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CONSTRUCTION AND TESTING SUMMARY REPORT

CITY OF PORT ST. LUCIE,
WESTPORT INJECTION WELL SYSTEM,
WESTPORT WASTEWATER
TREATMENT PLANT, JULY 2004
VOLUME I

Part of a bigger picture

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Construction and Testing Summary Report

City of Port St. Lucie
Westport Injection Well System
Westport Wastewater
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CONSTRUCTION AND TESTING SUMMARY REPORT
CITY OF PORT ST. LUCIE
WESTPORT INJECTION WELL SYSTEM
WESTPORT WASTEWATER TREATMENT PLANT
PORT ST. LUCIE, FLORIDA

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Date: 2/23/04

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1. Introduction

This document provides the construction and testing results of the Class I injection well (IW1) and associated Floridan-aquifer, dual-zone deep monitor well (MW1) at the City of Port St. Lucie, Westport Wastewater Treatment Plant (WWTP) in St. Lucie County, Florida. The Westport WWTP is located in Section 20, Township 37 South, Range 40 East. A site location map and a site layout map showing the location of the injection well system are presented in Figure 1.

The City intends to dispose of secondarily-treated domestic wastewater using deep well (Class I) injection as the primary disposal method. IW1 has been designed and constructed to accept up to 12 million gallons per day (mgd). Initially, through the end of 2008, the average daily effluent flow to be disposed will be 3.19 mgd.

A dual-zone, deep monitor well (MW1) was constructed to monitor for potential upward migration of fluids injected into IW1. The upper monitor zone (from 1,732 feet to 1,757 feet below pad level [bpl]) was installed above the lowermost regional Underground Source of Drinking Water (USDW), the interface defined by the depth at which the total dissolved solids (TDS) concentration of the formation water exceeds 10,000 milligrams per liter (mg/L). The lower monitor zone (from 1,922 feet to 1,972 feet bpl) was installed in the first sufficiently transmissive interval below the USDW. The MW1 construction detail (with geologic and hydrogeologic columns) is presented as Figure 2.

IW1 was constructed with a 24-inch outside diameter (O.D.), 0.500-inch wall thickness, seamless-steel casing installed to a depth of 2,912 feet bpl (base of plug) and was lined with 2,884 feet of 20-inch O.D., 0.438-inch wall thickness, internally-coated steel (threaded and coupled) injection tubing. The total depth of IW1 is 3,350 feet bpl. The construction detail for IW1 (with geologic and hydrogeologic columns) is presented as Figure 3. Construction and testing of the wells was performed in accordance with Chapter 62-528, Florida Administrative Code (FAC), the recommendations of the Underground Injection Control (UIC) Technical Advisory Committee (TAC), and the provisions of Florida Department of Environmental Protection (FDEP) Construction Permit No. 189145-001-UC. A copy of the construction permit is provided in Appendix A. The monitor well, injection well and appurtenances were constructed in accordance with the contract documents for the work ("Technical Specifications – City of Port St. Lucie, Westport Injection Well System, 2002"), which were prepared by Reese, Macon and Associates, Inc.

Youngquist Brothers, Inc. (Contractor) began construction of MW1 on December 26, 2002. The construction of MW1 was completed on February 14, 2003 and the Contractor then mobilized to the IW1 location. Construction of IW1 began on February 24, 2003. The construction and testing of both MW1 and IW1 were completed by July 29, 2003. A summary of the construction and testing activities is presented as Table 1.

[Note: Casing setting depths reported in Table 1 are 2.4 feet (for MW1) and 2.5 feet (for IW1) less than depths shown on Figure 2 and Figure 3, respectively. After construction and testing was completed, the drilling location of MW1 and IW1 was raised using fill material to the finished grade, and a concrete pad was constructed. The difference between the elevation of the steel-drilling pad used during construction and the finished concrete-pad elevation accounts for the (deeper) depths shown on the well detail figures.]

2. Findings

The results of the construction and testing of MW1 and IW1 led to the following conclusions:

- The base of the lowermost regional USDW is located at a depth of approximately 1,790 feet bpl.

- The primary confining interval above the injection zone occurs between approximately 2,030 feet and 2,900 feet bpl. The top of the injection zone is located at a depth of approximately 2,900 feet bpl.

- As determined by core sample analysis, the average horizontal and vertical hydraulic conductivities of the primary confining interval (between 2,030 feet and 2,900 feet bpl) are 2.35 gallons per day per square foot (gpd/ft^2) and 0.33 gpd/ft^2, respectively.

- The transmissivity of the injection zone penetrated by the open hole (from 2,900 feet to 3,350 feet bpl) is estimated as 2,018,250 gallons per day per foot (gpd/ft), and the hydraulic conductivity of the injection zone is estimated at 4,485 gpd/ft^2.

- The injection zone is sufficiently transmissive to accept combined effluent at the anticipated buildout volume of 12 mgd.

3. Data Collection Methods and Results

During well construction, data were collected and interpreted to determine the geologic and hydrogeologic characteristics of the strata intercepted by the borehole. These data were used to determine the optimal subsurface design of MW1 and IW1. Data also were collected to ensure both wells were being constructed in accordance with the technical specifications and that regulatory requirements were met. Data-collection methods and results are described below. Daily construction and testing activities were recorded in daily logs and compiled by onsite field personnel during the majority of the construction period. As required by the construction permit, weekly construction progress reports were prepared (by ARCADIS) and submitted to the FDEP and TAC members. A summary of the events described in the construction progress reports is provided in Table 1.

3.1 Pilot-Hole Construction and Testing

Pilot holes were constructed when drilling MW1 and IW1 below the top of Hawthorn Group sediments. The data collected during the drilling and testing of the pilot holes provided information that assisted with the final design of the wells. Methods used to collect data during pilot-hole construction and testing and the results obtained are described below.

3.1.1 Lithology and Penetration Rate

During pilot-hole drilling for both MW1 and IW1, drilled cuttings were collected at 10-foot depth intervals and described by an onsite (ARCADIS) geologist in a lithologic summary. Included with the lithologic descriptions are drilling conditions such as revolutions per minute (RPM) of the drill bit and the weight on the bit (WOB). A penetration rate log, compiled from geolograph charts and observations made by the onsite geologist, also was created during pilot-hole drilling. The penetration rate log summarizes the rate of penetration through the formation in minutes per foot (min/ft) and the lithology. The lithologic summaries (Geologic Log) and penetration rate logs for IW1 and MW1 are provided in Appendix B. A description of the major geologic and hydrogeologic units encountered during pilot-hole drilling is presented in Section 5 of this report.

3.1.2 Pilot-Hole Water Quality

Pilot-hole water-quality sampling of the reverse-air discharge was performed at approximately 90-foot intervals during pilot-hole drilling below the 42-inch O.D.

surface casing of IW1. Water samples were analyzed in the field for temperature, conductivity, pH, and chloride concentrations. Pilot-hole water quality reflects a mixture of formation fluids for the entire open-hole interval and fresh water that was used to begin reverse-air drilling. The results of the water-sample analysis are provided in Table 2.

The pilot-hole water-quality data indicate that, from the base of the intermediate casing (at 1,833 feet bpl) to a depth of approximately 2,249 feet bpl, collected water was brackish. The reverse-air discharge is a mixture of fresh water (used to partially fill the drilling-fluid storage tanks) and formation water in the borehole. During the coring process, fresh water also was mixed with clay-based drilling-fluid additives and pumped into the well to suppress the artesian head to below land surface. Field analysis of pilot-hole water-quality samples collected in the interval from 2,339 to 2,850 feet bpl indicate the fluids predominantly consisted of formation water which had been partially affected by fresh water introduced during coring.

3.1.3 Geophysical Logging

Geophysical logging was performed in the pilot-hole intervals of both MW1 and IW1 wells to correlate drill cuttings and core samples collected during drilling, to identify formation boundaries, and to obtain specific geologic and hydrogeologic data pertaining to the subsurface formations. These data were used to assist in the selection of the optimum casing setting depths, determine packer-testing intervals and identify transmissive and confining intervals. Reamed-hole caliper logs were performed prior to casing installation to confirm appropriate casing setting depths and provide data for use in calculating theoretical casing-cementing volumes. Summaries of the geophysical logs performed on MW1 and IW1 are provided as Table 3 and Table 4, respectively. Copies of the geophysical logs are included in Volume II of this report. Detailed interpretations of the geophysical logs previously were provided in the documents listed below.

Document Containing Geophysical Logging Results Interpretations	Date	Well & Depth Intervals Logged	Page Numbers and/or Reference to Location of Logs
Dual-Zone Deep Monitor Well (MW-1) Monitoring Zones Recommendation	1/23/03	MW1: 750-2,350 feet	Ref: pp. 2-4 Enclosed with letter report
Injection Well IW-1 Intermediate Casing-Seat Recommendation	3/20/03	IW1: 749-1,900 feet	Ref: pp. 4-6 Enclosed with letter report
Request for Final Casing-Setting Depth Approval, Westport Class I Injection Well No. 1	5/20/03	IW1: 1,830-3,189 feet & 3,100–3,350 feet	Ref: pp. 6-9 Enclosed with Construction Progress Reports #18 and #24
Injection Test Request (Letter)	7/21/03	IW1: 0-2,880 feet MW1: 1,755-1,922 feet	Ref: pp. 1-2 Appendix A

3.1.4 Core Collection

Eight rock cores were collected between 1,847 feet and 2,903 feet bpl during pilot-hole drilling. The rock-core intervals were selected by the onsite geologist based on evaluation of the drill cutting samples. The rock cores were first described onsite and then select sections of the rock cores were sent to Core Lab Petroleum Services (Houston, TX) for horizontal and vertical hydraulic conductivity estimates. Core descriptions and core-analysis reports are included in Appendix B. A summary of the results from the rock-core analyses is provided as Table 5.

The core analytical data (with packer-pumping test data) were utilized to assess the potential degree and extent of confinement between the injection zone (at 2,900 feet bpl) and the regional USDW (at 1,790 feet bpl). The rock-core analyses indicate that the lowest hydraulic conductivity values were obtained between 2,274 feet and 2,283 feet bpl. As determined by core analyses, the average horizontal and vertical hydraulic conductivities of the primary confining interval (between 2,030 feet and 2,900 feet bpl) are 2.35 gpd/ft^2 and 0.33 gpd/ft^2, respectively.

3.1.5 Packer Testing

Five straddle-packer pumping tests were conducted between 1,650 feet and 2,100 feet bpl in the pilot hole of MW1, and five straddle-packer tests were conducted in intervals between 2,217 feet and 2,898 feet bpl in the pilot hole of IW1. The tests were performed to determine the water quality and hydrologic properties of the test intervals. Prior to conducting each packer test, a straddle-packer assembly was installed to the selected interval. Each interval then was pumped (developed) until the field-measured water quality stabilized (conductivity, temperature, pH, and chloride concentrations).

After development, the water level was allowed to recover to the approximate static water level.

Following the stabilization of the water level after development, the pumping portion of each packer test was conducted at an approximately constant pumping rate. During testing, water levels and field water quality were measured. In general, the pumping portion of each test was considered complete when the water quality and water level had stabilized. Just prior to terminating the pumping portion of each test, a final water sample was collected for laboratory analysis, and a 5-gallon water sample was collected for submittal to Florida State University Department of Geological Sciences. The recovery portion of each test began when the pump was shut off. Water levels were measured during the recovery portion of each test until the water level stabilized to approximately the static level.

Water-level drawdown (pumping portion data) and recovery data were used to estimate the horizontal hydraulic conductivity and transmissivity of each test interval. The horizontal hydraulic conductivity and transmissivity estimates assisted in establishing the boundaries of the confining unit and injection zone. Final water samples were analyzed in a lab for chloride, TDS, specific conductance, sulfate, total phosphorus and ammonia-nitrogen to verify the USDW boundary and to establish the background water quality of each test interval. A summary of the water-sample analytical results from packer testing is presented as Table 6. A summary of the hydraulic conductivity estimates from packer testing is presented as Table 7. Electronic packer-test transducer data and charts are included in Appendix C.

3.2 Well Construction and Testing

Data were collected during the construction and testing of both MW1 and IW1 to ensure that both wells were being constructed in accordance with the technical specifications and FAC regulatory requirements.

The well construction details, including the type, diameter, and setting depth of each casing (or tubing) string for MW1 and IW1 are presented as Figure 2 and Figure 3, respectively. The casing mill certificates for MW1 and IW1, with Fiberglass Reinforced Plastic (FRP) tubing-product cut sheets (MW1 tubing) and Permox Coating data (IW1 injection-tubing coating) are included in Appendix D. The data-collection methods used during the construction and testing of both wells, and the results obtained are described below.

3.2.1 Surficial-Aquifer, Containment-Pad Monitor Wells

A Surficial-aquifer, containment-pad monitor well was installed near each of the four corners of the reinforced-steel drilling pad to monitor for spillage to groundwater during construction. Each of the wells was constructed to a depth of approximately 20 feet below land surface with 5 feet of 2-inch diameter, Schedule 40 polyvinyl chloride (PVC) casing attached to 15 feet of 2-inch diameter, 0.010-inch slot, threaded PVC screen. Following installation of the monitor wells, samples were collected from each well and analyzed to establish background water quality prior to beginning construction of MW1. The results of the monitor-well water sampling were included in each Weekly Construction Progress Report (Reports 1 through 31).

3.2.2 Inclination Surveys

Inclination surveys were performed by the Contractor on MW1 and IW1 at 90-foot intervals during pilot-hole drilling and reaming operations. Inclination surveys were performed to ensure that all casing could be set to the required depths with sufficient annular space for proper cementing. The maximum allowable inclination from vertical at any portion of a hole was 1.0 degree. The maximum allowable difference between any two successive survey points was 0.5 degree.

During construction of MW1 and IW1, all inclination surveys met the above criteria. The maximum deviation observed from vertical for MW1 was 0.55 degree. The maximum deviation observed from vertical for IW1 was 0.5 degree. The maximum difference between any two successive survey points for both MW1 and IW1 was 0.25 degree. Summaries of inclination survey results for MW1 and IW1 are presented in Tables 8 and 9, respectively.

3.2.3 Hydrostatic Pressure Tests

The Contractor performed hydrostatic pressure tests on the MW1 upper monitor-zone casing (16-inch O.D.) and on the MW1 lower monitor-zone casing (FRP tubing). In addition, the Contractor performed hydrostatic pressure tests on the IW1 injection casing (24-inch O.D.) and IW1 injection tubing (20-inch O.D.). Pressure tests were performed to demonstrate that the casing and tubing have mechanical integrity. The pressure tests of the upper monitor-zone casing and lower monitor-zone tubing of MW1, and of the injection casing of IW1, were performed by pressurizing the inside of each casing or tubing using potable water. The MW1 lower monitor-zone tubing pressure test utilized a packer assembly to isolate the tubing from the open borehole. The MW1 upper monitor-zone casing and the IW1 injection casing were pressure

tested in place after cementing of the annulus of each casing was nearly complete (within 309 feet and 831 feet of land surface, respectively). A pressure test was performed on the injection tubing of IW1 (after installation of a YBI Positive-Seal Packer™) by placing the annular space between the injection tubing and injection casing under pressure. The pressure was recorded during each test every 5 minutes for one (1) hour as measured by a (certified) calibrated pressure gauge installed on the annular space at the wellhead.

Each pressure test was considered successful if the pressure inside the casing or tubing (or annular space of the injection tubing) did not change more than 5% from its original pressure. After the completion of each test, the pressure was relieved and the volume of water discharged from the casing or tubing (or annular space of the injection tubing) was measured.

The pressure changes during each pressure test for MW1 and IW1 (four tests in total) were within the 5% allowable limit. The hydrostatic pressure-test results for the MW1 lower monitor-zone tubing, the IW1 injection casing and IW1 injection tubing (and the associated pressure-gauge calibration certificates) are included in Appendix E. Further discussion of the hydrostatic pressure tests is included in the Technical Memorandum included in Appendix E.

3.2.4 Temperature Logs

Temperature logs were performed after each casing cementing stage (where cement returns were not observed at surface). The top of the cement for each stage was estimated from the results of each temperature log (temperature increases indicate the heat released from curing cement). The top of cement also was physically tagged after each cementing stage using steel work pipe inserted inside the annulus. The estimated depth of the top of cement from the temperature log was compared to the physical tag depth (for each stage) to ensure that the formation did not collapse and fall on top of the cement (resulting in cement voids or uncemented annular sections).

There was a good correlation between the tagged depth for the top of cement and the estimated depth of the top of cement as inferred from the temperature log of each cement stage for MW1 and IW1. "Cement top" temperature logs for MW1 and IW1 are provided in Volume II of this report. Summaries of the cement stages for MW1 and IW1 are presented as Tables 10 and 11, respectively.

3.2.5 Television Surveys

Television surveys were conducted on the 24-inch O.D. injection casing and the 20-inch O.D. injection tubing of IW1. The television surveys were performed to visually inspect the casing and tubing for any damage that may have occurred during or after installation. Television surveys also were performed on the intermediate casing and pilot hole to a depth of 3,185 feet bpl and on the 22-inch diameter borehole to a depth of 3,350 feet bpl. Prior to performing the television surveys, freshwater was pumped down IW1 to improve picture clarity. The camera then was lowered inside the casings (or tubing) and the open holes. The surveys were recorded onto videocassette (VHS) tapes.

No damage was observed in the intermediate casing, injection casing or injection tubing of IW1. VHS tape copies of the television surveys of the 22-inch diameter borehole, injection casing and injection tubing are enclosed with this report. A VHS tape copy of the television survey of the intermediate casing and pilot hole was submitted with the ARCADIS "*Request for Final Casing-Setting Depth Approval*" letter dated May 20, 2003.

3.2.6 Cement Bond Logs

A cement bond log (CBL) with variable density log (VDL) display was performed on the MW1 ($6^5/_8$-inch diameter) FRP tubing (after installation) both before and after the Contractor cemented the tubing in place A CBL was performed prior to cementing the FRP tubing of MW1 in order to collect background CBL readings. A CBL with VDL display was performed on the IW1, 24-inch O.D. injection casing after it was cemented up to 286 feet bpl. In addition, readings were taken of the top (un-cemented) 286 feet of the injection casing of IW1 to calibrate the CBL tool and to establish a background (free-pipe) signal that was compared to the cemented portion of the casing. The CBLs were performed to evaluate the bond between the cement and the casing (or tubing) and the bond between the cement and formation.

The CBLs performed on MW1 and IW1 indicated that both the FRP tubing of MW1 and injection casing of IW1 are well bonded to cement. The CBLs also indicated that the bonds between the formation and the cement for both MW1 and IW1 are well established. Copies of the CBLs are included in Volume II of this report. Further discussion of the CBLs is included in the ARCADIS "*Injection Test Request*" letter dated July 21, 2003.

3.2.7 High-Resolution Temperature Log

A high-resolution temperature log was conducted on the completed injection well to demonstrate mechanical integrity. The temperature parameter inside the injection tubing and outer casing is a function of a combination of factors, including the water temperature of the formation, the number, diameter and wall thickness of casings that "cover" the formation, the density and quality of the cement slurry used during casing cementing and the presence of a coating on the inside of the injection tubing.

The data collected from the high-resolution temperature log indicated that IW1 has mechanical integrity. A copy of the high-resolution temperature log is included in Volume II of this report. Further discussion of the high-resolution temperature log is included in the Technical Memorandum in Appendix E.

3.2.8 Radioactive Tracer Survey

A radioactive tracer survey (RTS) was performed on the completed injection well to demonstrate the external mechanical integrity of the well (including the cement sheath and adjacent formation). The RTS logging tool used for the survey consisted of three gamma-ray detectors, one at the top (GRT), middle (GRM), and bottom (GRB) of the tool. An ejector (loaded with 10-millicuries [MCI] of Iodine 131) was located between GRT and GRM. Prior to testing, a background gamma-ray log (GRL) was performed on the entire length of the well and into the open hole (from approximately 3,140 feet bpl to pad level). The RTS performed on IW1 consisted of three tests, and each test consisted of two parts labeled 'dynamic monitoring' and 'logging out of position'. During Tests 1, 2, and 3, a 1.5-MCI slug, a 2-MCI slug, and a 3.5-MCI slug of Iodine 131 were ejected, respectively. Prior to and following each ejection, freshwater was pumped down IW1 at a rate of 74 gallons per minute (gpm), 69 gpm, and 5,200 gpm, respectively.

3.2.8.1 Dynamic Monitoring

During RTS testing, Iodine 131 was released from the ejector while a specified rate of freshwater was pumped down IW1. The elapsed time was recorded and the presence of Iodine 131 at each detector was recorded (if present on the gamma-ray log). Freshwater pumped down the well forced the Iodine 131 downward where it was detected by GRM and then GRB (located below the ejector). The GRT can detect the Iodine 131 if the Iodine 131 migrates upward outside the injection casing (i.e. if there are spaces between the cement and casing or the cement and formation, or if fractures in the formation exist near the well). If the GRT detects Iodine 131, the logging tool is

moved up the well (20 feet at a time) to measure the extent of upward migration of the Iodine 131.

3.2.8.2 Logging Out of Position

After performing each dynamic monitoring test, the logging tool was moved up the well to record the vertical extent of tracer (Iodine 131) movement. The primary purpose of "logging out of position" was to determine the extent of upward migration of Iodine 131 through the formation or through spaces in the annuli in the cement sheath. During logging out of position, the presence of Iodine 131 (at each detector) was recorded.

After the 3 tests were completed, the tool was lowered down the open hole to 3,346 feet bpl. Between 3,150 feet and 3,050 feet bpl, the remaining 3 MCI of Iodine 131 in the tool was ejected. The final gamma-ray log was then performed up to pad level. The results of the three tests and the final log then were compared to the background log.

3.2.8.3 RTS Interpretation

The results of the survey indicate that the cement sheath around the outer (24-inch O.D.) injection casing is intact and a good bond is present between the cement and the formation, as well as between the casing and the cement, above a depth of approximately 2,900 feet bpl. Based on the RTS and temperature log results, the top of the injection zone is located at approximately 2,900 feet bpl in the immediate vicinity of IW1. The RTS logging results suggest that an adequate degree of confinement is provided by the formation above that depth. A copy of the RTS log is included in Volume II of the Appendices. A technical memorandum with detailed discussion of the RTS methods and an interpretation of the results is included in Appendix E.

3.3 Injection Testing

Following completion of construction and mechanical integrity testing of IW1, an injection test was performed to demonstrate the ability of the injection well to accept fluid and to test the effectiveness of the confining units between the injection zone and the monitoring zones.

Prior to beginning the injection test, the wellhead pressures of MW1 (upper and lower zones) and IW1 were monitored for approximately 58 hours to gather background data. After background data were collected, water from an onsite lake was pumped into IW1

at an average rate of 8,880 gpm for approximately 8 hours while the monitoring of MW1 and IW1 wellhead pressures continued. Following injection, wellhead pressure monitoring for MW1 and IW1 continued for approximately 33 more hours.

No noticeable changes were observed in the pressure data collected prior to injection and the pressure data collected during injection in the upper and lower monitor zones of MW1. Based on the injection test results, the injection of more than 12 mgd does not affect the pressures of the MW1 monitoring zones. This supports the interpretation that the monitor zones are isolated from the injection zone by one or more suitable, overlying confining intervals. The results also demonstrate that the section of the injection zone tapped by the open hole of IW1 (from 2,904 feet to 3,350 feet bpl) is sufficiently transmissive to accept the anticipated buildout volume of 12 mgd. Wellhead pressure data, plots of the data, and transducer calibration sheets are presented in Appendix F.

4. Operational Testing

After receiving FDEP approval, operational testing of IW1 commenced on November 1, 2003. During operational testing, permit conditions applicable to monitoring the physical and chemical characteristics of injected fluids, MW1 monitor-zone fluids, and operational performance of the injection well were satisfied to provide information to submit the operating permit application for the injection well system. Operational testing of IW1 was performed in accordance with Chapter 62-528, FAC, and the provisions of the FDEP Construction Permit No. 189145-001-UC. Available IW1 operational and effluent water-quality data with graphical plots are presented in Appendix G. Available MW1 monitor-zone water-quality and wellhead pressure data (upper and lower zone) with graphical plots also are presented in Appendix G.

4.1 Data Compilation

Reported operational and water-quality data have been compiled into tabular and graphical formats for the period from November 1, 2003 to April 27, 2004 and are provided in Appendix G, which has been divided into 5 sections (1 through 5), each including one table and the associated graphs of the collected operational or analytical data over (versus) time. Available Injection Well IW1 operational data, including the average injection wellhead pressures (in pounds per square inch-gauge) and average daily injection volumes (expressed as an average daily flow rate in gallons per minute) of the secondarily-treated wastewater effluent are presented in Table 1 (Appendix G, Section 1) by month during the reporting period of November 1, 2003 to April 27, 2004. Available water-quality data collected from the Floridan-aquifer dual zone Deep

Monitor Well MW1, upper monitor zone (for monthly submittal to the FDEP) during the reporting period (November 1, 2003 to April 27, 2004) are summarized in Table 2 (Appendix G, Section 2), and MW-1 water-quality data collected from the lower monitor zone during the same reporting period are summarized in Table 3 (Appendix G, Section 3). A summary of WWTP effluent water-quality data collected during the reporting period is presented as Table 4 (Appendix G, Section 4). A summary of quarterly-specific injectivity data for IW1, collected during the reporting period, is presented as Table 5 in Section 5 of Appendix G.

A graph of the IW1 average-daily flows and average wellhead-injection pressures (Appendix G, Table 1) by month is presented as Figure 1-1. The six months of operational data (injection-pressure and flow-volume) for IW1 indicate that the average-daily injection volume to IW1 ranged from 0.296 million gallons (mg) to approximately 0.560 mg, and the monthly average of the daily injection-wellhead pressure ranged between 21.3 psi and 23.6 psi (Table 5).

The available water-quality data for the Deep Monitor Well MW1 upper (shallow) monitor zone (1,732.4 to 1,757.4 feet) summarized in Appendix G, Table 2 are presented graphically in Appendix G on Figures 2-1 through 2-10. Available water-quality data for the MW1 lower (deep) monitor zone (1,922.4 to 1,972.4 feet) summarized in Appendix G, Table 3 are presented graphically on Figures 3-1 through 3-10. Upper and lower monitor zone wellhead pressures (average monthly) are presented on Figures 2-11 and 3-11, respectively. Effluent water-quality graphs showing available water-quality data over time (Appendix G, Table 4) are presented as Figures 4-1 through 4-11. Specific-injectivity testing data (Appendix G, Table 5) for IW1 are presented as Figure 5-1.

4.2 Interpretations

An interpretation of the available information is required in order to demonstrate that the injection well system has mechanical integrity and that an adequate degree of confinement exists between the injection zone and the base of the lowermost regional USDW, estimated to occur at a depth of approximately 1,790 feet bpl.

4.2.1 Operational Data

The six months of available injection-pressure and flow-volume data for IW1 are presented in Table 1 (Appendix G), and graphed as Figure 1-1. Specific-injectivity tests were conducted using effluent from the Westport Wastewater Treatment Plant in each month during the reporting period at the maximum achievable injection rates with the

available volume of effluent (Appendix G, Table 5; Figure 5-1). The test results indicate that the maximum sustained wellhead pressure is below 35 psi during pumping of approximately 6,469 gpm (equivalent to about 9.31 mgd) of mixed wastewater.

4.2.2 Water-Quality Data

The upper monitor zone water-quality data for the upper monitor zone (Appendix G, Table 2; Figures 2-1 through 2-10) do not indicate movement of effluent upward to the upper monitor zone. The available lower monitor zone water-quality data (Appendix G, Table 3, Figures 3-1 through 3-10) do not indicate upward migration of effluent to above the regional USDW. However, a comparison of the PT-2 packer-pumping test water-quality (Table 6) suggests that the gradual increase observed in the chloride, sodium and TDS concentrations of the weekly water samples is likely the result of residual (freshwater) drilling fluid in the monitor zone. The lower zone concentrations are approaching the PT-2 analytical sample results obtained during the IW1 pilot-hole construction and testing program. The same gradual increase is evident in the weekly upper-monitor zone water-quality results and likely is due to the same effect, although the specific monitoring interval was not packer tested (because the FDEP requested a monitor-zone completion in a lower depth interval than was recommended) . The pilot hole for the well was reamed using the reverse-air method, and it is apparent that the relatively transmissive monitor zones selected for this injection well facility were affected by the freshwater and formation fluids added to and mixed within the closed-circulation drilling system. These upward trends are expected to stabilize within a 6 to 9-month period.

4.2.3 Monitor Zone Pressures

The gradual increase in both the upper and lower monitor-zone salinities is the cause of the gradual decrease in monitor-zone pressures observed over time (Figures 2-11 and 3-11). These trends are expected to stabilize within a 6 to 9-month period.

4.3 Conclusions

The water-quality data for the deep monitor well (MW1) upper and lower monitor zones have been compiled and presented; there are no indications that the injected fluids have affected the water quality of these "early warning" monitoring intervals. The data collected from operational testing demonstrate that the injection well system has mechanical integrity and that an adequate degree of confinement exists between the injection zone and the base of the lowermost regional USDW.

5. Geology and Hydrogeology

5.1 Regional Geologic Setting

The Surficial Aquifer is composed mainly of unconsolidated sand, silt and shell with varying amounts of limestone, sandstone, shell and clay. This aquifer contains the water table and water within it exists under mainly unconfined conditions. Between land surface and approximately 130 feet deep, the Pleistocene sediments correspond to descriptions of the Pamlico Sand and Anastasia Formation in St. Lucie County. Below 130 feet deep (to approximately 185 feet or more), the sediments are mainly composed of clay, shell, sands and silt. These descriptions correspond to the Post-Miocene Ft. Thompson, Caloosahatchee Marl and the Tamiami Formations. The base of the Tamiami Formation is not well defined in St. Lucie County; however, the lower limit of the Surficial Aquifer coincides with the top of laterally extensive and vertically persistent beds of much lower permeability and varies in depth from about 100 feet to more than 175 feet below land surface in the County.

Underlying the Surficial Aquifer are the Miocene clays and marls that form a confining sequence between the Surficial Aquifer and the Oligocene to Eocene limestones and dolomites of the Floridan Aquifer. These sediments form a confining sequence referred to as the Hawthorn Group. The Hawthorn Group sediments overlie the Floridan Aquifer, which exists under artesian conditions with a potentiometric level above land surface. In south Florida, the dense Miocene clays of the overlying Hawthorn Group sediments provide good confinement for the Floridan Aquifer.

The Floridan Aquifer includes the thick carbonate sequence of all or part of the Paleocene to lower Miocene Series and, in south Florida, serves as a regionally significant water-yielding unit under confined conditions. The Floridan Aquifer underlies all of Florida and southern Georgia and includes all of middle and upper Eocene Ocala Group, Avon Park Formation and Lake City Limestone, the Oligocene Suwannee Limestone and those permeable Hawthorn Group beds in contact with the rest of the aquifer.

The middle to upper Eocene limestones, dolomitic limestones and dolomites of the Avon Park Formation and Lake City Limestone overlie the lower Eocene sediments of the Oldsmar Formation. Much of the Oldsmar Formation can be characterized by the vuggy texture of the dolomite drilled cutting samples and large-scale dissolution features noted on caliper logs. The lower portion of this formation contains a section of highly permeable dolomite with highly mineralized water referred to as the "Boulder Zone" that is used throughout south Florida for the disposal of wastewater.

5.2 Local Hydrogeology and Underground Sources of Drinking Water

A brief review of the regional hydrogeologic setting for the vicinity of the injection well system follows to indicate the general vertical and lateral limits of all underground sources of drinking water, their position relative to the injection formation and the direction of water movement (where known) in each USDW that may be affected by the proposed injection.

A north-south hydrostratigraphic cross section of the geologic formations containing the underground sources of drinking water in the area of the project site is presented as Figure 5. In addition, a west-east (southwest to northeast) hydrostratigraphic cross section of the same geologic formations in the area of the project site is presented as Figure 6. The general vertical limits of the USDWs are shown with their position relative to the injection formation (injection zone). Formation names and boundaries of the confining intervals and injection zone are also shown.

5.2.1 Surficial Aquifer

In the local area of the project site, the Surficial Aquifer is composed mainly of unconsolidated sand and shell with varying amounts of limestone, sandstone and clay between land surface and 180 feet. The aquifer is used as the main source of drinking water throughout St. Lucie County.

The water table elevation is between 12 and 16 feet (based on the National Geodetic Vertical Datum [NGVD] adjustment of 1929) in the vicinity of the Westport Injection Well System (Technical Publication 95-01, South Florida Water Management District, 1995). Based upon a review of the 1983 photorevised, Palm City, Florida, U. S. Geological Survey topographic map, and the final survey of the project site, the land surface elevation shows little slope in the vicinity of the site and appears to be between approximately 15 and 20 feet above NGVD. The groundwater flow direction in the Surficial Aquifer appears to be to the east-northeast toward the North Fork of the St. Lucie River. Based on the water level measurements collected from the Surficial-Aquifer pad monitor wells at the project site, the groundwater generally flows to the southwest. The base of the Surficial Aquifer at the project site is approximately 160 feet below NGVD or approximately 180 feet below land surface.

5.2.2 Intermediate Aquifer

Underlying the Surficial Aquifer are approximately 560 feet of Miocene clays and marls with some limestones forming a sequence of confining beds between the

sediments of the Surficial Aquifer and the Eocene limestones and dolomites of the Floridan Aquifer System. This Miocene-age sequence is found throughout south Florida and has been redesignated from the (Hawthorn, Peace River and Arcadia Formations) to the Hawthorn Group based on extensive work to define the areal extent of the several formations comprising these sediments in Florida. Although permeable beds existing within the Hawthorn Group may comprise an Intermediate Aquifer System, the Hawthorn Group formations generally form a confining sequence (or aquitard) in St. Lucie County and the water quality is poor in comparison to the upper and middle Surficial Aquifer. The dense clays of the Miocene Hawthorn Group sediments provide good confinement for the underlying Floridan Aquifer.

5.2.3 Floridan Aquifer

The Floridan Aquifer underlies all of Florida and southern Georgia and includes parts or all of middle and upper Eocene Ocala Group (Avon Park) Formations and the Oligocene Suwannee Limestone, as well as portions of the Miocene Tampa Formation and those permeable Hawthorn Group beds in contact with the rest of the aquifer.

In St. Lucie County, water quality in the Floridan Aquifer is poor in comparison to the Surficial Aquifer. Water from the Floridan Aquifer in the area contains TDS concentrations that exceed drinking water standards. Although the desalination treatment required results in higher consumer costs, Floridan Aquifer water has become an alternate supply in St. Lucie County in order to preserve the better-quality water from the Surficial Aquifer System (both to mitigate potential impacts to environmentally sensitive wetlands and to reduce the potential for saltwater intrusion in the Surficial Aquifer). The Floridan Aquifer generally exists under artesian conditions with a potentiometric level above land surface. The Floridan Aquifer is artesian in all parts of St. Lucie County, except in eastern St. Lucie County where land surface along the Coastal Ridge is 50 feet or more above mean sea level. In areas where the Floridan Aquifer has not experienced significant withdrawals, the potentiometric water level varies from 30 to 50 feet above mean sea level (Bearden, H. W., Report of Investigations No. 62, United States Geological Survey, 1972, p. 10). The principal recharge areas for the artesian Floridan Aquifer in southern Florida are centered in Polk and Lake County. The potentiometric surface of the aquifer slopes gently toward the east and southeast, except where locally affected by withdrawals.

5.3 Local Geologic Structures

Based upon the data collected during pilot-hole construction, the hydrology and geologic structures near the site have been summarized. In the local area of the project

site, the Surficial Aquifer is composed mainly of unconsolidated sand, clay and shell, with varying amounts of limestone, sandstone and clay between land surface and 180 feet bpl. These Pleistocene sediments correspond to descriptions of the Pamlico Sand and underlying Anastasia Formation in St. Lucie County.

Between 180 and 186 feet bpl, the sediments consist of grayish-olive clays with varying amounts of sand, shell, and some interbedded limestone. These descriptions correspond to Post-Miocene Ft. Thompson, Caloosahatchee Marl and Tamiami Formation sediments.

Between 186 and 740 feet bpl, the sediments consist predominantly of dark olive-gray, slightly plastic clay with sand and shell. Marl predominates from 510 to 740 feet bpl, consisting of a light olive-gray, soft, plastic carbonate mud with some quartz and phosphate sands. Below 630 feet bpl, limestones are present, interbedded with the marl; these formations correspond to descriptions of the Hawthorn Group and the underlying Suwannee Limestone. Between 740 feet and 1,270 feet bpl, sediments consisting of a moderately soft, fossiliferous, white to very pale orange limestone that contain foraminifera. The limestone corresponds to descriptions of the upper Eocene Ocala Group. From 930 feet to 1,270 feet bpl, sediments consist of very-fine grained, hard, highly fractured dolomite.

The middle to upper Eocene limestones, dolomitic limestones and dolomites of the Avon Park Formation and Lake City Limestone are encountered between 1,270 and 2,527 feet deep. The existence of the Lake City Limestone in this area is inferred from the literature. Typically, there is insufficient microfossil evidence in samples from pilot holes completed in the south Florida area to precisely delineate a base for the Avon Park Formation. For this reason, and based on the literature (Miller, 1986), the Avon Park Formation and Lake City Limestone are incorporated into the Avon Park (Formation) for the purpose of this document (Figures 5 and 6).

Between 2,527 and 2,900 feet bpl, limestone is present and shows signs of dolomitization near the base. The interval between 2,900 and 3,450 feet bpl consists of interbedded dolomitic limestone and dolomite. The formation between 2,900 and 3,450 feet bpl is consistent with the lower Eocene Oldsmar Formation as described by Miller (1986). Those dolomites are pale to dark yellowish brown, crystalline to cryptocrystalline, dense and massive with some evidence of dissolution (cavities, vugs, caverns and fractures). Dolomites encountered between 2,900 feet and 3,350 feet bpl are consistent with descriptions of the highly transmissive interval known in south Florida as the "Boulder Zone".

6. Additional Operating Permit Requirements

6.1 Operation and Maintenance Manual

A final Operation and Maintenance Manual (RMA, July 2003) has been prepared for the use of WWTP operators and other personnel and is enclosed with this report. The manual contains routine operating procedures (including actual injection procedures), emergency procedures, actual operating data and reports, the proposed monitoring program, and the proposed plugging and abandonment plan for the injection well system.

6.1.1 Injection Procedures

Domestic wastewater effluent from the Westport WWTP will be injected into IW1. The effluent will be stored in two lined holding ponds, and then pumped to the injection well through the effluent pump station.

The firm pumping capacity of the pump station is 4,200 gpm (6.05 mgd) with two out of the three installed pumps in operation. The maximum flow to the injection well, over the next five-year period, is expected to be approximately 3,400 gpm (4.9 mgd) with an anticipated maximum injection pressure of 31 psi. The operational data collected during the operational testing period are discussed in Section 4 of this report and provided in Appendix G.

6.2 Record Drawings

Record drawings, based upon inspections by the Engineer, with all deviations noted, were submitted with the ARCADIS report titled "*Operational Testing Request*" dated August 2003.

6.3 Submittal of Fluid Compatibility Evaluation and Background Water-Quality Data

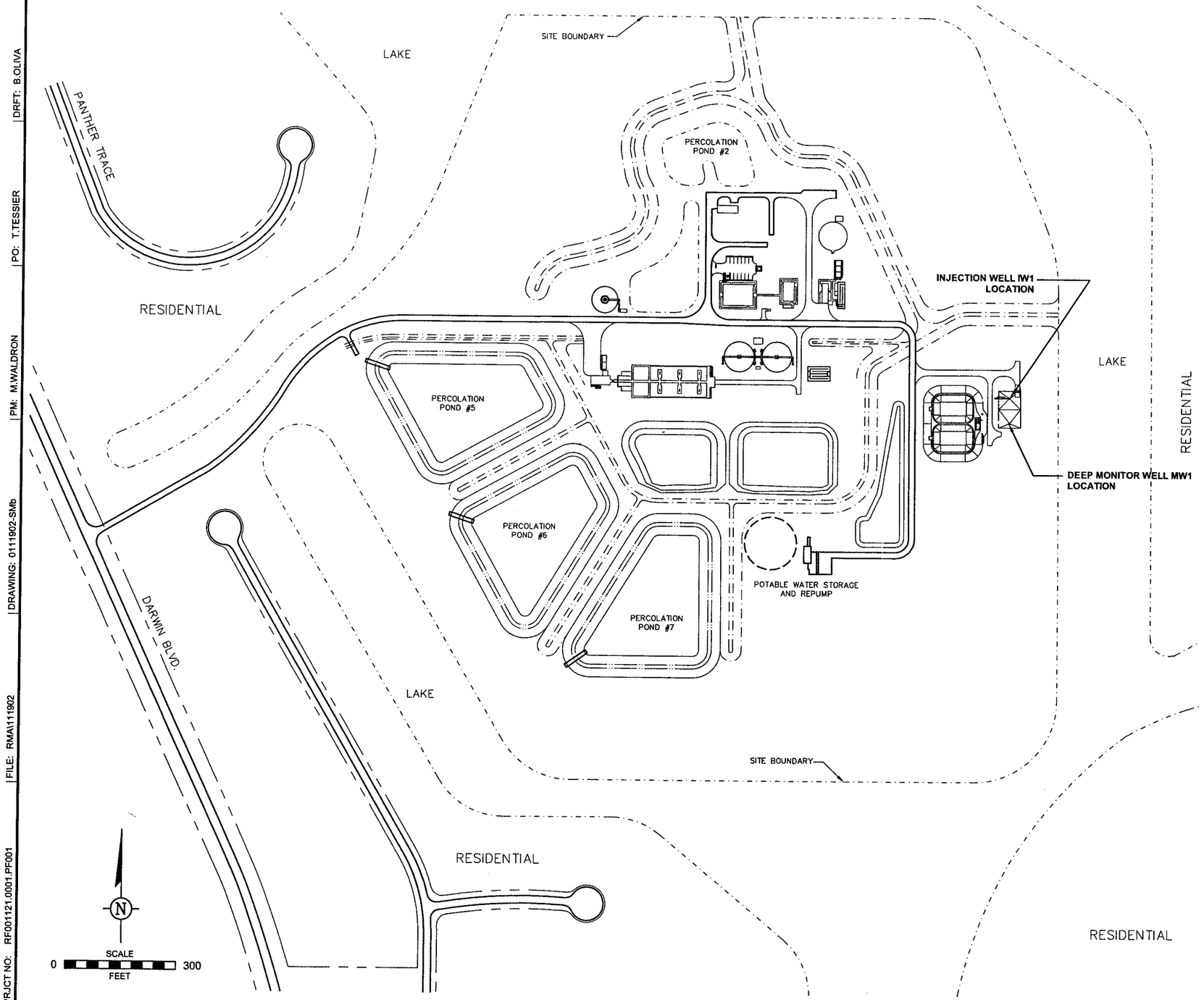
Information concerning the compatibility of the injected waste with fluids and minerals in the receiving zone has been reviewed and evaluated. The text and tabulated results of the fluid-compatibility evaluation are presented in Appendix H. The chemical characteristics of the actual injection-zone fluids are not significantly different than was anticipated for the compatibility evaluation developed as part of the permitting process. Relevant water-quality data, including the background water quality of the MW1 monitor zones and IW1 injection zone, are provided in Appendix H.

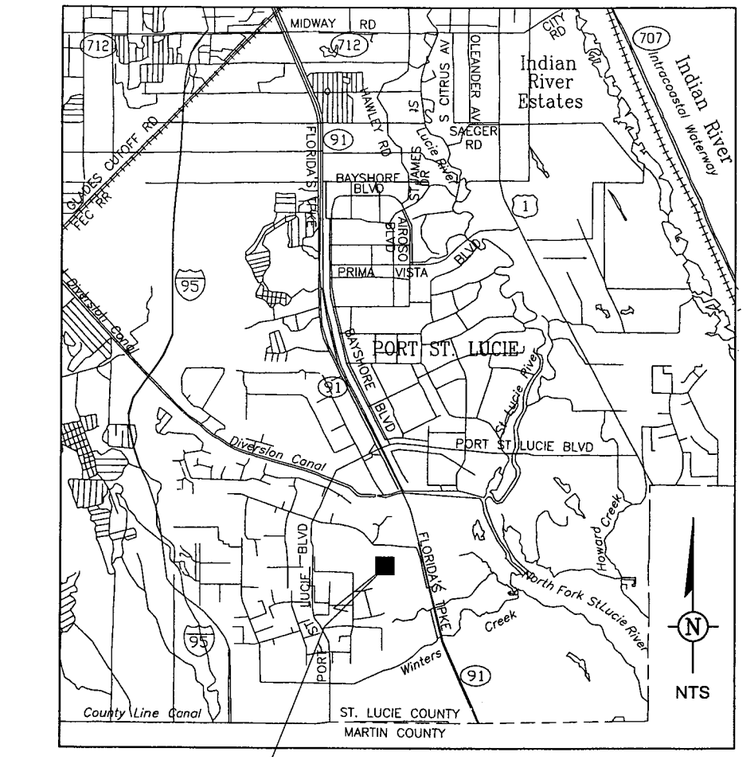
6.4 Corrective Action of Defective Wells

An additional operating permit requirement is the status of corrective action on defective wells in the area of review. Based on the reasonably ascertainable publicly available information, no defective wells were located inside the area of review.

6.5 Certification of Completion

The Certifications of Well Completion for IW1 and MW1 are presented in Appendix I.





PROJECT LOCATION

LOCATION MAP

SOURCE: Reese, Macon & Associates, Inc.

NO.	DATE	REVISION DESCRIPTION	CHKD.

ARCADIS
712 U.S. HIGHWAY ONE, SUITE 200
NORTH PALM BEACH, FLORIDA 33408
Tel: 561.881.0077 Fax: 561.881.0012

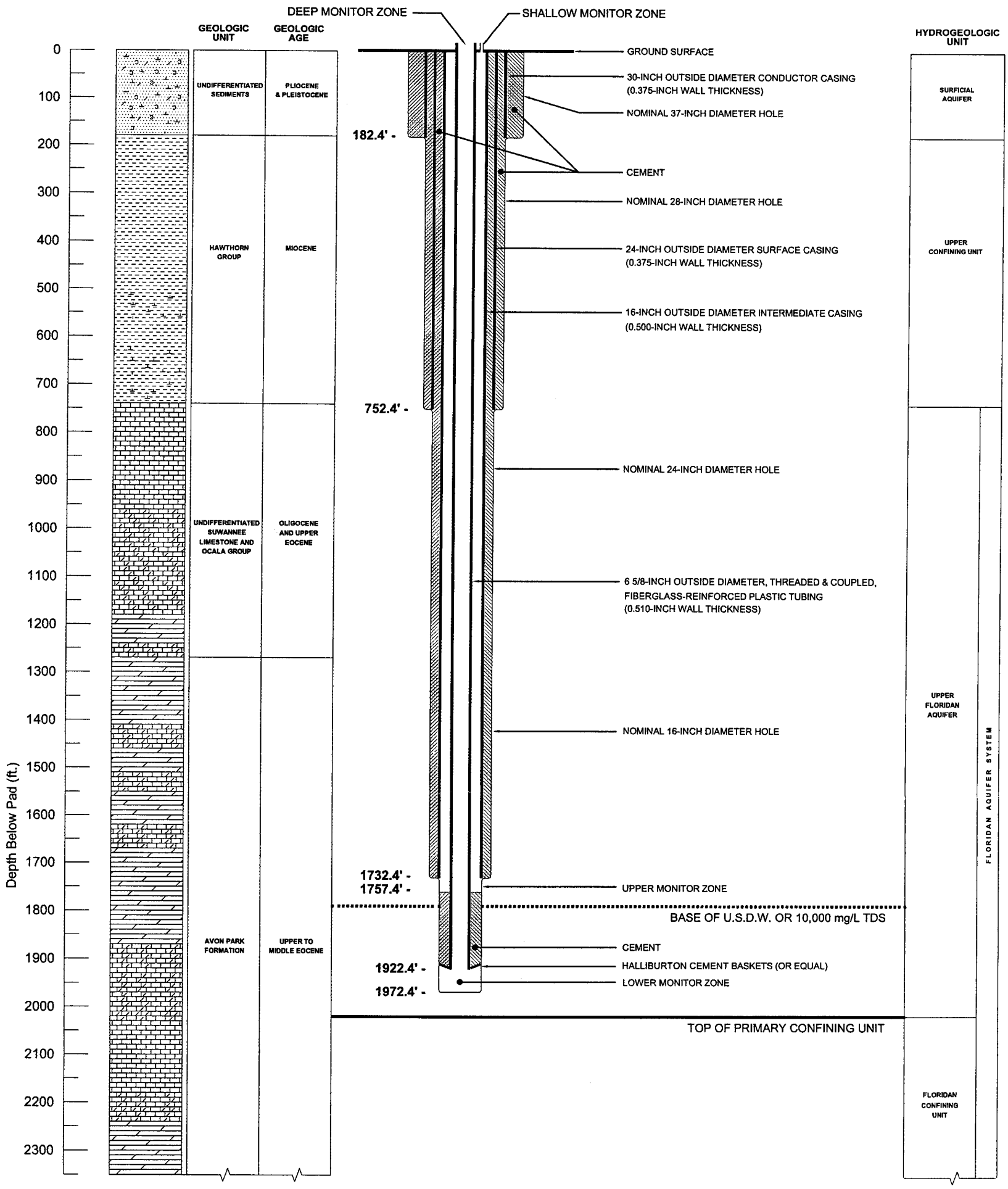
DATE: 22JUL04 | PRJCT NO: RF001121.0001.PF001 | FILE: RMA1111902 | DRAWING: 0111902-SMb | PM: M.WALDRON | PO: T.TESSIER | DRFT: B.OLIVA

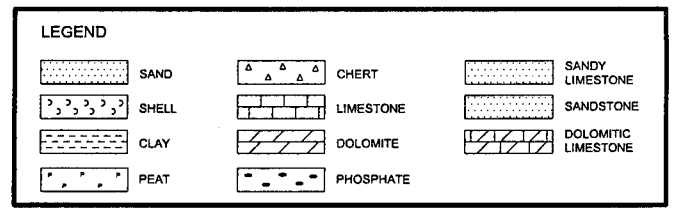
SITE LOCATION AND SITE LAYOUT SHOWING INJECTION WELL IW1 AND DEEP MONITOR WELL LOCATIONS

CITY OF PORT ST. LUCIE
WESTPORT WASTEWATER TREATMENT PLANT
ST. LUCIE COUNTY, FLORIDA

FIGURE
1

DATE: 22JUL04	PRJCT NO: RF001121.0001.PF001	FILE: RMA\111902	DRAWING: 0111902-DMW	PM: M.WALDRON	PO: T.TESSIER	DRFT: B.OLIVA





DRAWING NOT TO SCALE

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NORTH PALM BEACH, FLORIDA 33408
Tel: 561.881.0077 Fax: 561.881.0012

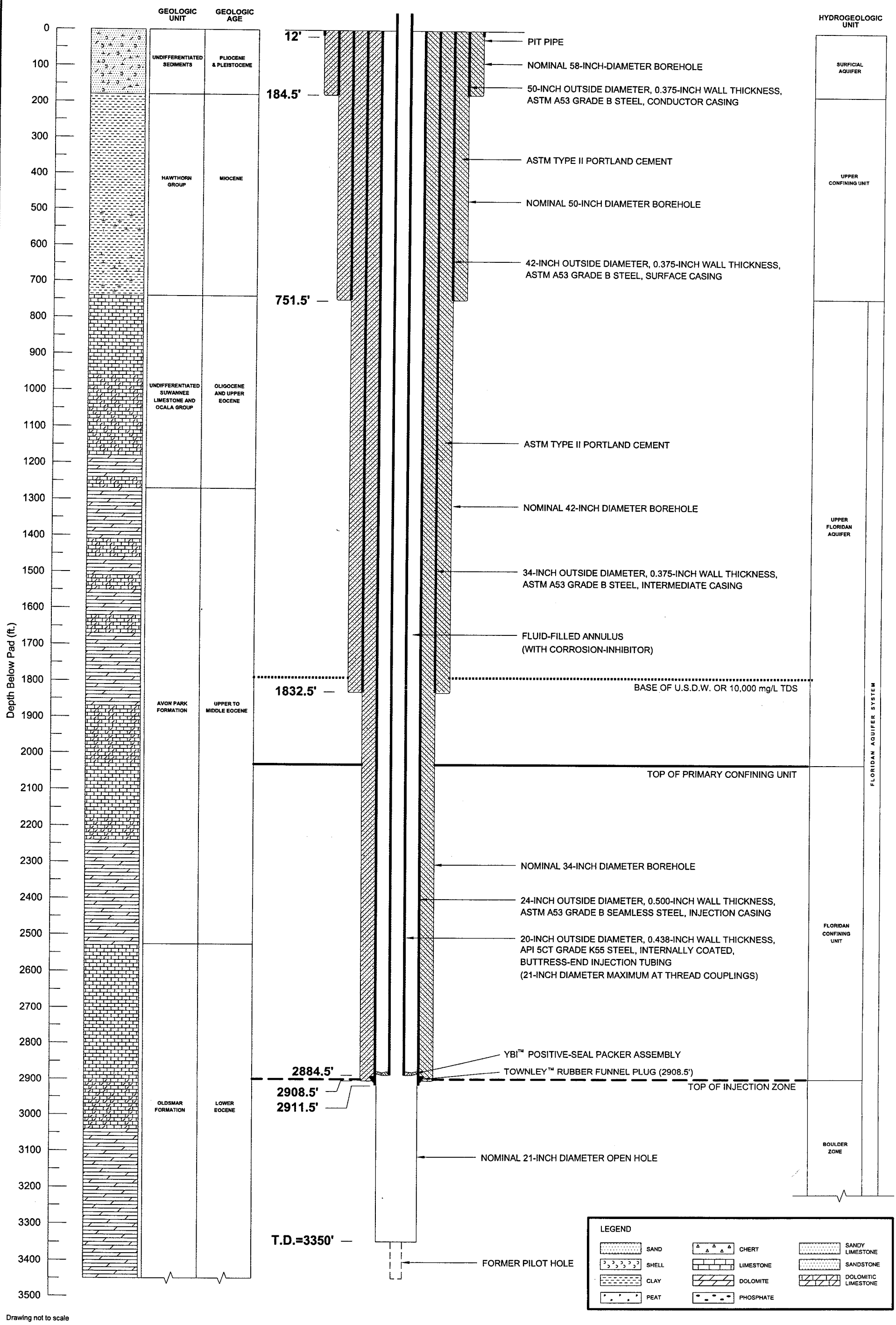
NO.	DATE	REVISION DESCRIPTION	CHKD.

DEEP MONITOR WELL MW1 DETAIL WITH GEOLOGIC AND HYDROGEOLOGIC COLUMNS

CITY OF PORT ST. LUCIE
WESTPORT WASTEWATER TREATMENT PLANT
ST. LUCIE COUNTY, FLORIDA

FIGURE
2

DATE: 22JUL04	PRJCT NO: RF001121.0001.PF001	FILE: RMA\111902	DRAWING: 0111902-IW1	PM: M.WALDRON	PO: T.TESSIER	DRFT: B.OLIVA



Drawing not to scale

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NORTH PALM BEACH, FLORIDA 33408
Tel: 561.881.0077 Fax: 561.881.0012

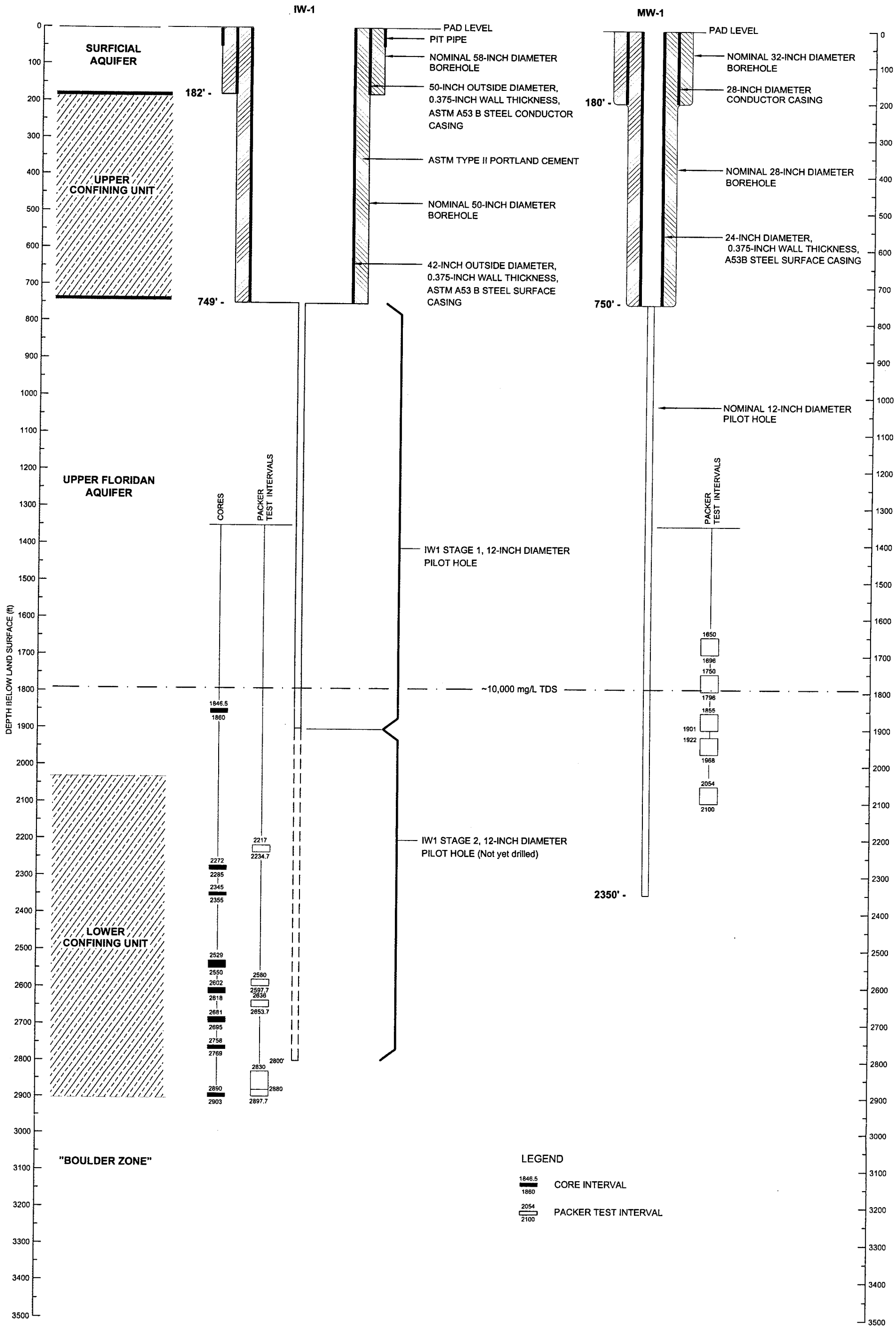
NO.	DATE	REVISION DESCRIPTION	CHKD.

INJECTION WELL IW1 DETAIL WITH GEOLOGIC AND HYDROGEOLOGIC COLUMNS

CITY OF PORT ST. LUCIE
WESTPORT WASTEWATER TREATMENT PLANT
ST. LUCIE COUNTY, FLORIDA

FIGURE
3

DATE: 14MAY04	PRJCT NO: RF001121.0002.PF001	FILE: RMA\111902	DRAWING: 0111902-IWTST	PM: M.WALDRON	PO: T.TESSIER	DRFT: B.OLIVA



LEGEND

1846.5 / 1860 — CORE INTERVAL

2054 / 2100 — PACKER TEST INTERVAL

Drawing not to scale

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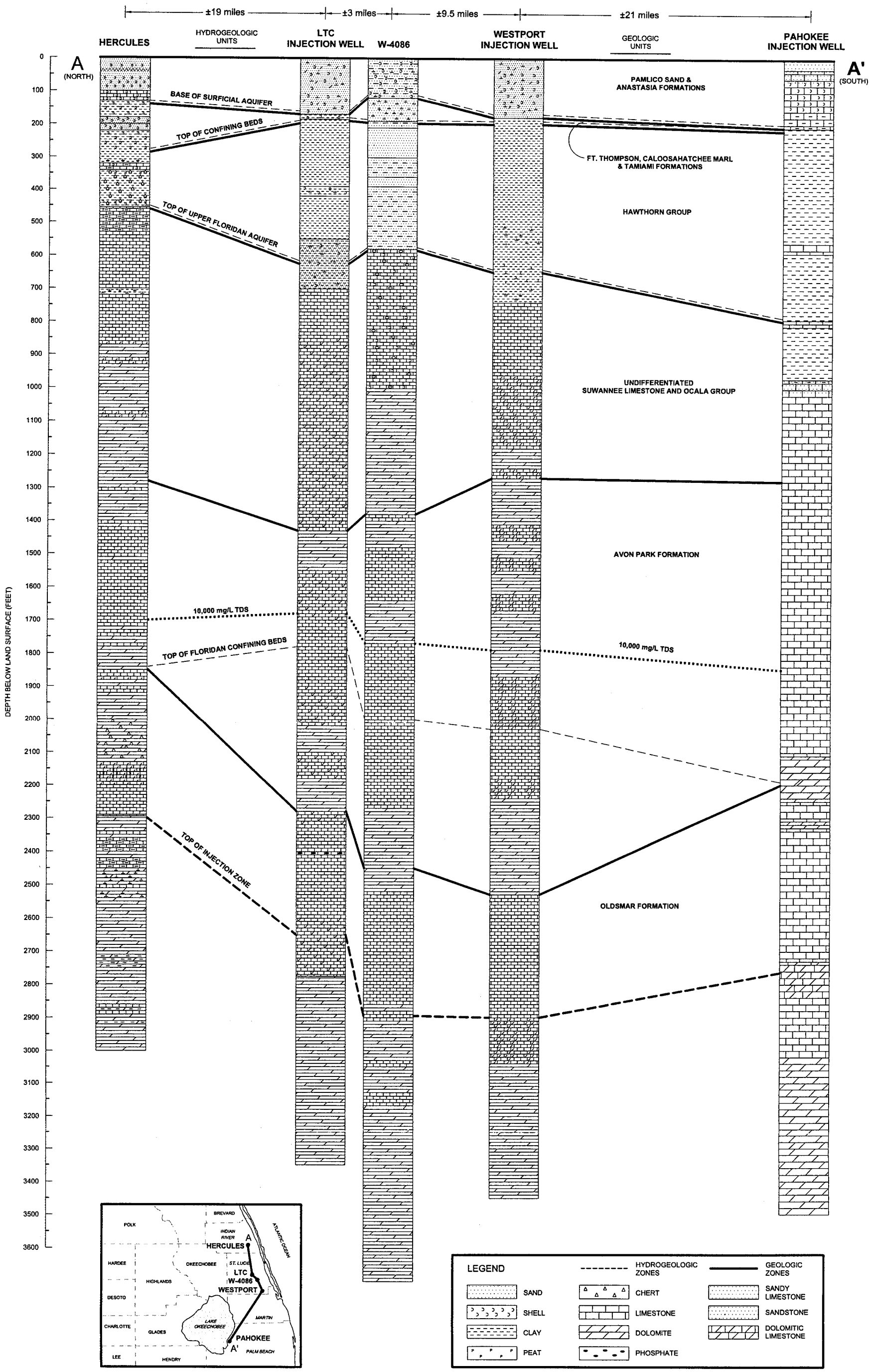
NO.	DATE	REVISION DESCRIPTION	CHKD.

INJECTION WELL SYSTEM TEST INTERVALS

CITY OF PORT ST. LUCIE
WESTPORT WASTEWATER TREATMENT PLANT
ST. LUCIE COUNTY, FLORIDA

FIGURE
4

DATE: 14MAY04	PRJCT NO: RF001121.0001.PF001	FILE: RMA\111902	DRAWING: 0111902-NSWE Cross Sections	PM: M.WALDRON	PO: T.TESSIER	DRFT: B.OLIVA



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Tel: 561.881.0077 Fax: 561.881.0012

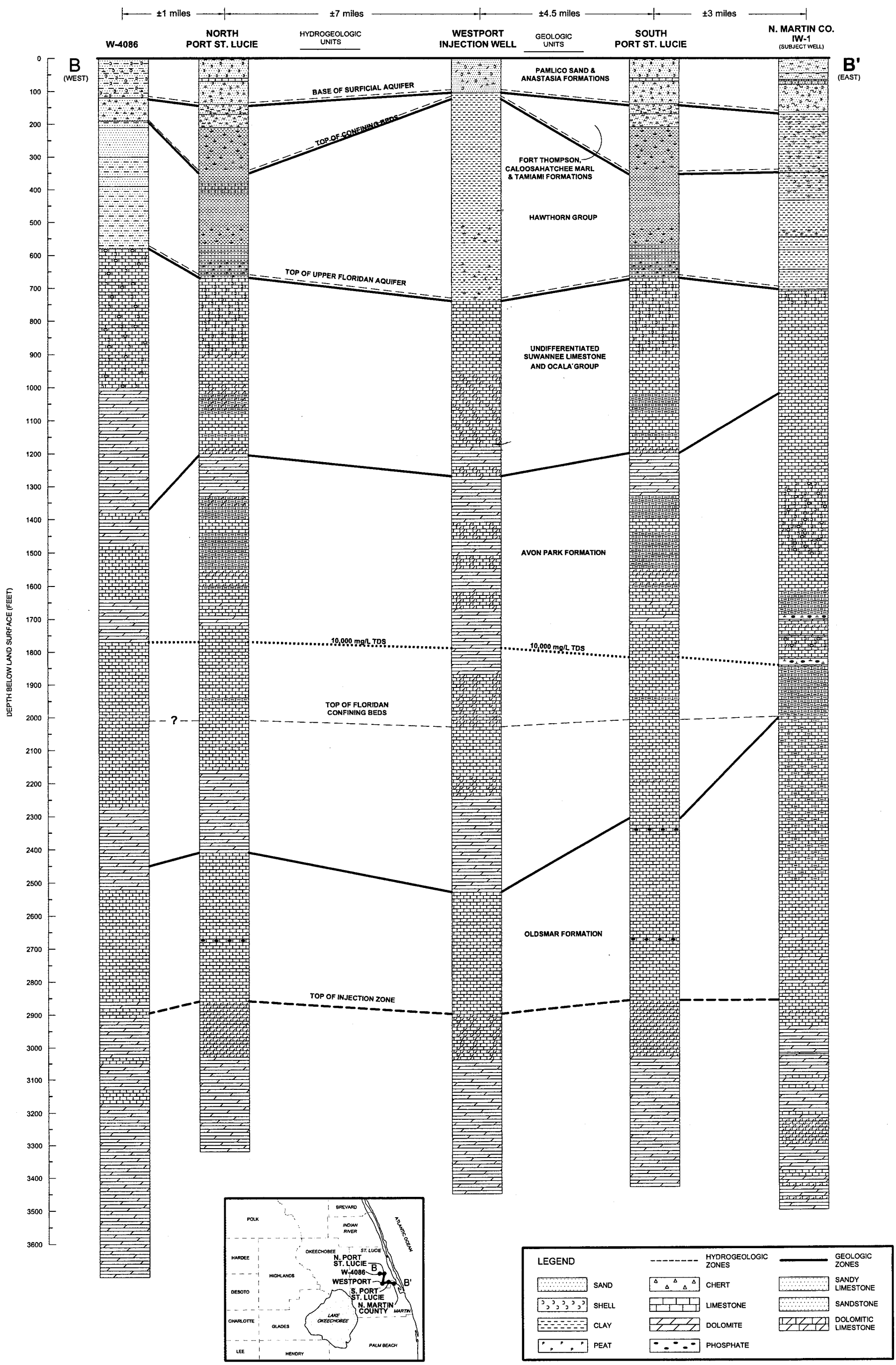
NO.	DATE	REVISION DESCRIPTION	CHKD.

NORTH-SOUTH HYDRO-STRATIGRAPHIC CROSS SECTION

CITY OF PORT ST. LUCIE
WESTPORT WASTEWATER TREATMENT PLANT
ST. LUCIE COUNTY, FLORIDA

FIGURE
5

DATE: 14MAY04	PRJCT NO: RF001121.0001.PF001	FILE: RMA\111902	DRAWING: 0111902-NSWE Cross Sections	PM: M.WALDRON	PO: T.TESSIER	DRFT: B.OLIVA



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NORTH PALM BEACH, FLORIDA 33408
Tel: 561.881.0077 Fax: 561.881.0012

NO.	DATE	REVISION DESCRIPTION	CHKD.

