3542	1000. 4.5837E-02	1.0000E+30 2.8992E-04	-0.1054 -7.6294E-04	8.5175E-02 -5.0354E-04
2	1000. 0.3353 0.1227	1000. -0.4082 1.5259E-05	1000. -0.1809	1000. 0.1372	1000. -0.4080	1000. 0.2220	1.0000E+30 -7.0480E-02	1.0000E+30 -0.3029	-0.1319 -0.1665	7.2464E-02 -0.1057
3	1000. 0.3238 0.3314	1000. -0.3430 -8.8501E-04	1000. -3.0853E-02	1000. 0.3786	1000. -0.1977	1000. -0.4624	1.0000E+30 0.1501	1.0000E+30 9.2438E-02	-0.2060 -0.1326	4.1504E-03 -0.3787
4	1000. 0.2188 -0.4174	1000. -0.4201 2.7466E-04	1000. -8.8394E-02	1000. 0.3287	1000. -0.2531	1000. -0.5211	1.0000E+30 -0.1747	1.0000E+30 0.2841	-0.3367 -0.4611	-0.1678 -0.4781
5	1000. -0.1053 -0.4339	1000. 0.3566 -6.1035E-05	1000. -0.3460	1000. 3.6179E-02	1000. 0.4121	1000. 4.9835E-02	1.0000E+30 9.6237E-02	1.0000E+30 0.2559	19.35 0.3044	0.3869 0.1312
6	1000. 0.3361 -0.5004	1000. -8.1787E-02 2.7466E-04	1000. 0.2075	1000. -0.4496	1000. -0.1198	1000. 0.4247	1000. 0.2539	1.0000E+30 0.1457	-0.2250 0.1100	-0.2608 6.8970E-02
7	1000. -0.3714 0.3390	1000. 0.3085 0.3874	1000. -0.3896	1000. -7.8415E-02	1000. 0.2148	1000. -0.3034	1000. 0.3510	1000. 1.9135E-02	0.3086 -6.1203E-02	6.3919E-02 -0.3126
8	1000. -8.2443E-02 -3.7079E-02	1000. -0.4593 -0.4167	1000. -9.0469E-02	1000. 0.1867	1.0000E+30 0.4375	1.0000E+30 -0.1742	1.0000E+30 0.4325	1.0000E+30 -4.3900E-02	-0.1393 -0.3468	-0.5320 0.2378
9	1000. 0.3603 -0.1400	1000. -0.2424 1000.	1000. 0.1285	1000. 0.3989	1.0000E+30 -0.3724	1.0000E+30 -7.5089E-02	1.0000E+30 0.3822	1.0000E+30 8.0231E-02	0.1928 -0.4600	-0.3381 0.1252
10	1000. 0.3178 1000.	1000. -7.1762E-02 1000.	1000. 0.2861	1000. -0.4712	1.0000E+30 -0.2870	1.0000E+30 -3.5812E-02	1.0000E+30 0.3962	-0.4927 -8.0872E-04	-0.5619 0.4215	-0.3718 -0.1508
11	1000. 0.3629 1000.	1000. -2.9724E-02 1000.	1000. 0.3744	1000. -0.3315	1000. -0.1429	1.0000E+30 8.8348E-03	1.0000E+30 0.3915	-2.0920E-02 -0.1200	-0.2314 0.2311	7.1259E-02 -0.5202
12	1000. -0.2547 1000.	1000. 0.1617 1000.	1000. 0.3875	1000. -0.2452	1000. 1.0513E-02	1.0000E+30 0.3028	1.0000E+30 -0.4022	0.3865 -0.1247	4.3488E-03 0.2110	-0.5255 -0.5730
13	1000. 0.2102 13.61	1000. -0.5365 1000.	1000. -0.4410	1000. -0.2027	1000. -2.7222E-02	1.0000E+30 0.2617	5.5817E-02 -0.2332	-0.2199 1.0834E-02	0.3189 0.3695	-0.1435 -0.2583

14	1000. -0.5378 13.39	1000. -0.2245 1000.	1000. -1.2894E-02	1000. 9.0637E-02	1000. 0.1694	1.0000E+30 0.2629 -0.3115	-0.4920 6.2927E-02 9.6085E-02	-0.5232 -0.5410	3.6469E-03 7.952
15	1000. -0.2863 1000.	1000. 0.2057 1000.	1000. -0.4491	1000. -0.4213	1.0000E+30 -0.3431	1.0000E+30 -0.2868 -9.1415E-02	-0.1155 -0.5577 -0.5240	-0.2870 -6.9077E-02	0.1684 0.2801
16	1000. 0.2142 1000.	1000. -0.2078 1000.	1000. 0.1891	1000. 0.2446	1.0000E+30 0.3169	1.0000E+30 0.3515 -0.5490	3.1387E-02 -2.7527E-02	0.3302 0.4194	-0.3843 1000.
17	1000. -0.2964 1000.	1000. 0.3609 1000.	1000. -0.2342	1000. -9.6527E-02	1.0000E+30 -1.6891E-02	6.5155E-03 -9.6283E-03 8.7387E-02	3.0670E-03 -0.3809 -0.5473	-4.0741E-02 -0.1622	0.1653 1000.
18	1000. 0.1939 1000.	1000. -7.3532E-02 1000.	1000. 0.3541	1.0000E+30 -0.4935	1.0000E+30 -0.4002 -0.3792	-0.1602 -0.2933 -0.2842	0.2439 5.7983E-03	-0.3964 0.3845	-0.1507 1000.
19	1000. -0.3236 1000.	1000. 0.2825 1000.	1000. -0.2463	1.0000E+30 -8.6700E-02	1.0000E+30 -9.1553E-05 5.9036E-02	-0.5672 0.2143 0.1597	-0.2911 9.0500E-02 -0.5960	9.0500E-02 -0.1060	-0.6099 1000.
20	1000. 0.1472 1000.	1000. -0.4410 1000.	1000. 1.3885E-02	1.0000E+30 0.1603	1.0000E+30 0.2705 0.3290	-0.2549 -0.5459 -0.5474	2.1820E-03 -0.5825 -0.3585	-0.5825 1000.	-0.2380 1000.
21	1000. -0.6133 1000.	1000. -0.2711 1000.	1000. 0.2263	-0.5206 -0.6059	-0.9530 -0.4792	-6.0867E-02 -0.3928 -0.1566	-0.2910 -0.6916 0.1624	-0.2667 1000.	4.5502E-02 1000.
22	1000. -0.3158 1000.	1000. -3.8986E-02 1000.	1.0000E+30 -0.5844	12.29 -0.3464	-0.2172 -0.2237	-0.5436 -0.1410	9.7687E-02 4.0924E-02	-0.3446 1000.	8.6563E-02 1000. 1000.
23	1000. 0.2552 1000.	1000. -0.4808 1000.	1.0000E+30 -0.2070	12.00 -1.8066E-02	-0.5565 8.5266E-02	7.1121E-02 0.1545 0.1696	-0.3374 0.1330 1000.	-0.4576 1000.	-8.6548E-02 1000.
24	1000. -0.1059 1000.	1000. 0.1456 1000.	1.0000E+30 0.2228	11.64 0.3261	4.5578E-02 -0.6015 -0.4974	-0.3528 0.2389 0.3260	-0.3112 1000.	8.4000E-02 1000.	-0.5303 1000.
25	1000. 0.3158 1.0000E+30	1000. -0.4067 1.0000E+30	1000. -0.3798	0.3312 -0.3442	-0.3556 -0.3059	0.1769 -0.2275	-0.2419 -0.4515	0.1905 0.1411	-0.4244 -0.3585 -4.2557E-02 -0.4362
26	1000. -0.3663 1.0000E+30	1000. -0.1118 1000.	1000. -1.3397E-02	1.8265E-02 5.0873E-02	0.2659 8.4000E-02	-0.2979 0.1019	0.2421 2.6642E-02	-0.3468 -0.2164	2.0325E-02 -0.6053 1.0000E+30
27	1000. -5.7510E-02 1.0000E+30	1000. 0.1963 1000.	1000. 0.3139	-0.2996 -0.5792	-0.1218 -0.5464	0.2337 -0.5113	-0.3081 -0.5024	7.5562E-02 -0.5844	-0.6105 0.1686 -0.3297 -0.2082
28	1000. 0.2398 1000.	1000. -0.4918 1000.	1000. -0.3139	-0.5498 -0.2416	-0.5385 -0.1760	-0.2687 -8.7204E-02	0.1178 3.0350E-02	-0.5224 0.1199	-0.2913 0.1440 -4.9866E-02 1.0000E+30

29	1000. -0.4415 1000.	1000. -0.1988 1000.	1000. 4.0451E-02 1000.	1000. 0.1708 1000.	-0.2492 0.2534 1000.	9.5673E-02 0.3671 1000.	-0.4905 -0.4839 1000.	-0.1520 -0.3799 1000.	5.7419E-02 1.0000E+30 1000.	0.3026 1.0000E+30 1000.
30	1000. -4.2938E-02 1000.	1000. 0.1596 1000.	1000. 0.3715 1000.	0.1693 -0.5531 1000.	-0.1970 -0.4513 1000.	0.2489 -0.2218 1000.	-0.2387 6.6132E-02 1000.	0.1797 8.9493E-02 1000.	-0.5667 1.0000E+30 1000.	-0.3152 1000. 1000.
31	1000. 0.3622 1000.	1000. -0.3232 1000.	-0.2381 -0.2546 1000.	-0.5851 -0.3425 1000.	3.5278E-02 -0.2827 1000.	-0.4175 -5.2826E-02 1000.	5.0140E-02 1.0000E+30 1000.	-0.4859 1.0000E+30 1000.	-0.1673 1000. 1000.	6.6406E-02 1000. 1000.
32	1000. -0.1960 1000.	-0.4066 0.2131 1000.	0.1090 0.1574 1000.	-0.2867 0.2001 1000.	0.2337 0.2090 1000.	-0.1593 0.2421 1000.	0.3852 1.0000E+30 1000.	-0.1429 1.0000E+30 1000.	0.2463 1000. 1000.	-0.5672 1000. 1000.
33	1000. 2.6260E-02 1000.	-2.5406E-02 1000. 1000.	0.3950 -0.4286 1000.	-7.7698E-02 -0.3830 1000.	-0.4393 -0.3257 1000.	7.3776E-02 -0.3597 1000.	-0.2900 9.639 1000.	0.2897 1.0000E+30 1000.	-0.3186 1000. 1000.	-0.2225 1000. 1000.
34	1000. 0.1912 1000.	-0.1486 1000. 1000.	-0.5101 -6.8268E-02 1000.	0.1260 -2.0599E-02 1000.	-0.2617 -6.7596E-03 1000.	0.2865 1.6602E-02 1000.	-9.9808E-02 1.0000E+30 1000.	-0.1434 1.0000E+30 1000.	0.2932 1000. 1000.	0.2965 1000. 1000.
35	0.0000E+00 -0.4738 1000.	0.2770 -0.3624 1000.	-0.4279 0.1922 1000.	0.3816 0.3519 1000.	-1.7395E-02 0.3385 1000.	0.4337 0.2864 1000.	-0.2524 -0.1532 1000.	1000. 1000. 1000.	1000. 1000. 1000.	-0.3907 1000. 1000.
36	0.0000E+00 0.1218 1000.	-4.6448E-02 0.1990 1000.	7.3822E-02 -0.5277 1000.	-0.1366 -0.4188 1000.	0.3769 -0.3977 1000.	-0.2820 -0.4042 1000.	-9.0927E-02 -0.4290 1000.	1000. 1000. 1000.	1000. 1000. 1000.	4.3488E-02 1000. 1000.
37	0.0000E+00 -0.5220 1000.	-0.4778 -0.2523 1000.	0.1438 -8.9661E-02 1000.	-0.3787 -3.8925E-02 1000.	-5.6473E-02 -4.6783E-02 1000.	0.1525 -8.4381E-03 1000.	0.2617 1.0000E+30 1000.	1000. 1000. 1000.	1000. 1000. 1000.	0.2640 1000. 1000.
38	0.0000E+00 0.3388 1000.	0.3961 -0.1072 1000.	0.3581 -0.5049 1000.	-0.4657 -0.4283 1000.	-0.3765 -0.3882 1000.	-0.3133 -0.3465 1000.	-0.2761 1.0000E+30 1000.	-0.3011 1.0000E+30 1000.	2.7649E-02 1000. 1000.	-0.1144 1000. 1000.
39	0.0000E+00 -0.5292 1000.	0.4450 -9.6512E-02 1000.	1000. -0.2861 1000.	1000. 0.1049 1000.	0.4176 0.2393 1000.	0.3965 0.3106 1000.	0.3909 1.0000E+30 1000.	-0.5345 1.0000E+30 1000.	-0.3428 1000. 1000.	7.4280E-02 1000. 1000.
40	0.0000E+00 -0.2324 1000.	0.1570 0.2845 1000.	1000. 0.1336 1000.	1000. -0.5369 1000.	0.2449 1.0000E+30 1000.	0.1907 1.0000E+30 1000.	0.1446 1000. 1000.	0.1759 1000. 1000.	0.2938 1000. 1000.	-0.4867 1000. 1000.
41	0.0000E+00 7.0038E-02 1000.	7.8491E-02 0.3629 1000.	1000. 1000. 1000.	1000. 1000. 1000.	6.6040E-02 1000. 1000.	-8.3038E-02 1000. 1000.	-0.1785 1000. 1000.	-0.2641 1000. 1000.	-0.2231 1000. 1000.	-8.9478E-02 1000. 1000.
42	0.0000E+00 0.4206 1000.	1000. -0.2016 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	-0.4740 1000. 1000.	0.4023 1000. 1000.	0.2557 1000. 1000.	0.1676 1000. 1000.	0.2176 1000. 1000.
43	1000. -0.2995 1000.	1000. 1.0000E+30 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	0.2218 1000. 1000.	-3.1784E-02 1000. 1000.	-0.2537 1000. 1000.	-0.3972 1000. 1000.	-0.4324 1000. 1000.

44	1000. 0.1245 1000.	1000. 1.0000E+30 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	0.4244 1000.	0.2205 1000.	0.1217 1000.	4.6417E-02 1000.
45	1000. 0.3814 1000.	1000. 0.2888 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	3.9093E-02 1000.	-0.2499 1000.	-0.4638 1000.	0.4051 1000.
46	1000. -0.4664 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000.	9.4513E-02 1000.	-0.1690 1000.	-0.3494 1000.
47	1000. -0.4754 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000.	-0.4282 1000.	0.1798 1000.	-0.1768 1000.
48	1000. -0.4859 1000.	1000. -0.1808 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	-0.2470 1000.	4.9118E-02 1000.
49	1000. -0.4946 1000.	1000. -5.4398E-02 1000.	1000. 8.1345E-02 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	-0.2214 1000.	9.9777E-02 1000.
50	1000. 0.3227 1000.	1000. -8.4427E-02 1000.	1000. 0.4392 1000.	1000. 0.1538 1000.	1000. 5.7678E-03 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	0.4631 1000.	-0.1337 1000.
51	1000. 0.4351 1000.	1000. 0.2248 1000.	1000. 6.3843E-02 1000.	1000. -7.4890E-02 1000.	1000. -0.1635 1000.	1000. -0.3768 1000.	1000. 1000.	0.4534 1000.	7.8461E-02 1000.	-0.2302 1000.
52	1000. -0.1538 1000.	1000. -0.2008 1000.	1000. -0.1454 1000.	1000. -0.1929 1000.	1000. -0.2497 1000.	1000. -0.4155 1000.	1000. 1000.	-0.1912 1000.	2.2522E-02 1000.	-6.1142E-02 1000.
53	1000. 0.3349 1000.	1000. 0.3487 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000.	0.2471 1000.	0.2960 1000.	0.2754 1000.
54	1000. -0.1165 1000.	1000. -4.9011E-02 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000.	-0.1987 1000.	-0.2455 1000.	-0.3909 1000.
55	1000. -0.4545 1000.	1000. -0.3461 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000.	-0.5049 1000.	0.3899 1000.	0.1989 1000.
56	1000. 0.3725 1000.	1000. -0.5058 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000. 1000.	1000. 1000.	0.2502 1000.	0.1865 1000.	6.9260E-02 1000.

VOLUMETRIC BUDGET FOR ENTIRE MODEL AT END OF TIME STEP 1 IN STRESS PERIOD 1

CUMULATIVE VOLUMES	L**3	RATES FOR THIS TIME STEP	L**3/T
--------------------	------	--------------------------	--------

IN:

 STORAGE = 0.00000E+00
 CONSTANT HEAD = 16442.
 WELLS = 0.00000E+00
 RECHARGE = 94962.
 RIVER LEAKAGE = 14340.
 HEAD DEP BOUNDS = 0.13563E+06

TOTAL IN = 0.26138E+06

OUT:

 STORAGE = 0.00000E+00
 CONSTANT HEAD = 5373.4
 WELLS = 0.00000E+00
 RECHARGE = 0.00000E+00
 RIVER LEAKAGE = 19177.
 HEAD DEP BOUNDS = 0.23578E+06

TOTAL OUT = 0.26033E+06

IN - OUT = 1051.3

PERCENT DISCREPANCY = 0.40

IN:

 STORAGE = 0.00000E+00
 CONSTANT HEAD = 0.19030
 WELLS = 0.00000E+00
 RECHARGE = 1.0991
 RIVER LEAKAGE = 0.16597
 HEAD DEP BOUNDS = 1.5698

TOTAL IN = 3.0252

OUT:

 STORAGE = 0.00000E+00
 CONSTANT HEAD = 0.62192E-01
 WELLS = 0.00000E+00
 RECHARGE = 0.00000E+00
 RIVER LEAKAGE = 0.22195
 HEAD DEP BOUNDS = 2.7289

TOTAL OUT = 3.0130

IN - OUT = 0.12167E-01

PERCENT DISCREPANCY = 0.40

TIME SUMMARY AT END OF TIME STEP 1 IN STRESS PERIOD 1

	SECONDS	MINUTES	HOURS	DAYS	YEARS
TIME STEP LENGTH	86400.0	1440.00	24.0000	1.00000	0.273785E-02
STRESS PERIOD TIME	86400.0	1440.00	24.0000	1.00000	0.273785E-02
TOTAL SIMULATION TIME	86400.0	1440.00	24.0000	1.00000	0.273785E-02

APPENDIX 5
PUMPING RUNS

SOUTHAMPTON AQUIFER SIMULATION

3-D Model-- hydraulic conductivity = 220 ft/day

1 LAYERS 56 ROWS 22 COLUMNS
1 STRESS PERIOD(S) IN SIMULATION
MODEL TIME UNIT IS SECONDS

I/O UNITS:

ELEMENT OF IUNIT: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

I/O UNIT: 11 12 0 14 0 0 17 0 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0

BAS1 -- BASIC MODEL PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 1

ARRAYS RHS AND BUFF WILL SHARE MEMORY.

START HEAD WILL BE SAVED

11170 ELEMENTS IN X ARRAY ARE USED BY BAS

11170 ELEMENTS OF X ARRAY USED OUT OF 56000

BCF1 -- BLOCK-CENTERED FLOW PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 11

TRANSIENT SIMULATION

LAYER AQUIFER TYPE

1 3

6161 ELEMENTS IN X ARRAY ARE USED BY BCF

17331 ELEMENTS OF X ARRAY USED OUT OF 56000

WEL1 -- WELL PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM 12

MAXIMUM OF 3 WELLS

12 ELEMENTS IN X ARRAY ARE USED FOR WELLS

17343 ELEMENTS OF X ARRAY USED OUT OF 56000

RIV1 -- RIVER PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 14

MAXIMUM OF 9 RIVER NODES

54 ELEMENTS IN X ARRAY ARE USED FOR RIVERS

17397 ELEMENTS OF X ARRAY USED OUT OF 56000

GHB1 -- GHB PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 17

MAXIMUM OF 13 HEAD-DEPENDENT BOUNDARY NODES

CELL-BY-CELL FLOW WILL BE PRINTED WHEN ICBCFL NOT 0

65 ELEMENTS IN X ARRAY ARE USED FOR HEAD-DEPENDENT BOUNDARIES

17462 ELEMENTS OF X ARRAY USED OUT OF 56000

SIP1 -- STRONGLY IMPLICIT PROCEDURE SOLUTION PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 19

MAXIMUM OF 750 ITERATIONS ALLOWED FOR CLOSURE

5 ITERATION PARAMETERS

7933 ELEMENTS IN X ARRAY ARE USED BY SIP

25395 ELEMENTS OF X ARRAY USED OUT OF 56000

BOUNDARY ARRAY FOR LAYER 1 WILL BE READ ON UNIT 1 USING FORMAT: (20I4)

	1 11 21	2 12 22	3 13	4 14	5 15	6 16	7 17	8 18	9 19	10 20
1	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1
2	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1
3	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1
4	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1
5	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1
6	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1
7	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	0 1 1	1 1 1	1 1 1
8	0 1 1	0 1 1	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1
9	0 1 1	0 1 0	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1
10	0 1 0	0 1 0	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1
11	0 1 0	0 1 0	0 1 1	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1
12	0 1 0	0 1 0	0 1 1	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1

0	0	0	0	0	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1
1	0								
0	0	0	0	0	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1
1	0								
0	0	0	0	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1
0	0								
0	0	0	0	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	0
0	0								
0	0	0	0	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	0
0	0								
0	0	0	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	0
0	0								
0	0	0	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	0	0
0	0								
0	0	0	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	0	0
0	0								
0	0	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	0	0	0
0	0								
0	0	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	0	0
0	0								
0	0	0	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1
1	1								
0	0	0	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	0
0	0								
0	0	0	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1
1	0								

28	0 1 0	0 1 0	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1
29	0 1 0	0 1 0	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1
30	0 1 0	0 1 0	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 0 0
31	0 1 0	0 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
32	0 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
33	0 1 0	1 0 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
34	0 1 0	1 0 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
35	-1 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	0 0 0	0 0 0	1 0 0
36	-1 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	0 0 0	0 0 0	1 0 0
37	-1 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	0 0 0	0 0 0	1 0 0
38	-1 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
39	-1 1 0	1 1 0	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
40	-1 1 0	1 1 0	0 1 1	0 1 1	1 1 1	1 1 0	1 0 0	1 0 0	1 0 0	1 0 0
41	-1 1 0	1 1 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0
42	-1 1 0	0 1 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0

43	0	0	0	0	0	1	1	1	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								
44	0	0	0	0	0	0	1	1	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								
45	0	0	0	0	0	0	1	1	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								
46	0	0	0	0	0	0	0	1	1	1
	1	0	0	0	0	0	0	0	0	0
	0	0								
47	0	0	0	0	0	0	0	1	1	1
	1	0	0	0	0	0	0	0	0	0
	0	0								
48	0	0	0	0	0	0	0	0	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								
49	0	0	0	0	0	0	0	0	1	1
	1	1	1	0	0	0	0	0	0	0
	0	0								
50	0	0	0	0	0	0	0	0	1	1
	1	1	1	1	1	0	0	0	0	0
	0	0								
51	0	0	0	0	0	0	0	1	1	1
	1	1	1	1	1	1	0	0	0	0
	0	0								
52	0	0	0	0	0	0	0	1	1	1
	1	1	1	1	1	1	0	0	0	0
	0	0								
53	0	0	0	0	0	0	0	1	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								
54	0	0	0	0	0	0	0	1	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								
55	0	0	0	0	0	0	0	1	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								
56	0	0	0	0	0	0	0	1	1	1
	1	1	0	0	0	0	0	0	0	0
	0	0								

AQUIFER HEAD WILL BE SET TO 999.99 AT ALL NO-FLOW NODES (IBOUND=0).