WEST-EAST HYDRO-STRATIGRAPHIC CROSS SECTION

CITY OF PORT ST. LUCIE
WESTPORT WASTEWATER TREATMENT PLANT
ST. LUCIE COUNTY, FLORIDA

FIGURE
6

Table 1. Summary of Construction and Testing Activities, City of Port St. Lucie, Westport Injection Well System

Described In Weekly Report	Date	Milestones
		Dual-Zone Monitor Well MW1
	16-Dec-2003	Construction of perimeter surficial monitor wells (PMW-1 to PMW-4)
Construction Progress Report # 1	26-Dec-2002	Construction of MW-1 began
	27-Dec-2002	Completed 37-inch diameter borehole to 185 feet bpl
	27-Dec-2002	Conducted geophysical logging of borehole: XY caliper and gamma ray
	27-Dec-2002	Installed and cemented in place 30-inch diameter O.D. steel conductor casing to 180 feet bpl
	28-Dec-2002	Began pilot hole drilling from 185 feet bpl
Construction Progress Report # 2	30-Dec-2002	Completed pilot hole drilling to 760 feet bpl
	30-Dec-2002	Conducted geophysical logging of pilot hole: XY caliper and gamma ray
	30-Dec-2002	Began drilling nominal 28-inch diameter borehole from base of conductor casing.
	1-Jan-2003	Completed drilling nominal 28-inch diameter borehole to 751feet bpl
	2-Jan-2003	Conducted of geophysical logging of 28-inch diameter borehole: XY caliper and gamma ray
	2-Jan-2003	Installed and cemented in place 24-inch O.D. steel surface casing to 750 feet bpl
	5-Jan-2003	Began pilot hole drilling using reverse-air drilling method from 760 feet bpl
Construction Progress Report # 3	10-Jan-2003	Completed pilot hole drilling to 2,350 feet bpl
	11-Jan-2003	Conducted geophysical logging: XY caliper, gamma ray, static and dynamic temperature, static and dynamic fluid resistivity, SP, dual induction, sonic, borehole televiewer, static and dynamic flowmeter, and log derived TDS
	12-Jan-2003	Began packer pumping tests
Construction Progress Report # 4	17-Jan-2003	Completed 5 packer pumping tests of the interval between 1650 feet and 2100 feet bpl
	19-Jan-2003	Cemented in pilot hole from 2,350 feet to 1,165 feet bpl
Construction Progress Report #5	20-Jan-2003	Began drilling nominal 24-inch borehole from base of surface casing
Construction Progress Report #6	30-Jan-2003	Completed drilling nominal 24-inch diameter borehole to 1,735 feet bpl
	30-Jan-2003	Conducted geophysical logging of 24-inch diameter borehole: XY caliper and gamma ray
	2-Feb-2003	Installed and cemented in place 16-inch O.D. steel intermediate casing (cemented from 1,730 feet to 216 feet bpl)
Construction Progress Report #7	4-Feb-2003	Performed one-hour hydrostatic pressure test on intermediate casing
	5-Feb-2003	Began drilling a nominal 16-inch diameter borehole from the base of intermediate casing, Completed drilling nominal 16-inch diameter borehole to 1,750
	5-Feb-2003	Performed a specific capacity test of the interval between the base of the intermediate casing and 1,750 feet bpl (specific capacity was 0.77 gpm per foot of drawdown)
	5-Feb-2003	Continued to drill a nominal 16-inch diameter borehole from 1,750 feet to 1,760 feet bpl
	5-Feb-2003	Performed a specific capacity test of the interval between the base of the intermediate casing and 1,760 feet bpl (specific capacity was 4.78 gpm per foot of drawdown)
	5-Feb-2003	Continued to drill nominal 16-inch diameter borehole from 1,760 feet bpl
	6-Feb-2003	Completed drilling 16-inch diameter borehole to 1,915
	6-Feb-2003	Began drilling nominal 12-inch borehole from 1,915 feet. Completed drilling nominal 12-inch borehole to 1970 feet bpl
	7-Feb-2003	Conducted geophysical logging: XY caliper, gamma ray and cement bond log (on the 16-inch O.D. intermediate casing)
Construction Progress Report #8	11-Feb-2003	Installed $6^{5}/_{8}$-inch O.D. FRP tubing to 1,923 feet bpl (cement baskets located at 1,920 feet bpl)
	11-Feb-2003	Performed background cement bond log on FRP tubing
	12-Feb-2003	Installed 20/30 size silica sand from 1,970 feet to 1,920 (after being unsuccessful in setting the cement baskets)
	13-Feb-2003	Cemented FRP tubing between the interval of 1920 feet and 1,755 feet bpl
	13-Feb-2003	Developed out the sand from 1,920 to 1,970
	14-Feb-2003	Began mobilizing rig to IW1 location

Table 1. Summary of Construction and Testing Activities, City of Port St. Lucie, Westport Injection Well System

Described In Weekly Report	Date	Milestones
		Injection Well, IW1
Construction Progress Report #9 and #10	24-Feb-2003	Completed mobilizing to IW1 location
	24-Feb-2003	Began drilling nominal 58-inch diameter borehole from pad level
	26-Feb-2003	Completed drilling nominal 58-inch diameter borehole to 186 feet bpl
	26-Feb-2003	Conducted geophysical logging of 58-inch diameter borehole: XY caliper and gamma ray
	26-Feb-2003	Installed and cemented in place 50-inch O.D. steel conductor casing to 182 feet bpl
	27-Feb-2003	Began pilot hole drilling from 186 feet bpl
	28-Feb-2003	Completed pilot hole drilling to 750 feet bpl
	28-Feb-2003	Conducted geophysical logging on pilot hole: XY caliper and gamma ray
	28-Feb-2003	Began drilling nominal 50-inch diameter borehole from base of conductor casing
Construction Progress Report #11	4-Mar-2003	Completed drilling nominal 50-inch diameter borehole to 755 feet bpl
	4-Mar-2003	Conducted geophysical logging of 50-inch diameter borehole: XY caliper and gamma ray
	6-Mar-2003	Installed and cemented in place 42-inch O.D. steel surface casing to 749 feet bpl
Construction Progress Report #12	10-Mar-2003	Began pilot hole drilling using reverse-air drilling method from 755 feet bpl
	15-Mar-2003	Completed pilot hole drilling to 1,900 feet bpl (one rock core was collected during drilling)
	16-Mar-2003	Conducted geophysical logging: XY caliper, gamma ray, static and dynamic temperature, static and dynamic fluid resistivity, SP, dual induction, sonic, borehole televiewer, static and dynamic flowmeter, and log derived TDS
Construction Progress Report #13	17-Mar-2003	Cemented in pilot hole from 1,900 feet to base of surface casing
	18-Mar-2003	Began drilling nominal 42-inch diameter borehole from base of surface casing
Construction Progress Report #14	28-Mar-2003	Completed drilling nominal 42-inch diameter borehole to 1,840 feet bpl
	29-Mar-2003	Conducted geophysical logging of 42-inch diameter borehole: XY caliper and gamma ray
Construction Progress Report #15	2-Apr-2003	Installed and cemented in place 34-inch O.D. steel intermediate casing to 1,830 feet bpl
	3-Apr-2003	Began pilot hole drilng from 1,900 feet bpl
Construction Progress Report #16, #17 & #18	22-Apr-2003	Completed pilot hole drilling to 3,450 feet bpl. During pilot hole drilling, 6 rock cores were collected between the interval of 2,272 feet and 2,903 feet bpl (Rock cores #2 - #7)
	24-Apr-2003	Conducted geophysical logging of pilot hole (from 1,830 feet to 3,189 feet bpl): XY caliper, gamma ray, static and dynamic temperature, static and dynamic fluid resistivity, SP, dual induction, sonic, static and dynamic flowmeter, log derived TDS, and TV survey
	24-Apr-2003	Began packer pumping tests of pilot hole
Construction Progress Report #19	3-May-2003	Completed 5 packer pumping tests (Packer Tests #6 - #10) between the interval of 2,217 feet and 2,898 feet bpl
Construction Progress Report #20	5-May-2003	Installed a bridge plug at 2,930 feet bpl and began cementing in pilot hole
	7-May-2003	Cemented in pilot hole to 1,943 feet bpl
	8-May-2003	Began drilling nominal 34-inch diameter borehole from base of intermediate casing
Construction Progress Report #21 and #22	23-May-2003	Completed drilling nominal 34-inch diameter borehole to 2,903 feet bpl.
	23-May-2003	Began drilling nominal 22-inch diameter borehole from 2,903 feet bpl
Construction Progress Report #23 and #24	5-Jun-2003	Completed drilling nominal 22-inch diameter borehole to 3,350 feet bpl
	5-Jun-2003	Conducted geophysical logging of nominal 22-inch diameter borehole: Between 1,830 feet and 3,350 feet bpl - XY caliper and gamma ray, Between 3,100 feet and 3,350 feet bpl - dual induction, sonic w/ VDL, static and dynamic fluid resistivity, static and dynamic temperature, static and dynamic flowmeter, and TV survey
	6-Jun-2003	Began installing 24-inch O.D. steel injection casing (with rubber funnel plug)
	8-Jun-2003	Completed installing 24-inch O.D. injection casing to 2,909 feet bpl (base of plug)
	8-Jun-2003	Performed one hour hydrostatic pressure test on injection casing
Construction Progress Report #25	9-Jun-2003	Began cementing in injection casing
	12-Jun-2003	Completed cementing in injection casing to 286 feet bpl
Construction Progress Report #26	16-Jun-2003	Collected water sample of injection zone (for FDEP and for analysis of primary/secondary drinking water standards)
	16-Jun-2003	Conduct cement bond log of 24-inch O.D. injection casing from 270 feet to 2,886 feet bpl
	16-Jun-2003	Conduct cement bond log of FRP tubing of MW1 from 1,496 feet to 1,930 feet bpl
	17-Jun-2003	Conducted TV survey of injection casing to a depth of 2,885
	17-Jun-2003	Cemented in 24-inch O.D. injection casing from 268 feet bpl to pad level
	17-Jun-2003	Cemented in 16-inch O.D. casing in MW1 from 205 feet bpl to pad level

Table 1. Summary of Construction and Testing Activities, City of Port St. Lucie, Westport Injection Well System

Described In Weekly Report	Date	Milestones
Construction Progress Report #27	24-Jun-2003	Collected water sample of MW1 (upper and lower zone) for primary and secondary drinking water standards and municipal minimum-criteria parameters
	26-Jun-2003	Performed one hour hydrostatic pressure test on the FRP final tubing (lower monitor zone) of MW1
Construction Progress Report #28 and #29	7-Jul-2003	Conducted pre-installation video survey of 20-inch O.D. steel injection tubing sections
	7-Jul-2003	Began installing 20-inch O.D. injection tubing
	8-Jul-2003	Completed installing 20-inch O.D. injection tubing to 2,883
	8-Jul-2003	Completed TV survey of injection tubing and outer mandrel
	8-Jul-2003	Installed corrosion inhibitor solution in annulus between injection tubing and injection casing and then seated injection tubing to outer mandrel of injection casing
	10-Jul-2003	Performed one hour hydrostatic pressure test on injection tubing
	10-Jul-2003	Conducted TV survey of injection tubing and open hole to 3,030 feet bpl
	11-Jul-2003	Began demobilizing rig, performed wellhead construction and began preparing for injection test
Construction Progress Report #30	17-Jul-2003	Conducted "background" high resolution temperature log and gamma ray log
	17-Jul-2003	Conducted radioactive tracer survey
Construction Progress Report #31	29-Jul-2003	Performed injection test of IW1

Casing setting depths reported in this table are 2.4 feet (for MW1) and 2.5 feet (for IW1) less than reported depths on Figure 2 and Figure 3. After well construction and testing were completed, the pad elevation of MW1 and IW1 was raised to finished grade and the concrete containment pad was constructed. Well depths shown on Figures 2 and 3 have been adjusted to reflect depth from grade of finished pad.

Table 2. Summary of Reverse-Air Discharge Water-Quality Results, City of Port St Lucie Westport Injection Well System

Date	Time	Depth Sampled (ft below pad level)	Field Parameters			
			Temp. (°C)	Conductivity (uS/cm)	pH (pH units)	Chloride (mg/L)
MONITOR WELL 1						
1/5/2003	14:10	900	22.1	1210	8.5	200
1/5/2003	18:45	990	21.8	1180	8.2	200
1/6/2003	14:51	1080	23.1	1374	8.3	380
1/6/2003	17:15	1170	22.4	1408	8.32	440
1/6/2003	1:47	1260	20.8	1687	7.7	480
1/7/2003	9:52	1350	20.5	2530	7.49	625
1/7/2003	15:02	1440	21.2	2970	9.3	750
1/7/2003	18:55	1530	19.7	2950	8.43	1000
1/8/2003	3:28	1620	20.9	3440	7.25	1000
1/8/2003	10:28	1710	20.4	3350	7.73	1500
1/8/2003	16:20	1800	20.8	6070	7.35	2500
1/8/2003	23:06	1890	22.3	16710	7.05	5000
1/9/2003	3:58	1980	22.0	26500	7.04	9500
1/9/2003	8:05	2070	21.6	14400	7.16	6000
1/9/2003	11:30	2160	22.3	14660	7.35	6000
1/9/2003	15:46	2250	22.7	25900	7.02	9500
1/10/2003	2:26	2340	23.4	31200	6.92	n/a
INJECTION WELL 1						
3/10/2003	10:45	809	30.5	839	8.36	180
3/10/2003	12:13	899	26.2	1043	10.14	240
3/10/2003	18:24	989	28.2	989	9.81	220
3/10/2003	22:40	1079	27.8	1211	8.35	300
3/11/2003	3:25	1169	26.6	2960	7.65	740
3/11/2003	15:34	1259	25.3	1960	7.85	540
3/12/2003	1:40	1349	26.8	3400	7.18	1250
3/12/2003	16:05	1529	26.7	3770	7.79	1020
3/12/2003	23:30	1619	26.9	3710	7.42	1250
3/13/2003	13:40	1715	26.0	4180	7.68	1280
3/13/2003	23:30	1799	26.8	8230	7.19	2625
3/15/2003	17:45	1889	26.5	15360	7.45	6000
4/4/2003	23:59	1979	27.6	7110	8.4	4500
4/4/2003	7:15	2069	26.2	7090	8.82	4000
4/4/2003	18:05	2159	26.4	13850	8.15	5500
4/5/2003	2:40	2249	21.1	23000	7.84	7500
4/6/2003	18:40	2339	26.8	30300	7.79	10500*
4/8/2003	3:08	2429	27.1	31900	7.82	10500*
4/8/2003	15:15	2519	27.7	49900	7.66	17500*
4/12/2003	6:40	2580	25.3	37700	7.29	14500*
4/13/2003	7:30	2670	23.9	44000	7.1	15500*
4/14/2003	12:00	2760	24.6	43900	7.13	17000*
4/18/2003	15:45	2850	24.2	32000	7.12	13000*
4/19/2003	20:47	2940	25.6	41000	7.03	14000
4/20/2003	5:57	3030	24.9	47600	7.03	16500
4/20/2003	21:50	3130	25.0	51700	6.89	n/a

"°C " denotes temperature in units of degrees Celsius.

"µS/cm" denotes conductivity in units of microsiemens per centimeter.

"mg/L" denotes concentration in units of milligrams per liter.

"bpl" denotes below (drilling) pad level.

"n/a" denotes that data are not available.

* A mix of drilling-fluid additives (Barite™ or High-Yield, QuikGel™ bentonite) and fresh water was used to suppress flow from well during coring operations.

Table 3. Summary of Geophysical Logs Performed at Deep Monitor Well MW1, City of Port St. Lucie Westport Injection Well System

Date	Geophysical Survey Performed	Casing Depth (feet bpl)	Open Hole Depth (feet bpl)	Casing/Pilot Hole Diameter (inches)
12/27/02	XY Caliper, Gamma Ray	---	185	36.5
12/30/02	XY Caliper, Gamma Ray	180	760	12.25
01/02/03	XY Caliper, Gamma Ray	180	760	28.50
01/10/03	Fluid Resistivity, Temperature (Static)	760	2350	12.25
01/10/03	XY Caliper, Gamma Ray	760	2350	12.25
01/10/03	Dual Induction, LL3/SP	760	2350	12.25
01/10/03	Flowmeter (Static and Dynamic)	760	2350	12.25
01/10/03	Borehole Compensated Sonic with VDL	760	2350	12.25
01/10/03	Borehole Televiewer	760	2350	12.25
01/11/03	Flowmeter (Dynamic)	760	2350	12.25
01/11/03	Fluid Resistivity and Temperature (Dynamic)	760	2350	12.25
01/11/03	Log Derived Water Quality (Total Dissolved Solids)	760	2350	12.25
01/30/03	XY Caliper, Gamma Ray	760	1735	22.50
02/01/03	16" Casing Cement Top Temperature (Stages 1-3)	1730	1735	16.00
02/02/03	16" Casing Cement Top Temperature (Stage 4)	1730	1735	16.00
02/06/03	XY Caliper, Gamma Ray	1730	1915	14.75
02/06/03	XY Caliper, Gamma Ray	1915	1970	12.25
02/07/03	16" Casing Cement Bond w/ Variable Density Log	1730	1970	16.00
02/11/03	6.625" Tubing Cement Bond (background)	1923	1970	6.63
02/13/03	Cement Top Temperature (6.625" FRP, Stages 1-2)	1923	1970	6.63
06/16/03	Merged Cement Bond w/ Variable Density Log (6.625" FRP)	1923	1970	6.63

"bpl" denotes below (drilling) pad level.

"LL3/SP" denotes lateral resistivity and spontaneous potential logs

"VDL" denotes a variable density log display.

Table 4. Summary of Geophysical Logs Performed at Injection Well IW1, City of Port St. Lucie Westport Injection Well System

Date	Geophysical Survey Performed	Casing Depth (feet bpl)	Open Hole Depth (feet bpl)	Casing/Pilot Hole Diameter (inches)
02/26/03	XY Caliper, Gamma Ray		186	58.5
02/28/03	XY Caliper, Gamma Ray	182	750	30.25
03/04/03	XY Caliper, Gamma Ray	182	755	48.50
03/16/03	XY Caliper, Gamma Ray	749	1900	12.25
03/16/03	Off-Set Gamma Ray	749	1900	12.25
03/16/03	Dual Induction, LL3/SP	749	1900	12.25
03/16/03	Flowmeter (Static and Dynamic)	749	1900	12.25
03/16/03	Fluid Resistivity, Temperature (Static and Dynamic)	749	1900	12.25
03/16/03	Borehole Compensated Sonic with VDL	749	1900	12.25
03/16/03	Log Derived Water Quality (Total Dissolved Solids)	749	1900	12.25
03/16/03	Borehole Televiewer	749	1900	12.25
03/29/03	XY Caliper, Gamma Ray	749	1835	40.50
04/02/03	34" Casing Cement Top (Stages 1- 6)	1830	1835	34.00
04/23/03	XY Caliper, Gamma Ray	1830	3450*	12.25
04/23/03	Dual Induction, LL3/SP	1830	3450*	12.25
04/24/03	Borehole Compensated Sonic/ VDL	1830	3450*	12.25
04/24/03	Fluid Resistivity, Temperature (Static and Dynamic)	1830	3450*	12.25
04/24/03	Flowmeter (Static and Dynamic)	1830	3450*	12.25
04/24/03	Video Survey	1830	3450*	12.25
05/04/03	XY Caliper, Gamma Ray	1830	3450**	12.25
06/05/03	XY Caliper, Gamma Ray	1830	3350	22.00
06/05/03	Dual Induction, LL3/SP	1830	3350	22.00
06/05/03	Borehole Compensated Sonic/ VDL	1830	3350	22.00
06/05/03	Flowmeter (Static and Dynamic)	1830	3350	22.00
06/05/03	Fluid Resistivity, Temperature (Static and Dynamic)	1830	3350	22.00
06/06/03	TV Survey (reamed borehole)	1830	3350	34 & 22
06/10/03	24" Casing Cement Top Temperature (Stages 1- 9)	2903	3350	32.50
06/16/03	Cement Bond Log w/ VDL	2903	3350	24.00
06/17/03	Video Survey (20" diameter tubing and open hole)	2764	3350	32.50
07/10/03	Video Survey (24" diameter casing only).	2764	3350	32.50

"bpl" denotes below (drilling) pad level.

* pilot hole logging limited to a depth of 3186 ft bpl due to an caving zone in the borehole.

** pilot hole logging limited to a depth of 3179 ft bpl due to caving zone in the borehole.

"LL3/SP" denotes lateral resistivity and spontaneous potential logs

"VDL" denotes a variable density log display.

Table 5. Summary of Hydraulic Conductivities from Core Analyses for Injection Well IW1, City of Port St. Lucie Westport Injection Well System

Pilot Hole Stage	Core Number	Depth Interval of Core Sections Tested (feet below drilling-pad level)	Lowest Horizontal Hydraulic Conductivity (cm/sec)	Lowest Vertical Hydraulic Conductivity (cm/sec)
Stage #1	1	1,853.3-1,858.5	4.04×10^{-8}	2.91×10^{-8}
Stage #2	2	2,273.5-2,283.2	7.88×10^{-10}	5.53×10^{-7}
	3	2,343.2-2,349.6	4.66×10^{-7}	7.75×10^{-8}
	4	2,529.5-2,545.0	9.67×10^{-7}	9.30×10^{-7}
	5	2,604.8-2,613.6	3.85×10^{-7}	2.68×10^{-7}
	6	2,681.7-2,688.7	2.30×10^{-5}	1.91×10^{-6}
	7	2,765.5-2,767.2	1.07×10^{-6}	3.46×10^{-6}
	8	2,892.7-2,896.7	2.89×10^{-7}	1.50×10^{-7}

"cm/sec" denotes centimeters per second.

Table 6. Summary of Packer-Pumping Test, Final Water Sample Results, City of Port St. Lucie, Westport Injection Well System

Test	Test Date	Test Interval (feet below pad level)	Ammonia Nitrogen (mg/L)	Specific Conductance (µmhos/cm)	Chloride (mg/L)	Total Phosphorus (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Total Kjeldahl Nitrogen (mg/L)	pH Field Result (pH units)
PT-1	13-Jan-03	2,054 - 2,100	0.71	50000	20000	0.23	1600	34000	1.1	6.72
PT-2	14-Jan-03	1,922 - 1,968	1	44000	18000	0.230	1500	31000	1.2	6.85
PT-3	15-Jan-03	1,855 - 1,901	1.3	43000	16000	0.200	1100	26000	1.5	6.45
PT-4	17-Jan-03	1,750 - 1,796	1.2	16000	5000	0.030	530	8800	3.7	7.04
PT-5	17-Jan-03	1,650 - 1,696	0.49	7500	2500	0.250	390	4600	1.3	7.19
PT-6	26-Apr-03	2,880.0 - 2,897.7	0.52	47000	21000	0.730	3200	34000	0.58	7.44
PT-7	3-May-03	2,830.0 - 2,880.7	0.18	47000	22000	0.460	2600	32000	0.61	6.93
PT-8	27-Apr-03	2,636.0 - 2,653.7	0.46	49000	22000	0.490	2800	35000	0.5	6.65
PT-9	29-Apr-03	2,580.0 - 2,597.7	1.70*	7400*	2900*	0.77*	350*	4400*	1.20*	6.59
PT-10	2-May-03	2,217.0 - 2,234.7	0.73	36000	16000	0.520	1800	26000	0.68	6.88

"mg/L" denotes concentration in units of milligrams per liter.
"µmhos/cm" denotes specific conductance in units of micromhos per centimeter.
Packer pumping-test depth intervals for straddle-packer intervals are measured from inflation-element centerlines.
" * " Sample collected from Test Interval #9 was not representative because formation did not yield enough water to purge one work-pipe storage volume.
Packer pumping tests #1 through 5 were conducted on the Deep Monitor Well MW1 pilot hole.

Table 7. Summary of Packer-Pumping Test Data and Estimated Hydraulic Conductivities, City of Port St. Lucie, Westport Injection Well System

	Test	Date	Depth Interval (feet bpl)	Tested Aquifer Thickness (feet)	Pumping Rate (gpm)	Estimated Transmissivity (gpd/ft)		Horizontal Hydraulic Conductivity (gpd/sq ft)		Horizontal Hydraulic Conductivity (cm/sec)		Method of Interpretation
						Drawdown	Recovery	Drawdown	Recovery	Drawdown	Recovery	
MW-1 Packer Tests	1	13-Jan-03	2,054 - 2,100	46	24.2	NA	317.1	NA	6.9	NA	3.25E-04	Turcan (1963)
						NA	295.6	NA	6.4	NA	3.03E-04	Papadopulos-Cooper (1967)
	2	14-Jan-03	1,922 - 1,968	46	77	NA	4709.5	NA	102.4	NA	4.83E-03	Turcan (1963)
						NA	4743.2	NA	103.1	NA	4.86E-03	Papadopulos-Cooper (1967)
	3	15-Jan-03	1,855 - 1,901	46	9.5	NA	257.0	NA	5.6	NA	2.63E-04	Turcan (1963)
						NA	257.2	NA	5.6	NA	2.64E-04	Papadopulos-Cooper (1967)
	4	17-Jan-03	1,750 - 1,796	46	82.7	NA	5596.1	NA	121.7	NA	5.74E-03	Turcan (1963)
						NA	5294.2	NA	115.1	NA	5.43E-03	Papadopulos-Cooper (1967)
	5	17-Jan-03	1,650 - 1,696	46	82.0	NA	5952.5	NA	129.4	NA	6.10E-03	Turcan (1963)
						NA	5051.2	NA	109.8	NA	5.18E-03	Papadopulos-Cooper (1967)
MW-1 Packer Tests	6	26-Apr-03	2,880.0 - 2,897.7	17.7	8.8	NA	100.0	NA	5.6	NA	2.64E-04	Turcan (1963)
						82.6	84.0	4.7	4.7	2.20E-04	2.24E-04	Papadopulos-Cooper (1967)
	7	3-May-03	2,830.0 - 2,880.7	50.7	33.1	NA	760.0	NA	15.0	NA	7.07E-04	Turcan (1963)
						729.3	729.3	14.4	14.4	6.78E-04	6.78E-04	Papadopulos-Cooper (1967)
	8	27-Apr-03	2,636.0 - 2,653.7	17.7	6.6	NA	68.0	NA	3.8	NA	1.79E-04	Turcan (1963)
						60.0	62.0	3.4	3.5	1.60E-04	1.65E-04	Papadopulos-Cooper (1967)
	9	29-Apr-03	2,580.0 - 2,597.7	17.7	2.0	NA	3.1	NA	0.2	NA	8.49E-06	Cooper-Jacob (1946)
	10	2-May-03	2,217.0 - 2,234.7	17.7	2.6	28.0	NA	NA	1.6	NA	7.55E-05	Turcan (1963)
						20.5	24.2	1.2	1.4	5.50E-05	6.50E-05	Papadopulos-Cooper (1967)

"gpd/ft" denotes transmissivity in units of "gallons per day per foot", and is estimated using a method by Jacob and Turcan.

"gpd/sq ft" denotes horizontal hydraulic conductivity in "gallons per day per square foot" calculated by Turcan and Papadopulos-Cooper methods.

"cm/sec" denotes hydraulic conductivity in units of "centimeters per second".

"NA" denotes not analyzed. Drawdown data was not analyzed on most tests.

Table 8. Summary of Inclination Survey Results for Deep Monitor Well MW1, City of Port St. Lucie Wesport Injection Well System

Date	Time	Open Hole Diameter (inches)	Inclination Survey Depth (feet bpl)	Survey Result	
				Deviation Total (degrees)	Deviation Change (degrees)
12/26/2002	21:22	37	120	0.20	0
12/28/2002	10:40	37	180	0.25	0.05
12/28/2002	14:55	12	270	0.25	0.00
12/28/2002	20:04	12	360	0.25	0.00
12/28/2002	22:50	12	450	0.40	0.15
12/29/2002	9:20	12	540	0.15	0.25
12/29/2002	23:08	12	630	0.10	0.05
12/30/2002	11:05	12	720	0.25	0.15
12/30/2002	23:30	28	210	0.25	0.00
12/31/2002	2:45	28	300	0.25	0.00
12/31/2002	5:05	28	390	0.23	0.02
12/31/2002	10:10	28	480	0.25	0.02
12/31/2002	21:15	28	570	0.25	0.00
1/1/2003	4:30	28	660	0.20	0.05
1/1/2003	17:00	28	750	0.30	0.10
1/5/2003	11:30	12	810	0.27	0.03
01/05/03	14:28	12	900	0.27	0.00
01/06/03	12:30	12	990	0.25	0.02
01/06/03	15:15	12	1080	0.30	0.05
01/06/03	17:55	12	1170	0.25	0.05
01/07/03	1:08	12	1260	0.30	0.05
01/07/03	9:30	12	1350	0.25	0.05
01/07/03	19:28	12	1440	0.35	0.10
01/07/03	19:45	12	1530	0.35	0.00
01/08/03	2:50	12	1620	0.50	0.15
01/08/03	10:28	12	1710	0.40	0.10
01/08/03	16:18	12	1800	0.50	0.1
01/08/03	23:34	12	1890	0.40	0.10
01/09/03	3:42	12	1980	0.50	0.1
01/09/03	8:05	12	2070	0.50	0
01/09/03	11:30	12	2160	0.40	0.1
01/09/03	16:12	12	2250	0.30	0.10
01/10/03	1:55	12	2340	0.30	0.00
01/20/03	18:45	22.5	934	0.25	0.05
01/20/03	na	22.5	844	0.20	0.05
01/20/03	na	22.5	1024	0.25	0.05
01/20/03	na	22.5	1114	0.35	0.10
01/21/03	na	22.5	1204	0.25	0.10
01/21/03	na	22.5	1294	0.30	0.05
01/22/03	na	22.5	1384	0.50	0.2
01/22/03	na	22.5	1474	0.35	0.15
01/23/03	na	22.5	1564	0.55	0.2
01/29/03	22:00	22.5	1654	0.50	0.05
02/05/03	22:16	14.25	1799	0.40	0.10
02/06/03	6:20	14.25	1889	0.40	0.00

"bpl" denotes below (drilling) pad level.

Table 9. Summary of Inclination Survey Results for Injection Well IW1, City of Port St. Lucie, Westport Injection Well System

Date	Time	Open Hole Diameter (inches)	Inclination Survey Depth (feet bpl)	Survey Result	
				Deviation Total (degrees)	Deviation Change (degrees)
2/25/2003	3:22	58	180	0.25	
2/25/2003	11:20	58	90	0.50	0.25
2/27/2003	6:09	12	269	0.27	0.23
2/27/2003	10:10	12	359	0.50	0.23
2/27/2003	14:15	12	449	0.40	0.10
2/27/2003	20:00	12	539	0.50	0.10
2/27/2003	23:31	12	629	0.50	0.00
2/28/2003	2:49	12	719	0.30	0.20
2/28/2003	16:15	50	190	0.37	0.07
2/28/2003	21:46	50	280	0.37	0.00
3/1/2003	2:58	50	370	0.40	0.03
3/1/2003	13:58	50	460	0.35	0.05
3/2/2003	12:02	50	550	0.35	0.00
3/4/2003	5:10	50	640	0.20	0.15
3/4/2003	16:38	50	733	0.25	0.05
3/10/2003	10:57	12	800	0.50	0.25
03/10/03	15:05	12	890	0.40	0.10
03/10/03	18:38	12	980	0.50	0.10
03/10/03	23:03	12	1070	0.50	0.00
03/11/03	3:25	12	1160	0.30	0.20
03/11/03	15:49	12	1250	0.50	0.20
03/12/03	1:50	12	1340	0.40	0.10
03/12/03	10:35	12	1430	0.50	0.10
03/12/03	16:38	12	1520	0.40	0.10
03/12/03	7:45	12	1610	0.30	0.10
03/13/03	13:00	12	1700	0.35	0.05
03/13/03	23:45	12	1790	0.40	0.05
03/15/03	17:59	12	1880	0.25	0.15
03/18/03	19:15	42	820	0.20	0.05
03/18/03	23:45	42	910	0.35	0.15
03/19/03	4:30	42	1000	0.25	0.10
03/19/03	12:15	42	1090	0.25	0.00
03/19/03	18:15	42	1180	0.40	0.15
03/20/03	19:15	42	1271	0.30	0.10
03/21/03	16:15	42	1360	0.30	0.00
03/22/03	14:30	42	1451	0.25	0.05
03/23/03	5:15	42	1541	0.40	0.15
03/25/03	0:25	42	1630	0.25	0.15
03/25/03	0:45	42	1720	0.50	0.25
04/03/03	17:20	12	1889	0.25	0.25
04/04/03	0:13	12	1979	0.25	0.00
04/04/03	7:00	12	2069	0.30	0.05
04/04/03	18:20	12	2159	0.35	0.05
04/05/03	3:18	12	2249	0.40	0.05
04/06/03	19:14	12	2339	0.30	0.10
04/08/03	2:37	12	2429	0.40	0.10
04/08/03	15:22	12	2519	0.30	0.10
04/12/03	6:43	12	2580	0.30	0.00
04/13/03	7:50	12	2670	0.30	0.00
04/18/03	10:45	12	2760	0.30	0.00
04/18/03	15:40	12	2850	0.25	0.05

"bpl" denotes below (drilling) pad level.

Table 10. Cementing Summary of Deep Monitor Well MW1, City of Port St Lucie, Westport Injection Well System

Casing String	Outside Diameter (inches)	Inside Diameter (inches)	Casing Wall Thickness (inches)	Casing Depth (feet bpl)	Date	Cement Stage	Type of Cement	Quantity of Cement (cubic feet)	Remarks
Pit	60								Vibrated in place
Conductor	30	29.25	0.375	180	12/27/2002	1	6% bentonite Neat	40 63	Pressure grout. Cement returns to surface.
Surface	24	23.25	0.375	750	1/2/2003	1	6% bentonite Neat	842 348	Pressure grout. Cement returns to surface.
Intermediate	16	15.01	0.495	1,730	7/19/2002	1	6% bentonite Neat	236 225	Pressure grout. Tagged cement top at 1,519 feet bpl
					2/1/2003	2	6% bentonite	140	Tagged cement top at 1,232 feet bpl. Tremied in place.
					2/1/2003	3	6% bentonite	966	Tagged cement top at 968 feet bpl. Tremied in place.
					2/2/2003	4	6% bentonite	904	Tagged cement top at 658 feet bpl. Tremied in place.
					2/2/2003	5	6% bentonite	674	Tagged cement top at 250 feet bpl. Tremied in place.
					6/17/2003	6	6% bentonite	309	Cement returns to surface (after CBL was performed). Tremied in place.
Lower Monitor Zone Tubing	6.625	5.605	0.51	1,923	2/12/2003	1	Neat, 2% CaCl	11	Tagged cement top at 1,886 feet bpl. Tremied in place.
					2/12/2003	2	Neat	101	Tagged cement top at 1,813 feet bpl. Tremied in place.
					2/13/2003	3	Neat	62	Tagged cement top at 1,755 feet bpl. Tremied in place.

"bpl" denotes below (drilling) pad level.

Total: 4,921 cubic feet

Table 11. Cementing Summary of Injection Well IW1, City of Port St. Lucie, LTC Injection Well System

Casing String	Outside Diameter (inches)	Inside Diameter (inches)	Casing Wall Thickness (inches)	Casing Depth (feet bpl)	Date	Cement Stage	Type of Cement	Quantity of Cement (cubic feet)	Remarks
Pit	60	Not Available							Vibrated in place
Conductor	50	49.25	0.375	182	2/26/2003	1	Neat	1,173	Pressure grout. Cement returns to surface.
Surface	42	41.25	0.375	749	3/5/2003	1	6% bentonite Neat	1,965 421	Pressure grout. Tagged cement top at 114 feet bpl
					3/6/2003	2	6% bentonite	376	Cement returns a few feet bpl. Tremied in place.
Intermediate	34	33.25	0.375	1,830	3/31/2003	1	6% bentonite Neat	926 326	Pressure grout. Tagged cement top at 1,590 feet bpl
					3/31/2003	2	6% bentonite	1,084	Tagged cement top at 1,250 feet bpl. Tremied in place.
					3/31/2003	3	6% bentonite, 2% CaCl	281	Tagged cement top at 1,197 feet bpl. Tremied in place.
					4/1/2003	4	6% bentonite, 2% CaCl	1,404	Tagged cement top at 808 feet bpl. Tremied in place.
					4/1/2003	5	6% bentonite, 2% CaCl	977	Tagged cement top at 596 feet bpl. Tremied in place.
					4/2/2003	6	6% bentonite, 2% CaCl	1,039	Tagged cement top at 238 feet bpl. Tremied in place.
					4/2/2003	7	6% bentonite, 2% CaCl	674	Cement top approximately 10 feet bpl. Tremied in place.
Injection Casing	24	23	0.5	2,899	6/10/2003	1	Neat	342	Tagged cement top at 2,795 feet bpl. Tremied in place.
					6/10/2003	2	6% bentonite	1,123	Tagged cement top at 2,505 feet bpl. Tremied in place.
					6/10/2003	3	6% bentonite	522	Tagged cement top at 2,427 feet bpl. Tremied in place.
					6/11/2003	4	6% bentonite	803	Tagged cement top at 2,231 feet bpl. Tremied in place.
					6/11/2003	5	6% bentonite	460	Tagged cement top at 2,121 feet bpl. Tremied in place.
					6/11/2003	6	6% bentonite	1,123	Tagged cement top at 1,843 feet bpl. Tremied in place.
					6/12/2003	7	6% bentonite	1,128	Tagged cement top at 1,487 feet bpl. Tremied in place.
					6/12/2003	8	6% bentonite	1,684	Tagged cement top at 887 feet bpl. Tremied in place.
					6/12/2003	9	6% bentonite	1,735	Tagged cement top at 286 feet bpl. Tremied in place.
					6/17/2003	10	6% bentonite	831	Cement returns at pad level (after CBL was performed). Tremied in place.
Injection Tubing	20	19.124	0.438	2,883	7/8/2003	Not Cemented			Fluid Filled Annulus/Corrosion Inhibitor

"bpl" denotes below (drilling) pad level.

Total: 20,397 cubic feet

Appendix A

Construction Permit

Department of Environmental Protection

Jeb Bush
Governor

Southeast District
P.O. Box 15425
West Palm Beach, Florida 33416

David B. Struhs
Secretary

NOTICE OF PERMIT

ELECTRONIC CORRESPONDENCE December 11, 2002

In the Matter of an
Application for Permit by:

Jesus A. Merejo
Interim Director
City of Port St. Lucie Utility Systems Department
900 SE Ogden Lane
Port St. Lucie, FL 34983

ST. LUCIE COUNTY
UIC - City of Port St. Lucie Westport Wastewater Treatment
FILE: 189145-001-UC
Class I Injection Well IW-1

Dear Mr. Merejo:

Enclosed is Permit, Number 189145-001-UC, to construct the City of Port St. Lucie Utility Systems Department, Westport Wastewater Treatment Plant, Class I, 24-inch injection well, IW-1, with a 20-inch outside diameter (OD) injection tubing, and the associated dual zone monitor well, MW-1. The purpose of the injection well system is for the disposal and monitoring, of up to 6.05 million gallons per day MGD (4200 gpm) peak hour flow at start-up based on pumping capacity, and 12 MGD peak hour flow (10 fps) at buildout, of secondary treated wastewater from the City of Port St. Lucie Westport Wastewater Treatment Plant, issued pursuant to Section(s) 403.087, Florida Statutes (F.S.) and Florida Administrative Codes (F.A.C.) 62-4, 62-520, 62-522, 62-528, 62-550, 62-600, 62-601 and 62-660.

Any party to this Order (permit) has the right to seek judicial review of the permit under Section 120.68, F.S., by the filing of a Notice of Appeal under Rule 9.110 of the Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days after this notice is filed with the Clerk of the Department.

Should you have any questions, please contact Heidi Vandor, PG at 561-681-6695 or, Joe May, PG at 561-681-6691, of this office.

Executed in West Palm Beach, Florida.
STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

John L Moulton III 12/11/02

Melissa L. Meeker — Date
Director of District Management
Southeast District

MLM/LAH/JRM/HV

cc: Richard Deuerling, FDEP/TLH
Steve Anderson, SFWMD/WPB
Jim Macon, Reese, Macon & Assoc.
Nancy Marsh, USEPA/ATL
Heidi Vandor, FDEP/WPB
Mike Waldron, Arcadis
Ron Reese, USGS/MIA
JP Listick, FDEP/WPB

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on 12/11/02 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to the §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk — 12/11/02 Date

Department of Environmental Protection

Jeb Bush
Governor

Southeast District
P.O. Box 15425
West Palm Beach, Florida 33416

David B. Struhs
Secretary

PERMITTEE:
Jesus A. Merejo
Interim Director
City of Port St. Lucie Utility Systems Department
900 SE Ogden Lane
Port St. Lucie, FL 34983

PERMIT/CERTIFICATION NO: 189145-001-UC
DATE OF ISSUE: December 11, 2002
EXPIRATION DATE: December 10, 2004
COUNTY: St. Lucie
POSITION: 27° 14' 07" N / 80° 21' 11" W
PROJECT: Westport Wastewater Treatment Plant
Port St. Lucie Utility Systems Department
IW-1 and MW-1

This permit is issued under the provisions of Chapter 403.087, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Rules 62-4, 62-520, 62-522, 62-528, 62-550, and 62-660. The above named permittee is hereby authorized to perform the work or construct the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

TO CONSTRUCT AND OPERATIONALLY TEST: One Class I, industrial 24-inch outside diameter (OD) injection well (IW-1), with a 20-inch outside diameter (OD) coated steel injection tubing (0.438-inch wall thickness), and an associated dual zone monitoring well (MW-1). The purpose of the well is for the disposal of secondary treated wastewater from the Westport Wastewater Treatment Plant. The ultimate plan is to connect this injection well system with the proposed injection well at the Western LTC Water Treatment Plant to provide system redundancy. Based on start-up conditions, the proposed peak hour flow is 6.05 million gallons per day (MGD), 4200 gpm, with two 2100 gpm pumps in operation and one 2100 gpm pump as reserve. The build-out design capacity of 12 MGD peak hour flow (10 feet/sec) is designed to be provided by additional pumps. The injection interval will be in the "Boulder Zone" in the lower Oldsmar Limestone between approximately 2800 feet below land surface (bpl) and the total depth of the injection well at approximately 3450 feet bpl. The confinement of the injection zone from overlying underground source of drinking water (USDW) aquifers and fluid movement adjacent to the wellbore of the injection well will be monitored by the dual zone monitoring well, MW-1. The lower monitoring interval will be between approximately 1950 to 2000 feet below platform level (bpl) for the purpose of monitoring below the lowermost USDW. The upper monitoring interval will be between approximately 1650 to 1700 feet bpl and is designed to monitor within, and near the base of, the USDW. The actual depths will be field determined during construction and testing.

IN ACCORDANCE WITH: Application to Construct a Class I Injection Well received September 4, 2001, Request for Information (RFI) dated October 26, 2001; response to RFI received on December 4, 2001, Certificate of Financial Responsibility issued on February 4, 2002; publication of the Notice of Draft Permit in The Stuart News - The Port St. Lucie News newspaper on March 23, 2002; and in consideration of public comment received as a result of the public meeting held on April 26, 2002 at 10:00 am.

LOCATED AT: City of Port St. Lucie Utility Systems Department, Westport Wastewater Treatment Plant, 851 SW Darwin Blvd., Port St. Lucie, St. Lucie County, Florida.

TO SERVE: Westport Wastewater Treatment Plant Service Area.

SUBJECT TO: General Conditions 1-24 and Specific Conditions 1-11.

GENERAL CONDITIONS:

The following General Conditions are referenced in Florida Administrative Code Rule 62-528.307.

1) The terms, conditions, requirements, limitations and restrictions set forth in this permit are "permit conditions" and are binding and enforceable pursuant to Section 403.141, F.S.

2) This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action.

3) As provided in subsection 403.087(7), F.S., the issuance of this permit does not convey any vested rights or exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

4) This permit conveys no title to land, water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5) This permit does not relieve the permittee from liability for harm to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefrom; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6) The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, or are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7) The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

   a) Have access to and copy any records that must be kept under conditions of this permit;
   b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
   c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

   Reasonable time will depend on the nature of the concern being investigated.

8) If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

   a) A description of and cause of noncompliance; and
   b) The period of noncompliance, including dates and times; or, if not corrected the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent the recurrence of the noncompliance. The permittee shall be responsible for any and all

15) Reports of compliance or noncompliance with, or any progress reports on, requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each scheduled date.

16) Any permit noncompliance constitutes a violation of the Safe Drinking Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

17) It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

18) The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

19) This permit may be modified, revoked and reissued, or terminated for cause, as provided in 40 CFR Sections 144.39(a), 144.40(a), and 144.41 (1998). The filing of a request by the permittee for a permit modification, revocation or reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

20) The permittee shall retain all records of all monitoring information concerning the nature and composition of injected fluid until five years after completion of any plugging and abandonment procedures specified under Rule 62-528.435, F.A.C. The permittee shall deliver the records to the Department office that issued the permit at the conclusion of the retention period unless the permittee elects to continue retention of the records.

21) All reports and other submittals required to comply with this permit shall be signed by a person authorized under Rules 62-528.340(1) or (2), F.A.C. All reports shall contain the certification required in Rule 62-528.340(4), F.A.C.

22) The permittee shall notify the Department as soon as possible of any planned physical alterations or additions to the permitted facility. In addition, prior approval is required for activities described in Rule 62-528.410(1)(h), F.A.C.

23) The permittee shall give advance notice to the Department of any planned changes in the permitted facility or injection activity which may result in noncompliance with permit requirements.

24) The permittee shall report any noncompliance which may endanger health or the environment including:

    a) Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water; or
    b) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.

    Information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9) In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10) The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11) This permit is transferable only upon Department approval in accordance with rules 62-4.120 and 62-528.350, F.A.C. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12) This permit or a copy thereof shall be kept at the work site of the permitted activity.

13) The permittee shall comply with the following;

a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records shall be extended automatically unless the Department determines that the records are no longer required.

b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c) Records of monitoring information shall include:

i) the date, exact place, and time of sampling or measurements;
ii) the person responsible for performing the sampling or measurements;
iii) the dates analyses were performed;
iv) the person responsible for performing the analyses;
v) the analytical techniques or methods used;
vi) the results of such analyses.

d) The permittee shall furnish to the Department, within the time requested in writing, any information which the Department requests to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.

e) If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

14) All applications, reports, or information required by the Department shall be certified as being true, accurate, and complete.

1) GENERAL REQUIREMENTS

a) This permit is to construct and operationally test the City of Port St. Lucie Westport Wastewater Treatment Plant Class I injection well, IW-1, and an associated dual zone Floridan Aquifer monitoring well, MW-1. This permit does not authorize the construction or testing of any other well or wells associated with Westport Wastewater Treatment Plant, except as specified in this permit.

b) If injection is to continue beyond the expiration date of this permit the permittee shall apply for, and obtain an operation permit. If necessary to complete the two-year operational testing period, the permittee shall apply for renewal of the construction permit at least 60 days prior to the expiration date of this permit.

c) Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures.

d) The permittee shall give advance notice to the Department of any planned changes in the permitted facility or injection activity which may result in noncompliance with permit requirements.

e) Pursuant to Rule 62-4.080(3), F.A.C., a permittee may request that a permit be extended as a modification of an existing permit. A request for an extension is the responsibility of the permittee and shall be submitted to the Department before the expiration of the permit. In accordance with Rule 62-4.070(4), F.A.C., a permit cannot be extended beyond the maximum five year statutory limit. Should operational testing need to continue beyond five year limit of this permit, the permittee must renew this construction permit.

2) SITE REQUIREMENTS

a) The measurement points for drilling and logging construction shall be surveyed and referenced to the National Geodetic Vertical Datum (NGVD) of 1988 prior to the onset of drilling activities for this injection well system.

b) The injection well shall be surveyed by a Florida registered land surveyor for latitude and longitude and submitted on a site plan prior to commencement of construction activities.

c) A drilling and system construction schedule shall be submitted to the Department, the Underground Injection Control–Technical Advisory Committee (UIC-TAC) and the United States Environmental Protection Agency (USEPA), Region IV, Atlanta (special advisor to the UIC-TAC) prior to site preparation for the injection well system.

d) Four permanent surficial aquifer monitoring wells, identified as Pad Monitoring Wells (PMWs), shall be located at the corners of the injection well drilling pad and identified by location number and pad location, (i.e., NW, NE, SW, and SE). If located in a traffic area, the well head(s) must be protected by a traffic bearing enclosure and cover. Individual cover(s) must lock and be specifically marked to identify the well and its purpose.

   i) These wells shall be sampled and analyzed prior to the onset of drilling for chlorides, conductivity, temperature, and water level (relative to NGVD 1988). Initial analyses must be submitted prior to the initiation of work.

   ii) These wells are to be retained in service, sampled weekly for the above parameters during the construction phase and quarterly thereafter.

iii) These wells shall also be sampled 48 hours prior to any maintenance, testing or repairs to the system which represent an increased potential for accidental discharge to the surficial aquifer.

iv) The results of these analyses shall be submitted to the Department within thirty days of the completion of the activity.

A copy of the FDEP Southeast District Summary Sheet is attached for your use when reporting the above information.

Well construction permits and completion reports as required by the St. Lucie County Department of Health shall be obtained and copies provided to the Department.

3) CONSTRUCTION AND TESTING REQUIREMENTS

a) The Department shall be notified within 48 hours after work has commenced.

b) A revised set of contract documents that includes this permit and approved specification changes documented in all responses to requests for information (RFIs) shall be submitted to the Department, the UIC-TAC and the USEPA prior to construction.

c) Blow-out preventers or equal shall be installed on the respective wells prior to penetration of the Floridan Aquifer System.

d) The bore of Injection Well (IW-1) shall not be advanced below the base of the Hawthorn Group, until testing to determine the lower limit of the Underground Source of Drinking Water (USDW) in the deep monitoring well pilot hole has been accomplished—and the results are submitted and approved by the Department.

e) Hurricane Preparedness - Upon the issuance of a "Hurricane Watch" by the National Weather Service, the preparations to be made shall include but are not limited to the following:

i) Secure all on-site chemicals, and other stockpiled additive materials to prevent surface and/or ground water contamination.

ii) Properly secure drilling equipment and rig(s) to prevent damage to well(s) and on-site treatment process equipment as well as public property.

f) UIC-TAC and USEPA review and Department approval are required for the following stages of construction and testing, pursuant to Chapter 62-528, F.A.C.

i) Final updated contract documents, and project startup date.

ii) Pre-construction monitoring data, results and interpretation, of the shallow pad monitoring wells.

iii) Intermediate injection well casing seat.

iv) Monitoring zone selection and casing seat(s).

v) Final injection well casing seat and the installation of the nominal tubing.

vi) Proposed cementing procedures (including cement volumes, number of stages) for the intermediate and final casing must be submitted with the caliper logs (reamed sections)

vii) Short term injection testing

viii) Operational testing.

g) The formation evaluation program shall consist of the construction and geophysical logging program, the formation core sampling program and the packer testing program.

h) The construction and geophysical logging program shall be implemented in accordance with this permit and as proposed in the submittal dated August 28, 2001 "Permit Application and Support Document Proposed Class 1 Injection Well System Construction Program" and the response to RFI received on December 4, 2001. All depths specified are approximate. Exact depths will be determined based on field conditions and are subject to the conditions of this permit. The program shall, at a minimum, include:

Injection Well IW-1

Drill 58-inch hole (0-180 feet bpl):
caliper, gamma ray

Set and cement 50-inch casing (0-180 feet bpl):
Temperature-static (after each cement stage)

Drill 12-inch pilot hole (180-750 feet bpl)
caliper

Ream 50-inch borehole (180-750 feet bpl):
caliper, gamma ray

Set and cement 42-inch casing (0-750 feet bpl):
Temperature-static (after each cement stage)

Drill 12-inch pilot hole (750-2000 feet bpl):
caliper, gamma ray, dual induction, borehole compensated w/VDL, temperature-static and dynamic, fluid resistance-static and pumping, flowmeter-static and pumping, video survey (downhole radial color TV survey with rotating lens—a borehole televiewer shall be used if the TV survey quality is not acceptable)

Ream 42-inch borehole (750-2000 feet bpl):
caliper, gamma ray

Set and cement 34-inch casing (0-2000 feet bpl):
temperature-static, after each cement stage

Drill 12-inch pilot hole (2000-2800 feet bpl):
caliper, gamma ray, dual induction, borehole compensated w/VDL, temperature-static and dynamic, fluid resistivity-static and pumping, flowmeter-static and pumping, video survey (downhole radial color TV survey with rotating lens—a borehole televiewer shall be used if the TV survey quality is not acceptable)

Ream 34-inch hole (2000-2800 feet bpl):
caliper, gamma ray

Drill 12-inch pilot hole (2800-3450 feet bpl)
caliper, gamma ray, dual induction, borehole compensated w/VDL, temperature-static and dynamic, fluid resistivity-static and pumping, flowmeter-static and pumping, video survey

(downhole radial color TV survey with rotating lens—a borehole televiewer shall be used if the TV survey quality is not acceptable)

Ream 21-inch hole (2800-3450 feet bpl)
caliper, gamma ray

Set and cement 24-inch injection casing (0-2800 feet bpl) with Townly® Rubber Funnel Plug:
temperature-static, after each cement stage, cement bond log with variable density display before the final cementing stage

Set 20-inch injection tubing (0-2800 feet bpl)
video survey (downhole radial color TV survey with rotating lens)

Monitoring Well MW-1

Drill 34-inch borehole (0-180 feet bpl):
caliper, gamma ray

Set and cement 30-inch casing (0-180 feet bpl):
temperature-static, after each cement stage

Drill 12-inch pilot hole (180-750 feet bpl):
caliper, gamma ray

Ream 29-inch borehole (180-750 feet bpl):
caliper and gamma ray

Set and cement 24-inch casing (0-750 feet bpl):
temperature-static, after final cement stage

Drill 12-inch pilot hole (750-2350 feet bpl):
caliper, gamma ray, dual induction, borehole compensated w/VDL, temperature-static and dynamic, fluid resistivity-static and pumping, flowmeter-static and pumping, video survey (downhole radial color TV survey with rotating lens). A borehole televiewer shall be used if the TV survey quality is not acceptable.

Ream 24-inch borehole (750-1650 feet bpl):
caliper and gamma ray

Set and cement 16-inch casing (0-1650 feet bpl) for upper monitoring zone:
temperature-static-after each cement stage, cement bond log with variable density display before the final cement stage

Ream 16-inch borehole (1650-2000 feet bpl):
caliper and gamma ray

Set and cement 6-$^{5}/_{8}$-inch FRP tubing plus 50 feet of screen (0-2000 feet bpl) for lower monitoring zone, cementing back in place to 1700 feet bpl:
temperature-static, after each cement stage, cement bond log with variable density display before cementing and after the final cement stage

The pumping logs for IW-1 and MW-1 shall be run while pumping the borehole at a rate that adequately stresses the confining units, as shown by head loss across the beds, and allows the log interpreter to clearly identify the confining beds.

i) The formation core sampling program shall be implemented in accordance with this permit and as proposed in the submittal dated August 28, 2001 "Permit Application and Support Document Proposed Class 1 Injection Well System Construction Program" and the response to RFI received on December 4, 2001, the program shall, at a minimum include eight cores from the base of the USDW to the top of the injection interval, at intervals which are to be field determined.

j) The packer testing program shall be implemented in accordance with this permit and as proposed in the submittal dated August 28, 2001 "Permit Application and Support Document Proposed Class 1 Injection Well System Construction Program" and the response to RFI received on December 4, 2001, the program shall, at a minimum include 10 packer tests, at intervals which are to be field determined.

   i) At least one straddle packer test conducted in each prospective monitoring zone.

   ii) At least six straddle packer tests conducted from the lowermost zone of the USDW to the top of the proposed injection horizon. These packer tests will be used for the demonstration of confinement. For this reason the packer tests will be performed in the anticipated confining zones, from the base of the USDW to the top of the injection interval.

   iii) Water samples shall be collected from each packer test, and analyzed for total dissolved solids, chlorides, conductivity, ammonia, total Kjeldahl as nitrogen and sulfate. A five gallon water sample from intervals where sufficient water is available, shall be collected at the end of the packer test.

k) The depth of the USDW and the background water quality of the monitoring zones shall be determined during drilling and testing. Determination of the depth of the USDW shall be accomplished, interpreted, analyzed using the following information:

   i) Water samples from packer tests with analysis and interpretation

   ii) Aquifer performance test data with analysis and interpretation

   iii) Geophysical logging upon reaching the total depth of the appropriate pilot hole interval using the following logs: caliper, gamma, dual induction, borehole compensated sonic, pumping flow meter, temperature, and fluid resistivity.

   iv) Plots of sonic porosity and apparent formation fluid resistivity (RWA). Interpretation will include the calculation of sonic porosity and RWA, and the input parameters used will be provided.

l) The confinement of the injection zone, from overlying aquifers, shall be monitored by the dual zone monitoring well MW-1and a regular monitoring program. The lower interval is to be located within a transmissive interval below the base of the USDW (i.e., the total dissolved solids [TDS] concentration value of the ground water is greater than 10,000 mg/L and the monitoring zone as a near as is appropriate to the top of the injection zone). The upper interval shall ideally be located within in a transmissive interval immediately above the base of the lowermost USDW (the TDS value of the ground water is less than or equal to 10,000 mg/L). Should a sufficiently transmissive interval for the lower monitoring zone not be present below the base of the USDW and above the top of the injection horizon—as defined by testing during drilling—a sufficiently transmissive interval above the base of the USDW shall be utilized as the lower monitoring zone. The upper monitoring zone shall be established as near to and above the lower monitoring zone should the lower monitoring zone be positioned with the USDW. The data and analysis supporting the selection of these monitoring intervals shall be simultaneously submitted to the Department, the UIC-TAC and the USEPA, Region IV, Atlanta—after the collection, interpretation

and analysis of all the required data (geophysical logs, cores, and fluid sample analyses). The monitoring well MW-1 pilot hole shall be completed first in order to provide the geophysical logs which will be utilized to determine the best coring intervals for the injection well IW-1 pilot hole. The hydrogeologic evaluation of the proposed monitoring zone will be submitted only after the collection, interpretation and analysis of all required date (geophysical logs, cores, fluid sample analyses, and packer tests). The final selection of the specific upper and lower monitoring intervals shall be approved by the Department.

m) To identify the upper and lower monitoring zones, the following information shall be analyzed, interpreted and submitted: television survey (borehole imaging), the permeability of the transition zone in the vicinity of the USDW, packer test data including water quality (total dissolved solids, chlorides, ammonia, total Kjeldahl as nitrogen, and specific conductivity), the specific capacity of the proposed upper and lower monitoring zones, and the identification of the base of the USDW.

n) Recommended casing depths in IW-1 and the monitoring intervals in MW-1 shall be accompanied by technical justification, geophysical logs with engineering and geological interpretations and water quality data. Department approval shall be based on the permittee's presentation that shows compliance with Department rules and this permit.

o) Confinement shall be demonstrated using, at a minimum, directly measured lithologic properties, geophysical evidence, and tests performed while pumping the formation, as described in items i) through iv) below:

   i) Formation tests shall include flow meter logs, packer tests, water quality sampling during packer tests, and analysis of drawdown curves measured during packer tests. These tests shall be conducted under pumping conditions to directly measure the hydraulic properties of the confining beds.

   ii) For the purpose of determining confinement, flow meter, temperature and fluid resistivity logs shall be run in the pilot hole from the base the USDW to the potential confining unit immediately prior to the intersection of the top of the injection interval, under pumping conditions, at a pumping rate that adequately stresses the confining beds (as demonstrated by head loss across the beds), so that the permeability of the zones within the potential confining intervals can be evaluated.

   iii) Other geophysical logs will be used as indirect evidence to deduce or correlate formation properties measured in pumping tests and direct lithologic sample analysis.

   iv) Lithologic properties measured in laboratory analyses of core samples shall include: hydraulic conductivity (vertical and horizontal) Young's modulus/elastic modulus formation factor, Archie's cementation exponent and coefficient (required for data at or above the USDW), and specific gravity.

p) If effluent is encountered or suspected during pilot hole drilling and testing, the Department shall be notified immediately by telephone and in writing and immediate appropriate precautionary measures shall be taken to prevent any upward fluid movement. These measures include pumping barite through the drill rod to form a density balance plug to prevent any upward fluid movement. The permittee will then provide full documentation of the event to the Department which shall include, but not be limited to, geophysical logging, packer testing and thief sampling. If the presence of effluent is confirmed, the permittee will notify the Department of its plan to place a cement plug or drillable packer assembly just above the documented presence of effluent, prior to continuation of testing of the pilot hole.

q) Mechanical integrity of the injection well shall be determined pursuant to Rule 62-528.300(6)(b)2, and (c), F.A.C.

i) The pressure test for the final casing shall be accepted if tested with a liquid filled casing at 1.5 times the expected operating pressure with a test tolerance of a total change not greater than 5 percent, above or below initial pressure. The subsequent annular pressure test shall be attempted at the final casing test pressure.

ii) Verification of pressure gauge calibration must be provided to the Department representative at the time of the test and in the certified test report.

iii) Pad monitoring wells shall be sampled and waters analyzed for water depth, chlorides, total dissolved solids, temperature and specific conductivity one week prior to the onset of the mechanical integrity testing. (A copy of the SED reporting sheet is attached.)

r) UIC-TAC meetings are scheduled on the second and fourth Tuesday of each month subject to a five working day prior notice and timely receipt of critical data by all UIC-TAC members and the USEPA. Emergency meetings may be arranged when justified to avoid undue construction delays.

s) Department approval at a scheduled UIC-TAC meeting shall be based on the permittee's presentation that shows compliance with Department rules and this permit.

t) No drilling operations shall begin without an approved disposal site for drilling fluids, cuttings, or waste. It shall be the permittee's responsibility to obtain the necessary approval(s) for disposal prior to the start of construction.

u) Waters spilled during construction or testing shall be contained and properly disposed.

v) An interpretation of all test results and geophysical logs must be submitted with all submittals.

4) QUALITY ASSURANCE/QUALITY CONTROL REQUIREMENTS

a) Pursuant to Rule 62-528.440(5)(b), F.A.C., the Professional Engineer(s) of Record shall certify all documents related to the completion of the Class I injection well system (including the associated Floridan Aquifer monitoring well) as a disposal facility. The Department shall be notified immediately of any change of the Engineer(s) of Record.

b) In accordance with Chapter 492, F.S., all documents prepared for the geological/hydrogeological evaluation of this injection well system shall be signed and sealed by a Florida Licensed Professional Geologist or qualified Florida Registered Professional Engineer.

c) Continuous on-site supervision by qualified personnel (engineer and/or geologist) is required during all testing, geophysical logging and cementing operations.

5) REPORTING REQUIREMENTS

a) All reports and surveys required by this permit shall be submitted concurrently to all the members of the Technical Advisory Committee and the United States Environmental Protection Agency, Region IV, Atlanta (UIC-TAC). The UIC-TAC shall consist of representatives from these agencies:

- Department of Environmental Protection, West Palm Beach and Tallahassee
- United States Geological Survey (USGS), Miami
- South Florida Water Management District (SFWMD), West Palm Beach

- Special Advisors to the UIC-TAC: US Environmental Protection Agency (USEPA), Region IV, Atlanta

b) The Department and other applicable agencies must be notified of any unusual or abnormal events occurring during construction, and in the event the Permittee is temporarily unable to comply with the provisions of the permit (e.g., on-site spills, artesian flows, large volume circulation losses, equipment damage due to: fire, wind and drilling difficulties, etc.). Information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

c) The Department shall be notified at least 72 hours prior to all testing for mechanical integrity.

d) All testing for mechanical integrity must be initiated during normal business hours, Monday through Friday.

e) The permittee shall submit weekly construction progress reports no later than seven calendar days immediately following the week of record. An evaluation and interpretation of all test results shall be submitted with all test data. These reports shall include, at a minimum, the following information:

i) A cover letter summary of the daily engineer report, driller's log and a projection for activities in the next reporting period.

ii) Daily engineer's reports and work log with detailed descriptions of all drilling progress, cementing, testing, logging, and casing installation activities with appropriate interpretations.

iii) Lithologic and geophysical logs and water quality test results, with interpretations.

iv) An interpretation of all test results and geophysical logs as they relate to the week's activities, submitted with the latest test results and logs, submitted under ii) and iii) above.

v) Detailed description of any unusual construction-related events during the reporting period.

vi) Weekly water quality analysis and water levels for the four pad monitoring wells. (See Specific Condition 2d)

vii) A certified evaluation of all logging and test results must be submitted with test data.

viii) Description of the formations encountered.

ix) Details of cementing operations including the following information, for each stage of cement: cement slurry composition, specific gravity, pumping rate, volume of cement pumped, theoretical fill depth, actual tag depth. Additionally, a percent fill, and an explanation of any variation between actual versus theoretical fill— from both the physical tag and the geophysical logs. For each casing, a laboratory analysis of dry cement composition of a sample taken during the neat cement stage emplaced at the base of each casing should also be provided.

f) Upon completion of analysis of cores and sample cuttings recovered during the construction of the monitoring well and the injection well, the permittee shall contact the Underground Injection

Control Section of the Department of Environmental Protection for transfer to Florida State Geologic Survey.

g) Department approval shall be based on the permittee's presentation that shows compliance with Department rules and this permit. Casing seat requests, as a minimum, shall include technical justification utilizing the following information:

- Lithologic and geophysical logs with interpretations.
- Water quality data.
- Identification of confining units.
- Identification of monitoring zones.
- Drilling rate and weight on bit data, with interpretations related to the casing seat
- Casing depth evaluation (mechanically secure formation, potential for grout seal).
- Identification of the base of the USDW using water quality, RWA plots, and log interpretations.

h) Department approval shall be based on the permittee's presentation that shows compliance with Department rules and this permit. The injection test request shall contain the following justifications:

- Cement bond logs and interpretation
- Temperature logs performed after each cementing stage
- Theoretical versus actual cement calculations
- Final downhole TV survey with interpretation
- Water quality analysis of injection fluid from every source
- Planned injection procedures
- All required weekly progress report information must be current, and received by the Department
- Certification of mechanical integrity and test results, with interpretation, including a copy of all logs and final video survey.

i) Department approval shall be based on the permittee's presentation that shows compliance with Department rules and this permit. Monitoring Zone requests shall contain the following:

- Identification of the base of the USDW.
- Identification of confining beds.
- Water quality of proposed monitoring zone.
- Transmissivity or specific capacity of proposed monitoring zone.
- Packer test drawdown curves and interpretation.

j) A final report of the construction and testing of the injection well and dual zone monitoring well, shall be submitted no later than 210 days after commencement of operational testing, pursuant to Rule 62-528.430(1)(e), F.A.C. This report shall include, as a minimum, definitions of the injection interval, all relevant confining beds, the depth of the base of the USDW and all monitoring zones, including all relevant data and interpretations.

6) OPERATIONAL TESTING REQUIREMENTS

a) The operational testing of the Class I injection well system under this permit shall not commence without written authorization from the Department.

b) Operational testing. Prior to operational testing, the permittee shall comply with the requirements of Rule 62-528.450(3)(a), (b) and (c), F.A.C.

c) Prior to operational testing approval, the following items must be submitted (with a request for operational testing approval) for UIC-TAC and USEPA review and Department approval:

i) Certification of completion of well construction and well construction drawings. The well construction drawings shall include a geologic stratigraphic cross section depicting the corresponding formations, the base of the USDW, and the boundaries of the confining and injection zone intervals.

ii) Data from the short term injection testing with interpretation, conducted pursuant to Rules 62-528.405(3)(a), 62-528.410(7)(e) and 62-528.450(3)(a)2., F.A.C. The injection well shall first be tested for integrity of construction, and shall be followed by a short term injection test of such duration to allow for the prediction of the operating pressure. This test shall be conducted for a minimum of 12-24 hours at the maximum rate at which the well is to be permitted. Pressure/water level data from the injection well and both monitoring zones shall be recorded continuously for at least 24 hours before the test, during the test, and at least 12 hours following the test.

iii) A copy of the borehole television/imaging survey with interpretation.

iv) Lithologic and geophysical logs with interpretations.

v) Certification of mechanical integrity and interpretation of the test data.

vi) A description of the actual injection procedure including the anticipated maximum pressure and flow rate at which the well will be operated under normal and emergency conditions.

vii) Information concerning the compatibility of the injected waste with fluids and minerals in the receiving zone.

viii) Surface equipment (including pumping station, piping, pressure gauges and flow meters, and all appurtenances) completion certified by the engineer of record. Calibration certificates for pressure gauges and flow meters shall also be submitted.

ix) Signed and sealed record "as-built" engineering drawings of the injection well system including all well construction, the pump station, subsurface and surface piping and equipment, and appurtenances. These drawings shall include the location of sampling points for injectate and the dual monitoring zone samples.

x) Draft operating and maintenance manual, including a description of water hammer control, with emergency discharge management plan procedures. The emergency discharge system must be fully constructed and operational prior to approval of operational testing.

xi) The demonstration of confinement prepared providing confirmation of confinement and defining the injection and confining sequences utilizing data collected during the drilling, logging and testing of the injection well and dual zone monitoring well. The report shall include the results of hydraulic testing (permeability, porosity, etc.) on the cores, and shall be reviewed and updated as appropriate after the completion of any additional injection/monitoring well pairs in the future from the confining interval. This submittal shall be prepared, signed, and sealed by a Florida Registered Professional Geologist or qualified Registered Professional Engineer.

xii) Wastewater stream analysis, sampled within six months of the request for operational testing, for Primary and Secondary Drinking Water Standards (62-550, F.A.C.) and Minimum Criteria parameters (62-520, F.A.C.), as attached.

xiii) Background water quality data from the two monitoring and single injection zone, analyzed Primary and Secondary Drinking Water Standards (62-550, F.A.C.) and Minimum Criteria parameters (62-520, F.A.C.), as attached.

xiv) A controlled monthly test of the injection well specific injectivity (volume/pressure) shall be conducted in accordance with Rule 62-528.430(2)(d), F.A.C., at a rate which is equal to the maximum possible (design) flow. For reporting the injectivity test results, a summary sheet and sample graph from the FDEP Southeast District UIC Section is attached. The injectivity test results shall be reported to the Department in the MORs. The following data shall be recorded and reported:

1) static injection wellhead pressure (psig)
2) initial totalizer reading (gallons)
3) final pressure upon test cessation (approximately 10-15 minutes)
4) final totalizer reading (gallons)
5) wellhead injection pressure fall-off (psig every 30 seconds until again static)
6) Specific Injectivity shall be reported in gallons/psi

All readings shall be taken after a minimum five minute period of stabilized flow. Pursuant to Rule 62-528.430(2)(d), F.A.C., as part of the specific injectivity test, the well shall be shut-in for a period of time necessary to conduct a valid observation of pressure fall-off.

xv) Other data obtained during well construction needed by the Department to evaluate whether the well will operate in compliance with Department Rules.

d) Prior to the authorization of operational testing by the Department, the permittee shall contact the Underground Injection Control Section of the Department, Southeast District, to arrange for a site inspection. The purpose of this inspection is to verify that all equipment has been installed, in compliance with the permit and Department rules, pursuant to this permit application and permit conditions. During the inspection, emergency procedures and reporting requirements shall also be reviewed.

7) OPERATIONAL TESTING CONDITIONS

a) Upon receipt of written authorization from the Department, the operational testing of the injection well system shall be subject to Rule 62-528.450(3), F.A.C.

b) The progress of the operational testing for the system shall extend for a six month period and may be reviewed during UIC-TAC meetings scheduled by the permittee at three months and six months after operational testing has begun. Reports evaluating the system's progress must be submitted to each member of the UIC-TAC and the USEPA, Region IV, Atlanta at least two weeks prior to the scheduled UIC-TAC meeting. The conditions for the operational testing period may be modified by the Department at each of these UIC-TAC review intervals.

Mechanical Integrity

i) Injection is prohibited until the permittee affirmatively demonstrates that the well has mechanical integrity. Prior to operational testing the permittee shall establish, and thereafter maintain the mechanical integrity of the well at all times.

ii) If the Department determines that the injection well lacks mechanical integrity, written notice shall be given to the permittee.

iii) Within 48 hours of receiving written notice that the well lacks mechanical integrity, unless the Department requires immediate cessation of injection, the permittee shall cease injection into the well unless the Department allows continued injection pursuant to iv) below.

iv) The Department shall allow the permittee to continue operation of a well that lacks mechanical integrity if the permittee has made a satisfactory demonstration that fluid movement into or between USDWs is not occurring.

c) Any failure of the Class I injection well monitoring and recording equipment for a period of more than 48 hours shall be reported within 24 hours to the Department. A written report describing the incident shall also be given to the Department within five days of the start of the event. The final report shall contain a complete description of the occurrence, a discussion of the cause(s) and the steps being taken to reduce, eliminate, and prevent recurrence of the event, and all other pertinent information deemed necessary by the Department.

d) No underground injection is allowed that causes or allows movement of fluid into an underground source of drinking water.

e) The permittee shall report any noncompliance which may endanger health or the environment, including:

i) Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water; or

ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.

iii) Information shall be provided orally within 24 hours of the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written condition shall contain a written description of the noncompliance and the cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

g) The injection well system shall be monitored in accordance with Rules 62-528.425(1)(g) and 62-528.430(2), F.A.C. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The following injection well performance and monitoring zone data shall be recorded and reported in the Monthly Operating Report (MOR) as indicated below.

(i) Injection well performance:

(1) Physical characteristics of the injection well:

Flow rate parameters:

- average daily flow rate to injection well (MGD)
- daily maximum sustained (15 minutes minimum) flow rate injection well (MGD)
- daily minimum sustained (15 minutes minimum) flow rate to injection well (MGD)
- monthly average of the daily flow rates to injection well (MGD)
- monthly maximum (peak hour) flow rate to injection well (MGD)
- monthly minimum flow rate to injection well (MGD)

Volumetric parameters:

- total daily flow to injection well (MG)
- monthly average of the daily flow volumes to injection well (MG)
- monthly maximum of the daily flow volumes to injection well (MG)
- monthly minimum of the daily flow volumes to injection well (MG)

Injection pressure parameters:

- daily average injection pressure at injection well (psig)
- daily maximum sustained (15 minutes minimum) injection pressure at injection well (psig)
- daily minimum sustained (15 minutes minimum) injection pressure at injection well (psig)
- monthly average injection pressure at injection well (psig)
- monthly maximum sustained injection pressure at injection well (psig)
- monthly minimum sustained injection pressure at injection well (psig)

Annular pressure parameters:

- daily average annular pressure at injection well (psig)
- daily maximum sustained (15 minutes minimum) annular pressure at injection well (psig)
- daily minimum sustained (15 minutes minimum) annular pressure at injection well (psig)
- monthly average annular pressure at injection well (psig)
- monthly maximum sustained annular pressure at injection well (psig)
- monthly minimum sustained annular pressure at injection well (psig)

Additional parameters:

- monthly wellhead pressure with no flow (shut-in pressure, psig)

(2) **Chemical characteristics of the wastewater stream shall be sampled weekly:**

- chloride (mg/L)
- fecal coliform (# of colonies/100ml)
- iron (mg/L)
- nitrogen, ammonia, total as N (mg/L)
- nitrogen, total Kjeldahl as N (TKN, mg/L)
- nitrogen, nitrate, total as N (nitrate, mg/L)
- pH (standard units)
- phosphorous, total as P (mg/L)
- residue, total filterable (total dissolved solids, TDS, mg/L)
- sodium (mg/L)
- specific conductance (temperature compensated, µmhos/cm or µS/cm)
- sulfate, total as SO_4 (mg/L)
- temperature (°C)
- total suspended solids (TSS, mg/L)

Monthly sampling:

- gross alpha (pCi/L)
- radium-226 (^{226}Ra, pCi/L)
- radium-228 (^{228}Ra, pCi/L)
- fluoride (mg/L)

The MORs shall indicate monthly averages for all parameters sampled daily.