INITIAL HEAD FOR LAYER 1 WILL BE READ ON UNIT 1 USING FORMAT:

(10F8.0)

	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22								
1	1000. 175.0 157.0	1000. 175.0 158.0	1000. 174.0	1000. 174.0	1000. 174.0	1000. 172.0	1000. 169.0	181.0 166.0	177.0 160.0	176.0 158.0
2	1000. 175.0 160.0	1000. 174.0 159.0	1000. 174.0	1000. 173.0	1000. 172.0	1000. 172.0	210.0 170.0	181.0 167.0	177.0 164.0	176.0 161.0
3	1000. 175.0 162.0	1000. 175.0 159.0	1000. 174.0	1000. 173.0	1000. 173.0	1000. 172.0	210.0 170.0	182.0 168.0	177.0 166.0	176.0 164.0
4	1000. 176.0 165.0	1000. 175.0 164.0	1000. 174.0	1000. 174.0	1000. 173.0	1000. 172.0	210.0 171.0	182.0 169.0	177.0 167.0	177.0 166.0
5	1000. 176.0 167.0	1000. 175.0 166.0	1000. 175.0	1000. 174.0	1000. 174.0	1000. 173.0	210.0 172.0	183.0 170.0	179.0 169.0	178.0 168.0
6	1000. 177.0 168.0	1000. 176.0 168.0	1000. 176.0	1000. 175.0	1000. 175.0	1000. 174.0	1000. 173.0	183.0 172.0	180.0 170.0	179.0 169.0
7	1000. 179.0 170.0	1000. 177.0 169.0	1000. 177.0	1000. 176.0	1000. 176.0	1000. 175.0	1000. 174.0	1000. 173.0	181.0 172.0	180.0 171.0
8	1000. 180.0 172.0	1000. 178.0 171.0	1000. 178.0	1000. 177.0	256.0 177.0	250.0 177.0	225.0 176.0	184.0 175.0	182.0 174.0	181.0 173.0
9	1000. 180.0 174.0	1000. 180.0 1000.	1000. 179.0	1000. 179.0	250.0 178.0	240.0 178.0	225.0 177.0	184.0 176.0	183.0 175.0	182.0 175.0
10	1000. 182.0 1000.	1000. 181.0 1000.	1000. 180.0	1000. 180.0	255.0 180.0	240.0 179.0	220.0 179.0	185.0 178.0	184.0 177.0	183.0 176.0
11	1000. 183.0 1000.	1000. 182.0 1000.	1000. 182.0	1000. 181.0	1000. 181.0	240.0 181.0	215.0 180.0	185.0 179.0	185.0 179.0	184.0 179.0
12	1000. 184.0 1000.	1000. 184.0 1000.	1000. 183.0	1000. 182.0	1000. 182.0	230.0 182.0	188.0 181.0	187.0 181.0	186.0 180.0	185.0 180.0
13	1000. 185.0	1000. 184.0	1000. 184.0	1000. 184.0	1000. 184.0	230.0 183.0	188.0 182.0	187.0 182.0	186.0 182.0	186.0 181.0

	181.0	1000.								
14	1000. 186.0 182.0	1000. 185.0 1000.	1000. 185.0	1000. 185.0	1000. 185.0	220.0 184.0	189.0 184.0	188.0 183.0	188.0 183.0	187.0 182.0
15	1000. 187.0 1000.	1000. 186.0 1000.	1000. 186.0	1000. 185.0	240.0 185.0	220.0 185.0	190.0 185.0	189.0 184.0	189.0 183.0	188.0 183.0
16	1000. 188.0 1000.	1000. 187.0 1000.	1000. 186.0	1000. 186.0	240.0 186.0	215.0 186.0	190.0 186.0	190.0 185.0	189.0 184.0	189.0 1000.
17	1000. 188.0 1000.	1000. 187.0 1000.	1000. 187.0	1000. 186.0	240.0 186.0	192.0 186.0	191.0 186.0	190.0 186.0	190.0 185.0	189.0 1000.
18	1000. 189.0 1000.	1000. 188.0 1000.	1000. 187.0	240.0 187.0	230.0 187.0	192.0 187.0	191.0 187.0	191.0 186.0	190.0 186.0	190.0 1000.
19	1000. 190.0 1000.	1000. 189.0 1000.	1000. 188.0	240.0 188.0	230.0 188.0	193.0 187.0	192.0 187.0	191.0 187.0	191.0 186.0	190.0 1000.
20	1000. 190.0 1000.	1000. 190.0 1000.	1000. 189.0	240.0 189.0	210.0 189.0	194.0 188.0	193.0 188.0	192.0 188.0	192.0 1000.	191.0 1000.
21	1000. 191.0 1000.	1000. 191.0 1000.	1000. 190.0	197.0 190.0	196.0 190.0	195.0 189.0	194.0 189.0	193.0 189.0	192.0 1000.	192.0 1000.
22	1000. 192.0 1000.	1000. 192.0 1000.	230.0 191.0	197.0 191.0	196.0 190.0	196.0 190.0	195.0 190.0	194.0 1000.	193.0 1000.	193.0 1000.
23	1000. 193.0 1000.	1000. 192.0 1000.	230.0 192.0	197.0 191.0	197.0 191.0	196.0 191.0	195.0 191.0	194.0 1000.	194.0 1000.	193.0 1000.
24	1000. 193.0 1000.	1000. 193.0 1000.	230.0 192.0	198.0 192.0	197.0 192.0	196.0 192.0	196.0 192.0	195.0 1000.	194.0 1000.	194.0 1000.
25	1000. 194.0 230.0	1000. 193.0 250.0	1000. 193.0	198.0 193.0	197.0 193.0	197.0 193.0	196.0 193.0	195.0 194.0	195.0 194.0	194.0 195.0
26	1000. 194.0 240.0	1000. 194.0 1000.	1000. 194.0	198.0 194.0	198.0 194.0	197.0 193.0	196.0 194.0	196.0 194.0	195.0 195.0	195.0 220.0
27	1000. 195.0 250.0	1000. 194.0 1000.	1000. 194.0	198.0 194.0	198.0 194.0	197.0 194.0	197.0 194.0	196.0 194.0	196.0 195.0	195.0 195.0
28	1000. 195.0	1000. 195.0	1000. 195.0	198.0 195.0	198.0 195.0	198.0 195.0	197.0 195.0	196.0 195.0	196.0 195.0	196.0 230.0

	1000.	1000.								
29	1000. 196.0 1000.	1000. 196.0 1000.	1000. 195.0	1000. 195.0	198.0 195.0	197.0 195.0	197.0 195.0	197.0 195.0	196.0 230.0	196.0 240.0
30	1000. 196.0 1000.	1000. 196.0 1000.	1000. 196.0	198.0 196.0	198.0 196.0	198.0 196.0	197.0 196.0	197.0 196.0	197.0 225.0	197.0 1000.
31	1000. 197.0 1000.	1000. 197.0 1000.	198.0 197.0	198.0 197.0	198.0 197.0	198.0 196.0	198.0 196.0	197.0 225.0	197.0 1000.	197.0 1000.
32	1000. 197.0 1000.	198.0 197.0 1000.	198.0 197.0	198.0 197.0	198.0 197.0	198.0 197.0	198.0 197.0	198.0 225.0	197.0 1000.	197.0 1000.
33	1000. 198.0 1000.	199.0 1000. 1000.	199.0 197.0	198.0 197.0	198.0 197.0	198.0 197.0	198.0 197.0	198.0 230.0	198.0 1000.	198.0 1000.
34	1000. 198.0 1000.	199.0 1000. 1000.	199.0 198.0	199.0 198.0	199.0 198.0	198.0 198.0	198.0 220.0	198.0 230.0	198.0 1000.	198.0 1000.
35	200.0 199.0 1000.	199.0 199.0 1000.	199.0 199.0	199.0 198.0	199.0 198.0	199.0 199.0	199.0 199.0	1000. 1000.	1000. 1000.	199.0 1000.
36	200.0 199.0 1000.	199.0 199.0 1000.	199.0 199.0	199.0 199.0	199.0 199.0	199.0 199.0	199.0 199.0	1000. 1000.	1000. 1000.	199.0 1000.
37	198.0 200.0 1000.	198.0 200.0 1000.	199.0 200.0	199.0 200.0	199.0 200.0	200.0 200.0	200.0 230.0	1000. 1000.	1000. 1000.	200.0 1000.
38	197.0 200.0 1000.	197.0 200.0 1000.	198.0 200.0	199.0 200.0	200.0 200.0	200.0 200.0	200.0 240.0	201.0 250.0	201.0 1000.	200.0 1000.
39	195.0 201.0 1000.	196.0 200.0 1000.	1000. 200.0	1000. 200.0	200.0 200.0	200.0 200.0	201.0 240.0	201.0 250.0	201.0 1000.	201.0 1000.
40	196.0 201.0 1000.	196.0 201.0 1000.	1000. 200.0	1000. 200.0	201.0 210.0	201.0 230.0	201.0 1000.	201.0 1000.	201.0 1000.	201.0 1000.
41	198.0 201.0 1000.	197.0 201.0 1000.	1000. 1000.	1000. 1000.	201.0 1000.	201.0 1000.	201.0 1000.	201.0 1000.	201.0 1000.	201.0 1000.
42	200.0 202.0 1000.	1000. 202.0 1000.	1000. 1000.	1000. 1000.	1000. 1000.	201.0 1000.	202.0 1000.	202.0 1000.	202.0 1000.	202.0 1000.
43	1000. 202.0	1000. 220.0	1000. 1000.	1000. 1000.	1000. 1000.	202.0 1000.	202.0 1000.	202.0 1000.	202.0 1000.	202.0 1000.

	1000.	1000.								
44	1000.	1000.	1000.	1000.	1000.	1000.	202.0	202.0	202.0	202.0
	202.0	203.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
45	1000.	1000.	1000.	1000.	1000.	1000.	202.0	202.0	203.0	203.0
	203.0	203.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
46	1000.	1000.	1000.	1000.	1000.	1000.	1000.	203.0	203.0	203.0
	203.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
47	1000.	1000.	1000.	1000.	1000.	1000.	1000.	203.0	203.0	203.0
	204.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
48	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	202.0	203.0
	204.0	205.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
49	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	202.0	204.0
	205.0	206.0	207.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
50	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	204.0	205.0
	206.0	207.0	208.0	208.0	208.0	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
51	1000.	1000.	1000.	1000.	1000.	1000.	1000.	206.0	205.0	207.0
	207.0	208.0	208.0	208.0	208.0	209.0	1000.	1000.	1000.	1000.
	1000.	1000.								
52	1000.	1000.	1000.	1000.	1000.	1000.	1000.	207.0	207.0	207.0
	208.0	208.0	208.0	208.0	208.0	209.0	1000.	1000.	1000.	1000.
	1000.	1000.								
53	1000.	1000.	1000.	1000.	1000.	1000.	1000.	208.0	208.0	208.0
	209.0	209.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
54	1000.	1000.	1000.	1000.	1000.	1000.	1000.	209.0	209.0	209.0
	209.0	209.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
55	1000.	1000.	1000.	1000.	1000.	1000.	1000.	209.0	210.0	210.0
	210.0	209.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								
56	1000.	1000.	1000.	1000.	1000.	1000.	1000.	210.0	210.0	210.0
	210.0	210.0	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.
	1000.	1000.								

DEFAULT OUTPUT CONTROL -- THE FOLLOWING OUTPUT COMES AT THE END OF EACH STRESS PERIOD:

TOTAL VOLUMETRIC BUDGET

HEAD

DRAWDOWN

COLUMN TO ROW ANISOTROPY = 1.000000

DELR WILL BE READ ON UNIT 11 USING FORMAT: (10F8.0)

500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00
500.00	500.00	500.00	250.00	250.00	500.00	500.00	500.00	500.00	500.00
500.00	500.00								

DELC WILL BE READ ON UNIT 11 USING FORMAT: (10F8.0)

500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00
500.00	500.00	500.00	500.00	250.00	250.00	250.00	250.00	500.00	500.00
500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00
500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00
500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00
500.00	500.00	500.00	500.00	500.00	500.00				

PRIMARY STORAGE COEF = 0.2200000E-04 FOR LAYER 1

HYD. COND. ALONG ROWS FOR LAYER 1 WILL BE READ ON UNIT 11 USING FORMAT: (10F8.0)

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22								

1	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	5.0000E-04	5.0000E-04	5.0000E-04
	5.0000E-04	1.0020E-03	1.5020E-03	1.5020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03
	2.8020E-03	2.8020E-03								
2	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	5.0000E-04	5.0000E-04	5.0000E-04	5.0000E-04
	5.0000E-04	1.0020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03
	2.8020E-03	2.8020E-03								
3	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	5.0000E-04	5.0000E-04	5.0000E-04	5.0000E-04	5.0000E-04
	5.0000E-04	1.0020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03
	2.8020E-03	2.8020E-03								
4	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	5.0000E-04	5.0000E-04	5.0000E-04	5.0000E-04	5.0000E-04
	5.0000E-04	1.0020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03
	2.8020E-03	2.8020E-03								
5	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	5.0000E-04	5.0000E-04	5.0000E-04	5.0000E-04
	5.0000E-04	1.0020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03
	2.8020E-03	2.8020E-03								
6	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	5.0000E-04	5.0000E-04	5.0000E-04
	5.0000E-04	1.0020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03	2.8020E-03
	2.8020E-03	2.8020E-03								

52	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	1.5000E-03	1.5000E-03	1.5000E-03
	1.5000E-03	1.5000E-03	1.5000E-03	1.5000E-03	1.5000E-03	1.5000E-03	1.5000E-03	1.5000E-03	2.0000E-08	2.0000E-08	2.0000E-08
	2.0000E-08	2.0000E-08									
53	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	1.5000E-03	1.5000E-03	1.5000E-03
	1.5000E-03	1.5000E-03	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08
	2.0000E-08	2.0000E-08									
54	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	1.5000E-03	1.5000E-03	1.5000E-03
	1.5000E-03	1.5000E-03	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08
	2.0000E-08	2.0000E-08									
55	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	1.5000E-03	1.5000E-03	1.5000E-03
	1.5000E-03	1.5000E-03	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08
	2.0000E-08	2.0000E-08									
56	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	1.5000E-03	1.5000E-03	1.5000E-03
	1.5000E-03	1.5000E-03	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08	2.0000E-08
	2.0000E-08	2.0000E-08									

BOTTOM FOR LAYER 1 WILL BE READ ON UNIT 11 USING FORMAT: (10f8.0)

	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22								
1	250.0	250.0	250.0	250.0	250.0	250.0	250.0	180.0	150.0	100.0
	50.00	0.0000E+00	-20.00	-30.00	-40.00	-50.00	-50.00	-40.00	-30.00	-20.00
	-10.00	0.0000E+00								
2	250.0	250.0	250.0	250.0	250.0	250.0	190.0	180.0	150.0	100.0
	50.00	0.0000E+00	-20.00	-30.00	-40.00	-500.0	-50.00	-40.00	-30.00	-20.00
	0.0000E+00	0.0000E+00								
3	250.0	250.0	250.0	250.0	250.0	220.0	190.0	180.0	150.0	100.0
	50.00	0.0000E+00	-20.00	-25.00	-30.00	-40.00	-50.00	-40.00	-25.00	0.0000E+00
	0.0000E+00	25.00								
4	250.0	250.0	250.0	250.0	250.0	220.0	190.0	180.0	150.0	100.0
	50.00	0.0000E+00	-20.00	-25.00	-30.00	-30.00	-40.00	-40.00	-20.00	0.0000E+00
	25.00	35.00								
5	250.0	250.0	250.0	250.0	250.0	250.0	190.0	180.0	175.0	125.0
	50.00	0.0000E+00	-20.00	-25.00	-30.00	-35.00	-30.00	-25.00	-20.00	0.0000E+00
	25.00	50.00								
6	250.0	250.0	250.0	250.0	250.0	250.0	250.0	180.0	170.0	125.0
	50.00	0.0000E+00	-20.00	-25.00	-30.00	-35.00	-30.00	-20.00	0.0000E+00	25.00
	50.00	100.0								
7	250.0	250.0	250.0	200.0	255.0	230.0	215.0	180.0	170.0	125.0
	50.00	0.0000E+00	-20.00	-25.00	-30.00	-35.00	-20.00	0.0000E+00	25.00	50.00
	100.0	125.0								

8	250.0 50.00 150.0	250.0 0.0000E+00 150.0	250.0 -20.00 -25.00	250.0 -25.00 -30.00	235.0 -25.00 -20.00	230.0 -20.00 0.0000E+00	205.0 180.0 150.0	150.0 50.00 100.0	100.0 100.0
9	250.0 50.00 150.0	250.0 0.0000E+00 250.0	250.0 -15.00 -20.00	250.0 -20.00 -25.00	230.0 -25.00 -20.00	220.0 0.0000E+00 25.00	205.0 180.0 150.0	150.0 50.00 100.0	100.0 100.0
10	250.0 50.00 150.0	250.0 0.0000E+00 250.0	250.0 -15.00 -20.00	250.0 -20.00 -25.00	235.0 -20.00 -15.00	220.0 0.0000E+00 50.00	200.0 175.0 150.0	150.0 100.0 125.0	100.0 125.0
11	250.0 50.00 250.0	250.0 0.0000E+00 250.0	250.0 -10.00 -15.00	250.0 -15.00 -15.00	250.0 0.0000E+00 50.00	220.0 195.0 175.0	175.0 150.0 100.0	150.0 100.0 125.0	100.0 125.0
12	250.0 50.00 250.0	250.0 0.0000E+00 250.0	250.0 -10.00 -5.000	250.0 0.0000E+00 0.0000E+00	250.0 200.0 180.0	200.0 180.0 165.0	180.0 165.0 150.0	150.0 125.0 150.0	100.0 150.0
13	250.0 75.00 170.0	250.0 50.00 225.0	250.0 0.0000E+00 -5.000	250.0 0.0000E+00 25.00	250.0 200.0 175.0	200.0 175.0 150.0	175.0 150.0 125.0	150.0 125.0 100.0	100.0 150.0
14	250.0 75.00 170.0	250.0 50.00 225.0	250.0 0.0000E+00 -5.000	250.0 0.0000E+00 50.00	250.0 200.0 175.0	200.0 175.0 150.0	175.0 150.0 125.0	150.0 125.0 150.0	100.0 175.0
15	250.0 75.00 250.0	250.0 50.00 250.0	250.0 0.0000E+00 -5.000	250.0 0.0000E+00 50.00	220.0 200.0 175.0	200.0 175.0 150.0	175.0 150.0 125.0	150.0 125.0 150.0	100.0 165.0
16	250.0 75.00 250.0	250.0 50.00 250.0	250.0 25.00 0.0000E+00	250.0 0.0000E+00 0.0000E+00	220.0 195.0 175.0	195.0 175.0 150.0	175.0 150.0 125.0	150.0 160.0 200.0	100.0 200.0
17	250.0 75.00 250.0	250.0 50.00 250.0	250.0 25.00 8.000	250.0 8.000 8.000	220.0 180.0 165.0	180.0 165.0 150.0	165.0 150.0 125.0	150.0 160.0 200.0	100.0 200.0
18	250.0 75.00 250.0	250.0 50.00 250.0	250.0 25.00 10.00	220.0 20.00 180.0	200.0 180.0 165.0	180.0 165.0 150.0	165.0 150.0 125.0	150.0 160.0 250.0	100.0 250.0
19	250.0 75.00 250.0	250.0 50.00 250.0	250.0 25.00 10.00	220.0 20.00 180.0	200.0 180.0 165.0	180.0 165.0 150.0	165.0 150.0 125.0	150.0 160.0 250.0	100.0 250.0
20	250.0 75.00 250.0	250.0 50.00 250.0	250.0 25.00 15.00	210.0 15.00 190.0	190.0 175.0 165.0	175.0 165.0 150.0	165.0 150.0 125.0	150.0 200.0 250.0	100.0 250.0
21	250.0 75.00 250.0	250.0 50.00 250.0	210.0 35.00 20.00	180.0 35.00 175.0	175.0 170.0 165.0	170.0 165.0 150.0	165.0 150.0 125.0	150.0 200.0 250.0	100.0 250.0
22	250.0 75.00 250.0	250.0 50.00 250.0	210.0 35.00 20.00	180.0 35.00 175.0	175.0 170.0 165.0	170.0 165.0 150.0	165.0 150.0 125.0	150.0 200.0 250.0	100.0 250.0

23	250.0 65.00 250.0	250.0 50.00 250.0	210.0 40.00	180.0 30.00	175.0 40.00	170.0 50.00	150.0 100.0	125.0 150.0	100.0 200.0	80.00 250.0
24	250.0 65.00 250.0	250.0 50.00 250.0	210.0 40.00	180.0 35.00	175.0 40.00	170.0 50.00	150.0 100.0	125.0 150.0	100.0 200.0	80.00 250.0
25	250.0 65.00 210.0	250.0 50.00 230.0	200.0 40.00	175.0 40.00	170.0 50.00	170.0 75.00	150.0 100.0	125.0 150.0	100.0 180.0	80.00 185.0
26	250.0 65.00 220.0	250.0 50.00 250.0	200.0 50.00	175.0 50.00	170.0 75.00	170.0 100.0	150.0 125.0	125.0 150.0	100.0 180.0	80.00 200.0
27	250.0 80.00 200.0	250.0 70.00 200.0	200.0 65.00	175.0 75.00	170.0 85.00	165.0 100.0	150.0 125.0	125.0 150.0	100.0 170.0	90.00 180.0
28	250.0 85.00 250.0	250.0 80.00 200.0	200.0 80.00	175.0 100.0	170.0 100.0	165.0 125.0	150.0 150.0	125.0 170.0	100.0 180.0	90.00 200.0
29	250.0 85.00 250.0	250.0 90.00 250.0	200.0 100.0	240.0 100.0	170.0 125.0	165.0 150.0	150.0 170.0	125.0 180.0	100.0 200.0	90.00 210.0
30	250.0 85.00 250.0	250.0 100.0 250.0	200.0 125.0	175.0 150.0	160.0 150.0	150.0 160.0	135.0 170.0	120.0 180.0	100.0 210.0	95.00 250.0
31	250.0 100.0 250.0	240.0 100.0 250.0	180.0 150.0	175.0 150.0	170.0 150.0	150.0 180.0	135.0 190.0	120.0 205.0	100.0 250.0	90.00 250.0
32	250.0 180.0 250.0	180.0 150.0 250.0	175.0 170.0	170.0 150.0	150.0 150.0	140.0 180.0	125.0 190.0	115.0 205.0	100.0 250.0	95.00 250.0
33	250.0 150.0 250.0	180.0 200.0 250.0	175.0 160.0	170.0 160.0	150.0 160.0	140.0 180.0	130.0 190.0	110.0 210.0	100.0 250.0	100.0 250.0
34	250.0 150.0 250.0	180.0 200.0 250.0	175.0 170.0	150.0 175.0	140.0 175.0	130.0 180.0	120.0 205.0	115.0 210.0	110.0 250.0	110.0 250.0
35	180.0 120.0 250.0	175.0 150.0 250.0	150.0 150.0	140.0 150.0	130.0 150.0	125.0 180.0	130.0 180.0	150.0 250.0	150.0 250.0	115.0 250.0
36	180.0 120.0 250.0	150.0 125.0 250.0	140.0 150.0	135.0 150.0	130.0 180.0	125.0 180.0	135.0 180.0	150.0 250.0	150.0 250.0	120.0 250.0
37	150.0 135.0 250.0	140.0 125.0 250.0	135.0 130.0	135.0 150.0	135.0 150.0	130.0 180.0	130.0 210.0	150.0 250.0	150.0 250.0	140.0 250.0

38	140.0 136.0 250.0	140.0 140.0 250.0	140.0 150.0	150.0 150.0	150.0 150.0	150.0 180.0	140.0 220.0	135.0 230.0	135.0 250.0	136.0 250.0
39	140.0 140.0 250.0	150.0 150.0 250.0	150.0 185.0	200.0 175.0	175.0 180.0	160.0 190.0	150.0 220.0	135.0 230.0	138.0 250.0	138.0 250.0
40	150.0 150.0 250.0	180.0 175.0 250.0	200.0 180.0	203.0 180.0	180.0 190.0	175.0 210.0	150.0 250.0	150.0 250.0	140.0 250.0	140.0 250.0
41	175.0 150.0 250.0	180.0 180.0 250.0	200.0 250.0	200.0 250.0	180.0 250.0	175.0 250.0	160.0 250.0	150.0 250.0	145.0 250.0	140.0 250.0
42	175.0 150.0 250.0	250.0 180.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	175.0 250.0	175.0 250.0	155.0 250.0	150.0 250.0	145.0 250.0
43	250.0 150.0 250.0	250.0 200.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	175.0 250.0	150.0 250.0	145.0 250.0
44	250.0 150.0 250.0	250.0 200.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	165.0 250.0	150.0 250.0
45	250.0 175.0 250.0	250.0 180.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	240.0 250.0	180.0 250.0	175.0 250.0	165.0 250.0	150.0 250.0
46	250.0 175.0 250.0	250.0 250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	175.0 250.0	175.0 250.0	150.0 250.0
47	250.0 180.0 250.0	250.0 225.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	150.0 250.0
48	250.0 150.0 250.0	250.0 180.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	200.0 250.0	175.0 250.0	150.0 250.0
49	250.0 175.0 250.0	250.0 180.0 250.0	250.0 200.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	175.0 250.0
50	250.0 170.0 250.0	250.0 180.0 250.0	250.0 190.0	250.0 200.0	250.0 200.0	250.0 200.0	250.0 250.0	190.0 250.0	175.0 250.0	175.0 250.0
51	250.0 150.0 250.0	250.0 150.0 250.0	250.0 180.0	250.0 185.0	250.0 190.0	250.0 200.0	250.0 240.0	180.0 250.0	175.0 250.0	175.0 250.0
52	250.0 150.0 250.0	250.0 150.0 250.0	250.0 170.0	250.0 185.0	250.0 190.0	250.0 200.0	250.0 240.0	180.0 250.0	174.0 250.0	175.0 250.0