(ii) **Monitoring well performance:**

- Physical characteristics - upper and lower monitoring zones potentiometric surface or water table height relative to the National Geodetic Vertical Datum (NGVD) in feet of head or pressure in psig—both shall be referenced to NGVD 1988
- daily maximum pressure or water level (as appropriate)
- daily minimum pressure or water level (as appropriate)
- daily average pressure or water level (as appropriate)
- monthly maximum pressure or water level (as appropriate)
- monthly minimum pressure or water level (as appropriate)
- monthly average pressure or water level (as appropriate)

(3) Chemical characteristics of the upper and lower monitoring zones:
Weekly sampling:

- chloride (mg/L)
- fecal coliform (# of colonies/100ml)
- iron (mg/L)
- nitrogen, ammonia, total as N (mg/L)
- nitrogen, total Kjeldahl as N (TKN, mg/L)
- nitrogen, nitrate, total as N (nitrate, mg/L)
- pH (standard units)
- phosphorous, total as P (mg/L)
- residue, total filterable (total dissolved solids, TDS, mg/L)
- sodium (mg/L)
- specific conductance (temperature compensated, μmhos/cm or μS/cm)
- sulfate, total as SO_4 (mg/L)

Monthly sampling:

- gross alpha (ρCi/L)
- radium-226 (^{226}Ra, ρCi/L)
- radium-228 (^{228}Ra, ρCi/L)
- fluoride (mg/L)

The MORs shall also indicate monthly averages for all parameters sampled weekly.

h) Weekly sampling as described above will be continued for a minimum of 6 months. At that time the permittee may submit data for UIC-TAC and USEPA review and Department approval to demonstrate that reasonable assurance of ground water stability has been established in justification of any written request to reduce the sampling frequency to monthly sampling.

i) A wastewater stream analysis (24-hour composite sample) for Primary and Secondary Drinking Water Standards (Chapter 62-550, F.A.C.) and Minimum Criteria, see attached list, must be submitted annually and submitted within 120 days of the sampling date. VOC parameters and biological parameters shall be sampled either in-situ or grab.

j) A minimum of 3 well volumes of fluid shall be evacuated from the monitoring systems prior to sampling for the chemical parameters listed above. All samples shall be analyzed by a state-certified laboratory. Sufficient purging shall have occurred when either of the following have occurred:

i) pH, specific conductivity and temperature when sampled, upon purging the third or subsequent well volume, each vary less than 5% total range of variance from that sampled upon purging the previous well volume; or

ii) upon purging the fifth well volume

k) The flow to the injection well at the wellhead shall be monitored and controlled at all times to ensure the maximum fluid velocity down the well does not exceed that rate at which the well was tested, proposed to be a peak hourly flow rate of 10 feet per second during normal operation, and when the permittee provides the Department with reasonable assurances that higher velocities will not compromise the integrity or operation of the injection well, then the injection well may be operated at 12 feet per second during planned testing, maintenance, or emergency conditions.

l) The pressure at the wellhead and in the annular space shall be monitored and controlled at all times to ensure the maximum pressures on the final casing and the tubing and packer does not exceed 66 percent of the final casing mechanical integrity test pressures. The annular space shall continually be maintained at approximately 1.5 times the current operating injection pressure within the tubing, but shall never exceed the maximum allowable injection pressure.

m) Pursuant to Rule 62-528.425(1)(b), F.A.C., the injection well system shall be monitored at all times by continuous indicating, recording and totalizing devices for injection fluid flow rate and volume, and the pressure in all monitoring zones and the annular space. The permittee shall calibrate all pressure gauges, flowmeters, chart recorders, and other related equipment associated with the injection well system on an annual basis. The permittee shall maintain all monitoring equipment and shall ensure that the monitoring equipment is calibrated and in proper operating condition at all times. Laboratory equipment, methods, and quality control will follow EPA guidelines as expressed in Standard Methods for the Examination of Water and Wastewater. The pressure gauges, flowmeter, and chart records shall be calibrated using standard engineering methods. The monitoring zone pressures shall be referenced to NGVD 1988, and the MOR shall reference the pressures to NGVD 1988.

n) A qualified representative of the Engineer of Record must be present for the start-up operations.

o) All required data submissions, including Monthly Operating Reports (MORs), shall be clearly identified on each page with Facility Name, ID Number, permit number, date of sampling/recording, operator's name, license and telephone number, and type of data shown. Monitoring zones shall be identified by monitoring well number and depth interval. The lead plant operator or higher official must sign and date each submittal. An approved copy (MOR summary sheet) from the FDEP Southeast District, UIC Section is attached for your use.

p) The permittee shall submit monthly to the Department the results of all injection well and monitoring well data required by this permit no later than the last day of the month immediately following the month of record. The results shall be sent to the Florida Department of Environmental Protection, Southeast District, Underground Injection Control Section, Post Office Box 15425, West Palm Beach, Florida, 33416. A copy of this report shall also be sent to the Florida Department of Environmental Protection, Underground Injection Control Program, MS 3530, 2600 Blair Stone Road, Tallahassee, Florida, 32399-2400.

q) The Department must be notified, in writing, 30 days in advance of the date of start-up of operations.

8) SURFACE EQUIPMENT

a) The surface equipment for the injection well system shall maintain compliance with Chapter 62-600, F.A.C. for water hammer control, screening, access for logging and testing, reliability and flexibility in the event of damage to the well and concentrate piping. A regular program of exercising the valves integral to the well head shall be instituted. At a minimum, all valves integral to the injection well system shall be exercised during the regularly scheduled monthly injectivity testing.

b) The injection well and monitoring well surface equipment and piping shall be kept free of corrosion at all times.

c) Spillage onto the injection well pad during construction activities, and any waters spilled during mechanical integrity testing, other maintenance, testing or repairs to the system shall be contained by an impermeable wall around the edge of the pad and directed to a sump pump which in turn discharges to the pumping station wet well or via other approved means to the injection well system.

d) The injection well construction pad with impermeable perimeter retaining wall shall be maintained and retained in service for the life of the injection well—unless otherwise authorized by the Department. The injection and monitoring well pad(s) are not, unless specific approval is obtained from the Department, to be used for storage of any material or equipment at any time.

e) The four surficial aquifer monitoring wells installed at the corners of the injection well pad shall be secured, maintained, and retained in service—unless otherwise authorized by the Department.

f) The integrity of the monitoring zone sampling systems shall be maintained at all times. Sampling lines shall be clearly and unambiguously identified by monitoring zone at the point at which samples are drawn. All reasonable and prudent precautions shall be taken to ensure that samples are properly identified by monitoring zone and that samples obtained are representative of those zones. Sampling lines and equipment shall be kept free of contamination with independent discharges and no interconnections with any other lines.

9) FINANCIAL RESPONSIBILITY

a) The permittee shall maintain the resources necessary to close, plug and abandon the injection and associated monitoring wells, at all times pursuant to Rule 62-528.435(9), F.A.C.

b) The permittee shall review annually the plugging and abandonment cost estimates. An increase of 10 percent or more over the cost estimate upon which financial responsibility is based shall require the permittee to submit documentation to obtain an updated Certificate of Demonstration of Financial Responsibility.

c) In the event the mechanism used to demonstrate financial responsibility should become invalid for any reason, the permittee shall notify the Department of Environmental Protection in writing within 14 days of such invalidation. The permittee shall then within 30 days of said notification submit to the Department for approval new financial documentation in order to comply with Rule 62-528.435(9), F.A.C., and the conditions of this permit.

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10) EMERGENCY DISPOSAL

a) All applicable federal, state, and local permits shall be in place to allow for any alternate discharges due to emergency or planned outage conditions.

b) Any proposed changes in emergency disposal methods shall be submitted for UIC-TAC and USEPA review and Department approval prior to implementation.

c) The alternate disposal method shall be maintained in working order at all times.

d) In the event of an emergency and/or discharge, or other abnormal event where the permittee is temporarily unable to comply with any of the conditions of this permit due to breakdown of equipment, power outages, destruction by hazard or fire, wind, or by other cause, the Department shall be notified in person or by telephone within 24 hours of the incident. A written report describing the incident shall also be submitted to the Department within five days of the start of the incident. The written report shall contain a complete description of and discuss the cause of the emergency and/or discharge, and if it has been corrected, the anticipated time the discharge is to continue, the steps being taken to reduce, eliminate, and prevent recurrence of the event, and all other information deemed necessary by the Department.

11) SIGNATORIES AND CERTIFICATION REQUIREMENTS

a) All reports and other submittals required to comply with this permit shall be signed by a person authorized under Rules 62-528.340(1) or (2), F.A.C.

b) In accordance with Rule 62-528.340(4), F.A.C., all reports shall contain the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Issued this 11th day of December, 2002

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Melissa L. Meeker
Director of District Management

MLM/SAH/JRM/HV

Appendix B

Geologic Log, Penetration Rate Log, and Core Descriptions and Analysis Reports

ARCADIS

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
FILL- Limerock, shell and sand compacted.	57-inch diameter reamer bit and stabilizer assembly. Mud-rotary method.	0 – 1.5	1.5
SAND – Sand, 100%, clear, quartz, fine to medium grained, well sorted, rounded to sub-rounded; Organic Matter, trace, black to dark brown, decomposed.	Revolutions per Minute (RPM): 3-5, Weight on Bit (WOB): 2-3K	1.5– 2.0	0.5
SILTY SAND – Sand, 70%, clear to dusky brown (10YR 2/2), quartz, very- fine to fine grained, rounded to sub-rounded; Silt, 30%, dusky brown (10YR 2/2).	RPM: 3-5, WOB: 2-3K	2.0 – 5.0	3.0
HARD PAN – Sand, 70%, dusky brown (10YR 2/2) to black (N1), quartz, very- fine to fine grained, rounded to sub-rounded, moderately well cemented: Organic Matter, 30%, black (N10), silty, decomposed.	RPM: 3-5, WOB: 2-3K	5.0 – 6.0	1.0
SANDY CLAY– Clay, 70%, light olive gray (5Y 6/1), silty, very soft, low plasticity; Sand, 30%, clear, quartz, slightly silty, very- fine grained, sub-rounded; Organic Matter, trace, brown, poorly decomposed.	RPM: 3-5, WOB: 2-3K	6.0 – 10.0	4.0
SHELL WITH SOME SAND – Shell, 80%, very pale orange (10YR 8/2) to light brown (5YR 6/4) and medium gray (N5), “hash” of mostly shell fragments to 0.3- inch with some whole shells to 0.8- inch size; Sand, 20%, clear, quartz, fine grained, sub-rounded.	RPM: 16, WOB: 5-8K	10 – 50	40
SHELL WITH SAND AND LITTLE CLAY AND SANDSTONE – Shell, 50%, very pale orange (10YR 8/2) to light brown (5YR 6/4) and medium gray (N5), mostly shell fragments to 0.3- inch with some whole shells to 0.8- inch size; Sand, 30%, clear, quartz, fine grained, sub-rounded; Clay, 10%, medium gray (N5), very soft, medium plasticity, slightly phosphatic; Sandstone, 10%, light gray (N7), quartz, fine grained, soft, poorly cemented, numerous shell intraclasts.	RPM: 18, WOB: 8-10K	50-60	10
SANDSTONE WITH SAND AND SOME SHELL – Sandstone, 50%, medium gray (N5), quartz, some calcareous matrix, slightly phosphatic, fine to coarse grained, moderately- well cemented, numerous shell intraclasts; Sand, 30%, clear, quartz, fine to medium grained, subrounded; Shell, 20%, very pale orange (10YR 8/2) to light brown (5YR 6/4), fragments, some whole bivalves to 0.8 inch.	RPM: 20, WOB: 5-10K	60-70	10

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
SHELL WITH SOME SAND AND SANDSTONE – Shell, 50%, very pale orange (10YR 8/2) to light brown (5YR 6/4), mostly shell fragments to 0.4- inch; Sand, 25%, clear, quartz, fine grained, sub- rounded; Sandstone, 25%, medium light gray (N6), quartz with calcareous matrix, very fine to medium grained, moderately hard, moderately- well cemented, slightly phosphatic, numerous shell intraclasts; Clay, trace, medium light gray (N6), very soft, medium plasticity.	RPM: 20-24, WOB: 6K	70-90	20
SHELL WITH SOME LIMESTONE, LITTLE SANDSTONE AND SAND – Shell, 50%, very pale orange (10YR 8/2) to light brown (5YR 6/4), mostly shell fragments to 0.4- inch; Limestone, 20%, medium light gray (N6), intraclast (shells) grainstone, slightly phosphatic, fine grained, moderately hard, moderately well cemented, slightly vuggy; Sandstone, 15%, medium dark gray (N4), quartz with calcareous matrix, very fine- to fine grained, moderately hard, moderately well cemented, few shell intraclasts; Sand, 15%, clear to very light gray (N8), mostly quartz, some calcareous, fine to medium grained, sub-rounded to sub-angular.	RPM: 20-24, WOB: 6K	90-110	20
LIMESTONE WITH SHELL AND LITTLE SAND – Limestone, 50%, medium light gray (N6), intramicrite wackestone, slightly phosphatic, fine grained, soft to moderately hard, moderately well cemented, numerous shell intraclasts; Shell, 40%, very pale orange (10YR 8/2) to light brown (5YR 6/4), mostly shell fragments to 0.4- inch; Sand, 10%, clear to very light gray (N8), mostly quartz, some calcareous, fine to medium grained, sub-rounded to sub-angular.	RPM: 20-24, WOB: 6-8K	110-130	20
LIMESTONE WITH SHELL AND LITTLE SAND- Limestone, 70%, medium light gray (N6), intramicrite wackestone, slightly phosphatic, fine grained, soft to moderately hard, moderately- well cemented, numerous shell intraclasts; Shell, 20%, very pale orange (10YR 8/2) to light brown (5YR 6/4), mostly shell fragments to 0.4- inch; Sand, 10%, clear to very light gray (N8), mostly quartz, some calcareous, fine to medium grained, sub-rounded to sub-angular.	RPM: 20-26, WOB: 6-8K	130-170	40

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
LIMESTONE WITH SHELL AND SOME SAND – Limestone, 70%, greenish gray (5GY 6/1) and medium light gray (N6), grainstone, phosphatic, fine grained, moderately hard, moderately- well cemented; Shell, 15%, very pale orange (10YR 8/2) to light brown (5YR 6/4), mostly shell fragments to 0.2- inch; Sand, 15%, clear to very light gray (N8), mostly quartz, fine grained, sub-rounded to sub-angular; Clay, trace, very light gray (N8), calcareous, very soft, non- plastic.	RPM: 20, WOB: 7K	170-180	10
SANDY CLAY WITH SHELL AND LITTLE LIMESTONE– Clay, 50%, grayish olive (10Y 4/2) to dusky yellowish green (10GY 3/2), silty, slightly phosphatic, very soft to soft, cohesive, non-plastic; Shell, 25%, very pale orange (10YR 8/2) to light brown (5Y 6/4), bivalves, mostly tests to 0.3 inch; Sand, 15%, very light gray (N8), calcareous, detritic, some clear, quartz, very- fine to fine grained, sub-rounded to sub- angular; Limestone, 10%, yellowish gray (5Y 7/2), biosparitic, with shell intraclasts, slightly phosphatic, vuggy, moderately- well cemented.	RPM: 20, WOB: 5K TOP OF HAWTHORN	180 – 186	6
CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray (5G 4/1) with trace of pale olive (10Y 6/2), silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very - fine grained, sub-rounded; Shell, trace, very pale orange (10YR 8/2), isolated tests to 0.2 inch. Between 185 and 240 ft bpl large (more than 50%) amount of cement fragments in cuttings. Diminishing with depth and disappearing below 260 ft bpl.	RPM: 44, WOB: 4K	186 – 300	114
CLAY WITH VERY LITTLE SAND AND SHELL– Clay, 90%, dark greenish gray (5G 4/1), some grayish olive green (5GY 3/2), silty, soft to very soft, very cohesive, non-plastic; Sand, 5%, clear, quartz, fine grained, sub-rounded; Shell, 5%, very pale orange (10YR 8/2), small tests to 0.2-inch.	RPM: 30, WOB: 5K	300 – 310	10
CLAY – Clay, 100%, grayish olive (10Y 4/2) to dark greenish gray (5G 4/1), silty, slightly phosphatic to phosphatic, trace calcareous (limey), very cohesive, very soft to moderately hard, non-plastic; Sand, trace, clear, quartz, very- fine grained, sub-rounded; Shell, trace, white (N9) to very pale orange (10YR 8/2), tests up to 0.2 inch; Chert, trace, olive gray (5Y 4/1), micritic, very hard.	RPM: 30, WOB: 5K	310 – 470	160
CLAY WITH VERY LITTLE SAND – Clay, 95%, olive gray (5Y 4/1) to grayish yellow green (5GY 7/2), mostly silty, some calcareous, phosphatic, cohesive, very soft,	RPM: 30, WOB: 6K	470 - 510	40

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
low plasticity to non-plastic; Sand, 5%, clear, quartz, very-fine grained, sub-rounded.			
CLAY WITH LITTLE LIMESTONE – Clay, 90%, 60% pale olive (10Y 6/2), calcareous (marl), 40% grayish olive (10Y 4/2), silty, very phosphatic, very soft to soft, highly cohesive, non- plastic; Limestone, 10%, grayish yellow green (5GY 7/2) to white (N9), arenaceous, slightly phosphatic, fine grained, poorly cemented, soft, microporous; Sand, trace, clear to light greenish gray (5GY 8/1), quartz and calcareous, very- fine to fine grained; Chert, trace, olive gray, (5Y 4/1), micritic, very hard.	RPM: 45-48, WOB: 3-4K	510 - 530	20
CLAY, SOME LIMESTONE AND VERY LITTLE SAND – Clay, 80%, pale greenish yellow (10Y 8/2) to yellowish gray (5Y 7/2), very soft to soft, calcareous, some silty, highly phosphatic, non-plastic, cohesive; Limestone, 15%, yellowish gray (5Y 7/2), arenaceous, phosphatic, fine grained, poorly cemented, soft, microporous; Sand, 5%, light gray (N7) to clear, mostly calcareous, detritic, some quartz, very- fine to fine grained, sub-rounded to angular.	RPM: 45-46 WOB: 3-4K	530 - 560	30
CLAY – Clay, 100%, pale olive (10Y 6/2), silty, very slightly calcareous, slightly phosphatic, very soft to soft, cohesive, non- plastic; Limestone, trace, grayish yellow green (5GY 7/2), arenaceous, slightly phosphatic, fine grained, poorly cemented, soft, microporous; Sand, trace, clear to light greenish gray (5GY 8/1), quartz and calcareous, very fine to fine grained.	RPM: 45-46 WOB: 3-4K	560 -570	10
CLAY WITH LITTLE LIMESTONE – Clay, 90%, mostly pale greenish yellow (10Y 8/2), calcareous (marl), some grayish olive green (5GY 3/2), silty, phosphatic, very soft to soft, highly cohesive, non- plastic to low plasticity; Limestone, 10%, grayish yellow green (5GY 7/2) to white (N9), arenaceous, slightly phosphatic, fine grained, poorly cemented, soft, microporous; Sand, trace, clear to light greenish gray (5GY 8/1), quartz and calcareous, very- fine to fine grained.	RPM: 45-46 WOB: 3-4K	570-580	10
CLAY – Clay, 100%, pale olive (10Y 6/2) to pale greenish yellow (10Y 8/2), slightly calcareous, silty, phosphatic, very soft to soft, cohesive, non- plastic; Limestone, trace, grayish yellow green (5GY 7/2), arenaceous, slightly phosphatic, fine grained, microporous, poorly cemented, soft; Sand, trace, clear to light greenish gray (5GY 8/1), quartz and calcareous, very- fine to fine grained.	RPM: 45-46 WOB: 3-4K	580-630	50
CALCAREOUS CLAY (MARL) AND SOME	RPM: 45-46	630-640	10

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
LIMESTONE WITH LITTLE SAND – Clay, 70%, 90% yellowish gray (5Y 7/2), calcareous (marl), 10% grayish olive (10Y 4/2), silty, phosphatic, moderately soft to very soft, non-plastic, non-cohesive; Limestone, 20%, yellowish gray (5Y 7/2), oolitic grainstone, phosphatic, fine grained, poorly cemented, soft to moderately hard; Sand, 10%, clear to light gray, mostly calcareous, detritic, some quartz, very -fine to fine grained, sub-rounded to angular.	WOB: 3-4K		
CALCAREOUS CLAY (MARL) WITH VERY LITTLE LIMESTONE AND SHELL – Clay, 90%, 80% pale olive (10Y 6/2), calcareous (marl), 20% grayish olive green (5GY 3/2), silty, phosphatic, very soft to soft, non-plastic, cohesive; Limestone, 5%, very pale orange (10YR 8/2) to white (N9), arenaceous, some oolitic grainstone, phosphatic, fine grained, poorly cemented, very soft to soft; Shell, 5%, very pale orange (10Y 8/2) to white (N9), tests to 0.1-inch; Sand, trace, clear, quartz, very- fine to fine grained, sub-rounded.	RPM: 45-46 WOB: 3-4K	640-680	40
CALCAREOUS CLAY (MARL) AND SOME LIMESTONE WITH VERY LITTLE SAND – Clay, 70%, 90% yellowish gray (5Y 7/2), calcareous, trace white (N9), 10% grayish olive (10Y 4/2), silty, phosphatic, moderately soft to very soft, non-plastic, non-cohesive; Limestone, 25%, yellowish gray (5Y 7/2), oolitic grainstone, phosphatic, fine grained, poorly cemented, soft to moderately hard; Sand, 5%, clear to light gray, mostly calcareous, detritic, some quartz, very- fine to fine grained, sub-rounded to angular.	RPM: 45-46 WOB: 3-4K	680-690	10
CLAY WITH LITTLE LIMESTONE – Clay, 90%, mostly pale greenish yellow (10Y 8/2), calcareous (marl), some grayish olive green (5GY 3/2), silty, phosphatic, very soft to soft, highly cohesive, non- plastic to low plasticity; Limestone, 10%, grayish yellow green (5GY 7/2) to white (N9), arenaceous, slightly phosphatic, fine grained, poorly cemented, soft, microporous; Sand, trace, clear to light greenish gray (5GY 8/1), quartz and calcareous, very- fine to fine grained.	RPM: 44-46 WOB: 3-4K	690-730	40
CALCAREOUS CLAY (MARL) AND LIMESTONE WITH LITTLE SAND – Clay, 60%, 80% yellowish gray (5Y 7/2) to white (N9), calcareous, 20% grayish olive (10Y 4/2), silty, very phosphatic, moderately soft to very soft, non-plastic, poorly-cohesive; Limestone, 30%, yellowish gray (5Y 7/2), oolitic grainstone, phosphatic, fine grained, poorly cemented, soft to moderately hard; Sand, 10%, clear to light gray, mostly calcareous, detritic,	RPM: 44-46 WOB: 3-4K	730-740	10

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
some quartz, very -fine to fine grained, sub-rounded to angular.			
LIMESTONE WITH VERY LITTLE CLAY AND SHELL- Limestone, 90%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), biosparitic grainstone, fossiliferous with forams and shell intraclasts, phosphatic, moderately- well cemented, moderately hard, vuggy, porous; Clay, 5% to trace at the bottom, yellowish gray (5Y 7/2), calcareous (marl), slightly phosphatic, very soft, non- plastic; Shell, 5%, very pale orange (10YR 8/2) to white (N9), tests to 0.3-inch.	Sample from 750-760 consisted of mostly cement. RPM: 44-46 WOB: 3-5K	740-770	30
LIMESTONE – Limestone, 100%, yellowish gray (5Y 8/1), sparry grainstone, fine to medium grained, sub-rounded, trace of fossils, slightly phosphatic, moderately-well cemented, soft, porous.	RPM: 46, WOB: 5-8K	770-840	70
LIMESTONE – Limestone, 100%; 85% yellowish gray (5Y 8/1), biosparitic, highly fossiliferous, with large amounts of foraminifera, crinoids and bivalves shell fragments, poorly cemented, very soft to soft, vuggy, porous; 15%, light gray (N7) to medium light gray (N6), micritic, moderately hard.	RPM: 40-46 WOB: 8-14K	840-910	70
LIMESTONE– Limestone, 100%; 95%, very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), biosparitic grainstone, fossiliferous, fine grained, poorly cemented, very soft to soft; 5%, light gray (N7) to medium light gray (N6), micritic to fine crystalline, well cemented, hard.	RPM: 40-46 WOB: 10-13K	910-930	20
LIMESTONE AND LITTLE DOLOMITE – Limestone, 90%; 70% very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), biosparitic grainstone, highly fossiliferous (forminifera, shell fragments), fine grained, poorly to moderately- well cemented, very soft to moderately hard; 30% yellowish gray (5Y 7/2), dolomitic, fine crystalline, slightly vuggy, moderately hard; Dolomite, 10%, very light gray (N8) to pale yellowish brown (10YR 6/2), micritic to fine crystalline, well cemented, hard.	RPM: 40, WOB: 10-13K	930-940	10
LIMESTONE – Limestone, 100%; 95% yellowish gray (5Y 7/2), grainstone, few fossils (foraminifera), poorly cemented, very soft, vuggy, porous; 5%, light gray (N7) to medium light gray (N6), micritic, moderately hard.	RPM: 36, WOB: 6-12K	940-960	20
LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; 90% yellowish gray (5Y 7/2), biosparitic, fossiliferous (foraminifera, crinoids), fine grained; 10% light gray (N7), fine crystalline, partly slightly dolomitic, poorly to moderately- well cemented, very soft to moderately hard, vuggy, microporous; Dolomite, 5%, grayish orange (10YR 7/4) to medium gray	RPM: 36, WOB: 10K	960-1050	90

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
(N5), fine crystalline to micritic, moderately hard, slightly vuggy; Clay (marl), trace, yellowish gray (5Y 8/1), very soft, non plastic.			
LIMESTONE AND SOME DOLOMITE – Limestone, 70%, very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), biosparitic, fossiliferous (foraminifera and crinoids, some bivalves shells), fine grained, very soft to soft, poorly cemented, vuggy, porous; Dolomite, 30%, moderate olive brown (5Y 4/4), olive gray (5Y 3/2) to medium gray (N5), very- fine crystalline to micritic, very-well cemented, hard, slightly vuggy.	RPM: 36, WOB: 10K	1050-1060	10
LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; 80% yellowish gray (5Y 7/2), biosparitic, fossiliferous (foraminifera, crinoids), fine grained, poorly cemented, very soft, vuggy; 20%, very pale orange (10YR 8/2) to light gray (N7), dolomitic, very- fine crystalline to micritic, well cemented, moderately hard; Dolomite, 5%, grayish orange (10YR 7/4) to medium gray (N5), fine crystalline to micritic, moderately hard, slightly vuggy; Clay (marl), trace, yellowish gray (5Y 8/1), very soft, non plastic.	RPM: 36, WOB: 10K	1060-1070	10
LIMESTONE AND LITTLE DOLOMITE – Limestone, 90%, very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), biosparitic, fossiliferous (foraminifera, crinoids), fine grained, poorly cemented, very soft to soft, vuggy; Dolomite, 10%, dark gray (N3) to medium gray (N5) and grayish orange (10YR 7/4), very- fine crystalline, well cemented, hard, slightly vuggy.	RPM: 36, WOB: 10K	1070-1080	10
LIMESTONE AND SOME DOLOMITE – Limestone, 75%, very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), biosparitic, fossiliferous (foraminifera and crinoids, some bivalves shells), partly dolomitic, fine grained, poorly cemented, very soft to soft, vuggy, porous; Dolomite, 25%, moderate olive brown (5Y 4/4), olive gray (5Y 3/2) to medium gray (N5), very fine crystalline to micritic, hard, well cemented, slightly vuggy.	RPM: 36, WOB: 10K	1080-1100	20
DOLOMITE AND LIMESTONE- Dolomite, 60%, dark gray (N3) to medium gray (N5) and grayish orange (10YR 7/4), very- fine crystalline to micritic, hard, slightly vuggy; Limestone, 40%, very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), biosparitic, with some foraminifera, partly dolomitic, fine grained, poorly cemented, very soft to soft, vuggy, porous.	RPM: 36, WOB: 10K	1100-1110	10

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; yellowish gray (5Y 7/2) to very pale orange (10YR 8/2), biosparitic, with some foraminifera, partly dolomitic, fine grained, poorly cemented, very soft to soft, vuggy, porous; Dolomite, 5%, grayish orange (10YR 7/4) to medium gray (N5), very- fine crystalline to micritic, moderately- well cemented, moderately hard, slightly vuggy; Clay (marl), trace, yellowish gray (5Y 8/1), very soft, non plastic.	RPM: 36, WOB: 10K	1110-1140	30
LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), biosparitic, with some foraminifera, partly dolomitic, fine grained, poorly cemented, very soft to soft, vuggy, porous; Dolomite, 50%, moderate yellowish brown (10YR 5/4) to dark gray (N3), very- fine crystalline to micritic, moderately- well cemented, hard, slightly vuggy.	RPM: 36-44, WOB: 10K	1140-1150	10
LIMESTONE AND SOME DOLOMITE – Limestone, 75%, very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), biosparitic, fossiliferous (foraminifera and crinoids), partly dolomitic, fine grained, poorly cemented, very soft to soft, vuggy, porous; Dolomite, 25%, very light gray (N8) to medium gray (N5), little grayish orange (10 YR 8/2), very-fine crystalline to micritic, well cemented, moderately hard, slightly vuggy.	RPM: 36-44, WOB: 10K	1150-1160	10
LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), biosparitic, with some foraminifera, partly dolomitic, fine grained, poorly cemented, very soft to soft, vuggy, porous; Dolomite, 50%, very light gray (N8) to medium dark gray (N4), little yellowish brown (10YR 5/4) very fine crystalline to micritic, moderately- well cemented, moderately hard, slightly vuggy.	RPM: 36-44, WOB: 10-12K	1160-1170	10
LIMESTONE AND SOME DOLOMITE – Limestone, 70%, very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), biosparitic, fossiliferous (foraminifera and crinoids), partly dolomitic, fine grained, poorly cemented, very soft to soft, vuggy, porous; Dolomite, 30%, very light gray (N8) to medium gray (N5), little grayish orange (10 YR 8/2), very fine crystalline to micritic, well cemented, moderately hard, slightly vuggy.	RPM: 36-44, WOB: 10-12K	1170-1180	10
DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown (10YR 6/2), little dark yellowish brown (10YR 4/2) and medium light gray (N6), very-fine crystalline, slightly vuggy, well cemented, moderately hard to hard; Limestone, 5%, very pale orange	RPM: 36 WOB: 12K	1180-1190	10

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
(10YR 8/2) to yellowish gray (5Y 7/2), biosparitic with trace of forams, very- fine grained, poorly cemented, soft.			
DOLOMITE AND SOME LIMESTONE– Dolomite, 80%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4) and medium light gray (N6), very-fine crystalline, slightly calcareous, well cemented, moderately hard to hard, slightly vuggy; Limestone, 20%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), biosparitic, very-fine grained, poorly to moderately- well cemented, soft, slightly vuggy.	RPM: 36-44 WOB: 10-15K	1190-1220	30
DOLOMITE- Dolomite, 100%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4) and dark gray (N3), very- fine crystalline, moderately-well to well cemented, hard, few vugs; Limestone, trace, very pale orange (10YR 8/2), biosparitic, very-fine grained, moderately- well cemented, soft, slightly vuggy.	RPM: 44 WOB: 10-15K	1220-1230	10
DOLOMITE AND LITTLE LIMESTONE – Dolomite, 90%, pale yellowish brown (10YR 6/2), moderate yellowish brown (10YR 5/4) and medium light gray (N6) to medium dark gray (N4), very- fine crystalline, slightly vuggy, well cemented, moderately hard to hard; Limestone, 10%, very pale orange (10YR 8/2), biosparitic, very- fine grained, slightly fossiliferous (fragments of shell and coral), poorly cemented, soft, slightly vuggy.	RPM: 44 WOB: 10-15K	1230-1240	10
LIMESTONE AND DOLOMITE- Limestone, 60%, very pale orange (10YR 8/2), slightly fossiliferous (fragments of shell and coral), very fine grained, poorly cemented, soft, slightly vuggy; Dolomite, 40%, pale yellowish brown (10YR 6/2), moderate yellowish brown (10YR 5/4) and medium light gray (N6) to medium dark gray (N4), sucrosic to very-fine crystalline, well cemented, moderately hard to hard, slightly vuggy, Clay, trace, medium dark gray (N4), moderately soft, non- plastic, cohesive.	RPM: 44 WOB: 10-15K	1240-1270	30
DOLOMITE AND VERY LITTLE LIMESTONE; Dolomite, 95%, from pale yellowish brown (10YR 6/2) to grayish olive green (5GY 3/2) and greenish black (5GY 2/1) with trace of medium light gray (N6) to medium gray (N5), sucrosic to micritic, moderately well- to well cemented, hard to very hard, few small vugs; Limestone, 5%, very pale orange, (10YR 8/2), mostly dolomitic, micritic, some biosparitic, very- fine grained, slightly fossiliferous, poorly to moderately- well cemented, soft to moderately hard, slightly vuggy.	RPM: 36-44 WOB: 10-15K	1270-1330	60
DOLOMITE AND VERY LITTLE LIMESTONE –	RPM: 40-48	1330-1370	40

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
Dolomite, 95%, pale yellowish brown (10YR 6/2) to grayish orange (10YR 7/4) and very little light gray (N5), sucrosic to micritic, brittle, well cemented, moderately hard to hard with micro vugs; Limestone, 5%, very pale orange (10YR 8/2), grainstone, moderately- well cemented., soft.	WOB: 15K		
DOLOMITE AND VERY LITTLE LIMESTONE; Dolomite, 95%, from pale yellowish brown (10YR 6/2) to grayish olive green (5GY 3/2) with some medium light gray (N6) to medium gray (N5), sucrosic to micritic, hard to very hard, moderately- well to well cemented, few small vugs; Limestone, 5%, very pale orange, (10YR 8/2), grainstone, moderately- well cemented, soft.	RPM: 36-48 WOB: 10-15K	1370-1410	40
LIMESTONE AND DOLOMITE– Limestone, 60%, 90% very light gray (N8), clayey limestone with other detritic impurities, very soft to soft, poorly cemented, vuggy; 10% yellowish gray (5Y 8/1), very calcareous, grainstone, moderately- well cemented, moderately hard, vuggy; Dolomite, 40%, from pale yellowish brown (10YR 6/2) to grayish olive green (5GY 3/2), fine crystalline, well cemented, hard, few small vugs; Clay, trace, greenish gray (5G 6/1) to medium gray (N5), slightly calcareous, soft to very soft, non- plastic.	RPM: 36 WOB: 10-18K	1410-1420	10
LIMESTONE AND SOME DOLOMITE- Limestone, 80%, very pale orange (10YR 8/2) to grayish orange (10Y 7/4), biospartic, fine grained, slightly fossiliferous, poorly cemented, moderately soft, vuggy, porous; Dolomite, 20%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), fine crystalline, vuggy, well cemented, hard; Clay, trace, greenish gray (5G 6/1) to medium gray (N5), slightly calcareous, soft.	RPM: 36 WOB: 10-20K	1420-1440	20
DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown (10YR 6/2) to grayish orange (10YR 7/4) and very little light gray (N5), fine crystalline, with micro vugs, well cemented, hard; Limestone, 5%, very pale orange (10YR 8/2), grainstone, moderately- well cemented, soft.	RPM: 30 WOB: 20K	1440-1450	10
LIMESTONE AND LITTLE DOLOMITE-Limestone, 90%, very pale orange (10YR 8/2) to very light gray (N8), oolitic grainstone, fine grained, poorly cemented, soft; Dolomite, 10%, pale yellowish brown (10YR 6/2) to medium dark gray (N4), fine crystalline to micritic, compact, well cemented, hard.	RPM: 30 WOB: 20K	1450-1460	10
DOLOMITE – Dolomite, 100%, light brown (5YR 6/4) to dark yellowish brown (10YR 4/2), fine crystalline, vuggy, moderately hard; little dark gray (N3), sucrosic to micritic,	RPM: 30-36 WOB: 15-20K	1460-1510	50

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
moderately- well cemented, moderately hard to hard, very slightly vuggy; Limestone, trace, very pale orange (10YR 8/2), oolitic grainstone, fine grained, poorly cemented, moderately hard			
LIMESTONE AND DOLOMITE – Limestone, 60%, very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), oolitic grainstone, very- fine grained, dolomitic, fossiliferous, poorly to moderately- well cemented, soft; Dolomite, 40%, moderate yellowish brown (10YR 5/4) and medium gray (N5), micritic to very-fine crystalline, poorly to moderately- well cemented, moderately hard to hard, slightly vuggy.	RPM: 32 WOB: 5K	1510-1530	20
LIMESTONE AND SOME DOLOMITE– Limestone, 80%, very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), oolitic grainstone, very- fine grained, fossiliferous, dolomitic, soft, poorly to moderately- well cemented, slightly vuggy; Dolomite, 20%, medium light gray (N6) to medium dark gray (N4), fine crystalline to micritic, multiple limestone inclusions and fossils, moderately- well cemented, moderately hard,	RPM: 28 WOB: 20-22K	1530-1550	20
DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown (10YR 6/2), dark yellowish brown (10YR 4/2), grayish orange (10YR 7/4), and medium light gray (N6) to medium dark gray (N4), sucrosic, some micritic to very-fine crystalline, slightly vuggy, well cemented, moderately hard; Limestone, 5%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), oolitic dolomitic grainstone, very fine grained, poorly cemented, soft.	RPM: 28-44 WOB: 15-22K	1550-1600	50
DOLOMITE– Dolomite, 100%, pale yellowish brown (10YR 6/2), dark yellowish brown (10YR 4/2), grayish orange (10YR 7/4) and medium light gray (N6) to medium dark gray (N4, micritic to very-fine crystalline, some sucrosic, slightly vuggy, moderately hard, well cemented; Limestone, trace, very pale orange (10YR 8/2), oolitic dolomitic grainstone, very- fine grained, poorly cemented, soft.	RPM: 40-48 WOB: 15K	1600-1620	20
DOLOMITE AND LITTLE LIMESTONE – Dolomite, 85%, pale yellowish brown (10YR 6/2), dark yellowish brown (10YR 4/2), grayish orange (10YR 7/4), and medium light gray (N6) to medium dark gray (N4), sucrosic, some micritic to very-fine crystalline, slightly vuggy, well cemented, moderately hard, Limestone, 15%, very pale orange (10YR 8/2), oolitic dolomitic grainstone, trace of forams, very- fine grained, poorly cemented, soft.	RPM: 36-44 WOB: 15K	1620-1650	30
LIMESTONE AND SOME DOLOMITE– Limestone,	RPM: 36-44	1650-1660	10

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
70%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), oolitic grainstone with nodules, very- fine grained, slightly fossiliferous with forams, partly dolomitic, soft, poorly cemented, slightly vuggy; Dolomite, 30%, medium light gray (N6) to medium dark gray (N4), micritic, little pale yellowish, fine crystalline, moderately- well cemented, moderately hard.	WOB: 15K		
DOLOMITE AND SOME LIMESTONE – Dolomite, 75%, pale yellowish brown (10YR 6/2), dark yellowish brown (10YR 4/2) and grayish orange (10YR 7/4), sucrosic to fine crystalline, some medium light gray (N6) to medium dark gray (N4), micritic, moderately hard, moderately well cemented; Limestone, 25%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), oolitic grainstone with nodules, very fine grained, little micritic, slightly fossiliferous with forams, partly dolomitic, poorly cemented, soft, slightly vuggy.	RPM: 36-44 WOB: 15K	1660-1670	10
DOLOMITE AND VERY LITTLE LIMESTONE– Dolomite, 95%, pale yellowish brown (10YR 6/2), dark yellowish brown (10YR 4/2) and grayish orange (10YR 7/4), fine crystalline and sucrosic, some medium light gray (N6) to medium dark gray (N4), micritic, moderately- well cemented, moderately hard; Limestone, 5%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), grainstone, very- fine grained, little micritic, slightly fossiliferous, partly dolomitic, poorly cemented, soft, slightly vuggy.	RPM: 44 WOB: 15K	1670-1680	10
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2), dark yellowish brown (10YR 4/2) and grayish orange (10YR 7/4), fine crystalline and sucrosic, some medium light gray (N6) to medium dark gray (N4), micritic, moderately- well cemented, moderately hard; Limestone, trace, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), grainstone, very- fine grained, little micritic, slightly fossiliferous, partly dolomitic, poorly cemented, soft, slightly vuggy.	RPM: 30-44 WOB: 10-20K	1680-1720	40
DOLOMITE WITH LITTLE LIMESTONE-Dolomite, 90%, moderate yellowish brown (10YR 5/4) and some dark gray (N3), sucrosic to fine crystalline, vuggy to solid, moderately- well cemented, moderately hard,; Limestone, 10%, very pale orange (10YR 8/2) to grayish orange (10YR 7/4), dolomitic, micritic, some fine grained, slightly vuggy, moderately- well cemented, soft to moderately hard.	RPM: 32-36 WOB: 15-20K	1720-1730	10

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2), dark yellowish brown (10YR 4/2) and grayish orange (10YR 7/4), fine crystalline and sucrosic, some medium light gray (N6) to medium dark gray (N4), micritic, moderately well cemented, moderately hard; Limestone, trace, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), grainstone, very- fine grained, little micritic, slightly fossiliferous, partly dolomitic, poorly cemented, soft, slightly vuggy.	RPM: 32-36 WOB: 15-20K	1730-1740	10
DOLOMITE- Dolomite, 100%, moderate yellowish brown (10YR 5/4) to yellowish gray (5Y 8/1), fine crystalline, vuggy to solid, hard to very hard, very- well cemented; Limestone, trace, very pale orange (10YR 8/2), dolomitic, micritic, moderately- well cemented, moderately hard, slightly vuggy.	RPM: 36 WOB: 15-20K	1740-1750	10
DOLOMITE AND SOME DOLOMITIC LIMESTONE– Dolomite, 75%, pale yellowish brown (10YR 6/2), dark yellowish brown (10YR 4/2) and grayish orange (10YR 7/4), some medium light gray (N6) to medium dark gray (N4), trace black (N1), fine- crystalline to micritic, well cemented, hard to very hard, vuggy; Limestone, 25%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), dolomitic, fine crystalline, little micritic, hard, well cemented, slightly vuggy.	RPM: 36 WOB: 15-20K	1750-1760	10
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2) dark yellowish brown (10YR 4/2), some dark gray (N3), fine- crystalline to micritic, trace sucrosic, hard to very hard, slightly vuggy; Limestone, trace, very pale orange (10YR 8/2), dolomitic, micritic, moderately hard.	RPM: 36, WOB: 20- 25K	1760-1780	20
DOLOMITE AND SOME DOLOMITIC LIMESTONE– Dolomite, 75%, pale yellowish brown (10YR 6/2 and grayish orange (10YR 7/4), little light gray (N7), fine crystalline to micritic, well cemented, hard to very hard, vuggy; Limestone, 25%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), dolomitic, fine crystalline, little micritic, well cemented, hard, slightly vuggy.	RPM: 36, WOB: 20- 25K	1780-1790	10
DOLOMITE- 100%, moderate yellowish brown (10YR 5/4) to grayish orange (10YR 7/4), little light gray (N7), fine crystalline to micritic, moderately hard.	RPM: 36, WOB: 20- 25K	1790-1800	10
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2), dark yellowish brown (10YR 4/2), some dark gray (N3), sucrosic to fine- crystalline, moderately well to poorly cemented, moderately hard, slightly vuggy; Limestone, trace, very pale orange (10YR 8/2), dolomitic, micritic, moderately hard.	RPM: 36, WOB: 20- 25K	1800-1820	20
DOLOMITE AND SOME DOLOMITIC LIMESTONE–	RPM: 36,	1820-1840	20

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
Dolomite, 80%, pale yellowish brown (10YR 6/2 and grayish orange (10YR 7/4), little light gray (N7), fine-crystalline to micritic, well cemented, hard to very hard, vuggy; Limestone, 20%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), mostly dolomitic, some chalky, fine crystalline, little pellitic, poorly to moderately- well cemented, moderately hard to soft, slightly vuggy.	WOB: 20- 25K		
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2), sucrosic, moderately- well to poorly cemented, moderately hard to soft, slightly vuggy; Limestone, trace, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very- fine grained, poorly cemented, partially dolomitic, moderately hard.	RPM: 24, WOB: 5K	1840-1846	6
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2), little medium light gray (N6), mostly fine- crystalline and sucrosic, some micritic, moderately- well to very- well cemented, moderately hard to very hard, vuggy; Limestone, trace, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), partially dolomitic, very- fine grained, poorly cemented, moderately hard.	RPM: 26-40, WOB: 10-20K Core #1 collected from interval 1846.5- 1860.0 ft bpl.	1846-1870	24
DOLOMITE AND SOME LIMESTONE – Dolomite, 80%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), sucrosic, some light gray (N7) to medium light gray (N6), very-fine crystalline, moderately well cemented, moderately hard to hard, vuggy; Limestone, 20%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), dolomitic, fine crystalline, poorly to moderately well cemented, soft.	RPM: 40-44, WOB: 15-18K	1870-1900	30
DOLOMITE AND LITTLE LIMESTONE – Dolomite, 90%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), little brownish gray (5YR 4/1), very-fine crystalline, moderately-well cemented, hard, vuggy, porous; Limestone, 10%, very pale orange (10 YR 8/2), very-fine grained, partially crystalline, poorly cemented, moderately hard.	RPM: 43 WOB: 15K	1900-1950	50
DOLOMITE AND VERY LITTLE LIMESTONE– Dolomite, 95%, 80% moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), very-fine crystalline, moderately-well cemented, vuggy, porous; 20% brownish black (5YR 2/1), very-fine crystalline, moderately-well cemented, hard, slightly vuggy; Limestone, 5%, very pale orange (10YR 8/2), very-fine grained, partially crystalline, moderately hard, poorly cemented.	RPM: 43 WOB: 15K	1950-1960	10

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITE – Dolomite, 100%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), very-fine crystalline to fine crystalline, moderately-well cemented, hard, vuggy; Limestone, trace, very pale orange (10YR 8/2), very-fine grained, partially crystalline, moderately hard, poorly cemented.	RPM: 32 WOB: 15K	1960-1970	10
DOLOMITIC LIMESTONE AND SOME DOLOMITE – Limestone, 80%, yellowish gray (5Y 7/2) to pale yellowish brown (10 YR 6/2), very-fine grained and very-fine crystalline, dolomitic, poorly to moderately- well cemented, hard, slightly fossiliferous; Dolomite, 20%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), very-fine crystalline, moderately well-cemented, moderately hard, vuggy; Lignite, trace, black, micritic.	RPM: 32 WOB: 15K	1970-1980	10
DOLOMITE AND LIMESTONE – Dolomite, 60%, moderate yellowish brown (10YR 5/4), very-fine crystalline, moderately-well cemented, hard, vuggy (with calcite partially filling vugs); Limestone, 40%, very pale orange (10YR 8/2), partially dolomitic, very-fine grained, moderately hard, moderately-well cemented, fossiliferous; Clay, trace, very pale orange (10YR 8/2), calcareous, soft, non-plastic; Lignite, trace, black (N2), micritic, soft.	RPM: 32 WOB: 15K	1980-1990	10
DOLOMITE AND LITTLE LIMESTONE– Dolomite, 90%, moderate yellowish brown (10YR 5/4) with little pale yellowish brown (10YR 6/2), very-fine to fine crystalline, well cemented, hard, partially vuggy; Limestone, 10%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), partially dolomitic, very-fine grained, moderately hard, moderately-well cemented; Clay, trace, very pale orange (10YR 8/2), calcareous, soft, non-plastic; Lignite, trace, black (N2), micritic, soft.	RPM: 32 WOB: 15K	1990-2000	10
DOLOMITE AND SOME LIMESTONE – Dolomite, 80%, moderate yellowish brown (10YR 5/4) with little light gray (N7), very-fine to fine crystalline, hard, slightly vuggy; Limestone, 20%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/4), very-fine grained, partially dolomitic, moderately-well cemented, moderately hard.	RPM: 32 WOB: 15K	2000-2010	10
LIMESTONE – Limestone, 100%, very pale orange (10YR, 8/2), oolitic, very-fine to fine grained, poorly cemented, soft, slightly vuggy.	RPM: 32 WOB: 15K	2010-2020	10
DOLOMITE AND SOME DOLOMITIC LIMESTONE – Dolomite, 70%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2) with little brownish black (5YR 2/1), very-fine to fine crystalline, well cemented, hard, partially vuggy; Limestone, 30%, very pale orange	RPM: 37 WOB: 5K	2020-2030	10

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
(10YR 8/2) to pale yellowish brown (10YR 6/2), dolomitic, very-fine grained, moderately-well cemented, soft.			
LIMESTONE – Limestone, 100%, very pale orange (10YR 8/2), oolitic, slightly vuggy, forams present, poorly cemented, soft, some vugs filled with detritic impurities.	RPM: 37 WOB: 5K Some cement in cuttings.	2030-2050	20
LIMESTONE AND VERY LITTLE DOLOMITE – Limestone, 95%, very pale orange (10YR 8/2), oolitic, slightly vuggy, forams present, poorly cemented, soft, few detritic impurities; Dolomite, 5%, grayish brown (5YR 3/2), sucrosic, vuggy, well cemented, moderately hard.	RPM: 37 WOB: 5K Some cement in cuttings.	2050-2090	40
LIMESTONE – Limestone, 100%, very pale orange (10YR 8/2), oolitic, slightly vuggy, forams present, poorly cemented, soft.	RPM: 34 WOB: 15-20K	2090-2100	10
LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange (10YR 8/2), oolitic, slightly vuggy, forams present, poorly cemented, soft; Dolomite, 50%, pale brown (5YR 5/2) to dusky yellowish brown (10YR 2/2), sucrosic, vuggy, well cemented, moderately hard to hard.	RPM:20 WOB: 15-20K	2100-2120	20
LIMESTONE – Limestone, 100%, very pale orange (10YR 8/2), dolomitic, oolitic, slightly vuggy, foraminiferous, poorly cemented, soft; Dolomite, trace, pale brown (5YR 5/2) to dusky yellowish brown (10YR 2/2), micritic, moderately hard.	RPM: 26 WOB: 20-23K	2120-2150	30
DOLOMITIC LIMESTONE AND VERY LITTLE DOLOMITE – Limestone, 95%, very pale orange (10YR 8/2), dolomitic, oolitic, slightly vuggy, foraminiferous, poorly cemented, moderately soft to soft; Dolomite, 5%, medium gray (N5) to medium dark gray (N4), micritic, hard.	RPM: 26 WOB: 10-15K	2150-2170	20
DOLOMITIC LIMESTONE AND LITTLE DOLOMITE – Limestone, 90%, very pale orange (10YR 8/2), dolomitic, very-fine grained, slightly oolitic, poorly cemented, soft; Dolomite, 10%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), very-fine crystalline, poorly cemented, moderately hard.	RPM: 28 WOB: 15-20K	2170-2180	10
DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, moderate yellowish brown (10YR 5/4), very-fine crystalline, moderately-well cemented, hard, slightly vuggy; Limestone, 5%, very pale orange (10YR 8/2), partially dolomitic, very-fine grained, poorly cemented, soft, slightly fossiliferous.	RPM: 28 WOB: 10-15K	2180-2200	20
DOLOMITIC LIMESTONE AND SOME DOLOMITE – Limestone, 80%, very pale orange (10YR 8/2) to pale	RPM: 34 WOB: 20K	2200-2210	10

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
yellowish brown (10YR 6/2), very-fine grained, dolomitic, slightly fossiliferous, poorly cemented, soft; Dolomite, 20%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), very-fine crystalline, moderately-well cemented, hard.			
DOLOMITIC LIMESTONE AND LITTLE DOLOMITE– Limestone, 90%, very pale orange (10YR 8/2), very-fine grained, dolomitic, slightly fossiliferous, poorly cemented, soft; Dolomite, 10%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), very-fine crystalline, moderately- well cemented, hard, vuggy.	WOB: 10K	2210-2220	10
DOLOMITIC LIMESTONE AND SOME DOLOMITE – Limestone, 80%, very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), dolomitic, very-fine grained, slightly fossiliferous, poorly cemented, soft to very soft; Dolomite, 20%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), very-fine crystalline, moderately-well cemented, hard.		2220-2240	20
DOLOMITE AND LITTLE LIMESTONE – Dolomite, 90%, moderate yellowish brown (10YR 5/4) to pale brown (5YR 5/2) with trace dark gray (N3), very-fine crystalline, sucrosic, well cemented, hard, slightly vuggy; Limestone, 10%, very pale orange (10YR 8/2), very-fine grained, poorly cemented, soft, slightly foraminiferous.	RPM: 30-42 WOB: 10-20K Core #2 collected from interval 2272.0-2285.0 feet bpl	2240-2330	90
DOLOMITE – Dolomite, 100%, dark yellowish brown (10YR 4/2) and little medium gray (N5), micritic, hard; Limestone, trace, very pale orange (10YR 8/2), partially dolomitic, very-fine grained, moderately-well cemented, moderately hard.	RPM: 30-42 WOB: 10-20K	2330-2340	10
DOLOMITE – Dolomite, 100%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2) with little medium gray (N5) to dark gray (N3), micritic, hard, (from 2444-2445 and 2449-2450 feet bpl dolomite is moderately-well cemented, vuggy, and sucrosic); Limestone, trace, very pale orange (10YR 8/2), partially dolomitic, very-fine grained, moderately-well cemented, moderately hard.	RPM: 30-42 WOB: 10-20K Core #3 collected from interval 2341.5-2355.0 feet bpl	2340-2350	10
DOLOMITE – Dolomite, 100%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2) with little medium gray (N5), micritic, partially sucrosic, moderately-well to well cemented, hard, partially vuggy; Limestone, trace, very pale orange (10YR 8/2), partially dolomitic, very-fine grained, moderately-well cemented, moderately hard.	RPM: 34 WOB: 18K	2350-2370	20

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITE AND SOME LIMESTONE – Dolomite, 70%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), micritic, moderately-well cemented, hard, sucrosic, slightly vuggy; Limestone, 30%, very pale orange (10YRE 8/2) to yellowish gray (5Y 7/2), partially dolomitic, very-fine grained, moderately-well cemented, moderately hard.	RPM: 44 WOB: 20K	2370-2400	30
DOLOMITE – Dolomite, 100%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2) with little medium gray (N5), micritic, partially sucrosic, moderately-well to well cemented, moderately hard, partially vuggy; Limestone, trace, very pale orange (10YR 8/2), partially dolomitic, very-fine grained, moderately-well cemented, moderately hard.	RPM: 34 WOB: 20-25K	2400-2420	20
DOLOMITE – Dolomite, 100%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2) with trace amounts of very light gray (N8) to medium dark gray (N4), micritic, hard.	RPM: 32 WOB: 25K	2420-2450	30
DOLOMITE – Dolomite, 100%, dusky yellowish brown (10YR 2/2), micritic, hard; Chert, trace, dark gray (N3), very hard.	RPM: 40-44 WOB: 15-20K	2450-2470	20
DOLOMITE – Dolomite, 100%, dark yellowish brown (10YR 4/2) to dusky yellowish brown (10YR 2/2), some very light gray (N8) to medium dark gray (N4), micritic, slightly vuggy, hard; Limestone, trace, very pale orange (10YR 8/2), very-fine grained, moderately-well cemented, soft.	RPM: 40-44 WOB: 15-20K	2470-2520	50
DOLOMITE AND SOME LIMESTONE – Dolomite, 80%, dark yellowish brown (10YR 4/2) to dusky yellowish brown (10YR 2/2) and very light gray (N8) to medium dark gray (N4), micritic, well cemented, hard; Limestone, 20%, yellowish gray (5Y 7/2), very fine grained, sucrosic, moderately-well cemented, moderately hard.	RPM: 44 WOB: 15K	2520-2527	7
LIMESTONE AND SOME CHERT– Limestone, 80%, yellowish gray (5Y 7/2) to pale olive (10Y 6/2) with smudges of darker material, slightly dolomitic, fine crystalline, well cemented, moderately hard, few cavities, trace of fossils (forams), moderately- well cemented, moderately hard; Chert, 20%, medium gray (N5), very fine crystalline, very hard.	RPM: 44 WOB: 15K Core #4A collected from interval 2529.0-2535.6 feet bpl	2527-2536	9

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
LIMESTONE AND LITTLE CHERT- Limestone, 90%, yellowish gray (5Y 7/2), with some smudges of darker material, fine grained to very- fine crystalline, mostly slightly dolomitic, moderately- well to well cemented, moderately hard to hard, few cavities, trace of fossils (forams); Chert, 10%, medium gray (N5), micritic, very hard, slightly vuggy; Dolomite, trace, olive gray (5Y 3/2), fine crystalline, hard, porous.	RPM: 44 WOB: 10K Core #4B collected from interval 2536.5-2550.2 feet bpl	2536- 2550	14
LIMESTONE - Limestone, 100%, yellowish gray (5Y 7/2), fine grained to very fine crystalline, slightly dolomitic, poorly to moderately- well cemented, moderately hard to hard, few cavities, trace of fossils (forams); Chert, trace, medium gray (N5), micritic, very hard, slightly vuggy	RPM: 44 WOB: 10K	2550- 2590	40
LIMESTONE- Limestone, 100%, yellowish gray (5Y 7/2), little very pale orange (10YR8/2) and chalky, fine grained, poorly to moderately- well cemented, soft, trace of fossils; Chert, trace, medium gray (N5), very hard.	RPM: 40 WOB: 10-15K Core #5 collected from interval 2602.0-2618.0 ft pl	2590- 2613	23
LIMESTONE- Limestone, 100%, yellowish gray (5Y 7/2), with some smudges of darker material, fine grained to very- fine crystalline, mostly slightly dolomitic, moderately well- to well cemented, moderately hard to hard, trace of fossils.	RPM: 36 WOB: 12K	2613-2618	5
LIMESTONE- Limestone, 100%, yellowish gray (5Y 7/2), little very pale orange (10YR 8/2) and chalky, fine grained, poorly to moderately- well cemented, soft, trace of fossils; Chert, trace, micritic, medium gray (N5), very hard; Clay, trace, white (N9) to yellowish gray (5Y 7/2), calcareous, chalky, very soft, non- plastic.	RPM: 34 WOB: 20K	2618- 2680	62
LIMESTONE- Limestone, 100%, very pale orange (10YR 8/2), yellowish gray (5Y 8/1) and some grayish orange (10YR 7/4) with black (N1) specs, fine grained, poorly to moderately- well cemented, slightly dolomitic, soft to moderately hard, frequent irregular fractures, vuggy, fossiliferous with forams; Chert, trace, olive black (5Y 2/1), very hard.	RPM: 26-32 WOB: 12-17K Core #6 collected from interval 2681.0- 2694.8 ft bpl	2680-2720	40
LIMESTONE- Limestone, 100%, yellowish gray (5Y 7/2), little very pale orange (10YR 8/2) and chalky, partly dolomitic, fine grained, poorly to moderately well-cemented, soft, trace of fossils; Clay, trace, white (N9) to yellowish gray (5Y 7/2), calcareous, chalky, very soft, non- plastic.	RPM: 26-30 WOB: 12-17K	2720-2740	20

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
LIMESTONE- Limestone, 100%, very pale orange (10YR 8/2), some yellowish gray (5Y 8/1), fine grained, poorly to moderately- well cemented, dolomitic, some grains with forams, vuggy, soft; Chert, trace, pale yellowish brown (10YR 6/2), very hard.	RPM: 30 WOB: 12-15K Core #7 collected from interval 2758.0- 2769.0 ft bpl	2740-2790	50
LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%, very pale orange (10YR 8/2), some yellowish gray (5Y 8/1), fine grained, poorly to moderately- well cemented, slightly dolomitic, some grains with forams, vuggy, soft; Dolomite, 5%, moderately yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), micritic, well cemented, hard; Chert, trace, pale yellowish brown (10YR 6/2), very hard.	RPM: 34-40 WOB: 20-25K	2790-2810	20
LIMESTONE- Limestone, 100%, very pale orange (10YR 8/2), slightly dolomitic, fine grained, poorly to moderately- well cemented, soft, trace of fossils; Dolomite, trace, moderately yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), micritic, well cemented, hard; Marl, trace, white, soft.	RPM: 18-42 WOB: 15-25K	2810-2880	70
DOLOMITE AND LIMESTONE- Dolomite, 70%, moderately yellowish brown (10YR 5/4) to pale brown (5YR 5/2), micritic to sucrosic, well cemented, vuggy, moderately hard; Limestone, 30%, very pale orange (10YR 8/2), slightly dolomitic, fine grained, poorly to moderately- well cemented, soft, trace of fossils.	RPM: 12 WOB: 30K	2880-2890	10
LIMESTONE- Limestone, 100%, very pale orange (10YR 8/2), slightly dolomitic, fine grained, poorly to moderately- well cemented, soft, trace of fossils; Dolomite, trace, moderately yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), micritic, well cemented, hard.	RPM: 10 WOB: 30K Core #8 collected from interval 2890.0- 2903.0 ft bpl	2890-2900	10
DOLOMITE AND SOME LIMESTONE- Dolomite, 70%, moderately yellowish brown (10YR 5/4) to pale brown (5YR 5/2), micritic to sucrosic, well cemented, vuggy, moderately hard; Limestone, 30%, very pale orange (10YR 8/2), slightly dolomitic, fine grained, poorly to moderately- well cemented, soft, trace of fossils.	RPM: 12 WOB: 32K	2900-2910	10
DOLOMITE AND LIMESTONE- Dolomite, 50%, pale yellowish brown (10YR 6/2) to dark pale brown (10YR 4/2), micritic, well cemented, hard; Limestone, 50%, very pale orange (10YR 8/2), slightly dolomitic, fine grained, poorly to moderately- well cemented, soft, trace of fossils.	RPM: 12 WOB: 32K	2910-2950	40

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITE AND LIMESTONE- Dolomite, 65%, pale yellowish brown (10YR 6/2) to dark pale brown (10YR 4/2), micritic, well cemented, hard; Limestone, 35%, very pale orange (10YR 8/2), slightly dolomitic, very-fine grained, poorly to moderately- well cemented, soft.	RPM: 38 WOB: 25K	2950-2970	20
DOLOMITE AND LIMESTONE- Dolomite, 50%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2), micritic, well cemented, hard; Limestone, 50%, very pale orange (10YR 8/2), slightly dolomitic, fine grained, poorly to moderately-well cemented, soft.	RPM: 40 WOB: 5-25K	2970-2980	10
DOLOMITE AND SOME LIMESTONE – Dolomite, 85%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2), micritic, partially vuggy, moderately-well to well cemented, hard; Limestone, 15%, very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), very-fine grained, dolomitic, slightly sparitic, poorly to moderately-well cemented, soft.	RPM: 46 WOB: 5-25K	2980-2990	10
DOLOMITE AND LIMESTONE – Dolomite, 60%, moderate yellowish brown (10YR 4/2), very-fine crystalline, slightly vuggy, moderately-well cemented, hard; Limestone, 40%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very-fine grained, slightly dolomitic, moderately- well cemented, moderately hard.	RPM: 46 WOB: 15K	2990-3000	10
LIMESTONE AND DOLOMITE – Limestone, 60%, very pale orange (10YR 8/2), very-fine grained, slightly dolomitic, poorly cemented, soft; Dolomite, 40%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), very-fine crystalline, poorly to moderately-well cemented, moderately hard to soft.	RPM: 46 WOB: 25K	3000-3020	20
DOLOMITE AND SOME LIMESTONE – Dolomite, 70%, pale yellowish brown (10YR 6/2) to pale brown (5YR 5/2), micritic to sucrosic, slightly vuggy, moderately-well cemented, hard; Limestone, 30%, very pale orange (10YR 8/2), fine grained, slightly dolomitic, poorly cemented, soft.	RPM: 40 WOB: 25K	3020-3030	10
DOLOMITE AND LITTLE LIMESTONE – Dolomite, 90%, pale yellowish brown (10YR 6/2) to pale brown (5YR 5/2), micritic to sucrosic, slightly vuggy, moderately-well cemented, hard; Limestone, 10%, very pale orange (10YR 8/2), fine grained, slightly dolomitic, poorly cemented, soft	RPM: 40 WOB: 25K	3030-3040	10

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2) with some grayish brown (5YR 3/2), micritic, vuggy, moderately-well cemented, hard; Limestone, trace, very pale orange (10YR 8/2), fine grained, slightly dolomitic, poorly cemented, soft.	RPM: 24-30 WOB: 12-30K	3040-3110	70
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2) to dusky yellowish brown (10YR 2/2) and light olive gray (5Y 6/1) to olive gray (5Y 4/1), micritic, primarily compact (10% vuggy), well cemented, hard.	RPM: 40 WOB: 10-15K	3110-3130	20
DOLOMITE AND SOME LIMESTONE – Dolomite, 85%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2), micritic, primarily vuggy, moderately-well cemented, hard; Limestone, 15%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very-fine grained, dolomitic, moderately-well cemented, moderately hard.	RPM: 36 WOB: 25K	3130-3140	10
DOLOMITE – Dolomite, 100%, mostly pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), little light gray (N7), micritic, little fine crystalline and sucrosic, compact, well cemented, hard.	RPM: 44 WOB: 25K	3140-3150	10
DOLOMITE – Dolomite, 100%, dark yellowish brown (10YR 4/2), very-fine to fine crystalline, mostly sucrosic, some micritic, vuggy, moderately-well cemented, moderately hard to soft; Limestone, trace, very pale orange (10YR 8/2), very-fine grained, dolomitic, moderately hard.	RPM: 44 WOB: 25K	3150-3160	10
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), micritic, little fine crystalline, moderately well cemented, hard to moderately hard; Limestone, trace, very pale orange (10YR 8/2), very-fine grained, dolomitic, moderately well cemented, moderately hard.	RPM: 44 WOB: 25K	3160-3170	10
DOLOMITE – Dolomite, 100%, light olive gray (5Y 5/2) to moderate yellowish brown (10YR 5/4), little light gray (N7), micritic, little fine crystalline, poorly cemented and soft, with numerous boulder type fragments, very hard; Limestone, trace, very pale orange (10YR 8/2), very-fine grained, dolomitic, poorly cemented, soft.	RPM: 48 WOB: 15-20K Dredging.	3170-3180	10
DOLOMITE – Dolomite, 100%, moderate yellowish brown (10YR 5/4), fine crystalline, sucrosic, poorly cemented and soft, with few boulder type fragments, micritic, very hard.	RPM: 48 WOB: 15-20K	3180-3190	10

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITE – Dolomite, 100%, light olive gray (5Y 5/2) to dark yellowish brown (10YR 4/2), some light gray (N7) to dark gray (N3), micritic, little fine crystalline, poorly cemented and soft, with very few boulder type fragments, very hard; Limestone, trace, very pale orange (10YR 8/2), very-fine grained, dolomitic, poorly cemented, soft.	RPM: 48 WOB: 15-20K	3190-3230	40
DOLOMITE – Dolomite, 100%, moderate yellowish brown (10YR 5/4), fine crystalline, sucrosic, poorly cemented and soft, with very little light gray (N7), micritic and moderately hard.	RPM: 48 WOB: 15-20K	3230-3240	10
DOLOMITE – Dolomite, 100%, light olive gray (5Y 5/2) to dark yellowish brown (10YR 4/2), some light gray (N7) to dark gray (N3), micritic, little fine crystalline, poorly cemented and soft; Limestone, trace, very pale orange (10YR 8/2), very-fine grained, dolomitic, poorly cemented, soft.	RPM: 48 WOB: 15-20K	3240-3270	30
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), very-fine crystalline, sucrosic, poorly cemented, soft; Limestone, trace, very pale orange (10YR 8/2), very-fine crystalline, dolomitic, poorly cemented, soft.	RPM: 44 WOB: 20K	3270-3280	10
DOLOMITE – Dolomite, 100%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), micritic, well cemented, hard; Limestone, trace, very pale orange (10YR 8/2), very -fine crystalline, dolomitic, poorly cemented, soft.	RPM: 44 WOB: 25K	3280-3300	20
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4) and olive gray (5Y 4/1), micritic to very-fine crystalline, slightly vuggy, well cemented, hard.	RPM: 44 WOB: 20K	3300-3310	10
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2), some light gray (N7) to dark gray (N3), micritic to very-fine crystalline, poorly cemented, soft to moderately hard; Limestone, trace, very pale orange (10YR 8/2), very fine grained, dolomitic, poorly cemented, soft.	RPM: 44 WOB: 25K	3310-3320	10
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2), micritic to very-fine crystalline, well cemented, hard.	RPM: 44 WOB: 25K	3320-3330	10
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), very-fine crystalline, sucrosic, vuggy, poorly cemented, partly micritic, moderately hard to soft; Limestone, trace, very pale orange (10YR 8/2), very-fine grained, dolomitic, poorly cemented, soft.	RPM: 48 WOB: 15- 20K	3330-3360	30

GEOLOGIC LOG

INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), little dusky yellowish brown (10YR 2/2), mostly micritic, some very-fine crystalline, sucrosic, vuggy and poorly cemented, moderately hard to soft; Limestone, trace, very pale orange (10YR 8/2), very-fine grained, dolomitic, poorly cemented, soft.	RPM: 48 WOB: 15- 20K	3360-3390	30
DOLOMITE – Dolomite, 100%, moderate yellowish brown (10YR 5/4), fine crystalline, sucrosic, poorly cemented and soft, with very little (some in the interval 3420-3430 ft bpl) light gray (N7), micritic and moderately hard.	RPM: 48 WOB: 15- 20K	3390-3440	50
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), some dusky yellowish brown (10YR 2/2), micritic and very-fine crystalline, sucrosic, vuggy and poorly cemented, moderately hard to soft.	RPM: 48 WOB: 15- 20K	3440-3450	10

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
TOP SOIL- Soil, black, sand with roots and partially decomposed organic matter.	36.5-inch diameter reamer bit and stabilizer assembly. Mud-rotary method.	0 – 0.5	0.5
SAND – Sand, 100%, clear, quartz, fine to medium grained, well sorted, round to sub-rounded; Organic Matter, trace, black to dark brown, decomposed.	RPM: 3-5, WOB: 2-3K	0.5– 2.0	1.5
SILTY SAND - Sand, 70%, clear to dusky brown (10YR 2/2), quartz, very fine to fine grained, rounded to sub-rounded; Silt, 30%, dusky brown (10YR 2/2).	RPM: 3-5, WOB: 2-3K	2.0 – 5.0	3.0
HARD PAN– Sand, 70%, dusky brown (10YR 2/2) to black (N1), quartz, very fine to fine grained, rounded to sub-rounded, partly cemented: Organic Matter, 30%, black (N10), silty, decomposed.	RPM: 3-5, WOB: 2-3K	5.0 – 6.0	1.0
SANDY CLAY- Clay, 70%, light olive gray (5Y 6/1), silty, very soft, low plasticity; Sand, 30%, clear, quartz, sub-rounded; Organic Matter, trace, brown, poorly decomposed.	RPM: 3-5, WOB: 2-3K	6.0 – 10.0	4.0
SHELL WITH SOME SAND– Shell, 80%, very pale orange (10YR 8/2) to light brown (5YR 6/4) and medium gray (N5), “hash” of mostly shell fragments to 0.3- inch with some whole shells to 0.8- inch size; Sand, 20%, clear, quartz, fine grained, sub-rounded.	RPM: 7, WOB: 5-7K	10 – 40	30
SHELL WITH SAND AND LITTLE CLAY AND SANDSTONE– Shell, 50%, very pale orange (10YR 8/2) to light brown (5YR 6/4) and medium gray (N5), mostly shell fragments to 0.3- inch with some whole shells to 0.8- inch size; Sand, 30%, clear, quartz, fine grained, sub-rounded; Clay, 10%, medium gray (N5), very soft, moderate plasticity, slightly phosphatic; Sandstone, 10%, light gray (N7), quartz, fine grained, poorly cemented, with numerous shell intraclasts.	RPM: 10, WOB: 10-12K	40-60	20
SANDSTONE WITH SAND AND SOME SHELL- Sandstone, 50%, medium gray (N5), quartz, some calcareous matrix, , slightly phosphatic, fine to coarse grained, moderately well cemented, numerous shell intraclasts; Sand, 30%, clear, quartz, fine to medium grained, subrounded; Shell, 20%, very pale orange (10YR 8/2) to light brown (5YR 6/4), fragments, some whole bivalves to 0.8 inch.	RPM: 10, WOB: 10K	60-70	10