53	250.0 150.0 250.0	250.0 150.0 250.0	250.0 165.0	250.0 180.0	250.0 200.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	175.0 250.0
54	250.0 150.0 250.0	250.0 150.0 250.0	250.0 200.0	250.0 200.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	175.0 250.0
55	250.0 150.0 250.0	250.0 150.0 250.0	250.0 200.0	250.0 200.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	175.0 250.0
56	250.0 140.0 250.0	250.0 150.0 250.0	250.0 200.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	200.0 250.0	180.0 250.0	160.0 250.0

SECONDARY STORAGE COEF = 0.2000000 FOR LAYER 1

TOP FOR LAYER 1 WILL BE READ ON UNIT 11 USING FORMAT: (10f8.0)

	1 11 21	2 12 22	3 13	4 14	5 15	6 16	7 17	8 18	9 19	10 20
1	250.0 110.0 10.00	250.0 60.00 20.00	250.0 10.00	250.0 -10.00	250.0 -20.00	250.0 -30.00	250.0 -30.00	200.0 -20.00	195.0 -10.00	190.0 0.0000E+00
2	250.0 110.0 20.00	250.0 60.00 20.00	250.0 10.00	250.0 -10.00	250.0 -20.00	250.0 -300.0	210.0 -30.00	200.0 -20.00	195.0 -10.00	190.0 10.00
3	250.0 110.0 35.00	250.0 60.00 45.00	250.0 10.00	250.0 -5.000	250.0 -10.00	240.0 -20.00	210.0 -30.00	200.0 -15.00	195.0 10.00	190.0 20.00
4	250.0 110.0 45.00	250.0 60.00 55.00	250.0 10.00	250.0 -5.000	250.0 -10.00	240.0 -10.00	210.0 -20.00	200.0 -10.00	195.0 10.00	190.0 35.00
5	250.0 70.00 60.00	250.0 60.00 70.00	250.0 10.00	250.0 -5.000	250.0 -10.00	250.0 -15.00	210.0 -10.00	200.0 -5.000	195.0 10.00	190.0 35.00
6	250.0 70.00 110.0	250.0 60.00 120.0	250.0 10.00	250.0 -5.000	250.0 -10.00	250.0 -15.00	250.0 -10.00	200.0 10.00	193.0 35.00	190.0 60.00
7	250.0 70.00 135.0	250.0 60.00 145.0	250.0 10.00	310.0 -5.000	274.0 -10.00	250.0 -15.00	235.0 10.00	200.0 35.00	193.0 60.00	189.0 110.0
8	250.0 110.0 170.0	250.0 60.00 170.0	250.0 10.00	250.0 -5.000	256.0 -10.00	250.0 -5.000	225.0 10.00	200.0 60.00	190.0 110.0	185.0 160.0

9	250.0 110.0 170.0	250.0 60.00 250.0	250.0 10.00	250.0 0.0000E+00	250.0 -5.000	240.0 10.00	225.0 35.00	200.0 60.00	190.0 110.0	120.0 160.0
10	250.0 70.00 170.0	250.0 60.00 250.0	250.0 10.00	250.0 0.0000E+00	255.0 0.0000E+00	240.0 10.00	220.0 60.00	195.0 110.0	190.0 135.0	180.0 145.0
11	250.0 110.0 250.0	250.0 60.00 250.0	250.0 10.00	250.0 5.000	250.0 10.00	240.0 60.00	215.0 85.00	197.0 110.0	190.0 135.0	180.0 145.0
12	250.0 170.0 250.0	250.0 60.00 250.0	250.0 10.00	250.0 15.00	250.0 20.00	230.0 60.00	210.0 110.0	195.0 135.0	185.0 160.0	180.0 170.0
13	250.0 175.0 180.0	250.0 85.00 235.0	250.0 60.00	250.0 15.00	250.0 35.00	230.0 60.00	200.0 110.0	195.0 135.0	185.0 160.0	179.0 180.0
14	250.0 110.0 185.0	250.0 85.00 235.0	250.0 60.00	250.0 15.00	250.0 60.00	220.0 110.0	200.0 135.0	190.0 160.0	160.0 185.0	135.0 195.0
15	250.0 110.0 250.0	250.0 85.00 250.0	250.0 60.00	250.0 15.00	240.0 60.00	220.0 110.0	198.0 135.0	190.0 160.0	185.0 175.0	135.0 175.0
16	250.0 110.0 250.0	250.0 85.00 250.0	250.0 60.00	250.0 35.00	240.0 60.00	215.0 110.0	197.0 160.0	190.0 170.0	185.0 170.0	135.0 210.0
17	250.0 110.0 250.0	250.0 85.00 250.0	250.0 60.00	250.0 35.00	240.0 60.00	210.0 110.0	195.0 160.0	190.0 170.0	180.0 170.0	175.0 210.0
18	250.0 110.0 250.0	250.0 85.00 250.0	250.0 60.00	240.0 35.00	230.0 60.00	200.0 110.0	195.0 160.0	190.0 170.0	180.0 170.0	175.0 250.0
19	250.0 170.0 250.0	250.0 85.00 250.0	250.0 60.00	240.0 35.00	230.0 60.00	210.0 110.0	194.0 160.0	188.0 170.0	180.0 170.0	175.0 250.0
20	250.0 170.0 250.0	250.0 85.00 250.0	250.0 60.00	240.0 35.00	210.0 60.00	198.0 110.0	194.0 160.0	188.0 170.0	180.0 210.0	175.0 250.0
21	250.0 110.0 250.0	250.0 85.00 250.0	220.0 60.00	230.0 45.00	200.0 60.00	195.0 110.0	190.0 160.0	185.0 170.0	180.0 210.0	175.0 250.0
22	250.0 170.0 250.0	250.0 170.0 250.0	230.0 60.00	200.0 45.00	197.0 60.00	193.0 110.0	190.0 120.0	185.0 170.0	180.0 210.0	175.0 250.0
23	250.0 170.0 250.0	250.0 170.0 250.0	230.0 60.00	200.0 50.00	197.0 60.00	193.0 110.0	187.0 120.0	183.0 170.0	177.0 210.0	173.0 250.0

24	250.0 170.0 250.0	250.0 170.0 250.0	230.0 60.00	200.0 55.00	195.0 60.00	190.0 110.0	185.0 120.0	180.0 170.0	177.0 210.0	173.0 250.0
25	250.0 90.00 230.0	250.0 75.00 250.0	200.0 60.00	197.0 60.00	193.0 85.00	190.0 110.0	185.0 160.0	180.0 190.0	175.0 195.0	170.0 205.0
26	250.0 90.00 240.0	250.0 75.00 250.0	200.0 70.00	197.0 85.00	193.0 110.0	190.0 135.0	184.0 160.0	180.0 190.0	175.0 200.0	110.0 220.0
27	250.0 100.0 250.0	250.0 90.00 310.0	200.0 85.00	197.0 95.00	193.0 110.0	188.0 135.0	183.0 160.0	180.0 190.0	135.0 200.0	110.0 220.0
28	250.0 105.0 260.0	250.0 100.0 310.0	200.0 110.0	197.0 120.0	193.0 135.0	185.0 160.0	180.0 180.0	160.0 190.0	135.0 210.0	110.0 230.0
29	250.0 105.0 250.0	250.0 110.0 250.0	300.0 120.0	250.0 135.0	180.0 160.0	180.0 180.0	175.0 190.0	160.0 210.0	135.0 230.0	110.0 240.0
30	250.0 110.0 250.0	250.0 135.0 250.0	210.0 160.0	185.0 170.0	185.0 170.0	170.0 180.0	160.0 190.0	145.0 200.0	130.0 225.0	115.0 250.0
31	250.0 120.0 250.0	250.0 160.0 250.0	190.0 170.0	190.0 190.0	185.0 190.0	180.0 200.0	160.0 215.0	145.0 225.0	130.0 250.0	110.0 250.0
32	250.0 160.0 250.0	190.0 180.0 250.0	190.0 190.0	185.0 200.0	180.0 190.0	160.0 200.0	150.0 215.0	135.0 225.0	125.0 250.0	115.0 250.0
33	250.0 170.0 250.0	190.0 220.0 250.0	190.0 220.0	185.0 210.0	180.0 200.0	160.0 200.0	150.0 200.0	140.0 230.0	120.0 250.0	160.0 250.0
34	250.0 170.0 250.0	190.0 220.0 250.0	190.0 210.0	185.0 200.0	160.0 185.0	150.0 215.0	140.0 220.0	135.0 230.0	130.0 250.0	160.0 250.0
35	200.0 177.0 250.0	190.0 177.0 250.0	185.0 190.0	160.0 190.0	150.0 200.0	145.0 190.0	150.0 200.0	170.0 250.0	170.0 250.0	145.0 250.0
36	200.0 178.0 250.0	190.0 178.0 250.0	160.0 179.0	155.0 190.0	150.0 200.0	145.0 190.0	155.0 200.0	170.0 250.0	170.0 250.0	179.0 250.0
37	198.0 155.0 250.0	160.0 180.0 250.0	155.0 180.0	155.0 185.0	155.0 190.0	150.0 200.0	150.0 230.0	170.0 250.0	170.0 250.0	160.0 250.0
38	197.0 156.0 250.0	160.0 160.0 250.0	160.0 185.0	170.0 190.0	170.0 190.0	170.0 200.0	160.0 240.0	155.0 250.0	155.0 250.0	156.0 250.0

39	195.0 160.0 250.0	170.0 210.0 250.0	170.0 220.0	210.0 210.0	195.0 200.0	185.0 210.0	170.0 240.0	160.0 250.0	158.0 250.0	158.0 250.0
40	196.0 185.0 250.0	220.0 195.0 250.0	220.0 190.0	223.0 200.0	190.0 210.0	195.0 230.0	185.0 250.0	170.0 250.0	160.0 250.0	160.0 250.0
41	200.0 210.0 250.0	250.0 220.0 250.0	220.0 250.0	220.0 250.0	190.0 250.0	190.0 250.0	185.0 250.0	170.0 250.0	165.0 250.0	160.0 250.0
42	200.0 210.0 250.0	250.0 210.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	185.0 250.0	195.0 250.0	185.0 250.0	170.0 250.0	165.0 250.0
43	250.0 210.0 250.0	250.0 210.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	190.0 250.0	190.0 250.0	197.0 250.0	192.0 250.0	195.0 250.0
44	250.0 210.0 250.0	250.0 210.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	190.0 250.0	194.0 250.0	192.0 250.0	195.0 250.0
45	250.0 200.0 250.0	250.0 260.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	190.0 250.0	195.0 250.0	185.0 250.0	195.0 250.0
46	250.0 200.0 250.0	250.0 250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	185.0 250.0	195.0 250.0	185.0 250.0
47	250.0 200.0 250.0	250.0 225.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	190.0 250.0	195.0 250.0	190.0 250.0
48	250.0 197.0 250.0	250.0 200.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	210.0 250.0	196.0 250.0	194.0 250.0
49	250.0 198.0 250.0	250.0 200.0 250.0	250.0 220.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	190.0 250.0	196.0 250.0	195.0 250.0
50	250.0 198.0 250.0	250.0 200.0 250.0	250.0 220.0	250.0 230.0	250.0 240.0	250.0 210.0	250.0 250.0	190.0 250.0	197.0 250.0	196.0 250.0
51	250.0 198.0 250.0	250.0 200.0 250.0	250.0 212.0	250.0 230.0	250.0 240.0	250.0 275.0	250.0 280.0	190.0 250.0	197.0 250.0	196.0 250.0
52	250.0 200.0 250.0	250.0 220.0 250.0	250.0 230.0	250.0 245.0	250.0 250.0	250.0 278.0	250.0 285.0	200.0 250.0	198.0 250.0	197.0 250.0
53	250.0 220.0 250.0	250.0 225.0 250.0	250.0 185.0	250.0 190.0	250.0 210.0	250.0 250.0	250.0 250.0	200.0 250.0	199.0 250.0	198.0 250.0

54	250.0	250.0	250.0	250.0	250.0	250.0	250.0	220.0	199.0	198.0
	200.0	225.0	210.0	210.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
55	250.0	250.0	250.0	250.0	250.0	250.0	250.0	200.0	199.0	199.0
	200.0	225.0	210.0	210.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
56	250.0	250.0	250.0	250.0	250.0	250.0	250.0	220.0	200.0	200.0
	200.0	225.0	210.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								

SOLUTION BY THE STRONGLY IMPLICIT PROCEDURE

MAXIMUM ITERATIONS ALLOWED FOR CLOSURE = 750
 ACCELERATION PARAMETER = 0.50000
 HEAD CHANGE CRITERION FOR CLOSURE = 0.10000E-02
 SIP HEAD CHANGE PRINTOUT INTERVAL = 999

CALCULATE ITERATION PARAMETERS FROM MODEL CALCULATED WSEED

STRESS PERIOD NO. 1, LENGTH = 604800.0

23

NUMBER OF TIME STEPS = 50

MULTIPLIER FOR DELT = 1.500

INITIAL TIME STEP SIZE = 0.4742625E-03

3 WELLS

LAYER	ROW	COL	STRESS RATE	WELL NO.
1	17	15	-1.2255	1
1	16	14	0.00000E+00	2
1	16	15	0.00000E+00	3

9 RIVER REACHES

LAYER	ROW	COL	STAGE	CONDUCTANCE	BOTTOM ELEVATION	RIVER REACH
1	56	10	212.0	0.2800E-01	210.0	1
1	55	10	211.0	0.2800E-01	209.0	2
1	54	10	209.0	0.2800E-01	207.0	3
1	53	9	207.0	0.2800E-01	205.0	4
1	52	9	206.0	0.2800E-01	204.0	5
1	51	9	204.0	0.2800E-01	202.0	6
1	50	9	202.0	0.2800E-01	200.0	7
1	49	9	200.0	0.2800E-01	198.0	8
1	48	9	198.0	0.2800E-01	196.0	9

13 HEAD-DEPENDENT BOUNDARY NODES

LAYER	ROW	COL	ELEVATION	CONDUCTANCE	BOUND NO.
1	1	16	172.0	0.3420	1
1	1	17	169.0	0.3420	2
1	1	18	166.0	999.1	3
1	1	19	160.0	999.1	4
1	1	20	158.0	999.1	5
1	1	21	157.0	999.1	6
1	1	22	158.0	999.1	7
1	2	22	159.0	999.1	8
1	3	22	159.0	999.1	9
1	4	22	164.0	999.1	10
1	5	22	166.0	999.1	11
1	6	22	168.0	999.1	12
1	1	15	174.0	999.1	13

AVERAGE SEED = 0.00073643

MINIMUM SEED = 0.00000003

5 ITERATION PARAMETERS CALCULATED FROM AVERAGE SEED:

0.0000000E+00 0.8352659E+00 0.9728627E+00 0.9955295E+00 0.9992636E+00

1 ITERATIONS FOR TIME STEP 1 IN STRESS PERIOD 1
1 ITERATIONS FOR TIME STEP 2 IN STRESS PERIOD 1
1 ITERATIONS FOR TIME STEP 3 IN STRESS PERIOD 1
1 ITERATIONS FOR TIME STEP 4 IN STRESS PERIOD 1
1 ITERATIONS FOR TIME STEP 5 IN STRESS PERIOD 1
2 ITERATIONS FOR TIME STEP 6 IN STRESS PERIOD 1
3 ITERATIONS FOR TIME STEP 7 IN STRESS PERIOD 1
3 ITERATIONS FOR TIME STEP 8 IN STRESS PERIOD 1
4 ITERATIONS FOR TIME STEP 9 IN STRESS PERIOD 1
4 ITERATIONS FOR TIME STEP 10 IN STRESS PERIOD 1
5 ITERATIONS FOR TIME STEP 11 IN STRESS PERIOD 1
5 ITERATIONS FOR TIME STEP 12 IN STRESS PERIOD 1
6 ITERATIONS FOR TIME STEP 13 IN STRESS PERIOD 1
7 ITERATIONS FOR TIME STEP 14 IN STRESS PERIOD 1
10 ITERATIONS FOR TIME STEP 15 IN STRESS PERIOD 1
8 ITERATIONS FOR TIME STEP 16 IN STRESS PERIOD 1
10 ITERATIONS FOR TIME STEP 17 IN STRESS PERIOD 1
9 ITERATIONS FOR TIME STEP 18 IN STRESS PERIOD 1
9 ITERATIONS FOR TIME STEP 19 IN STRESS PERIOD 1
9 ITERATIONS FOR TIME STEP 20 IN STRESS PERIOD 1
9 ITERATIONS FOR TIME STEP 21 IN STRESS PERIOD 1
9 ITERATIONS FOR TIME STEP 22 IN STRESS PERIOD 1
10 ITERATIONS FOR TIME STEP 23 IN STRESS PERIOD 1
10 ITERATIONS FOR TIME STEP 24 IN STRESS PERIOD 1
11 ITERATIONS FOR TIME STEP 25 IN STRESS PERIOD 1
11 ITERATIONS FOR TIME STEP 26 IN STRESS PERIOD 1
11 ITERATIONS FOR TIME STEP 27 IN STRESS PERIOD 1
12 ITERATIONS FOR TIME STEP 28 IN STRESS PERIOD 1
11 ITERATIONS FOR TIME STEP 29 IN STRESS PERIOD 1
11 ITERATIONS FOR TIME STEP 30 IN STRESS PERIOD 1
13 ITERATIONS FOR TIME STEP 31 IN STRESS PERIOD 1
11 ITERATIONS FOR TIME STEP 32 IN STRESS PERIOD 1
14 ITERATIONS FOR TIME STEP 33 IN STRESS PERIOD 1
15 ITERATIONS FOR TIME STEP 34 IN STRESS PERIOD 1
16 ITERATIONS FOR TIME STEP 35 IN STRESS PERIOD 1
17 ITERATIONS FOR TIME STEP 36 IN STRESS PERIOD 1
19 ITERATIONS FOR TIME STEP 37 IN STRESS PERIOD 1
19 ITERATIONS FOR TIME STEP 38 IN STRESS PERIOD 1
20 ITERATIONS FOR TIME STEP 39 IN STRESS PERIOD 1
19 ITERATIONS FOR TIME STEP 40 IN STRESS PERIOD 1
17 ITERATIONS FOR TIME STEP 41 IN STRESS PERIOD 1
15 ITERATIONS FOR TIME STEP 42 IN STRESS PERIOD 1
12 ITERATIONS FOR TIME STEP 43 IN STRESS PERIOD 1
12 ITERATIONS FOR TIME STEP 44 IN STRESS PERIOD 1
12 ITERATIONS FOR TIME STEP 45 IN STRESS PERIOD 1
18 ITERATIONS FOR TIME STEP 46 IN STRESS PERIOD 1
16 ITERATIONS FOR TIME STEP 47 IN STRESS PERIOD 1
16 ITERATIONS FOR TIME STEP 48 IN STRESS PERIOD 1
19 ITERATIONS FOR TIME STEP 49 IN STRESS PERIOD 1
22 ITERATIONS FOR TIME STEP 50 IN STRESS PERIOD 1

MAXIMUM HEAD CHANGE FOR EACH ITERATION:

HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL

3.513 (1, 23, 4) 1.727 (1, 23, 4) 1.593 (1, 22, 5) 0.8264 (1, 22, 5) 0.4432 (1, 23, 5)
0.1582 (1, 22, 5) 0.1057 (1, 22, 5) 0.7619E-01 (1, 23, 5) 0.5246E-01 (1, 24, 9) 0.8271E-01 (1, 23, 10)
0.1996E-01 (1, 21, 18) 0.1351E-01 (1, 19, 19) 0.8219E-02 (1, 37, 7) 0.1031E-01 (1, 21, 18) 0.6534E-02 (1, 37, 7)
0.5828E-02 (1, 19, 19) 0.2500E-02 (1, 19, 19) 0.2407E-02 (1, 21, 18) 0.1429E-02 (1, 24, 17) 0.2174E-02 (1, 21, 18)

0.1664E-02 (1, 19, 19) 0.9862E-03 (1, 19, 19)

HEAD IN LAYER 1 AT END OF TIME STEP 50 IN STRESS PERIOD 1

26

	1 11 21	2 12 22	3 13	4 14	5 15	6 16	7 17	8 18	9 19	10 20
1	1000. 175.0 157.0	1000. 174.2 158.0	1000. 173.8	1000. 173.8	1000. 174.0	1000. 171.8	1000. 169.0	181.0 166.0	176.8 160.0	175.9 158.0
2	1000. 175.0 159.9	1000. 174.1 159.0	1000. 173.5	1000. 172.8	1000. 172.0	1000. 171.3	209.6 169.4	181.3 166.5	176.8 163.3	175.9 161.2
3	1000. 175.1 161.8	1000. 174.1 159.0	1000. 173.5	1000. 172.8	1000. 172.2	1000. 171.2	209.3 169.4	182.5 167.3	176.9 165.4	176.1 163.6
4	1000. 175.4 164.6	1000. 174.3 164.0	1000. 173.7	1000. 173.0	1000. 172.4	1000. 171.5	209.3 169.9	182.6 168.2	177.1 166.8	176.6 165.8
5	1000. 176.0 166.6	1000. 174.6 166.0	1000. 174.0	1000. 173.4	1000. 172.9	1000. 172.0	209.1 170.7	183.8 169.4	179.0 168.2	177.7 167.2
6	1000. 176.8 167.7	1000. 175.1 168.0	1000. 174.6	1000. 174.0	1000. 173.5	1000. 172.7	1000. 171.7	182.9 170.6	180.0 169.5	178.8 168.3
7	1000. 177.7 169.1	1000. 175.9 168.9	1000. 175.2	1000. 174.7	1000. 174.2	1000. 173.5	1000. 172.6	1000. 171.8	180.9 170.8	179.7 169.9
8	1000. 178.5 170.7	1000. 176.8 170.0	1000. 176.0	1000. 175.5	254.4 175.0	247.2 174.4	225.6 173.6	185.9 172.9	181.9 172.2	180.4 171.5
9	1000. 178.9 171.9	1000. 177.6 1000.	1000. 176.7	1000. 176.1	249.5 175.7	239.8 175.2	224.1 174.6	187.1 173.8	182.9 173.4	181.0 172.7
10	1000. 180.0 1000.	1000. 178.3 1000.	1000. 177.4	1000. 176.8	252.1 176.4	238.5 176.0	219.0 175.5	188.9 174.9	183.8 174.6	182.1 174.2
11	1000. 180.8 1000.	1000. 179.2 1000.	1000. 178.1	1000. 177.3	1000. 176.9	234.7 176.6	213.1 176.3	188.4 176.0	184.3 176.0	182.3 176.0
12	1000. 181.3 1000.	1000. 179.8 1000.	1000. 178.5	1000. 177.8	1000. 177.3	225.6 177.0	195.6 176.9	187.3 177.1	184.6 177.5	182.5 177.8
13	1000. 181.6 180.6	1000. 179.9 1000.	1000. 178.5	1000. 178.0	1000. 177.6	222.6 177.3	193.6 177.4	187.4 178.0	185.0 179.0	183.1 179.7