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
SHELL WITH SAND, SANDSTONE AND LITTLE CLAY – Shell, 40%, very pale orange (10YR 8/2) to light brown (5YR 6/4), mostly shell fragments to 0.4-inch; Sand, 25%, clear, quartz, fine grained, sub-rounded; Sandstone, 25%, medium gray (N5), quartz, fine to medium grained, moderately well cemented, slightly phosphatic with numerous shell intraclasts; Clay, 10%, medium light gray (N6), very soft, medium plasticity.	RPM: 12, WOB 5K	70-80	10
SHELL WITH SOME LIMESTONE AND LITTLE SAND – Shell, 60%, very pale orange (10YR 8/2) to light brown (5YR 6/4), mostly shell fragments to 0.4-inch; Limestone, 25%, medium gray (N5), arenaceous, slightly phosphatic, fine grained, moderately well cemented, with shell intraclasts; Sand, 15%, clear to very light gray (N8), mostly quartz, some calcareous, sub-rounded to sub-angular.	RPM: 12, WOB 5K	80-90	10
SHELL WITH LIMESTONE, SOME SAND AND LITTLE CLAY- Shell, 40%, very pale orange (10YR 8/2) to light brown (5YR 6/4), mostly shell fragments to 0.4- inch; Limestone, 30%, medium gray (N5), arenaceous, slightly phosphatic, fine grained, soft to moderately hard, moderately well cemented with numerous shell intraclasts; Sand, 20%, clear to light gray (N7), quartz, some calcareous, fine to medium grained; Clay, 10%, medium light gray (N6), slightly phosphatic, calcareous, very soft, medium plasticity.	RPM: 23, WOB: 5K	90-120	30
SHELLWITH LIMESTONE AND SOME SAND- Shell, 50%, very pale orange (10YR 8/2), white, light brown (5YR 5/6) to medium gray (N5), tests to 0.3-inch; Limestone, 30%, light olive gray (5Y 6/1), arenaceous and biosparitc with numerous shell intraclasts, phosphatic, fine grained, soft to moderately hard, moderately well cemented; Sand, 20%, clear to light gray (N7), quartz and calcareous, very fine to fine grained, sub-rounded to sub-angular; Clay, trace, light olive gray (5Y 6/1), very soft, non- plastic.	RPM: 16-22, WOB: 6K	120-170	50

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
LIMESTONE WITH SHELL, SOME CLAY AND LITTLE SAND- Limestone, 50%, yellowish gray (5Y 7/2), biosparitic, with shell intraclasts, slightly phosphatic, vuggy, moderately well cemented; Shell, 25%, very pale orange (10YR 8/2) to light gray ((N7), tests, some larger fragments to 1 inch; Clay, 15%, light olive gray (5Y 5/2), calcareous, soft, nonplastic; Sand, 10%, light gray (N7) to clear, calcareous, detritic, some quartz, fine grained, sub- angular.	RPM: 24, WOB: 4K	170 – 180	10
SANDY CLAY WITH SHELL AND LITTLE LIMESTONE– Clay, 50%, grayish olive (10Y 4/2), silty, slightly phosphatic, very soft to soft, cohesive, non-plastic; Shell, 25%, very pale orange (10YR 8/2) to light brown (5Y 6/4), bivalves, mostly tests to 0.3 inch; Sand, 15%, very light gray (N8), calcareous, detritic, some clear, quartz, very fine to fine grained, sub-rounded; Limestone, 10%, yellowish gray (5Y 7/2), biosparitic, with shell intraclasts, slightly phosphatic, vuggy, moderately well cemented.	RPM: 24, WOB: 4K TOP OF HAWTHORN	180 – 185	5
CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray (5G 4/1) with trace of pale olive (10Y 6/2), silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained, sub-rounded; Shell, trace, very pale orange (10YR 8/2), isolated tests to 0.2 inch. Between 185 and 210 ft bpl, large (more than 50%) amount of cement fragments in cuttings. Diminishing with depth and disappearing below 230 ft bpl.	RPM: 20-24, WOB: 9-10K	185 –360	175
CLAY WITH VERY LITTLE SAND AND LIMESTONE– Clay, 90%, dark greenish gray (5G 4/1) some grayish olive green (5GY 3/2), silty, soft to very soft, very cohesive, non-plastic; Sand, 5%, clear, quartz, fine grained, sub-rounded; Limestone, 5%, very pale orange (10YR 8/2) to yellowish gray (5Y 4/1), arenaceous, phosphatic, shell intraclasts and detritic material present, soft, poorly cemented.	RPM: 30, WOB: 5K	360 – 380	20
CLAY – Clay, 100%, grayish yellow green (5GY 7/2) to olive gray (5Y 4/1), silty, slightly phosphatic to phosphatic, trace calcareous (limey), very cohesive, soft to very soft, non-plastic; Sand, trace, clear, quartz, very fine grained, sub-rounded; Shell, trace, white to very pale orange (10YR 8/2), tests up to 0.2 inch.	RPM: 30, WOB: 5K	380 – 440	60

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
CLAY WTH VERY LITTLE LIMESTONE – Clay, 95%, grayish yellow green (5GY 7/2) to olive gray (5Y 4/1), silty, phosphatic, cohesive, soft, low plasticity to non-plastic; Limestone, 5%, yellowish gray (5Y 7/2), phosphatic, soft, moderately well cemented, shell intraclasts; Sand, trace, clear, quartz, very fine grained, sub-rounded.	RPM: 30, WOB: 6K	440 – 460	20
CLAY – Clay, 100%, grayish olive (10Y 4/2) to dark greenish gray (5GY 4/1), very phosphatic, highly cohesive, low plasticity; Limestone, trace, yellowish gray (5Y 7/2), arenaceous, soft, moderately cemented; Sand, trace, clear, quartz, sub-rounded, very fine grained.	RPM: 46, WOB: 6–10K	460 – 470	10
CLAY WITH VERY LITTLE LIMESTONE – Clay, 95%, grayish olive (10Y 4/2) to pale olive (10Y 6/2), calcareous, some silty, phosphatic, soft, highly cohesive, low plasticity; Limestone, 5%, grayish yellow green (5GY 7/2) to white (N9), arenaceous, slightly phosphatic, fine grained, microporous, soft, poorly cemented; Sand, trace, clear to light greenish gray (5GY 8/1), quartz and calcareous, very fine to fine grained.	RPM: 48, WOB: 10K	470 - 480	10
CLAY WITH LITTLE LIMESTONE – Clay, 90%, 60% pale olive (10Y 6/2), calcareous (marl), 40% grayish olive (10Y 4/2), silty, phosphatic, very soft to soft, highly cohesive, nonplastic to low plasticity; Limestone, 10%, grayish yellow green (5GY 7/2) to white (N9), arenaceous, slightly phosphatic, fine grained, microporous, soft, poorly cemented; Sand, trace, clear to light greenish gray (5GY 8/1), quartz and calcareous, very fine to fine grained.	RPM: 40-48 WOB: 4-10K	480 -530	50
CLAY, SOME LIMESTONE AND LITTLE SAND – Clay, 80%, pale greenish yellow (10Y 8/2) to yellowish gray (5Y 7/2), very soft to soft, calcareous, some silty, highly phosphatic, non-plastic, cohesive; Limestone, 15%, yellowish gray (5Y 7/2), arenaceous, phosphatic, fine grained, soft, poorly cemented; Sand, 5%, light gray (N7) to clear, mostly calcareous, detritic, some quartz, very fine to fine grained, sub-rounded to angular.	RPM: 40-48 WOB: 4-10K	530 –540	10

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
CALCAREOUS CLAY (MARL) WITH LIMESTONE AND LITTLE SAND AND SHELL – Clay, 60%, mostly pale greenish yellow (10Y 8/2), calcareous (marl), some grayish olive green (5GY 3/2), silty, highly phosphatic, very soft to soft, non-plastic, cohesive; Limestone, 30%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), pelisparitic grainstone, highly phosphatic, fine grained, very soft to soft, poorly cemented; Sand, 5%, vey pale orange (10Y 8/2) to clear, mostly calcareous, detritic, some quartz, very fine to coarse grained, sub-rounded to angular; Shell, 5%, very pale orange (10 YR 8/2), tests to 0.2 inch.	RPM: 40-48 WOB: 4-10K	540 – 550	10
CLAY- Clay, 100%, dusky yellow green (5GY 5/2), silty, slightly calcareous, very slightly phosphatic, soft to hard, low to medium plasticity; Limestone, trace, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), pelisparitic grainstone, highly phosphatic, fine grained, very soft to soft, poorly cemented; Sand, trace, clear, quartz, very fine grained, sub-rounded; Shell, trace, very pale orange (10 YR 8/2), single tests to 0.2 inch.	RPM: 24-28 WOB: 6-10K	550 – 570	20
CLAY – Clay, 100%, grayish olive (10Y 4/2), silty to dusky yellow (5Y 6/4), calcareous, very phosphatic, very soft to hard, highly cohesive, low plasticity to non- plastic; Limestone, trace, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), sporadic small fragments of pelisparitic grainstone, phosphatic, fine grained, very soft to soft, poorly cemented; Sand, trace, clear, quartz, very fine grained, sub-rounded; Shell, trace, very pale orange (10 YR 8/2), single tests to 0.1 inch.	RPM: 24-28 WOB: 6-10K	570-580	10
CLAY WITH LITTLE LIMESTONE AND SHELL – Clay, 90%, 80% pale olive (10Y 6/2), calcareous (marl), 20% grayish olive green (5GY 3/2), silty, highly phosphatic, very soft to soft, non-plastic, cohesive; Limestone, 5%, very pale orange (10YR 8/2) to white (N9), arenaceous, some oolitic grainstone, phosphatic, fine grained, very soft to soft, poorly cemented; Shell, 5%, vey pale orange (10Y 8/2) to white (N9), tests to 0.1 inch; Sand, trace, clear, quartz, very fine to fine grained, sub-rounded.	RPM: 44-48 WOB: 6-10K	580-640	60

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
CALCAREOUS CLAY (MARL) AND SOME LIMESTONE WITH VERY LITTLE SAND – Clay, 70%, 90% yellowish gray (5Y 7/2), calcareous, 10% grayish olive (10Y 4/2), silty, phosphatic, moderately soft to very soft, non-plastic, non-cohesive; Limestone, 25%, yellowish gray (5Y 7/2), oolitic grainstone, phosphatic, fine grained, soft to moderately hard, poorly cemented; Sand, 5%, clear to light gray, mostly calcareous, detritic, some quartz, very fine to fine grained, sub-rounded to angular.	RPM: 46, WOB: 5K	640 – 660	20
CALCAREOUS CLAY (MARL), LIMESTONE AND SAND – Clay, 35%, yellowish gray (5Y 7/2), calcareous, phosphatic, very soft to soft, non-plastic, non-cohesive; Limestone, 35%, yellowish gray (5Y 7/2), arenaceous, phosphatic, fine grained, soft, poorly to moderately well cemented; Sand, 30%, clear, quartz, to light gray, calcareous, detritic, very fine to fine grained, sub-rounded to angular.	RPM: 42, WOB: 6K	660 – 690	30
CALCAREOUS CLAY (MARL) WITH LIMESTONE, SOME SAND AND LITTLE SHELL- Clay, 50%, pale olive (10Y 6/2), trace of pale blue (5PB), calcareous, phosphatic, very soft, non-plastic, slightly cohesive; Limestone, 25%, yellowish gray (5Y 7/2) to dark gray (N3), arenaceous, phosphatic, slightly vuggy, fine grained, soft to very soft, poorly cemented; Sand, 20%, clear, quartz, to light gray, calcareous, detritic, very fine to medium grained, sub-rounded to angular; Shell, 5%, very pale orange (10YR 8/2), tests to 0.2 inch.	RPM: 28, WOB: 6-8K	690 – 700	10
CLAY WITH SOME SAND AND VERY LITTLE LIMESTONE– Clay, 80%, pale olive (10Y 6/2), mostly calcareous (marl), slightly silty, phosphatic, phosphatic, phosphatic,very soft to soft, non-plastic, cohesive; Sand, 15%, clear, quartz, to light gray, calcareous, detritic, very fine to medium grained, sub-rounded to angular; Limestone, 5%, very pale orange (10YR 8/2) to light gray (N7), arenaceous some oolitic grainstone, phosphatic, fine grained, very soft to soft, poorly cemented; Shell, trace, very pale orange (10YR 8/2), single tests to 0.3 inch.	RPM: 28, WOB: 6-8K	700-735	35

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
CLAYEY LIMESTONE WITH SOME SAND – Limestone, 50%, very pale orange (10YR 8/2) to light gray (N7), biosparitic, some arenaceous, fine to medium grained, soft to moderately hard, poorly to moderately well cemented, fossiliferous, with trace of forams; Clay, 30%, light greenish gray (5GY 8/1), trace of white (N9), calcareous (marl), very soft,), chalky, phosphatic, non-plastic; Sand, 20%, very light gray (N8), calcareous, detritic, very little clear, quartz, very fine to medium grained, sub-rounded to sub-angular; Shell, trace, very pale orange, (10YR 8/2), tests to 0.2 inch.	RPM: 28, WOB: 6-8K	735 – 740	5
LIMESTONE WITH SOME SAND AND LITTLE CLAY– Limestone, 70%, very pale orange (10YR 8/2) to light gray (N7), biosparitic, some arenaceous, fine to medium grained, soft to moderately hard, poorly to moderately well cemented, fossiliferous, with trace of forams; Sand, 20%, very light gray (N8), calcareous, detritic, very little clear, quartz, very fine to medium grained, sub-rounded to sub-angular; Clay, 10%, light olive gray (5GY 6/1), trace of white (N9), very soft, calcareous (marl), chalky, phosphatic, non-plastic; Shell, trace, very pale orange, (10YR 8/2) , tests to 0.2 inch..	RPM: 28, WOB: 6-8K	740 – 755	15
LIMESTONE WITH VERY LITTLE CLAY AND SHELL- Limestone, 90%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), biosparitic grainstone, fossiliferous with forams and shell intraclasts, phosphatic, moderately hard, moderately well cemented, vuggy, porous; Clay, 5% to trace at the bottom, yellowish gray (5Y 7/2), calcareous (marl), slightly phosphatic, very soft, non- plastic; Shell, 5%, very pale orange (10YR 8/2) to white (N9), tests to 0.3 inch.	RPM: 28, WOB: 6-8K	755-760	5
LIMESTONE – Limestone, 100%, yellowish gray (5Y 7/2), sparry grainstone with trace of light gray (N7) arenaceous, very slightly phosphatic, trace of fossils, soft to very soft, poorly cemented, vuggy, porous; Clay, trace, yellowish gray (5Y 7/2), calcareous, very soft, non- plastic; Chert, trace, olive gray, micrcrystalline, very hard.	Bit plugging-off. Cement cuttings in sample RPM: 20-32, WOB: 4-6K	760 – 780	20

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
LIMESTONE WITH LITTLE CLAY AND SAND– Limestone, 80%, yellowish gray (5Y 7/2), sparry grainstone ,very slightly phosphatic, trace of fossils, very soft, poorly cemented, vuggy, porous; Clay, 10%, yellowish gray (5Y 7/2), calcareous, very soft, non-plastic; Sand, 10%, yellowish gray (5Y 7/2), calcareous, detritic, fine to medium grained, sub-rounded.	Bit plugging-off. Cement cuttings in sample RPM: 20-32, WOB: 4-6K	780 – 790	10
LIMESTONE – Limestone, 100%, yellowish gray (5Y 7/2), sparry grainstone with trace of light gray (N7) arenaceous, very slightly phosphatic, trace of fossils, soft, poorly to moderately well cemented, vuggy, porous.	Trace of cement. RPM: 20-32, WOB: 5K	790 – 810	20
LIMESTONE – Limestone, 100%, yellowish gray (5Y 7/2), biosparitic grainstone, very slightly phosphatic, fossilferous, with forams, soft to moderately hard, poorly to moderately well cemented, vuggy, porous.	RPM: 42, WOB: 5K	810 – 840	30
LIMESTONE – Limestone, 100%; 90% yellowish gray (5Y 7/2), biosparitic, highly fossilferous (disc shaped, crinoids), with large amounts of foraminifera, soft to moderately hard, poorly to moderately well cemented, vuggy, porous; 10%, light gray (N7) to medium light gray (N6), microcrystalline, moderately hard, partly dolomitic.	RPM: 42, WOB: 5K	840 –910	70
LIMESTONE WITH LITTLE DOLOMITE – Limestone, 90%; 70% very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), biosparitic grainstone, highly fossilferous (disc shaped, crinoids), with large amounts of foraminifera, soft to moderately hard, poorly to moderately well cemented, fine grained; 30% yellowish gray (5Y 7/2), dolomitic, finely crystalline, slightly vuggy, moderately hard; Dolomite, 10%, very light gray (N8) to pale yellowish brown (10YR 6/2), microcrystalline to finely crystalline, hard.	RPM: 32, WOB: 10K	910 – 920	10
LIMESTONE – Limestone, 100%; 60% yellowish gray (5Y 7/2), biosparitic, highly fossilferous (disc shaped, crinoids), with large amounts of foraminifera, very soft to moderately hard, poorly to moderately well cemented, vuggy, porous; 40% yellowish gray (5Y 7/2), dolomitic, finely crystalline, slightly vuggy, moderately hard.	RPM: 32, WOB: 10K	920 –980	60

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITIC LIMESTONE AND LITTLE DOLOMITE- Limestone, 85%; 70% yellowish gray (5Y 7/2), dolomitic, finely crystalline, slightly vuggy, moderately hard; 30% yellowish gray (5Y 7/2), biosparitic, fossilferous (disc shaped, crinoids), with some foraminifera, slightly dolomitic, very soft to moderately hard, poorly to moderately well cemented, vuggy, porous; Dolomite, 15%, grayish orange (10YR 7/4) to medium gray (N5), finely crystalline to microcrystalline, moderately hard, slightly vuggy.	RPM: 32, WOB: 10K	980 –1000	20
LIMESTONE–Limestone, 100%, yellowish gray (5Y 8/1) to very light gray (N8), oolitic, fine grained, moderately well cemented, fossiliferous (gastropods and disc shaped), slightly vuggy. Dolomite, trace, medium light gray (N6), moderately well cemented, moderately hard.	RPM: 32, WOB: 8K	1000-1020	20
LIMESTONE-Limestone, 100%, grayish orange (10YR 7/4), oolitic, fine grained, soft, poorly cemented, slightly vuggy, some forams present.	RPM: 32, WOB: 8K	1020-1030	10
LIMESTONE–Limestone, 100%, 90% yellowish gray (5Y 8/1), 10% light gray (N7), oolitic, fine grained, moderately well cemented, slightly fossiliferous (gastropods and disc shaped), slightly vuggy.	RPM: 36, WOB: 3K	1030-1040	10
LIMESTONE AND LITTLE DOLOMITE – Limestone, 90%, very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), oolitic, fine grained, soft, poorly to moderately well cemented, vuggy, porous, fossiliferous; Dolomite, 10%, dark gray (N3) to medium gray (N5), very fine crystalline, hard, slightly vuggy.	RPM: 36, WOB: 3K	1040-1050	10
LIMESTONE WITH VERY LITTLE DOLOMITE AND CLAY (MARL) – Limestone, 90%, 70% yellowish gray (5Y 8/1), oolitic, soft, poorly cemented, vuggy, porous, slightly fosiliferous, 30% very light gray (N8), dolomitic, fine crystalline, slightly vuggy, moderately hard, moderately cemented; Dolomite, 5%, medium light gray (N6), fine crystalline, hard, slightly vuggy; Clay (Marl), 5%, yellowish gray (5Y 8/1) to white (N9), soft, very calcareous, cohesive.	RPM: 36, WOB: 8K	1050-1060	10

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
LIMESTONE WITH VERY LITTLE DOLOMITE– Limestone, 90%, yellowish gray (5Y 7/2) to pale yellowish brown (10YR 6/2), very fine grained, partially dolomitic, poorly to moderately-well cemented, slightly vuggy; Clayey Limestone, 5%, yellowish gray (5Y 7/2), very fine grained, soft, slightly cohesive; Dolomite, 5%, brownish black (5YR 2/1), very-fine crystalline, hard.	RPM: 36, WOB: 8K	1060-1070	10
LIMESTONE – Limestone, 100%, yellowish gray (5Y 7/2) to very pale orange (10YR 8/2), very fine grained, primarily poorly cemented (small amount moderately-well cemented), vuggy.	RPM: 34, WOB: 8K	1070-1100	30
LIMESTONE – Limestone, 100%, light gray (N7), very fine grained, well cemented, slightly vuggy.	RPM: 42, WOB: 5-10K	1100-1110	10
LIMESTONE – Limestone, 95%, very light gray (N8) to light gray (N7) with trace amounts of dark gray (N3), very fine grained, poorly to moderately cemented, vuggy; Clayey Limestone, 5%, very light gray (N8) to light gray (N7), soft, slightly cohesive.	RPM: 42, WOB: 5-10K	1110-1120	10
LIMESTONE – Limestone, 100%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very fine grained, poorly to moderately cemented, moderately soft, vuggy, slightly fossiliferous; trace light gray (N7) to medium gray (N5), very fine grained, moderately well cemented.	RPM: 40-42 WOB: 5-10K	1120-1130	10
CLAYEY LIMESTONE AND LIMESTONE – Clayey Limestone, 60%, very light gray (N8) to light gray (N7), very fine grained, soft, slightly cohesive; Limestone, 40%, light gray (N7) to medium gray (N5), very fine grained, poorly to moderately-well cemented, vuggy.	RPM: 40-42 WOB: 5-10K	1130-1140	10
LIMESTONE AND SOME DOLOMITE – Limestone, 85%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very fine grained, poorly to moderately cemented, slightly vuggy; Dolomite, 15%, moderate yellowish brown (10YR 5/4), very fine crystalline, slightly vuggy, hard.	RPM: 40-42 WOB: 5-10K	1140-1150	10
LIMESTONE AND VERY LITTLE DOLOMITE – Limestone, 95%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2) with little light gray (N7), very fine grained, slightly fossiliferous; Dolomite, 5%, moderate yellowish brown (10YR 5/4), very fine crystalline, well cemented.	RPM: 40, WOB: 5-10K	1150-1160	10

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
LIMESTONE AND SOME DOLOMITE – Limestone, 70%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very fine grained, poorly to moderately cemented, slightly dolomitic, vuggy; Dolomite, 30%, moderate yellowish brown (10YR 5/4) to dark gray (N3), very fine crystalline, moderately well cemented.	RPM: 40, WOB: 5-10K	1160-1170	10
DOLOMITE AND LITTLE LIMESTONE– Dolomite, 85%, pale yellowish brown (10YR 6/2), very-fine crystalline, slightly calcareous, slightly vuggy, well cemented; Limestone, 15%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very-fine grained, poorly to moderately cemented.	RPM: 44, WOB: 8K	1170-1200	30
DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2) and medium light gray (N6) to medium dark gray (N4), very-fine crystalline, vuggy, well cemented; Limestone, 5%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very fine grained, moderately well cemented.	RPM: 45-46, WOB: 5-10K	1200-1240	40
LIMESTONE AND SOME DOLOMITE – Limestone, 70%, very pale orange (10YR 8/2) and very light gray (N8), very fine grained, dolomitic, slighty vuggy, moderately well cemented; Dolomite, 30%, moderate yellowish brown (10YR 5/4) and medium dark gray (N4), very fine crystalline, well cemented, hard.	RPM: 45, WOB: 5-10K	1240-1260	20
LIMESTONE – Limestone, 100%, yellowish gray (5Y 7/2) to pale yellowish brown (10YR 6/2), very fine grained, dolomitic, slightly fossiliferous, vuggy, moderately cemented.	RPM: 26, WOB: 10-15K	1260-1280	20
DOLOMITE-Dolomite, 100%, 90% grayish orange pink (5YR 7/2), moderately well cemented, moderately hard, crystalline, 10% dark gray, well cemented, hard, microcrystalline; Clay, trace, medium dark gray (N4), moderately soft, cohesive.	RPM: 28 WOB: 10-15K	1280-1290	10
DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, medium gray (N5), some grayish orange (10YR 7/4), very finely crystalline to microcrystalline, moderately hard to hard; Limestone, 5%, very pale orange (10YR 8/2), grainstone, soft, moderately well cemented.	RPM: 28, WOB: 5-10K	1290-1300	10

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITE– Dolomite, 100%, light gray (N7) to grayish orange (10YR 7/4), sucritic to microcrystalline, vuggy, well cemented, moderately hard to hard; Limestone, trace, very pale orange (10YR 8/2), soft, poorly cemented.	RPM: 40, WOB: 15K	1300-1320	20
DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown (10YR 6/2) to grayish orange (10YR 7/4), sucritic to microcrystalline, vuggy, moderately hard to hard; Limestone, 5%, very pale orange (10YR 8/2), grainstone, soft, moderately well cemented.	RPM: 40, WOB: 15K Frequent bit chatter.	1320-1360	40
DOLOMITE AND SOME LIMESTONE – Dolomite, 85%, grayish orange pink (5YR 7/2) to light brown (5YR 6/4) with some light gray (N7), microcrystalline, vuggy, moderately hard to hard; Limestone, 15%, very pale orange (10YR 8/2), grainstone, some forams, soft, poorly cemented.	RPM: 40-46 WOB: 15K	1360-1380	20
DOLOMITE AND SOME LIMESTONE – Dolomite, 80%, 60% light brownish gray (5YR 6/1) and 40% light gray (N7), microcrystalline to cryptocrystalline, vuggy, moderately hard to hard; Limestone, 20%, very pale orange (10YR 8/2), grainstone, some forams, soft, poorly cemented.	RPM: 46, WOB: 15K	1380-1390	10
DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, dark yellowish orange (10YR 6/6) to pale yellowish brown (10YR 6/2) with some light gray (N7) and dark gray (N4), microcrystalline, vuggy, moderately hard to hard; Limestone, 5%, very pale orange (10YR 8/2), grainstone, some forams, soft, poorly cemented.	RPM: 46, WOB: 15K	1390-1420	30
LIMESTONE AND SOME CLAY – Limestone, 80%, 90% yellowish gray (5y 8/1), very calcareous, grainstone, moderately well cemented, moderately hard, vuggy; 10% very light gray (N8), clayey limestone with other detritic impurities, moderately soft, poorly cemented, vuggy; Clay, 20%, greenish gray (5G 6/1) to medium gray (N5), slightly calcareous, soft to very soft; Dolomite, trace, dark gray (N3), microcrystalline, vyggy, well cemented, moderately hard to hard.	RPM: 42 WOB: 10-15K	1420-1430	10

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITE AND SOME LIMESTONE – Dolomite, 80%, pale yellowish brown (10YR 6/2) to pale brown (5Y 5/2), finely crystalline to microcrystalline, well cemented, moderately hard; Limestone, 20%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), grainstone, fine grained, moderately soft, poorly cemented, vuggy, porous; Clay, trace, greenish gray (5G 6/1) to medium gray (N5), slightly calcareous, soft.	RPM: 44, WOB: 15K	1430-1440	10
LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 90%, very pale orange (10YR 8/2) to very light gray (N8), fine grained, soft, poorly cemented; Dolomite, 10%, pale yellowish brown (10YR 6/2) to medium dark gray (N4), microcrystalline, compact, well cemented, hard.	RPM42, WOB: 15K	1440-1450	10
DOLOMITE WITH VERY LITTLE LIMESTONE – Dolomite, 95%, light brown (5YR 6/4) to dark yellowish brown (10YR 4/2), finely crystalline, vuggy, moderately soft; a few dark gray (N3), sucrosic to microcrystalline, moderately hard to hard, very slightly vuggy; Limestone, 5%, very pale orange (10YR 8/2), fine grained, moderately soft, poorly cemented.	RPM: 40-42, WOB:15K	1450-1490	40
DOLOMITE WITH LITTLE LIMESTONE – Dolomite, 90%, medium light gray (N6) to dark gray (N3), some light brownish gray (5YR 6/1) to pale yellowish brown (10YR 6/2), crystalline, moderately hard, vuggy; Limestone, 10%, very pale orange (10YR 8/2), fine grained, soft, poorly cemented; Clay (Marl), trace, white (N9), very soft, slightly cohesive.	RPM: 40-45 WOB: 15K	1490-1500	10
LIMESTONE AND DOLOMITE – Limestone, 60%, yellowish gray (5Y 7/2), very fine grained, vuggy, partially dolomitic, poorly to moderately cemented; Dolomite, 40%, moderate yellowish brown (10YR 5/4), microcrystalline to very fine crystalline, vuggy, poorly to moderately cemented.	RPM: 45, WOB: 15K	1500-1510	10
DOLOMITE – Dolomite, 100%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2) and medium light gray (N6) to medium dark gray (N4), microcrystalline to very fine crystalline, partially vuggy, contains some limestone inclusions, moderately-well cemented.	RPM: 45, WOB: 15K	1510-1520	10

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
LIMESTONE AND DOLOMITE – Limestone, 60%, very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), very fine grained, dolomitic, fossiliferous, poorly to moderately cemented; Dolomite, 40%, moderate yellowish brown (10YR 5/4) and medium gray (N5), microcrystalline to very fine crystalline, poorly to moderately cemented, partially vuggy.	RPM: 27, WOB: 5-10K	1520-1560	40
LIMESTONE – Limestone, 80%, very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), very fine grained, fossiliferous, dolomitic, poorly to moderately cemented, slightly vuggy; Dolomite, 20%, medium light gray (N6) to medium dark gray (N4), microcrystalline, multiple limestone inclusions and fossils, moderately cemented.	RPM: 27, WOB: 15K	1560-1570	10
DOLOMITE AND LIMESTONE – Dolomite, 75%, moderate yellowish brown (10YR 5/4), microcrystalline, hard, well cemented; Limestone, 25%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very fine grained, fossiliferous, dolomitic, mixed with medium gray dolomite, poorly cemented.	RPM: 27, WOB: 15K	1570-1580	10
DOLOMITE – Dolomite, 95%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4) and medium light gray (N6), microcrystalline to very-fine crystalline, well cemented, slightly vuggy; Limestone, 5%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very fine grained, poorly cemented.	RPM: 26, WOB: 10K	1580-1590	10
DOLOMITE AND LIMESTONE – Dolomite, 80%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2) and medium light gray (N6) to medium dark gray (N4), microcrystalline to very fine crystalline, slightly vuggy, well cemented; Limestone, 20%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very fine grained, poorly cemented.	RPM: 27 WOB: 15-20K	1590-1620	30
DOLOMITE AND LIMESTONE – Dolomite, 70%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), very-fine grained to fine grained, moderately-well cemented, vuggy; Limestone, 30%, very pale orange (10YR 8/2), very fine grained, poorly cemented.	RPM: 28, WOB: 20K	1620-1630	10

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
LIMESTONE AND DOLOMITIC LIMESTONE WITH VERY LITTLE DOLOMITE – Limestone, 75%, yellowish gray (5Y 8/1) to very pale orange (10YR 8/2), fine grained, fosiliferous, slightly vuggy, moderately soft to soft, moderately cemented; Dolomitic limestone, 20%, very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), well cemented, moderately hard; Dolomite, 5%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), microcrystalline to very-fine crystalline, slightly vuggy, well cemented, moderately hard to hard.	RPM: 36, WOB: 15K	1630-1640	10
DOLOMITE AND SOME LIMESTONE – Dolomite, 80%, dark yellowish orange (10YR 6/6) to moderate yellowish brown (10YR 5/4) and some dark gray (N3), sucritic to fine crystalline, vuggy, well cemented, moderately hard to hard; Limestone, 20%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), fine grained, fossiliferous, slightly vuggy, moderately cemented.	RPM: 36, WOB: 15K	1640-1650	10
DOLOMITE AND LIMESTONE – Dolomite, 50%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2) and some dark gray (N3), sucritic to fine crystalline, vuggy, well cemented, moderately hard to hard; Limestone, 50%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), fine grained, fossiliferous, slightly vuggy, moderately cemented.	RPM: 36 WOB: 5-10K	1650-1660	10
LIMESTONE AND SOME DOLOMITIC LIMESTONE-Limestone, 70%, yellowish gray (5Y 8/1) to very pale orange (10YR 8/2), fine grained, fossiliferous, vuggy, moderately cemented, moderately soft; Dolomitic limestone, 30%, very light gray (N8) to medium light gray (N6), crystalline to fine crystalline, vuggy, well cemented, moderately hard to hard.	RPM: 36, WOB: 5-10K	1660-1670	10
DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2) and some medium light gray (N6) to dark gray (N3), sucritic to fine crystalline, vuggy, well cemented, moderately hard to hard; Limestone, 5%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), fine grained, fossiliferous, slightly vuggy, moderately cemented.	RPM: 36, WOB: 5-10K	1670-1690	20

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITE-Dolomite, 100%, light brownish gray (5YR 6/1) to moderate yellowish brown (10YR 5/4), sucrosic to fine crystalline, vuggy to compact, well cemented, moderately hard to hard; Limestone, trace, white (N9) to yellowish gray (5Y 8/1), fine grained, vuggy, poorly cemented, soft.	RPM: 44, WOB: 20K	1690-1710	20
DOLOMITE WITH LITTLE LIMESTONE-Dolomite, 90%, light brownish gray (5YR 6/1) to moderate yellowish brown (10YR 5/4) and some dark gray N3) in the bottom of interval, sucrosic to fine crystalline, vuggy to compact, well cemented, moderately hard to hard; Limestone, 10%, white (N9) to yellowish gray (5Y 8/1), fine grained, vuggy, poorly cemented, soft.	RPM: 48, WOB: 20k	1710-1730	20
DOLOMITE WITH VERY LITTLE LIMESTONE-Dolomite, 95%, 50% light brownish gray (5YR 6/1) to moderate yellowish brown (10YR 5/4) and 50% dark gray (N3), fine crystalline, vuggy to compact, well cemented, moderately hard to hard; Limestone, 5%, white (N9) to yellowish gray (5Y 8/1), fine grained, vuggy, poorly cemented, soft	RPM: 48, WOB: 20K	1730-1740	10
DOLOMITE WITH LITTLE LIMESTONE-Dolomite, 90%, moderate yellowish brown (10YR 5/4), sucrosic to fine crystalline, vuggy, well cemented, hard; Limestone, 10%, white (N9) to yellowish gray (5Y 8/1), fine grained, vuggy, poorly cemented, soft.	RPM: 48, WOB: 20	1740-1750	10
LIMESTONE AND DOLOMITE-Limestone, 50%, very pale orange (10YR 8/2), fine grained, vuggy, moderately well cemented, moderately hard; Dolomite, 50%, dark yellowish orange, (10YR 6/6), microcrystalline, vuggy, well cemented moderately hard to hard.	RPM: 48, WOB: 20K	1750-1760	10
DOLOMITE AND VERY LITTLE LIMESTONE-Dolomite, 100%, 80% light gray (N7) to dark gray (N3), 20% moderate yellowish brown (10YR 5/4), microcrystalline, vuggy, well cemented, hard; Limestone, trace, very pale orange (10YR 8/2), fine grained, fossiliferous, vuggy, moderately cemented, soft.	RPM: 46, WOB: 20K	1760-1770	10
DOLOMITE-Dolomite, 100%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), microcrystalline, vuggy, well cemented, hard.	RPM: 46-48, WOB: 20	1770-1790	20

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITE AND VERY LITTLE LIMESTONE-Dolomite, 95%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), microcrystalline, vuggy, well cemented, hard; Limestone, 5%, very pale orange (10YR 8/2), fine grained, fossiliferous, vuggy, moderately cemented, soft.	RPM: 48, WOB: 20K	1790-1800	10
DOLOMITE-Dolomite, 100%, 50% pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), 50% medium gray (N5) to dark gray (N3), microcrystalline, vuggy, well cemented, hard; Limestone, trace, very pale orange (10YR 8/2), fine grained, fossiliferous, vuggy, moderately cemented, soft.	RPM: 44-46 WOB: 20K	1800-1810	10
DOLOMITE – Dolomite, 100%, 80% pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2), very-fine crystalline, vuggy, well cemented, 20% medium gray (N5) to grayish black (N2), very fine crystalline, slightly vuggy, well cemented.	RPM: 34, WOB: 20K	1810-1820	10
DOLOMITE – Dolomite, 85%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2) with trace amounts of medium gray (N5) to medium dark gray (N4), very-fine crystalline, vuggy; Limestone, 15%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very fine grained, poorly cemented.	RPM: 34, WOB: 20K	1820-1830	10
DOLOMITE AND SOME LIMESTONE – Dolomite, 70%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2) with trace amounts of medium gray (N5) to medium dark gray (N4), very-fine crystalline, vuggy; Limestone, 30%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very fine grained, poorly cemented.	RPM: 34, WOB: 20K	1830-1840	10
DOLOMITE – Dolomite, 80%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2) with trace amounts of medium gray (N5) to medium dark gray (N4), very-fine crystalline, vuggy; Limestone, 20%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very-fine grained, slightly fossiliferous, poorly cemented.	RPM: 44 WOB: 15K	1840-1850	10

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITIC LIMESTONE – Dolomitic Limestone, 95%, pale yellowish brown (10YR 6/2) to medium light gray (N6), microcrystalline, well cemented; Limestone, 5%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very-fine grained, poorly cemented; Dolomite, trace, moderate yellowish brown (10YR 5/4), vuggy, very fine crystalline.	RPM: 44 WOB: 15-20K	1850-1860	10
DOLOMITE – Dolomite, 85%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2) with trace amounts of medium gray (N5) to medium dark gray (N4), very-fine crystalline, vuggy; Limestone, 15%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very-fine grained, poorly cemented, partially dolomitic.	RPM: 44 WOB: 15-20K	1860-1870	10
DOLOMITE AND LIMESTONE – Dolomite, 65%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), very-fine crystalline, vuggy, moderately cemented; Limestone, 35%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), partially crystalline, dolomitic, poorly to moderately cemented.	RPM: 44 WOB: 15-20K	1870-1880	10
LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very-fine grained, partially very-fine crystalline, slightly dolomitic; Dolomite, 50%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), very fine to fine crystalline, vuggy, moderately-well cemented.	RPM: 37 WOB: 10-20K	1880-1910	30
DOLOMITE AND LIMESTONE – Dolomite, 75%, pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/5), very-fine crystalline, vuggy; Limestone, 25%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very fine grained, slightly fossiliferous, poorly cemented.	RPM: 37 WOB: 10-20K	1910-1920	20
DOLOMITE – Dolomite, 70%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2) with trace amounts of medium dark gray (N4) to grayish black (N2), very-fine crystalline, vuggy; Limestone, 30%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very fine grained, partially crystalline, poorly cemented.	RPM: 37, WOB: 10K	1920-1960	40

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITE – Dolomite, 95%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), microcrystalline to very-fine crystalline, porous, vuggy, moderately to well cemented; Limestone, 5%, very pale orange (10YR 8/2), very fine grained, poorly cemented.	RPM: 37, WOB: 10K	1960-1970	10
DOLOMITIC LIMESTONE AND SOME DOLOMITE – Limestone, 90%, very pale orange (10YR 8/2) to pale yellowish brown (10 YR 6/2), very fine grained, dolomitic, slightly fossiliferous, vuggy, poorly to moderately cemented; Dolomite, 10%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10 YR 4/2) and little medium dark gray (N4), very-fine crystalline, vuggy, unconsolidated (mixed with the limestone).	RPM: 47, WOB: 5-10K	1970-1990	20
DOLOMITE – Dolomite, 100%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), microcrystalline to very-fine crystalline, porous, vuggy, moderately to well cemented; Limestone, trace, very pale orange (10YR 8/2), very fine grained, poorly cemented.	RPM: 47, WOB: 5-10K	1990-2000	10
DOLOMITE AND SOME DOLOMITIC LIMESTONE – Dolomite, 85%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), very-fine to fine crystalline, vuggy, multiple limestone inclusions, moderately to well cemented; Dolomitic Limestone, 15%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very-fine to fine grained, partially crystalline, slightly fossiliferous, poorly cemented, vuggy.	RPM: 47, WOB: 5-10K	2000-2010	10
DOLOMITIC LIMESTONE AND SOME DOLOMITE – Limestone, 90%, very pale orange (10YR 8/2) to pale yellowish brown (10 YR 6/2), very fine grained, dolomitic, slightly fossiliferous, vuggy, poorly to moderately cemented; Dolomite, 10%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10 YR 4/2) and little medium dark gray (N4), very fine crystalline, vuggy, moderately hard.	RPM: 44, WOB: 5-10K	2010-2020	10

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITIC LIMESTONE, LIMESTONE AND SOME DOLOMITE- Dolomitic limestone, 50%, pale yellowish brown (10YR 6/2), to medium dark gray (N4), fine grained, dolomitic, fossiliferous, vuggy, well cemented, moderately hard; Limestone, 40%, very pale orange (10YR 8/2), oolitic, slightly vuggy, moderately cemented, soft; Dolomite, 10%, moderate brown (5YR 4/4), microcrystalline, vuggy, well cemented, hard.	RPM: 44, WOB: 5-10K	2020-2030	10
LIMESTONE AND LITTLE DOLOMITE- Limestone, 95%, very pale orange (10YR 8/2), oolitic, slightly dolomitic, slightly vuggy, moderately well cemented, soft; Dolomite, 5%, moderate brown (5YR 4/4), microcrystalline, vuggy, well cemented, hard.	RPM: 44, WOB: 5-10K	2030-2050	20
LIMESTONE-Limestone, 100%, very pale orange (10YR 8/2), oolitic, slightly foraminiferous, slightly vuggy, moderately cemented, soft.	RPM: 40-46, WOB: 5-10K	2050-2110	60
DOLOMITIC LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange (10YR 8/2) to pale yellowish brown (10 YR 6/2), fine grained, dolomitic, fossiliferous, vuggy, well cemented, moderately hard; Dolomite, 50%, grayish brown (5YR 3/2) to medium dark gray (N4), fine crystalline, vuggy, well cemented, moderately hard to hard.	RPM: 44, WOB: 10K	2110-2120	10
LIMESTONE-Limestone, 100%, very pale orange (10YR 8/2), oolitic, slightly dolomitic in the upper portion of interval, foraminiferous, slightly vuggy, moderately cemented, soft; Dolomite, trace, moderate brown (5YR 4/4), microcrystalline, vuggy, hard.	RPM: 44, WOB: 8K	2120-2160	40
LIMESTONE AND DOLOMITE-Limestone, 60%, very pale orange 910YR 8/2) to grayish orange (10YR 7/4), oolitic, foraminiferous, vuggy, moderately cemented, soft; Dolomite, 40%, grayish orange (10YR 7/4) to pale yellowish brown (10YR 6/2), some medium gray (N5), sucrosic to microcrystalline, vuggy, calcitic, well cemented, moderately hard to hard.	RPM: 46, WOB: 10K	2160-2170	10

DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
LIMESTONE -Limestone, 100%, very pale orange (10YR 8/2) to grayish orange (10YR 7/4), oolitic, foraminiferous, vuggy, moderately cemented, soft; Dolomite, trace, moderate brown (5YR 4/4) to dark gray (N3), microcrystalline, hard.	RPM: 46, WOB: 10K	2170-2180	10
DOLOMITE-Dolomite, 100%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), sucrosic to microcrystalline, vuggy, well cemented, hard.	RPM: 40-48 WOB: 10-20K	2180-2210	30
LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange 910YR 8/2) to grayish orange (10YR 7/4), oolitic, foraminiferous, vuggy, moderately cemented, soft; Dolomite, 50%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), sucrosic to microcrystalline, vuggy, well cemented, hard.	RPM: 44, WOB: 10-20	2210-2240	30
DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), sucrosic to microcrystalline, calcitic, some forams present, vuggy, well cemented, hard; Limestone, 5%, very pale orange (10YR 8/2) to grayish orange (10YR 7/4), oolitic, foraminiferous, vuggy, moderately cemented, soft.	RPM: 42-46 WOB: 20K	2240-2280	40
DOLOMITE AND SOME LIMESTONE – Dolomite, 75%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), microcrystalline, vuggy, well cemented, hard; Limestone, 25%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very fine grained, partially dolomitic, poorly cemented.	RPM: 42, WOB: 20-22K	2280-2300	20
DOLOMITE – Dolomite, 100%, moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), microcrystalline, slightly vuggy, well cemented, hard; Limestone, trace, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very fine grained, partially dolomitic, poorly cemented.	RPM: 42, WOB: 20-22K	2300-2320	20
DOLOMITE AND SOME LIMESTONE – Dolomite, 70%, medium gray (N5) and moderate yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/2), microcrystalline, well cemented, hard; Limestone, 30%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very fine grained, partially dolomitic, poorly cemented.	RPM: 42, WOB: 20-22K	2320-2330	10

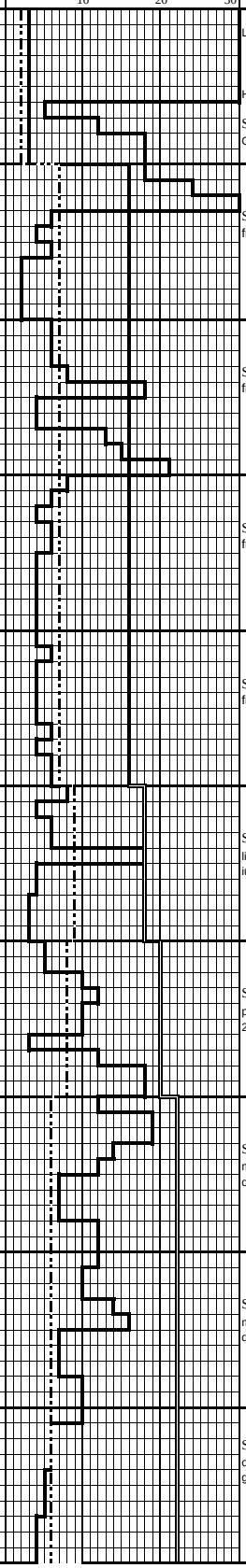
DEEP MONITOR WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM

GEOLOGIC LOG	DRILLING COMMENTS	DEPTH INTERVAL	THICKNESS
DOLOMITE AND SOME LIMESTONE – Dolomite, 85%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2) and little medium light gray (N6), microcrystalline to very-fine crystalline, moderately to well cemented; Limestone, 15%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very-fine grained, partially crystalline, slightly fossiliferous, partially dolomitic, poorly to moderately cemented.	RPM: 42, WOB: 20-22K	2330-2340	10
DOLOMITE AND LITTLE LIMESTONE– Dolomite, 90%, moderate yellowish brown (10YR 5/4) to dusky yellowish brown (10YR 2/2), microcrystalline, slightly vuggy, well cemented, hard; Limestone, 10%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), very-fine grained, partially dolomitic, poorly cemented.	RPM: 42, WOB: 20-22K	2340-2350	10

"RPM" denotes rotation speed in "revolutions per minute."
"WOB" denotes "weight on the bit" in thousands of pounds per square inch.

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):



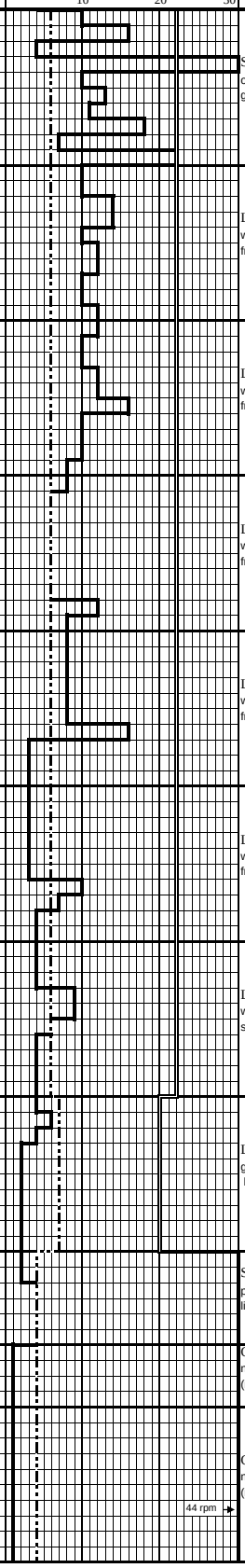
Depth Below Pad Level (ft)	Description
0-1	
1-2	LIMEROCK (compacted fill), SAND, ORGANIC MATTER.
2-3	
3-4	
4-5	
5-6	HARDPAN- Sand 70%, dark brown to black, cemented; Organic Matter, 30%, black, silty, decomposed.
6-7	
7-8	SANDY CLAY- Clay, 70%, light olive gray, silty, very soft, low plasticity; Sand, 30%, clear, quartz;
8-9	Organic Matter, trace, brown, poorly decomposed.
9-10	
10-11	
11-12	
12-13	
13-14	SHELL WITH SOME SAND– Shell, 80%, very pale orange to light brown, "hash" of mostly shell
14-15	fragments with some whole shells; Sand, 20%, clear, quartz, fine grained.
15-16	
16-17	
17-18	
18-19	
19-20	
20-21	
21-22	
22-23	
23-24	SHELL WITH SOME SAND– Shell, 80%, very pale orange to light brown, "hash" of mostly shell
24-25	fragments with some whole shells; Sand, 20%, clear, quartz, fine grained.
25-26	
26-27	
27-28	
28-29	
29-30	
30-31	
31-32	
32-33	
33-34	SHELL WITH SOME SAND– Shell, 80%, very pale orange to light brown, "hash" of mostly shell
34-35	fragments with some whole shells; Sand, 20%, clear, quartz, fine grained.
35-36	
36-37	
37-38	
38-39	
39-40	
40-41	
41-42	
42-43	
43-44	SHELL WITH SOME SAND– Shell, 80%, very pale orange to light brown, "hash" of mostly shell
44-45	fragments with some whole shells; Sand, 20%, clear, quartz, fine grained.
45-46	
46-47	
47-48	
48-49	
49-50	
50-51	
51-52	
52-53	
53-54	SHELL WITH SAND AND LITTLE CLAY AND SANDSTONE– Shell, 50%, very pale orange to
54-55	light brown, mostly shell fragments, some whole shells; Sand, 30%, clear, quartz, fine grained; Clay, 10%, med-
55-56	ium gray, very soft, moderate plasticity, slightly phosphatic; Sandstone, 10%, light gray, quartz, fine grained, soft.
56-57	
57-58	
58-59	
59-60	
60-61	
61-62	
62-63	
63-64	SANDSTONE WITH SAND AND SOME SHELL- Sandstone, 50%, medium gray, quartz, slightly
64-65	phosphatic, fine to coarse grained, moderately hard; Sand, 30%, clear, quartz, fine to medium grained; Shell,
65-66	20%, very pale orange to light brown , fragments, some whole.
66-67	
67-68	
68-69	
69-70	
70-71	
71-72	
72-73	
73-74	SHELL WITH SOME SAND AND SANDSTONE – Shell, 50%, very pale orange to light brown,
74-75	mostly shell fragments to 0.4- inch; Sand, 25%, clear, quartz, fine grained; Sandstone, 25%, medium light gray,
75-76	quartz with calcareous matrix, moderately hard.
76-77	
77-78	
78-79	
79-80	
80-81	
81-82	
82-83	
83-84	SHELL WITH SOME SAND AND SANDSTONE – Shell, 50%, very pale orange to light brown,
84-85	mostly shell fragments to 0.4- inch; Sand, 25%, clear, quartz, fine grained; Sandstone, 25%, medium light gray,
85-86	quartz with calcareous matrix, moderately hard.
86-87	
87-88	
88-89	
89-90	
90-91	
91-92	
92-93	SHELL WITH SOME LIMESTONE, LITTLE SANDSTONE AND SAND – Shell, 50%, very pale
93-94	orange to light brown, mostly shell fragments to 0.4- inch; Limestone, 20%, medium light gray, intraclast (shells)
94-95	grainstone, moderately hard; Sandstone, 15%, medium dark gray, quartz with calcareous matrix, moderately
95-96	hard; Sand, 15%, clear to very light gray, mostly quartz,
96-97	
97-98	
98-99	
99-100	

Injection Well No.1

Penetration rate (min/ft):

Weight On Bit (K lbs):

Rotary Speed (rpm):



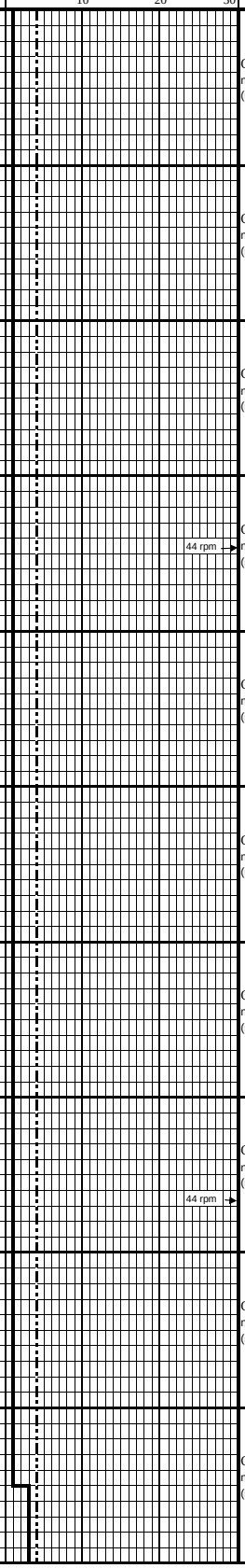
Depth Below Pad Level (ft)	Description
100-101	SHELL WITH SOME LIMESTONE, LITTLE SANDSTONE AND SAND – Shell, 50%, very pale
101-102	
102-103	
103-104	
104-105	orange to light brown, mostly shell fragments to 0.4- inch; Limestone, 20%, medium light gray, intraclast (shells)
105-106	grainstone, moderately hard; Sandstone, 15%, medium dark gray, quartz with calcareous matrix, moderately
106-107	hard; Sand, 15%, clear to very light gray, mostly quartz,
107-108	
108-109	
109-110	
110-111	LIMESTONE WITH SHELL AND LITTLE SAND- Limestone, 50%, medium light gray, intramicrit
111-112	
112-113	
113-114	
114-115	wackestone, fine grained, soft to moderately hard, Shell, 40%, very pale orange to light brown, mostly shell
115-116	fragments to 0.4- inch; Sand, 10%, clear to very light gray, mostly quartz, some calcareous.
116-117	
117-118	
118-119	
119-120	
120-121	LIMESTONE WITH SHELL AND LITTLE SAND- Limestone, 50%, medium light gray, intramicrit
121-122	
122-123	
123-124	
124-125	wackestone, fine grained, soft to moderately hard, Shell, 40%, very pale orange to light brown, mostly shell
125-126	fragments to 0.4- inch; Sand, 10%, clear to very light gray, mostly quartz, some calcareous.
126-127	
127-128	
128-129	
129-130	
130-131	LIMESTONE WITH SHELL AND LITTLE SAND- Limestone, 50%, medium light gray, intramicrit
131-132	
132-133	
133-134	
134-135	wackestone, fine grained, soft to moderately hard, Shell, 40%, very pale orange to light brown, mostly shell
135-136	fragments to 0.4- inch; Sand, 10%, clear to very light gray, mostly quartz, some calcareous.
136-137	
137-138	
138-139	
139-140	
140-141	LIMESTONE WITH SHELL AND LITTLE SAND- Limestone, 50%, medium light gray, intramicrit
141-142	
142-143	
143-144	
144-145	wackestone, fine grained, soft to moderately hard, Shell, 40%, very pale orange to light brown, mostly shell
145-146	fragments to 0.4- inch; Sand, 10%, clear to very light gray, mostly quartz, some calcareous.
146-147	
147-148	
148-149	
149-150	
150-151	LIMESTONE WITH SHELL AND LITTLE SAND- Limestone, 70%, medium light gray, intramicrit
151-152	
152-153	
153-154	
154-155	wackestone, fine grained, soft to moderately hard; Shell, 20%, very pale orange to light brown, mostly shell
155-156	fragments to 0.4- inch; Sand, 10%, clear to very light gray, mostly quartz.
156-157	
157-158	
158-159	
159-160	
160-161	LIMESTONE WITH SHELL AND LITTLE SAND- Limestone, 70%, medium light gray, intramicrit
161-162	
162-163	
163-164	
164-165	wackestone, soft to moderately hard; Shell, 20%, very pale orange to light brown; Sand, 10%,
165-166	shell intraclasts, mostly shell fragments to 0.4- inch;
166-167	
167-168	
168-169	
169-170	
170-171	LIMESTONE WITH SHELL AND SOME SAND- Limestone, 70%, greenish gray and medium ligh
171-172	
172-173	
173-174	
174-175	gray, grainstone, fine grained, moderately hard, moderately well cemented; Shell, 15%, very pale orange to
175-176	light brown, mostly shell fragments to 0.2- inch; Sand, 15%, clear to very light gray, mostly quartz,
176-177	
177-178	
178-179	
179-180	
180-181	SANDY CLAY WITH SHELL AND LITTLE LIMESTONE– Clay, 50%, grayish olive, silty, slightly
181-182	
182-183	phosphatic, very soft to soft, cohesive, non-plastic; Shell, 25%, very pale orange to light brown; Sand, 15%, very
183-184	light gray, calcareous, detritic, some clear, quartz; Limestone, 10%, yellowish gray, biosparitic, moderately soft..
184-185	
185-186	
186-187	CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray, silty, very soft to soft, cohesive,
187-188	non-plastic; Sand, 5%, clear, quartz; Shell, trace, very pale orange. Between 185 and 240 ft bpl large
188-189	(more than 50%) amount of cement fragments in cuttings.
189-190	
190-191	CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray, silty, very soft to soft, cohesive,
191-192	
192-193	
193-194	
194-195	non-plastic; Sand, 5%, clear, quartz; Shell, trace, very pale orange. Between 185 and 240 ft bpl large
195-196	(more than 50%) amount of cement fragments in cuttings.
196-197	
197-198	
198-199	
199-200	

Injection Well No.1

Penetration rate (min/ft):

Weight On Bit (K lbs):

Rotary Speed (rpm):



Depth Below Pad Level (ft)	Description
200-201	CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray, silty, very soft to soft, cohesive, non-plastic; Sand, 5%, clear, quartz; Shell, trace, very pale orange. Between 185 and 240 ft bpl large (more than 50%) amount of cement fragments in cuttings.
201-202	
202-203	
203-204	
204-205	
205-206	
206-207	
207-208	
208-209	
209-210	
210-211	CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray, silty, very soft to soft, cohesive, non-plastic; Sand, 5%, clear, quartz; Shell, trace, very pale orange. Between 185 and 240 ft bpl large (more than 50%) amount of cement fragments in cuttings.
211-212	
212-213	
213-214	
214-215	
215-216	
216-217	
217-218	
218-219	
219-220	
220-221	CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray, silty, very soft to soft, cohesive, non-plastic; Sand, 5%, clear, quartz; Shell, trace, very pale orange. Between 185 and 240 ft bpl large (more than 50%) amount of cement fragments in cuttings.
221-222	
222-223	
223-224	
224-225	
225-226	
226-227	
227-228	
228-229	
229-230	
230-231	CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray, silty, very soft to soft, cohesive, non-plastic; Sand, 5%, clear, quartz; Shell, trace, very pale orange. Between 185 and 240 ft bpl large (more than 50%) amount of cement fragments in cuttings.
231-232	
232-233	
233-234	
234-235	
235-236	
236-237	
237-238	
238-239	
239-240	
240-241	CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray, silty, very soft to soft, cohesive, non-plastic; Sand, 5%, clear, quartz; Shell, trace, very pale orange. Between 185 and 240 ft bpl large (more than 50%) amount of cement fragments in cuttings.
241-242	
242-243	
243-244	
244-245	
245-246	
246-247	
247-248	
248-249	
249-250	
250-251	CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray, silty, very soft to soft, cohesive, non-plastic; Sand, 5%, clear, quartz; Shell, trace, very pale orange. Between 185 and 240 ft bpl large (more than 50%) amount of cement fragments in cuttings.
251-252	
252-253	
253-254	
254-255	
255-256	
256-257	
257-258	
258-259	
259-260	
260-261	CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray, silty, very soft to soft, cohesive, non-plastic; Sand, 5%, clear, quartz; Shell, trace, very pale orange. Between 185 and 240 ft bpl large (more than 50%) amount of cement fragments in cuttings.
261-262	
262-263	
263-264	
264-265	
265-266	
266-267	
267-268	
268-269	
269-270	
270-271	CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray, silty, very soft to soft, cohesive, non-plastic; Sand, 5%, clear, quartz; Shell, trace, very pale orange. Between 185 and 240 ft bpl large (more than 50%) amount of cement fragments in cuttings.
271-272	
272-273	
273-274	
274-275	
275-276	
276-277	
277-278	
278-279	
279-280	
280-281	CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray, silty, very soft to soft, cohesive, non-plastic; Sand, 5%, clear, quartz; Shell, trace, very pale orange. Between 185 and 240 ft bpl large (more than 50%) amount of cement fragments in cuttings.
281-282	
282-283	
283-284	
284-285	
285-286	
286-287	
287-288	
288-289	
289-290	
290-291	CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray, silty, very soft to soft, cohesive, non-plastic; Sand, 5%, clear, quartz; Shell, trace, very pale orange. Between 185 and 240 ft bpl large (more than 50%) amount of cement fragments in cuttings.
291-292	
292-293	
293-294	
294-295	
295-296	
296-297	
297-298	
298-299	
299-300	

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):

Depth Below Pad Level (ft)	10 20 30	Description
300-301		CLAY WITH VERY LITTLE SAND AND SHELL- Clay, 90%, dark greenish gray to grayish olive green, silty, soft to very soft, very cohesive, non-plastic; Sand, 5%, clear, quartz; Shell, 5%, very pale orange.
301-302		
302-303		
303-304		
304-305		
305-306		
306-307		
307-308		
308-309		
309-310		
310-311		CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderately hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
311-312		
312-313		
313-314		
314-315		
315-316	30 rpm →	
316-317		
317-318		
318-319		
319-320		
320-321		CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderately hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
321-322		
322-323		
323-324		
324-325		
325-326		
326-327		
327-328		
328-329		
329-330		
330-331		CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderately hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
331-332		
332-333		
333-334		
334-335		
335-336		
336-337		
337-338		
338-339		
339-340		
340-341		CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderately hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
341-342		
342-343		
343-344		
344-345		
345-346		
346-347		
347-348		
348-349		
349-350		
350-351		CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderately hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
351-352		
352-353		
353-354		
354-355		
355-356	30 rpm →	
356-357		
357-358		
358-359		
359-360		
360-361		CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderately hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
361-362		
362-363		
363-364		
364-365		
365-366		
366-367		
367-368		
368-369		
369-370		
370-371		CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderately hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
371-372		
372-373		
373-374		
374-375		
375-376		
376-377		
377-378		
378-379		
379-380		
380-381		CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderately hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
381-382		
382-383		
383-384		
384-385		
385-386		
386-387		
387-388		
388-389		
389-390		
390-391		CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderately hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
391-392		
392-393		
393-394		
394-395	30 rpm →	
395-396		
396-397		
397-398		
398-399		
399-400		

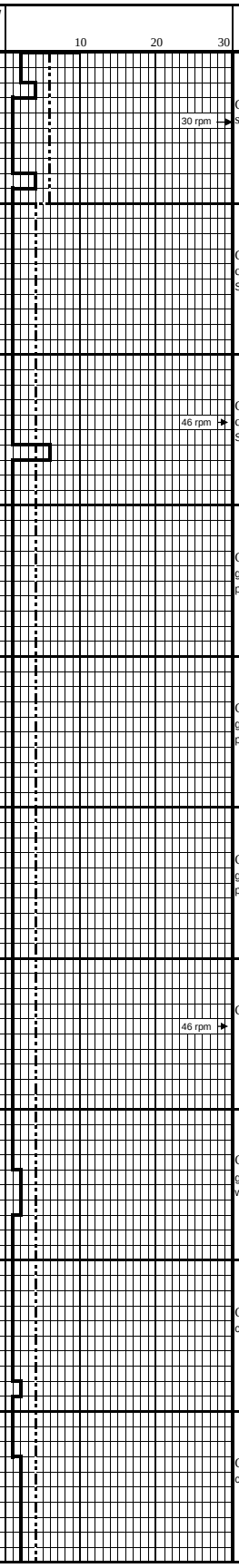
Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):

Depth Below Pad Level (ft)	10	20	30	Description
400-401				CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderatel
401-402				hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
402-403				
403-404				
404-405				
405-406				
406-407				
407-408				
408-409				
409-410				
410-411				CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderatel
411-412				hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
412-413				
413-414				
414-415				
415-416				
416-417				
417-418				
418-419				
419-420				
420-421				CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderatel
421-422				hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
422-423				
423-424				
424-425				
425-426				
426-427				
427-428				
428-429				
429-430				
430-431				CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderatel
431-432				hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
432-433				
433-434				
434-435				
435-436			30 rpm →	
436-437				
437-438				
438-439				
439-440				
440-441				CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderatel
441-442				hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
442-443				
443-444				
444-445				
445-446				
446-447				
447-448				
448-449				
449-450				
450-451				CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderatel
451-452				hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
452-453				
453-454				
454-455				
455-456				
456-457				
457-458				
458-459				
459-460				
460-461				CLAY- Clay, 100%, grayish olive to dark greenish gray, silty, very cohesive, very soft to moderatel
461-462				hard, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange.
462-463				
463-464				
464-465			30 rpm →	
465-466				
466-467				
467-468				
468-469				
469-470				
470-471				CLAY WITH VERY LITTLE SAND – Clay, 95%, olive gray to grayish yellow green, cohesive, very
471-472				soft, low plasticity to non-plastic; Sand, 5%, clear, quartz.
472-473				
473-474				
474-475				
475-476				
476-477				
477-478				
478-479				
479-480				
480-481				CLAY WITH VERY LITTLE SAND – Clay, 95%, olive gray to grayish yellow green, cohesive, very
481-482				soft, low plasticity to non-plastic; Sand, 5%, clear, quartz.
482-483				
483-484				
484-485				
485-486				
486-487				
487-488				
488-489				
489-490				
490-491				CLAY WITH VERY LITTLE SAND – Clay, 95%, olive gray to grayish yellow green, cohesive, very
491-492				soft, low plasticity to non-plastic; Sand, 5%, clear, quartz.
492-493				
493-494				
494-495				
495-496				
496-497				
497-498				
498-499				
499-500				

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):



Depth Below Pad Level (ft)	Description
500-501	CLAY WITH VERY LITTLE SAND – Clay, 95%, olive gray to grayish yellow green, cohesive, very soft, low plasticity to non-plastic; Sand, 5%, clear, quartz.
501-502	
502-503	
503-504	
504-505	
505-506	
506-507	
507-508	
508-509	
509-510	
510-511	CLAY WITH LITTLE LIMESTONE – Clay, 90%, pale olive to grayish olive very soft to soft, highly cohesive, non- plastic; Limestone, 10%, grayish yellow green to white, arenaceous, soft, poorly cemente Sand, trace, clear to light greenish gray, quartz and calcareous.
511-512	
512-513	
513-514	
514-515	
515-516	
516-517	
517-518	
518-519	
519-520	
520-521	CLAY WITH LITTLE LIMESTONE – Clay, 90%, pale olive to grayish olive, very soft to soft, highly cohesive, non- plastic; Limestone, 10%, grayish yellow green to white, arenaceous, soft, poorly cemente Sand, trace, clear to light greenish gray, quartz and calcareous.
521-522	
522-523	
523-524	
524-525	
525-526	
526-527	
527-528	
528-529	
529-530	
530-531	CLAY, SOME LIMESTONE AND LITTLE SAND – Clay, 80%, pale greenish yellow to yellowish gray, very soft to soft, non-plastic, cohesive; Limestone, 15%, yellowish gray, arenaceous, soft, poorly cemented; Sand, 5%, light gray to clear, mostly calcareous, detritic, some quartz.
531-532	
532-533	
533-534	
534-535	
535-536	
536-537	
537-538	
538-539	
539-540	
540-541	CLAY, SOME LIMESTONE AND LITTLE SAND – Clay, 80%, pale greenish yellow to yellowish gray, very soft to soft, non-plastic, cohesive; Limestone, 15%, yellowish gray, arenaceous, soft, poorly cemented; Sand, 5%, light gray to clear, mostly calcareous, detritic, some quartz.
541-542	
542-543	
543-544	
544-545	
545-546	
546-547	
547-548	
548-549	
549-550	
550-551	CLAY, SOME LIMESTONE AND LITTLE SAND – Clay, 80%, pale greenish yellow to yellowish gray, very soft to soft, non-plastic, cohesive; Limestone, 15%, yellowish gray, arenaceous, soft, poorly cemented; Sand, 5%, light gray to clear, mostly calcareous, detritic, some quartz.
551-552	
552-553	
553-554	
554-555	
555-556	
556-557	
557-558	
558-559	
559-560	
560-561	CLAY– Clay, 100%, pale olive, silty, very slightly calcareous, very soft to soft, cohesive, non- plasti
561-562	
562-563	
563-564	
564-565	
565-566	
566-567	
567-568	
568-569	
569-570	
570-571	CLAY WITH LITTLE LIMESTONE– Clay, 90%, mostly pale greenish yellow, some grayish olive green, very soft to soft, highly cohesive, non- plastic to low plasticity; Limestone, 10%, grayish yellow green to white, arenaceous, soft, poorly cemented.
571-572	
572-573	
573-574	
574-575	
575-576	
576-577	
577-578	
578-579	
579-580	
580-581	CLAY – Clay, 100%, pale olive to pale greenish yellow, slightly calcareous, silty, very soft to soft cohesive, non- plastic.
581-582	
582-583	
583-584	
584-585	
585-586	
586-587	
587-588	
588-589	
589-590	
590-591	CLAY – Clay, 100%, pale olive to pale greenish yellow, slightly calcareous, silty, very soft to soft cohesive, non- plastic.
591-592	
592-593	
593-594	
594-595	
595-596	
596-597	
597-598	
598-599	
599-600	

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):

Depth Below Pad Level (ft)	10 20 30	Description
600-601		CLAY – Clay, 100%, pale olive to pale greenish yellow, slightly calcareous, silty, very soft to soft cohesive, non- plastic.
601-602		
602-603		
603-604		
604-605	46 rpm →	
605-606		
606-607		
607-608		
608-609		
609-610		
610-611		CLAY – Clay, 100%, pale olive to pale greenish yellow, slightly calcareous, silty, very soft to soft cohesive, non- plastic.
611-612		
612-613		
613-614		
614-615		
615-616		
616-617		
617-618		
618-619		
619-620		
620-621		CLAY – Clay, 100%, pale olive to pale greenish yellow, slightly calcareous, silty, very soft to soft cohesive, non- plastic.
621-622		
622-623		
623-624		
624-625	44 rpm →	
625-626		
626-627		
627-628		
628-629		
629-630		
630-631		CALCAREOUS CLAY (MARL) AND SOME LIMESTONE WITH LITTLE SAND – Clay, 70%, yellowish gray, calcareous, little silty, phosphatic, moderately soft to very soft, non-plastic, non-cohesive; Limestone, 20%, yellowish gray, soft to moderately hard; Sand, 10%, clear to light gray, mostly detritic.
631-632		
632-633		
633-634		
634-635		
635-636		
636-637		
637-638		
638-639		
639-640		
640-641		CLAY WITH LITTLE LIMESTONE AND SHELL – Clay, 90%, pale olive, mostly calcareous, very soft to soft, non-plastic, cohesive; Limestone, 5%, very pale orange to white, fine grained, very soft to soft, poorly cemented; Shell, 5%, very pale orange to white.
641-642		
642-643		
643-644		
644-645		
645-646		
646-647		
647-648		
648-649		
649-650		
650-651		CLAY WITH LITTLE LIMESTONE AND SHELL – Clay, 90%, pale olive, mostly calcareous, very soft to soft, non-plastic, cohesive; Limestone, 5%, very pale orange to white, fine grained, very soft to soft, poorly cemented; Shell, 5%, very pale orange to white.
651-652		
652-653		
653-654		
654-655		
655-656		
656-657		
657-658		
658-659		
659-660		
660-661		CLAY WITH LITTLE LIMESTONE AND SHELL – Clay, 90%, pale olive, mostly calcareous, very soft to soft, non-plastic, cohesive; Limestone, 5%, very pale orange to white, fine grained, very soft to soft, poorly cemented; Shell, 5%, very pale orange to white.
661-662		
662-663		
663-664		
664-665	44 rpm →	
665-666		
666-667		
667-668		
668-669		
669-670		
670-671		CLAY WITH LITTLE LIMESTONE AND SHELL – Clay, 90%, pale olive, mostly calcareous, very soft to soft, non-plastic, cohesive; Limestone, 5%, very pale orange to white, fine grained, very soft to soft, poorly cemented; Shell, 5%, very pale orange to white.
671-672		
672-673		
673-674		
674-675		
675-676		
676-677		
677-678		
678-679		
679-680		
680-681		CALCAREOUS CLAY (MARL) AND SOME LIMESTONE WITH VERY LITTLE SAND – Clay, 70%, yellowish gray, calcareous, moderately soft to very soft, non-plastic, non-cohesive; Limestone, 25%, yellowish gray, soft to moderately hard, poorly cemented; Sand, 5%, clear to light gray.
681-682		
682-683		
683-684		
684-685		
685-686		
686-687		
687-688		
688-689		
689-690		
690-691		CLAY WITH LITTLE LIMESTONE – Clay, 90%, mostly pale greenish yellow mostly calcareous (marl), very soft to soft, highly cohesive, non- plastic to low plasticity; Limestone, 10%, grayish yellow green to white, soft, poorly cemented.
691-692		
692-693		
693-694		
694-695		
695-696		
696-697		
697-698		
698-699		
699-700		

Injection Well No.1

Penetration rate (min/ft):

Weight On Bit (K lbs):

Rotary Speed (rpm):

Depth Below Pad Level (ft)	10	20	30	Description
700-701				CLAY WITH LITTLE LIMESTONE – Clay, 90%, mostly pale greenish yellow mostly calcareous (marl), very soft to soft, highly cohesive, non- plastic to low plasticity; Limestone, 10%, grayish yellow green to white, soft, poorly cemented.
701-702				
702-703				
703-704				
704-705			44 rpm →	
705-706				
706-707				
707-708				
708-709				
709-710				
710-711				CLAY WITH LITTLE LIMESTONE – Clay, 90%, mostly pale greenish yellow mostly calcareous (marl), very soft to soft, highly cohesive, non- plastic to low plasticity; Limestone, 10%, grayish yellow green to white, soft, poorly cemented.
711-712				
712-713				
713-714				
714-715			46 rpm	
715-716				
716-717				
717-718				
718-719				
719-720				
720-721				CLAY WITH LITTLE LIMESTONE – Clay, 90%, mostly pale greenish yellow mostly calcareous (marl), very soft to soft, highly cohesive, non- plastic to low plasticity; Limestone, 10%, grayish yellow green to white, soft, poorly cemented.
721-722				
722-723				
723-724				
724-725				
725-726				
726-727				
727-728				
728-729				
729-730				
730-731				CALCAREOUS CLAY (MARL) AND LIMESTONE WITH LITTLE SAND – Clay, 60%, yellowish gray to white, calcareous, some grayish olive, silty, very phosphatic, moderately soft to very soft, non-plastic; Limestone, 30%, yellowish gray, soft to moderately hard; Sand, 10%, clear to light gray, mostly calcareous,detritic.
731-732				
732-733				
733-734				
734-735				
735-736				
736-737				
737-738				
738-739				
739-740				
740-741				LIMESTONE WITH VERY LITTLE CLAY AND SHELL- Limestone, 90%, very pale orange to yellowish gray (5Y 7/2), biosparitic grainstone, moderately hard, moderately well cemented; Clay, 5% to trace at the bottom, yellowish gray, calcareous (marl).
741-742				
742-743				
743-744				
744-745			44 rpm →	
745-746				
746-747				
747-748				
748-749				
749-750				
750-751				LIMESTONE WITH VERY LITTLE CLAY AND SHELL- Limestone, 90%, very pale orange to yellowish gray (5Y 7/2), biosparitic grainstone, moderately hard, moderately well cemented; Clay, 5% to trace at the bottom, yellowish gray, calcareous (marl).
751-752				
752-753				
753-754				
754-755				
755-756				
756-757				
757-758				
758-759				
759-760				
760-761				LIMESTONE WITH VERY LITTLE CLAY AND SHELL- Limestone, 90%, very pale orange to yellowish gray (5Y 7/2), biosparitic grainstone, moderately hard, moderately well cemented; Clay, 5% to trace at the bottom, yellowish gray, calcareous (marl).
761-762				
762-763				
763-764				
764-765				
765-766				
766-767				
767-768				
768-769				
769-770				
770-771				LIMESTONE – Limestone, 100%, yellowish gray, sparry grainstone, fine to medium grained moderately well cemented.
771-772				
772-773				
773-774				
774-775				
775-776				
776-777				
777-778				
778-779				
779-780				
780-781				LIMESTONE – Limestone, 100%, yellowish gray, sparry grainstone, fine to medium grained moderately well cemented.
781-782				
782-783				
783-784				
784-785			44 rpm →	
785-786				
786-787				
787-788				
788-789				
789-790				
790-791				LIMESTONE – Limestone, 100%, yellowish gray, sparry grainstone, fine to medium grained moderately well cemented.
791-792				
792-793				
793-794				
794-795				
795-796				
796-797				
797-798				
798-799				
799-800				

Injection Well No.1

Penetration rate (min/ft):

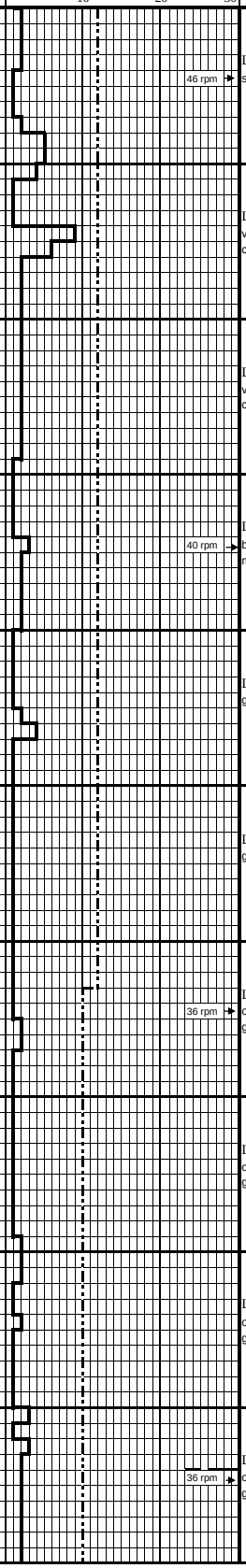
Weight On Bit (K lbs):

Rotary Speed (rpm):

Depth Below Pad Level (ft)	10	20	30	Description
800-801				LIMESTONE – Limestone, 100%, yellowish gray, sparry grainstone, fine to medium grained, sof moderately well cemented.
801-802				
802-803				
803-804				
804-805				
805-806				
806-807				
807-808				
808-809				
809-810				
810-811				LIMESTONE – Limestone, 100%, yellowish gray, sparry grainstone, fine to medium grained, sof moderately well cemented.
811-812				
812-813				
813-814				
814-815				
815-816				
816-817				
817-818				
818-819				
819-820				
820-821				LIMESTONE – Limestone, 100%, yellowish gray, sparry grainstone, fine to medium grained, sof moderately well cemented.
821-822				
822-823				
823-824				
824-825				
825-826				
826-827				
827-828				
828-829				
829-830				
830-831				LIMESTONE – Limestone, 100%, yellowish gray, sparry grainstone, fine to medium grained, sof moderately well cemented.
831-832				
832-833				
833-834				
834-835			44 rpm →	
835-836				
836-837				
837-838				
838-839				
839-840				
840-841				LIMESTONE – Limestone, 100%; yellowish gray, biosparitic, very soft to soft, poorly cemented some light gray to medium light gray, microcrystalline, moderately hard.
841-842				
842-843				
843-844				
844-845				
845-846				
846-847				
847-848				
848-849				
849-850				
850-851				LIMESTONE – Limestone, 100%; yellowish gray, biosparitic, very soft to soft, poorly cemented some light gray to medium light gray, microcrystalline, moderately hard.
851-852				
852-853				
853-854				
854-855				
855-856				
856-857				
857-858				
858-859				
859-860				
860-861				LIMESTONE – Limestone, 100%; yellowish gray, biosparitic, very soft to soft, poorly cemented some light gray to medium light gray, microcrystalline, moderately hard.
861-862				
862-863				
863-864				
864-865				
865-866				
866-867				
867-868				
868-869				
869-870				
870-871				LIMESTONE – Limestone, 100%; yellowish gray, biosparitic, very soft to soft, poorly cemented some light gray to medium light gray, microcrystalline, moderately hard.
871-872				
872-873				
873-874			44 rpm →	
874-875				
875-876				
876-877				
877-878				
878-879				
879-880				
880-881				LIMESTONE – Limestone, 100%; yellowish gray, biosparitic, very soft to soft, poorly cemented some light gray to medium light gray, microcrystalline, moderately hard.
881-882				
882-883				
883-884				
884-885				
885-886				
886-887				
887-888				
888-889				
889-890				
890-891				LIMESTONE – Limestone, 100%; yellowish gray, biosparitic, very soft to soft, poorly cemented some light gray to medium light gray, microcrystalline, moderately hard.
891-892				
892-893				
893-894				
894-895				
895-896				
896-897				
897-898				
898-899				
899-900				

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):



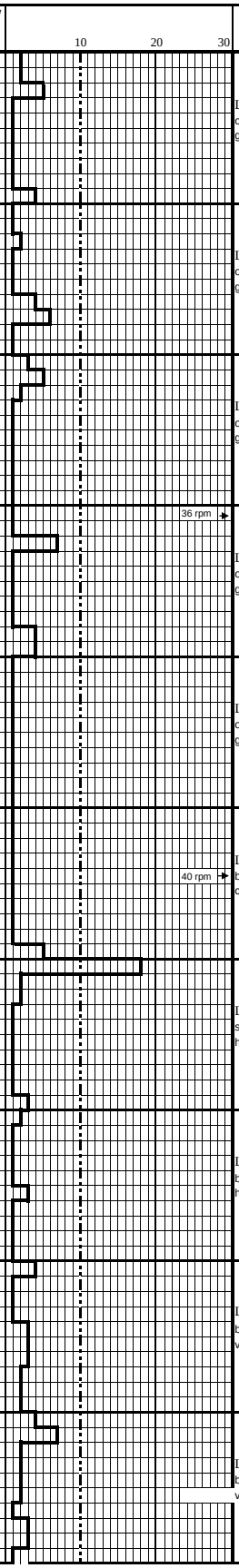
Depth Below Pad Level (ft)	Description
900-901	LIMESTONE – Limestone, 100%; yellowish gray, biosparitic, very soft to soft, poorly cemented
901-902	
902-903	
903-904	
904-905	some light gray to medium light gray, microcrystalline, moderately hard.
905-906	
906-907	
907-908	
908-909	
909-910	
910-911	LIMESTONE– Limestone, 100%; very pale orange to yellowish gray, biosparitic grainstone, fossiliferous
911-912	
912-913	
913-914	
914-915	very soft to soft, poorly cemented, fine grained, very little light gray to medium light gray, microcrystalline to finely
915-916	crystalline, hard, well cemented.
916-917	
917-918	
918-919	
919-920	
920-921	LIMESTONE– Limestone, 100%; very pale orange to yellowish gray, biosparitic grainstone, fossiliferous
921-922	
922-923	
923-924	
924-925	very soft to soft, poorly cemented, fine grained, very little light gray to medium light gray, microcrystalline to finely
925-926	crystalline, hard, well cemented.
926-927	
927-928	
928-929	
929-930	
930-931	LIMESTONE WITH LITTLE DOLOMITE – Limestone, 90%; very pale orange to yellowish gray,
931-932	
932-933	
933-934	
934-935	biosparitic grainstone, very soft to moderately hard, rained, some yellowish gray, dolomitic, finely crystalline,
935-936	moderately hard; Dolomite, 10%, very light gray to pale yellowish brown, microcrystalline to finely crystalline, hard.
936-937	
937-938	
938-939	
939-940	
940-941	LIMESTONE – Limestone, 100%; yellowish gray, grainstone, very soft, poorly cemented, very little ligh
941-942	
942-943	
943-944	
944-945	gray to medium light gray, microcrystalline, moderately hard.
945-946	
946-947	
947-948	
948-949	
949-950	
950-951	LIMESTONE – Limestone, 100%; yellowish gray, grainstone, very soft, poorly cemented, very little ligh
951-952	
952-953	
953-954	
954-955	gray to medium light gray, microcrystalline, moderately hard.
955-956	
956-957	
957-958	
958-959	
959-960	
960-961	LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; yellowish gray, biosparitic, f
961-962	
962-963	
963-964	
964-965	ossiliferous, little light gray, fine crystalline, partly slightly dolomitic, very soft to moderately hard; Dolomite, 5%,
965-966	grayish orange to medium gray, finely crystalline to microcrystalline, moderately hard, slightly vuggy.
966-967	
967-968	
968-969	
969-970	
970-971	LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; yellowish gray, biosparitic, f
971-972	
972-973	
973-974	
974-975	ossiliferous, little light gray, fine crystalline, partly slightly dolomitic, very soft to moderately hard; Dolomite, 5%,
975-976	grayish orange to medium gray, finely crystalline to microcrystalline, moderately hard, slightly vuggy.
976-977	
977-978	
978-979	
979-980	
980-981	LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; yellowish gray, biosparitic, f
981-982	
982-983	
983-984	
984-985	ossiliferous, little light gray, fine crystalline, partly slightly dolomitic, very soft to moderately hard; Dolomite, 5%,
985-986	grayish orange to medium gray, finely crystalline to microcrystalline, moderately hard, slightly vuggy.
986-987	
987-988	
988-989	
989-990	
990-991	LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; yellowish gray, biosparitic, f
991-992	
992-993	
993-994	
994-995	ossiliferous, little light gray, fine crystalline, partly slightly dolomitic, very soft to moderately hard; Dolomite, 5%,
995-996	grayish orange to medium gray, finely crystalline to microcrystalline, moderately hard, slightly vuggy.
996-997	
997-998	
998-999	
999-1000	

Injection Well No.1

Penetration rate (min/ft):

Weight On Bit (K lbs):

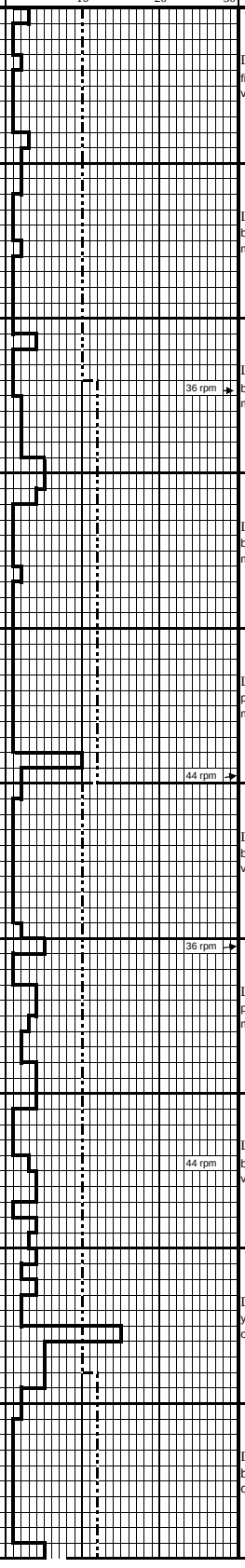
Rotary Speed (rpm):



Depth Below Pad Level (ft)	Description
1000-1001	LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; yellowish gray, biosparitic, f
1001-1002	ossiliferous, little light gray, fine crystalline, partly slightly dolomitic, very soft to moderately hard; Dolomite, 5%,
1002-1003	grayish orange to medium gray, finely crystalline to microcrystalline, moderately hard, slightly vuggy.
1003-1004	
1004-1005	
1005-1006	
1006-1007	
1007-1008	
1008-1009	
1009-1010	
1010-1011	LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; yellowish gray, biosparitic, f
1011-1012	ossiliferous, little light gray, fine crystalline, partly slightly dolomitic, very soft to moderately hard; Dolomite, 5%,
1012-1013	grayish orange to medium gray, finely crystalline to microcrystalline, moderately hard, slightly vuggy.
1013-1014	
1014-1015	
1015-1016	
1016-1017	
1017-1018	
1018-1019	
1019-1020	
1020-1021	LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; yellowish gray, biosparitic, f
1021-1022	ossiliferous, little light gray, fine crystalline, partly slightly dolomitic, very soft to moderately hard; Dolomite, 5%,
1022-1023	grayish orange to medium gray, finely crystalline to microcrystalline, moderately hard, slightly vuggy.
1023-1024	
1024-1025	
1025-1026	
1026-1027	
1027-1028	
1028-1029	
1029-1030	
1030-1031	LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; yellowish gray, biosparitic, f
1031-1032	ossiliferous, little light gray, fine crystalline, partly slightly dolomitic, very soft to moderately hard; Dolomite, 5%,
1032-1033	grayish orange to medium gray, finely crystalline to microcrystalline, moderately hard, slightly vuggy.
1033-1034	
1034-1035	
1035-1036	
1036-1037	
1037-1038	
1038-1039	
1039-1040	
1040-1041	LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; yellowish gray, biosparitic, f
1041-1042	ossiliferous, little light gray, fine crystalline, partly slightly dolomitic, very soft to moderately hard; Dolomite, 5%,
1042-1043	grayish orange to medium gray, finely crystalline to microcrystalline, moderately hard, slightly vuggy.
1043-1044	
1044-1045	
1045-1046	
1046-1047	
1047-1048	
1048-1049	
1049-1050	
1050-1051	LIMESTONE AND SOME DOLOMITE – Limestone, 70%, very pale orange to yellowish gray,
1051-1052	biosparitic, very soft to soft; Dolomite, 30%, moderate olive brown, olive gray to medium gray, very fine to micro
1052-1053	crystalline, hard, very well cemented.
1053-1054	
1054-1055	
1055-1056	
1056-1057	
1057-1058	
1058-1059	
1059-1060	
1060-1061	LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; yellowish gray, biosparitic, very
1061-1062	soft, poorly cemented, some very pale orange to light gray, dolomitic, very fine to microcrystalline, moderately
1062-1063	hard; Dolomite, 5%, grayish orange to medium gray, finely crystalline to microcrystalline, moderately hard.
1063-1064	
1064-1065	
1065-1066	
1066-1067	
1067-1068	
1068-1069	
1069-1070	
1070-1071	LIMESTONE AND LITTLE DOLOMITE – Limestone, 90%, very pale orange to yellowish gray,
1071-1072	biosparitic, very soft to soft; Dolomite, 10%, dark gray to medium gray and grayish orange, very fine crystalline,
1072-1073	hard, well cemented.
1073-1074	
1074-1075	
1075-1076	
1076-1077	
1077-1078	
1078-1079	
1079-1080	
1080-1081	LIMESTONE AND SOME DOLOMITE – Limestone, 75%, very pale orange to yellowish gray,
1081-1082	biosparitic, partly dolomitic, very soft to soft; Dolomite, 25%, moderate olive brown, olive gray to medium gray,
1082-1083	very fine- to micro-crystalline, hard.
1083-1084	
1084-1085	
1085-1086	
1086-1087	
1087-1088	
1088-1089	
1089-1090	
1090-1091	LIMESTONE AND SOME DOLOMITE – Limestone, 75%, very pale orange to yellowish gray,
1091-1092	biosparitic, partly dolomitic, very soft to soft; Dolomite, 25%, moderate olive brown, olive gray to medium gray,
1092-1093	very fine- to micro-crystalline, hard.
1093-1094	
1094-1095	
1095-1096	
1096-1097	
1097-1098	
1098-1099	
1099-1100	

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):



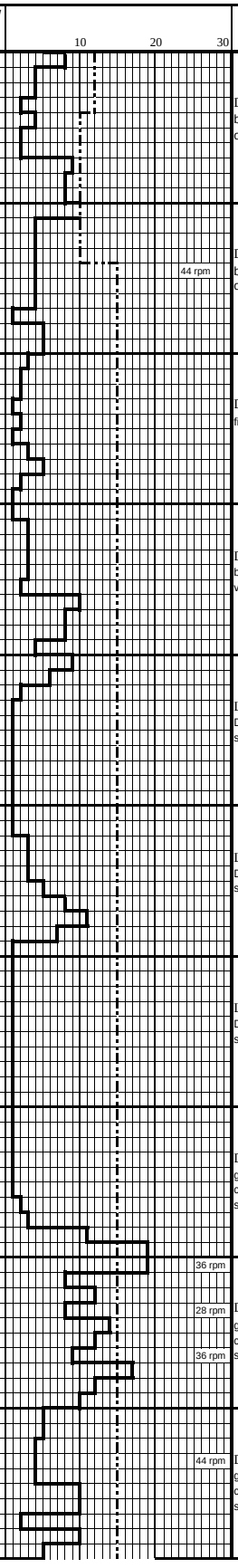
Depth Below Pad Level (ft)	Description
1100-1101 to 1109-1110	DOLOMITE AND LIMESTONE- Dolomite, 60%, dark gray to medium gray and grayish orange, very fine- to micro-crystalline, hard; Limestone, 40%, very pale orange to yellowish gray, biosparitic, partly dolomitic, very soft to soft.
1110-1111 to 1119-1120	LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; yellowish gray to very pale orange, biosparitic, partly dolomitic, very soft to soft; Dolomite, 5%, grayish orange to medium gray, very fine-to micro-crystalline, moderately hard.
1120-1121 to 1129-1130	LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; yellowish gray to very pale orange, biosparitic, partly dolomitic, very soft to soft; Dolomite, 5%, grayish orange to medium gray, very fine-to micro-crystalline, moderately hard.
1130-1131 to 1139-1140	LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%; yellowish gray to very pale orange, biosparitic, partly dolomitic, very soft to soft; Dolomite, 5%, grayish orange to medium gray, very fine-to micro-crystalline, moderately hard.
1140-1141 to 1149-1150	LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange to yellowish gray, biosparitic, partly dolomitic, very soft to soft; Dolomite, 50%, moderate yellowish brown to dark gray, very-fine- to micro-crystalline, moderately hard.
1150-1151 to 1159-1160	LIMESTONE AND SOME DOLOMITE – Limestone, 75%, very pale orange to yellowish gray, biosparitic,partly dolomitic, very soft to soft; Dolomite, 25%, very light gray to medium gray, little grayish orange, very fine- to micro-crystalline, moderately hard.
1160-1161 to 1169-1170	LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange to yellowish gray, biosparitic, partly dolomitic; Dolomite, 50%, very light gray to medium dark gray, little yellowish brown very fine- to micro-crystalline, moderately hard.
1170-1171 to 1179-1180	LIMESTONE AND SOME DOLOMITE – Limestone, 70%, very pale orange to yellowish gray, biosparitic, partly dolomitic, very soft to soft; Dolomite, 30%, very light gray to medium gray, little grayish orange, very fine- to micro- crystalline, moderately hard.
1180-1181 to 1189-1190	DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown, little dark yellowish brown and medium light gray, very-fine crystalline, moderately hard to hard; Limestone, 5%, very pale orange to yellowish gray, biosparitic, soft.
1190-1191 to 1199-1200	DOLOMITE AND SOME LIMESTONE– Dolomite, 80%, pale yellowish brown to moderate yellowisl brown and medium light gray, very-fine crystalline, moderately hard to hard; Limestone, 20%, very pale orange to yellowish gray, biosparitic, soft.

Injection Well No.1

Penetration rate (min/ft):

Weight On Bit (K lbs):

Rotary Speed (rpm):



Depth Below Pad Level (ft)	Description
1200-1201 1201-1202 1202-1203 1203-1204 1204-1205 1205-1206 1206-1207 1207-1208 1208-1209 1209-1210	DOLOMITE AND SOME LIMESTONE– Dolomite, 80%, pale yellowish brown to moderate yellowisl brown and medium light gray, very-fine crystalline, moderately hard to hard; Limestone, 20%, very pale orange to yellowish gray, biosparitic, soft.
1210-1211 1211-1212 1212-1213 1213-1214 1214-1215 1215-1216 1216-1217 1217-1218 1218-1219 1219-1220	DOLOMITE AND SOME LIMESTONE– Dolomite, 80%, pale yellowish brown to moderate yellowisl brown and medium light gray, very-fine crystalline, moderately hard to hard; Limestone, 20%, very pale orange to yellowish gray, biosparitic, soft.
1220-1221 1221-1222 1222-1223 1223-1224 1224-1225 1225-1226 1226-1227 1227-1228 1228-1229 1229-1230	DOLOMITE- Dolomite, 100%, pale yellowish brown to moderate yellowish brown and dark gray, ver fine crystalline, moderately hard to hard.
1230-1231 1231-1232 1232-1233 1233-1234 1234-1235 1235-1236 1236-1237 1237-1238 1238-1239 1239-1240	DOLOMITE AND SOME LIMESTONE – Dolomite, 90%, pale yellowish brown, moderate yellowisl brown and medium light gray to medium dark gray, very-fine crystalline, moderately hard to hard; Limestone, 10%, very pale orange, biosparitic, soft.
1240-1241 1241-1242 1242-1243 1243-1244 1244-1245 1245-1246 1246-1247 1247-1248 1248-1249 1249-1250	LIMESTONE AND DOLOMITE- Limestone, 60%, very pale orange, slightly fossiliferous, soft; Dolomite, 40%, pale yellowish brown, moderate yellowish brown and medium light gray to medium dark gray, sucrosic to very-fine crystalline, moderately hard to hard.
1250-1251 1251-1252 1252-1253 1253-1254 1254-1255 1255-1256 1256-1257 1257-1258 1258-1259 1259-1260	LIMESTONE AND DOLOMITE- Limestone, 60%, very pale orange, slightly fossiliferous, soft; Dolomite, 40%, pale yellowish brown, moderate yellowish brown and medium light gray to medium dark gray, sucrosic to very-fine crystalline, moderately hard to hard.
1260-1261 1261-1262 1262-1263 1263-1264 1264-1265 1265-1266 1266-1267 1267-1268 1268-1269 1269-1270	LIMESTONE AND DOLOMITE- Limestone, 60%, very pale orange, slightly fossiliferous, soft; Dolomite, 40%, pale yellowish brown, moderate yellowish brown and medium light gray to medium dark gray, sucrosic to very-fine crystalline, moderately hard to hard.
1270-1271 1271-1272 1272-1273 1273-1274 1274-1275 1275-1276 1276-1277 1277-1278 1278-1279 1279-1280	DOLOMITE WITH VERY LITTLE LIMESTONE; Dolomite, 95%, from pale yellowish brown to grayish olive green and greenish black with trace of medium light gray to medium gray, sucrosic to krypto-crystalline, hard to very hard; Limestone, 5%, very pale orange, mostly dolomitic, micritic, some biosparitic, soft to moderately hard.
1280-1281 1281-1282 1282-1283 1283-1284 1284-1285 1285-1286 1286-1287 1287-1288 1288-1289 1289-1290	DOLOMITE WITH VERY LITTLE LIMESTONE; Dolomite, 95%, from pale yellowish brown to grayish olive green and greenish black with trace of medium light gray to medium gray, sucrosic to krypto-crystalline, hard to very hard; Limestone, 5%, very pale orange, mostly dolomitic, micritic, some biosparitic, soft to moderately hard.
1290-1291 1291-1292 1292-1293 1293-1294 1294-1295 1295-1296 1296-1297 1297-1298 1298-1299 1299-1300	DOLOMITE WITH VERY LITTLE LIMESTONE; Dolomite, 95%, from pale yellowish brown to grayish olive green and greenish black with trace of medium light gray to medium gray, sucrosic to krypto-crystalline, hard to very hard; Limestone, 5%, very pale orange, mostly dolomitic, micritic, some biosparitic, soft to moderately hard.

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):

Depth Below Pad Level (ft)	10 20 30	Description
1300-1301		DOLOMITE WITH VERY LITTLE LIMESTONE; Dolomite, 95%, from pale yellowish brown to grayish olive green and greenish black with trace of medium light gray to medium gray, sucrosic to krypto-crystalline, hard to very hard; Limestone, 5%, very pale orange, mostly dolomitic, micritic, some biosparitic, soft to moderately hard.
1301-1302		
1302-1303		
1303-1304		
1304-1305		
1305-1306		
1306-1307		
1307-1308		
1308-1309		
1309-1310		
1310-1311		DOLOMITE WITH VERY LITTLE LIMESTONE; Dolomite, 95%, from pale yellowish brown to grayish olive green and greenish black with trace of medium light gray to medium gray, sucrosic to krypto-crystalline, hard to very hard; Limestone, 5%, very pale orange, mostly dolomitic, micritic, some biosparitic, soft to moderately hard.
1311-1312	40 rpm	
1312-1313		
1313-1314		
1314-1315		
1315-1316		
1316-1317		
1317-1318		
1318-1319		
1319-1320		
1320-1321		DOLOMITE WITH VERY LITTLE LIMESTONE; Dolomite, 95%, from pale yellowish brown to grayish olive green and greenish black with trace of medium light gray to medium gray, sucrosic to krypto-crystalline, hard to very hard; Limestone, 5%, very pale orange, mostly dolomitic, micritic, some biosparitic, soft to moderately hard.
1321-1322		
1322-1323		
1323-1324	46 rpm	
1324-1325		
1325-1326		
1326-1327		
1327-1328		
1328-1329		
1329-1330		
1330-1331		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown to grayish orange and very little light gray, sucrosic to kryptocrystalline, brittle, moderately hard to hard; Limestone, 5%, very pale orange, grainstone, soft.
1331-1332		
1332-1333		
1333-1334		
1334-1335		
1335-1336		
1336-1337		
1337-1338		
1338-1339		
1339-1340		
1340-1341	48 rpm	DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown to grayish orange and very little light gray, sucrosic to kryptocrystalline, brittle, moderately hard to hard; Limestone, 5%, very pale orange, grainstone, soft.
1341-1342		
1342-1343		
1343-1344		
1344-1345		
1345-1346		
1346-1347		
1347-1348		
1348-1349	44 rpm	
1349-1350		
1350-1351		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown to grayish orange and very little light gray, sucrosic to kryptocrystalline, brittle, moderately hard to hard; Limestone, 5%, very pale orange, grainstone, soft.
1351-1352		
1352-1353		
1353-1354		
1354-1355		
1355-1356		
1356-1357		
1357-1358		
1358-1359		
1359-1360		
1360-1361		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown to grayish orange and very little light gray, sucrosic to kryptocrystalline, brittle, moderately hard to hard; Limestone, 5%, very pale orange, grainstone, soft.
1361-1362		
1362-1363		
1363-1364		
1364-1365		
1365-1366		
1366-1367		
1367-1368		
1368-1369		
1369-1370		
1370-1371		DOLOMITE AND VERY LITTLE LIMESTONE; Dolomite, 95%, from pale yellowish brown to grayish olive green with some medium light gray to medium gray, sucrosic to kryptocrystalline, hard to very hard; Limestone, 5%, very pale orange, grainstone, soft.
1371-1372		
1372-1373		
1373-1374		
1374-1375		
1375-1376		
1376-1377		
1377-1378		
1378-1379		
1379-1380	40 rpm	
1380-1381		DOLOMITE AND VERY LITTLE LIMESTONE; Dolomite, 95%, from pale yellowish brown to grayish olive green with some medium light gray to medium gray, sucrosic to kryptocrystalline, hard to very hard; Limestone, 5%, very pale orange, grainstone, soft.
1381-1382		
1383-1384		
1384-1385		
1385-1386		
1386-1387		
1387-1388		
1388-1389		
1389-1390		
1389-1390		
1390-1391		DOLOMITE AND VERY LITTLE LIMESTONE; Dolomite, 95%, from pale yellowish brown to grayish olive green with some medium light gray to medium gray, sucrosic to kryptocrystalline, hard to very hard; Limestone, 5%, very pale orange, grainstone, soft.
1391-1392		
1392-1393		
1393-1394		
1394-1395		
1395-1396		
1396-1397		
1397-1398		
1398-1399		
1399-1400		

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):

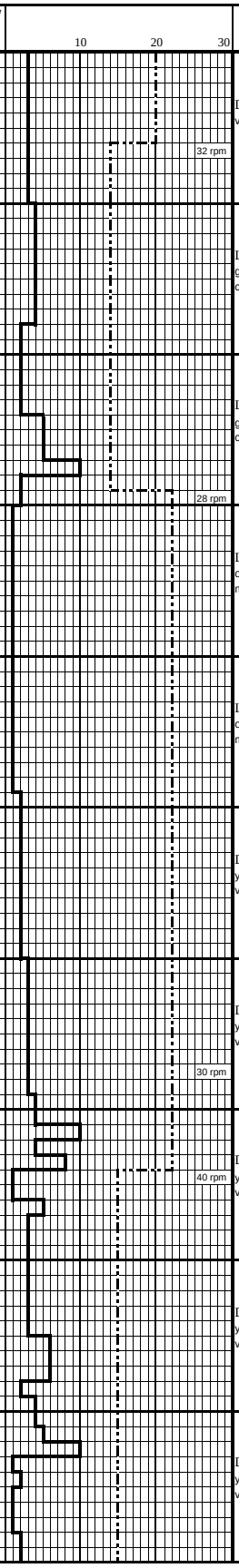
Depth Below Pad Level (ft)	10	20	30	Description
1400-1401			36 rpm	DOLOMITE AND VERY LITTLE LIMESTONE; Dolomite, 95%, from pale yellowish brown to grayish olive green with some medium light gray to medium gray, sucrosic to kryptocrystalline, hard to very hard; Limestone, 5%, very pale orange, grainstone, soft.
1401-1402				
1402-1403				
1403-1404				
1404-1405				
1405-1406				
1406-1407				
1407-1408				
1408-1409				
1409-1410				
1410-1411				LIMESTONE AND DOLOMITE– Limestone, 60%, very light gray, very soft to soft with little of yellowish gray, very calcareous, grainstone, moderately hard; Dolomite, 40%, from pale yellowish brown to grayish olive green, fine crystalline, hard.
1411-1412				
1412-1413				
1413-1414				
1414-1415				
1415-1416				
1416-1417				
1417-1418				
1418-1419				
1419-1420				
1420-1421			36 rpm	LIMESTONE AND SOME DOLOMITE- Limestone, 80%, very pale orange to grayish orange, bio sparitic, moderately soft; Dolomite, 20%, moderate yellowish brown to dark yellowish brown, finely crystalline, hard.
1421-1422				
1422-1423				
1423-1424				
1424-1425				
1425-1426				
1426-1427				
1427-1428				
1428-1429				
1429-1430				
1430-1431				LIMESTONE AND SOME DOLOMITE- Limestone, 80%, very pale orange to grayish orange, bio sparitic, moderately soft; Dolomite, 20%, moderate yellowish brown to dark yellowish brown, finely crystalline, hard.
1431-1432				
1432-1433				
1433-1434				
1434-1435				
1435-1436				
1436-1437				
1437-1438				
1438-1439				
1439-1440				
1440-1441			48 rpm	DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown to grayish orange and very little light gray, finely crystalline, hard; Limestone, 5%, very pale orange, grainstone, soft.
1441-1442				
1442-1443				
1443-1444				
1444-1445				
1445-1446				
1446-1447				
1447-1448				
1448-1449				
1449-1450				
1450-1451				LIMESTONE AND LITTLE DOLOMITE-Limestone, 90%, very pale orange to very light gray, oolitic grainstone, soft; Dolomite, 10%, pale yellowish brown to medium dark gray, finely- to micro- crystalline, hard.
1451-1452				
1452-1453				
1453-1454				
1454-1455				
1455-1456				
1456-1457				
1457-1458				
1458-1459				
1459-1460				
1460-1461			30 rpm	DOLOMITE– Dolomite, 100%, light brown to dark yellowish brown, finely crystalline, moderately sof very little dark gray, sucrosic to microcrystalline, moderately hard to hard.
1461-1462				
1462-1463				
1463-1464				
1464-1465				
1465-1466				
1466-1467				
1467-1468				
1468-1469				
1469-1470				
1470-1471				DOLOMITE– Dolomite, 100%, light brown to dark yellowish brown, finely crystalline, moderately sof very little dark gray, sucrosic to microcrystalline, moderately hard to hard.
1471-1472				
1472-1473				
1473-1474				
1474-1475				
1475-1476				
1476-1477				
1477-1478				
1478-1479				
1479-1480				
1480-1481			36 rpm	DOLOMITE– Dolomite, 100%, light brown to dark yellowish brown, finely crystalline, moderately sof very little dark gray, sucrosic to microcrystalline, moderately hard to hard.
1481-1482				
1482-1483				
1483-1484				
1484-1485				
1485-1486				
1486-1487				
1487-1488				
1488-1489				
1489-1490				
1490-1491				DOLOMITE– Dolomite, 100%, light brown to dark yellowish brown, finely crystalline, moderately sof very little dark gray, sucrosic to microcrystalline, moderately hard to hard.
1491-1492				
1492-1493				
1493-1494				
1494-1495				
1495-1496				
1496-1497				
1497-1498				
1498-1499				
1499-1500				

Injection Well No.1

Penetration rate (min/ft):

Weight On Bit (K lbs):

Rotary Speed (rpm):



Depth Below Pad Level (ft)	Description
1500-1501	DOLOMITE– Dolomite, 100%, light brown to dark yellowish brown, finely crystalline, moderately sof
1501-1502	very little dark gray, sucrosic to microcrystalline, moderately hard to hard.
1502-1503	
1503-1504	
1504-1505	
1505-1506	
1506-1507	
1507-1508	
1508-1509	
1509-1510	
1510-1511	LIMESTONE AND DOLOMITE – Limestone, 60%, very pale orange to pale yellowish brown, oolitic
1511-1512	grainstone, dolomitic; Dolomite, 40%, moderate yellowish brown and medium gray, microcrystalline to very-fine
1512-1513	crystalline, moderately hard to hard.
1513-1514	
1514-1515	
1515-1516	
1516-1517	
1517-1518	
1518-1519	
1519-1520	
1520-1521	LIMESTONE AND DOLOMITE – Limestone, 60%, very pale orange to pale yellowish brown, oolitic
1521-1522	grainstone, dolomitic; Dolomite, 40%, moderate yellowish brown and medium gray, microcrystalline to very-fine
1522-1523	crystalline, moderately hard to hard.
1523-1524	
1524-1525	
1525-1526	
1526-1527	
1527-1528	
1528-1529	
1529-1530	
1530-1531	LIMESTONE AND SOME DOLOMITE– Limestone, 80%, very pale orange to pale yellowish brown
1531-1532	oolitic grainstone, soft; Dolomite, 20%, medium light gray to medium dark gray, fine- to micro-crystalline,
1532-1533	moderately hard.
1533-1534	
1534-1535	
1535-1536	
1536-1537	
1537-1538	
1538-1539	
1539-1540	
1540-1541	LIMESTONE AND SOME DOLOMITE– Limestone, 80%, very pale orange to pale yellowish brown
1541-1542	oolitic grainstone, soft; Dolomite, 20%, medium light gray to medium dark gray, fine- to micro-crystalline,
1542-1543	moderately hard.
1543-1544	
1544-1545	
1545-1546	
1546-1547	
1547-1548	
1548-1549	
1549-1550	
1550-1551	DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown, dark
1551-1552	yellowish brown, grayish orange and medium light gray to medium dark gray, sucrosic, some microcrystalline to
1552-1553	very-fine crystalline, moderately hard; Limestone, 5%, very pale orange to yellowish gray, oolitic grainstone, soft.
1553-1554	
1554-1555	
1555-1556	
1556-1557	
1557-1558	
1558-1559	
1559-1560	
1560-1561	DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown, dark
1561-1562	yellowish brown, grayish orange and medium light gray to medium dark gray, sucrosic, some microcrystalline to
1562-1563	very-fine crystalline, moderately hard; Limestone, 5%, very pale orange to yellowish gray, oolitic grainstone, soft.
1563-1564	
1564-1565	
1565-1566	
1566-1567	
1567-1568	
1568-1569	
1569-1570	
1570-1571	DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown, dark
1571-1572	yellowish brown, grayish orange and medium light gray to medium dark gray, sucrosic, some microcrystalline to
1572-1573	very-fine crystalline, moderately hard; Limestone, 5%, very pale orange to yellowish gray, oolitic grainstone, soft.
1573-1574	
1574-1575	
1575-1576	
1576-1577	
1577-1578	
1578-1579	
1579-1580	
1580-1581	DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown, dark
1581-1582	yellowish brown, grayish orange and medium light gray to medium dark gray, sucrosic, some microcrystalline to
1582-1583	very-fine crystalline, moderately hard; Limestone, 5%, very pale orange to yellowish gray, oolitic grainstone, soft.
1583-1584	
1584-1585	
1585-1586	
1586-1587	
1587-1588	
1588-1589	
1589-1590	
1590-1591	DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown, dark
1591-1592	yellowish brown, grayish orange and medium light gray to medium dark gray, sucrosic, some microcrystalline to
1592-1593	very-fine crystalline, moderately hard; Limestone, 5%, very pale orange to yellowish gray, oolitic grainstone, soft.
1593-1594	
1594-1595	
1595-1596	
1596-1597	
1597-1598	
1598-1599	
1599-1600	

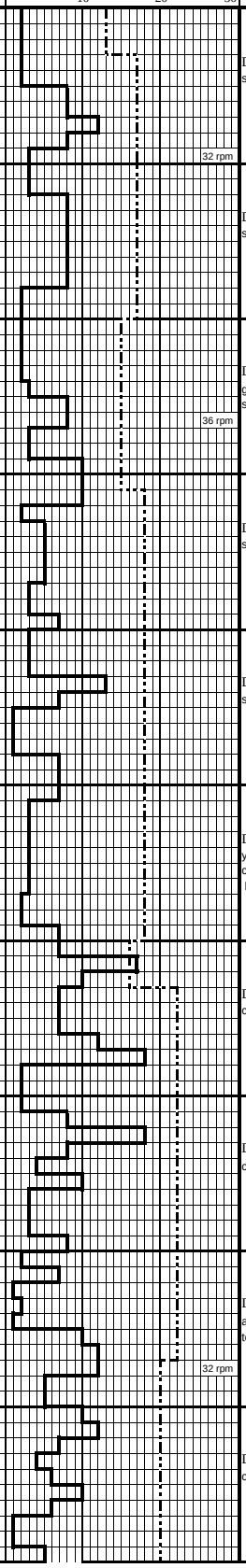
Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):

Depth Below Pad Level (ft)	10 20 30	Description
1600-1601		DOLOMITE– Dolomite, 100%, pale yellowish brown, dark yellowish brown, grayish orange and mediur light gray to medium dark gray, microcrystalline to very-fine crystalline, some sucrosic, moderately hard;
1601-1602		
1602-1603		
1603-1604		
1604-1605		
1605-1606		
1606-1607		
1607-1608		
1608-1609		
1609-1610		
1610-1611	36 rpm	DOLOMITE– Dolomite, 100%, pale yellowish brown, dark yellowish brown, grayish orange and mediur light gray to medium dark gray, microcrystalline to very-fine crystalline, some sucrosic, moderately hard;
1611-1612		
1612-1613		
1613-1614		
1614-1615		
1615-1616		
1616-1617		
1617-1618		
1618-1619		
1619-1620		
1620-1621		DOLOMITE AND LITTLE LIMESTONE – Dolomite, 85%, pale yellowish brown, dark yellowish brown, grayish orange and medium light gray to medium dark gray, sucrosic, some microcrystalline to very-fine crystalline, moderately hard; Limestone, 15%, very pale orange, oolitic dolomitic grainstone, soft.
1621-1622		
1622-1623		
1623-1624		
1624-1625		
1625-1626		
1626-1627		
1627-1628		
1628-1629		
1629-1630		
1630-1631		DOLOMITE AND LITTLE LIMESTONE – Dolomite, 85%, pale yellowish brown, dark yellowish brown, grayish orange and medium light gray to medium dark gray, sucrosic, some microcrystalline to very-fine crystalline, moderately hard; Limestone, 15%, very pale orange, oolitic dolomitic grainstone, soft.
1631-1632		
1632-1633		
1633-1634		
1634-1635		
1635-1636		
1636-1637		
1637-1638		
1638-1639		
1639-1640		
1640-1641		DOLOMITE AND LITTLE LIMESTONE – Dolomite, 85%, pale yellowish brown, dark yellowish brown, grayish orange and medium light gray to medium dark gray, sucrosic, some microcrystalline to very-fine crystalline, moderately hard; Limestone, 15%, very pale orange, oolitic dolomitic grainstone, soft.
1641-1642		
1642-1643		
1643-1644		
1644-1645		
1645-1646		
1646-1647		
1647-1648		
1648-1649		
1649-1650		
1650-1651	30 rpm	LIMESTONE AND SOME DOLOMITE– Limestone, 70%, very pale orange to yellowish gray, oolitic grainstone with nodules, partly dolomitic, soft; Dolomite, 30%, medium light gray to medium dark gray, microcrystalline, little pale yellowish, fine-crystalline, moderately hard.
1651-1652		
1652-1653		
1653-1654		
1654-1655		
1655-1656		
1656-1657		
1657-1658		
1658-1659		
1659-1660		
1660-1661		DOLOMITE AND SOME LIMESTONE – Dolomite, 75%, pale yellowish brown, dark yellowish brown and grayish orange, sucrosic to fine crystalline, some medium light gray to medium dark gray, microcrystalline, moderately hard; Limestone, 25%, very pale orange to yellowish gray , oolitic grainstone with nodules, partly dolomitic, soft.
1661-1662		
1662-1663		
1663-1664		
1664-1665	44 rpm	
1665-1666		
1666-1667		
1667-1668		
1668-1669		
1669-1670		
1670-1671		DOLOMITE AND VERY LITTLE LIMESTONE– Dolomite, 95%, pale yellowish brown, dark yellowish brown and grayish orange, sucrosic to fine crystalline, some medium light gray to medium dark gray, microcrystalline, moderately hard; Limestone, 5%, very pale orange to yellowish gray, grainstone, partly dolomitic, soft.
1671-1672		
1672-1673		
1673-1674		
1674-1675		
1675-1676		
1676-1677		
1677-1678		
1678-1679		
1679-1680		
1680-1681		DOLOMITE – Dolomite, 100%, pale yellowish brown, dark yellowish brown and grayish orange sucrosic to fine crystalline, some medium light gray to medium dark gray, microcrystalline, moderately hard.
1681-1682		
1682-1683		
1683-1684		
1684-1685		
1685-1686		
1686-1687		
1687-1688		
1688-1689		
1689-1690	34 rpm	
1690-1691		DOLOMITE – Dolomite, 100%, pale yellowish brown, dark yellowish brown and grayish orange sucrosic to fine crystalline, some medium light gray to medium dark gray, microcrystalline, moderately hard.
1691-1692		
1692-1693		
1693-1694		
1694-1695		
1695-1696	36 rpm	
1696-1697		
1697-1698		
1698-1699		
1699-1700		

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):



Depth Below Pad Level (ft)	Description
1700-1701	DOLOMITE – Dolomite, 100%, pale yellowish brown, dark yellowish brown and grayish orange
1701-1702	sucrosic to fine crystalline, some medium light gray to medium dark gray, microcrystalline, moderately hard.
1702-1703	
1703-1704	
1704-1705	
1705-1706	
1706-1707	
1707-1708	
1708-1709	
1709-1710	
1710-1711	DOLOMITE – Dolomite, 100%, pale yellowish brown, dark yellowish brown and grayish orange
1711-1712	sucrosic to fine crystalline, some medium light gray to medium dark gray, microcrystalline, moderately hard.
1712-1713	
1713-1714	
1714-1715	
1715-1716	
1716-1717	
1717-1718	
1718-1719	
1719-1720	
1720-1721	DOLOMITE WITH LITTLE LIMESTONE-Dolomite, 90%, moderate yellowish brown and some dark
1721-1722	gray, sucrosic to fine crystalline, moderately hard; Limestone, 10%, very pale orange to grayish orange, dolomitic,
1722-1723	soft to moderately hard.
1723-1724	
1724-1725	
1725-1726	
1726-1727	
1727-1728	
1728-1729	
1729-1730	
1730-1731	DOLOMITE – Dolomite, 100%, pale yellowish brown, dark yellowish brown and grayish orange
1731-1732	sucrosic to fine crystalline, some medium light gray to medium dark gray, microcrystalline.
1732-1733	
1733-1734	
1734-1735	
1735-1736	
1736-1737	
1737-1738	
1738-1739	
1739-1740	
1740-1741	DOLOMITE- Dolomite, 100%, moderate yellowish brown to yellowish gray, fine crystalline, vuggy t
1741-1742	solid, hard to very hard.
1742-1743	
1743-1744	
1744-1745	
1745-1746	
1746-1747	
1747-1748	
1748-1749	
1749-1750	
1750-1751	DOLOMITE AND SOME DOLOMITIC LIMESTONE– Dolomite, 75%, pale yellowish brown, dark
1751-1752	yellowish brown and grayish orange, some medium light gray to medium dark gray, trace black,fine- to micro-
1752-1753	crystalline, hard to very hard; Limestone, 25%, very pale orange to yellowish gray, dolomitic, fine crystalline,
1753-1754	little micritic, hard.
1754-1755	
1755-1756	
1756-1757	
1757-1758	
1758-1759	
1759-1760	
1760-1761	DOLOMITE – Dolomite, 100%, pale yellowish dark yellowish brown, some dark gray, fine- to krypt
1761-1762	crystalline, trace sucrosic, hard to very hard
1762-1763	
1763-1764	
1764-1765	
1765-1766	
1766-1767	
1767-1768	
1768-1769	
1769-1770	
1770-1771	DOLOMITE – Dolomite, 100%, pale yellowish, dark yellowish brown, some dark gray, fine- to krypt
1771-1772	crystalline, trace sucrosic, hard to very hard
1772-1773	
1773-1774	
1774-1775	
1775-1776	
1776-1777	
1777-1778	
1778-1779	
1779-1780	
1780-1781	DOLOMITE AND SOME DOLOMITIC LIMESTONE– Dolomite, 75%, pale yellowish brown
1781-1782	and grayish orange, little light gray, fine- to micro-crystalline, hard to very hard; Limestone, 25%, very pale orange
1782-1783	to yellowish gray, dolomitic, fine crystalline, little micritic, hard.
1783-1784	
1784-1785	
1785-1786	
1786-1787	
1787-1788	
1788-1789	
1789-1790	
1790-1791	DOLOMITE- 100%, moderate yellowish brown to grayish orange, little light gray, fine- to micr
1791-1792	crystalline, moderately hard.
1792-1793	
1793-1794	
1794-1795	
1795-1796	
1796-1797	
1797-1798	
1798-1799	
1799-1800	

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):

Depth Below Pad Level (ft)	10	20	30	Description
1800-1801				DOLOMITE – Dolomite, 100%, pale yellowish brown, dark yellowish brown, some dark gray, sucrosi
1801-1802				to fine- crystalline, moderately hard.
1802-1803				
1803-1804				
1804-1805				
1805-1806				
1806-1807				
1807-1808				
1808-1809				
1809-1810				
1810-1811				DOLOMITE – Dolomite, 100%, pale yellowish brown, dark yellowish brown, some dark gray, sucrosi
1811-1812				to fine- crystalline, moderately hard.
1812-1813				
1813-1814				
1814-1815				
1815-1816				
1816-1817				
1817-1818				38 rpm
1818-1819				
1819-1820				
1820-1821				DOLOMITE AND SOME DOLOMITIC LIMESTONE– Dolomite, 80%, pale yellowish brown and
1821-1822				grayish orange, little light gray, fine- to micro-crystalline, hard to very hard; Limestone, 20%, very pale orange to
1822-1823				yellowish gray, mostly dolomitic, some chalky, fine crystalline, little pellitic, moderately hard to soft.
1823-1824				
1824-1825				
1825-1826				
1826-1827				
1827-1828				
1828-1829				
1829-1830				40 rpm
1830-1831				DOLOMITE AND SOME DOLOMITIC LIMESTONE– Dolomite, 80%, pale yellowish brown and
1831-1832				grayish orange, little light gray, fine- to micro-crystalline, hard to very hard; Limestone, 20%, very pale orange to
1832-1833				yellowish gray, mostly dolomitic, some chalky, fine crystalline, little pellitic, moderately hard to soft.
1833-1834				
1834-1835				
1835-1836				
1836-1837				
1837-1838				
1838-1839				
1839-1840				
1840-1841				DOLOMITE – Dolomite, 100%, pale yellowish brown to dark yellowish brown, sucrosic, moderatel
1841-1842				hard to soft, moderately well to poorly cemented.
1842-1843				
1843-1844				
1844-1845				
1845-1846				
1846-1847				DOLOMITE – Dolomite, 100%, pale yellowish brown to dark yellowish brown, little medium light gray
1847-1848				mostly fine- to krypto- crystalline, some sucrosic, moderately hard to very hard.
1848-1849				
1849-1850				26 rpm
1850-1851				DOLOMITE – Dolomite, 100%, pale yellowish brown to dark yellowish brown, little medium light gray
1851-1852				mostly fine- to krypto- crystalline, some sucrosic, moderately hard to very hard.
1852-1853				
1853-1854				
1854-1855				
1855-1856				
1856-1857				
1857-1858				
1858-1859				
1859-1860				
1860-1861				DOLOMITE – Dolomite, 100%, pale yellowish brown to dark yellowish brown, little medium light gray
1861-1862				mostly fine- to krypto- crystalline, some sucrosic, moderately hard to very hard.
1862-1863				
1863-1864				
1864-1865				
1865-1866				
1866-1867				
1867-1868				
1868-1869				
1869-1870				40 rpm
1870-1871				DOLOMITE AND SOME LIMESTONE – Dolomite, 80%, pale yellowish brown to moderate
1871-1872				yellowish brown, sucrosic, some light gray to medium light gray, very-fine crystalline, moderately hard to hard;
1872-1873				Limestone, 20%, very pale orange to yellowish gray, dolomitic, fine crystalline, dolomitic, soft.
1873-1874				
1874-1875				
1875-1876				
1876-1877				
1877-1878				
1878-1879				
1879-1880				
1880-1881				DOLOMITE AND SOME LIMESTONE – Dolomite, 80%, pale yellowish brown to moderate
1881-1882				yellowish brown, sucrosic, some light gray to medium light gray, very-fine crystalline, moderately hard to hard;
1882-1883				Limestone, 20%, very pale orange to yellowish gray, dolomitic, fine crystalline, dolomitic, soft.
1883-1884				
1884-1885				
1885-1886				44 rpm
1886-1887				
1887-1888				
1888-1889				
1889-1890				
1890-1891				DOLOMITE AND SOME LIMESTONE – Dolomite, 80%, pale yellowish brown to moderate
1891-1892				yellowish brown, sucrosic, some light gray to medium light gray, very-fine crystalline, moderately hard to hard;
1892-1893				Limestone, 20%, very pale orange to yellowish gray, dolomitic, fine crystalline, dolomitic, soft.
1893-1894				
1894-1895				
1895-1896				40 rpm
1896-1897				
1897-1898				
1898-1899				
1899-1900				

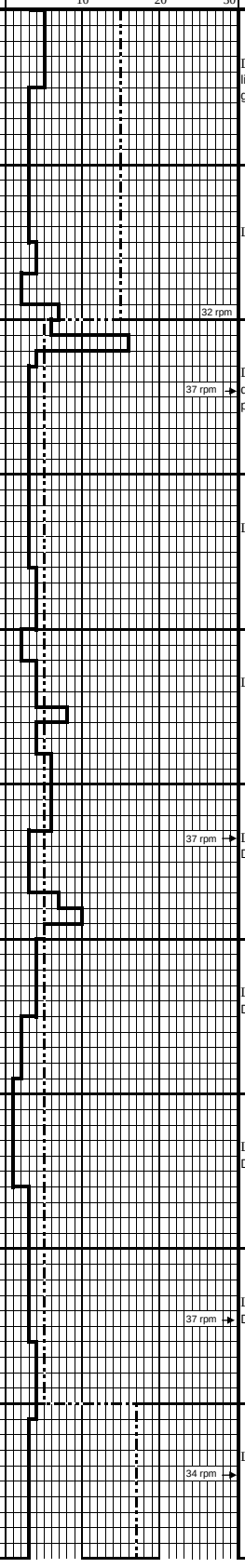
Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):

Depth Below Pad Level (ft)	10	20	30	Description
1900-1901				DOLOMITE AND LITTLE LIMESTONE – Dolomite, 90%, moderate yellowish brown to dark yellowish brown, little brownish gray, very-fine crystalline, hard; Limestone, 10%, very pale orange, very-fine grained, partially crystalline, moderately hard.
1901-1902				
1902-1903				
1903-1904				
1904-1905			43 rpm	
1905-1906				
1906-1907				
1907-1908				
1908-1909				
1909-1910				
1910-1911				DOLOMITE AND LITTLE LIMESTONE – Dolomite, 90%, moderate yellowish brown to dark yellowish brown, little brownish gray, very-fine crystalline, hard; Limestone, 10%, very pale orange, very-fine grained, partially crystalline, moderately hard.
1911-1912				
1912-1913				
1913-1914				
1914-1915				
1915-1916				
1916-1917				
1917-1918				
1918-1919				
1919-1920				
1920-1921				DOLOMITE AND LITTLE LIMESTONE – Dolomite, 90%, moderate yellowish brown to dark yellowish brown, little brownish gray, very-fine crystalline, hard; Limestone, 10%, very pale orange, very-fine grained, partially crystalline, moderately hard.
1921-1922				
1922-1923				
1923-1924				
1924-1925				
1925-1926				
1926-1927				
1927-1928				
1928-1929				
1929-1930				
1930-1931				DOLOMITE AND LITTLE LIMESTONE – Dolomite, 90%, moderate yellowish brown to dark yellowish brown, little brownish gray, very-fine crystalline, hard; Limestone, 10%, very pale orange, very-fine grained, partially crystalline, moderately hard.
1931-1932				
1932-1933				
1933-1934				
1934-1935				
1935-1936				
1936-1937				
1937-1938				
1938-1939				
1939-1940				
1940-1941				DOLOMITE AND LITTLE LIMESTONE – Dolomite, 90%, moderate yellowish brown to dark yellowish brown, little brownish gray, very-fine crystalline, hard; Limestone, 10%, very pale orange, very-fine grained, partially crystalline, moderately hard.
1941-1942				
1942-1943				
1943-1944			43 rpm	
1944-1945				
1945-1946				
1946-1947				
1947-1948				
1948-1949				
1949-1950				
1950-1951				DOLOMITE AND VERY LITTLE LIMESTONE– Dolomite, 95%, 80% moderate yellowish brown tc dark yellowish brown; 20% brownish black very-fine crystalline, hard; Limestone, 5%, very pale orange, very-fine grained, partially crystalline, moderately hard.
1951-1952				
1952-1953				
1953-1954				
1954-1955				
1955-1956				
1956-1957				
1957-1958				
1958-1959				
1959-1960				
1960-1961			32 rpm	DOLOMITE – Dolomite, 100%, moderate yellowish brown to dark yellowish brown, very-fine to fin crystalline, moderately-well cemented, hard.
1961-1962				
1962-1963				
1963-1964				
1964-1965				
1965-1966				
1966-1967				
1967-1968				
1968-1969				
1969-1970				
1970-1971				DOLOMITIC LIMESTONE AND SOME DOLOMITE – Limestone, 80%, yellowish gray to pale yellowish brown, very-fine grained and very-fine crystalline, dolomitic, hard; Dolomite, 20%, moderate yellowish brown to dark yellowish brown, very-fine crystalline, moderately hard.
1971-1972				
1972-1973				
1973-1974				
1974-1975				
1975-1976				
1976-1977				
1977-1978				
1978-1979				
1979-1980				
1980-1981				DOLOMITE AND LIMESTONE – Dolomite, 60%, moderate yellowish brown, very-fine crystalline hard, moderately-well cemented; Limestone, 40%, very pale orange, partially dolomitic, very-fine grained, moderately hard.
1981-1982				
1982-1983				
1983-1984				
1984-1985				
1985-1986				
1986-1987				
1987-1988				
1988-1989				
1989-1990				
1990-1991				DOLOMITE AND LITTLE LIMESTONE– Dolomite, 90%, moderate yellowish brown with little pale yellowish brown, very-fine to fine crystalline, hard; Limestone, 10%, very pale orange to yellowish gray, partially dolomitic, very-fine grained, moderately hard.
1991-1992				
1992-1993				
1993-1994				
1994-1995				
1995-1996				
1996-1997				
1997-1998				
1998-1999				
1999-2000				

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):



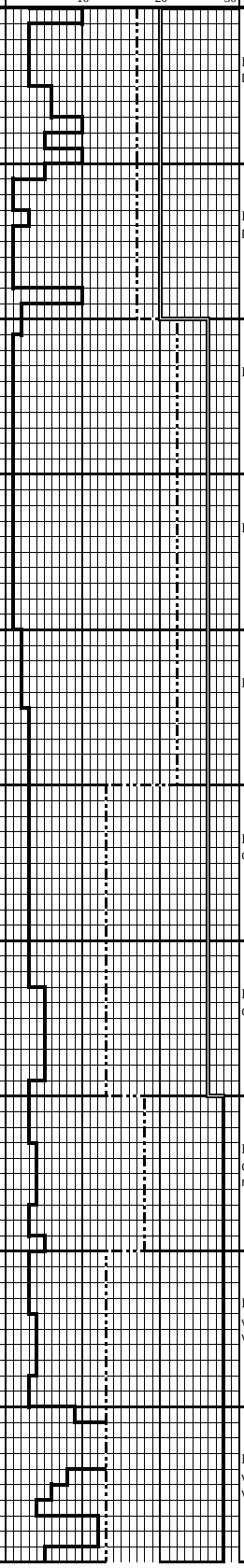
Depth Below Pad Level (ft)	Description
2000-2001 to 2009-2010	DOLOMITE AND SOME LIMESTONE – Dolomite, 80%, moderate yellowish brown with little light gray, very-fine to fine crystalline, hard; Limestone, 20%, very pale orange to yellowish gray, very-fine grained, partially dolomitic, moderately hard.
2010-2011 to 2019-2020	LIMESTONE – Limestone, 100%, very pale orange, oolitic, very-fine to fine grained, sof
2020-2021 to 2029-2030	DOLOMITE AND SOME DOLOMITIC LIMESTONE – Dolomite, 70%, pale yellowish brown to dark yellowish brown with little brownish black, very-fine to fine crystalline, hard; Limestone, 30%, very pale orange to pale yellowish brown, dolomitic, very-fine grained, moderately soft.
2030-2031 to 2039-2040	LIMESTONE – Limestone, 100%, very pale orange, oolitic, poorly cemented, sof
2040-2041 to 2049-2050	LIMESTONE – Limestone, 100%, very pale orange, oolitic, poorly cemented, sof
2050-2051 to 2059-2060	LIMESTONE AND VERY LITTLE DOLOMITE – Limestone, 95%, very pale orange, oolitic, soft; Dolomite, 5%, grayish brown, sucrosic, moderately hard.
2060-2061 to 2069-2070	LIMESTONE AND VERY LITTLE DOLOMITE – Limestone, 95%, very pale orange, oolitic, soft; Dolomite, 5%, grayish brown, sucrosic, moderately hard.
2070-2071 to 2079-2080	LIMESTONE AND VERY LITTLE DOLOMITE – Limestone, 95%, very pale orange, oolitic, soft; Dolomite, 5%, grayish brown, sucrosic, moderately hard.
2080-2081 to 2089-2090	LIMESTONE AND VERY LITTLE DOLOMITE – Limestone, 95%, very pale orange, oolitic, soft; Dolomite, 5%, grayish brown, sucrosic, moderately hard.
2090-2091 to 2099-2100	LIMESTONE – Limestone, 100%, very pale orange, oolitic, poorly cemented, sof

Injection Well No.1

Penetration rate (min/ft):

Weight On Bit (K lbs):

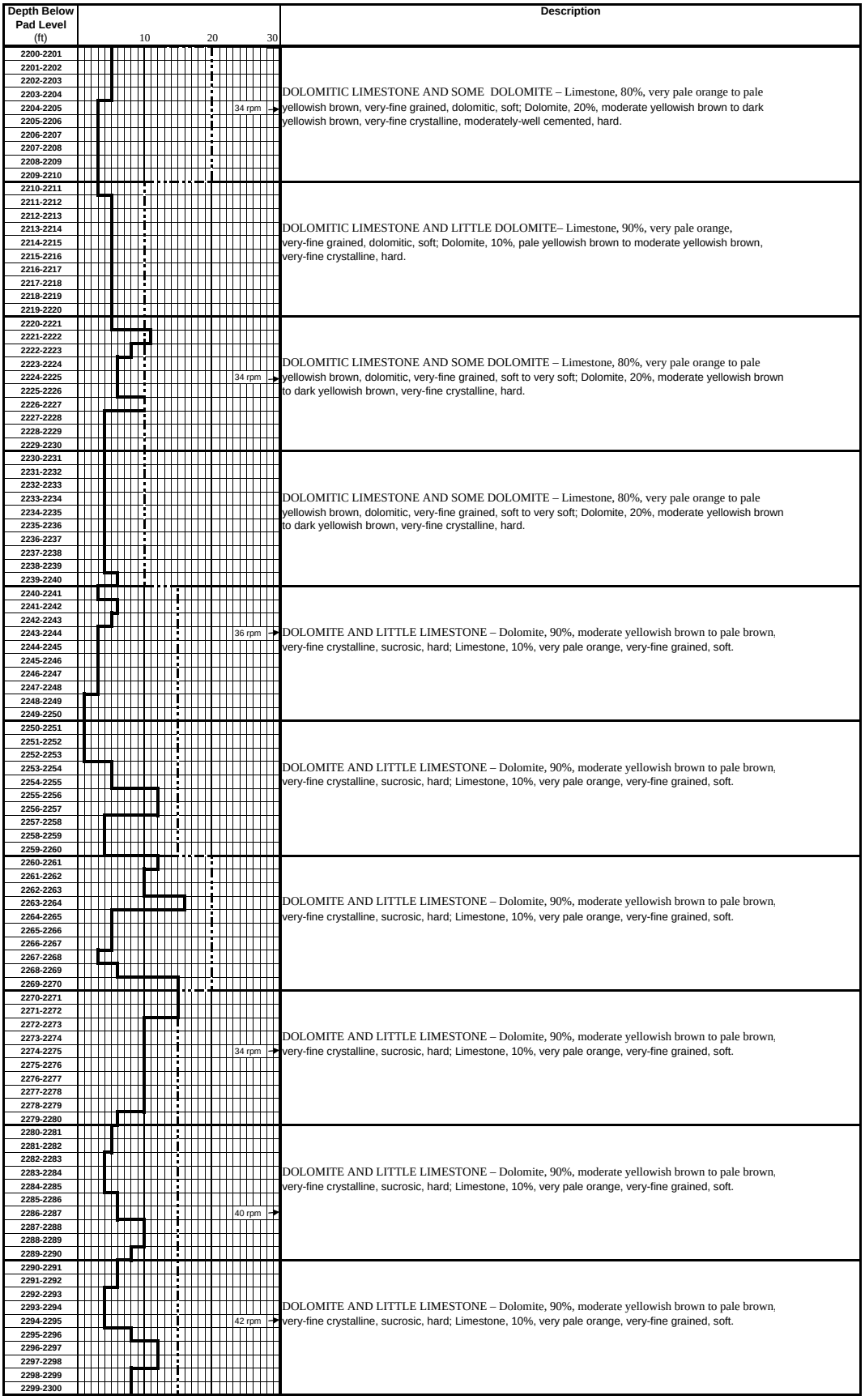
Rotary Speed (rpm):



Depth Below Pad Level (ft)	Description
2100-2101 2101-2102 2102-2103 2103-2104 2104-2105 2105-2106 2106-2107 2107-2108 2108-2109 2109-2110	LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange, oolitic, poorly cemented, soft Dolomite, 50%, pale brown to dusky yellowish brown, sucrosic, well cemented, moderately-hard to hard.
2110-2111 2111-2112 2112-2113 2113-2114 2114-2115 2115-2116 2116-2117 2117-2118 2118-2119 2119-2120	LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange, oolitic, poorly cemented, soft Dolomite, 50%, pale brown to dusky yellowish brown, sucrosic, well cemented, moderately-hard to hard.
2120-2121 2121-2122 2122-2123 2123-2124 2124-2125 2125-2126 2126-2127 2127-2128 2128-2129 2129-2130	LIMESTONE – Limestone, 100%, very pale orange, dolomitic, poorly cemented, oolitic, sof
2130-2131 2131-2132 2132-2133 2133-2134 2134-2135 2135-2136 2136-2137 2137-2138 2138-2139 2139-2140	LIMESTONE – Limestone, 100%, very pale orange, dolomitic, poorly cemented, oolitic, sof
2140-2141 2141-2142 2142-2143 2143-2144 2144-2145 2145-2146 2146-2147 2147-2148 2148-2149 2149-2150	LIMESTONE – Limestone, 100%, very pale orange, dolomitic, poorly cemented, oolitic, sof
2150-2151 2151-2152 2152-2153 2153-2154 2154-2155 2155-2156 2156-2157 2157-2158 2158-2159 2159-2160	DOLOMITIC LIMESTONE AND VERY LITTLE DOLOMITE – Limestone, 95%, very pale orange, dolomitic, oolitic moderately- hard to soft; Dolomite, 5%, medium gray to medium dark gray, micritic, hard.
2160-2161 2161-2162 2162-2163 2163-2164 2164-2165 2165-2166 2166-2167 2167-2168 2168-2169 2169-2170	DOLOMITIC LIMESTONE AND VERY LITTLE DOLOMITE – Limestone, 95%, very pale orange, dolomitic, oolitic moderately- hard to soft; Dolomite, 5%, medium gray to medium dark gray, micritic, hard.
2170-2171 2171-2172 2172-2173 2173-2174 2174-2175 2175-2176 2176-2177 2177-2178 2178-2179 2179-2180	DOLOMITIC LIMESTONE AND LITTLE DOLOMITE – Limestone, 90%, very pale orange, dolomitic, very-fine grained, slightly oolitic, poorly cemented, soft; Dolomite, 10%, pale yellowish brown to moderate yellowish brown, very-fine crystalline, poorly cemented, moderately hard.
2180-2181 2181-2182 2182-2183 2183-2184 2184-2185 2185-2186 2186-2187 2187-2188 2188-2189 2189-2190	DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, moderate yellowish brown, very-fine crystalline, moderately-well cemented, hard; Limestone, 5%, very pale orange, partially dolomitic, very-fine grained, modertely hard.
2190-2191 2191-2192 2192-2193 2193-2194 2194-2195 2195-2196 2196-2197 2197-2198 2198-2199 2199-2200	DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, moderate yellowish brown, very-fine crystalline, moderately-well cemented, hard; Limestone, 5%, very pale orange, partially dolomitic, very-fine grained, modertely hard.