14	1000. 182.0 181.9	1000. 179.9 1000.	1000. 178.5	1000. 177.9	1000. 177.5	216.9 177.3	192.8 177.8	188.1 178.9	186.0 181.0	184.0 181.7	(27)
15	1000. 182.6 1000.	1000. 180.2 1000.	1000. 178.5	1000. 177.5	236.1 177.0	215.9 177.1	193.1 177.8	188.8 178.9	186.8 180.3	184.9 181.2	
16	1000. 183.1 1000.	1000. 180.5 1000.	1000. 178.6	1000. 177.0	235.0 176.2	210.8 177.0	192.7 177.9	189.1 178.8	187.1 179.9	185.4 1000.	
17	1000. 183.7 1000.	1000. 181.0 1000.	1000. 178.9	1000. 176.7	231.8 174.2	202.4 177.1	192.2 178.1	189.4 178.9	187.3 179.6	185.8 1000.	
18	1000. 184.4 1000.	1000. 181.7 1000.	1000. 179.6	237.7 178.1	227.8 177.0	199.3 178.0	191.9 178.6	189.5 179.2	187.6 179.6	186.1 1000.	
19	1000. 185.1 1000.	1000. 182.9 1000.	1000. 180.9	236.8 180.0	224.6 179.6	198.0 179.6	192.2 179.7	189.8 179.9	188.0 179.8	186.5 1000.	
20	1000. 186.0 1000.	1000. 184.3 1000.	1000. 182.7	229.9 182.1	212.5 181.7	196.9 181.5	192.8 181.4	190.4 181.2	188.7 1000.	187.3 1000.	
21	1000. 187.3 1000.	1000. 186.0 1000.	1000. 184.6	203.6 184.0	199.3 183.6	196.7 183.4	193.7 182.9	191.2 182.2	189.6 1000.	188.4 1000.	
22	1000. 188.4 1000.	1000. 187.6 1000.	225.8 186.4	209.7 185.8	200.5 185.5	197.4 185.3	194.4 184.8	192.0 1000.	190.4 1000.	189.3 1000.	
23	1000. 189.2 1000.	1000. 188.5 1000.	225.9 187.9	212.0 187.4	203.4 187.2	198.3 187.0	194.8 187.0	192.7 1000.	191.3 1000.	190.2 1000.	
24	1000. 189.9 1000.	1000. 189.3 1000.	226.0 189.2	210.8 189.0	203.4 188.8	198.4 188.6	195.1 189.2	193.2 1000.	191.9 1000.	190.9 1000.	
25	1000. 191.1 227.9	1000. 190.5 247.6	1000. 190.5	203.9 190.6	201.1 190.5	197.9 190.4	195.3 191.3	193.7 192.9	192.7 194.2	191.8 199.0	
26	1000. 192.3 1000.	1000. 191.9 1000.	1000. 191.9	200.3 191.9	199.1 191.9	197.2 192.0	195.4 192.8	194.3 194.0	193.5 194.8	192.8 1000.	
27	1000. 193.5 238.8	1000. 193.2 1000.	1000. 193.2	197.9 193.2	197.7 193.3	196.7 193.5	195.6 194.4	194.9 195.8	194.3 197.4	193.8 209.0	
28	1000. 194.5 1000.	1000. 194.4 1000.	1000. 194.3	197.0 194.5	197.1 194.5	196.6 194.7	196.0 195.9	195.4 198.7	195.1 203.6	194.8 222.7	

44	1000. 202.4 1000.	1000. 203.3 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	202.1 1000.	202.2 1000.	202.3 1000.	202.4 1000.
45	1000. 202.6 1000.	1000. 202.9 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	202.3 1000.	202.3 1000.	202.4 1000.	202.5 1000.
46	1000. 202.8 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	202.4 1000.	202.5 1000.	202.7 1000.
47	1000. 203.2 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	202.4 1000.	202.4 1000.	202.8 1000.
48	1000. 203.7 1000.	1000. 204.5 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	201.7 1000.	203.1 1000.
49	1000. 204.6 1000.	1000. 205.5 1000.	1000. 206.9	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	202.3 1000.	203.7 1000.
50	1000. 205.9 1000.	1000. 206.6 1000.	1000. 207.6	1000. 207.9	1000. 208.0	1000. 1000.	1000. 1000.	1000. 1000.	203.7 1000.	204.9 1000.
51	1000. 206.9 1000.	1000. 207.4 1000.	1000. 207.8	1000. 208.0	1000. 208.2	1000. 208.8	1000. 1000.	206.1 1000.	205.3 1000.	206.2 1000.
52	1000. 207.7 1000.	1000. 208.0 1000.	1000. 208.0	1000. 208.1	1000. 208.2	1000. 208.8	1000. 1000.	207.0 1000.	206.7 1000.	207.2 1000.
53	1000. 208.4 1000.	1000. 208.5 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	207.8 1000.	207.7 1000.	208.1 1000.
54	1000. 208.9 1000.	1000. 208.9 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	208.7 1000.	208.6 1000.	208.8 1000.
55	1000. 209.3 1000.	1000. 209.3 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	209.2 1000.	209.3 1000.	209.6 1000.
56	1000. 209.6 1000.	1000. 209.6 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	209.8 1000.	209.7 1000.	210.0 1000.

	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22								
1	1000. 1.9638E-02 -2.7466E-04	1000. 0.7636 0.0000E+00	1000. 0.1892	1000. 0.2233	1000. 2.4414E-04	1000. 0.1560	1000. -3.1189E-02	4.4861E-02 1.3733E-04	0.1838 -4.2725E-04	0.1269 -2.5940E-04
2	1000. 2.3987E-02 6.5460E-02	1000. -0.1056 0.0000E+00	1000. 0.5329	1000. 0.2052	1000. -4.6738E-02	1000. 0.7136	0.4083 0.5599	-0.3390 0.4595	0.1626 0.6677	9.4940E-02 -0.2109
3	1000. -9.5154E-02 0.2291	1000. 0.8601 -4.5776E-04	1000. 0.5368	1000. 0.2031	1000. 0.8294	1000. 0.8190	0.6656 0.6083	-0.5333 0.6953	6.3339E-02 0.5704	-8.2031E-02 0.4236
4	1000. 0.6148 0.4279	1000. 0.6725 1.5259E-04	1000. 0.3439	1000. 0.9795	1000. 0.5722	1000. 0.5408	0.6995 1.127	-0.5683 0.7677	-0.1191 0.1507	0.3669 0.2408
5	1000. 1.1581E-02 0.3644	1000. 0.4064 -4.5776E-05	1000. 0.9843	1000. 0.5646	1000. 1.103	1000. 0.9679	0.9086 1.263	-0.7937 0.6254	-7.0190E-04 0.8311	0.3134 0.7960
6	1000. 0.1770 0.2604	1000. 0.8644 1.2207E-04	1000. 1.443	1000. 0.9862	1000. 1.479	1000. 1.253	1000. 1.333	7.1548E-02 1.413	8.8196E-03 0.5364	0.2406 0.6736
7	1000. 1.272 0.9292	1000. 1.128 9.7336E-02	1000. 1.765	1000. 1.296	1000. 1.765	1000. 1.491	1000. 1.377	1000. 1.190	8.3023E-02 1.242	0.2656 1.123
8	1000. 1.505 1.342	1000. 1.179 1.026	1000. 2.012	1000. 1.547	1.567 1.993	2.809 2.633	-0.5975 2.445	-1.916 2.058	6.8970E-02 1.840	0.6125 1.506
9	1000. 1.139 2.092	1000. 2.374 1000.	1000. 2.274	1000. 2.852	0.4836 2.294	0.1569 2.818	0.9342 2.423	-3.119 2.160	8.5892E-02 1.635	0.9974 2.259
10	1000. 1.969 1000.	1000. 2.697 1000.	1000. 2.589	1000. 3.167	2.945 3.570	1.539 3.043	1.039 3.534	-3.862 3.082	0.2029 2.395	0.9264 1.756
11	1000. 2.160 1000.	1000. 2.784 1000.	1000. 3.946	1000. 3.651	1000. 4.056	5.319 4.364	1.909 3.708	-3.358 2.960	0.6763 2.962	1.705 2.960
12	1000. 2.750 1000.	1000. 4.193 1000.	1000. 4.495	1000. 4.216	1000. 4.651	4.378 4.992	-7.610 4.136	-0.3392 3.933	1.369 2.533	2.453 2.163
13	1000. 3.368 0.3681	1000. 4.094 1000.	1000. 5.452	1000. 5.965	1000. 6.373	7.395 5.664	-5.583 4.641	-0.3638 3.957	0.9831 2.973	2.900 1.265

14	1000. 4.032 0.1315	1000. 5.121 1000.	1000. 6.488	1000. 7.105	1000. 7.537	3.117 6.654	-3.822 6.240	-0.1302 4.101	1.962 1.959	3.021 0.2651
15	1000. 4.424 1000.	1000. 5.835 1000.	1000. 7.499	1000. 7.484	3.898 8.044	4.070 7.854	-3.090 7.181	0.2257 5.115	2.207 2.675	3.144 1.850
16	1000. 4.919 1000.	1000. 6.490 1000.	1000. 7.437	1000. 8.950	5.015 9.789	4.221 8.971	-2.694 8.133	0.8746 6.174	1.899 4.106	3.600 1000.
17	1000. 4.279 1000.	1000. 6.000 1000.	1000. 8.110	1000. 9.282	8.158 11.84	-10.42 8.910	-1.185 7.891	0.6148 7.068	2.667 5.366	3.170 1000.
18	1000. 4.601 1000.	1000. 6.336 1000.	1000. 7.403	2.297 8.941	2.243 9.969	-7.337 9.031	-0.9217 8.355	1.470 6.770	2.418 6.392	3.879 1000.
19	1000. 4.862 1000.	1000. 6.108 1000.	1000. 7.072	3.170 7.952	5.356 8.399	-5.045 7.447	-0.1516 7.267	1.182 7.089	3.025 6.241	3.494 1000.
20	1000. 4.024 1000.	1000. 5.651 1000.	1000. 6.296	10.06 6.887	-2.506 7.286	-2.864 6.465	0.2473 6.625	1.559 6.811	3.313 1000.	3.694 1000.
21	1000. 3.738 1000.	1000. 4.996 1000.	1000. 5.448	-6.587 5.977	-3.326 6.354	-1.719 5.605	0.3474 6.140	1.778 6.809	2.441 1000.	3.577 1000.
22	1000. 3.577 1000.	1000. 4.398 1000.	4.247 4.554	-12.74 5.184	-4.519 4.512	-1.413 4.734	0.6296 5.165	1.959 1000.	2.551 1000.	3.682 1000.
23	1000. 3.774 1000.	1000. 3.461 1000.	4.090 4.122	-14.96 3.579	-6.398 3.827	-2.274 3.990	0.1924 3.989	1.299 1000.	2.729 1000.	2.835 1000.
24	1000. 3.085 1000.	1000. 3.670 1000.	4.041 2.822	-12.79 3.023	-6.372 3.161	-2.415 3.378	0.9153 2.810	1.799 1000.	2.062 1000.	3.083 1000.
25	1000. 2.945 2.115	1000. 2.492 2.379	1000. 2.461	-5.911 2.447	-4.052 2.470	-0.8507 2.558	0.7481 1.666	1.275 1.140	2.322 -0.1966	2.178 -4.048
26	1000. 1.696 1000.	1000. 2.069 1000.	1000. 2.100	-2.287 2.088	-1.079 2.074	-0.1738 0.9612	0.6007 1.242	1.731 7.4310E-03	1.524 0.1770	2.227 1000.
27	1000. 1.543 11.20	1000. 0.7906 1000.	1000. 0.7743	9.8282E-02 0.7812	0.2977 0.6890	0.2728 0.5339	1.364 -0.3616	1.134 -1.828	1.691 -2.403	1.166 -13.99
28	1000. 0.4785 1000.	1000. 0.6407 1000.	1000. 0.6547	1.043 0.5456	0.8927 0.4606	1.384 0.3218	1.040 -0.9139	0.5516 -3.717	0.8883 -8.616	1.188 7.280

29	1000. 0.5410 1000.	1000. 0.6294 1000.	1000. -0.3027	1000. -0.3795	0.8770 -0.4401	0.2132 -0.6659	0.6377 -2.684	0.9741 -5.603	0.1720 7.901	0.3756 5.712
30	1000. -0.2345 1000.	1000. -0.1750 1000.	1000. -8.9511E-02	0.3364 -0.1597	0.5773 -0.2670	0.8121 -0.5842	0.1234 -4.238	0.3792 -13.58	0.5064 2.689	0.6343 1000.
31	1000. 4.2419E-02 1000.	1000. 0.2939 1000.	-0.1626 0.3134	4.7745E-02 0.2041	0.2530 0.2563	0.4538 -0.4764	0.6288 -2.367	-0.2131 5.140	-0.1369 1000.	-0.1003 1000.
32	1000. -0.6502 1000.	-0.5097 -0.2047 1000.	-0.3745 -0.2596	-0.2215 -0.2001	-9.9167E-02 -0.2186	6.3156E-02 -0.1840	0.1659 -2.868	0.1944 2.414	-0.8105 1000.	-0.9348 1000.
33	1000. -0.7406 1000.	0.3266 1000. 1000.	0.4100 -0.8138	-0.5018 -0.9333	-0.3829 -0.9084	-0.3261 -1.436	-0.2816 -12.26	-0.3237 3.434	-0.5181 1000.	-0.8683 1000.
34	1000. -2.263 1000.	6.1508E-02 1000. 1000.	0.1722 -1.114	0.2469 -1.382	0.3040 -1.932	-0.6927 -2.748	-0.6849 4.408	-0.6636 1.875	-1.052 1000.	-1.739 1000.
35	0.0000E+00 -2.797 1000.	-0.2709 -3.347 1000.	-9.5367E-03 -2.777	4.3655E-02 -4.027	-3.1281E-03 -4.669	-6.4651E-02 -5.816	-0.1020 -11.94	1000. 1000.	1000. 1000.	-2.259 1000.
36	0.0000E+00 -3.606 1000.	-0.1327 -4.588 1000.	2.6550E-03 -5.292	-0.1011 -6.118	-0.2961 -7.028	-0.4613 -10.34	-0.5576 -15.51	1000. 1000.	1000. 1000.	-3.160 1000.
37	0.0000E+00 -3.220 1000.	-0.2876 -4.620 1000.	0.3020 -6.109	-0.1550 -7.716	-0.6194 -9.294	7.2403E-02 -13.25	-0.1103 4.728	1000. 1000.	1000. 1000.	-2.486 1000.
38	0.0000E+00 -2.814 1000.	-0.1567 -4.043 1000.	-0.3522 -6.555	-0.2020 -9.028	-9.9274E-02 -11.03	-0.5199 -16.56	-0.8470 5.060	-0.3802 2.332	-0.7677 1000.	-2.241 1000.
39	0.0000E+00 -1.071 1000.	0.3092 -1.905 1000.	1000. -3.711	1000. -8.185	-0.7691 -12.39	-0.9729 -20.26	-0.2189 4.858	-0.4769 4.157	-0.7082 1000.	-0.9541 1000.
40	0.0000E+00 -0.9855 1000.	7.4356E-02 -1.486 1000.	1000. -6.131	1000. -11.33	-5.6030E-02 -4.489	-0.2162 7.576	-0.3945 1000.	-0.5715 1000.	-0.7534 1000.	-0.8933 1000.
41	0.0000E+00 -0.6747 1000.	-1.8311E-04 -0.6273 1000.	1000. 1000.	1000. 1000.	-0.2604 1000.	-0.4312 1000.	-0.5781 1000.	-0.7333 1000.	-0.8474 1000.	-0.8624 1000.
42	0.0000E+00 -9.5627E-02 1000.	1000. -0.5533 1000.	1000. 1000.	1000. 1000.	1000. 1000.	-0.6799 1000.	0.2120 1000.	8.2870E-02 1000.	-4.0771E-02 1000.	-0.1175 1000.
43	1000. -0.5844 1000.	1000. 13.03 1000.	1000. 1000.	1000. 1000.	1000. 1000.	0.1654 1000.	3.6118E-02 1000.	-9.6252E-02 1000.	-0.2366 1000.	-0.3719 1000.

44	1000. -0.4376 1000.	1000. -0.2704 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	-0.1479 1000.	-0.2365 1000.	-0.3335 1000.	-0.4260 1000.
45	1000. 0.3648 1000.	1000. 0.1280 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	-0.2530 1000.	-0.3320 1000.	0.5697 1000.	0.4602 1000.
46	1000. 0.2010 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	0.5967 1000.	0.5119 1000.	0.3308 1000.
47	1000. 0.8463 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	0.6145 1000.	0.6278 1000.	0.1724 1000.
48	1000. 0.2555 1000.	1000. 0.5381 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	0.3425 1000.	-5.1041E-02 1000.
49	1000. 0.3500 1000.	1000. 0.5318 1000.	1000. 0.1190 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	-0.3248 1000.	0.3140 1000.
50	1000. 0.1193 1000.	1000. 0.3734 1000.	1000. 0.3891 1000.	1000. 8.6304E-02 1000.	1000. 1.6785E-04 1000.	1000. 1000.	1000. 1000.	1000. 1000.	0.3015 1000.	0.1071 1000.
51	1000. 6.2332E-02 1000.	1000. 0.5986 1000.	1000. 0.1788 1000.	1000. -1.7365E-02 1000.	1000. -0.1810 1000.	1000. 0.1917 1000.	1000. 1000.	-0.1210 1000.	-0.3150 1000.	0.8366 1000.
52	1000. 0.3010 1000.	1000. 4.2633E-02 1000.	1000. 1.7212E-02 1000.	1000. -7.1732E-02 1000.	1000. -0.2115 1000.	1000. 0.1885 1000.	1000. 1000.	4.7806E-02 1000.	0.3435 1000.	-0.2006 1000.
53	1000. 0.5838 1000.	1000. 0.4689 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	0.1712 1000.	0.3389 1000.	-6.9702E-02 1000.
54	1000. 0.1223 1000.	1000. 5.7617E-02 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	0.2725 1000.	0.3728 1000.	0.1604 1000.
55	1000. 0.6712 1000.	1000. -0.2859 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	-0.1773 1000.	0.7238 1000.	0.3725 1000.
56	1000. 0.3925 1000.	1000. 0.4487 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	0.1814 1000.	0.2974 1000.	5.8441E-03 1000.

VOLUMETRIC BUDGET FOR ENTIRE MODEL AT END OF TIME STEP 50 IN STRESS PERIOD 1

CUMULATIVE VOLUMES

L**3

RATES FOR THIS TIME STEP

L**3/T

IN:

STORAGE = 0.92006E+07
CONSTANT HEAD = 20950.
WELLS = 0.00000E+00
RIVER LEAKAGE = 57023.
HEAD DEP BOUNDS = 0.42847E+06

TOTAL IN = 0.97070E+07

OUT:

STORAGE = 0.78369E+07
CONSTANT HEAD = 28849.
WELLS = 0.74118E+06
RIVER LEAKAGE = 0.17711E+06
HEAD DEP BOUNDS = 0.88924E+06

TOTAL OUT = 0.96733E+07

IN - OUT = 33781.

PERCENT DISCREPANCY = 0.35

IN:

STORAGE = 11.968
CONSTANT HEAD = 0.31142E-01
WELLS = 0.00000E+00
RIVER LEAKAGE = 0.98921E-01
HEAD DEP BOUNDS = 0.70890

TOTAL IN = 12.807

OUT:

STORAGE = 9.7205
CONSTANT HEAD = 0.50739E-01
WELLS = 1.2255
RIVER LEAKAGE = 0.28878
HEAD DEP BOUNDS = 1.4742

TOTAL OUT = 12.760

IN - OUT = 0.47103E-01

PERCENT DISCREPANCY = 0.37

TIME SUMMARY AT END OF TIME STEP 50 IN STRESS PERIOD 1

	SECONDS	MINUTES	HOURS	DAYS	YEARS
TIME STEP LENGTH	201600.	3360.00	56.0000	2.33333	0.638832E-02
STRESS PERIOD TIME	604800.	10080.0	168.000	7.00000	0.191650E-01
TOTAL SIMULATION TIME	604800.	10080.0	168.000	7.00000	0.191650E-01

U.S. GEOLOGICAL SURVEY MODULAR FINITE-DIFFERENCE GROUND-WATER MODEL

SOUTHAMPTON AQUIFER SIMULATION

1 LAYERS 56 ROWS 22 COLUMNS

3-D Model-- hydraulic conductivity = 220 ft/day

1 STRESS PERIOD(S) IN SIMULATION

MODEL TIME UNIT IS SECONDS

I/O UNITS:

ELEMENT OF IUNIT: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

I/O UNIT: 11 12 0 14 0 0 17 0 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0

BAS1 -- BASIC MODEL PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 1

ARRAYS RHS AND BUFF WILL SHARE MEMORY.

START HEAD WILL BE SAVED

11170 ELEMENTS IN X ARRAY ARE USED BY BAS

11170 ELEMENTS OF X ARRAY USED OUT OF 56000

BCF1 -- BLOCK-CENTERED FLOW PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 11

TRANSIENT SIMULATION

LAYER AQUIFER TYPE

1 3

6161 ELEMENTS IN X ARRAY ARE USED BY BCF

17331 ELEMENTS OF X ARRAY USED OUT OF 56000

WEL1 -- WELL PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 12

MAXIMUM OF 3 WELLS

12 ELEMENTS IN X ARRAY ARE USED FOR WELLS

17343 ELEMENTS OF X ARRAY USED OUT OF 56000

RIV1 -- RIVER PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 14

MAXIMUM OF 9 RIVER NODES

54 ELEMENTS IN X ARRAY ARE USED FOR RIVERS

17397 ELEMENTS OF X ARRAY USED OUT OF 56000

GH1 -- GH1 PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 17

MAXIMUM OF 13 HEAD-DEPENDENT BOUNDARY NODES

CELL-BY-CELL FLOW WILL BE PRINTED WHEN ICBCFL NOT 0

65 ELEMENTS IN X ARRAY ARE USED FOR HEAD-DEPENDENT BOUNDARIES

17462 ELEMENTS OF X ARRAY USED OUT OF 56000

SIP1 -- STRONGLY IMPLICIT PROCEDURE SOLUTION PACKAGE, VERSION 1, 12/08/83 INPUT READ FROM UNIT 19

MAXIMUM OF 750 ITERATIONS ALLOWED FOR CLOSURE

5 ITERATION PARAMETERS

7933 ELEMENTS IN X ARRAY ARE USED BY SIP

25395 ELEMENTS OF X ARRAY USED OUT OF 56000

BOUNDARY ARRAY FOR LAYER 1 WILL BE READ ON UNIT 1 USING FORMAT: (2014)

	1 11 21	2 12 22	3 13	4 14	5 15	6 16	7 17	8 18	9 19	10 20
1	0 1 1	0 1 1	0 1	0 1	0 1	0 1	0 1	1 1	1 1	1 1
2	0 1 1	0 1 1	0 1	0 1	0 1	0 1	1 1	1 1	1 1	1 1
3	0 1 1	0 1 1	0 1	0 1	0 1	0 1	1 1	1 1	1 1	1 1
4	0 1 1	0 1 1	0 1	0 1	0 1	0 1	1 1	1 1	1 1	1 1
5	0 1 1	0 1 1	0 1	0 1	0 1	0 1	1 1	1 1	1 1	1 1
6	0 1 1	0 1 1	0 1	0 1	0 1	0 1	0 1	1 1	1 1	1 1
7	0 1 1	0 1 1	0 1	0 1	0 1	0 1	0 1	0 1	1 1	1 1
8	0 1 1	0 1 1	0 1	0 1	1 1	1 1	1 1	1 1	1 1	1 1
9	0 1 1	0 1 0	0 1	0 1	1 1	1 1	1 1	1 1	1 1	1 1
10	0 1 0	0 1 0	0 1	0 1	1 1	1 1	1 1	1 1	1 1	1 1
11	0 1 0	0 1 0	0 1	0 1	0 1	1 1	1 1	1 1	1 1	1 1
12	0 1 0	0 1 0	0 1	0 1	0 1	1 1	1 1	1 1	1 1	1 1

[illegible]

28	0 1 0	0 1 0	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1
29	0 1 0	0 1 0	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1
30	0 1 0	0 1 0	0 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 0 0
31	0 1 0	0 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
32	0 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
33	0 1 0	1 0 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
34	0 1 0	1 0 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
35	-1 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	0 0 0	0 0 0	1 0 0
36	-1 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	0 0 0	0 0 0	1 0 0
37	-1 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	0 0 0	0 0 0	1 0 0
38	-1 1 0	1 1 0	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
39	-1 1 0	1 1 0	0 1 1	0 1 1	1 1 1	1 1 1	1 1 1	1 1 0	1 0 0	1 0 0
40	-1 1 0	1 1 0	0 1 1	0 1 1	1 1 1	1 1 0	1 0 0	1 0 0	1 0 0	1 0 0
41	-1 1 0	1 1 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0
42	-1 1 0	0 1 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0

43	0 1 0	0 1 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0	1 0 0	1 0 0
44	0 1 0	0 1 0	0 0 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0	1 0 0
45	0 1 0	0 1 0	0 0 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0	1 0 0
46	0 1 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0
47	0 1 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0
48	0 1 0	0 1 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0
49	0 1 0	0 1 0	0 1 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0
50	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0
51	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 0 0	1 0 0	1 0 0	1 0 0
52	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 0 0	1 0 0	1 0 0	1 0 0
53	0 1 0	0 1 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0
54	0 1 0	0 1 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0
55	0 1 0	0 1 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0
56	0 1 0	0 1 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 0 0	1 0 0	1 0 0

AQUIFER HEAD WILL BE SET TO 999.99 AT ALL NO-FLOW NODES (IBOUND=0).