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):



Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):

Depth Below Pad Level (ft)	10	20	30	Description
2300-2301				DOLOMITE AND LITTLE LIMESTONE – Dolomite, 90%, moderate yellowish brown to pale brown, very-fine crystalline, sucrosic, hard; Limestone, 10%, very pale orange, very-fine grained, soft.
2301-2302				
2302-2303				
2303-2304				
2304-2305				
2305-2306				
2306-2307				
2307-2308				
2308-2309				
2309-2310				
2310-2311				DOLOMITE AND LITTLE LIMESTONE – Dolomite, 90%, moderate yellowish brown to pale brown, very-fine crystalline, sucrosic, hard; Limestone, 10%, very pale orange, very-fine grained, soft.
2311-2312				
2312-2313				
2313-2314				
2314-2315				
2315-2316				
2316-2317				
2317-2318				
2318-2319				
2319-2320				
2320-2321				DOLOMITE AND LITTLE LIMESTONE – Dolomite, 90%, moderate yellowish brown to pale brown, very-fine crystalline, sucrosic, hard; Limestone, 10%, very pale orange, very-fine grained, soft.
2321-2322				
2322-2324				
2322-2324				
2324-2325				
2325-2326				
2326-2327				
2327-2328			38 rpm →	
2328-2329				
2329-2330				
2330-2331				DOLOMITE – Dolomite, 100%, dark yellowish brown and little medium gray, micritic, hard
2331-2332				
2332-2333				
2333-2334				
2334-2335				
2335-2336				
2336-2337				
2337-2338				
2338-2339				
2339-2340				
2340-2341				DOLOMITE – Dolomite, 100%, moderate yellowish brown to dark yellowish brown with little mediur gray, micritic, partially sucrosic, hard.
2341-2342				
2342-2343				
2343-2344				
2344-2345				
2345-2346	No data due to coring			
2346-2347				
2347-2348				
2348-2349				
2349-2350				
2350-2351				DOLOMITE – Dolomite, 100%, moderate yellowish brown to dark yellowish brown with little mediur gray, micritic, partially sucrosic, hard.
2351-2352				
2352-2353				
2353-2354				
2354-2355				
2355-2356				
2356-2357				
2357-2358			34 rpm →	
2358-2359				
2359-2360				
2360-2361				DOLOMITE – Dolomite, 100%, moderate yellowish brown to dark yellowish brown with little mediur gray, micritic, partially sucrosic, hard.
2361-2362				
2362-2363				
2363-2364				
2364-2365				
2365-2366				
2366-2367				
2367-2368				
2368-2369				
2369-2370				
2370-2371				DOLOMITE AND SOME LIMESTONE – Dolomite, 70%, moderate yellowish brown to dark yellowisl brown, micritic, some fine crystalline, sucrosic; Limestone, 30%, very pale orange to yellowish gray, partially dolomitic
2371-2372				
2372-2373				
2373-2374			44 rpm →	
2374-2375				
2375-2376				
2376-2377				
2377-2378				
2378-2379				
2379-2380				
2380-2381				DOLOMITE AND SOME LIMESTONE – Dolomite, 70%, moderate yellowish brown to dark yellowisl brown, micritic, some fine crystalline, sucrosic; Limestone, 30%, very pale orange to yellowish gray, partially dolomitic
2381-2382				
2382-2383				
2383-2384				
2384-2385				
2385-2386				
2386-2387				
2387-2388				
2388-2389				
2389-2390				
2390-2391				DOLOMITE AND SOME LIMESTONE – Dolomite, 70%, moderate yellowish brown to dark yellowisl brown, micritic, some fine crystalline, sucrosic; Limestone, 30%, very pale orange to yellowish gray, partially dolomitic
2391-2392				
2392-2393				
2393-2394				
2394-2395				
2395-2396				
2396-2397				
2397-2398				
2398-2399				
2399-2400				

Injection Well No.1

Penetration rate (min/ft):

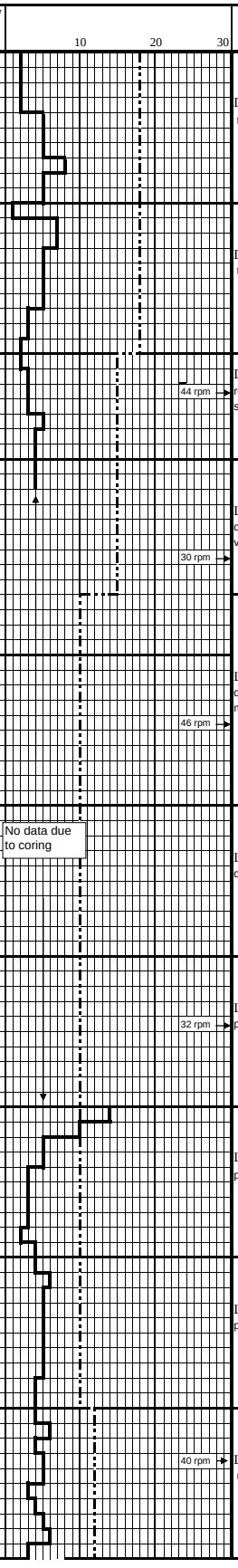
Weight On Bit (K lbs):

Rotary Speed (rpm):

Depth Below Pad Level (ft)	10	20	30	Description
2400-2401				DOLOMITE – Dolomite, 100%, moderate yellowish brown to dark yellowish brown with little mediu
2401-2402				
2402-2403				
2403-2404				
2404-2405			44 rpm →	gray, micritic, partially sucrosic, moderately hard.
2405-2406				
2406-2407				
2407-2408				
2408-2409				
2409-2410				
2410-2411				DOLOMITE – Dolomite, 100%, moderate yellowish brown to dark yellowish brown with little mediu
2411-2412				
2412-2413				
2413-2414				
2414-2415				gray, micritic, partially sucrosic, moderately hard.
2415-2416				
2416-2417				
2417-2418				
2418-2419				
2419-2420				
2420-2421				DOLOMITE – Dolomite, 100%, moderate yellowish brown to dark yellowish brown, micritic, har
2421-2422				
2422-2423				
2423-2424			32 rpm →	
2424-2425				
2425-2426				
2426-2427				
2427-2428				
2428-2429				
2429-2430				
2430-2431				DOLOMITE – Dolomite, 100%, moderate yellowish brown to dark yellowish brown, micritic, har
2431-2432				
2432-2433				
2433-2434				
2434-2435				
2435-2436				
2436-2437				
2437-2438				
2438-2439				
2439-2440				
2440-2441				DOLOMITE – Dolomite, 100%, moderate yellowish brown to dark yellowish brown, micritic, har
2441-2442				
2442-2443				
2443-2444				
2444-2445				
2445-2446				
2446-2447				
2447-2448				
2448-2449				
2449-2450				
2450-2451				DOLOMITE – Dolomite, 100%, dusky yellowish brown, micritic, hard
2451-2452				
2452-2453				
2453-2454				
2454-2455			42 rpm →	
2455-2456				
2456-2457				
2457-2458				
2458-2459				
2459-2460				
2460-2461				DOLOMITE – Dolomite, 100%, dusky yellowish brown, micritic, hard
2461-2462				
2462-2463				
2463-2464				
2464-2465				
2465-2466				
2466-2467				
2467-2468				
2468-2469				
2469-2470				
2470-2471				DOLOMITE – Dolomite, 100%, dark yellowish brown to dusky yellowish brown, some very light gra
2471-2472				
2472-2473				
2473-2474				
2474-2475				to medium dark gray, micritic, hard.
2475-2476				
2476-2477				
2477-2478				
2478-2479				
2479-2480				
2480-2481				DOLOMITE – Dolomite, 100%, dark yellowish brown to dusky yellowish brown, some very light gra
2481-2482				
2482-2483				
2483-2484				
2484-2485				to medium dark gray, micritic, hard.
2485-2486				
2486-2487				
2487-2488				
2488-2489				
2489-2490				
2490-2491				DOLOMITE – Dolomite, 100%, dark yellowish brown to dusky yellowish brown, some very light gra
2491-2492				
2492-2493				
2493-2494			42 rpm →	
2494-2495				to medium dark gray, micritic, hard.
2495-2496				
2496-2497				
2497-2498				
2498-2499				
2499-2500				

Injection Well No.1

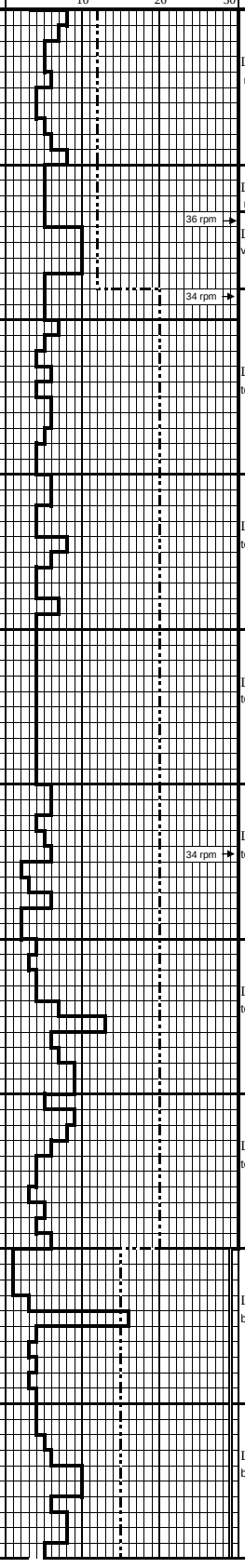
Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):



Depth Below Pad Level (ft)	Description
2500-2501 to 2509-2510	DOLOMITE – Dolomite, 100%, dark yellowish brown to dusky yellowish brown, some very light gra to medium dark gray, micritic, hard.
2510-2511 to 2519-2520	DOLOMITE – Dolomite, 100%, dark yellowish brown to dusky yellowish brown, some very light gra to medium dark gray, micritic, hard.
2520-2521 to 2526-2527	DOLOMITE AND SOME LIMESTONE – Dolomite, 80%, dark yellowish brown to dusky yellowish rown and very light gray to medium dark gray, micritic, hard; Limestone, 20%, yellowish gray, very fine grained, sucrosic, moderately hard.
2527-2528 to 2539-2540	LIMESTONE AND SOME CHERT– Limestone, 80%, yellowish gray to pale olive with smudges o darker material, slightly dolomitic, fine- crystalline, well cemented, moderately hard; Chert, 20%, medium gray, very fine crystalline, very hard.
2540-2541 to 2549-2550	LIMESTONE AND LITTLE CHERT- Limestone, 90%, yellowish gray, with some smudges o darker material, fine grained to very fine crystalline, mostly slightly dolomitic, moderately well to well cemented, moderately hard to hard; Chert, 10%, medium gray, micritic, very hard, slightly vuggy;
2550-2551 to 2559-2560	LIMESTONE - Limestone, 100%, yellowish gray, fine grained to very fine crystalline, slightly dolomitic, poorly to moderately well cemented, moderately hard to hard.
2560-2561 to 2569-2570	LIMESTONE - Limestone, 100%, yellowish gray, fine grained to very fine crystalline, slightly dolomiti poorly to moderately well cemented, moderately hard to hard.
2570-2571 to 2579-2580	LIMESTONE - Limestone, 100%, yellowish gray, fine grained to very fine crystalline, slightly dolomiti poorly to moderately well cemented, moderately hard to hard.
2580-2581 to 2589-2590	LIMESTONE - Limestone, 100%, yellowish gray, fine grained to very fine crystalline, slightly dolomiti poorly to moderately well cemented, moderately hard to hard.
2590-2591 to 2599-2600	LIMESTONE- Limestone, 100%, yellowish gray, little very pale orange and chalky, fine grained, poorly moderately well cemented, soft.

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):



Depth Below Pad Level (ft)	Description
2600-2601	LIMESTONE- Limestone, 100%, yellowish gray, little very pale orange and chalky, fine grained, poorly
2601-2602	moderately well cemented, soft.
2602-2603	
2603-2604	
2604-2605	
2605-2606	
2606-2607	
2607-2608	
2608-2609	
2609-2610	
2610-2611	LIMESTONE- Limestone, 100%, yellowish gray, little very pale orange and chalky, fine grained, poorly
2611-2612	moderately well cemented, soft.
2612-2613	
2613-2614	LIMESTONE- Limestone, 100%, yellowish gray, with some smudges of darker material, fine grained t
2614-2615	very fine crystalline, mostly slightly dolomitic, moderately well to well cemented, moderately hard to hard.
2615-2616	
2616-2617	
2617-2618	
2618-2619	
2619-2620	
2620-2621	LIMESTONE- Limestone, 100%, yellowish gray, little very pale orange and chalky, fine grained, poorl
2621-2622	to moderately well cemented, soft.
2622-2623	
2623-2624	
2624-2625	
2625- 2626	
2626-2627	
2627-2628	
2628-2629	
2629-2630	
2630-2631	LIMESTONE- Limestone, 100%, yellowish gray, little very pale orange and chalky, fine grained, poorl
2631-2632	to moderately well cemented, soft.
2632-2633	
2633-2634	
2634-2635	
2635-2636	
2636-2637	
2637-2638	
2638-2639	
2639-2640	
2640-2641	LIMESTONE- Limestone, 100%, yellowish gray, little very pale orange and chalky, fine grained, poorl
2641-2642	to moderately well cemented, soft.
2642-2643	
2643-2644	
2644-2645	
2645-2646	
2646-2647	
2647-2648	
2648-2649	
2649-2650	
2650-2651	LIMESTONE- Limestone, 100%, yellowish gray, little very pale orange and chalky, fine grained, poorl
2651-2652	to moderately well cemented, soft.
2652-2653	
2653-2654	
2654-2655	
2655-2656	
2656-2657	
2657-2658	
2658-2659	
2659-2660	
2660-2661	LIMESTONE- Limestone, 100%, yellowish gray, little very pale orange and chalky, fine grained, poorl
2661-2662	to moderately well cemented, soft.
2662-2663	
2663-2664	
2664-2665	
2665-2666	
2666-2667	
2667-2668	
2668-2669	
2669-2670	
2670-2671	LIMESTONE- Limestone, 100%, yellowish gray, little very pale orange and chalky, fine grained, poorl
2671-2672	to moderately well cemented, soft.
2672-2673	
2673-2674	
2674-2675	
2675-2676	
2676-2677	
2677-2678	
2678-2679	
2679-2680	
2680-2681	LIMESTONE- Limestone, 100%, very pale orange, yellowish gray and some grayish orange with
2681-2682	black specs, fine grained, poorly to moderately well cemented, slightly dolomitic, soft to moderately hard.
2682-2683	
2683-2684	
2684-2685	
2685-2686	
2686-2687	
2687-2688	
2688-2689	
2689-2690	
2690-2691	LIMESTONE- Limestone, 100%, very pale orange, yellowish gray and some grayish orange with
2691-2692	black specs, fine grained, poorly to moderately well cemented, slightly dolomitic, soft to moderately hard.
2692-2693	
2693-2694	
2694-2695	
2695-2696	
2696-2697	
2697-2698	
2698-2699	
2699-2700	

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):

Depth Below Pad Level (ft)	10	20	30	Description
2700-2701				LIMESTONE- Limestone, 100%, very pale orange, yellowish gray and some grayish orange with black specs, fine grained, poorly to moderately well cemented, slightly dolomitic, soft to moderately hard.
2701-2701				
2702-2703				
2703-2704				
2704-2705				
2705-2706				
2706=2707				
2707-2708				
2707-2709				
2709-2710				
2710-2711				LIMESTONE- Limestone, 100%, very pale orange, yellowish gray and some grayish orange with black specs, fine grained, poorly to moderately well cemented, slightly dolomitic, soft to moderately hard.
2711-2712				
2712-2713				
2713-2714				
2714-2715				
2715-2716				
2716-2717				
2717-2718				
2718-2719				
2719-2720				
2720-2721				LIMESTONE- Limestone, 100%, yellowish gray, little very pale orange and chalky, partly dolomitic, poor to moderately well cemented, soft.
2721-2722				
2722-2723				
2723-2724				
2724-2725				
2725-2726				
2726-2727				
2727-2728				
2728-2729				
2729-2730				
2730-2731				LIMESTONE- Limestone, 100%, yellowish gray, little very pale orange and chalky, partly dolomitic, poor to moderately well cemented, soft.
2731-2732				
2732-2733				
2733-2734				
2734-2735				
2735-2736				
2736-2737				
2737-2738				
2738-2739				
2739-2740				
2740-2741				LIMESTONE- Limestone, 100%, very pale orange, some yellowish gray, poorly to moderately well cemented, dolomitic, soft.
2741-2742				
2742-2743				
2743-2744				
2744-2745				
2745-2746				
2746-2747				
2747-2748				
2748-2749				
2749-2750				
2750-2751				LIMESTONE- Limestone, 100%, very pale orange, some yellowish gray, poorly to moderately well cemented, dolomitic, soft.
2751-2752				
2752-2753				
2753-2754				
2754-2755				
2755-2756				
2756-2757				
2757-2758				
2758-2759				
2759-2760				
2760-2761				LIMESTONE- Limestone, 100%, very pale orange, some yellowish gray, poorly to moderately well cemented, dolomitic, soft.
2761-2762				
2762-2763				
2763-2764				
2764-2765				
2765-2766				
2766-2767				
2767-2768				
2768-2769				
2769-2770				
2770-2771				LIMESTONE- Limestone, 100%, very pale orange, some yellowish gray, poorly to moderately well cemented, dolomitic, soft.
2771-2772				
2772-2773				
2773-2774				
2774-2775				
2775-2776				
2776-2777				
2777-2778				
2778-2779				
2779-2780				
2780-2781				LIMESTONE- Limestone, 100%, very pale orange, some yellowish gray, poorly to moderately well cemented, dolomitic, soft.
2781-2782				
2782-2783				
2783-2784				
2784-2785				
2785-2786				
2786-2787				
2787-2788				
2788-2789				
2789-2790				
2790-2791				LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%, very pale orange, some yellowish gray poorly to moderately well cemented, soft; Dolomite, 5%, moderately yellowish brown to dark yellowish brown, micritic, well cemented, hard.
2791-2792				
2792-2793				
2793-2794			37 rpm →	
2794-2795				
2795-2796				
2796-2797				
2797-2798				
2798-2799				
2799-2800				

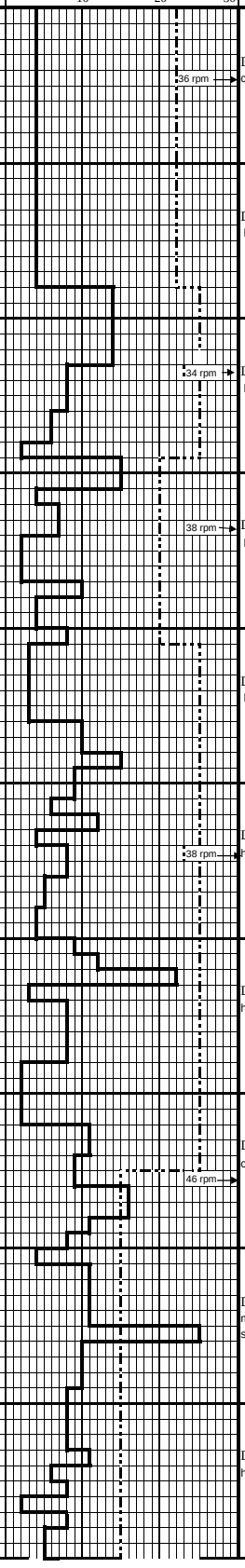
Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):

Depth Below Pad Level (ft)	10	20	30	Description
2800-2801				LIMESTONE AND VERY LITTLE DOLOMITE- Limestone, 95%, very pale orange, some yellowish gray poorly to moderately well cemented, soft; Dolomite, 5%, moderately yellowish brown to dark yellowish brown, micritic, well cemented, hard.
2801-2802				
2802-2803				
2803-2804				
2804-2805				
2805-2806				
2806-2807				
2807-2808				
2808-2809				
2809-2810				
2810-2811				LIMESTONE- Limestone, 100%, very pale orange, poorly to moderately well cemented, sof
2811-2812				
2812-2813				
2813-2814				
2814-2815				
2815-2816				
2816-2817				
2817-2818				
2818-2819				
2819-2820				
2820-2821				LIMESTONE- Limestone, 100%, very pale orange, poorly to moderately well cemented, sof
2821-2822				
2822-2823				
2823-2824				
2824-2825				
2825-2826				
2826-2827				
2827-2828				
2828-2829				
2829-2830				
2830-2831				LIMESTONE- Limestone, 100%, very pale orange, poorly to moderately well cemented, sof
2831-2832				
2832-2833				
2833-2834			40 rpm →	
2834-2835				
2835-2836				
2836-2837				
2837-2838				
2838-2839				
2839-2840				
2840-2841				LIMESTONE- Limestone, 100%, very pale orange, poorly to moderately well cemented, sof
2841-2842				
2842-2843				
2843-2844				
2844-2845				
2845-2846				
2846-2847				
2847-2848				
2848-2849				
2849-2850				
2850-2851				LIMESTONE- Limestone, 100%, very pale orange, poorly to moderately well cemented, sof
2851-2852				
2852-2853				
2853-2854				
2854-2855				
2855-2856				
2856-2857				
2857-2858				
2858-2859				
2859-2860				
2860-2861				LIMESTONE- Limestone, 100%, very pale orange, poorly to moderately well cemented, sof
2861-2862				
2862-2863				
2863-2864				
2864-2865				
2865-2866				
2866-2867				
2867-2868				
2868-2869				
2869-2870				
2870-2871				LIMESTONE- Limestone, 100%, very pale orange, poorly to moderately well cemented, sof
2871-2872				
2872-2873				
2873-2874				
2874-2875			40 rpm →	
2875-2876				
2876-2877				
2877-2878				
2878-2879				
2879-2880				
2880-2881				DOLOMITE AND LIMESTONE- Dolomite, 70%, moderately yellowish brown to pale brown, wel cemented, moderately hard; Limestone, 30%, very pale orange, poorly to moderately well cemented, soft
2881-2882				
2882-2883				
2883-2884				
2884-2885				
2885-2886				
2886-2887				
2887-2888				
2888-2889				
2889-2890				
2890-2891				LIMESTONE- Limestone, 100%, very pale orange, poorly to moderately well cemented, so
2891-2892				
2892-2893				
2893-2894				
2894-2895				
2895-2986				
2896-2897				
2897-2898				
2898-2899				
2899-2900				

Injection Well No.1

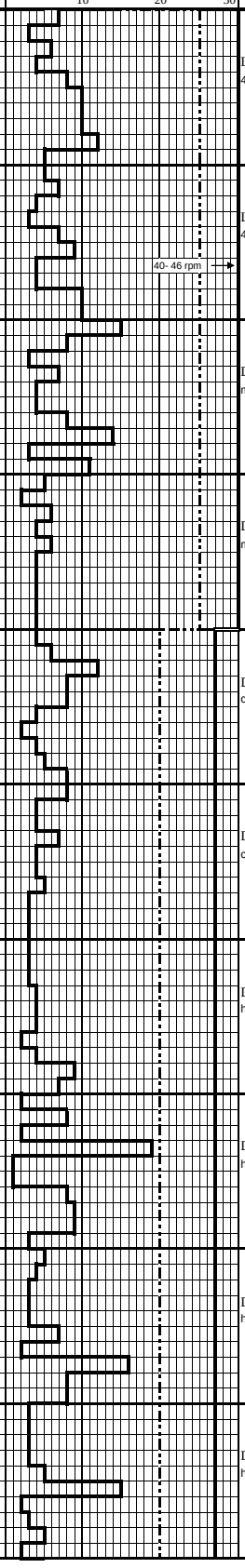
Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):



Depth Below Pad Level (ft)	Description
2900-2901 to 2909-2910	DOLOMITE AND SOME LIMESTONE- Dolomite, 70%, moderately yellowish brown to pale brown, wel cemented, moderately hard; Limestone, 30%, very pale orange, poorly to moderately well cemented, soft
2910-2911 to 2919-2920	DOLOMITE AND LIMESTONE- Dolomite, 50%, pale yellowish brown to dark pale brown, well cemente hard; Limestone, 50%, very pale orange, poorly to moderately well cemented, soft
2920-2921 to 2929-2930	DOLOMITE AND LIMESTONE- Dolomite, 50%, pale yellowish brown to dark pale brown, well cemente hard; Limestone, 50%, very pale orange, poorly to moderately well cemented, soft
2930-2931 to 2939-2940	DOLOMITE AND LIMESTONE- Dolomite, 50%, pale yellowish brown to dark pale brown, well cemente hard; Limestone, 50%, very pale orange, poorly to moderately well cemented, soft
2940-2941 to 2949-2950	DOLOMITE AND LIMESTONE- Dolomite, 50%, pale yellowish brown to dark pale brown, well cemente hard; Limestone, 50%, very pale orange, poorly to moderately well cemented, soft
2950-2951 to 2959-2960	DOLOMITE AND LIMESTONE- Dolomite, 65%, pale yellowish brown to dark pale brown, well cemented hard; Limestone, 35%, very pale orange, poorly to moderately cemented, soft.
2960-2961 to 2969-2970	DOLOMITE AND LIMESTONE- Dolomite, 65%, pale yellowish brown to dark pale brown, well cemented hard; Limestone, 35%, very pale orange, poorly to moderately cemented, soft.
2970-2971 to 2979-2980	DOLOMITE AND LIMESTONE- Dolomite, 50%, pale yellowish brown to dark yellowish brown, wel cemented, hard; Limestone, 50%, very pale orange, poorly to moderately-well cemented, soft.
2980-2981 to 2989-2990	DOLOMITE AND SOME LIMESTONE – Dolomite, 85%, pale yellowish brown to dark yellowish brown moderately to well cemented; Limestone, 15%, very pale orange to pale yellowish brown, poorly to moderately-well cemented, soft.
2990-2991 to 2999-3000	DOLOMITE AND LIMESTONE – Dolomite, 60%, moderate yellowish brown, moderately-well cemente hard; Limestone, 40%, very pale orange to yellowish gray, moderately- well cemented, moderately hard.

Injection Well No.1

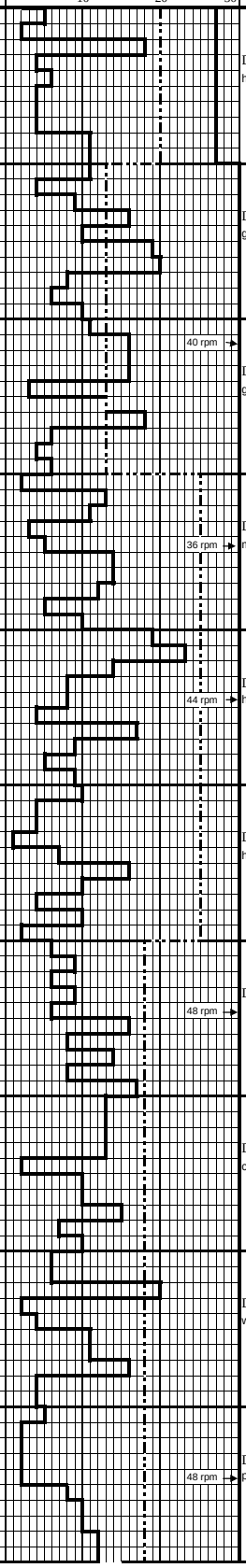
Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):



Depth Below Pad Level (ft)	Description
3000-3001	LIMESTONE AND DOLOMITE – Limestone, 60%, very pale orange, poorly cemented, soft; Dolomite 40%, pale yellowish brown to moderate yellowish brown, poorly cemented, moderately hard to soft.
3001-3002	
3002-3003	
3003-3004	
3004-3005	
3005-3006	
3006-3007	
3007-3008	
3008-3009	
3009-3010	
3010-3011	LIMESTONE AND DOLOMITE – Limestone, 60%, very pale orange, poorly cemented, soft; Dolomite 40%, pale yellowish brown to moderate yellowish brown, poorly cemented, moderately hard to soft.
3011-3012	
3012-3013	
3013-3014	
3014-3015	
3015-3016	
3016-3017	
3017-3018	
3018-3019	
3019-3020	
3020-3021	DOLOMITE AND SOME LIMESTONE – Dolomite, 70%, pale yellowish brown to pale brown, moderately-well cemented, hard; Limestone, 30%, very pale orange, poorly cemented, soft.
3021-3022	
3022-3023	
3023-3024	
3024-3025	
3025-3026	
3026-3027	
3027-3028	
3028-3029	
3029-3030	
3030-3031	DOLOMITE AND LITTLE LIMESTONE – Dolomite, 90%, pale yellowish brown to pale brown, moderately-well cemented, hard; Limestone, 10%, very pale orange, poorly cemented, soft
3031-3032	
3032-3033	
3033-3034	
3034-3035	
3035-3036	
3036-3037	
3037-3038	
3038-3039	
3039-3040	
3040-3041	DOLOMITE – Dolomite, 100%, pale yellowish brown to dark yellowish brown, moderately-wel cemented, hard.
3041-3042	
3042-3043	
3043-3044	
3044-3045	
3045-3046	
3046-3047	
3047-3048	
3048-3049	
3049-3050	
3050-3051	DOLOMITE – Dolomite, 100%, pale yellowish brown to dark yellowish brown, moderately-wel cemented, hard.
3051-3052	
3052-3053	
3052-3054	
3054-3055	
3055-3056	
3056-3057	
3057-3058	
3058-3059	
3059-3060	
3060-3061	DOLOMITE – Dolomite, 100%, pale yellowish brown to dark yellowish brown, moderately-well cemente hard
3061-3062	
3062-3063	
3063-3064	
3064-3065	
3065-3066	
3066-3067	
3067-3068	
3068-3069	
3069-3070	
3070-3071	DOLOMITE – Dolomite, 100%, pale yellowish brown to dark yellowish brown, moderately-well cemente hard
3071-3072	
3072-3073	
3073-3074	
3074-3075	
3075-3076	
3076-3077	
3077-3078	
3078-3079	
3079-3080	
3080-3081	DOLOMITE – Dolomite, 100%, pale yellowish brown to dark yellowish brown, moderately-well cemente hard
3081-3082	
3082-3083	
3083-3084	
3084-3085	
3085-3086	
3086-3087	
3087-3088	
3088-3089	
3089-3090	
3090-3091	DOLOMITE – Dolomite, 100%, pale yellowish brown to dark yellowish brown, moderately-well cemente hard
3091-3092	
3092-3093	
3093-3094	
3094-3095	
3095-3096	
3096-3097	
3097-3098	
3098-3099	
3099-3100	

Injection Well No.1

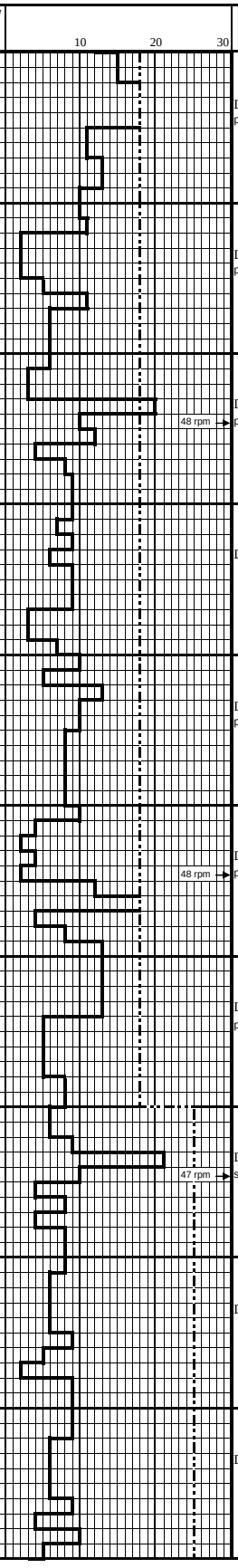
Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):



Depth Below Pad Level (ft)	Description
3100-3101 3101-3102 3102-3103 3103-3104 3104-3105 3105-3106 3106-3107 3107-3108 3108-3109 3109-3110	DOLOMITE – Dolomite, 100%, pale yellowish brown to dark yellowish brown, moderately-well cemente hard
3110-3111 3111-3112 3112-3113 3113-3114 3114-3115 3115-3116 3116-3117 3117-3118 3118-3119 3119-3120	DOLOMITE – Dolomite, 100%, pale yellowish brown to dusky yellowish brown and light olive gray to oliv gray, well cemented, hard.
3120-3121 3121-3122 3122-3123 3123-3124 3124-3125 3125-3126 3126-3127 3127-3128 3128-3129 3129-3130	DOLOMITE – Dolomite, 100%, pale yellowish brown to dusky yellowish brown and light olive gray to oliv gray, well cemented, hard.
3130-3131 3131-3132 3132-3133 3133-3134 3134-3135 3135-3136 3136-3137 3137-3138 3138-3139 3139-3140	DOLOMITE AND SOME LIMESTONE – Dolomite, 85%, pale yellowish brown to dark yellowish brown moderately-well cemented, hard; Limestone, 15%, very pale orange to yellowish gray, moderately-well cemented, moderately
3140-3141 3141-3142 3142-3143 3143-3144 3144-3145 3145-3146 3146-3147 3147-3148 3148-3149 3149-3150	DOLOMITE – Dolomite, 100%, mostly pale yellowish brown to moderate yellowish brown, well cemente hard.
3150-3151 3151-3152 3152-3153 3153-3154 3154-3155 3155-3156 3156-3157 3157-3158 3158-3159 3159-3160	DOLOMITE – Dolomite, 100%, mostly pale yellowish brown to moderate yellowish brown, well cemente hard.
3160-3161 3161-3162 3162-3163 3163-3164 3164-3165 3165-3166 3166-3167 3167-3168 3168-3169 3169-3170	DOLOMITE – Dolomite, 100%, dark yellowish brown, moderately-well cemented, moderately hard to so
3170-3171 3171-3172 3172-3173 3173-3174 3174-3175 3175-3176 3176-3177 3177-3178 3178-3179 3179-3180	DOLOMITE – Dolomite, 100%, light olive gray to moderate yellowish brown, little light gray, poorl cemented and soft, with numerous boulder type fragments, very hard.
3180-3181 3181-3182 3182-3183 3183-3184 3184-3185 3185-3186 3186-3187 3187-3188 3188-3189 3189-3190	DOLOMITE – Dolomite, 100%, moderate yellowish brown, fine crystalline, poorly cemented and sof with few boulder type fragments, micritic, very hard.
3190-3191 3191-3192 3192-3193 3193-3194 3194-3195 3195-3196 3196-3197 3197-3198 3198-3199 3199-3200	DOLOMITE – Dolomite, 100%, light olive gray to dark yellowish brown, some light gray to dark gray poorly cemented and soft, with very few boulder type fragments, very hard.

Injection Well No.1

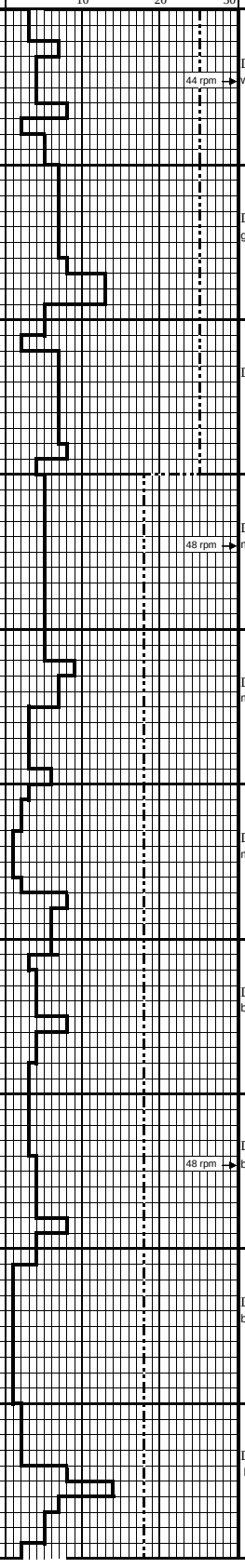
Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):



Depth Below Pad Level (ft)	Description
3200-3201	DOLOMITE – Dolomite, 100%, light olive gray to dark yellowish brown, some light gray to dark gray
3201-3202	poorly cemented and soft, with very few boulder type fragments, very hard.
3202-3203	
3203-3204	
3204-3205	
3205-3206	
3206-3207	
3207-3208	
3208-3209	
3209-3210	
3210-3211	DOLOMITE – Dolomite, 100%, light olive gray to dark yellowish brown, some light gray to dark gray
3211-3212	poorly cemented and soft, with very few boulder type fragments, very hard.
3212-3213	
3213-3214	
3214-3215	
3215-3216	
3216-3217	
3217-3218	
3218-3219	
3219-3220	
3220-3221	DOLOMITE – Dolomite, 100%, light olive gray to dark yellowish brown, some light gray to dark gray
3221-3222	poorly cemented and soft, with very few boulder type fragments, very hard.
3222-3223	
3223-3224	
3224-3225	48 rpm
3225-3226	
3226-3227	
3227-3228	
3228-3229	
3229-3230	
3230-3231	DOLOMITE – Dolomite, 100%, moderate yellowish brown, poorly cemented and sof
3231-3232	
3232-3233	
3233-3234	
3234-3235	
3235-3236	
3236-3237	
3237-3238	
3238-3239	
3239-3240	
3240-3241	DOLOMITE – Dolomite, 100%, light olive gray to dark yellowish brown, some light gray to dark gray
3241-3242	poorly cemented and soft.
3242-3243	
3243-3244	
3244-3245	
3245-3246	
3246-3247	
3247-3248	
3248-3249	
3249-3250	
3250-3251	DOLOMITE – Dolomite, 100%, light olive gray to dark yellowish brown, some light gray to dark gray
3251-3252	poorly cemented and soft.
3252-3253	
3253-3254	
3254-3255	48 rpm
3255-3256	
3256-3257	
3257-3258	
3258-3259	
3259-3260	
3260-3261	DOLOMITE – Dolomite, 100%, light olive gray to dark yellowish brown, some light gray to dark gray
3261-3262	poorly cemented and soft.
3262-3263	
3263-3264	
3264-3265	
3265-3266	
3266-3267	
3267-3268	
3268-3269	
3269-3270	
3270-3271	DOLOMITE – Dolomite, 100%, pale yellowish brown to moderate yellowish brown, poorly cementec
3271-3272	
3272-3273	
3273-3274	
3274-3275	47 rpm soft.
3275-3276	
3276-3277	
3277-3278	
3278-3279	
3279-3280	
3280-3281	DOLOMITE – Dolomite, 100%, moderate yellowish brown to dark yellowish brown, well cemented, har
3281-3282	
3282-3283	
3283-3284	
3284-3285	
3285-3286	
3286-3287	
3287-3288	
3288-3289	
3289-3290	
3290-3291	DOLOMITE – Dolomite, 100%, moderate yellowish brown to dark yellowish brown, well cemented, har
3291-3292	
3292-3293	
3293-3294	
3294-3295	
3295-3296	
3296-3297	
3297-3298	
3298-3299	
3299-3300	

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):



Depth Below Pad Level (ft)	Description
3300-3301	DOLOMITE – Dolomite, 100%, pale yellowish brown to moderate yellowish brown and olive gray
3301-3302	well cemented, hard.
3302-3303	
3303-3304	
3304-3305	
3305-3306	
3306-3307	
3307-3308	
3308-3309	
3309-3310	
3310-3311	DOLOMITE – Dolomite, 100%, pale yellowish brown to dark yellowish brown, some light gray to dar
3311-3312	gray, poorly cemented, soft to moderately hard;
3312-3313	
3313-3314	
3314-3315	
3315-3316	
3316-3317	
3317-3318	
3318-3319	
3319-3320	
3320-3321	DOLOMITE – Dolomite, 100%, pale yellowish brown to dark yellowish brown, well cemented, ha
3321-3322	
3322-3323	
3323-3324	
3324-3325	
3325-3326	
3326-3327	
3327-3328	
3328-3329	
3329-3330	
3330-3331	DOLOMITE – Dolomite, 100%, pale yellowish brown to moderate yellowish brown, poorly cementec
3331-3332	moderately hard to soft.
3332-3333	
3333-3334	
3334-3335	
3335-3336	
3336-3337	
3337-3338	
3338-3339	
3339-3340	
3340-3341	DOLOMITE – Dolomite, 100%, pale yellowish brown to moderate yellowish brown, poorly cementec
3341-3342	moderately hard to soft.
3342-3343	
3343-3344	
3344-3345	
3345-3346	
3346-3347	
3347-3348	
3348-3349	
3349-3350	
3350-3351	DOLOMITE – Dolomite, 100%, pale yellowish brown to moderate yellowish brown, poorly cementec
3351-3352	moderately hard to soft.
3352-3353	
3353-3354	
3354-3355	
3355-3356	
3356-3357	
3357-3358	
3358-3359	
3359-3360	
3360-3361	DOLOMITE – Dolomite, 100%, pale yellowish brown to moderate yellowish brown, little dusky yellowis
3361-3362	brown, poorly cemented, moderately hard to soft.
3362-3363	
3363-3364	
3364-3365	
3365-3366	
3366-3367	
3367-3368	
3368-3369	
3369-3370	
3370-3371	DOLOMITE – Dolomite, 100%, pale yellowish brown to moderate yellowish brown, little dusky yellowis
3371-3372	brown, poorly cemented, moderately hard to soft.
3372-3373	
3373-3374	
3374-3375	
3375-3376	
3376-3377	
3377-3378	
3378-3379	
3379-3380	
3380-3381	DOLOMITE – Dolomite, 100%, pale yellowish brown to moderate yellowish brown, little dusky yellowis
3381-3382	brown, poorly cemented, moderately hard to soft.
3382-3383	
3383-3384	
3384-3385	
3385-3386	
3386-3387	
3387-3388	
3388-3389	
3389-3390	
3390-3391	DOLOMITE – Dolomite, 100%, moderate yellowish brown, sucrosic, poorly cemented and soft, with ve
3391-3392	little light gray, micritic and moderately hard.
3392-3393	
3393-3394	
3394-3395	
3395-3396	
3396-3397	
3397-3398	
3398-3399	
3399-3400	

City of Port St. Lucie Westport Injection Well System
Port St. Lucie, Florida
PENETRATION RATE LOG

Injection Well No.1

Penetration rate (min/ft):
Weight On Bit (K lbs):
Rotary Speed (rpm):

Depth Below Pad Level (ft)	10	20	30	Description
3400-3401				DOLOMITE – Dolomite, 100%, moderate yellowish brown, sucrosic, poorly cemented and soft, with ve
3401-3402				little light gray, micritic and moderately hard.
3402-3403				
3403-3404				
3404-3405				
3405-3406				
3406-3407				
3407-3408				
3408-3409				
3409-3410				
3410-3411				
3411-3412				
3412-3413				
3413-3414				DOLOMITE – Dolomite, 100%, moderate yellowish brown, sucrosic, poorly cemented and soft, with ve
3414-3415			48 rpm →	little light gray, micritic and moderately hard.
3415-3416				
3416-3417				
3417-3418				
3418-3419				
3419-3420				
3420-3421				
3421-3422				DOLOMITE – Dolomite, 100%, moderate yellowish brown, sucrosic, poorly cemented and soft, with son
3422-3423				light gray, micritic and moderately hard.
3423-3424				
3424-3425				
3425-3426				
3426-3427				
3427-3428				
3428-3429				
3429-3430				
3430-3431				
3431-3432				DOLOMITE – Dolomite, 100%, moderate yellowish brown, sucrosic, poorly cemented and soft, with ve
3432-3433				little light gray, micritic and moderately hard.
3433-3434				
3434-3435				
3435-3436				
3436-3437				
3437-3438				
3438-3439				
3439-3440				
3440-3441				
3441-3442				DOLOMITE – Dolomite, 100%, pale yellowish brown to moderate yellowish brown, some dusky yellowis
3442-3443				brown, micritic and very-fine crystalline, sucrosic, poorly cemented, moderately hard to soft.
3443-3444				
3444-3445			48 rpm →	
3445-3446				
3446-3447				
3447-3448				
3448-3449				
3449-3450				

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

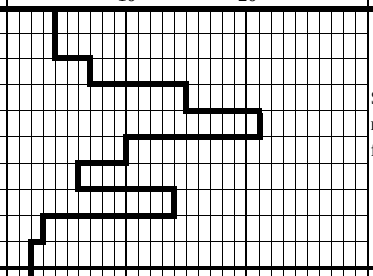
Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
0-1		SAND – Sand, 100%, clear, quartz, fine to medium grained, well sorted.
1-2		
2-3		SILTY SAND - Sand, 70%, clear to dusky brown, quartz, very fine to fine grained; Silt, 30%, dusky brown.
3-4		
4-5		
5-6		HARD PAN
6-7		SANDY CLAY- Clay, 70%, light olive gray, silty, very soft, low plasticity; Sand, 30%, clear, quartz.
7-8		
8-9		
9-10		
10-11		SHELL WITH SOME SAND– Shell, 80%, very pale orange to light brown and medium gray; Sand, 20%, clear, quartz, fine grained.
11-12		
12-13		
13-14		
14-15		
15-16		
16-17		
17-18		
18-19		
19-20		
20-21		SHELL WITH SOME SAND– Shell, 80%, very pale orange to light brown and medium gray; Sand, 20%, clear, quartz, fine grained.
21-22		
22-23		
23-24		
24-25		
25-26		
26-27		
27-28		
28-29		
29-30		
30-31		SHELL WITH SOME SAND– Shell, 80%, very pale orange to light brown and medium gray; Sand, 20%, clear, quartz, fine grained.
31-32		
32-33		
33-34		
34-35		
35-36		
36-37		
37-38		
38-39		
39-40		
40-41		SHELL WITH SAND AND LITTLE CLAY AND SANDSTONE– Shell, 50%, very pale orange to light brown and medium gray , mostly shell fragments; Sand, 30%, clear, quartz, fine grained;Clay, 10%, medium gray , very soft, moderate plasticity, slightly phosphatic; Sandstone, 10%, light gray , quartz, fine grained, poorly cemented.
41-42		
42-43		
43-44		
44-45		
45-46		
46-47		
47-48		
48-49		
49-50		
50-51		SHELL WITH SAND AND LITTLE CLAY AND SANDSTONE– Shell, 50%, very pale orange to light brown and medium gray , mostly shell fragments; Sand, 30%, clear, quartz, fine grained;Clay, 10%, medium gray , very soft, moderate plasticity, slightly phosphatic; Sandstone, 10%, light gray , quartz, fine grained, poorly cemented.
51-52		
52-53		
53-54		
54-55		
55-56		
56-57		
57-58		
58-59		
59-60		

ARCADIS

City of Port St. Lucie, Westport Injection Well System

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
60-61		SANDSTONE WITH SAND AND SOME SHELL- Sandstone, 50%, medium gray, quartz, moderately well cemented, slightly phosphatic; Sand, 30%, clear, quartz; Shell, 20%, very pale orange to light brown, fragments, tests to 0.8 inch.
61-62		
62-63		
63-64		
64-65		
65-66		
66-67		
67-68		
68-69		
69-70		
70-71		SHELL WITH SAND, SANDSTONE AND LITTLE CLAY – Shell, 40%, very pale orange to light brown; Sand, 25%, clear, quartz, fine grained; Sandstone, 25%, medium gray, quartz, fine to medium grained, moderately well cemented; Clay, 10%, medium light gray, very soft, medium plasticity.
71-72		
72-73		
73-74		
74-75		
75-76		
76-77		
77-78		
78-79		
79-80		
80-81		SHELL WITH SOME LIMESTONE AND LITTLE SAND – Shell, 60%, very pale orange to light brown; Limestone, 25%, medium gray, arenaceous, fine grained, moderately well cemented; Sand, 15%, clear to very light gray, mostly quartz, some calcareous.
81-82		
82-83		
83-84		
84-85		
85-86		
86-87		
87-88		
88-89		
89-90		
90-91		SHELL WITH LIMESTONE, SOME SAND AND LITTLE CLAY- Shell, 40%, very pale orange to l ight brown; Limestone, 30%, medium gray, arenaceous, fine grained, moderately well cemented; Sand, 20%, clear to light gray quartz, some calcareous; Clay, 10%, medium light gray, very soft, medium plasticity, calcareous.
91-92		
92-93		
93-94		
94-95		
95-96		
96-97		
97-98		
98-99		
99-100		
100-101		SHELL WITH LIMESTONE, SOME SAND AND LITTLE CLAY- Shell, 40%, very pale orange to l ight brown; Limestone, 30%, medium gray, arenaceous, fine grained, moderately well cemented; Sand, 20%, clear to light gray quartz, some calcareous; Clay, 10%, medium light gray, very soft, medium plasticity, calcareous.
101-102		
102-103		
103-104		
104-105		
105-106		
106-107		
107-108		
108-109		
109-110		
110-111		SHELL WITH LIMESTONE, SOME SAND AND LITTLE CLAY- Shell, 40%, very pale orange to l ight brown; Limestone, 30%, medium gray, arenaceous, fine grained, moderately well cemented; Sand, 20%, clear to light gray quartz, some calcareous; Clay, 10%, medium light gray, very soft, medium plasticity, calcareous.
111-112		
112-113		
113-114		
114-115		
115-116		
116-117		
117-118		
118-119		
119-120		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
120-121		SHELLWITH LIMESTONE AND SOME SAND- Shell, 50%, very pale orange, white,light brown to medium gray; Limestone, 30%, light olive gray, arenaceous and biosparitc, fine grained, moderately well cemented; Sand, 20%, clear to light gray, quartz and calcareous, very fine to fine grained; Clay, trace, light olive gray, very soft, non- plastic.
121-122		
122-123		
123-124		
124-125		
125-126		
126-127		
127-128		
128-129		
129-130		
130-131		SHELLWITH LIMESTONE AND SOME SAND- Shell, 50%, very pale orange, white,light brown to medium gray; Limestone, 30%, light olive gray, arenaceous and biosparitc, fine grained, moderately well cemented; Sand, 20%, clear to light gray, quartz and calcareous, very fine to fine grained; Clay, trace, light olive gray, very soft, non- plastic.
131-132		
132-133		
133-134		
134-135		
135-136		
136-137		
137-138		
138-139		
139-140		
140-141		SHELLWITH LIMESTONE AND SOME SAND- Shell, 50%, very pale orange, white,light brown to medium gray; Limestone, 30%, light olive gray, arenaceous and biosparitc, fine grained, moderately well cemented; Sand, 20%, clear to light gray, quartz and calcareous, very fine to fine grained; Clay, trace, light olive gray, very soft, non- plastic.
141-142		
142-143		
143-144		
144-145		
145-146		
146-147		
147-148		
148-149		
149-150		
150-151		SHELLWITH LIMESTONE AND SOME SAND- Shell, 50%, very pale orange, white,light brown to medium gray; Limestone, 30%, light olive gray, arenaceous and biosparitc, fine grained, moderately well cemented; Sand, 20%, clear to light gray, quartz and calcareous, very fine to fine grained; Clay, trace, light olive gray, very soft, non- plastic.
151-152		
152-153		
153-154		
154-155		
155-156		
156-157		
157-158		
158-159		
159-160		
160-161		SHELLWITH LIMESTONE AND SOME SAND- Shell, 50%, very pale orange, white,light brown to medium gray; Limestone, 30%, light olive gray, arenaceous and biosparitc, fine grained, moderately well cemented; Sand, 20%, clear to light gray, quartz and calcareous, very fine to fine grained; Clay, trace, light olive gray, very soft, non- plastic.
161-162		
162-163		
163-164		
164-165		
165-166		
166-167		
167-168		
168-169		
169-170		
170-171		LIMESTONE WITH SHELL, SOME CLAY AND LITTLE SAND- Limestone, 50%, yellowish gray, biosparitic; Shell, 25%, very pale orange to light gray; Clay, 15%, light olive gray, calcareous, soft, non- plastic; Sand, 10%, light gray to clear,calcareous, some quartz, fine grained.
171-172		
172-173		
173-174		
174-175		
175-176		
176-177		
177-178		
178-179		
179-180		

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
180-181		SANDY CLAY WITH SHELL AND LITTLE LIMESTONE– Clay, 50%, grayish olive, silty, slightly phosphatic, very soft to soft, cohesive, non-plastic; Shell, 25%, very pale orange to light brown; Sand, 15%, very light gray, calcareous, some clear, quartz, very fine to fine grained; Limestone, 10%, yellowish gray, biosparitic, moderately well cemented.
181-182		
182-183		
183-184		
184-185		
185-186		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch. Cement dominating in cuttings.
186-187		
187-188		
188-189		
189-190		
190-191		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch. Cement dominating in cuttings.
191-192		
192-193		
193-194		
194-195		
195-196		
196-197		
197-198		
198-199		
199-200		
200-201		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch. Cement dominating in cuttings.
201-202		
202-203		
203-204		
204-205		
205-206		
206-207		
207-208		
208-209		
209-210		
210-211		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch. Cement present in cuttings.
211-212		
212-213		
213-214		
214-215		
215-216		
216-217		
217-218		
218-219		
219-220		
220-221		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch. Cement present in cuttings.
221-222		
222-223		
223-224		
224-225		
225-226		
226-227		
227-228		
228-229		
229-230		
230-231		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch.
231-232		
232-233		
233-234		
234-235		
235-236		
236-237		
237-238		
238-239		
239-240		

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
240-241		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch.
241-242		
242-243		
243-244		
244-245		
245-246		
246-247		
247-248		
248-249		
249-250		
250-251		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch.
251-252		
252-253		
253-254		
254-255		
255-256		
256-257		
257-258		
258-259		
259-260		
260-261		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch.
261-262		
262-263		
263-264		
264-265		
265-266		
266-267		
267-268		
268-269		
269-270		
270-271		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch.
271-272		
272-273		
273-274		
274-275		
275-276		
276-277		
277-278		
278-279		
279-280		
280-281		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch.
281-282		
282-283		
283-284		
284-285		
285-286		
286-287		
287-288		
288-289		
289-290		
290-291		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch.
291-292		
292-293		
293-294		
294-295		
295-296		
296-297		
297-298		
298-299		
299-300		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
300-301		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch.
301-302		
302-303		
303-304		
304-305		
305-306		
306-307		
307-308		
308-309		
309-310		
310-311		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch.
311-312		
312-313		
313-314		
314-315		
315-316		
316-317		
317-318		
318-319		
319-320		
320-321		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch.
321-322		
322-323		
323-324		
324-325		
325-326		
326-327		
327-328		
328-329		
329-330		
330-331		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch.
331-332		
332-333		
333-334		
334-335		
335-336		
336-337		
337-338		
338-339		
339-340		
340-341		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch.
341-342		
342-343		
343-344		
344-345		
345-346		
346-347		
347-348		
348-349		
349-350		
350-351		CLAY WITH VERY LITTLE SAND – Clay, 95%, dark greenish gray with trace of pale olive, silty, very soft to soft, cohesive to very cohesive, non-plastic; Sand, 5%, clear, quartz, slightly phosphatic, very fine grained; Shell, trace, isolated tests to 0.2 inch.
351-352		
352-353		
353-354		
354-355		
355-356		
356-357		
357-358		
358-359		
359-360		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
360-361		CLAY WITH VERY LITTLE SAND AND LIMESTONE– Clay, 90%, dark greenish gray, some grayish olive green), silty, soft to very soft, very cohesive, non-plastic; Sand, 5%, clear, quartz, fine grained, sub-rounded; Limestone, trace, very pale orange to yellowish gray soft, poorly cemented, phosphatic.
361-362		
362-363		
363-364		
364-365		
365-366		
366-367		
367-368		
368-369		
369-370		
370-371		CLAY WITH VERY LITTLE SAND AND LIMESTONE– Clay, 90%, dark greenish gray, some grayish olive green), silty, soft to very soft, very cohesive, non-plastic; Sand, 5%, clear, quartz, fine grained, sub-rounded; Limestone, trace, very pale orange to yellowish gray soft, poorly cemented, phosphatic.
371-372		
372-373		
373-374		
374-375		
375-376		
376-377		
377-378		
378-379		
379-380		
380-381		CLAY- – Clay, 100%, grayish yellow green to olive gray, silty, very cohesive, soft to very soft, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange, tests up to 0.2 inch.
381-382		
382-383		
383-384		
384-385		
385-386		
386-387		
387-388		
388-389		
389-390		
390-391		CLAY- – Clay, 100%, grayish yellow green to olive gray, silty, very cohesive, soft to very soft, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange, tests up to 0.2 inch.
391-392		
392-393		
393-394		
394-395		
395-396		
396-397		
397-398		
398-399		
399-400		
400-401		CLAY- – Clay, 100%, grayish yellow green to olive gray, silty, very cohesive, soft to very soft, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange, tests up to 0.2 inch.
401-402		
402-403		
403-404		
404-405		
405-406		
406-407		
407-408		
408-409		
409-410		
410-411		CLAY- – Clay, 100%, grayish yellow green to olive gray, silty, very cohesive, soft to very soft, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange, tests up to 0.2 inch.
411-412		
412-413		
413-414		
414-415		
415-416		
416-417		
417-418		
418-419		
419-420		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
420-421		CLAY- – Clay, 100%, grayish yellow green to olive gray, silty, very cohesive, soft to very soft, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange, tests up to 0.2 inch.
421-422		
422-423		
423-424		
424-425		
425-426		
426-427		
427-428		
428-429		
429-430		
430-431		CLAY- – Clay, 100%, grayish yellow green to olive gray, silty, very cohesive, soft to very soft, non-plastic; Sand, trace, clear, quartz, very fine grained; Shell, trace, white to very pale orange, tests up to 0.2 inch.
431-432		
432-433		
433-434		
434-435		
435-436		
436-437		
437-438		
438-439		
439-440		
440-441		CLAY WTH VERY LITTLE LIMESTONE – Clay, 95%, grayish yellow green to olive gray, cohesive, soft, low plasticity to non-plastic, phosphatic; Limestone, 5%, yellowish gray, soft; Sand, trace, clear, quartz.
441-442		
442-443		
443-444		
444-445		
445-446		
446-447		
447-448		
448-449		
449-450		
450-451		CLAY WTH VERY LITTLE LIMESTONE – Clay, 95%, grayish yellow green to olive gray, cohesive, soft, low plasticity to non-plastic, phosphatic; Limestone, 5%, yellowish gray, soft; Sand, trace, clear, quartz.
451-452		
452-453		
453-454		
454-455		
455-456		
456-457		
457-458		
458-459		
459-460		
460-461		CLAY – Clay, 100%, grayish olive to dark greenish gray, highly cohesive, low plasticity, very phosphatic; Limestone, trace, yellowish gray, arenaceous, soft, moderately cemented; Sand, trace, clear, quartz.
461-462		
462-463		
463-464		
464-465		
465-466		
466-467		
467-468		
468-469		
469-470		
470-471		CLAY WITH VERY LITTLE LIMESTONE – Clay, 95%, grayish olive to pale olive, calcareous, some silty, phosphatic, soft, highly cohesive, low plasticity; Limestone, 5%, grayish yellow green to white, fine grained, soft, poorly cemented, slightly phosphatic; Sand, trace, quartz and calcareous.
471-472		
472-473		
473-474		
474-475		
475-476		
476-477		
477-478		
478-479		
479-480		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
480-481		CLAY WITH LITTLE LIMESTONE – Clay, 90%, pale olive to grayish olive, calcareous and silty, phosphatic, very soft to soft; Limestone, 10%, grayish yellow green to white, soft, poorly cemented, slightly phosphatic; Sand, trace, clear to light greenish gray, quartz and calcareous, very fine to fine grained.
481-482		
482-483		
483-484		
484-485		
485-486		
486-487		
487-488		
488-489		
489-490		
490-491		CLAY WITH LITTLE LIMESTONE – Clay, 90%, pale olive to grayish olive, calcareous and silty, phosphatic, very soft to soft; Limestone, 10%, grayish yellow green to white, soft, poorly cemented, slightly phosphatic; Sand, trace, clear to light greenish gray, quartz and calcareous, very fine to fine grained.
491-492		
492-493		
493-494		
494-495		
495-496		
496-497		
497-498		
498-499		
499-500		
500-501		CLAY WITH LITTLE LIMESTONE – Clay, 90%, pale olive to grayish olive, calcareous and silty, phosphatic, very soft to soft; Limestone, 10%, grayish yellow green to white, soft, poorly cemented, slightly phosphatic; Sand, trace, clear to light greenish gray, quartz and calcareous, very fine to fine grained.
501-502		
502-503		
503-504		
504-505		
505-506		
506-507		
507-508		
508-509		
509-510		
510-511		CLAY WITH LITTLE LIMESTONE – Clay, 90%, pale olive to grayish olive, calcareous and silty, phosphatic, very soft to soft; Limestone, 10%, grayish yellow green to white, soft, poorly cemented, slightly phosphatic; Sand, trace, clear to light greenish gray, quartz and calcareous, very fine to fine grained.
511-512		
512-513		
513-514		
514-515		
515-516		
516-517		
517-518		
518-519		
519-520		
520-521		CLAY WITH LITTLE LIMESTONE – Clay, 90%, pale olive to grayish olive, calcareous and silty, phosphatic, very soft to soft; Limestone, 10%, grayish yellow green to white, soft, poorly cemented, slightly phosphatic; Sand, trace, clear to light greenish gray, quartz and calcareous, very fine to fine grained.
521-522		
522-523		
523-524		
524-525		
525-526		
526-527		
527-528		
528-529		
529-530		
530-531		CLAY, SOME LIMESTONE AND LITTLE SAND – Clay, 80%, pale greenish yellow to yellowish gray, very soft to soft, calcareous, some silty; Limestone, 15%, yellowish gray, arenaceous, soft, poorly cemented; Sand, 5%, clear to light gray, mostly calcareous, some quartz.
531-532		
532-533		
533-534		
534-535		
535-536		
536-537		
537-538		
538-539		
539-540		

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
540-541		CALCAREOUS CLAY (MARL) WITH LIMESTONE AND LITTLE SAND AND SHELL – Clay, 60%, mostly pale greenish yellow, silty, very soft to soft; Limestone, 30%, very pale orange to yellowish gray, very soft to soft; Sand, 5%, vey pale orange to clear, mostly calcareous, detritic; Shell, 5%, tests to 0.2-inch.
541-542		
542-543		
543-544		
544-545		
545-546		
546-547		
547-548		
548-549		
549-550		
550-551		CLAY- Clay, 100%, dusky yellow green, silty, slightly calcareous, soft to hard; Limestone, trace, very pale orange to yellowish gray, very soft to soft; Sand, trace, clear, quartz; Shell, trace, single tests to 0.2-inch.
551-552		
552-553		
553-554		
554-555		
555-556		
556-557		
557-558		
558-559		
559-560		
560-561		CLAY- Clay, 100%, dusky yellow green, silty, slightly calcareous, soft to hard; Limestone, trace, very pale orange to yellowish gray, very soft to soft; Sand, trace, clear, quartz; Shell, trace, single tests to 0.2-inch.
561-562		
562-563		
563-564		
564-565		
565-566		
566-567		
567-568		
568-569		
569-570		
570-571		CLAY – Clay, 100%, grayish olive, silty to dusky yellow, calcareous, very soft to hard; Limestone, trace, very pale orange to yellowish gray, very soft to soft; Sand, trace, clear, quartz, very fine grained; Shell, trace, very pale orange, single tests to 0.1-inch.
571-572		
572-573		
573-574		
574-575		
575-576		
576-577		
577-578		
578-579		
579-580		
580-581		CLAY WITH LITTLE LIMESTONE AND SHELL – Clay, 90%, pale olive, calcareous (marl), some grayish olive green, very soft to soft; Limestone, 5%, very pale orange to white, very soft to soft; Shell, 5%, tests to 0.1-inch; Sand, trace, clear, quartz.
581-582		
582-583		
583-584		
584-585		
585-586		
586-587		
587-588		
588-589		
589-590		
590-591		CLAY WITH LITTLE LIMESTONE AND SHELL – Clay, 90%, pale olive, calcareous (marl), some grayish olive green, very soft to soft; Limestone, 5%, very pale orange to white, very soft to soft; Shell, 5%, tests to 0.1-inch; Sand, trace, clear, quartz.
591-592		
592-593		
593-594		
594-595		
595-596		
596-597		
597-598		
598-599		
599-600		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
600-601		CLAY WITH LITTLE LIMESTONE AND SHELL – Clay, 90%, pale olive, calcareous (marl), some grayish olive green, very soft to soft; Limestone, 5%, very pale orange to white, very soft to soft; Shell, 5%, tests to 0.1-inch; Sand, trace, clear, quartz.
601-602		
602-603		
603-604		
604-605		
605-606		
606-607		
607-608		
608-609		
609-610		
610-611		CLAY WITH LITTLE LIMESTONE AND SHELL – Clay, 90%, pale olive, calcareous (marl), some grayish olive green, very soft to soft; Limestone, 5%, very pale orange to white, very soft to soft; Shell, 5%, tests to 0.1-inch; Sand, trace, clear, quartz.
611-612		
612-613		
613-614		
614-615		
615-616		
616-617		
617-618		
618-619		
619-620		
620-621		CLAY WITH LITTLE LIMESTONE AND SHELL – Clay, 90%, pale olive, calcareous (marl), some grayish olive green, very soft to soft; Limestone, 5%, very pale orange to white, very soft to soft; Shell, 5%, tests to 0.1-inch; Sand, trace, clear, quartz.
621-622		
622-623		
623-624		
624-625		
625-626		
626-627		
627-628		
628-629		
629-630		
630-631		CLAY WITH LITTLE LIMESTONE AND SHELL – Clay, 90%, pale olive, calcareous (marl), some grayish olive green, very soft to soft; Limestone, 5%, very pale orange to white, very soft to soft; Shell, 5%, tests to 0.1-inch; Sand, trace, clear, quartz.
631-632		
632-633		
633-634		
634-635		
635-636		
636-637		
637-638		
638-639		
639-640		
640-641		CALCAREOUS CLAY (MARL) AND SOME LIMESTONE WITH VERY LITTLE SAND – Clay, 70%, yellowish gray, calcareous, little grayish olive), silty, moderately soft to very soft; Limestone, 25%, yellowish gray, soft to moderately hard; Sand, 5%, clear to light gray.
641-642		
642-643		
643-644		
644-645		
645-646		
646-647		
647-648		
648-649		
649-650		
650-651		CALCAREOUS CLAY (MARL) AND SOME LIMESTONE WITH VERY LITTLE SAND – Clay, 70%, yellowish gray, calcareous, little grayish olive), silty, moderately soft to very soft; Limestone, 25%, yellowish gray, soft to moderately hard; Sand, 5%, clear to light gray.
651-652		
652-653		
653-654		
654-655		
655-656		
656-657		
657-658		
658-659		
659-660		

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
660-661		CALCAREOUS CLAY (MARL), LIMESTONE AND SAND – Clay, 35%, yellowish gray, calcareous, very soft to soft; Limestone, 35%, yellowish gray, soft; Sand, 30%, clear, quartz, to light gray, calcareous, detritic.
661-662		
662-663		
663-664		
664-665		
665-666		
666-667		
667-668		
668-669		
669-670		
670-671		CALCAREOUS CLAY (MARL), LIMESTONE AND SAND – Clay, 35%, yellowish gray, calcareous, very soft to soft; Limestone, 35%, yellowish gray, soft; Sand, 30%, clear, quartz, to light gray, calcareous, detritic.
671-672		
672-673		
673-674		
674-675		
675-676		
676-677		
677-678		
678-679		
679-680		
680-681		CALCAREOUS CLAY (MARL), LIMESTONE AND SAND – Clay, 35%, yellowish gray, calcareous, very soft to soft; Limestone, 35%, yellowish gray, soft; Sand, 30%, clear, quartz, to light gray, calcareous, detritic.
681-682		
682-683		
683-684		
684-685		
685-686		
686-687		
687-688		
688-689		
689-690		
690-691		CALCAREOUS CLAY (MARL) WITH LIMESTONE, SOME SAND AND LITTLE SHELL- Clay, 50%, pale olive, calcareous, very soft; Limestone, 25%, yellowish gray to dark gray, soft to very soft; Sand, 20%, clear, quartz, to light gray, calcareous; Shell, 5%, very pale orange, tests to 0.2- inch.
691-692		
692-693		
693-694		
694-695		
695-696		
696-697		
697-698		
698-699		
699-700		
700-701		CLAY WITH SOME SAND AND VERY LITTLE LIMESTONE– Clay, 80%, pale olive, very soft to soft; Sand, 15%, clear, quartz, to light gray, calcareous; Limestone, 5%, very pale orange to light gray, very soft to soft; Shell, trace, very pale orange, single tests to 0.3- inch.
701-702		
702-703		
703-704		
704-705		
705-706		
706-707		
707-708		
708-709		
709-710		
710-711		CLAY WITH SOME SAND AND VERY LITTLE LIMESTONE– Clay, 80%, pale olive, very soft to soft; Sand, 15%, clear, quartz, to light gray, calcareous; Limestone, 5%, very pale orange to light gray, very soft to soft; Shell, trace, very pale orange, single tests to 0.3- inch.
711-712		
712-713		
713-714		
714-715		
715-716		
716-717		
717-718		
718-719		
719-720		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
720-721		CLAY WITH SOME SAND AND VERY LITTLE LIMESTONE– Clay, 80%, pale olive, very soft to soft; Sand, 15%, clear, quartz, to light gray, calcareous; Limestone, 5%, very pale orange to light gray, very soft to soft; Shell, trace, very pale orange, single tests to 0.3- inch.
721-722		
722-723		
723-724		
724-725		
725-726		
726-727		
727-728		
728-729		
729-730		
730-731		CLAY WITH SOME SAND AND VERY LITTLE LIMESTONE– Clay, 80%, pale olive, very soft to soft; Sand, 15%, clear, quartz, to light gray, calcareous; Limestone, 5%, very pale orange to light gray, very soft to soft; Shell, trace, very pale orange, single tests to 0.3- inch.
731-732		
732-733		
733-734		
734-735		
735-736		CLAYEY LIMESTONE WITH SOME SAND -– Limestone, 50%, very pale orange to light gray, soft to moderately hard cemented, fossiliferous; Clay, 30%, light greenish gray, calcareous (marl), very soft; Sand, 20%, very light gray, calcareous, detritic; Shell, trace, very pale orange, tests to 0.2-inch.
736-737		
737-738		
738-739		
739-740		
740-741		LIMESTONE WITH SOME SAND AND LITTLE CLAY-– Limestone, 70%, very pale orange to light gray, soft to moderately hard, fossiliferous, with trace of forams; Sand, 20%, very light gray, calcareous, detritic; Clay, 10%, light olive gray, very soft, calcareous (marl); Shell, trace, very pale orange, tests to 0.2-inch..
741-742		
742-743		
743-744		
744-745		
745-746		
746-747		
747-748		
748-749		
749-750		
750-751		LIMESTONE WITH SOME SAND AND LITTLE CLAY-– Limestone, 70%, very pale orange to light gray, soft to moderately hard, fossiliferous, with trace of forams; Sand, 20%, very light gray, calcareous, detritic; Clay, 10%, light olive gray, very soft, calcareous (marl); Shell, trace, very pale orange, tests to 0.2-inch..
751-752		
752-753		
753-754		
754-755		
755-756		LIMESTONE WITH VERY LITTLE CLAY AND SHELL- Limestone, 90%, very pale orange to yellowish gray (5Y 7/2), fossiliferous, moderately hard; Clay, 5% to trace at the bottom, yellowish gray, calcareous (marl), very soft; Shell, 5%, very pale orange to white, tests to 0.3-inch.
756-757		
757-758		
758-759		
759-760		
760-761		LIMESTONE - Limestone, 100%, yellowish gray, slightly phospahtic, soft, poorly cmented; Clay, trace, olive gray, microcrystalline, very hard.
761-762		
762-763		
763-764		
764-765		
765-766		
766-767		
767-768		
768-769		
769-770		
770-771		LIMESTONE - Limestone, 100%, yellowish gray, slightly phospahtic, soft, poorly cmented; Clay, trace, olive gray, microcrystalline, very hard.
771-772		
772-773		
773-774		
774-775		
775-776		
776-777		
777-778		
778-779		
779-780		