INITIAL HEAD FOR LAYER 1 WILL BE READ ON UNIT 1 USING FORMAT: (10F8.0)

	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22								
1	1000. 175.0 157.0	1000. 175.0 158.0	1000. 174.0	1000. 174.0	1000. 174.0	1000. 172.0	1000. 169.0	181.0 166.0	177.0 160.0	176.0 158.0
2	1000. 175.0 160.0	1000. 174.0 159.0	1000. 174.0	1000. 173.0	1000. 172.0	1000. 172.0	210.0 170.0	181.0 167.0	177.0 164.0	176.0 161.0
3	1000. 175.0 162.0	1000. 175.0 159.0	1000. 174.0	1000. 173.0	1000. 173.0	1000. 172.0	210.0 170.0	182.0 168.0	177.0 166.0	176.0 164.0
4	1000. 176.0 165.0	1000. 175.0 164.0	1000. 174.0	1000. 174.0	1000. 173.0	1000. 172.0	210.0 171.0	182.0 169.0	177.0 167.0	177.0 166.0
5	1000. 176.0 167.0	1000. 175.0 166.0	1000. 175.0	1000. 174.0	1000. 174.0	1000. 173.0	210.0 172.0	183.0 170.0	179.0 169.0	178.0 168.0
6	1000. 177.0 168.0	1000. 176.0 168.0	1000. 176.0	1000. 175.0	1000. 175.0	1000. 174.0	1000. 173.0	183.0 172.0	180.0 170.0	179.0 169.0
7	1000. 179.0 170.0	1000. 177.0 169.0	1000. 177.0	1000. 176.0	1000. 176.0	1000. 175.0	1000. 174.0	1000. 173.0	181.0 172.0	180.0 171.0
8	1000. 180.0 172.0	1000. 178.0 171.0	1000. 178.0	1000. 177.0	256.0 177.0	250.0 177.0	225.0 176.0	184.0 175.0	182.0 174.0	181.0 173.0
9	1000. 180.0 174.0	1000. 180.0 1000.	1000. 179.0	1000. 179.0	250.0 178.0	240.0 178.0	225.0 177.0	184.0 176.0	183.0 175.0	182.0 175.0
10	1000. 182.0 1000.	1000. 181.0 1000.	1000. 180.0	1000. 180.0	255.0 180.0	240.0 179.0	220.0 179.0	185.0 178.0	184.0 177.0	183.0 176.0
11	1000. 183.0 1000.	1000. 182.0 1000.	1000. 182.0	1000. 181.0	1000. 181.0	240.0 181.0	215.0 180.0	185.0 179.0	185.0 179.0	184.0 179.0
12	1000. 184.0 1000.	1000. 184.0 1000.	1000. 183.0	1000. 182.0	1000. 182.0	230.0 182.0	188.0 181.0	187.0 181.0	186.0 180.0	185.0 180.0
13	1000. 185.0	1000. 184.0	1000. 184.0	1000. 184.0	1000. 184.0	230.0 183.0	188.0 182.0	187.0 182.0	186.0 182.0	186.0 181.0

	181.0	1000.								
14	1000. 186.0 182.0	1000. 185.0 1000.	1000. 185.0	1000. 185.0	1000. 185.0	220.0 184.0	189.0 184.0	188.0 183.0	188.0 183.0	187.0 182.0
15	1000. 187.0 1000.	1000. 186.0 1000.	1000. 186.0	1000. 185.0	240.0 185.0	220.0 185.0	190.0 185.0	189.0 184.0	189.0 183.0	188.0 183.0
16	1000. 188.0 1000.	1000. 187.0 1000.	1000. 186.0	1000. 186.0	240.0 186.0	215.0 186.0	190.0 186.0	190.0 185.0	189.0 184.0	189.0 1000.
17	1000. 188.0 1000.	1000. 187.0 1000.	1000. 187.0	1000. 186.0	240.0 186.0	192.0 186.0	191.0 186.0	190.0 186.0	190.0 185.0	189.0 1000.
18	1000. 189.0 1000.	1000. 188.0 1000.	1000. 187.0	240.0 187.0	230.0 187.0	192.0 187.0	191.0 187.0	191.0 186.0	190.0 186.0	190.0 1000.
19	1000. 190.0 1000.	1000. 189.0 1000.	1000. 188.0	240.0 188.0	230.0 188.0	193.0 187.0	192.0 187.0	191.0 187.0	191.0 186.0	190.0 1000.
20	1000. 190.0 1000.	1000. 190.0 1000.	1000. 189.0	240.0 189.0	210.0 189.0	194.0 188.0	193.0 188.0	192.0 188.0	192.0 1000.	191.0 1000.
21	1000. 191.0 1000.	1000. 191.0 1000.	1000. 190.0	197.0 190.0	196.0 190.0	195.0 189.0	194.0 189.0	193.0 189.0	192.0 1000.	192.0 1000.
22	1000. 192.0 1000.	1000. 192.0 1000.	230.0 191.0	197.0 191.0	196.0 190.0	196.0 190.0	195.0 190.0	194.0 1000.	193.0 1000.	193.0 1000.
23	1000. 193.0 1000.	1000. 192.0 1000.	230.0 192.0	197.0 191.0	197.0 191.0	196.0 191.0	195.0 191.0	194.0 1000.	194.0 1000.	193.0 1000.
24	1000. 193.0 1000.	1000. 193.0 1000.	230.0 192.0	198.0 192.0	197.0 192.0	196.0 192.0	196.0 192.0	195.0 1000.	194.0 1000.	194.0 1000.
25	1000. 194.0 230.0	1000. 193.0 250.0	1000. 193.0	198.0 193.0	197.0 193.0	197.0 193.0	196.0 193.0	195.0 194.0	195.0 194.0	194.0 195.0
26	1000. 194.0 240.0	1000. 194.0 1000.	1000. 194.0	198.0 194.0	198.0 194.0	197.0 193.0	196.0 194.0	196.0 194.0	195.0 195.0	195.0 220.0
27	1000. 195.0 250.0	1000. 194.0 1000.	1000. 194.0	198.0 194.0	198.0 194.0	197.0 194.0	197.0 194.0	196.0 194.0	196.0 195.0	195.0 195.0
28	1000. 195.0	1000. 195.0	1000. 195.0	198.0 195.0	198.0 195.0	198.0 195.0	197.0 195.0	196.0 195.0	196.0 195.0	196.0 230.0

	1000.	1000.								
29	1000. 196.0 1000.	1000. 196.0 1000.	1000. 195.0	1000. 195.0	198.0 195.0	197.0 195.0	197.0 195.0	197.0 195.0	196.0 230.0	196.0 240.0
30	1000. 196.0 1000.	1000. 196.0 1000.	1000. 196.0	198.0 196.0	198.0 196.0	198.0 196.0	197.0 196.0	197.0 196.0	197.0 225.0	197.0 1000.
31	1000. 197.0 1000.	1000. 197.0 1000.	198.0 197.0	198.0 197.0	198.0 197.0	198.0 196.0	198.0 196.0	197.0 225.0	197.0 1000.	197.0 1000.
32	1000. 197.0 1000.	198.0 197.0 1000.	198.0 197.0	198.0 197.0	198.0 197.0	198.0 197.0	198.0 197.0	198.0 225.0	197.0 1000.	197.0 1000.
33	1000. 198.0 1000.	199.0 1000. 1000.	199.0 197.0	198.0 197.0	198.0 197.0	198.0 197.0	198.0 197.0	198.0 230.0	198.0 1000.	198.0 1000.
34	1000. 198.0 1000.	199.0 1000. 1000.	199.0 198.0	199.0 198.0	199.0 198.0	198.0 198.0	198.0 220.0	198.0 230.0	198.0 1000.	198.0 1000.
35	200.0 199.0 1000.	199.0 199.0 1000.	199.0 199.0	199.0 198.0	199.0 198.0	199.0 199.0	199.0 199.0	1000. 1000.	1000. 1000.	199.0 1000.
36	200.0 199.0 1000.	199.0 199.0 1000.	199.0 199.0	199.0 199.0	199.0 199.0	199.0 199.0	199.0 199.0	1000. 1000.	1000. 1000.	199.0 1000.
37	198.0 200.0 1000.	198.0 200.0 1000.	199.0 200.0	199.0 200.0	199.0 200.0	200.0 200.0	200.0 230.0	1000. 1000.	1000. 1000.	200.0 1000.
38	197.0 200.0 1000.	197.0 200.0 1000.	198.0 200.0	199.0 200.0	200.0 200.0	200.0 200.0	200.0 240.0	201.0 250.0	201.0 1000.	200.0 1000.
39	195.0 201.0 1000.	196.0 200.0 1000.	1000. 200.0	1000. 200.0	200.0 200.0	200.0 200.0	201.0 240.0	201.0 250.0	201.0 1000.	201.0 1000.
40	196.0 201.0 1000.	196.0 201.0 1000.	1000. 200.0	1000. 200.0	201.0 210.0	201.0 230.0	201.0 1000.	201.0 1000.	201.0 1000.	201.0 1000.
41	198.0 201.0 1000.	197.0 201.0 1000.	1000. 1000.	1000. 1000.	201.0 1000.	201.0 1000.	201.0 1000.	201.0 1000.	201.0 1000.	201.0 1000.
42	200.0 202.0 1000.	1000. 202.0 1000.	1000. 1000.	1000. 1000.	1000. 1000.	201.0 1000.	202.0 1000.	202.0 1000.	202.0 1000.	202.0 1000.
43	1000. 202.0	1000. 220.0	1000. 1000.	1000. 1000.	1000. 1000.	202.0 1000.	202.0 1000.	202.0 1000.	202.0 1000.	202.0 1000.

	1000.	1000.								
44	1000. 202.0 1000.	1000. 203.0 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	202.0 1000.	202.0 1000.	202.0 1000.	202.0 1000.
45	1000. 203.0 1000.	1000. 203.0 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	202.0 1000.	202.0 1000.	203.0 1000.	203.0 1000.
46	1000. 203.0 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	203.0 1000.	203.0 1000.	203.0 1000.
47	1000. 204.0 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	203.0 1000.	203.0 1000.	203.0 1000.
48	1000. 204.0 1000.	1000. 205.0 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	202.0 1000.	203.0 1000.
49	1000. 205.0 1000.	1000. 206.0 1000.	1000. 207.0	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	202.0 1000.	204.0 1000.
50	1000. 206.0 1000.	1000. 207.0 1000.	1000. 208.0	1000. 208.0	1000. 208.0	1000. 1000.	1000. 1000.	1000. 1000.	204.0 1000.	205.0 1000.
51	1000. 207.0 1000.	1000. 208.0 1000.	1000. 208.0	1000. 208.0	1000. 208.0	1000. 209.0	1000. 1000.	206.0 1000.	205.0 1000.	207.0 1000.
52	1000. 208.0 1000.	1000. 208.0 1000.	1000. 208.0	1000. 208.0	1000. 208.0	1000. 209.0	1000. 1000.	207.0 1000.	207.0 1000.	207.0 1000.
53	1000. 209.0 1000.	1000. 209.0 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	208.0 1000.	208.0 1000.	208.0 1000.
54	1000. 209.0 1000.	1000. 209.0 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	209.0 1000.	209.0 1000.	209.0 1000.
55	1000. 210.0 1000.	1000. 209.0 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	209.0 1000.	210.0 1000.	210.0 1000.
56	1000. 210.0 1000.	1000. 210.0 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	210.0 1000.	210.0 1000.	210.0 1000.

DEFAULT OUTPUT CONTROL -- THE FOLLOWING OUTPUT COMES AT THE END OF EACH STRESS PERIOD:

TOTAL VOLUMETRIC BUDGET

HEAD

DRAWDOWN

COLUMN TO ROW ANISOTROPY = 1.000000

DELR WILL BE READ ON UNIT 11 USING FORMAT: (10F8.0)

500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00
500.00	500.00	500.00	250.00	250.00	500.00	500.00	500.00	500.00	500.00
500.00	500.00								

DELC WILL BE READ ON UNIT 11 USING FORMAT: (10F8.0)

500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00
500.00	500.00	500.00	500.00	250.00	250.00	250.00	250.00	500.00	500.00
500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00
500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00
500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00
500.00	500.00	500.00	500.00	500.00	500.00				

PRIMARY STORAGE COEF = 0.2200000E-04 FOR LAYER 1

HYD. COND. ALONG ROWS FOR LAYER 1 WILL BE READ ON UNIT 11 USING FORMAT: (10F8.0)

	1 11 21	2 12 22	3 13	4 14	5 15	6 16	7 17	8 18	9 19	10 20
1	2.0000E-08 5.0000E-04 2.8020E-03	2.0000E-08 1.0020E-03 2.8020E-03	2.0000E-08 1.5020E-03	2.0000E-08 1.5020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03
2	2.0000E-08 5.0000E-04 2.8020E-03	2.0000E-08 1.0020E-03 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03
3	2.0000E-08 5.0000E-04 2.8020E-03	2.0000E-08 1.0020E-03 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03
4	2.0000E-08 5.0000E-04 2.8020E-03	2.0000E-08 1.0020E-03 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03
5	2.0000E-08 5.0000E-04 2.8020E-03	2.0000E-08 1.0020E-03 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03
6	2.0000E-08 5.0000E-04 2.8020E-03	2.0000E-08 1.0020E-03 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	2.0000E-08 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03	5.0000E-04 2.8020E-03

[illegible]

[illegible]

[illegible]

52	2.0000E-08 1.5000E-03 2.0000E-08	2.0000E-08 1.5000E-03 2.0000E-08	2.0000E-08 1.5000E-03 2.0000E-08	2.0000E-08 1.5000E-03 2.0000E-08	2.0000E-08 1.5000E-03 2.0000E-08	2.0000E-08 1.5000E-03 2.0000E-08	2.0000E-08 1.5000E-03 2.0000E-08	1.5000E-03 2.0000E-08	1.5000E-03 2.0000E-08	1.5000E-03 2.0000E-08
53	2.0000E-08 1.5000E-03 2.0000E-08	2.0000E-08 1.5000E-03 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	1.5000E-03 2.0000E-08	1.5000E-03 2.0000E-08	1.5000E-03 2.0000E-08
54	2.0000E-08 1.5000E-03 2.0000E-08	2.0000E-08 1.5000E-03 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	1.5000E-03 2.0000E-08	1.5000E-03 2.0000E-08	1.5000E-03 2.0000E-08
55	2.0000E-08 1.5000E-03 2.0000E-08	2.0000E-08 1.5000E-03 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	1.5000E-03 2.0000E-08	1.5000E-03 2.0000E-08	1.5000E-03 2.0000E-08
56	2.0000E-08 1.5000E-03 2.0000E-08	2.0000E-08 1.5000E-03 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	2.0000E-08 2.0000E-08 2.0000E-08	1.5000E-03 2.0000E-08	1.5000E-03 2.0000E-08	1.5000E-03 2.0000E-08

BOTTOM FOR LAYER 1 WILL BE READ ON UNIT 11 USING FORMAT: (10f8.0)

	1 11 21	2 12 22	3 13	4 14	5 15	6 16	7 17	8 18	9 19	10 20
1	250.0 50.00 -10.00	250.0 0.0000E+00 0.0000E+00	250.0 -20.00	250.0 -30.00	250.0 -40.00	250.0 -50.00	250.0 -50.00	180.0 -40.00	150.0 -30.00	100.0 -20.00
2	250.0 50.00 0.0000E+00	250.0 0.0000E+00 0.0000E+00	250.0 -20.00	250.0 -30.00	250.0 -40.00	250.0 -500.0	190.0 -50.00	180.0 -40.00	150.0 -30.00	100.0 -20.00
3	250.0 50.00 0.0000E+00	250.0 0.0000E+00 25.00	250.0 -20.00	250.0 -25.00	250.0 -30.00	220.0 -40.00	190.0 -50.00	180.0 -40.00	150.0 -25.00	100.0 0.0000E+00
4	250.0 50.00 25.00	250.0 0.0000E+00 35.00	250.0 -20.00	250.0 -25.00	250.0 -30.00	220.0 -30.00	190.0 -40.00	180.0 -40.00	150.0 -20.00	100.0 0.0000E+00
5	250.0 50.00 25.00	250.0 0.0000E+00 50.00	250.0 -20.00	250.0 -25.00	250.0 -30.00	250.0 -35.00	190.0 -30.00	180.0 -25.00	175.0 -20.00	125.0 0.0000E+00
6	250.0 50.00 50.00	250.0 0.0000E+00 100.0	250.0 -20.00	250.0 -25.00	250.0 -30.00	250.0 -35.00	250.0 -30.00	180.0 -20.00	170.0 0.0000E+00	125.0 25.00
7	250.0 50.00 100.0	250.0 0.0000E+00 125.0	250.0 -20.00	200.0 -25.00	255.0 -30.00	230.0 -35.00	215.0 -20.00	180.0 0.0000E+00	170.0 25.00	125.0 50.00

8	250.0 50.00 150.0	250.0 0.0000E+00 150.0	250.0 -20.00	250.0 -25.00	235.0 -30.00	230.0 -25.00	205.0 -20.00	180.0 0.0000E+00	150.0 50.00	100.0 100.0
9	250.0 50.00 150.0	250.0 0.0000E+00 250.0	250.0 -15.00	250.0 -20.00	230.0 -25.00	220.0 -20.00	205.0 0.0000E+00	180.0 25.00	150.0 50.00	100.0 100.0
10	250.0 50.00 150.0	250.0 0.0000E+00 250.0	250.0 -15.00	250.0 -20.00	235.0 -20.00	220.0 -15.00	200.0 0.0000E+00	175.0 50.00	150.0 100.0	100.0 125.0
11	250.0 50.00 250.0	250.0 0.0000E+00 250.0	250.0 -10.00	250.0 -15.00	250.0 -15.00	220.0 0.0000E+00	195.0 50.00	175.0 75.00	150.0 100.0	100.0 125.0
12	250.0 50.00 250.0	250.0 0.0000E+00 250.0	250.0 -10.00	250.0 -5.000	250.0 0.0000E+00	200.0 0.0000E+00	180.0 50.00	165.0 100.0	150.0 125.0	100.0 150.0
13	250.0 75.00 170.0	250.0 50.00 225.0	250.0 0.0000E+00	250.0 -5.000	250.0 0.0000E+00	200.0 25.00	175.0 50.00	150.0 100.0	125.0 125.0	100.0 150.0
14	250.0 75.00 170.0	250.0 50.00 225.0	250.0 0.0000E+00	250.0 -5.000	250.0 0.0000E+00	200.0 50.00	175.0 100.0	150.0 125.0	125.0 150.0	100.0 175.0
15	250.0 75.00 250.0	250.0 50.00 250.0	250.0 0.0000E+00	250.0 -5.000	220.0 0.0000E+00	200.0 50.00	175.0 100.0	150.0 125.0	125.0 150.0	100.0 165.0
16	250.0 75.00 250.0	250.0 50.00 250.0	250.0 25.00	250.0 0.0000E+00	220.0 0.0000E+00	195.0 50.00	175.0 100.0	150.0 150.0	125.0 160.0	100.0 200.0
17	250.0 75.00 250.0	250.0 50.00 250.0	250.0 25.00	250.0 8.000	220.0 8.000	180.0 50.00	165.0 100.0	150.0 150.0	125.0 160.0	100.0 200.0
18	250.0 75.00 250.0	250.0 50.00 250.0	250.0 25.00	220.0 10.00	200.0 25.00	180.0 50.00	165.0 100.0	150.0 150.0	125.0 160.0	100.0 250.0
19	250.0 75.00 250.0	250.0 50.00 250.0	250.0 25.00	220.0 10.00	200.0 25.00	180.0 50.00	165.0 100.0	150.0 150.0	125.0 160.0	100.0 250.0
20	250.0 75.00 250.0	250.0 50.00 250.0	250.0 25.00	210.0 15.00	190.0 25.00	175.0 50.00	165.0 100.0	150.0 150.0	125.0 200.0	100.0 250.0
21	250.0 75.00 250.0	250.0 50.00 250.0	210.0 35.00	180.0 20.00	175.0 35.00	170.0 50.00	165.0 100.0	150.0 150.0	125.0 200.0	100.0 250.0
22	250.0 75.00 250.0	250.0 50.00 250.0	210.0 35.00	180.0 20.00	175.0 35.00	170.0 50.00	165.0 100.0	150.0 150.0	125.0 200.0	100.0 250.0

23	250.0 65.00 250.0	250.0 50.00 250.0	210.0 40.00	180.0 30.00	175.0 40.00	170.0 50.00	150.0 100.0	125.0 150.0	100.0 200.0	80.00 250.0
24	250.0 65.00 250.0	250.0 50.00 250.0	210.0 40.00	180.0 35.00	175.0 40.00	170.0 50.00	150.0 100.0	125.0 150.0	100.0 200.0	80.00 250.0
25	250.0 65.00 210.0	250.0 50.00 230.0	200.0 40.00	175.0 40.00	170.0 50.00	170.0 75.00	150.0 100.0	125.0 150.0	100.0 180.0	80.00 185.0
26	250.0 65.00 220.0	250.0 50.00 250.0	200.0 50.00	175.0 50.00	170.0 75.00	170.0 100.0	150.0 125.0	125.0 150.0	100.0 180.0	80.00 200.0
27	250.0 80.00 200.0	250.0 70.00 200.0	200.0 65.00	175.0 75.00	170.0 85.00	165.0 100.0	150.0 125.0	125.0 150.0	100.0 170.0	90.00 180.0
28	250.0 85.00 250.0	250.0 80.00 200.0	200.0 80.00	175.0 100.0	170.0 100.0	165.0 125.0	150.0 150.0	125.0 170.0	100.0 180.0	90.00 200.0
29	250.0 85.00 250.0	250.0 90.00 250.0	200.0 100.0	240.0 100.0	170.0 125.0	165.0 150.0	150.0 170.0	125.0 180.0	100.0 200.0	90.00 210.0
30	250.0 85.00 250.0	250.0 100.0 250.0	200.0 125.0	175.0 150.0	160.0 150.0	150.0 160.0	135.0 170.0	120.0 180.0	100.0 210.0	95.00 250.0
31	250.0 100.0 250.0	240.0 100.0 250.0	180.0 150.0	175.0 150.0	170.0 150.0	150.0 180.0	135.0 190.0	120.0 205.0	100.0 250.0	90.00 250.0
32	250.0 100.0 250.0	180.0 150.0 250.0	175.0 170.0	170.0 150.0	150.0 150.0	140.0 180.0	125.0 190.0	115.0 205.0	100.0 250.0	95.00 250.0
33	250.0 150.0 250.0	180.0 200.0 250.0	175.0 160.0	170.0 160.0	150.0 160.0	140.0 180.0	130.0 190.0	110.0 210.0	100.0 250.0	100.0 250.0
34	250.0 150.0 250.0	180.0 200.0 250.0	175.0 170.0	150.0 175.0	140.0 175.0	130.0 180.0	120.0 205.0	115.0 210.0	110.0 250.0	110.0 250.0
35	180.0 120.0 250.0	175.0 150.0 250.0	150.0 150.0	140.0 150.0	130.0 150.0	125.0 180.0	130.0 180.0	150.0 250.0	150.0 250.0	115.0 250.0
36	180.0 120.0 250.0	150.0 125.0 250.0	140.0 150.0	135.0 150.0	130.0 180.0	125.0 180.0	135.0 180.0	150.0 250.0	150.0 250.0	120.0 250.0
37	150.0 135.0 250.0	140.0 125.0 250.0	135.0 130.0	135.0 150.0	135.0 150.0	130.0 180.0	130.0 210.0	150.0 250.0	150.0 250.0	140.0 250.0

38	140.0 136.0 250.0	140.0 140.0 250.0	140.0 150.0	150.0 150.0	150.0 150.0	150.0 180.0	140.0 220.0	135.0 230.0	135.0 250.0	136.0 250.0
39	140.0 140.0 250.0	150.0 150.0 250.0	150.0 185.0	200.0 175.0	175.0 180.0	160.0 190.0	150.0 220.0	135.0 230.0	138.0 250.0	138.0 250.0
40	150.0 150.0 250.0	180.0 175.0 250.0	200.0 180.0	203.0 180.0	180.0 190.0	175.0 210.0	150.0 250.0	150.0 250.0	140.0 250.0	140.0 250.0
41	175.0 150.0 250.0	180.0 180.0 250.0	200.0 250.0	200.0 250.0	180.0 250.0	175.0 250.0	160.0 250.0	150.0 250.0	145.0 250.0	140.0 250.0
42	175.0 150.0 250.0	250.0 180.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	175.0 250.0	175.0 250.0	155.0 250.0	150.0 250.0	145.0 250.0
43	250.0 150.0 250.0	250.0 200.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	175.0 250.0	150.0 250.0	145.0 250.0
44	250.0 150.0 250.0	250.0 200.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	165.0 250.0	150.0 250.0
45	250.0 175.0 250.0	250.0 180.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	240.0 250.0	180.0 250.0	175.0 250.0	165.0 250.0	150.0 250.0
46	250.0 175.0 250.0	250.0 250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	175.0 250.0	175.0 250.0	150.0 250.0
47	250.0 180.0 250.0	250.0 225.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	150.0 250.0
48	250.0 150.0 250.0	250.0 180.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	200.0 250.0	175.0 250.0	150.0 250.0
49	250.0 175.0 250.0	250.0 180.0 250.0	250.0 200.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	175.0 250.0
50	250.0 170.0 250.0	250.0 180.0 250.0	250.0 190.0	250.0 200.0	250.0 200.0	250.0 200.0	250.0 250.0	190.0 250.0	175.0 250.0	175.0 250.0
51	250.0 150.0 250.0	250.0 150.0 250.0	250.0 180.0	250.0 185.0	250.0 190.0	250.0 200.0	250.0 240.0	180.0 250.0	175.0 250.0	175.0 250.0
52	250.0 150.0 250.0	250.0 150.0 250.0	250.0 170.0	250.0 185.0	250.0 190.0	250.0 200.0	250.0 240.0	180.0 250.0	174.0 250.0	175.0 250.0

53	250.0 150.0 250.0	250.0 150.0 250.0	250.0 165.0	250.0 180.0	250.0 200.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	175.0 250.0
54	250.0 150.0 250.0	250.0 150.0 250.0	250.0 200.0	250.0 200.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	175.0 250.0
55	250.0 150.0 250.0	250.0 150.0 250.0	250.0 200.0	250.0 200.0	250.0 250.0	250.0 250.0	250.0 250.0	180.0 250.0	175.0 250.0	175.0 250.0
56	250.0 140.0 250.0	250.0 150.0 250.0	250.0 200.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	200.0 250.0	180.0 250.0	160.0 250.0

SECONDARY STORAGE COEF = 0.2000000 FOR LAYER 1

TOP FOR LAYER 1 WILL BE READ ON UNIT 11 USING FORMAT: (10f8.0)

	1 11 21	2 12 22	3 13	4 14	5 15	6 16	7 17	8 18	9 19	10 20
1	250.0 110.0 10.00	250.0 60.00 20.00	250.0 10.00	250.0 -10.00	250.0 -20.00	250.0 -30.00	250.0 -30.00	200.0 -20.00	195.0 -10.00	190.0 0.0000E+00
2	250.0 110.0 20.00	250.0 60.00 20.00	250.0 10.00	250.0 -10.00	250.0 -20.00	250.0 -300.0	210.0 -30.00	200.0 -20.00	195.0 -10.00	190.0 10.00
3	250.0 110.0 35.00	250.0 60.00 45.00	250.0 10.00	250.0 -5.000	250.0 -10.00	240.0 -20.00	210.0 -30.00	200.0 -15.00	195.0 10.00	190.0 20.00
4	250.0 110.0 45.00	250.0 60.00 55.00	250.0 10.00	250.0 -5.000	250.0 -10.00	240.0 -10.00	210.0 -20.00	200.0 -10.00	195.0 10.00	190.0 35.00
5	250.0 70.00 60.00	250.0 60.00 70.00	250.0 10.00	250.0 -5.000	250.0 -10.00	250.0 -15.00	210.0 -10.00	200.0 -5.000	195.0 10.00	190.0 35.00
6	250.0 70.00 110.0	250.0 60.00 120.0	250.0 10.00	250.0 -5.000	250.0 -10.00	250.0 -15.00	250.0 -10.00	200.0 10.00	193.0 35.00	190.0 60.00
7	250.0 70.00 135.0	250.0 60.00 145.0	250.0 10.00	310.0 -5.000	274.0 -10.00	250.0 -15.00	235.0 10.00	200.0 35.00	193.0 60.00	189.0 110.0
8	250.0 110.0 170.0	250.0 60.00 170.0	250.0 10.00	250.0 -5.000	256.0 -10.00	250.0 -5.000	225.0 10.00	200.0 60.00	190.0 110.0	185.0 160.0

9	250.0 110.0 170.0	250.0 60.00 250.0	250.0 10.00	250.0 0.0000E+00	250.0 -5.000	240.0 10.00	225.0 35.00	200.0 60.00	190.0 110.0	120.0 160.0
10	250.0 70.00 170.0	250.0 60.00 250.0	250.0 10.00	250.0 0.0000E+00	255.0 0.0000E+00	240.0 10.00	220.0 60.00	195.0 110.0	190.0 135.0	180.0 145.0
11	250.0 110.0 250.0	250.0 60.00 250.0	250.0 10.00	250.0 5.000	250.0 10.00	240.0 60.00	215.0 85.00	197.0 110.0	190.0 135.0	180.0 145.0
12	250.0 170.0 250.0	250.0 60.00 250.0	250.0 10.00	250.0 15.00	250.0 20.00	230.0 60.00	210.0 110.0	195.0 135.0	185.0 160.0	180.0 170.0
13	250.0 175.0 180.0	250.0 85.00 235.0	250.0 60.00	250.0 15.00	250.0 35.00	230.0 60.00	200.0 110.0	195.0 135.0	185.0 160.0	179.0 180.0
14	250.0 110.0 185.0	250.0 85.00 235.0	250.0 60.00	250.0 15.00	250.0 60.00	220.0 110.0	200.0 135.0	190.0 160.0	160.0 185.0	135.0 195.0
15	250.0 110.0 250.0	250.0 85.00 250.0	250.0 60.00	250.0 15.00	240.0 60.00	220.0 110.0	198.0 135.0	190.0 160.0	185.0 175.0	135.0 175.0
16	250.0 110.0 250.0	250.0 85.00 250.0	250.0 60.00	250.0 35.00	240.0 60.00	215.0 110.0	197.0 160.0	190.0 170.0	185.0 170.0	135.0 210.0
17	250.0 110.0 250.0	250.0 85.00 250.0	250.0 60.00	250.0 35.00	240.0 60.00	210.0 110.0	195.0 160.0	190.0 170.0	180.0 170.0	175.0 210.0
18	250.0 110.0 250.0	250.0 85.00 250.0	250.0 60.00	240.0 35.00	230.0 60.00	200.0 110.0	195.0 160.0	190.0 170.0	180.0 170.0	175.0 250.0
19	250.0 170.0 250.0	250.0 85.00 250.0	250.0 60.00	240.0 35.00	230.0 60.00	210.0 110.0	194.0 160.0	188.0 170.0	180.0 170.0	175.0 250.0
20	250.0 170.0 250.0	250.0 85.00 250.0	250.0 60.00	240.0 35.00	210.0 60.00	198.0 110.0	194.0 160.0	188.0 170.0	180.0 210.0	175.0 250.0
21	250.0 110.0 250.0	250.0 85.00 250.0	220.0 60.00	230.0 45.00	200.0 60.00	195.0 110.0	190.0 160.0	185.0 170.0	180.0 210.0	175.0 250.0
22	250.0 170.0 250.0	250.0 170.0 250.0	230.0 60.00	200.0 45.00	197.0 60.00	193.0 110.0	190.0 120.0	185.0 170.0	180.0 210.0	175.0 250.0
23	250.0 170.0 250.0	250.0 170.0 250.0	230.0 60.00	200.0 50.00	197.0 60.00	193.0 110.0	187.0 120.0	183.0 170.0	177.0 210.0	173.0 250.0

24	250.0 170.0 250.0	250.0 170.0 250.0	230.0 60.00	200.0 55.00	195.0 60.00	190.0 110.0	185.0 120.0	180.0 170.0	177.0 210.0	173.0 250.0
25	250.0 90.00 230.0	250.0 75.00 250.0	200.0 60.00	197.0 60.00	193.0 85.00	190.0 110.0	185.0 160.0	180.0 190.0	175.0 195.0	170.0 205.0
26	250.0 90.00 240.0	250.0 75.00 250.0	200.0 70.00	197.0 85.00	193.0 110.0	190.0 135.0	184.0 160.0	180.0 190.0	175.0 200.0	110.0 220.0
27	250.0 100.0 250.0	250.0 90.00 310.0	200.0 85.00	197.0 95.00	193.0 110.0	188.0 135.0	183.0 160.0	180.0 190.0	135.0 200.0	110.0 220.0
28	250.0 105.0 260.0	250.0 100.0 310.0	200.0 110.0	197.0 120.0	193.0 135.0	185.0 160.0	180.0 180.0	160.0 190.0	135.0 210.0	110.0 230.0
29	250.0 105.0 250.0	250.0 110.0 250.0	300.0 120.0	250.0 135.0	180.0 160.0	180.0 180.0	175.0 190.0	160.0 210.0	135.0 230.0	110.0 240.0
30	250.0 110.0 250.0	250.0 135.0 250.0	210.0 160.0	185.0 170.0	185.0 170.0	170.0 180.0	160.0 190.0	145.0 200.0	130.0 225.0	115.0 250.0
31	250.0 120.0 250.0	250.0 160.0 250.0	190.0 170.0	190.0 190.0	185.0 190.0	180.0 200.0	160.0 215.0	145.0 225.0	130.0 250.0	110.0 250.0
32	250.0 160.0 250.0	190.0 180.0 250.0	190.0 190.0	185.0 200.0	180.0 190.0	160.0 200.0	150.0 215.0	135.0 225.0	125.0 250.0	115.0 250.0
33	250.0 170.0 250.0	190.0 220.0 250.0	190.0 220.0	185.0 210.0	180.0 200.0	160.0 200.0	150.0 200.0	140.0 230.0	120.0 250.0	160.0 250.0
34	250.0 170.0 250.0	190.0 220.0 250.0	190.0 210.0	185.0 200.0	160.0 185.0	150.0 215.0	140.0 220.0	135.0 230.0	130.0 250.0	160.0 250.0
35	200.0 177.0 250.0	190.0 177.0 250.0	185.0 190.0	160.0 190.0	150.0 200.0	145.0 190.0	150.0 200.0	170.0 250.0	170.0 250.0	145.0 250.0
36	200.0 178.0 250.0	190.0 178.0 250.0	160.0 179.0	155.0 190.0	150.0 200.0	145.0 190.0	155.0 200.0	170.0 250.0	170.0 250.0	179.0 250.0
37	198.0 155.0 250.0	160.0 180.0 250.0	155.0 180.0	155.0 185.0	155.0 190.0	150.0 200.0	150.0 230.0	170.0 250.0	170.0 250.0	160.0 250.0
38	197.0 156.0 250.0	160.0 160.0 250.0	160.0 185.0	170.0 190.0	170.0 190.0	170.0 200.0	160.0 240.0	155.0 250.0	155.0 250.0	156.0 250.0

39	195.0 160.0 250.0	170.0 210.0 250.0	170.0 220.0	210.0 210.0	195.0 200.0	185.0 210.0	170.0 240.0	160.0 250.0	158.0 250.0	158.0 250.0
40	196.0 185.0 250.0	220.0 195.0 250.0	220.0 190.0	223.0 200.0	190.0 210.0	195.0 230.0	185.0 250.0	170.0 250.0	160.0 250.0	160.0 250.0
41	200.0 210.0 250.0	250.0 220.0 250.0	220.0 250.0	220.0 250.0	190.0 250.0	190.0 250.0	185.0 250.0	170.0 250.0	165.0 250.0	160.0 250.0
42	200.0 210.0 250.0	250.0 210.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	185.0 250.0	195.0 250.0	185.0 250.0	170.0 250.0	165.0 250.0
43	250.0 210.0 250.0	250.0 210.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	190.0 250.0	190.0 250.0	197.0 250.0	192.0 250.0	195.0 250.0
44	250.0 210.0 250.0	250.0 210.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	190.0 250.0	194.0 250.0	192.0 250.0	195.0 250.0
45	250.0 200.0 250.0	250.0 260.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	190.0 250.0	195.0 250.0	185.0 250.0	195.0 250.0
46	250.0 200.0 250.0	250.0 250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	185.0 250.0	195.0 250.0	185.0 250.0
47	250.0 200.0 250.0	250.0 225.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	190.0 250.0	195.0 250.0	190.0 250.0
48	250.0 197.0 250.0	250.0 200.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	210.0 250.0	196.0 250.0	194.0 250.0
49	250.0 198.0 250.0	250.0 200.0 250.0	250.0 220.0	250.0 250.0	250.0 250.0	250.0 250.0	250.0 250.0	190.0 250.0	196.0 250.0	195.0 250.0
50	250.0 198.0 250.0	250.0 200.0 250.0	250.0 220.0	250.0 230.0	250.0 240.0	250.0 210.0	250.0 250.0	190.0 250.0	197.0 250.0	196.0 250.0
51	250.0 198.0 250.0	250.0 200.0 250.0	250.0 212.0	250.0 230.0	250.0 240.0	250.0 275.0	250.0 280.0	190.0 250.0	197.0 250.0	196.0 250.0
52	250.0 200.0 250.0	250.0 220.0 250.0	250.0 230.0	250.0 245.0	250.0 250.0	250.0 278.0	250.0 285.0	200.0 250.0	198.0 250.0	197.0 250.0
53	250.0 220.0 250.0	250.0 225.0 250.0	250.0 185.0	250.0 190.0	250.0 210.0	250.0 250.0	250.0 250.0	200.0 250.0	199.0 250.0	198.0 250.0

54	250.0	250.0	250.0	250.0	250.0	250.0	250.0	220.0	199.0	198.0
	200.0	225.0	210.0	210.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
55	250.0	250.0	250.0	250.0	250.0	250.0	250.0	200.0	199.0	199.0
	200.0	225.0	210.0	210.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								
56	250.0	250.0	250.0	250.0	250.0	250.0	250.0	220.0	200.0	200.0
	200.0	225.0	210.0	250.0	250.0	250.0	250.0	250.0	250.0	250.0
	250.0	250.0								

SOLUTION BY THE STRONGLY IMPLICIT PROCEDURE

MAXIMUM ITERATIONS ALLOWED FOR CLOSURE = 750
 ACCELERATION PARAMETER = 0.50000
 HEAD CHANGE CRITERION FOR CLOSURE = 0.10000E-02
 SIP HEAD CHANGE PRINTOUT INTERVAL = 999

CALCULATE ITERATION PARAMETERS FROM MODEL CALCULATED WSEED

STRESS PERIOD NO. 1, LENGTH = 0.1555200E+08

NUMBER OF TIME STEPS = 150

MULTIPLIER FOR DELT. = 1.150

INITIAL TIME STEP SIZE = 0.1833164E-02

3 WELLS

LAYER	ROW	COL	STRESS RATE	WELL NO.
1	17	15	-1.2255	1
1	16	14	0.00000E+00	2
1	16	15	0.00000E+00	3

9 RIVER REACHES

LAYER	ROW	COL	STAGE	CONDUCTANCE	BOTTOM ELEVATION	RIVER REACH
1	56	10	212.0	0.2800E-01	210.0	1
1	55	10	211.0	0.2800E-01	209.0	2
1	54	10	209.0	0.2800E-01	207.0	3
1	53	9	207.0	0.2800E-01	205.0	4
1	52	9	206.0	0.2800E-01	204.0	5
1	51	9	204.0	0.2800E-01	202.0	6
1	50	9	202.0	0.2800E-01	200.0	7
1	49	9	200.0	0.2800E-01	198.0	8
1	48	9	198.0	0.2800E-01	196.0	9

13 HEAD-DEPENDENT BOUNDARY NODES

LAYER	ROW	COL	ELEVATION	CONDUCTANCE	BOUND NO.
1	1	16	172.0	0.3420	1
1	1	17	169.0	0.3420	2
1	1	18	166.0	999.1	3
1	1	19	160.0	999.1	4
1	1	20	158.0	999.1	5
1	1	21	157.0	999.1	6
1	1	22	158.0	999.1	7
1	2	22	159.0	999.1	8
1	3	22	159.0	999.1	9
1	4	22	164.0	999.1	10
1	5	22	166.0	999.1	11
1	6	22	168.0	999.1	12
1	1	15	174.0	999.1	13

AVERAGE SEED = 0.00073643

MINIMUM SEED = 0.00000003

5 ITERATION PARAMETERS CALCULATED FROM AVERAGE SEED:

0.0000000E+00 0.8352659E+00 0.9728627E+00 0.9955295E+00 0.9992636E+00

[illegible]

[illegible]

12 ITERATIONS FOR TIME STEP 120 IN STRESS PERIOD 1
 12 ITERATIONS FOR TIME STEP 121 IN STRESS PERIOD 1
 15 ITERATIONS FOR TIME STEP 122 IN STRESS PERIOD 1
 17 ITERATIONS FOR TIME STEP 123 IN STRESS PERIOD 1
 17 ITERATIONS FOR TIME STEP 124 IN STRESS PERIOD 1
 17 ITERATIONS FOR TIME STEP 125 IN STRESS PERIOD 1
 18 ITERATIONS FOR TIME STEP 126 IN STRESS PERIOD 1
 17 ITERATIONS FOR TIME STEP 127 IN STRESS PERIOD 1
 17 ITERATIONS FOR TIME STEP 128 IN STRESS PERIOD 1
 17 ITERATIONS FOR TIME STEP 129 IN STRESS PERIOD 1
 18 ITERATIONS FOR TIME STEP 130 IN STRESS PERIOD 1
 19 ITERATIONS FOR TIME STEP 131 IN STRESS PERIOD 1
 23 ITERATIONS FOR TIME STEP 132 IN STRESS PERIOD 1
 23 ITERATIONS FOR TIME STEP 133 IN STRESS PERIOD 1
 23 ITERATIONS FOR TIME STEP 134 IN STRESS PERIOD 1
 25 ITERATIONS FOR TIME STEP 135 IN STRESS PERIOD 1
 27 ITERATIONS FOR TIME STEP 136 IN STRESS PERIOD 1
 29 ITERATIONS FOR TIME STEP 137 IN STRESS PERIOD 1
 23 ITERATIONS FOR TIME STEP 138 IN STRESS PERIOD 1
 23 ITERATIONS FOR TIME STEP 139 IN STRESS PERIOD 1
 22 ITERATIONS FOR TIME STEP 140 IN STRESS PERIOD 1
 17 ITERATIONS FOR TIME STEP 141 IN STRESS PERIOD 1
 17 ITERATIONS FOR TIME STEP 142 IN STRESS PERIOD 1
 21 ITERATIONS FOR TIME STEP 143 IN STRESS PERIOD 1
 23 ITERATIONS FOR TIME STEP 144 IN STRESS PERIOD 1
 25 ITERATIONS FOR TIME STEP 145 IN STRESS PERIOD 1

*****NODE 5 17 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 2 TIME STEP =146 STRESS PERIOD = 1
 27 ITERATIONS FOR TIME STEP 146 IN STRESS PERIOD 1
 27 ITERATIONS FOR TIME STEP 147 IN STRESS PERIOD 1
 31 ITERATIONS FOR TIME STEP 148 IN STRESS PERIOD 1

*****NODE 6 11 1 (COL,ROW,LAYER) WENT DRY AT ITERATION = 2 TIME STEP =149 STRESS PERIOD = 1
 32 ITERATIONS FOR TIME STEP 149 IN STRESS PERIOD 1
 29 ITERATIONS FOR TIME STEP 150 IN STRESS PERIOD 1

MAXIMUM HEAD CHANGE FOR EACH ITERATION:

HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL HEAD CHANGE LAYER,ROW,COL

 -0.7929 (1, 25, 21) -0.5015 (1, 25, 20) -0.2786 (1, 38, 16) -0.3312 (1, 32, 11) -0.2535 (1, 34, 11)
 -0.1741 (1, 36, 17) -0.7798E-01 (1, 36, 17) -0.7337E-01 (1, 36, 17) -0.8756E-01 (1, 34, 11) -0.1516 (1, 21, 18)
 -0.5546E-01 (1, 36, 17) -0.3122E-01 (1, 36, 17) -0.3066E-01 (1, 34, 11) -0.4015E-01 (1, 32, 11) -0.2694E-01 (1, 34, 11)
 -0.2186E-01 (1, 19, 19) -0.9872E-02 (1, 19, 19) -0.9691E-02 (1, 21, 18) -0.8686E-02 (1, 34, 11) -0.1574E-01 (1, 21, 18)
 -0.7489E-02 (1, 19, 19) -0.4668E-02 (1, 19, 19) -0.2944E-02 (1, 34, 11) -0.4334E-02 (1, 21, 18) -0.2490E-02 (1, 17, 17)
 -0.3016E-02 (1, 19, 19) -0.1362E-02 (1, 19, 19) -0.1199E-02 (1, 19, 19) -0.9552E-03 (1, 19, 16)

HEAD IN LAYER 1 AT END OF TIME STEP150 IN STRESS PERIOD 1

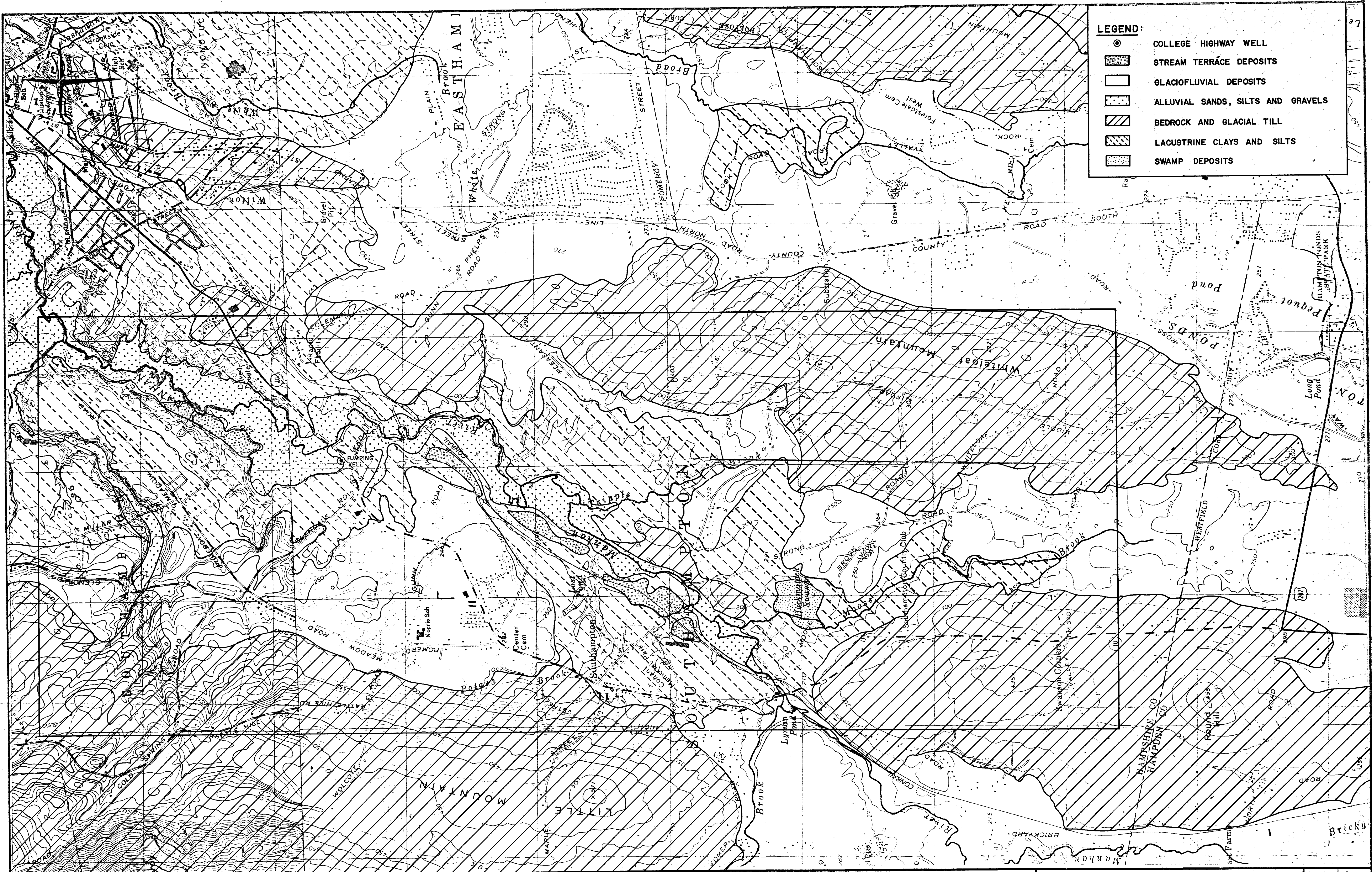
	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22								
1	1000. 175.2 157.0	1000. 174.5 158.0	1000. 174.0	1000. 173.9	1000. 174.0	1000. 171.9	1000. 169.0	180.8 166.0	176.9 160.0	176.1 158.0
2	1000. 175.3 159.9	1000. 174.4 159.0	1000. 173.7	1000. 173.0	1000. 172.2	1000. 171.4	194.9 169.5	185.2 166.6	177.8 163.4	176.4 161.2
3	1000. 175.6 161.8	1000. 174.5 159.0	1000. 173.8	1000. 173.0	1000. 172.4	1000. 171.3	194.8 169.5	185.7 167.4	178.5 165.5	176.8 163.6
4	1000. 175.9 164.6	1000. 174.7 164.0	1000. 174.0	1000. 173.3	1000. 172.7	1000. 171.7	194.7 170.0	186.1 168.4	179.0 166.9	177.2 165.8
5	1000. 176.5 166.7	1000. 175.0 166.0	1000. 174.4	1000. 173.8	1000. 173.2	1000. 172.3	194.7 170.9	187.2 169.5	180.8 168.3	178.1 167.3
6	1000. 177.4 167.8	1000. 175.7 168.0	1000. 175.0	1000. 174.5	1000. 173.9	1000. 173.1	1000. 171.9	183.8 170.8	181.1 169.6	179.3 168.4
7	1000. 178.7 169.1	1000. 176.6 168.9	1000. 175.8	1000. 175.2	1000. 174.7	1000. 173.9	1000. 172.9	1000. 172.0	182.9 170.9	180.8 170.0
8	1000. 179.8 170.7	1000. 177.7 170.0	1000. 176.7	1000. 176.0	239.2 175.5	230.7 174.7	208.4 173.8	193.0 173.2	185.8 172.3	182.2 171.6
9	1000. 180.3 172.0	1000. 178.6 1000.	1000. 177.5	1000. 176.7	234.4 176.2	225.0 175.6	208.3 174.8	192.8 174.0	187.1 173.5	183.4 172.8
10	1000. 181.6 1000.	1000. 179.3 1000.	1000. 178.2	1000. 177.4	235.7 176.9	222.0 176.3	204.0 175.7	191.8 175.1	187.0 174.6	184.4 174.1
11	1000. 182.3 1000.	1000. 180.3 1000.	1000. 178.8	1000. 177.9	1000. 177.4	1.0000E+30 177.0	197.8 176.5	190.5 176.0	186.7 175.7	184.2 175.6
12	1000. 182.6 1000.	1000. 180.8 1000.	1000. 179.2	1000. 178.3	1000. 177.8	201.8 177.3	193.8 177.0	190.0 176.8	186.5 176.7	184.1 176.7
13	1000. 182.9 178.9	1000. 180.8 1000.	1000. 179.2	1000. 178.5	1000. 178.0	201.3 177.6	192.6 177.4	189.5 177.4	186.7 177.5	184.5 177.8