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
780-781		LIMESTONE WITH LITTLE CLAY AND SAND - Limestone, 80%, yellowish gray, sparry grainstone, poorly cemented, porous; Clay, 10%, yellowish gray, calcareous, non-plastic; Sand, 10%, yellowish gray, calcareous, fine to medium grained.
781-782		
782-783		
783-784		
784-785		
785-786		
786-787		
787-788		
788-789		
789-790		
790-791		LIMESTONE - Limestone, 100%, yellowish gray, sparry grainstone, trace of fossils, vuggy, porous.
791-792		
792-793		
793-794		
794-795		
795-796		
796-797		
797-798		
798-799		
799-800		
800-801		LIMESTONE - Limestone, 100%, yellowish gray, sparry grainstone, trace of fossils, vuggy, porous.
801-802		
802-803		
803-804		
804-805		
805-806		
806-807		
807-808		
808-809		
809-810		
810-811		LIMESTONE - Limestone, 100%, yellowish gray, biosparitic grainstone, fossiliferous, vuggy, porous.
811-812		
812-813		
813-814		
814-815		
815-816		
816-817		
817-818		
818-819		
819-820		
820-821		LIMESTONE - Limestone, 100%, yellowish gray, biosparitic grainstone, fossiliferous, vuggy, porous.
821-822		
822-823		
823-824		
824-825		
825-826		
826-827		
827-828		
828-829		
829-830		
830-831		LIMESTONE - Limestone, 100%, yellowish gray, biosparitic grainstone, fossiliferous, vuggy, porous.
831-832		
832-833		
833-834		
834-835		
835-836		
836-837		
837-838		
838-839		
839-840		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
840-841		LIMESTONE - Limestone, 100%, 90% yellowish gray, biosparitic, highly fossiliferous, vuggy, porous, 10% light gray to medium light gray, microcrystalline, partly dolomitic.
841-842		
842-843		
843-844		
844-845		
845-846		
846-847		
847-848		
848-849		
849-850		
850-851		LIMESTONE - Limestone, 100%, 90% yellowish gray, biosparitic, highly fossiliferous, vuggy, porous, 10% light
851-852		
852-853		
853-854		
854-855		
855-856		
856-857		
857-858		
858-859		
859-860		
860-861		LIMESTONE - Limestone, 100%, 90% yellowish gray, biosparitic, highly fossiliferous, vuggy, porous, 10% light
861-862		
862-863		
863-864		
864-865		
865-866		
866-867		
867-868		
868-869		
869-870		
870-871		LIMESTONE - Limestone, 100%, 90% yellowish gray, biosparitic, highly fossiliferous, vuggy, porous, 10% light
871-872		
872-873		
873-874		
874-875		
875-876		
876-877		
877-878		
878-879		
879-880		
880-881		LIMESTONE - Limestone, 100%, 90% yellowish gray, biosparitic, highly fossiliferous, vuggy, porous, 10% light
881-882		
882-883		
883-884		
884-885		
885-886		
886-887		
887-888		
888-889		
889-890		
890-891		LIMESTONE - Limestone, 100%, 90% yellowish gray, biosparitic, highly fossiliferous, vuggy, porous, 10% light
891-892		
892-893		
893-894		
894-895		
895-896		
896-897		
897-898		
898-899		
899-900		

PENETRATION RATE LOG

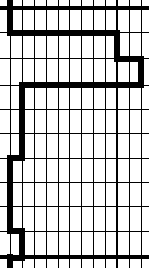
Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
900-901		LIMESTONE - Limestone, 100%, 90% yellowish gray, biosparitic, highly fossiliferous, vuggy, porous, 10% light
901-902		
902-903		
903-904		
904-905		
905-906		
906-907		
907-908		
908-909		
909-910		
910-911		LIMESTONE WITH LITTLE DOLOMITE - Limestone, 90%, 70% very pale orange to yellowish gray, biosparitic grainstone, highly fossiliferous, fine grained, 30% yellowish gray, dolomitic, finely crystalline, slightly vuggy; Dolomite, 10%, very light gray microcrystalline to very-fine crystalline.
911-912		
912-913		
913-914		
914-915		
915-916		
916-917		
917-918		
918-919		
919-920		
920-921		LIMESTONE - Limestone, 100%, 60% yellowish gray, biosparitic, highly fossiliferous, vuggy, porous, 40% yellowish gray, dolomitic, fine crystalline, slightly vuggy.
921-922		
922-923		
923-924		
924-925		
925-926		
926-927		
927-928		
928-929		
929-930		
930-931		LIMESTONE - Limestone, 100%, 60% yellowish gray, biosparitic, highly fossiliferous, vuggy, porous, 40% yellowish gray, dolomitic, fine crystalline, slightly vuggy.
931-932		
932-933		
933-934		
934-935		
935-936		
936-937		
937-938		
938-939		
939-940		
940-941		LIMESTONE - Limestone, 100%, 60% yellowish gray, biosparitic, highly fossiliferous, vuggy, porous, 40% yellowish gray, dolomitic, fine crystalline, slightly vuggy.
941-942		
942-943		
943-944		
944-945		
945-946		
946-947		
947-948		
948-949		
949-950		
950-951		LIMESTONE - Limestone, 100%, 60% yellowish gray, biosparitic, highly fossiliferous, vuggy, porous, 40% yellowish gray, dolomitic, fine crystalline, slightly vuggy.
951-952		
952-953		
953-954		
954-955		
955-956		
956-957		
957-958		
958-959		
959-960		

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
960-961		LIMESTONE - Limestone, 100%, 60% yellowish gray, biosparitic, highly fossiliferous, vuggy, porous, 40% yellowish gray, dolomitic, fine crystalline, slightly vuggy.
961-962		
962-963		
963-964		
964-965		
965-966		
966-967		
967-968		
968-969		
969-970		
970-971		LIMESTONE - Limestone, 100%, 60% yellowish gray, biosparitic, highly fossiliferous, vuggy, porous, 40% yellowish gray, dolomitic, fine crystalline, slightly vuggy.
971-972		
972-973		
973-974		
974-975		
975-976		
976-977		
977-978		
978-979		
979-980		
980-981		DOLOMITIC LIMESTONE AND LITTLE DOLOMITE - Limestone, 85%, 70% yellowish gray, dolomitic, fine crystalline, 30% yellowish gray, biosparitic, fossiliferous, slightly dolomitic, vuggy, porous; Dolomite, 15%, grayish orange to medium gray, microcrystalline to very-fine crystalline, slightly vuggy.
981-982		
982-983		
983-984		
984-985		
985-986		
986-987		
987-988		
988-989		
989-990		
990-991		DOLOMITIC LIMESTONE AND LITTLE DOLOMITE - Limestone, 85%, 70% yellowish gray, dolomitic, fine crystalline, 30% yellowish gray, biosparitic, fossiliferous, slightly dolomitic, vuggy, porous; Dolomite, 15%, grayish orange to medium gray, microcrystalline to very-fine crystalline, slightly vuggy.
991-992		
992-993		
993-994		
994-995		
995-996		
996-997		
997-998		
998-999		
999-1000		
1000-1001		LIMESTONE - Limestone, 100%, yellowish gray to very light gray, fine grained, fossiliferous; Dolomite, trace, medium light gray, moderately well cemented.
1001-1002		
1002-1003		
1003-1004		
1004-1005		
1005-1006		
1006-1007		
1007-1008		
1008-1009		
1009-1010		
1010-1011		LIMESTONE - Limestone, 100%, yellowish gray to very light gray, fine grained, fossiliferous; Dolomite, trace, medium light gray, moderately well cemented.
1011-1012		
1012-1013		
1013-1014		
1014-1015		
1015-1016		
1016-1017		
1017-1018		
1018-1019		
1019-1020		

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1020-1021		LIMESTONE - Limestone, 100%, grayish orange, fine grained, poorly cemented, slightly vuggy.
1021-1022		
1022-1023		
1023-1024		
1024-1025		
1025-1026		
1026-1027		
1027-1028		
1028-1029		
1029-1030		
1030-1031		LIMESTONE - Limestone, 100%, yellowish gray to light gray, fine grained, moderately well cemented, slightly fossiliferous, slightly vuggy.
1031-1032		
1032-1033		
1033-1034		
1034-1035		
1035-1036		
1036-1037		
1037-1038		
1038-1039		
1039-1040		
1040-1041		LIMESTONE AND LITTLE DOLOMITE – Limestone, 90%, very pale orange to yellowish gray, oolitic, soft, vuggy, porous, fossiliferous; Dolomite, 10%, dark gray to medium gray, very fine crystalline, hard.
1041-1042		
1042-1043		
1043-1044		
1044-1045		
1045-1046		
1046-1047		
1047-1048		
1048-1049		
1049-1050		
1050-1051		LIMESTONE WITH VERY LITTLE DOLOMITE AND CLAY (MARL) – Limestone, 90%, 70% yellowish gray, soft; 30% very light gray, dolomitic, fine crystalline, moderately hard; Dolomite, 5%, medium light gray, fine crystalline, hard; Clay (Marl), 5%, yellowish gray to white, soft, very calcareous, cohesive.
1051-1052		
1052-1053		
1053-1054		
1054-1055		
1055-1056		
1056-1057		
1057-1058		
1058-1059		
1059-1060		
1060-1061		LIMESTONE WITH VERY LITTLE DOLOMITE– Limestone, 90%, yellowish gray to pale yellowish brown, very fine grained, partially dolomitic; Clayey Limestone, 5%, yellowish gray, very fine grained, soft; Dolomite, 5%, brownish black, very-fine crystalline, hard.
1061-1062		
1062-1063		
1063-1064		
1064-1065		
1065-1066		
1066-1067		
1067-1068		
1068-1069		
1069-1070		
1070-1071		LIMESTONE – Limestone, 100%, yellowish gray to very pale orange , very fine grained, vuggy.
1071-1072		
1072-1073		
1073-1074		
1074-1075		
1075-1076		
1076-1077		
1077-1078		
1078-1079		
1079-1080		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

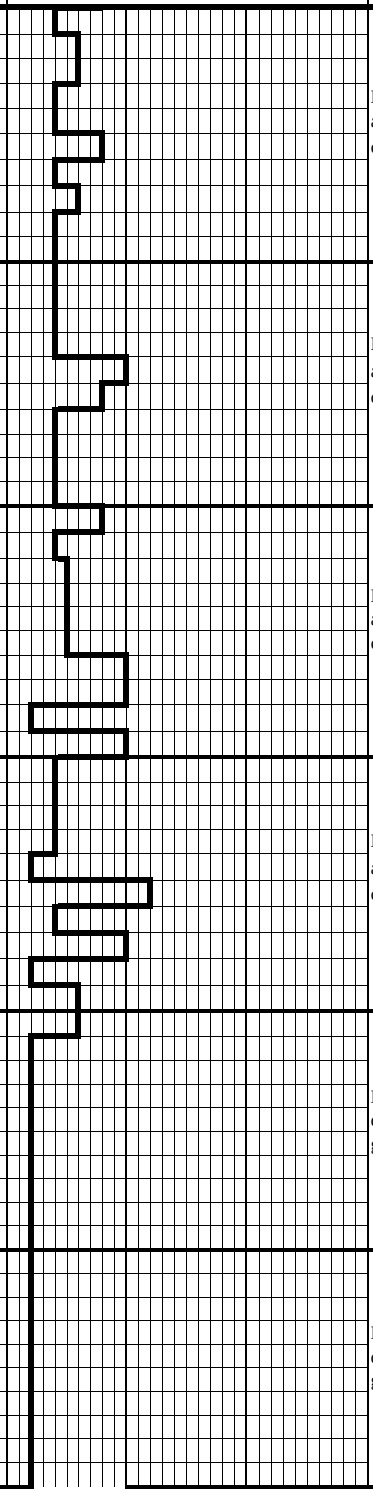
Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1080-1081		LIMESTONE – Limestone, 100%, yellowish gray to very pale orange , very fine grained, vuggy.
1081-1082		
1082-1083		
1083-1084		
1084-1085		
1085-1086		
1086-1087		
1087-1088		
1088-1089		
1089-1090		
1090-1091		LIMESTONE – Limestone, 100%, yellowish gray to very pale orange , very fine grained, vuggy.
1091-1092		
1092-1093		
1093-1094		
1094-1095		
1095-1096		
1096-1097		
1097-1098		
1098-1099		
1099-1100		
1100-1101		LIMESTONE – Limestone, 100%, light gray, very fine grained, well cemented, slightly vuggy
1101-1102		
1102-1103		
1103-1104		
1104-1105		
1105-1106		
1106-1107		
1107-1108		
1108-1109		
1109-1110		
1110-1111		LIMESTONE – Limestone, 95%, very light gray to light gray with trace amounts of dark gray, very fine grained; Clayey Limestone, 5%, very light gray to light gray, soft, slightly cohesive.
1111-1112		
1112-1113		
1113-1114		
1114-1115		
1115-1116		
1116-1117		
1117-1118		
1118-1119		
1119-1120		
1120-1121		LIMESTONE – Limestone, 100%, very pale orange to yellowish gray, very fine grained, moderately soft, vuggy, trace light gray to medium gray, very fine grained, moderately well cemented.
1121-1122		
1122-1123		
1123-1124		
1124-1125		
1125-1126		
1126-1127		
1127-1128		
1128-1129		
1129-1130		
1130-1131		CLAYEY LIMESTONE AND LIMESTONE – Clayey Limestone, 60%, very light gray to light gray, very fine grained, soft, slightly cohesive; Limestone, 40%, light gray to medium gray, very-fine grained, poorly to moderately-well cemented, vuggy.
1131-1132		
1132-1133		
1133-1134		
1134-1135		
1135-1136		
1136-1137		
1137-1138		
1138-1139		
1139-1140		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1140-1141		LIMESTONE AND SOME DOLOMITE – Limestone, 85%, very pale orange to yellowish gray , very fine grained, poorly to moderately cemented, slightly vuggy; Dolomite, 15%, moderate yellowish brown , very-fine crystalline, slightly vuggy, hard.
1141-1142		
1142-1143		
1143-1144		
1144-1145		
1145-1146		
1146-1147		
1147-1148		
1148-1149		
1149-1150		
1150-1151		LIMESTONE AND VERY LITTLE DOLOMITE – Limestone, 95%, very pale orange to yellowish gray with little light gray, very fine grained, slightly fossiliferous; Dolomite, 5%, moderate yellowish brown, very fine crystalline, well cemented.
1151-1152		
1152-1153		
1153-1154		
1154-1155		
1155-1156		
1156-1157		
1157-1158		
1158-1159		
1159-1160		
1160-1161		LIMESTONE AND SOME DOLOMITE – Limestone, 70%, very pale orange to yellowish gray, very fine grained, poorly to moderately cemented, slightly dolomitic, vuggy; Dolomite, 30%, moderate yellowish brown to dark gray, very-fine crystalline, moderately well cemented.
1161-1162		
1162-1163		
1163-1164		
1164-1165		
1165-1166		
1166-1167		
1167-1168		
1168-1169		
1169-1170		
1170-1171		DOLOMITE AND LITTLE LIMESTONE– Dolomite, 85%, pale yellowish brown, very-fine crystalline, slightly calcareous, slightly vuggy, well cemented; Limestone, 15%, very pale orange to yellowish gray , very-fine grained, poorly to moderately cemented.
1171-1172		
1172-1173		
1173-1174		
1174-1175		
1175-1176		
1176-1177		
1177-1178		
1178-1179		
1179-1180		
1180-1181		DOLOMITE AND LITTLE LIMESTONE– Dolomite, 85%, pale yellowish brown, very-fine crystalline, slightly calcareous, slightly vuggy, well cemented; Limestone, 15%, very pale orange to yellowish gray , very-fine grained, poorly to moderately cemented.
1181-1182		
1182-1183		
1183-1184		
1184-1185		
1185-1186		
1186-1187		
1187-1188		
1188-1189		
1189-1190		
1190-1191		DOLOMITE AND LITTLE LIMESTONE– Dolomite, 85%, pale yellowish brown, very-fine crystalline, slightly calcareous, slightly vuggy, well cemented; Limestone, 15%, very pale orange to yellowish gray , very-fine grained, poorly to moderately cemented.
1191-1192		
1192-1193		
1193-1194		
1194-1195		
1195-1196		
1196-1197		
1197-1198		
1198-1199		
1199-1200		

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1200-1201		DOLOMITE AND VERY LITTLE LIMESTONE– Dolomite, 95%, moderate yellowish brown to dark yellowish brown and medium light gray to medium dark gray, very-fine crystalline, vuggy, well cemented; Limestone, 5%, very pale orange to yellowish gray, very fine grained, moderately well cemented.
1201-1202		
1202-1203		
1203-1204		
1204-1205		
1205-1206		
1206-1207		
1207-1208		
1208-1209		
1209-1210		
1210-1211		DOLOMITE AND VERY LITTLE LIMESTONE– Dolomite, 95%, moderate yellowish brown to dark yellowish brown and medium light gray to medium dark gray, very-fine crystalline, vuggy, well cemented; Limestone, 5%, very pale orange to yellowish gray, very fine grained, moderately well cemented.
1211-1212		
1212-1213		
1213-1214		
1214-1215		
1215-1216		
1216-1217		
1217-1218		
1218-1219		
1219-1220		
1220-1221		DOLOMITE AND VERY LITTLE LIMESTONE– Dolomite, 95%, moderate yellowish brown to dark yellowish brown and medium light gray to medium dark gray, very-fine crystalline, vuggy, well cemented; Limestone, 5%, very pale orange to yellowish gray, very fine grained, moderately well cemented.
1221-1222		
1222-1223		
1223-1224		
1224-1225		
1225-1226		
1226-1227		
1227-1228		
1228-1229		
1229-1230		
1230-1231		DOLOMITE AND VERY LITTLE LIMESTONE– Dolomite, 95%, moderate yellowish brown to dark yellowish brown and medium light gray to medium dark gray, very-fine crystalline, vuggy, well cemented; Limestone, 5%, very pale orange to yellowish gray, very fine grained, moderately well cemented.
1231-1232		
1232-1233		
1233-1234		
1234-1235		
1235-1236		
1236-1237		
1237-1238		
1238-1239		
1239-1240		
1240-1241		LIMESTONE AND SOME DOLOMITE – Limestone, 70%, very pale orange and very light gray, very fine grained, dolomitic, slighty vuggy, moderately well cemented; Dolomite, 30%, moderate yellowish brown and medium dark gray, very-fine crystalline, well cemented, hard.
1241-1242		
1242-1243		
1243-1244		
1244-1245		
1245-1246		
1246-1247		
1247-1248		
1248-1249		
1249-1250		
1250-1251		LIMESTONE AND SOME DOLOMITE – Limestone, 70%, very pale orange and very light gray, very fine grained, dolomitic, slighty vuggy, moderately well cemented; Dolomite, 30%, moderate yellowish brown and medium dark gray, very-fine crystalline, well cemented, hard.
1251-1252		
1252-1253		
1253-1254		
1254-1255		
1255-1256		
1256-1257		
1257-1258		
1258-1259		
1259-1260		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1260-1261		LIMESTONE – Limestone, 100%, yellowish gray to pale yellowish brown, very fine grained, dolomitic, slightly fossiliferous, vuggy, moderately cemented.
1261-1262		
1262-1263		
1263-1264		
1264-1265		
1265-1266		
1266-1267		
1267-1268		
1268-1269		
1269-1270		
1270-1271		LIMESTONE – Limestone, 100%, yellowish gray to pale yellowish brown, very fine grained, dolomitic, slightly fossiliferous, vuggy, moderately cemented.
1271-1272		
1272-1273		
1273-1274		
1274-1275		
1275-1276		
1276-1277		
1277-1278		
1278-1279		
1279-1280		
1280-1281		DOLOMITE-Dolomite, 100%, 90% grayish orange pink, moderately hard, crystalline; 10% dark gray, well cemented, hard, microcrystalline; Clay, trace, medium dark gray, moderately soft, cohesive.
1281-1282		
1282-1283		
1283-1284		
1284-1285		
1285-1286		
1286-1287		
1287-1288		
1288-1289		
1289-1290		
1290-1291		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, medium gray, some grayish orange, very finely crystalline to microcrystalline, moderately hard to hard; Limestone, 5%, very pale orange, grainstone, soft.
1291-1292		
1292-1293		
1293-1294		
1294-1295		
1295-1296		
1296-1297		
1297-1298		
1298-1299		
1299-1300		
1300-1301		DOLOMITE– Dolomite, 100%, light gray to grayish orange, sucritic to microcrystalline, moderately hard to hard; Limestone, trace, very pale orange, soft.
1301-1302		
1302-1303		
1303-1304		
1304-1305		
1305-1306		
1306-1307		
1307-1308		
1308-1309		
1309-1310		
1310-1311		DOLOMITE– Dolomite, 100%, light gray to grayish orange, sucritic to microcrystalline, moderately hard to hard; Limestone, trace, very pale orange, soft.
1311-1312		
1312-1313		
1313-1314		
1314-1315		
1315-1316		
1316-1317		
1317-1318		
1318-1319		
1319-1320		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1320-1321		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown to grayish orange, sucritic to microcrystalline, vuggy, moderately hard to hard; Limestone, 5%, very pale orange, grainstone, soft.
1321-1322		
1322-1323		
1323-1324		
1324-1325		
1325-1326		
1326-1327		
1327-1328		
1328-1329		
1329-1330		
1330-1331		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown to grayish orange, sucritic to microcrystalline, vuggy, moderately hard to hard; Limestone, 5%, very pale orange, grainstone, soft.
1331-1332		
1332-1333		
1333-1334		
1334-1335		
1335-1336		
1336-1337		
1337-1338		
1338-1339		
1339-1340		
1340-1341		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown to grayish orange, sucritic to microcrystalline, vuggy, moderately hard to hard; Limestone, 5%, very pale orange, grainstone, soft.
1341-1342		
1342-1343		
1343-1344		
1344-1345		
1345-1346		
1346-1347		
1347-1348		
1348-1349		
1349-1350		
1350-1351		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown to grayish orange, sucritic to microcrystalline, vuggy, moderately hard to hard; Limestone, 5%, very pale orange, grainstone, soft.
1351-1352		
1352-1353		
1353-1354		
1354-1355		
1355-1356		
1356-1357		
1357-1358		
1358-1359		
1359-1360		
1360-1361		DOLOMITE AND SOME LIMESTONE – Dolomite, 85%, grayish orange pink to light brown, microcrystalline, vuggy, moderately hard to hard; Limestone, 15%, very pale orange, grainstone, some forams, soft.
1361-1362		
1362-1363		
1363-1364		
1364-1365		
1365-1366		
1366-1367		
1367-1368		
1368-1369		
1369-1370		
1370-1371		DOLOMITE AND SOME LIMESTONE – Dolomite, 85%, grayish orange pink to light brown, microcrystalline, vuggy, moderately hard to hard; Limestone, 15%, very pale orange, grainstone, some forams, soft.
1371-1372		
1372-1373		
1373-1374		
1374-1375		
1375-1376		
1376-1377		
1377-1378		
1378-1379		
1379-1380		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1380-1381		DOLOMITE AND SOME LIMESTONE – Dolomite, 80%, 60% light brownish gray and 40% light gray, microcrystalline to cryptocrystalline, vuggy, moderately hard to hard; Limestone, 20%, very pale orange, grainstone, soft.
1381-1382		
1383-1384		
1384-1385		
1385-1386		
1386-1387		
1387-1388		
1388-1389		
1389-1390		
1389-1390		
1390-1391		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, dark yellowish orange to pale yellowish brown, microcrystalline, vuggy, moderately hard to hard; Limestone, 5%, very pale orange, grainstone, some forams, soft,
1391-1392		
1392-1393		
1393-1394		
1394-1395		
1395-1396		
1396-1397		
1397-1398		
1398-1399		
1399-1400		
1400-1401		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, dark yellowish orange to pale yellowish brown, microcrystalline, vuggy, moderately hard to hard; Limestone, 5%, very pale orange, grainstone, some forams, soft,
1401-1402		
1402-1403		
1403-1404		
1404-1405		
1405-1406		
1406-1407		
1407-1408		
1408-1409		
1409-1410		
1410-1411		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, dark yellowish orange to pale yellowish brown, microcrystalline, vuggy, moderately hard to hard; Limestone, 5%, very pale orange, grainstone, some forams, soft,
1411-1412		
1412-1413		
1413-1414		
1414-1415		
1415-1416		
1416-1417		
1417-1418		
1418-1419		
1419-1420		
1420-1421		LIMESTONE AND SOME CLAY – Limestone, 80%, 90% yellowish gray, very calcareous, grainstone, moderately hard, vuggy; 10% very light gray, clayey limestone, moderately soft; Clay, 20%, greenish gray to medium gray, slightly calcareous, soft to very soft.
1421-1422		
1422-1423		
1423-1424		
1424-1425		
1425-1426		
1426-1427		
1427-1428		
1428-1429		
1429-1430		
1430-1431		DOLOMITE AND SOME LOMESTONE - Dolomite, 80%, pale yellowish brown, finely crystalline to microcrystalline, well cemented, moderately hard; Limestone, 20%, very pale orange to yellowish gray, grainstone, fine grained, moderately soft, poorly cemented, vuggy, porous.
1431-1432		
1432-1433		
1433-1434		
1434-1435		
1435-1436		
1436-1437		
1437-1438		
1438-1439		
1439-1440		

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1440-1441		LIMESTONE AND VERY LITTLE DOLOMITE - Limestone, 90%, very pale orange to very light gray, fine grained, soft, poorly cemented; Dolomite, 10%, pale yellowish brown to medium dark gray, microcrystalline, compact, well cemented, hard.
1441-1442		
1442-1443		
1443-1444		
1444-1445		
1445-1446		
1446-1447		
1447-1448		
1448-1449		
1449-1450		
1450-1451		DOLOMITE WITH VERY LITTLE LIMESTONE - Dolomite, 95%, light brown to dark yellowish brown, finely crystalline, vuggy, moderately soft; Limestone, 5%, very pale orange, finely grained, moderately soft, poorly cemented.
1451-1452		
1452-1453		
1453-1454		
1454-1455		
1455-1456		
1456-1457		
1457-1458		
1458-1459		
1459-1460		
1460-1461		DOLOMITE WITH VERY LITTLE LIMESTONE - Dolomite, 95%, light brown to dark yellowish brown, finely crystalline, vuggy, moderately soft; Limestone, 5%, very pale orange, finely grained, moderately soft, poorly cemented.
1461-1462		
1462-1463		
1463-1464		
1464-1465		
1465-1466		
1466-1467		
1467-1468		
1468-1469		
1469-1470		
1470-1471		DOLOMITE WITH VERY LITTLE LIMESTONE - Dolomite, 95%, light brown to dark yellowish brown, finely crystalline, vuggy, moderately soft; Limestone, 5%, very pale orange, finely grained, moderately soft, poorly cemented.
1471-1472		
1472-1473		
1473-1474		
1474-1475		
1475-1476		
1476-1477		
1477-1478		
1478-1479		
1479-1480		
1480-1481		DOLOMITE WITH VERY LITTLE LIMESTONE - Dolomite, 95%, light brown to dark yellowish brown, finely crystalline, vuggy, moderately soft; Limestone, 5%, very pale orange, finely grained, moderately soft, poorly cemented.
1481-1482		
1482-1483		
1483-1484		
1484-1485		
1485-1486		
1486-1487		
1487-1488		
1488-1489		
1489-1490		
1490-1491		DOLOMITE WITH LITTLE LIMESTONE - Dolomite, 90%, medium light gray to pale yellowish brown, crystalline, moderately hard, vuggy; Limestone, 10%, very pale orange, fine grained, soft, poorly cemented.
1491-1492		
1492-1493		
1493-1494		
1494-1495		
1495-1496		
1496-1497		
1497-1498		
1498-1499		
1499-1500		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1500-1501		LIMESTONE AND DOLOMITE - Limestone, 60%, yellowish gray, very fine grained, vuggy, partially dolomitic, poorly to moderately cemented; Dolomite, 40%, moderately yellowish brown, microcrystalline, vuggy, moderately cemented.
1501-1502		
1502-1503		
1503-1504		
1504-1505		
1505-1506		
1506-1507		
1507-1508		
1508-1509		
1509-1510		
1510-1511		DOLOMITE - Dolomite, 100%, pale yellowish brown to dark yellowish brown, microcrystalline, partially vuggy, moderately well cemented.
1511-1512		
1512-1513		
1513-1514		
1514-1515		
1515-1516		
1516-1517		
1517-1518		
1518-1519		
1519-1520		
1520-1521		LIMESTONE AND DOLOMITE - Limestone, 60%, very pale orange to pale yellowish brown, very fine grained, dolomitic, fossiliferous, poorly to moderately cemented; Dolomite, 40%, moderate yellowish brown, microcrystalline, poorly to moderately cemented, slightly vuggy.
1521-1522		
1522-1523		
1523-1524		
1524-1525		
1525-1526		
1526-1527		
1527-1528		
1528-1529		
1529-1530		
1530-1531		LIMESTONE AND DOLOMITE - Limestone, 60%, very pale orange to pale yellowish brown, very fine grained, dolomitic, fossiliferous, poorly to moderately cemented; Dolomite, 40%, moderate yellowish brown, microcrystalline, poorly to moderately cemented, slightly vuggy.
1531-1532		
1532-1533		
1533-1534		
1534-1535		
1535-1536		
1536-1537		
1537-1538		
1538-1539		
1539-1540		
1540-1541		LIMESTONE AND DOLOMITE - Limestone, 60%, very pale orange to pale yellowish brown, very fine grained, dolomitic, fossiliferous, poorly to moderately cemented; Dolomite, 40%, moderate yellowish brown, microcrystalline, poorly to moderately cemented, slightly vuggy.
1541-1542		
1542-1543		
1543-1544		
1544-1545		
1545-1546		
1546-1547		
1547-1548		
1548-1549		
1549-1550		
1550-1551		LIMESTONE AND DOLOMITE - Limestone, 60%, very pale orange to pale yellowish brown, very fine grained, dolomitic, fossiliferous, poorly to moderately cemented; Dolomite, 40%, moderate yellowish brown, microcrystalline, poorly to moderately cemented, slightly vuggy.
1551-1552		
1552-1553		
1553-1554		
1554-1555		
1555-1556		
1556-1557		
1557-1558		
1558-1559		
1559-1560		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1560-1561		LIMESTONE AND SOME DOLOMITE - Limestone, 80%, very pale orange to pale yellowish brown, very fine grained, fossiliferous, dolomitic, poorly to moderately cemented, slightly vuggy; Dolomite, 20%, medium light gray t medium dark gray, microcrystalline, fossiliferous, moderately cemented.
1561-1562		
1562-1563		
1563-1564		
1564-1565		
1565-1566		
1566-1567		
1567-1568		
1568-1569		
1569-1570		
1570-1571		DOLOMITE AND LIMESTONE – Dolomite, 75%, moderate yellowish brown , microcrystalline, hard, well cemented; Limestone, 25%, very pale orange to yellowish gray , very fine grained, fossiliferous, dolomitic.
1571-1572		
1572-1573		
1573-1574		
1574-1575		
1575-1576		
1576-1577		
1577-1578		
1578-1579		
1579-1580		
1580-1581		DOLOMITE – Dolomite, 95%, pale yellowish brown to moderate yellowish brown, microcrystalline to very-fine crystalline, well cemented, slightly vuggy; Limestone, 5%, very pale orange to yellowish gray, very fine grained, poorly cemented.
1581-1582		
1582-1583		
1583-1584		
1584-1585		
1585-1586		
1586-1587		
1587-1588		
1588-1589		
1589-1590		
1590-1591		DOLOMITE AND LIMESTONE – Dolomite, 80%, pale yellowish brown to dark yellowish brown and medium light gray to medium dark gray , microcrystalline to very-fine crystalline, slightly vuggy, well cemented; Limestone, 20%, very pale orange to yellowish gray , very fine grained, poorly cemented.
1591-1592		
1592-1593		
1593-1594		
1594-1595		
1595-1596		
1596-1597		
1597-1598		
1598-1599		
1599-1600		
1600-1601		DOLOMITE AND LIMESTONE – Dolomite, 80%, pale yellowish brown to dark yellowish brown and medium light gray to medium dark gray , microcrystalline to very-fine crystalline, slightly vuggy, well cemented; Limestone, 20%, very pale orange to yellowish gray , very fine grained, poorly cemented.
1601-1602		
1602-1603		
1603-1604		
1604-1605		
1605-1606		
1606-1607		
1607-1608		
1608-1609		
1609-1610		
1610-1611		DOLOMITE AND LIMESTONE – Dolomite, 80%, pale yellowish brown to dark yellowish brown and medium light gray to medium dark gray , microcrystalline to very-fine crystalline, slightly vuggy, well cemented; Limestone, 20%, very pale orange to yellowish gray , very fine grained, poorly cemented.
1611-1612		
1612-1613		
1613-1614		
1614-1615		
1615-1616		
1616-1617		
1617-1618		
1618-1619		
1619-1620		

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1620-1621		DOLOMITE AND LIMESTONE – Dolomite, 70%, pale yellowish brown to moderate yellowish brown, very-fine grained to fine grained, moderately-well cemented, vuggy; Limestone, 30%, very pale orange, very-fine grained, poorly cemented.
1621-1622		
1622-1623		
1623-1624		
1624-1625		
1625-1626		
1626-1627		
1627-1628		
1628-1629		
1629-1630		
1630-1631		LIMESTONE AND DOLOMITIC LIMESTONE WITH VERY LITTLE DOLOMITE – Limestone, 75%, yellowish gray to very pale orange, fine grained, fosiliferous, slightly vuggy, moderately soft to soft, moderately cemented; Dolomitic limestone, 20%, very pale orange to pale yellowish brown, well cemented, moderately hard; Dolomite, 5%, pale yellowish brown to moderate yellowish brown, microcrystalline to very-fine crystalline, slightly vuggy, well cemented, moderately hard to hard.
1631-1632		
1632-1633		
1633-1634		
1634-1635		
1635-1636		
1636-1637		
1637-1638		
1638-1639		
1639-1640		
1640-1641		DOLOMITE AND SOME LIMESTONE – Dolomite, 80%, dark yellowish orange to moderate yellowish brown and some dark gray, sucritic to fine crystalline, vuggy, well cemented, moderately hard to hard; Limestone, 20%, very pale orange to yellowish gray, fine grained, fossiliferous, slightly vuggy, moderately cemented.
1641-1642		
1642-1643		
1643-1644		
1644-1645		
1645-1646		
1646-1647		
1647-1648		
1648-1649		
1649-1650		
1650-1651		DOLOMITE AND LIMESTONE – Dolomite, 50%, pale yellowish brown to dark yellowish brown and some dark gray, sucritic to fine crystalline, vuggy, well cemented, moderately hard to hard; Limestone, 50%, very pale orange to yellowish gray, fine grained, fossiliferous, slightly vuggy, moderately cemented.
1651-1652		
1652-1653		
1653-1654		
1654-1655		
1655-1656		
1656-1657		
1657-1658		
1658-1659		
1659-1660		
1660-1661		LIMESTONE AND SOME DOLOMITIC LIMESTONE-Limestone, 70%, yellowish gray to very pale orange, fine grained, fossiliferous, vuggy, moderately cemented, moderately soft; Dolomitic limestone, 30%, very light gray to medium light gray, crystalline to fine crystalline, vuggy, well cemented, moderately hard to hard.
1661-1662		
1662-1663		
1663-1664		
1664-1665		
1665-1666		
1666-1667		
1667-1668		
1668-1669		
1669-1670		
1670-1671		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown to dark yellowish brown and some medium light gray to dark gray, sucritic to fine crystalline, vuggy, well cemented, moderately hard to hard; Limestone, 5%, very pale orange to yellowish gray , fine grained, fossiliferous, slightly vuggy, moderately cemented.
1671-1672		
1672-1673		
1673-1674		
1674-1675		
1675-1676		
1676-1677		
1677-1678		
1678-1679		
1679-1680		

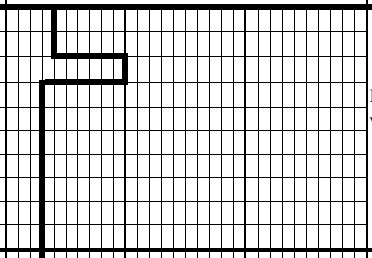
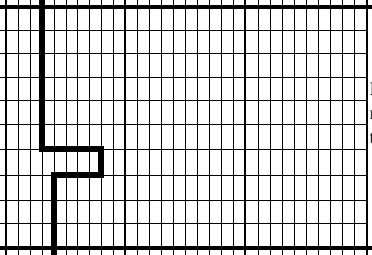
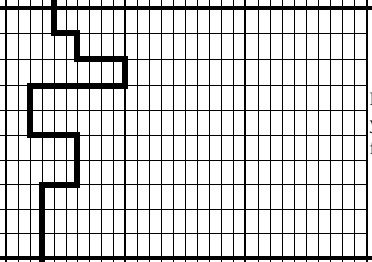
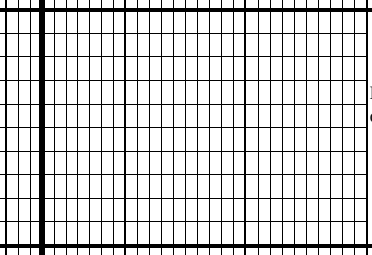
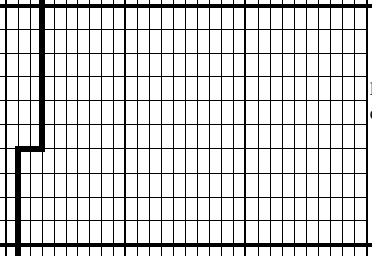
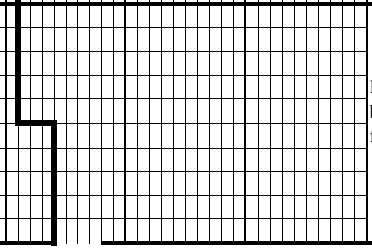
PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

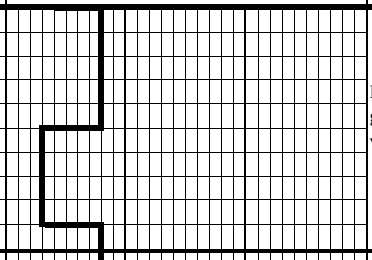
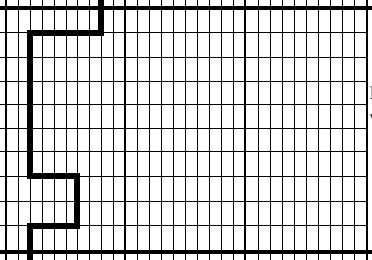
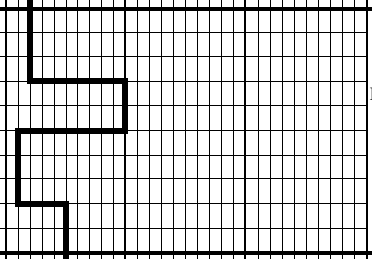
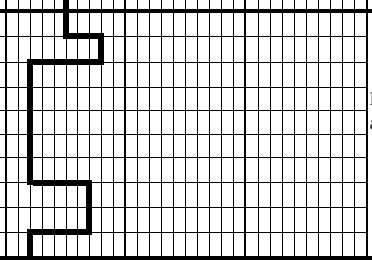
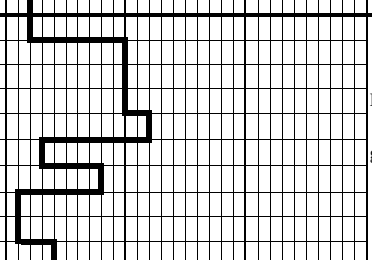
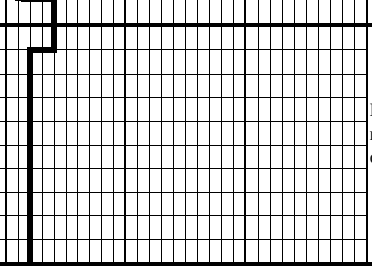
Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1680-1681		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, pale yellowish brown to dark yellowish brown and some medium light gray to dark gray, sucritic to fine crystalline, vuggy, well cemented, moderately hard to hard; Limestone, 5%, very pale orange to yellowish gray , fine grained, fossiliferous, slightly vuggy, moderately cemented.
1681-1682		
1682-1683		
1683-1684		
1684-1685		
1685-1686		
1686-1687		
1687-1688		
1688-1689		
1689-1690		
1690-1691		DOLOMITE-Dolomite, 100%, light brownish gray to moderate yellowish brown, sucrosic to fine crystalline, vuggy to compact, well cemented, moderately hard to hard; Limestone, trace, white to yellowish gray, fine grained, vuggy, poorly cemented, soft.
1691-1692		
1692-1693		
1693-1694		
1694-1695		
1695-1696		
1696-1697		
1697-1698		
1698-1699		
1699-1700		
1700-1701		DOLOMITE-Dolomite, 100%, light brownish gray to moderate yellowish brown, sucrosic to fine crystalline, vuggy to compact, well cemented, moderately hard to hard; Limestone, trace, white to yellowish gray, fine grained, vuggy, poorly cemented, soft.
1701-1702		
1702-1703		
1703-1704		
1704-1705		
1705-1706		
1706-1707		
1707-1708		
1708-1709		
1709-1710		
1710-1711		DOLOMITE WITH LITTLE LIMESTONE-Dolomite, 90%, light brownish gray to moderate yellowish brown and some dark gray in the bottom of interval, sucrosic to fine crystalline, vuggy to compact, well cemented, moderately hard to hard; Limestone, 10%, white to yellowish gray , fine grained, vuggy, poorly cemented, soft.
1711-1712		
1712-1713		
1713-1714		
1714-1715		
1715-1716		
1716-1717		
1717-1718		
1718-1719		
1719-1720		
1720-1721		DOLOMITE WITH LITTLE LIMESTONE-Dolomite, 90%, light brownish gray to moderate yellowish brown and some dark gray in the bottom of interval, sucrosic to fine crystalline, vuggy to compact, well cemented, moderately hard to hard; Limestone, 10%, white to yellowish gray , fine grained, vuggy, poorly cemented, soft.
1721-1722		
1722-1723		
1723-1724		
1724-1725		
1725-1726		
1726-1727		
1727-1728		
1728-1729		
1729-1730		
1730-1731		DOLOMITE WITH VERY LITTLE LIMESTONE-Dolomite, 95%, 50% light brownish gray to moderate yellowish brown and 50% dark gray , fine crystalline, vuggy to compact, well cemented, moderately hard to hard; Limestone, 5%, white to yellowish gray, fine grained, vuggy, poorly cemented, soft.
1731-1732		
1732-1733		
1733-1734		
1734-1735		
1735-1736		
1736-1737		
1737-1738		
1738-1739		
1739-1740		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1740-1741		DOLOMITE WITH LITTLE LIMESTONE-Dolomite, 90%, moderate yellowish brown, sucrosic to fine crystalline, vuggy, well cemented, hard; Limestone, 10%, white to yellowish gray, fine grained, vuggy, poorly cemented, soft.
1741-1742		
1742-1743		
1743-1744		
1744-1745		
1745-1746		
1746-1747		
1747-1748		
1748-1749		
1749-1750		
1750-1751		LIMESTONE AND DOLOMITE-Limestone, 50%, very pale orange, fine grained, vuggy, moderately well cemented, moderately hard; Dolomite, 50%, dark yellowish orange, microcrystalline, vuggy, well cemented moderately hard to hard.
1751-1752		
1752-1753		
1753-1754		
1754-1755		
1755-1756		
1756-1757		
1757-1758		
1758-1759		
1759-1760		
1760-1761		DOLOMITE AND VERY LITTLE LIMESTONE-Dolomite, 100%, 80% light gray to dark gray, 20% moderate yellowish brown, microcrystalline, vuggy, well cemented, hard; Limestone, trace, very pale orange, fine grained, fossiliferous, vuggy, moderately cemented, soft.
1761-1762		
1762-1763		
1763-1764		
1764-1765		
1765-1766		
1766-1767		
1767-1768		
1768-1769		
1769-1770		
1770-1771		DOLOMITE-Dolomite, 100%, moderate yellowish brown to dark yellowish brown, microcrystalline, vuggy, well cemented, hard.
1771-1772		
1772-1773		
1773-1774		
1774-1775		
1775-1776		
1776-1777		
1777-1778		
1778-1779		
1779-1780		
1780-1781		DOLOMITE-Dolomite, 100%, moderate yellowish brown to dark yellowish brown, microcrystalline, vuggy, well cemented, hard.
1781-1782		
1782-1783		
1783-1784		
1784-1785		
1785-1786		
1786-1787		
1787-1788		
1788-1789		
1789-1790		
1790-1791		DOLOMITE AND VERY LITTLE LIMESTONE-Dolomite, 95%, pale yellowish brown to moderate yellowish brown, microcrystalline, vuggy, well cemented, hard; Limestone, 5%, very pale orange, fine grained, fossiliferous, vuggy, moderately cemented, soft.
1791-1792		
1792-1793		
1793-1794		
1794-1795		
1795-1796		
1796-1797		
1797-1798		
1798-1799		
1799-1800		

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1800-1801		DOLOMITE-Dolomite, 100%, 50% pale yellowish brown to moderate yellowish brown, 50% medium gray to dark gray, microcrystalline, vuggy, well cemented, hard; Limestone, trace, very pale orange, fine grained, fossiliferous, vuggy, moderately cemented, soft.
1801-1802		
1802-1803		
1803-1804		
1804-1805		
1805-1806		
1806-1807		
1807-1808		
1808-1809		
1809-1810		
1810-1811		DOLOMITE – Dolomite, 100%, 80% pale yellowish brown to dark yellowish brown, very-fine crystalline, vuggy, well cemented, 20% medium gray to grayish black, very-fine crystalline, slightly vuggy, well cemented.
1811-1812		
1812-1813		
1813-1814		
1814-1815		
1815-1816		
1816-1817		
1817-1818		
1818-1819		
1819-1820		
1820-1821		DOLOMITE – Dolomite, 85%, pale yellowish brown to dark yellowish brown with trace amounts of medium gray to medium dark gray, very-fine crystalline, vuggy; Limestone, 15%, very pale orange to yellowish gray, very-fine grained, poorly cemented.
1821-1822		
1822-1823		
1823-1824		
1824-1825		
1825-1826		
1826-1827		
1827-1828		
1828-1829		
1829-1830		
1830-1831		DOLOMITE AND SOME LIMESTONE – Dolomite, 70%, pale yellowish brown to dark yellowish brown with trace amounts of medium gray to medium dark gray, very-fine crystalline, vuggy; Limestone, 30%, very pale orange to yellowish gray, very-fine grained, poorly cemented.
1831-1832		
1832-1833		
1833-1834		
1834-1835		
1835-1836		
1836-1837		
1837-1838		
1838-1839		
1839-1840		
1840-1841		DOLOMITE – Dolomite, 80%, pale yellowish brown to dark yellowish brown with trace amounts of medium gray to medium dark gray, very-fine crystalline, vuggy; Limestone, 20%, very pale orange to yellowish gray, very-fine grained, slightly fossiliferous, poorly cemented.
1841-1842		
1842-1843		
1843-1844		
1844-1845		
1845-1846		
1846-1847		
1847-1848		
1848-1849		
1849-1850		
1850-1851		DOLOMITIC LIMESTONE – Dolomitic Limestone, 95%, pale yellowish brown to medium light gray, microcrystalline, well cemented; Limestone, 5%, very pale orange to yellowish gray, very-fine grained, poorly cemented; Dolomite, trace, moderate yellowish brown, vuggy, very-fine crystalline.
1851-1852		
1852-1853		
1853-1854		
1854-1855		
1855-1856		
1856-1857		
1857-1858		
1858-1859		
1859-1860		

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1860-1861		DOLOMITE – Dolomite, 85%, pale yellowish brown to dark yellowish brown with trace amounts of medium gray to medium dark gray, very-fine crystalline, vuggy; Limestone, 15%, very pale orange to yellowish gray, very-fine grained, poorly cemented, partially dolomitic.
1861-1862		
1862-1863		
1863-1864		
1864-1865		
1865-1866		
1866-1867		
1867-1868		
1868-1869		
1869-1870		
1870-1871		DOLOMITE AND LIMESTONE – Dolomite, 65%, pale yellowish brown to moderate yellowish brown, very-fine crystalline, vuggy, moderately cemented; Limestone, 35%, very pale orange to yellowish gray, partially crystalline, dolomitic, poorly to moderately cemented.
1871-1872		
1872-1873		
1873-1874		
1874-1875		
1875-1876		
1876-1877		
1877-1878		
1878-1879		
1879-1880		
1880-1881		LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange to yellowish gray, very-fine grained, partially very-fine crystalline, slightly dolomitic; Dolomite, 50%, pale yellowish brown to moderate yellowish brown, very-fine to fine crystalline, vuggy, moderately-well cemented.
1881-1882		
1882-1883		
1883-1884		
1884-1885		
1885-1886		
1886-1887		
1887-1888		
1888-1889		
1889-1890		
1890-1891		LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange to yellowish gray, very-fine grained, partially very-fine crystalline, slightly dolomitic; Dolomite, 50%, pale yellowish brown to moderate yellowish brown, very-fine to fine crystalline, vuggy, moderately-well cemented.
1891-1892		
1892-1893		
1893-1894		
1894-1895		
1895-1896		
1896-1897		
1897-1898		
1898-1899		
1899-1900		
1900-1901		LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange to yellowish gray, very-fine grained, partially very-fine crystalline, slightly dolomitic; Dolomite, 50%, pale yellowish brown to moderate yellowish brown, very-fine to fine crystalline, vuggy, moderately-well cemented.
1901-1902		
1902-1903		
1903-1904		
1904-1905		
1905-1906		
1906-1907		
1907-1908		
1908-1909		
1909-1910		
1910-1911		DOLOMITE AND LIMESTONE – Dolomite, 75%, pale yellowish brown to moderate yellowish brown, very-fine crystalline, vuggy; Limestone, 25%, very pale orange to yellowish gray, very-fine grained, slightly fossiliferous, poorly cemented.
1911-1912		
1912-1913		
1913-1914		
1914-1915		
1915-1916		
1916-1917		
1917-1918		
1918-1919		
1919-1920		

Dual-Zone Deep Monitor Well

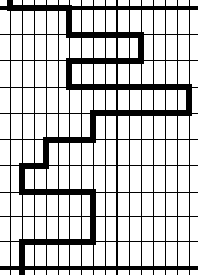
Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1920-1921		DOLOMITE – Dolomite, 70%, pale yellowish brown to dark yellowish brown with trace amounts of medium dark gray to grayish black, very-fine crystalline, vuggy; Limestone, 30%, very pale orange to yellowish gray, very-fine grained, partially crystalline, poorly cemented.
1921-1922		
1922-1923		
1923-1924		
1924-1925		
1925-1926		
1926-1927		
1927-1928		
1928-1929		
1929-1930		
1930-1931		DOLOMITE – Dolomite, 70%, pale yellowish brown to dark yellowish brown with trace amounts of medium dark gray to grayish black, very-fine crystalline, vuggy; Limestone, 30%, very pale orange to yellowish gray, very-fine grained, partially crystalline, poorly cemented.
1931-1932		
1932-1933		
1933-1934		
1934-1935		
1935-1936		
1936-1937		
1937-1938		
1938-1939		
1939-1940		
1940-1941		DOLOMITE – Dolomite, 70%, pale yellowish brown to dark yellowish brown with trace amounts of medium dark gray to grayish black, very-fine crystalline, vuggy; Limestone, 30%, very pale orange to yellowish gray, very-fine grained, partially crystalline, poorly cemented.
1941-1942		
1942-1943		
1943-1944		
1944-1945		
1945-1946		
1946-1947		
1947-1948		
1948-1949		
1949-1950		
1950-1951		DOLOMITE – Dolomite, 70%, pale yellowish brown to dark yellowish brown with trace amounts of medium dark gray to grayish black, very-fine crystalline, vuggy; Limestone, 30%, very pale orange to yellowish gray, very-fine grained, partially crystalline, poorly cemented.
1951-1952		
1952-1953		
1953-1954		
1954-1955		
1955-1956		
1956-1957		
1957-1958		
1958-1959		
1959-1960		
1960-1961		DOLOMITE – Dolomite, 95%, moderate yellowish brown to dark yellowish brown, microcrystalline to very-fine crystalline, porous, vuggy, moderately to well cemented; Limestone, 5%, very pale orange, very-fine grained, poorly cemented.
1961-1962		
1962-1963		
1963-1964		
1964-1965		
1965-1966		
1966-1967		
1967-1968		
1968-1969		
1969-1970		
1970-1971		DOLOMITIC LIMESTONE AND SOME DOLOMITE – Limestone, 90%, very pale orange to pale yellowish brown, very fine grained, dolomitic, slightly fossiliferous, vuggy, poorly to moderately cemented; Dolomite, 10%, moderate yellowish brown to dark yellowish brown and little medium dark gray, very-fine crystalline, vuggy, unconsolidated, calcareous.
1971-1972		
1972-1973		
1973-1974		
1974-1975		
1975-1976		
1976-1977		
1977-1978		
1978-1979		
1979-1980		

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
1980-1981		DOLOMITIC LIMESTONE AND SOME DOLOMITE – Limestone, 90%, very pale orange to pale yellowish brown, very fine grained, dolomitic, slightly fossiliferous, vuggy, poorly to moderately cemented; Dolomite, 10%, moderate yellowish brown to dark yellowish brown and little medium dark gray, very-fine crystalline, vuggy, unconsolidated, calcareous.
1981-1982		
1982-1983		
1983-1984		
1984-1985		
1985-1986		
1986-1987		
1987-1988		
1988-1989		
1989-1990		
1990-1991		DOLOMITE – Dolomite, 100%, moderate yellowish brown to dark yellowish brown, microcrystalline to very-fine crystalline, porous, vuggy, moderately to well cemented; Limestone, trace, very pale orange, very-fine grained, poorly cemented.
1991-1992		
1992-1993		
1993-1994		
1994-1995		
1995-1996		
1996-1997		
1997-1998		
1998-1999		
1999-2000		
2000-2001		DOLOMITE AND SOME DOLOMITIC LIMESTONE – Dolomite, 85%, moderate yellowish brown to dark yellowish brown, very-fine to fine crystalline, vuggy, multiple limestone inclusions, moderately to well cemented; Dolomitic Limestone, 15%, very pale orange to yellowish gray, very-fine to fine grained, partially crystalline, slightly fossiliferous, poorly cemented, vuggy.
2001-2002		
2002-2003		
2003-2004		
2004-2005		
2005-2006		
2006-2007		
2007-2008		
2008-2009		
2009-2010		
2010-2011		DOLOMITIC LIMESTONE AND SOME DOLOMITE – Limestone, 90%, very pale orange to pale yellowish brown, very fine grained, dolomitic, slightly fossiliferous, vuggy, poorly to moderately cemented; Dolomite, 10%, moderate yellowish brown to dark yellowish brown and little medium dark gray, very-fine crystalline, vuggy, moderately hard.
2011-2012		
2012-2013		
2013-2014		
2014-2015		
2015-2016		
2016-2017		
2017-2018		
2018-2019		
2019-2020		
2020-2021		DOLOMITIC LIMESTONE, LIMESTONE AND SOME DOLOMITE- Dolomitic limestone, 50%, pale yellowish brown, to medium dark gray, fine grained, dolomitic, fossiliferous, vuggy, well cemented, moderately hard; Limestone, 40%, very pale orange, oolitic, slightly vuggy, moderately cemented, soft; Dolomite, 10%, moderate brown, microcrystalline, vuggy, well cemented, hard.
2021-2022		
2022-2023		
2023-2024		
2024-2025		
2025-2026		
2026-2027		
2027-2028		
2028-2029		
2029-2030		
2030-2031		LIMESTONE AND LITTLE DOLOMITE-Limestone, 95%, very pale orange, oolitic, slightly dolomitic, slightly vuggy, moderately well cemented, soft; Dolomite, 5%, moderate brown, microcrystalline, vuggy, well cemented, hard.
2031-2032		
2032-2033		
2033-2034		
2034-2035		
2035-2036		
2036-2037		
2037-2038		
2038-2039		
2039-2040		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
2040-2041		LIMESTONE AND LITTLE DOLOMITE-Limestone, 95%, very pale orange, oolitic, slightly dolomitic, slightly vuggy, moderately well cemented, soft; Dolomite, 5%, moderate brown, microcrystalline, vuggy, well cemented, hard.
2041-2042		
2042-2043		
2043-2044		
2044-2045		
2045-2046		
2046-2047		
2047-2048		
2048-2049		
2049-2050		
2050-2051		LIMESTONE-Limestone, 100%, very pale orange, oolitic, slightly foraminiferous, slightly vuggy, moderately cemented, soft.
2051-2052		
2052-2053		
2053-2054		
2054-2055		
2055-2056		
2056-2057		
2057-2058		
2058-2059		
2059-2060		
2060-2061		LIMESTONE-Limestone, 100%, very pale orange, oolitic, slightly foraminiferous, slightly vuggy, moderately cemented, soft.
2061-2062		
2062-2063		
2063-2064		
2064-2065		
2065-2066		
2066-2067		
2067-2068		
2068-2069		
2069-2070		
2070-2071		LIMESTONE-Limestone, 100%, very pale orange, oolitic, slightly foraminiferous, slightly vuggy, moderately cemented, soft.
2071-2072		
2072-2073		
2073-2074		
2074-2075		
2075-2076		
2076-2077		
2077-2078		
2078-2079		
2079-2080		
2080-2081		LIMESTONE-Limestone, 100%, very pale orange, oolitic, slightly foraminiferous, slightly vuggy, moderately cemented, soft.
2081-2082		
2082-2083		
2083-2084		
2084-2085		
2085-2086		
2086-2087		
2087-2088		
2088-2089		
2089-2090		
2090-2091		LIMESTONE-Limestone, 100%, very pale orange, oolitic, slightly foraminiferous, slightly vuggy, moderately cemented, soft.
2091-2092		
2092-2093		
2093-2094		
2094-2095		
2095-2096		
2096-2097		
2097-2098		
2098-2099		
2099-2100		

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
2100-2101		LIMESTONE-Limestone, 100%, very pale orange, oolitic, slightly foraminiferous, slightly vuggy, moderately cemented, soft.
2101-2102		
2102-2103		
2103-2104		
2104-2105		
2105-2106		
2106-2107		
2107-2108		
2108-2109		
2109-2110		
2110-2111		DOLOMITIC LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange to pale yellowish brown, fine grained, dolomitic, fossiliferous, vuggy, well cemented, moderately hard; Dolomite, 50%, grayish brown to medium dark gray, fine crystalline, vuggy, well cemented, moderately hard to hard.
2111-2112		
2112-2113		
2113-2114		
2114-2115		
2115-2116		
2116-2117		
2117-2118		
2118-2119		
2119-2120		
2120-2121		LIMESTONE-Limestone, 100%, very pale orange, oolitic, slightly dolomitic in the upper portion of interval, foraminiferous, slightly vuggy, moderately cemented, soft; Dolomite, trace, moderate brown, microcrystalline,
2121-2122		
2122-2123		
2123-2124		
2124-2125		
2125-2126		
2126-2127		
2127-2128		
2128-2129		
2129-2130		
2130-2131		LIMESTONE-Limestone, 100%, very pale orange, oolitic, slightly dolomitic in the upper portion of interval, foraminiferous, slightly vuggy, moderately cemented, soft; Dolomite, trace, moderate brown, microcrystalline,
2131-2132		
2132-2133		
2133-2134		
2134-2135		
2135-2136		
2136-2137		
2137-2138		
2138-2139		
2139-2140		
2140-2141		LIMESTONE-Limestone, 100%, very pale orange, oolitic, slightly dolomitic in the upper portion of interval, foraminiferous, slightly vuggy, moderately cemented, soft; Dolomite, trace, moderate brown, microcrystalline,
2141-2142		
2142-2143		
2143-2144		
2144-2145		
2145-2146		
2146-2147		
2147-2148		
2148-2149		
2149-2150		
2150-2151		LIMESTONE-Limestone, 100%, very pale orange, oolitic, slightly dolomitic in the upper portion of interval, foraminiferous, slightly vuggy, moderately cemented, soft; Dolomite, trace, moderate brown, microcrystalline,
2151-2152		
2152-2153		
2153-2154		
2154-2155		
2155-2156		
2156-2157		
2157-2158		
2158-2159		
2159-2160		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
2160-2161		LIMESTONE AND DOLOMITE-Limestone, 60%, very pale orange to grayish orange, oolitic, foraminiferous, vuggy, moderately cemented, soft; Dolomite, 40%, grayish orange to pale yellowish brown some medium gray, sucrosic to microcrystalline, vuggy, calcitic, well cemented, moderately hard to hard.
2161-2162		
2162-2163		
2163-2164		
2164-2165		
2165-2166		
2166-2167		
2167-2168		
2168-2169		
2169-2170		
2170-2171		LIMESTONE -Limestone, 100%, very pale orange to grayish orange, oolitic, foraminiferous, vuggy, moderately cemented, soft; Dolomite, trace, moderate brown to dark gray, microcrystalline, hard.
2171-2172		
2172-2173		
2173-2174		
2174-2175		
2175-2176		
2176-2177		
2177-2178		
2178-2179		
2179-2180		
2180-2181		DOLOMITE-Dolomite, 100%, moderate yellowish brown to dark yellowish brown, sucrosic to microcrystalline, vuggy, well cemented, hard.
2181-2182		
2182-2183		
2183-2184		
2184-2185		
2185-2186		
2186-2187		
2187-2188		
2188-2189		
2189-2190		
2190-2191		DOLOMITE-Dolomite, 100%, moderate yellowish brown to dark yellowish brown, sucrosic to microcrystalline, vuggy, well cemented, hard.
2191-2192		
2192-2193		
2193-2194		
2194-2195		
2195-2196		
2196-2197		
2197-2198		
2198-2199		
2199-2200		
2200-2201		DOLOMITE-Dolomite, 100%, moderate yellowish brown to dark yellowish brown, sucrosic to microcrystalline, vuggy, well cemented, hard.
2201-2202		
2202-2203		
2203-2204		
2204-2205		
2205-2206		
2206-2207		
2207-2208		
2208-2209		
2209-2210		
2210-2211		LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange to grayish orange, oolitic, foraminiferous, vuggy, moderately cemented, soft; Dolomite, 50%, moderate yellowish brown to dark yellowish brown, sucrosic to microcrystalline, vuggy, well cemented, hard.
2211-2212		
2212-2213		
2213-2214		
2214-2215		
2215-2216		
2216-2217		
2217-2218		
2218-2219		
2219-2220		

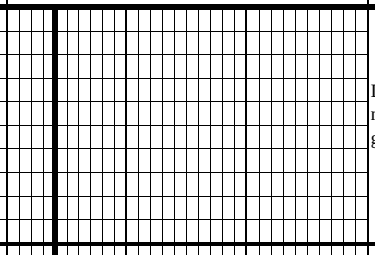
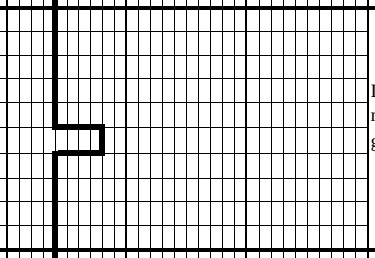
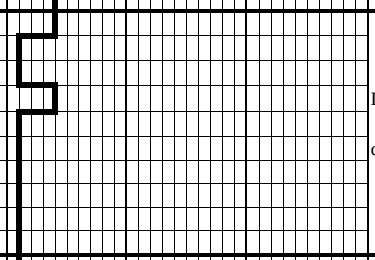
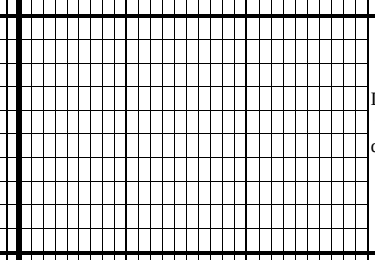
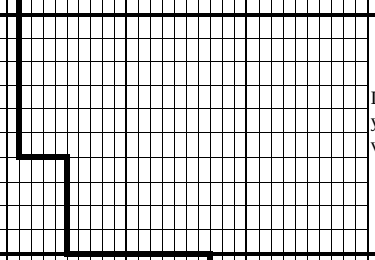
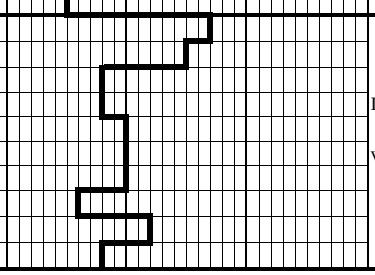
PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
2220-2221		LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange to grayish orange, oolitic, foraminiferous, vuggy, moderately cemented, soft; Dolomite, 50%, moderate yellowish brown to dark yellowish brown, sucrosic to microcrystalline, vuggy, well cemented, hard.
2221-2222		
2222-2223		
2223-2224		
2224-2225		
2225-2226		
2226-2227		
2227-2228		
2228-2229		
2229-2230		
2230-2231		LIMESTONE AND DOLOMITE – Limestone, 50%, very pale orange to grayish orange, oolitic, foraminiferous, vuggy, moderately cemented, soft; Dolomite, 50%, moderate yellowish brown to dark yellowish brown, sucrosic to microcrystalline, vuggy, well cemented, hard.
2231-2232		
2232-2233		
2233-2234		
2234-2235		
2235-2236		
2236-2237		
2237-2238		
2238-2239		
2239-2240		
2240-2241		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, moderate yellowish brown to dark yellowish brown, sucrosic to microcrystalline, calcitic, some forams present, vuggy, well cemented, hard; Limestone, 5%, very pale orange to grayish orange, oolitic, foraminiferous, vuggy, moderately cemented, soft.
2241-2242		
2242-2243		
2243-2244		
2244-2245		
2245-2246		
2246-2247		
2247-2248		
2248-2249		
2249-2250		
2250-2251		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, moderate yellowish brown to dark yellowish brown, sucrosic to microcrystalline, calcitic, some forams present, vuggy, well cemented, hard; Limestone, 5%, very pale orange to grayish orange, oolitic, foraminiferous, vuggy, moderately cemented, soft.
2251-2252		
2252-2253		
2253-2254		
2254-2255		
2255-2256		
2256-2257		
2257-2258		
2258-2259		
2259-2260		
2260-2261		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, moderate yellowish brown to dark yellowish brown, sucrosic to microcrystalline, calcitic, some forams present, vuggy, well cemented, hard; Limestone, 5%, very pale orange to grayish orange, oolitic, foraminiferous, vuggy, moderately cemented, soft.
2261-2262		
2262-2263		
2263-2264		
2264-2265		
2265-2266		
2266-2267		
2267-2268		
2268-2269		
2269-2270		
2270-2271		DOLOMITE AND VERY LITTLE LIMESTONE – Dolomite, 95%, moderate yellowish brown to dark yellowish brown, sucrosic to microcrystalline, calcitic, some forams present, vuggy, well cemented, hard; Limestone, 5%, very pale orange to grayish orange, oolitic, foraminiferous, vuggy, moderately cemented, soft.
2271-2272		
2272-2273		
2273-2274		
2274-2275		
2275-2276		
2276-2277		
2277-2278		
2278-2279		
2279-2280		

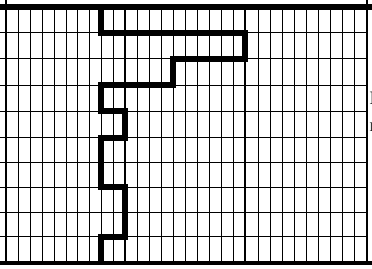
PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
2280-2281		DOLOMITE AND SOME LIMESTONE – Dolomite, 75%, moderate yellowish brown to dark yellowish brown, microcrystalline, vuggy, well cemented, hard; Limestone, 25%, very pale orange to yellowish gray, very-fine grained, partially dolomitic, poorly cemented.
2281-2282		
2282-2283		
2283-2284		
2284-2285		
2285-2286		
2286-2287		
2287-2288		
2288-2289		
2289-2290		
2290-2291		DOLOMITE AND SOME LIMESTONE – Dolomite, 75%, moderate yellowish brown to dark yellowish brown, microcrystalline, vuggy, well cemented, hard; Limestone, 25%, very pale orange to yellowish gray, very-fine grained, partially dolomitic, poorly cemented.
2291-2292		
2292-2293		
2293-2294		
2294-2295		
2295-2296		
2296-2297		
2297-2298		
2298-2299		
2299-2300		
2300-2301		DOLOMITE – Dolomite, 100%, moderate yellowish brown to dark yellowish brown, microcrystalline, slightly vuggy, well cemented, hard; Limestone, trace, very pale orange to yellowish gray, very-fine grained, partially dolomitic, poorly cemented.
2301-2302		
2302-2303		
2303-2304		
2304-2305		
2305-2306		
2306-2307		
2307-2308		
2308-2309		
2309-2310		
2310-2311		DOLOMITE – Dolomite, 100%, moderate yellowish brown to dark yellowish brown, microcrystalline, slightly vuggy, well cemented, hard; Limestone, trace, very pale orange to yellowish gray, very-fine grained, partially dolomitic, poorly cemented.
2311-2312		
2312-2313		
2313-2314		
2314-2315		
2315-2316		
2316-2317		
2317-2318		
2318-2319		
2319-2320		
2320-2321		DOLOMITE AND SOME LIMESTONE – Dolomite, 70%, medium gray and moderate yellowish brown to dark yellowish brown, microcrystalline, well cemented, hard; Limestone, 30%, very pale orange to yellowish gray, very-fine grained, partially dolomitic, poorly cemented.
2321-2322		
2322-2324		
2322-2324		
2324-2325		
2325-2326		
2326-2327		
2327-2328		
2328-2329		
2329-2330		
2330-2331		DOLOMITE AND SOME LIMESTONE – Dolomite, 85%, pale yellowish brown to dark yellowish brown and little medium light gray, microcrystalline to very-fine crystalline, moderately to well cemented; Limestone, 15%, very pale orange to yellowish gray, very-fine grained, partially crystalline, slightly fossiliferous, partially dolomitic, poorly to moderately cemented.
2331-2332		
2332-2333		
2333-2334		
2334-2335		
2335-2336		
2336-2337		
2337-2338		
2338-2339		
2339-2340		

PENETRATION RATE LOG

Dual-Zone Deep Monitor Well

Depth Below Pad Level (ft)	Penetration Rate (min/ft) 10 20	Description
2340-2341		DOLOMITE AND LITTLE LIMESTONE– Dolomite, 90%, moderate yellowish brown to dusky yellowish brown, microcrystalline, slightly vuggy, well cemented, hard; Limestone, 10%, very pale orange to yellowish gray, very-fine grained, partially dolomitic, poorly cemented.
2341-2342		
2342-2343		
2343-2344		
2344-2345		
2345-2346		
2346-2347		
2347-2348		
2348-2349		
2349-2350		

CORE LOG SUMMARY

Injection Well No. 1
Core Sample No. 1

Total Length Drilled (feet):	13.5	**Date Completed:**	3/15/2003
Core Barrel Length (feet):	34.6	**Sampling Interval (feet bpl):**	1846.5-1860
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8
Drilling Fluid Used:	water		

Depth feet bpl		**Length Recovered**	**RPM**	**WOB**	**Core Description**
From	**To**	feet		pounds	
1850.0	1853.2	3.2	20	7	Dolomitic limestone, pale yellowish brown (10YR 6/2) to grayish orange (10YR 7/4), fine crystalline, vuggy, few fossils, hard.
1853.2	1855.2	2.0			Dolomite, medium light gray (N6) to medium dark gray (N4), microcrystalline, numerous vugs, partly filled with calcite, very well cemented, very hard.
1855.2	1858.4	3.2	24	8	Dolomite, pale yellowish gray (10YR 6/2), some medium gray (N5) and medium dark gray (N4), microcrystalline, very few vugs (mostly in top section), solid, massive, extremly hard.
1858.4	1860.0	1.6	40	8	Dolomite, moderate yellowish brown (10YR 5/4), little dark yellowish brown (10YR 4/2), fine crystalline, some sucrosic with numerous vugs partially filled with calcareous material, very hard.

bpl denotes below pad level
RPM denotes rate per minute of coring barrel
WOB denotes weight on coring barrel in 1000 pounds

CORE LOG INVENTORY

Injection Well No. 1
Core Sample No. 1

Total Length Drilled (feet):	13.5	**Date Completed:**	3/15/2003
Core Barrel Length (feet):	34.6	**Sampling Interval (feet bpl):**	1846.5-1860
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8
Drilling Fluid Used:	water		

Depth feet bpl		**Length Recovered**	**RPM**	**WOB**	**Core Description**
From	**To**	feet		pounds	
1850.0	1850.4	0.4			Dolomitic limestone, solid, vuggy.
1850.4	1851.4	1.0			Dolomitic limestone, fragmented, 1-3-inch pieces.
1851.4	1851.9	0.5			Dolomitic limestone with diagonal fracture across 1/2 of diameter.
1851.9	1852.5	0.6			Dolomitic limestone split in half by vertical fracture.
1852.5	1853.5	0.5			Dolomitic limestone, fragmented, 1-4-inch pieces.
1853.5	1854.3	0.8			Dolomite, solid- two 4-inch long pieces.
1854.3	1855.0	0.7			Dolomite, solid, vuggy.
1855.0	1855.4	0.4			Dolomite, half core.
1855.4	1856.9	1.5			Dolomite, solid, few vugs.
1856.9	1857.7	0.8			Dolomite, solid, vuggy.
1857.7	1858.5	0.8			Dolomite, solid, small vugs.
1858.5	1859.3	0.8			Three dolomite fragments 1-4-inches long, numerous vugs.
1859.3	1860.0	0.7			Dolomite, solid, numerous, small vugs.

bpl denotes below pad level
RPM denotes rate per minute of coring barrel
WOB denotes weight on coring barrel in 1000 pounds

Sample/ Core Log Form

Well **IW 1** Project/No. **Reese, Macon & Assoc. / PF001153.0003** Page 1 of 1

Site

Location Port St. LucieWestport Injection Well System

Drilling Started 4/5/2003

Drilling Completed 4/5/2003

Total Depth Drilled 13.5 Feet

Hole Diameter 8 inches

Type of Sample/ Coring Device coring barrel

Length and Diameter of Coring Device 35.24 feet long, 4-inch I.D., 8.5-inch O.D.