14	1000. 183.0 179.5	1000. 180.6 1000.	1000. 179.1	1000. 178.4	1000. 177.9	201.0 177.7	192.3 177.7	189.6 177.8	187.4 178.1	185.2 178.9
15	1000. 183.5 1000.	1000. 180.9 1000.	1000. 179.1	1000. 178.0	220.1 177.4	200.7 177.5	192.4 177.9	189.7 178.1	187.8 178.3	185.9 178.6
16	1000. 183.9 1000.	1000. 181.2 1000.	1000. 179.1	1000. 177.5	220.0 176.7	197.9 177.4	192.7 178.0	189.9 178.3	188.0 178.5	186.3 1000.
17	1000. 184.5 1000.	1000. 181.6 1000.	1000. 179.4	1000. 177.2	1.0000E+30 174.6	196.6 177.5	193.1 178.4	190.1 178.7	188.2 178.8	186.6 1000.
18	1000. 185.1 1000.	1000. 182.3 1000.	1000. 180.2	220.2 178.6	203.7 177.5	196.8 178.4	193.2 179.0	190.3 179.2	188.4 179.2	186.9 1000.
19	1000. 185.8 1000.	1000. 183.5 1000.	1000. 181.5	220.0 180.6	202.9 180.1	196.7 180.1	193.4 180.2	190.6 180.2	188.7 179.7	187.2 1000.
20	1000. 186.6 1000.	1000. 185.0 1000.	1000. 183.3	210.3 182.7	199.9 182.3	196.4 182.2	193.5 182.0	191.0 181.7	189.2 1000.	187.9 1000.
21	1000. 187.8 1000.	1000. 186.6 1000.	1000. 185.2	200.2 184.7	198.6 184.4	196.0 184.1	193.5 183.6	191.4 182.8	189.9 1000.	188.8 1000.
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23	1000. 189.7 1000.	1000. 189.2 1000.	210.6 188.7	198.8 188.4	197.0 188.2	195.1 188.1	193.4 188.2	192.1 1000.	191.2 1000.	190.4 1000.
24	1000. 190.4 1000.	1000. 190.0 1000.	210.5 190.1	198.1 190.1	196.5 190.1	194.9 189.9	193.6 190.7	192.6 1000.	191.8 1000.	191.1 1000.
25	1000. 191.6 213.9	1000. 191.4 231.1	1000. 191.8	197.0 191.9	196.1 192.0	195.0 192.0	193.9 193.4	193.1 196.0	192.5 199.6	192.0 204.4
26	1000. 193.0 1000.	1000. 193.1 1000.	1000. 193.4	196.7 193.5	196.1 193.6	195.2 193.8	194.4 195.0	193.8 197.1	193.4 199.6	193.0 1000.
27	1000. 194.4 209.1	1000. 194.6 1000.	1000. 194.9	196.7 195.0	196.2 195.1	195.6 195.4	195.0 196.5	194.6 198.7	194.4 201.6	194.3 205.6
28	1000. 195.7 1000.	1000. 196.0 1000.	1000. 196.3	196.7 196.4	196.4 196.5	196.1 196.6	195.7 197.7	195.5 200.1	195.5 203.2	195.6 207.0

29	1000. 196.9 1000.	1000. 197.3 1000.	1000. 197.5	1000. 197.6	196.9 197.6	196.7 197.8	196.4 199.0	196.3 201.5	196.2 205.6	196.5 211.4
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31	1000. 198.8 1000.	1000. 199.2 1000.	198.5 199.6	198.3 200.1	198.1 200.1	197.9 200.2	197.9 202.0	197.9 206.4	198.1 1000.	198.4 1000.
32	1000. 199.4 1000.	198.9 199.7 1000.	198.7 200.6	198.6 200.8	198.5 200.9	198.4 201.1	198.4 203.3	198.5 208.2	198.7 1000.	199.2 1000.
33	1000. 199.9 1000.	199.0 1000. 1000.	199.0 201.6	198.9 201.5	198.8 201.5	198.8 201.8	198.9 203.4	199.0 211.3	199.3 1000.	199.8 1000.
34	1000. 200.8 1000.	199.2 1000. 1000.	199.2 202.0	199.2 202.0	199.2 202.1	199.2 202.4	199.3 206.9	199.3 213.2	199.7 1000.	200.3 1000.
35	200.0 201.8 1000.	199.5 202.3 1000.	199.3 202.4	199.4 202.4	199.5 202.5	199.6 202.8	199.7 203.4	1000. 1000.	1000. 1000.	201.4 1000.
36	200.0 202.2 1000.	199.3 202.6 1000.	199.3 202.8	199.5 202.9	199.8 203.0	200.1 203.2	200.3 203.5	1000. 1000.	1000. 1000.	202.0 1000.
37	198.0 202.8 1000.	198.4 203.1 1000.	199.0 203.3	199.6 203.4	200.3 203.5	200.7 203.7	200.9 210.7	1000. 1000.	1000. 1000.	202.5 1000.
38	197.0 203.3 1000.	197.2 203.6 1000.	198.6 203.7	199.7 203.9	200.9 203.9	201.4 204.1	201.8 220.2	202.5 232.1	202.8 1000.	203.0 1000.
39	195.0 203.7 1000.	195.7 204.0 1000.	1000. 204.2	1000. 204.4	201.7 204.5	202.0 204.9	202.3 220.1	202.6 230.6	203.0 1000.	203.3 1000.
40	196.0 203.8 1000.	195.9 204.0 1000.	1000. 204.3	1000. 204.6	202.1 204.8	202.3 210.2	202.5 1000.	202.8 1000.	203.1 1000.	203.5 1000.
41	198.0 203.9 1000.	197.0 204.1 1000.	1000. 1000.	1000. 1000.	202.3 1000.	202.6 1000.	202.8 1000.	203.0 1000.	203.3 1000.	203.6 1000.
42	200.0 203.9 1000.	1000. 204.1 1000.	1000. 1000.	1000. 1000.	1000. 1000.	202.8 1000.	203.0 1000.	203.1 1000.	203.4 1000.	203.6 1000.
43	1000. 203.7 1000.	1000. 204.1 1000.	1000. 1000.	1000. 1000.	1000. 1000.	203.0 1000.	203.1 1000.	203.2 1000.	203.4 1000.	203.6 1000.

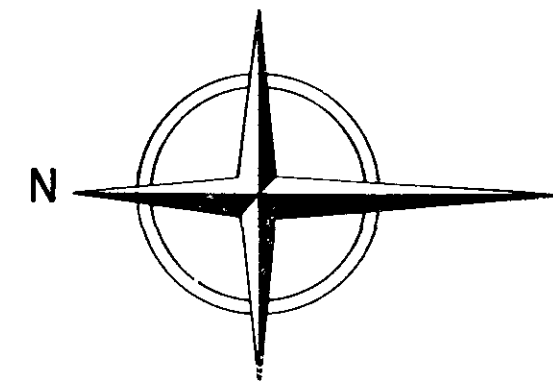
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45	1000. 203.5 1000.	1000. 203.7 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	203.2 1000.	203.2 1000.	203.3 1000.	203.4 1000.
46	1000. 203.3 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	203.1 1000.	203.1 1000.	203.2 1000.
47	1000. 203.3 1000.	1000. 1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	202.8 1000.	202.7 1000.	203.0 1000.
48	1000. 203.5 1000.	1000. 203.9 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	201.7 1000.	203.0 1000.
49	1000. 204.1 1000.	1000. 204.6 1000.	1000. 205.4	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	202.2 1000.	203.3 1000.
50	1000. 205.0 1000.	1000. 205.4 1000.	1000. 205.9	1000. 206.2	1000. 206.4	1000. 1000.	1000. 1000.	1000. 1000.	203.4 1000.	204.3 1000.
51	1000. 205.8 1000.	1000. 206.0 1000.	1000. 206.3	1000. 206.4	1000. 206.5	1000. 206.8	1000. 1000.	205.5 1000.	204.8 1000.	205.3 1000.
52	1000. 206.4 1000.	1000. 206.5 1000.	1000. 206.5	1000. 206.5	1000. 206.6	1000. 206.9	1000. 1000.	206.2 1000.	206.0 1000.	206.2 1000.
53	1000. 207.0 1000.	1000. 207.0 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	206.9 1000.	206.9 1000.	207.0 1000.
54	1000. 207.5 1000.	1000. 207.4 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	207.4 1000.	207.5 1000.	207.8 1000.
55	1000. 207.9 1000.	1000. 207.8 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	207.8 1000.	208.0 1000.	208.5 1000.
56	1000. 208.2 1000.	1000. 208.0 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	1000. 1000.	208.1 1000.	208.3 1000.	208.7 1000.

	1	2	3	4	5	6	7	8	9	10
	11	12	13	14	15	16	17	18	19	20
	21	22								
1	1000. -0.2473 -2.7466E-04	1000. 0.5084 0.0000E+00	1000. -8.8043E-03	1000. 0.1315	1000. 2.2888E-04	1000. 0.1374	1000. -4.1550E-02	0.1767 1.3733E-04	0.1451 -4.1199E-04	-6.0867E-02 -2.7466E-04
2	1000. -0.3459 5.2399E-02	1000. -0.4022 1.5259E-05	1000. 0.2920	1000. 2.5604E-02	1000. -0.1721	1000. 0.6143	15.09 0.4842	-4.206 0.4073	-0.8211 0.6301	-0.3616 -0.2349
3	1000. -0.5658 0.2058	1000. 0.5060 -4.7302E-04	1000. 0.2425	1000. -4.4205E-02	1000. 0.6213	1000. 0.6633	15.20 0.4867	-3.680 0.6040	-1.470 0.5019	-0.7593 0.3782
4	1000. 0.1239 0.3932	1000. 0.2689 1.3733E-04	1000. -8.0872E-03	1000. 0.6696	1000. 0.2982	1000. 0.3182	15.29 0.9601	-4.126 0.6451	-2.048 6.0104E-02	-0.2479 0.1764
5	1000. -0.4633 0.3205	1000. -4.8767E-02 -4.5776E-05	1000. 0.5697	1000. 0.1930	1000. 0.7694	1000. 0.6912	15.26 1.053	-4.238 0.4717	-1.757 0.7203	-6.7169E-02 0.7205
6	1000. -0.4403 0.2110	1000. 0.3158 1.2207E-04	1000. 0.9510	1000. 0.5477	1000. 1.088	1000. 0.9311	1000. 1.090	-0.7618 1.232	-1.075 0.4036	-0.3211 0.5879
7	1000. 0.3205 0.8697	1000. 0.4407 8.2703E-02	1000. 1.180	1000. 0.7868	1000. 1.319	1000. 1.136	1000. 1.113	1000. 0.9862	-1.900 1.086	-0.8486 1.018
8	1000. 0.2002 1.290	1000. 0.3081 1.037	1000. 1.333	1000. 0.9757	16.82 1.504	19.31 2.256	16.57 2.173	-9.043 1.844	-3.788 1.688	-1.213 1.414
9	1000. -0.2730 2.038	1000. 1.384 1000.	1000. 1.532	1000. 2.254	15.58 1.800	15.02 2.441	16.73 2.151	-8.773 1.961	-4.101 1.524	-1.391 2.204
10	1000. 0.4311 1000.	1000. 1.697 1000.	1000. 1.830	1000. 2.570	19.32 3.085	18.04 2.688	16.04 3.281	-6.789 2.934	-2.996 2.411	-1.361 1.869
11	1000. 0.7281 1000.	1000. 1.742 1000.	1000. 3.194	1000. 3.098	1000. 3.627	1.0000E+30 4.040	17.24 3.490	-5.495 2.968	-1.657 3.274	-0.1998 3.450
12	1000. 1.437 1000.	1000. 3.174 1000.	1000. 3.786	1000. 3.690	1000. 4.250	28.23 4.704	-5.849 3.980	-3.001 4.186	-0.5262 3.314	0.8535 3.255
13	1000. 2.146 2.069	1000. 3.192 1000.	1000. 4.824	1000. 5.452	1000. 5.966	28.74 5.368	-4.639 4.622	-2.509 4.628	-0.7489 4.526	1.452 3.164



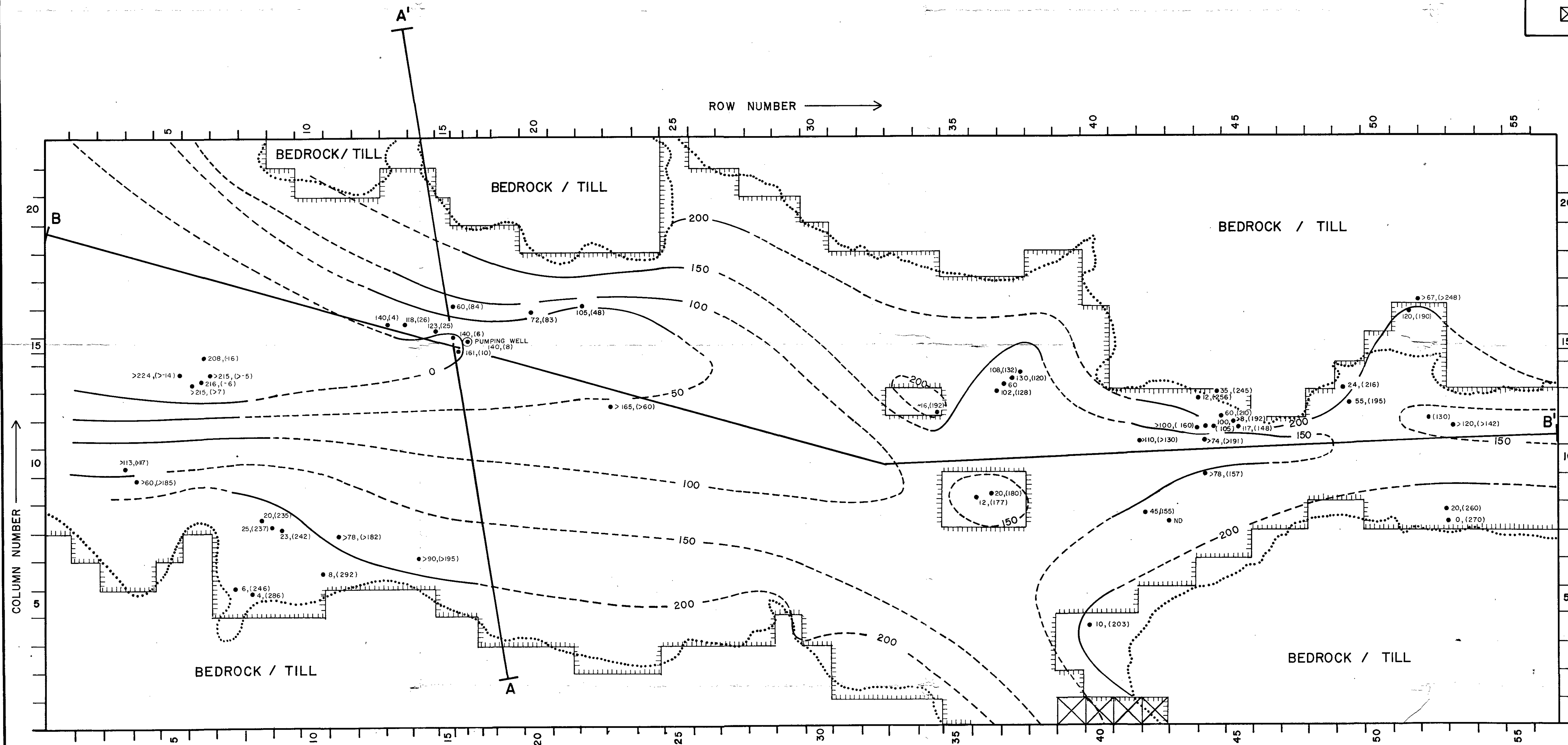
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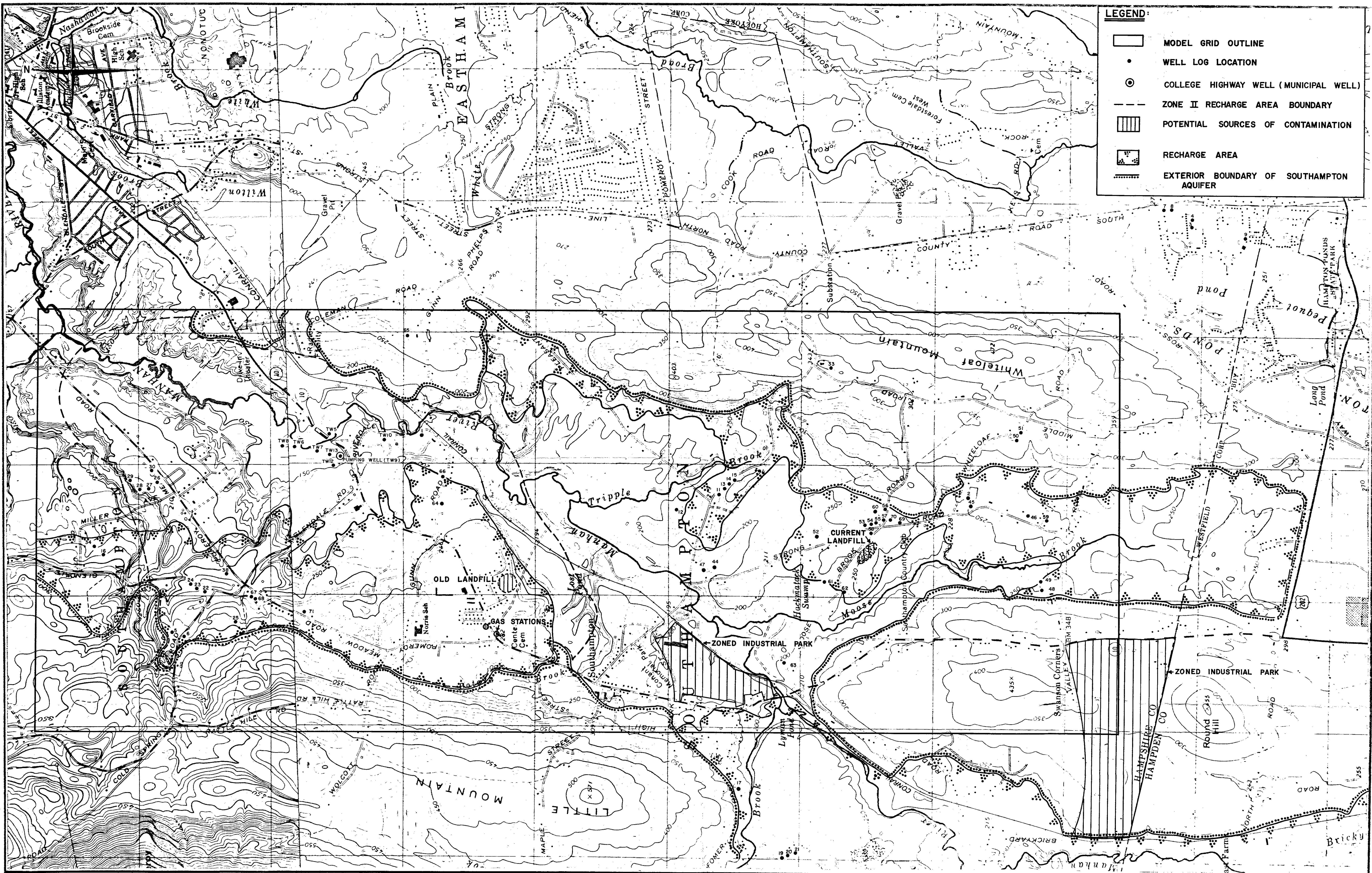
- COLLEGE HIGHWAY WELL
- [Stippled Box] STREAM TERRACE DEPOSITS
- [Horizontal Lines Box] GLACIOFLUVIAL DEPOSITS
- [Dotted Box] ALLUVIAL SANDS, SILTS AND GRAVELS
- [Diagonal Lines Box] BEDROCK AND GLACIAL TILL
- [Cross-hatched Box] LACUSTRINE CLAYS AND SILTS
- [Wavy Lines Box] SWAMP DEPOSITS



LEGEND

- 120, (190) WELL LOCATION WITH THE DEPTH TO BEDROCK / TILL SURFACE (BELOW GROUND SURFACE), AND THE ELEVATION OF THE BEDROCK / TILL SURFACE
- BEDROCK / TILL SURFACE CONTOURS (DASHED WHERE INFERRED)
- GEOLOGIC CONTACT BEDROCK / TILL AND VALLEY FILL DEPOSITS
- ▤ ACTIVE NODES
- ⊙ COLLEGE HIGHWAY WELL
- |— LOCATION OF GEOLOGIC CROSS SECTIONS
- ⊠ CONSTANT HEAD NODE





LEGEND:

- MODEL GRID OUTLINE
- WELL LOG LOCATION
- COLLEGE HIGHWAY WELL (MUNICIPAL WELL)
- ZONE II RECHARGE AREA BOUNDARY
- POTENTIAL SOURCES OF CONTAMINATION
- RECHARGE AREA
- EXTERIOR BOUNDARY OF SOUTHAMPTON AQUIFER

WE **WEHRAN ENGINEERING**
CONSULTING ENGINEERS

Drawn by: GB
Checked by: AB
Date: 11/24/71

Scales
1" = 1,000'

NOTE: WELL LOCATIONS ARE APPROXIMATE BASED ON VERBAL DESCRIPTIONS. THEY MAY BE SHIFTED SLIGHTLY DUE TO DISTORTION DURING MAP REPRODUCTION.

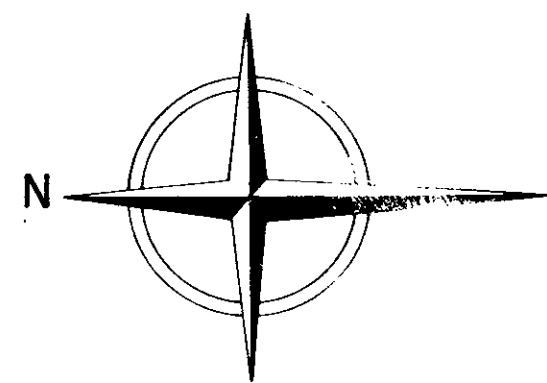
SOUTHAMPTON AQUIFER PROTECTION STUDY

SOUTHAMPTON

MA.

PLATE 3
SITE MAP

Sheet 3 of 8
Project No. 06308 HF



- LEGEND:
- 278 (9/86) WELL LOCATION WITH STATIC WATER ELEVATION AND DATE OF MEASUREMENT
 - GEOLOGIC CONTACT
 - - - EQUIPOTENTIAL CONTOUR (DASHED WHERE INFERRED)
 - ☐ ACTIVE NODES THAT RECEIVE PRECIPITATION
 - ☒ CONSTANT HEAD NODE

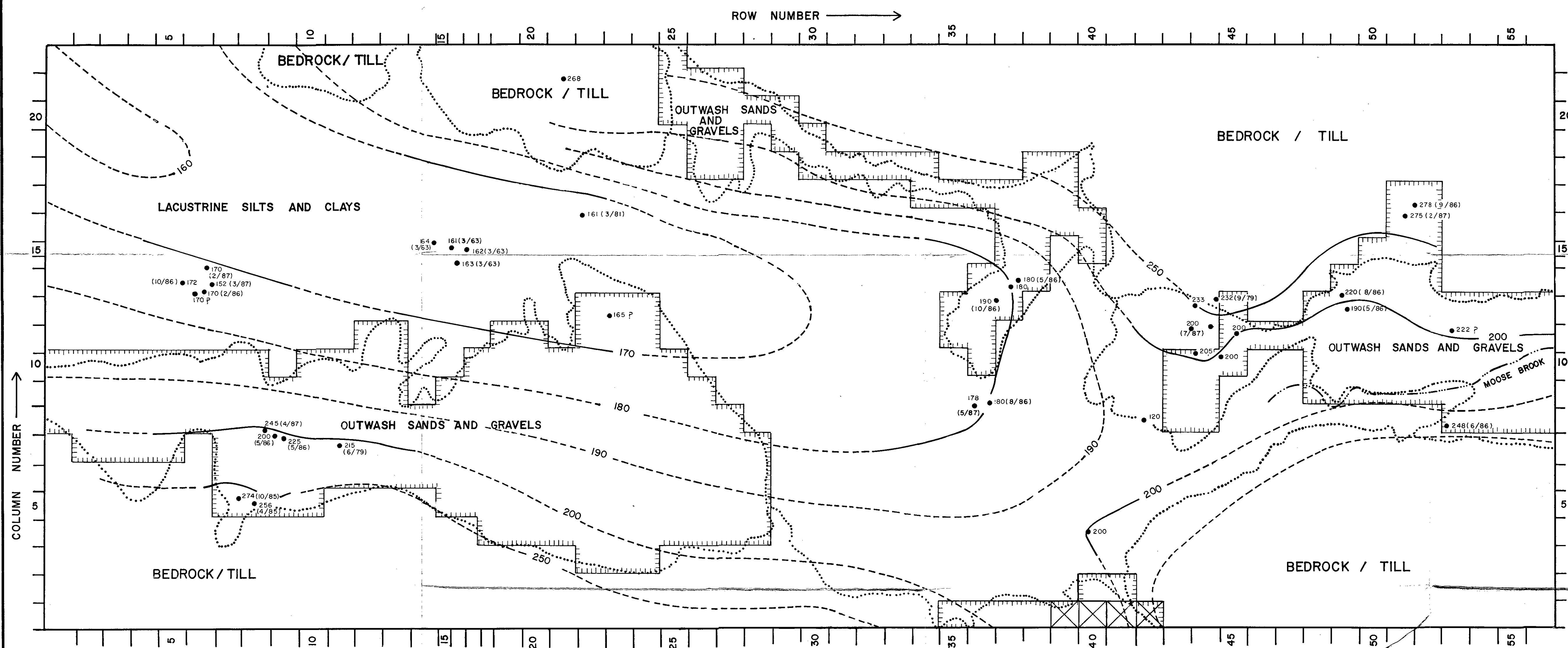
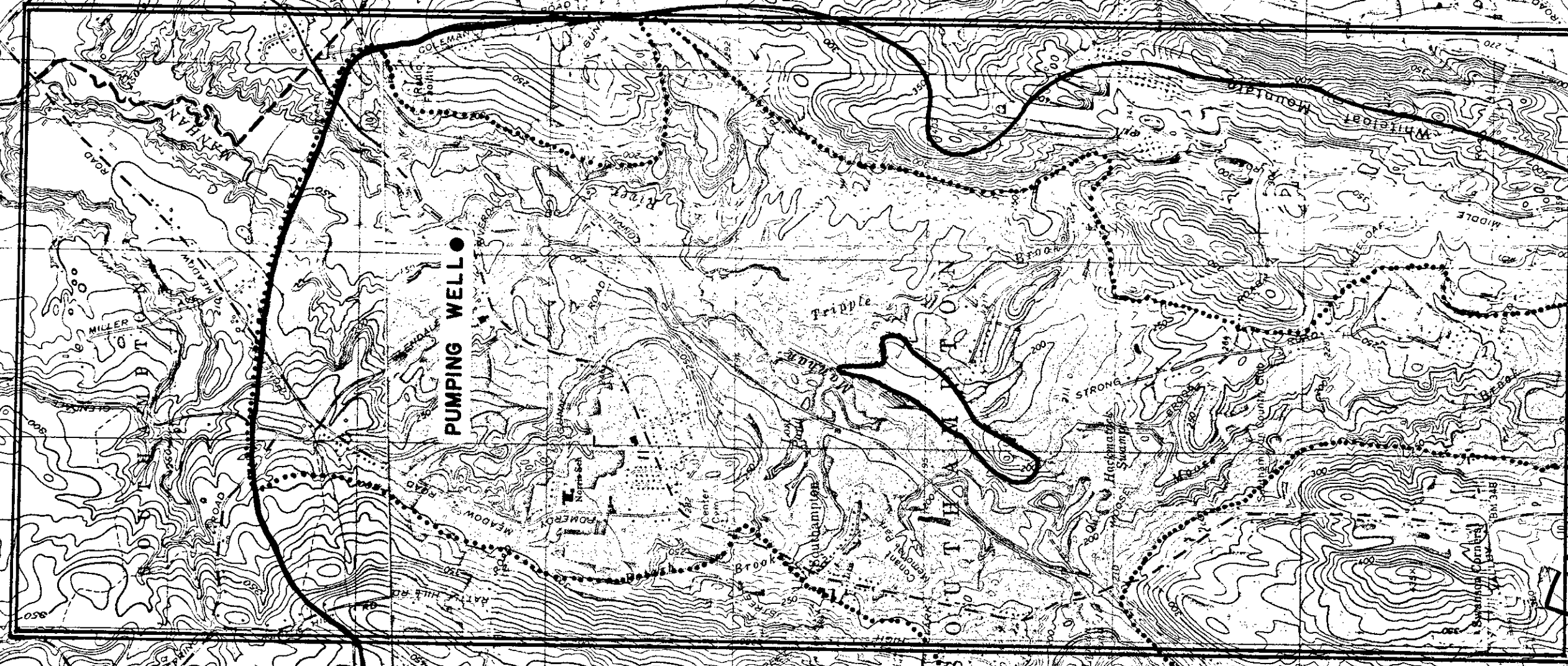


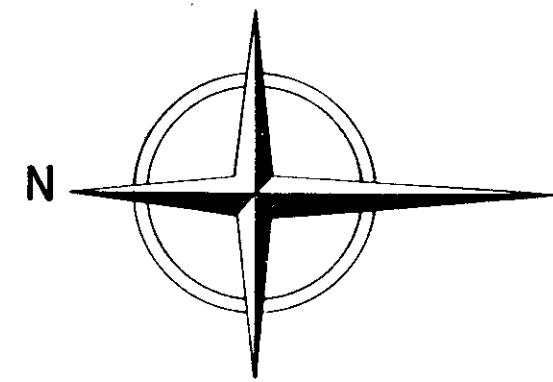
PLATE 5
WATERSHED MAP

LEGEND

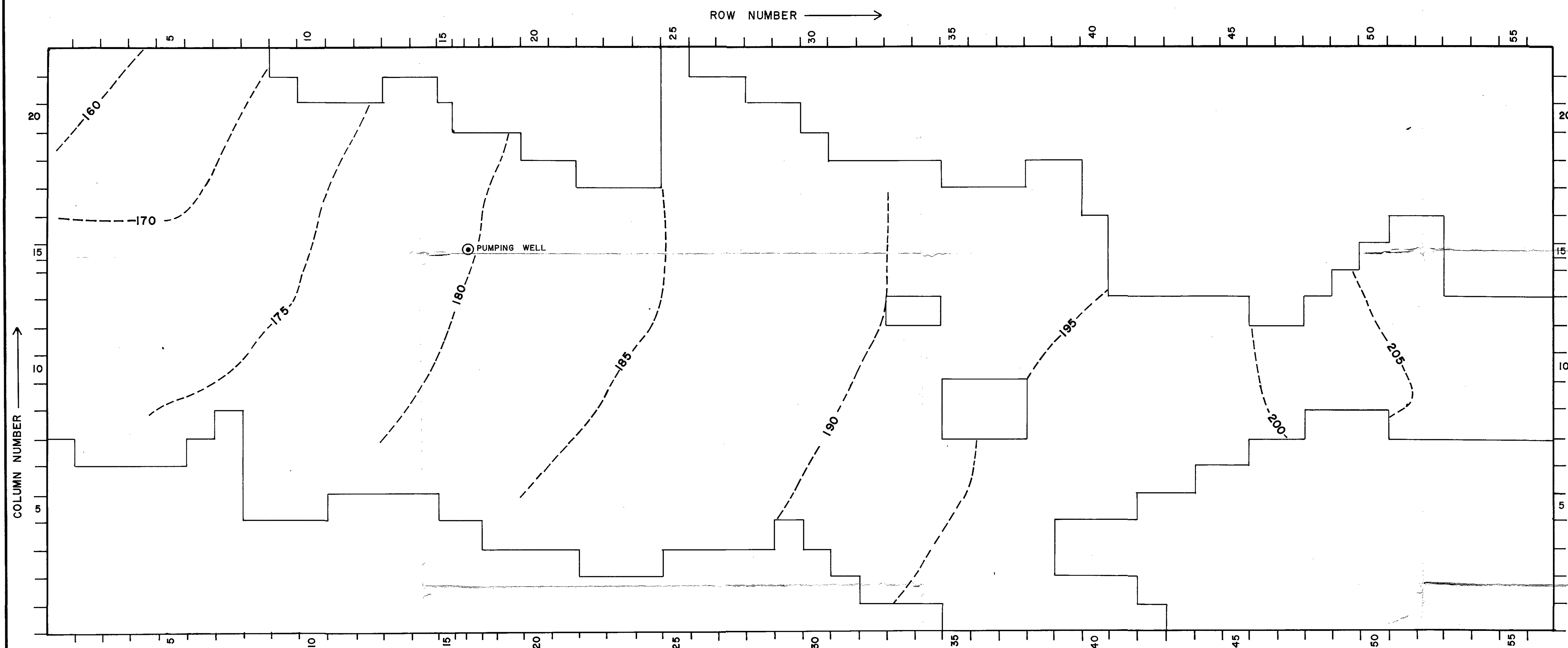
- ZONE II RECHARGE AREA (DASHED WHERE INFERRED)
- ZONE III RECHARGE AREA BOUNDARY (DASHED WHERE INFERRED)
- SOUTHAMPTON CORPORATE BOUNDARY
- MODEL GRID OUTLINE
- COLLEGE HIGHWAY WELL (MUNICIPAL WELL)

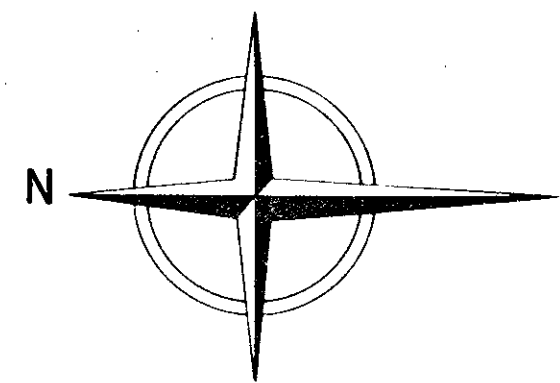
SCALE 1" = 25,000'





LEGEND:
----- EQUIPOTENTIAL CONTOUR
⊙ COLLEGE HIGHWAY WELL





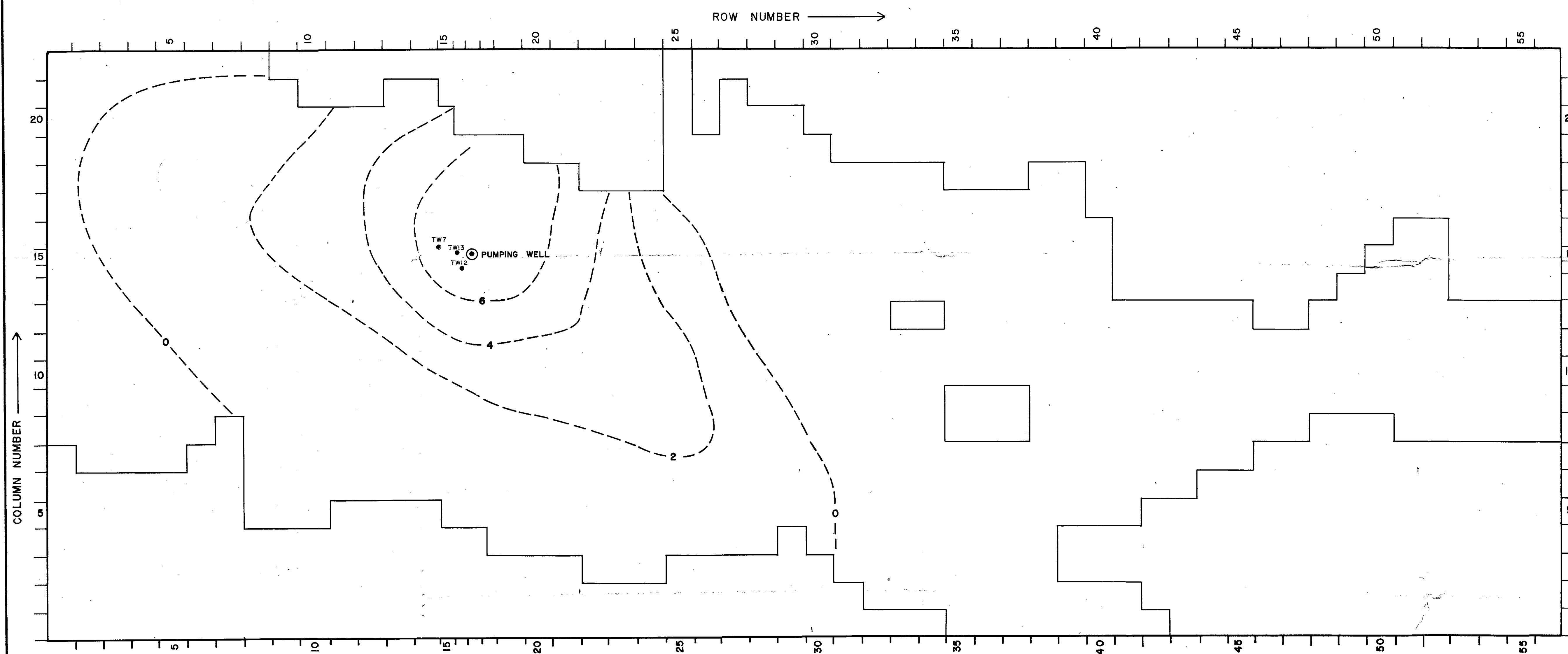
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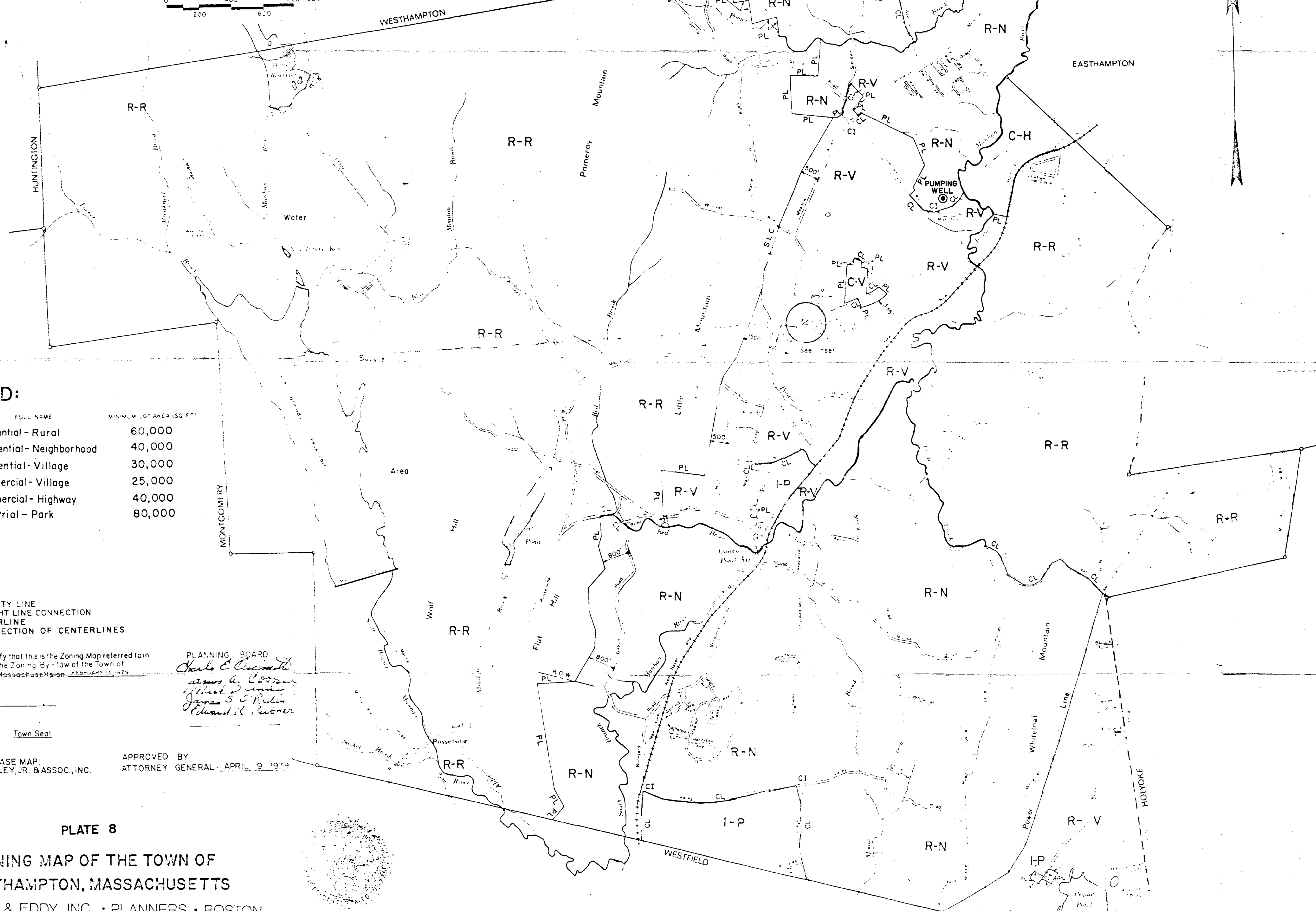
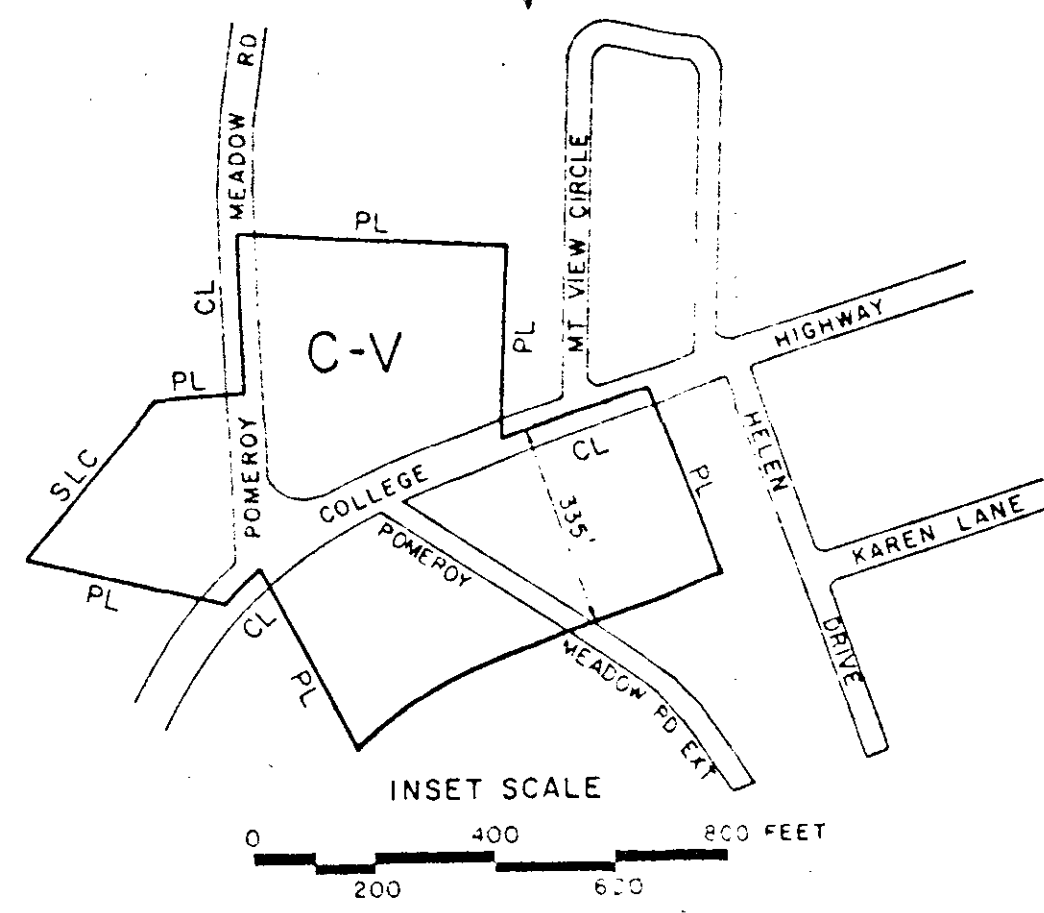
--- EQUIPOTENTIAL CONTOUR

⊙ COLLEGE HIGHWAY WELL

• OBSERVATION WELL

NOTE 180 DAYS PUMPING AT 550 GPM WITH NO RECHARGE





LEGEND:

SHORT NAME	FULL NAME	MINIMUM LOT AREA (SQ. FT.)
R-R	Residential - Rural	60,000
R-N	Residential - Neighborhood	40,000
R-V	Residential - Village	30,000
C-V	Commercial - Village	25,000
C-H	Commercial - Highway	40,000
I-P	Industrial - Park	80,000

NOTES:
 PL=PROPERTY LINE
 SLC=STRAIGHT LINE CONNECTION
 CL=CENTERLINE
 CI=INTERSECTION OF CENTERLINES

This is to certify that this is the Zoning Map referred to in Section III of the Zoning By-law of the Town of Southamptton, Massachusetts on FEBRUARY 11, 1979.

Attest
 Town Clerk

PLANNING BOARD
Charles C. Quinn
James A. Coonan
Michael J. Quinn
James S. O'Brien
Edward R. Parker

SOURCE OF BASE MAP:
 ALMER HUNTLEY, JR. & ASSOC., INC.

APPROVED BY
 ATTORNEY GENERAL APRIL 9, 1979

PLATE 8

ZONING MAP OF THE TOWN OF
 SOUTHAMPTON, MASSACHUSETTS
 METCALF & EDDY, INC. • PLANNERS • BOSTON

DECEMBER 1975 0 2000 4000 FEET

A true copy attested
Barbara A. Parker