Sampling Interval **1846.5-1860.0**

Land-Surface Elev. _____ feet ☐ Surveyed ☐ Estimated

Datum _____

Drilling Fluid Used water

Drilling Method reverse air

Drilling Contractor Youngquist Bros.,Inc.

Driller P. Shand

Hammer Weight N/A

Hammer Drop N/A

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	**Sample/Core Description**
1850.0	1850.4	0.4		Dolomitic limestone, solid, vuggy.
1850.4	1851.4	1.0		Dolomitic limestone, fragmented, 1-3-inch pieces.
1851.4	1851.9	0.5		Dolomitic limestone with diagonal fracture wiyhin 1/2 of diameter.
1851.9	1852.5	0.6		Dolomitic limestone split in half by vertical fracture.
1852.5	1853.5	0.5		Dolomitic limestone, fragmented, 1-4-inch pieces.
1853.5	1854.3	0.8		Dolomite, solid- two 4-inch long pieces.
1854.3	1855.0	0.7		Dolomite, solid, vuggy.
1855.0	1855.4	0.4		Dolomite, half core.
1855.4	1856.9	1.5		Dolomite, solid, few vugs.
1856.9	1857.7	0.8		Dolomite, solid, vuggy.
1857.7	1858.5	0.8		Dolomite, solid, small vugs.
1858.5	1859.3	0.8		Three dolomite fragments 1-4-inches long, numerous vugs.
1859.3	1860.0	0.7		Dolomite, solid, numerous, small vugs.

Red font- sections of the core suitable for lab analysis.

Sample/ Core Log Form

Well **IW 1** Project/No. **Reese, Macon & Assoc. / PF001153.0003** Page 1 of 1

Site

Location Port St. LucieWestport Injection Well System

Drilling Started 3/14/2003

Drilling Completed 3/15/2003

Total Depth Drilled 13.5 Feet

Hole Diameter 8 inches

Type of Sample/ Coring Device coring barrel

Length and Diameter of Coring Device 34.6 feet long, 4-inch I.D.

Sampling Interval **1846.5-1860.0**

Land-Surface Elev. _____ feet ☐ Surveyed ☐ Estimated

Datum _____

Drilling Fluid Used water

Drilling Method reverse air

Drilling Contractor Youngquist Bros.,Inc.

Driller P. Shand

Hammer Weight N/A

Hammer Drop N/A

Sample/Core Depth (feet below land surface) From	To	Core Recovery (feet)	Time/Hydraulic Pressure or Blows per 6 Inches	Sample/Core Description
1850.0	1853.2	3.2	WOB=7K	Dolomitic limestone, pale yellowish brown (10YR 6/2) to grayish orange (10YR 7/4), fine crystalline, vuggy, few
			RPM=20	fossils, hard.
1853.2	1855.2	2.0		Dolomite, medium light gray (N6) to medium dark gray (N4), microcrystalline, numerous vugs, partly filled with
				calcite, very well cemented, very hard.
1855.2	1858.4	3.2	WOB=8K	Dolomite, pale yellowish gray (10YR 6/2), some medium gray (N5) and medium dark gray (N4), kryptocrustalline,
			RPM=24	very few vugs (mostly in top section), solid, massive, extremly hard.
1858.4	1860.0	1.6	WOB=8K	Dolomite, moderate yellowish brown (10YR 5/4), little dark yellowish brown (10YR 4/2), fine crystalline, some
			RPM=40	sucrosic with numerous vugs partially filled with calcareous material, very hard.

CORE LOG SUMMARY

Injection Well No. 1
Core Sample No. 2

Total Length Drilled (feet):	13	**Date Completed:**	4/6/2003
Core Barrel Length (feet):	13.6	**Sampling Interval (feet bpl):**	2272.0-2285.0
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth feet bpl		**Length Recovered**	**RPM**	**WOB**	**Core Description**
From	**To**	feet		pounds	
2272.0	2285.0	13.0	15-32	8000	Dolomite, pale yellowish brown (10 YR 6/2), slightly calcitic, micritic to sucrosic, few vugs, hard to very hard. Diagonal to vertical fractures at 2275 and 2281 feet.

bpl denotes below pad level
RPM denotes rate per minute of coring barrel
WOB denotes weight on coring barrel in 1000 pounds
Core Recovery: 95%
RQD: 70% (denotes the ratio of total length of individual cores with length at least two times the core diameter over total drilled interval).

CORE LOG INVENTORY

Injection Well No. 1
Core Sample No. 2

Total Length Drilled (feet):	13.0	**Date Completed:**	4/6/2003
Core Barrel Length (feet):	13.6	**Sampling Interval (feet bpl):**	2272 - 2285
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth feet bpl		**Length Recovered**	**RPM**	**WOB**	**Core Description**
From	**To**	feet		pounds	
2272.0	2272.5	0.5	32	8	Dolomite, slightly calcitic, compact, few scattered vugs, hard.
2272.5	2274.7	2.2	32	8	Dolomite, slightly calcitic, compact, few scattered vugs, hard.
2274.7	2275.3	0.6	28	8	Dolomite, slightly calcitic, compact, few scattered vugs, hard.
2275.3	2276.8	1.5	32	8	Dolomite, slightly calcitic, compact, few scattered vugs, vertical fracture at 1/3 top of the core.
2276.8	2278.4	1.6	32	8	Dolomite, slightly calcitic, compact, few scattered vugs, hard.
2278.4	2280.0	1.6	32	8	Dolomite, slightly calcitic, compact, few scattered vugs, hard.
2280.0	2281.1	1.1	15	8	Dolomite, slightly calcitic, compact, few scattered vugs, vertical fracture at 1/3 bottom of the core.
2281.1	2281.7	0.6	15	8	Dolomite, slightly calcitic, compact, few scattered vugs, hard.
2281.7	2282.5	0.8	15	8	Dolomite, slightly calcitic, compact, few scattered vugs, hard.
2282.5	2283.6	1.1	15	8	Dolomite, slightly calcitic, compact, few scattered vugs, hard.
2283.6	2285.0	0.7	15	8	Dolomite, slightly calcitic, compact, few scattered vugs, hard.
		RQD=70%			

bpl denotes below pad level
RPM denotes rate per minute of coring barrel
WOB denotes weight on coring barrel in 1000 pounds
RQD denotes the ratio of total length of individual cores with length at least two times the core diameter over total drilled interval.

ARCADIS

CORE LOG SUMMARY

Injection Well No. 1
Core Sample No. 3

Total Length Drilled (feet):	13.5	**Date Completed:**	4/7/2003
Core Barrel Length (feet):	13.6	**Sampling Interval (feet bpl):**	2341.5-2355.0
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth feet bpl		Length Recovered	RPM	WOB	Core Description
From	**To**	feet		pounds	
2341.5	2341.7	0.2	17	8000	Dolomite, dark yellowish orange (10YR 6/6), sucrosic, porous with vugs, soft to moderately hard.
2341.7	2344.6	2.9	17	8000	Dolomite, pale yellowish brown (10YR 6/2), microcrystalline to sucrosic, few vugs, solid, very hard.
2344.6	2345.7	1.1	17	8000	Dolomite, dark yellowish orange (10YR 6/6), sucrosic, porous with vugs, soft to moderately hard.
2345.7	2350.1	1.6	17	8000	Dolomite, pale yellowish brown (10YR 6/2), microcrystalline to sucrosic, few vugs, solid, very hard.
2350.1	2350.8	0.7	18	8000	Dolomite, dark yellowish orange (10YR 6/6), sucrosic, porous with vugs, soft to moderately hard, bottom of the interval is harder and pale yellowish brown.
2350.8	2351.3	0.5	16	8000	Dolomite, pale yellowish brown (10YR 6/2), microcrystalline to sucrosic, vuggy, solid, very hard.

bpl denotes below pad level
RPM denotes rate per minute of coring barrel
WOB denotes weight on coring barrel in 1000 pounds

ARCADIS

City of Port St. Lucie, Westport Injection Well System

CORE LOG INVENTORY

Injection Well No. 1
Core Sample No. 3

Total Length Drilled (feet):	13.5	**Date Completed:**	4/7/2003
Core Barrel Length (feet):	13.6	**Sampling Interval (feet bpl):**	2341.5-2355.0
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth (feet bpl)		Length Recovered	RPM	WOB	Core Description
From	**To**	feet		pounds	
2341.5	2341.7	0.2			Dolomite, very vuggy, porous, soft to moderately hard.
2341.7	2342.8	1.1			Dolomite, solid, slightly vuggy, moderately hard.
2342.8	2343.7	0.9			Dolomite, solid, slightly vuggy, moderately hard.
2343.7	2344.6	0.9			Dolomite, solid, slightly vuggy, moderately hard.
2344.6	2345.7	1.1			Dolomite, solid, slightly vuggy, moderately hard.
2345.7	2346.0	0.3			Dolomite, solid, slightly vuggy, moderately hard.
2346.0	2346.4	0.4			Dolomite, solid, slightly vuggy, hard.
2346.4	2347.0	0.6			Dolomite, solid, slightly vuggy, hard.
2347.0	2347.8	0.8			Dolomite, solid, slightly vuggy, hard.
2347.8	2348.5	0.7			Dolomite, solid, slightly vuggy, hard.
2348.5	2349.5	1.0			Dolomite, solid, slightly vuggy, hard.
2349.5	2350.4	0.9			Top 2/3 of section is dolomite - solid, slightly vuggy, hard; bottom 1/3 - dolomite, very vuggy, soft to moderately hard.
2350.4	2350.8	0.4			Dolomite, very vuggy, porous, soft to moderately hard.
2350.8	2351.3	0.5			Dolomite, solid, slightly vuggy, hard.

bpl denotes below pad level
RPM denotes rate per minute of coring barrel
WOB denotes weight on coring barrel in 1000 pounds
Core Recovery: 72%
RQD: 28%

ARCADIS

City of Port St. Lucie Westport Injection Well System
CORE LOG INVENTORY

Injection Well No. 1
Core Sample No. 4 A

Total Length Drilled (feet):	6.6	**Date Completed:**	4/9/2003- 4/10/2003
Core Barrel Length (feet):	36.5	**Sampling Interval (feet bpl):**	2529.0-2535.6
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth (feet bpl) From	Depth (feet bpl) To	Length Recovered (feet)	RPM	WOB	Core Description
2529.0	2529.4	0.4	18	8K	Limestone, solid, slightly dolomitic.
2529.4	2529.9	0.5	18	8K	Limestone, solid, slightly dolomitic.
2529.9	2530.8	0.9	26	8K	Limestone, solid, slightly dolomitic.
2530.8	2530.9	0.1	26	8K	Limestone, slightly dolomitic, few cavities, uneven, small fragment.
2530.9	2530.3	0.4	26	8K	Limestone, solid, few shallow cavities, slightly dolomitic.

bpl denotes below pad level
RPM denotes revolutions per minute
WOB denotes weight on coring bit in 1000 pounds
Core Recovery: 29%

ARCADIS

City of Port St. Lucie Westport Injection Well System

CORE LOG SUMMARY

Injection Well No. 1
Core Sample No. 4 A

Total Length Drilled (feet):	6.6	**Date Completed:**	4/9/2003- 4/10/2003
Core Barrel Length (feet):	36.5	**Sampling Interval (feet bpl):**	2529.0-2535.6
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth (feet bpl) From	Depth (feet bpl) To	Length Recovered (feet)	RPM	WOB	Core Description
2529.0	2535.6	2.3	18- 26	8- 9K	LIMESTONE- Limestone, 100%, yellowish gray (5Y 7/2) to pale olive (10Y 6/2), partly with smudges of darker material, slightly dolomitic, fine crystalline, massive, hard, with few cavities to 2-inches wide, 1-inch deep, traces of fossills (forams), with rounded areas of secondary sedimentation 1-2- inches in diameter.

bpl denotes below pad level
RPM denotes revolutions per minute
WOB denotes weight on coring bit in 1000 pounds
Core Recovery: 29%

ARCADIS

City of Port St. Lucie Westport Injection Well System

CORE LOG INVENTORY

Injection Well No. 1
Core Sample No. 4 B

Total Length Drilled (feet):	13.7	**Date Completed:**	4/11/2003
Core Barrel Length (feet):	36.5	**Sampling Interval (feet bpl):**	2536.5- 2550.2
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth (feet bpl) From	Depth (feet bpl) To	Length Recovered (feet)	RPM	WOB	Core Description
2536.5	2536.8	0.3	16	8	Dolomite, olive gray with irregular black spots, porous, very hard. 2- inch chert fragment at the bottom.
2536.8	2537.3	0.5	16	8	Limestone, yellowish gray, 1-3- inch fragments.
2537.3	2537.9	0.6	16	8	Limestone, yellowish gray (5Y 8/1), solid, moderately well cemented, moderately hard.
2537.9	2538.2	0.3	16	8	Limestone, yellowish gray (5Y 8/1), solid, moderately well cemented, moderately hard.
2538.2	2538.4	0.2	16	8	Limestone, yellowish gray (5Y 8/1), solid, moderately well cemented, moderately hard.
2538.4	2539.6	1.2	16	8	Limestone, yellowish gray (5Y 8/1), fragmented into 1-4 inch pieces.
2539.6	2540.2	0.6	16	8	Chert, medium gray, with cavities filled with calcareous material, partly fractured, very hard.
2540.2	2540.8	0.6	16	8	Limestone, yellowish gray (5Y 7/2), shade darker than above, slightly dolomitic, solid, hard.
2540.8	2541.3	0.5	16	8	Limestone, yellowish gray (5Y 7/2), slightly dolomitic, solid, hard.
2541.3	2543.8	2.5	16	8	Limestone, yellowish gray (5Y 7/2), slightly dolomitic, solid single piece, hard.
2543.8	2544.4	0.6	16	8	Chert, medium gray, with small cavities filled with calcareous material, solid, very hard.
2544.4	2545.0	0.6	16	8	Limestone, yellowish gray (5Y 7/2), slightly dolomitic, solid, hard.
2545.0	2545.7	0.7	16	8	Limestone, yellowish gray (5Y 7/2), slightly dolomitic, multiple small fragments, two 2- 4- inch pieces.
2545.7	2546.1	0.4	16	8	Limestone, yellowish gray (5Y 7/2), slightly dolomitic, solid, hard.

bpl denotes below pad level
RPM denotes revolutions per minute
WOB denotes weight on coring bit in 1000 pounds
Core Recovery: 70%

ARCADIS

City of Port St. Lucie Westport Injection Well System

CORE LOG SUMMARY

Injection Well No. 1
Core Sample No. 4 B

Total Length Drilled (feet):	13.7	**Date Completed:**	4/11/2003
Core Barrel Length (feet):	36.5	**Sampling Interval (feet bpl):**	2536.5- 2550.2
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth (feet bpl) From	Depth (feet bpl) To	Length Recovered (feet)	RPM	WOB	Core Description
2536.5	2536.7	0.2	16	8	DOLOMITE- Dark yellowish brown (10YR 4/2) with irregular black spots, porous, very hard.
2536.7	2536.8	0.1	16	8	CHERT-Pale yellowish brown (10YR 6/2) and medium light gray (N6),microcrystalline silica,very hard.
2536.8	2539.6	2.8	16	8	LIMESTONE-yellowish gray (5Y 8/1), fine crystalline, moderately well cemented, moderately hard, trace of fossils.
2539.6	2540.2	0.6	16	8	CHERT-medium gray (N5) to light gray (N7) and light olive gray (5Y 6/1), microcrystalline silica, few fractures and cavities, cavities filled with calcareous sand, very hard.
2540.2	2543.8	3.6	16	8	LIMESTONE-yellowish gray (5Y 7/2), fine crystalline, well cemented, slightly dolomitic, hard.
2543.8	2544.4	0.6	16	8	CHERT-medium gray (N5) to light gray (N7), microcrystalline silica, few fractures and cavities, cavities filled with calcareous sand, very hard.
2544.4	2546.1	1.7	16	8	LIMESTONE-yellowish gray (5Y 7/2), fine crystalline, well cemented, slightly dolomitic, hard.

bpl denotes below pad level
RPM denotes revolutions per minute
WOB denotes weight on coring bit in 1000 pounds
Core Recovery: 70%

ARCADIS

CORE LOG SUMMARY

Injection Well No. 1
Core Sample No. 5

Total Length Drilled (feet):	16	**Date Completed:**	4/12/2003
Core Barrel Length (feet):	36.5	**Sampling Interval (feet bpl):**	2602.0-2618.0
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth (feet bpl) From	Depth (feet bpl) To	Length Recovered (feet)	RPM	WOB	Core Description
2602.0	2612.0	10.0	22	8	LIMESTONE-yellowish gray (5Y 8/1) and some greenish gray (5GY 6/1) with black (N1) specs, fine grained, moderately well cemented, moderately soft, fossiliferous.
2612.0	2612.7	0.7	22	8	LIMESTONE-very pale orange (10YR 8/2), fine grained, chalky, well cemented, soft, trace of fossils.
2612.7	2614.5	1.8	22	8	LIMESTONE-yellowish gray (5Y 8/1) and bands of light olive gray (5Y 6/1), fine crystalline, slightly dolomitic, well cemented, moderately hard, trace of fossils.

bpl denotes below pad level
RPM denotes revolutions per minute
WOB denotes weight on coring bit in 1000 pounds

ARCADIS

City of Port St. Lucie, Westport Injection Well System

CORE LOG INVENTORY

Injection Well No. 1
Core Sample No. 5

Total Length Drilled (feet):	16	**Date Completed:**	4/12/2003
Core Barrel Length (feet):	36.5	**Sampling Interval (feet bpl):**	2602.0- 2618.0
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth (feet bpl) From	Depth (feet bpl) To	Length Recovered (feet)	RPM	WOB	Core Description
2602.0	2603.9	1.9	22	8	LIMESTONE- Limestone, 100%, yellowish gray, fine grained, broken into 1- 2 -inch long fragments.
2603.9	2604.5	0.6	22	8	LIMESTONE- Limestone, 100%, yellowish gray, fine grained, solid.
2604.5	2604.8	0.3	22	8	LIMESTONE- Limestone, 100%, yellowish gray, fine grained, solid.
2604.8	2605.9	1.1	22	8	LIMESTONE- Limestone, 100%, yellowish gray, fine grained, solid.
2605.9	2606.3	0.4	22	8	LIMESTONE- Limestone, 100%, yellowish gray, fine grained, solid.
2606.3	2606.9	0.6	22	8	LIMESTONE- Limestone, 100%, yellowish gray, fine grained, solid.
2606.9	2607.9	1.0	22	8	LIMESTONE- Limestone, 100%, yellowish gray, fine grained, solid.
2607.9	2609.0	1.1	22	8	LIMESTONE- Limestone, 100%, yellowish gray, fine grained, solid.
2609.0	2610.2	1.2	22	8	LIMESTONE- Limestone, 100%, yellowish gray, fine grained, solid.
2610.2	2610.6	0.4	22	8	LIMESTONE- Limestone, 100%, yellowish gray, fine grained, 1-2 inch fragment with 2 chert pieces..
2610.6	2611.1	0.5	22	8	LIMESTONE- Limestone, 100%, yellowish gray, fine grained, solid.
2611.1	2611.6	0.5	22	8	LIMESTONE- Limestone, 100%, yellowish gray, fine grained, solid.
2611.6	2612.1	0.5	22	8	LIMESTONE- Limestone, 100%, yellowish gray, fine grained, solid, 2- 3-inch fragments.
2612.1	2612.4	0.3	22	8	LIMESTONE- Limestone, 100%, very pale orange, very fine grained, chalky, solid.
2612.4	2613.6	1.2	22	13	LIMESTONE- Limestone, 100%, very pale orange, very fine grained, chalky, solid, to 2612.7; yellowish gray, very
		11.6	22	8	fine crystalline, slightly dolomitic below.
2613.6	2614.0	0.4	22	8	LIMESTONE- Limestone, 100%, yellowish gray, very fine crystalline, slightly dolomitic, fractured vertically.
2514.0	2614.5	0.5	22	8	LIMESTONE- Limestone, 100%, yellowish gray, very fine crystalline, slightly dolomitic, solid.

bpl denotes below pad level
RPM denotes revolutions per minute
WOB denotes weight on coring bit in 1000 pounds

ARCADIS

City of Port St. Lucie, Westport Injection Well System
Port St. Lucie, Florida

CORE LOG SUMMARY

Injection Well No. 1
Core Sample No. 6

Total Length Drilled (feet):	13.7	**Date Completed:**	4/13/2003
Core Barrel Length (feet):	36.5	**Sampling Interval (feet bpl):**	2681.0-2694.8
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth (feet bpl)		Length Recovered (feet)	RPM	WOB	Core Description
From	To				
2681.0	2694.7	13.7	14-25	8	LIMESTONE- very pale orange (10YR 8/2), yellowish gray (5Y 8/1) and some grayish orange (10YR 7/4) with black (N1) specs, fine grained, poorly to moderately well cemented, slightly dolomitic, soft to moderately hard, frequent irregular fractures, vuggy, fossiliferous with forams; Chert, trace, olive black(5Y 2/1), very hard.

bpl denotes below pad level
RPM denotes revolutions per minute
WOB denotes weight on coring bit in 1000 pounds

ARCADIS

City of Port St. Lucie, Westport Injection Well System
Port St. Lucie, Florida

CORE LOG INVENTORY

Injection Well No. 1
Core Sample No. 6

Total Length Drilled (feet):	13.7	**Date Completed:**	4/13/2003
Core Barrel Length (feet):	36.5	**Sampling Interval (feet bpl):**	2681.0- 2694.8
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth (feet bpl) From	Depth (feet bpl) To	Length Recovered (feet)	RPM	WOB	Core Description
2681.0	2681.7	0.7	14	8	LIMESTONE AND CHERT- 1- 4 -inch long fragments.
2681.7	2682.2	0.5	14	8	LIMESTONE- solid.
2682.2	2682.7	0.5	14	8	LIMESTONE- 2- 4- inch fragments with uneven cut.
2682.7	2683.6	0.9	14	8	LIMESTONE- fractures, fragile, ready to break.
2683.6	2684.0	0.4	14	8	LIMESTONE- fragments 1-3-inch.
2684.0	2685.2	1.2	14	8	LIMESTONE- 3 sections, 4-5- inches long.
2685.2	2685.7	0.5	14	8	LIMESTONE- solid, vuggy.
2685.7	2685.9	0.2	14	8	LIMESTONE- 1-inch fragments .
2685.9	2687.0	1.1	14	8	LIMESTONE- solid, with fractures from 2686.7 ft bpl, and diagonal cut , slightly vuggy.
2687.0	2687.1	0.1	14	8	LIMESTONE- 1-inch fragments .
2687.1	2687.9	0.8	14	8	LIMESTONE- fractures, fragile, very vuggy, ready to break.
2687.9	2688.7	0.8	14	8	LIMESTONE- solid.
2688.7	2689.0	0.3	14	8	LIMESTONE- 1-inch fragments .
2689.0	2689.7	0.7	22	8	LIMESTONE- 2- 3-inch fragments .

bpl denotes below pad level
RPM denotes revolutions per minute
WOB denotes weight on coring bit in 1000 pounds

ARCADIS

CORE LOG SUMMARY

Injection Well No. 1
Core Sample No. 7

Total Length Drilled (feet):	11	**Date Completed:**	4/14/2003
Core Barrel Length (feet):	36.5	**Sampling Interval (feet bpl):**	2758-2769
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth (feet bpl) From	Depth (feet bpl) To	Length Recovered (feet)	RPM	WOB	Core Description
2764.2	2769.0	4.8	14	5	LIMESTONE-Limestone, 100%, very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), fine grained, slightly dolomitic, moderately well cemented, soft.

bpl denotes below pad level
RPM denotes revolutions per minute
WOB denotes weight on coring bit in 1000 pounds

ARCADIS

CORE LOG INVENTORY

Injection Well No. 1
Core Sample No. 7

Total Length Drilled (feet):	11	**Date Completed:**	4/14/2003
Core Barrel Length (feet):	36.5	**Sampling Interval (feet bpl):**	2758-2769
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth (feet bpl)		Length Recovered (feet)	RPM	WOB	Core Description
From	To				
2764.2	2765.4	1.2	14	5	LIMESTONE- Fragments of 1 inch to 2 inches.
2765.4	2765.8	0.4	14	5	LIMESTONE-Solid .
2765.8	2766.4	0.6	14	5	LIMESTONE- Fragments from 1 to 3 inches.
2766.4	2767.3	0.9	14	5	LIMESTONE-Two sections of 5 inches each.
2767.3	2769.0	1.7	14	5	LIMESTONE- Fragments from 1 to 3 inches.

bpl denotes below pad level
RPM denotes revolutions per minute
WOB denotes weight on coring bit in 1000 pounds
Core Recovery: 43%

ARCADIS

City of Port St. Lucie, Westport Injection Well System
Port St. Lucie, Florida
CORE LOG SUMMARY

Injection Well No. 1
Core Sample No. 8

Total Length Drilled (feet):	13	**Date Completed:**	4/19/2003
Core Barrel Length (feet):	36.5	**Sampling Interval (feet bpl):**	2890-2903
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth (feet bpl)		Length Recovered (feet)	RPM	WOB	Core Description
From	To				
2890.0	2891.6	1.6	15	8	LIMESTONE -Limestone, 100%, very pale orange (10YR 8/2) to grayish orange (10YR 7/4), fine grained, slightly dolomitic, with spherical and horizontal smudges of darker material. moderately well cemented, hard, few vugs.
2891.6	2895.5	3.9	15	8	LIMESTONE -Limestone, 100%, very pale orange (10YR 8/2), fine crystalline, dolomitic, with numerous vugs and solution cavities to 3- 4 inches wide, fosiliferous (shell fragments), well cemented, hard.
2895.5	2896.2	0.7	15	8	DOLOMITE- Dolomite, 100%, pale yellowish brown (10YR 6/2) to dark yellowish brown (10YR 4/2), micritic to sucrosic, calcareous, moderately well cemented, moderately hard to hard.
2896.2	2897.7	1.5	15	8	LIMESTONE-Limestone, 100%, very pale orange (10YR 8/2), fine grained, vuggy, porous, poorly cemented, soft, slightly fossiliferous; Marl, trace, white (N9) to bluish white (5B 9/1), soft.

ARCADIS

City of Port St. Lucie, Westport Injection Well System
Port St. Lucie, Florida

CORE LOG INVENTORY

Injection Well No. 1
Core Sample No. 8

Total Length Drilled (feet):	13	**Date Completed:**	4/19/2003
Core Barrel Length (feet):	36.5	**Sampling Interval (feet bpl):**	2890-2903
Core Barrel Diameter ID (inches):	4	**Hole Diameter (inches):**	8.5
Drilling Fluid Used:	water		

Depth (feet bpl) From	Depth (feet bpl) To	Length Recovered (feet)	RPM	WOB	Core Description
2890.0	2891.6	1.6	15	8	LIMESTONE- Limestone, slightly dolomitic, 1-3 inch fragments, becoming more dolomitic in the base and top.
2891.6	2892.1	0.5	15	8	LIMESTONE-Dolomitic Limestone, solid but cut at 1/3 diagonally.
2892.1	2892.3	0.2	15	8	LIMESTONE-Dolomitic Limestone, solid, irregular cut.
2892.3	2892.7	0.4	15	8	LIMESTONE-Dolomitic Limestone, fragments of 2-3 inch.
2892.7	2893.2	0.5	15	8	LIMESTONE-Dolomitic Limestone, solid, vuggy (vugs to 1- inch) hard, fosiliferous.
2893.2	2893.5	0.3	15	8	LIMESTONE-Dolomitic Limestone, solid, with 4-ich, 1-inch deep cavity.
2893.5	2893.8	0.3	15	8	LIMESTONE-Dolomitic Limestone, solid, vuggy.
2893.8	2894.1	0.3	15	8	LIMESTONE-Dolomitic Limestone, solid, vuggy, irregular cut.
2894.1	2894.5	0.4	15	8	LIMESTONE-Dolomitic Limestone, solid, vuggy, diagonal fracture.
2894.5	2895.5	1.0	15	8	LIMESTONE-Dolomitic Limestone, fragments of 2-4 inch.
2895.5	2896.2	0.7	15	8	DOLOMITE- Dolomite, calcareous, very hard, 2-3 fragments.
2896.2	2896.7	0.5	15	8	LIMESTONE-Limestone, porous, solid, moderately hard.
2896.7	2897.3	0.6	15	8	LIMESTONE-Limestone, 2 fragments of 3 inch.
2897.3	2897.7	0.4	15	8	LIMESTONE- Limestone, irregular fragments 1- 3 inch.

bpl denotes below pad level
RPM denotes revolutions per minute
WOB denotes weight on coring bit in 1000 pounds
Core Recovery: 59%

Youngquist Brothers, Inc.
Project No. PF001153.0003/Westport IW1
Port St. Lucie, Florida

CL File No.: HOU-030446
Date: June 9, 2003
Analyst(s): ML-LA-JH

CONVENTIONAL PLUG ANALYSIS

Sample Number	Sample ID	Depth ft	Porosity %	Permeability Kair mD	Hydraulic Conductivity cm/sec	Bulk Density g/cm3	Grain Density g/cm3	Description
			HORIZONTAL SAMPLES					
1H	Core 1	1854.3 - 1855.0	10.71	152	1.46E-04	2.539	2.826	Dol lt tan vf xln slmy foss vug
2H	Core 1	1855.4 - 1856.9	9.46	.050	4.79E-08	2.602	2.827	Dol lt tan vf xln slmy vug
3H	Core 1	1857.7 - 1858.5	10.18	.042	4.04E-08	2.561	2.834	Dol lt tan vf xln slmy vug
4H	Core 2	2273.5 - 2274.7	1.86	.001	7.88E-10	2.694	2.711	Dol brn vf xln vug
5H	Core 2	2276.8 - 2277.7	8.75	.311	2.99E-07	2.585	2.805	Dol brn vf xln vug
6H	Core 2	2282.5 - 2283.2	17.14	36.5	3.51E-05	2.301	2.782	Dol lt brn vf xln vug
7H	Core 3	2343.2 - 2343.7	24.15	99.2	9.53E-05	2.148	2.807	Dol tan vf xln pp vug
8H	Core 3	2346.4 - 2347.0	18.43	75.6	7.26E-05	2.317	2.815	Dol tan vf xln vug
9H	Core 3	2348.0 - 2349.6	10.32	.484	4.66E-07	2.557	2.818	Dol tan vf xln vug
10H	Core 4A	2529.9 - 2530.8	19.69	1.72	1.66E-06	2.230	2.751	Chk bu vf xln
11H	Core 4B	2542.9 - 2543.5	18.00	1.01	9.67E-07	2.263	2.735	Chk bu vf xln
12H	Core 4B	2544.4 - 2545.0	22.85	1.92	1.85E-06	2.126	2.717	Chk bu vf xln
13H	Core 5	2604.8 - 2605.6	24.30	5.51	5.30E-06	2.050	2.686	Chk wh vf xln vfoss
14H	Core 5	2609.0 - 2609.5	25.02	7.78	7.47E-06	2.028	2.690	Chk wh vf xln vfoss
15H	Core 5	2612.9 - 2613.6	19.20	.401	3.85E-07	2.197	2.693	Chk bu vf xln
16H	Core 6	2681.7 - 2682.2	13.80	23.9	2.30E-05	2.349	2.698	Chk wh vf xln vfoss vug
17H	Core 6	2685.2 - 2685.4	24.81	1177	1.13E-03	1.988	2.695	Chk wh vf xln vfoss vug
18H	Core 6	2687.9 - 2688.7	18.69	149	1.43E-04	2.209	2.707	Chk wh vf xln vfoss vug
19H	Core 7	2765.5 - 2765.8	18.62	1.11	1.07E-06	2.214	2.702	Chk wh vf xln vfoss vug
20H	Core 7	2766.4 - 2766.8	25.91	757	7.27E-04	1.997	2.701	Chk wh vf xln vfoss vug
21H	Core 7	2766.8 - 2767.2	23.84	47.0	4.52E-05	2.056	2.704	Chk wh vf xln vfoss vug
22H	Core 8	2892.7 - 2893.2	14.70	.301	2.89E-07	2.334	2.709	Chk wh vf xln vfoss vug
23H	Core 8	2894.1 - 2894.4	20.52	1.11	1.07E-06	2.181	2.714	Chk wh vf xln vfoss vug
24H	Core 8	2896.2 - 2896.7	14.52	36.0	3.46E-05	2.329	2.704	Chk wh vf xln vfoss vug

CONVENTIONAL PLUG ANALYSIS

Sample Number	Sample ID	Depth ft	Porosity %	Permeability Kair mD	Hydraulic Conductivity cm/sec	Bulk Density g/cm3	Grain Density g/cm3	Description
			VERTICAL SAMPLES					
1V	Core 1	1854.3 - 1855.0	9.67	1.85	1.78E-06	2.588	2.835	Dol lt tan vf xln slmy foss vug
2V	Core 1	1855.4 - 1856.9	10.74	22.6	2.17E-05	2.528	2.817	Dol lt tan vf xln slmy vug
3V	Core 1	1857.7 - 1858.5	11.16	.030	2.91E-08	2.540	2.831	Dol lt tan vf xln slmy vug
4V	Core 2	2273.5 - 2274.7	0.22	< .001		2.714	2.720	Dol brn vf xln vug
5V	Core 2	2276.8 - 2277.7	0.32	< .001		2.714	2.723	Dol brn vf xln vug
6V	Core 2	2282.5 - 2283.2	13.89	.575	5.53E-07	2.408	2.773	Dol lt brn vf xln vug
7V	Core 3	2343.2 - 2343.7	24.10	81.6	7.84E-05	2.146	2.806	Dol tan vf xln pp vug
8V	Core 3	2346.4 - 2347.0	23.24	108	1.04E-04	2.182	2.813	Dol tan vf xln vug
9V	Core 3	2348.0 - 2349.6	9.43	.081	7.75E-08	2.583	2.823	Dol tan vf xln vug
10V	Core 4A	2529.9 - 2530.8	21.05	2.86	2.75E-06	2.201	2.769	Chk bu vf xln
11V	Core 4B	2542.9 - 2543.5	18.06	.968	9.30E-07	2.263	2.736	Chk bu vf xln
12V	Core 4B	2544.4 - 2545.0	21.27	1.72	1.65E-06	2.163	2.720	Chk bu vf xln
13V	Core 5	2604.8 - 2605.6	25.77	6.05	5.81E-06	2.008	2.688	Chk wh vf xln vfoss
14V	Core 5	2609.0 - 2609.5	25.37	10.7	1.02E-05	2.030	2.694	Chk wh vf xln vfoss
15V	Core 5	2612.9 - 2613.6	19.11	.278	2.68E-07	2.207	2.698	Chk bu vf xln
16V	Core 6	2681.7 - 2682.2	13.26	1.99	1.91E-06	2.372	2.701	Chk wh vf xln vfoss vug
17V	Core 6	2685.2 - 2685.4	18.44	35.3	3.39E-05	2.228	2.701	Chk wh vf xln vfoss vug
18V	Core 6	2687.9 - 2688.7	18.39	25.2	2.42E-05	2.229	2.707	Chk wh vf xln vfoss vug
19V	Core 7	2765.5 - 2765.8	22.24	7.16	6.88E-06	2.116	2.695	Chk wh vf xln vfoss vug
20V	Core 7	2766.4 - 2766.8	20.33	24.4	2.35E-05	2.171	2.702	Chk wh vf xln vfoss vug
21V	Core 7	2766.8 - 2767.2	19.57	3.60	3.46E-06	2.195	2.705	Chk wh vf xln vfoss vug
22V	Core 8	2892.7 - 2893.2	16.31	.260	2.50E-07	2.297	2.712	Chk wh vf xln vfoss vug
23V	Core 8	2894.1 - 2894.4	18.71	.610	5.86E-07	2.234	2.708	Chk wh vf xln vfoss vug
24V	Core 8	2896.2 - 2896.7	13.88	.156	1.50E-07	2.357	2.700	Chk wh vf xln vfoss vug

Note: Hydraulic conductivity is a calculated value.

FORMATION RESISTIVITY FACTOR

1000 Hertz

Company: Youngquist Brothers, Inc.
Project: PF001153.003/Westport IW1
Location: Port St. Lucie, Florida
File: HOU-030446

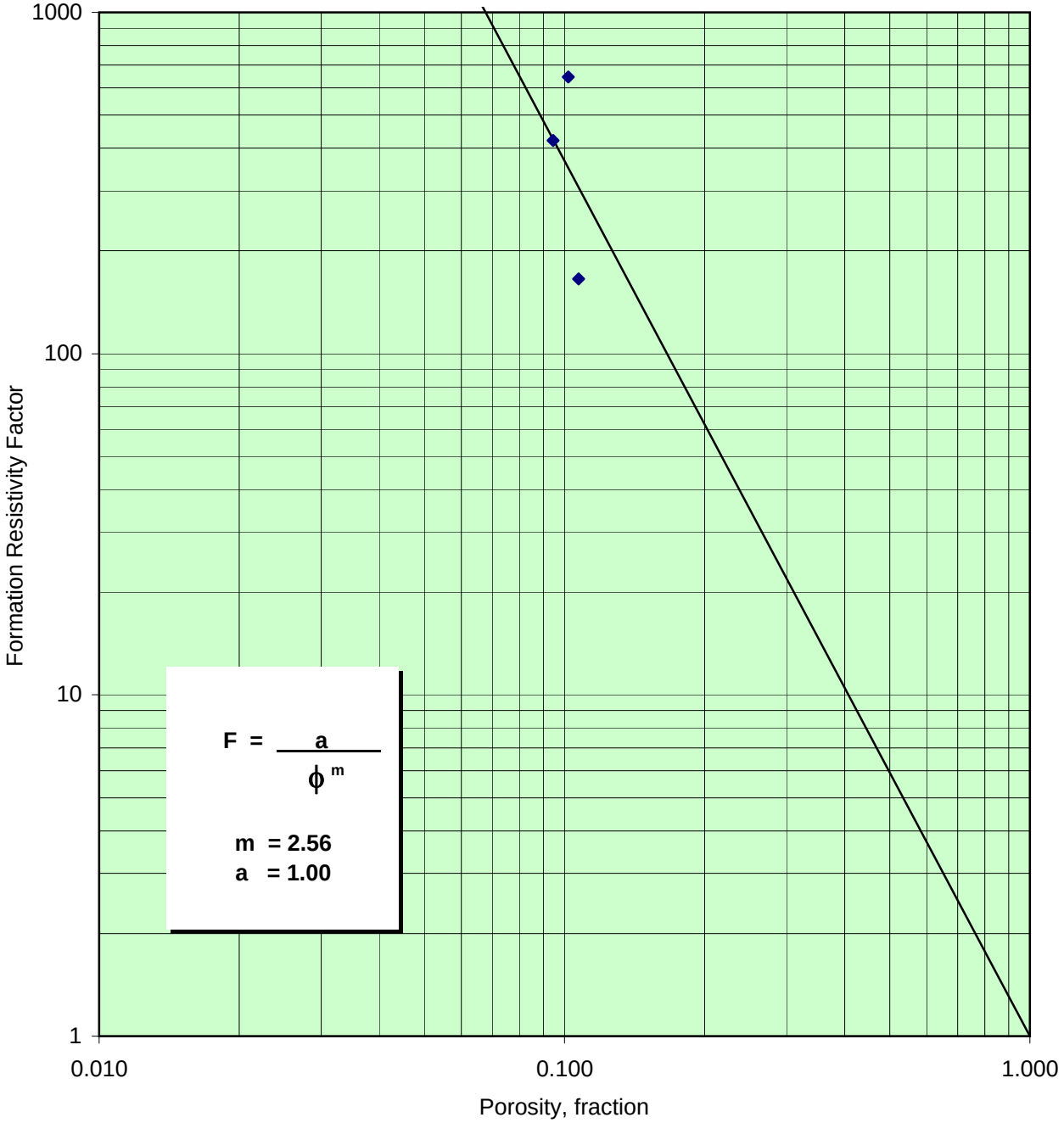
Saturant, ppm:
Confining Stress, psi:
Brine Resistivity, ohm-m @25°C:
Porosity Exponent (m) [Composite]:
Intercept (a):

Sample Number	Depth, feet	Grain Density gm/cc	Klinkenberg Permeability md	Porosity, fraction	Formation Factor, (Appa	
					Fa	Ro, ohm-m
1H	1854.3-55.0	2.83	147.	0.107	165.29	37.57
2H	1855.4-56.9	2.83	.035	0.095	421.65	95.84
3H	1857.7-58.8	2.83	.029	0.102	647.59	147.20

FORMATION RESISTIVITY FACTOR

1000 Hertz

Company:	Youngquist Brothers, Inc.	Saturant, ppm:	27,700
Project:	PF001153.003/Westport IW1	Confining Stress, psi:	800
Location:	Port St. Lucie, Florida	Brine Resistivity, ohm-m @25°C:	0.2273
File:	HOU-030446	Porosity Exponent (m) [Composite]:	2.56
		Intercept (a):	1.00



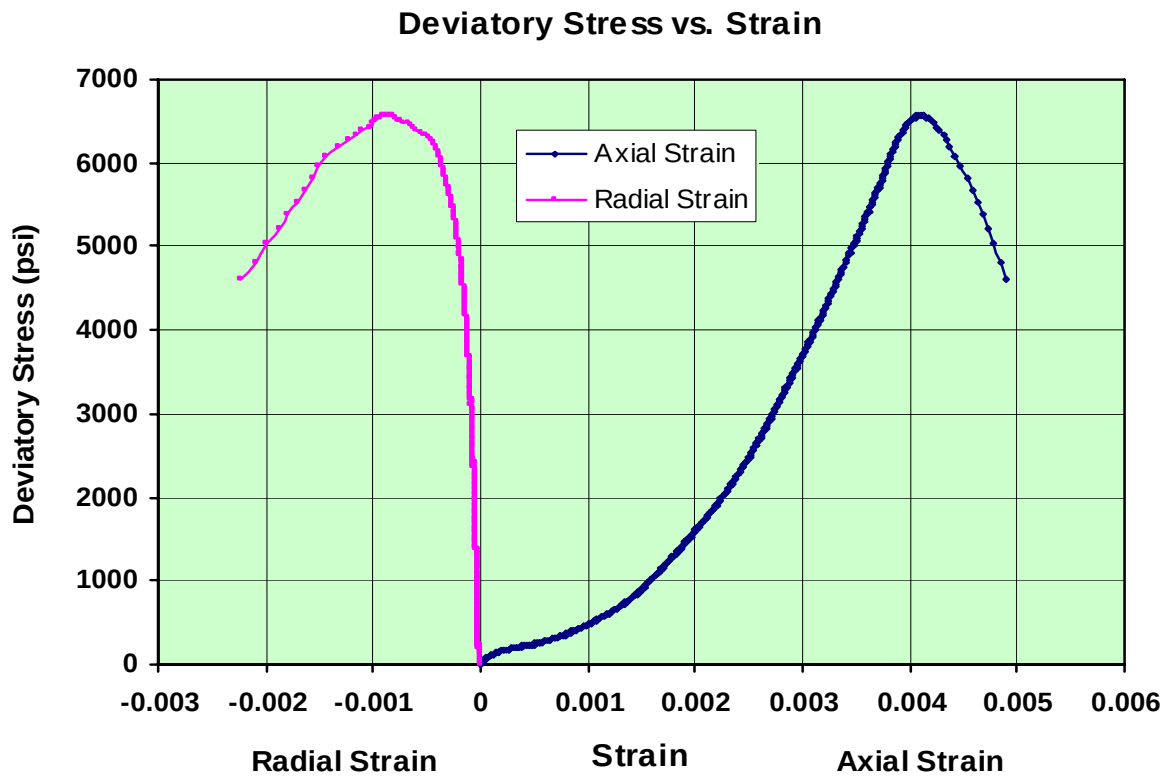
Core Laboratories

TRIAXIAL COMPRESSIVE TEST RESULTS SAND CONTROL

Company	**Youngquist Brothers**	Time	**Jun. 2003**
Well Name	**PF001153.003/Westport IW1**	Job No.	**Hou-030446**
Field Name		Saturation Condition	**100% Brine Saturated**
Location		Type of Sand	**Limestone**

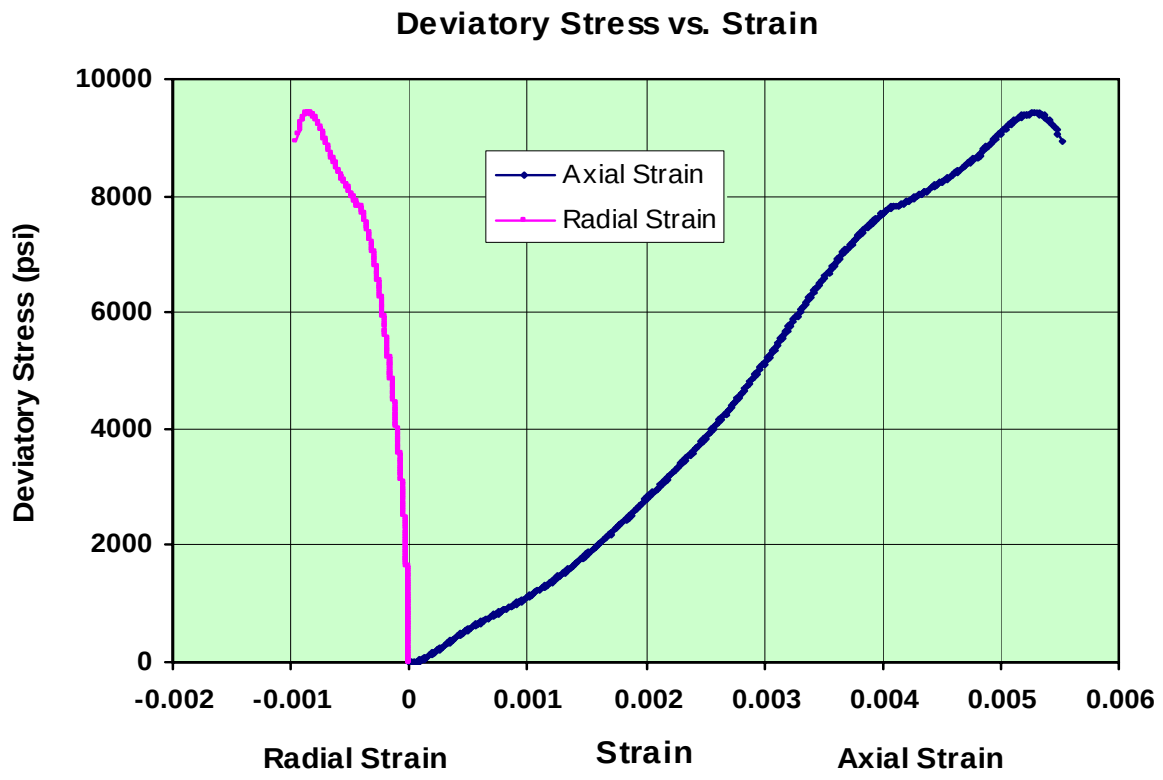
Sample Number	Depth (ft)	Confining Pressure (psi)	Bulk Density (gm/cm^3)	Compressive Strength (psi)	Young's Modulus (10^6 psi)	Poisson's Ratio
1V	1854.3-1855.0	1000	2.65	7567	2.49	0.11
2V	1855.4-1856.9	1000	2.61	9083	2.38	0.12
3V	1857.7-1858.8	1000	2.6	14033	3.71	0.14

Company	**Youngquist Brothers**	Time	**Jun. 2003**
Well Name	**PF001153.003/Westport IW1**	Job No.	**Hou-030446**
Field Name		Saturation Condition	**100% Brine Saturated**
Location		Type of Sand	**Limestone**



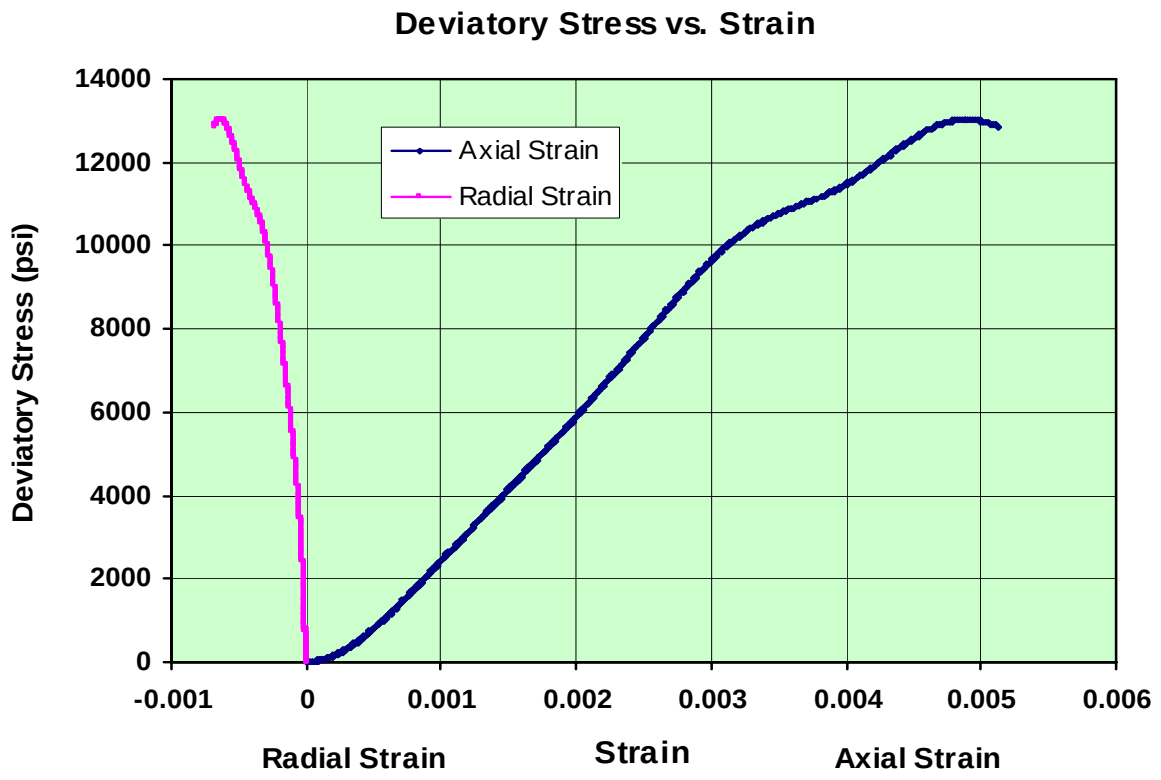
Sample	1V
Core/Depth (ft)	1854.3-1855.0
Diameter (in)	0.9995
Length (in)	2.0682
Mass (g)	70.56
Saturation State	Formation Brine
Sample Density (g/cc)	2.65
Confining Pressure (psi)	1000
Pore Pressure (psi)	0
Static Young's Modulus ($X10^6$ psi)	2.49
Static Poisson's Ratio	0.11
Compressive Strength (psi)	7567

Company	**Youngquist Brothers**	Time	**Jun. 2003**
Well Name	**PF001153.003/Westport IW1**	Job No.	**Hou-030446**
Field Name		Saturation Condition	**100% Brine Saturated**
Location		Type of Sand	**Limestone**



Sample	2V
Core/Depth (ft)	1855.4-1856.9
Diameter (in)	0.9964
Length (in)	2.1068
Mass (g)	70.36
Saturation State	Formation Brine
Sample Density (g/cc)	2.61
Confining Pressure (psi)	1000
Pore Pressure (psi)	0
Static Young's Modulus ($X10^6$ psi)	2.38
Static Poisson's Ratio	0.12
Compressive Strength (psi)	9083

Company	**Youngquist Brothers**	Time	**Jun. 2003**
Well Name	**PF001153.003/Westport IW1**	Job No.	**Hou-030446**
Field Name		Saturation Condition	**100% Brine Saturated**
Location		Type of Sand	**Limestone**



Sample	3V
Core/Depth (ft)	1857.7-1858.8
Diameter (in)	1.0008
Length (in)	2.0616
Mass (g)	69.08
Saturation State	Formation Brine
Sample Density (g/cc)	2.60
Confining Pressure (psi)	1000
Pore Pressure (psi)	0
Static Young's Modulus ($X10^6$ psi)	3.71
Static Poisson's Ratio	0.14
Compressive Strength (psi)	14033

Appendix C

Packer-Test Transducer Data and Charts

Straddle-Packer Test No. 1 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well

Packer Depth Interval:	2054-2100 feet bpl	**Static Water Level:**	6.17 feet bpl
Start of Logging:	1/12/2003 18:18	**Start of Pumping:**	01/12/03 18:27:11
End of Logging:	1/13/2003 2:20	**End of Pumping:**	1/13/03 2:25:37
Pumping Rate:	24 gpm	**Pumping Duration:**	480 minutes

Data Collected Using Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\PUMP1.DAT

Note: Double line indicates start of pumping

Bolded depth indicates assumed static water level

Date	Time	Minutes (from start pumping phase)	Water Level (feet above transducer)	Depth to Water (feet bpl)
01/12/03	18:18:30		162.83	6.17
01/12/03	18:18:30		162.83	6.17
01/12/03	18:18:30		162.83	6.17
01/12/03	18:18:30		162.83	6.17
01/12/03	18:18:31		162.83	6.17
01/12/03	18:18:31		162.83	6.17
01/12/03	18:18:31		162.83	6.17
01/12/03	18:18:31		162.83	6.17
01/12/03	18:18:31		162.83	6.17
01/12/03	18:18:31		162.84	6.16
01/12/03	18:18:31		162.83	6.17
01/12/03	18:18:31		162.84	6.16
01/12/03	18:18:31		162.83	6.17
01/12/03	18:18:31		162.83	6.17
01/12/03	18:18:32		162.83	6.17
01/12/03	18:18:32		162.83	6.17
01/12/03	18:18:32		162.83	6.17
01/12/03	18:18:32		162.83	6.17
01/12/03	18:18:32		162.83	6.17
01/12/03	18:18:32		162.83	6.17
01/12/03	18:18:32		162.83	6.17
01/12/03	18:18:32		162.84	6.16
01/12/03	18:18:32		162.84	6.16
01/12/03	18:18:32		162.85	6.15
01/12/03	18:18:33		162.85	6.15
01/12/03	18:18:33		162.83	6.17
01/12/03	18:18:33		162.83	6.17
01/12/03	18:18:33		162.83	6.17
01/12/03	18:18:33		162.84	6.16
01/12/03	18:18:33		162.83	6.17
01/12/03	18:18:33		162.83	6.17
01/12/03	18:18:33		162.83	6.17
01/12/03	18:18:33		162.83	6.17
01/12/03	18:18:34		162.85	6.15
01/12/03	18:18:34		162.84	6.16
01/12/03	18:18:34		162.84	6.16
01/12/03	18:18:34		162.84	6.16
01/12/03	18:18:34		162.83	6.17
01/12/03	18:18:34		162.83	6.17
01/12/03	18:18:34		162.83	6.17
01/12/03	18:18:34		162.83	6.17
01/12/03	18:18:34		162.83	6.17
01/12/03	18:18:34		162.85	6.15
01/12/03	18:18:35		162.83	6.17
01/12/03	18:18:35		162.83	6.17
01/12/03	18:18:35		162.84	6.16

Date	Time	Minutes (from start pumping phase)	Water Level (feet above transducer)	Depth to Water (feet bpl)
01/12/03	18:18:35		162.83	6.17
01/12/03	18:18:35		162.83	6.17
01/12/03	18:18:35		162.85	6.15
01/12/03	18:18:35		162.83	6.17
01/12/03	18:18:35		162.83	6.17
01/12/03	18:18:35		162.83	6.17
01/12/03	18:18:36		162.83	6.17
01/12/03	18:18:36		162.84	6.16
01/12/03	18:18:36		162.85	6.15
01/12/03	18:18:36		162.83	6.17
01/12/03	18:18:36		162.83	6.17
01/12/03	18:18:36		162.83	6.17
01/12/03	18:18:36		162.83	6.17
01/12/03	18:18:36		162.84	6.16
01/12/03	18:18:36		162.83	6.17
01/12/03	18:18:36		162.84	6.16
01/12/03	18:18:37		162.83	6.17
01/12/03	18:18:37		162.83	6.17
01/12/03	18:18:37		162.84	6.16
01/12/03	18:18:37		162.85	6.15
01/12/03	18:18:37		162.83	6.17
01/12/03	18:18:37		162.83	6.17
01/12/03	18:18:37		162.83	6.17
01/12/03	18:18:37		162.83	6.17
01/12/03	18:18:37		162.84	6.16
01/12/03	18:18:37		162.84	6.16
01/12/03	18:18:38		162.85	6.15
01/12/03	18:18:38		162.83	6.17
01/12/03	18:18:38		162.84	6.16
01/12/03	18:18:38		162.84	6.16
01/12/03	18:18:38		162.83	6.17
01/12/03	18:18:38		162.85	6.15
01/12/03	18:18:38		162.83	6.17
01/12/03	18:18:38		162.83	6.17
01/12/03	18:18:38		162.83	6.17
01/12/03	18:18:39		162.84	6.16
01/12/03	18:18:39		162.85	6.15
01/12/03	18:18:39		162.83	6.17
01/12/03	18:18:39		162.83	6.17
01/12/03	18:18:39		162.83	6.17
01/12/03	18:18:39		162.83	6.17
01/12/03	18:18:39		162.84	6.16
01/12/03	18:18:39		162.83	6.17
01/12/03	18:18:39		162.84	6.16
01/12/03	18:18:39		162.85	6.15
01/12/03	18:18:40		162.83	6.17
01/12/03	18:18:40		162.83	6.17
01/12/03	18:18:40		162.83	6.17
01/12/03	18:18:40		162.83	6.17
01/12/03	18:18:40		162.83	6.17
01/12/03	18:18:40		162.83	6.17
01/12/03	18:18:40		162.83	6.17
01/12/03	18:18:40		162.83	6.17
01/12/03	18:18:40		162.84	6.16
01/12/03	18:18:41		162.83	6.17
01/12/03	18:18:41		162.83	6.17
01/12/03	18:18:41		162.83	6.17
01/12/03	18:18:41		162.83	6.17
01/12/03	18:18:41		162.83	6.17

Date	Time	Minutes (from start pumping phase)	Water Level (feet above transducer)	Depth to Water (feet bpl)
01/12/03	18:18:41		162.83	6.17
01/12/03	18:18:41		162.83	6.17
01/12/03	18:18:41		162.83	6.17
01/12/03	18:18:41		162.84	6.16
01/12/03	18:18:41		162.83	6.17
01/12/03	18:18:42		162.84	6.16
01/12/03	18:18:42		162.83	6.17
01/12/03	18:18:42		162.83	6.17
01/12/03	18:18:42		162.84	6.16
01/12/03	18:18:42		162.83	6.17
01/12/03	18:18:42		162.83	6.17
01/12/03	18:18:42		162.83	6.17
01/12/03	18:18:42		162.83	6.17
01/12/03	18:18:42		162.84	6.16
01/12/03	18:18:44		162.83	6.17
01/12/03	18:18:45		162.83	6.17
01/12/03	18:18:46		162.83	6.17
01/12/03	18:18:47		162.83	6.17
01/12/03	18:18:48		162.83	6.17
01/12/03	18:18:49		162.83	6.17
01/12/03	18:18:50		162.83	6.17
01/12/03	18:18:51		162.83	6.17
01/12/03	18:18:52		162.83	6.17
01/12/03	18:18:53		162.83	6.17
01/12/03	18:18:54		162.83	6.17
01/12/03	18:18:55		162.83	6.17
01/12/03	18:18:56		162.83	6.17
01/12/03	18:18:57		162.83	6.17
01/12/03	18:18:58		162.83	6.17
01/12/03	18:18:59		162.83	6.17
01/12/03	18:19:00		162.83	6.17
01/12/03	18:19:01		162.83	6.17
01/12/03	18:19:02		162.83	6.17
01/12/03	18:19:03		162.83	6.17
01/12/03	18:19:04		162.83	6.17
01/12/03	18:19:05		162.83	6.17
01/12/03	18:19:06		162.83	6.17
01/12/03	18:19:07		162.83	6.17
01/12/03	18:19:08		162.83	6.17
01/12/03	18:19:09		162.83	6.17
01/12/03	18:19:10		162.83	6.17
01/12/03	18:19:11		162.83	6.17
01/12/03	18:19:12		162.83	6.17
01/12/03	18:19:13		162.83	6.17
01/12/03	18:19:14		162.83	6.17
01/12/03	18:19:15		162.83	6.17
01/12/03	18:19:16		162.83	6.17
01/12/03	18:19:17		162.83	6.17
01/12/03	18:19:18		162.83	6.17
01/12/03	18:19:19		162.83	6.17
01/12/03	18:19:20		162.83	6.17
01/12/03	18:19:21		162.83	6.17
01/12/03	18:19:22		162.83	6.17
01/12/03	18:19:23		162.83	6.17
01/12/03	18:19:24		162.83	6.17
01/12/03	18:19:25		162.83	6.17
01/12/03	18:19:26		162.83	6.17
01/12/03	18:19:27		162.83	6.17
01/12/03	18:19:28		162.83	6.17
01/12/03	18:19:29		162.83	6.17

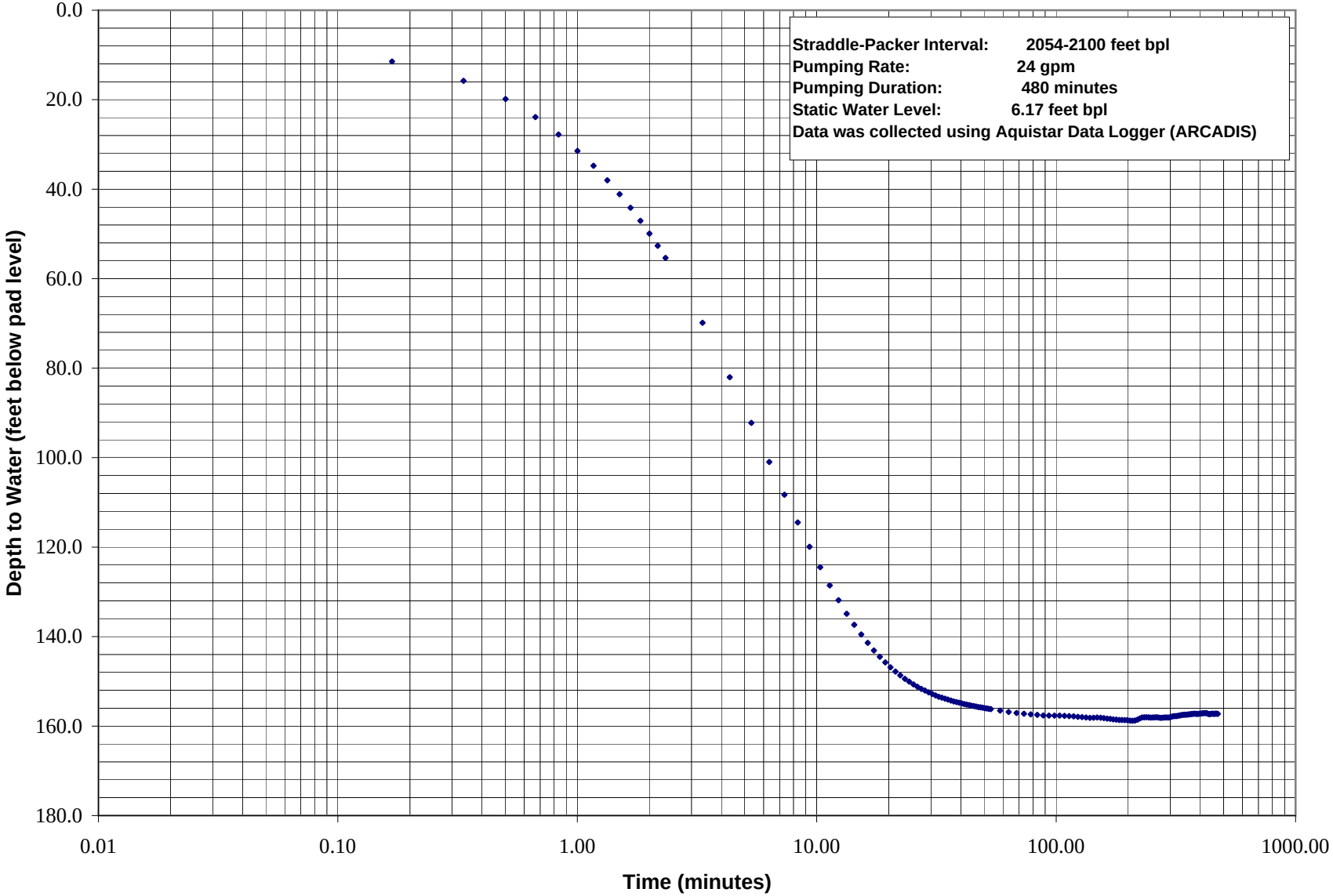
Date	Time	Minutes	Water Level	Depth to Water
		(from start pumping phase)	(feet above transducer)	(feet bpl)
01/12/03	18:19:30		162.83	6.17
01/12/03	18:19:31		162.83	6.17
01/12/03	18:19:41		162.83	6.17
01/12/03	18:19:51		162.83	6.17
01/12/03	18:20:01		162.83	6.17
01/12/03	18:20:11		162.83	6.17
01/12/03	18:20:21		162.83	6.17
01/12/03	18:20:31		162.83	6.17
01/12/03	18:20:41		162.83	6.17
01/12/03	18:20:51		162.83	6.17
01/12/03	18:21:01		162.83	6.17
01/12/03	18:21:11		162.83	6.17
01/12/03	18:21:21		162.83	6.17
01/12/03	18:21:31		162.83	6.17
01/12/03	18:21:41		162.83	6.17
01/12/03	18:21:51		162.83	6.17
01/12/03	18:22:01		162.83	6.17
01/12/03	18:22:11		162.83	6.17
01/12/03	18:22:21		162.83	6.17
01/12/03	18:22:31		162.83	6.17
01/12/03	18:22:41		162.83	6.17
01/12/03	18:22:51		162.83	6.17
01/12/03	18:23:01		162.83	6.17
01/12/03	18:23:11		162.83	6.17
01/12/03	18:23:21		162.83	6.17
01/12/03	18:23:31		162.83	6.17
01/12/03	18:23:41		162.83	6.17
01/12/03	18:23:51		162.83	6.17
01/12/03	18:24:01		162.83	**6.17**
01/12/03	18:24:11		163.22	5.78
01/12/03	18:24:21		163.99	5.01
01/12/03	18:24:31		164.73	4.27
01/12/03	18:24:41		165.56	3.44
01/12/03	18:24:51		166.21	2.79
01/12/03	18:25:01		166.18	2.82
01/12/03	18:25:11		166.11	2.89
01/12/03	18:25:21		166.06	2.94
01/12/03	18:25:31		166.00	3.00
01/12/03	18:25:41		165.95	3.05
01/12/03	18:25:51		165.89	3.11
01/12/03	18:26:01		165.84	3.16
01/12/03	18:26:11		165.78	3.22
01/12/03	18:26:21		165.70	3.30
01/12/03	18:26:31		165.64	3.36
01/12/03	18:26:41		165.58	3.42
01/12/03	18:26:51		165.53	3.47
01/12/03	18:27:01		165.47	3.53
01/12/03	18:27:11	0.00	161.53	7.47
01/12/03	18:27:21	0.17	157.53	11.47
01/12/03	18:27:31	0.33	153.23	15.77
01/12/03	18:27:41	0.50	149.14	19.86
01/12/03	18:27:51	0.67	145.10	23.90
01/12/03	18:28:01	0.83	141.22	27.78
01/12/03	18:28:11	1.00	137.56	31.44
01/12/03	18:28:21	1.17	134.24	34.76
01/12/03	18:28:31	1.33	130.99	38.01
01/12/03	18:28:41	1.50	127.89	41.11
01/12/03	18:28:51	1.67	124.86	44.14
01/12/03	18:29:01	1.83	121.94	47.06
01/12/03	18:29:11	2.00	119.07	49.93

Date	Time	Minutes	Water Level	Depth to Water
		(from start pumping phase)	(feet above transducer)	(feet bpl)
01/12/03	18:29:21	2.17	116.36	52.64
01/12/03	18:29:31	2.33	113.63	55.37
01/12/03	18:30:31	3.33	99.14	69.86
01/12/03	18:31:31	4.33	86.98	82.02
01/12/03	18:32:31	5.33	76.78	92.22
01/12/03	18:33:31	6.33	68.02	100.98
01/12/03	18:34:31	7.33	60.72	108.28
01/12/03	18:35:31	8.33	54.51	114.49
01/12/03	18:36:31	9.33	49.06	119.94
01/12/03	18:37:31	10.33	44.50	124.50
01/12/03	18:38:31	11.33	40.45	128.55
01/12/03	18:39:31	12.33	37.14	131.86
01/12/03	18:40:31	13.33	34.11	134.89
01/12/03	18:41:31	14.33	31.64	137.36
01/12/03	18:42:31	15.33	29.48	139.52
01/12/03	18:43:31	16.33	27.61	141.39
01/12/03	18:44:31	17.33	25.88	143.12
01/12/03	18:45:31	18.33	24.49	144.51
01/12/03	18:46:31	19.33	23.22	145.78
01/12/03	18:47:31	20.33	22.14	146.86
01/12/03	18:48:31	21.33	21.19	147.81
01/12/03	18:49:31	22.33	20.34	148.66
01/12/03	18:50:31	23.33	19.57	149.43
01/12/03	18:51:31	24.33	18.94	150.06
01/12/03	18:52:31	25.33	18.33	150.67
01/12/03	18:53:31	26.33	17.80	151.20
01/12/03	18:54:31	27.33	17.32	151.68
01/12/03	18:55:31	28.33	16.95	152.05
01/12/03	18:56:31	29.33	16.54	152.46
01/12/03	18:57:31	30.33	16.18	152.82
01/12/03	18:58:31	31.33	15.87	153.13
01/12/03	18:59:31	32.33	15.55	153.45
01/12/03	19:00:31	33.33	15.34	153.66
01/12/03	19:01:31	34.33	15.13	153.87
01/12/03	19:02:31	35.33	14.93	154.07
01/12/03	19:03:31	36.33	14.70	154.30
01/12/03	19:04:31	37.33	14.52	154.48
01/12/03	19:05:31	38.33	14.36	154.64
01/12/03	19:06:31	39.33	14.22	154.78
01/12/03	19:07:31	40.33	14.07	154.93
01/12/03	19:08:31	41.33	13.93	155.07
01/12/03	19:09:31	42.33	13.81	155.19
01/12/03	19:10:31	43.33	13.70	155.30
01/12/03	19:11:31	44.33	13.56	155.44
01/12/03	19:12:31	45.33	13.46	155.54
01/12/03	19:13:31	46.33	13.36	155.64
01/12/03	19:14:31	47.33	13.26	155.74
01/12/03	19:15:31	48.33	13.18	155.82
01/12/03	19:16:31	49.33	13.11	155.89
01/12/03	19:17:31	50.33	13.01	155.99
01/12/03	19:18:31	51.33	12.94	156.06
01/12/03	19:19:31	52.33	12.86	156.14
01/12/03	19:20:31	53.33	12.80	156.20
01/12/03	19:25:31	58.33	12.46	156.54
01/12/03	19:30:31	63.33	12.17	156.83
01/12/03	19:35:31	68.33	11.94	157.06
01/12/03	19:40:31	73.33	11.77	157.23
01/12/03	19:45:31	78.33	11.61	157.39
01/12/03	19:50:31	83.33	11.50	157.50
01/12/03	19:55:31	88.33	11.37	157.63

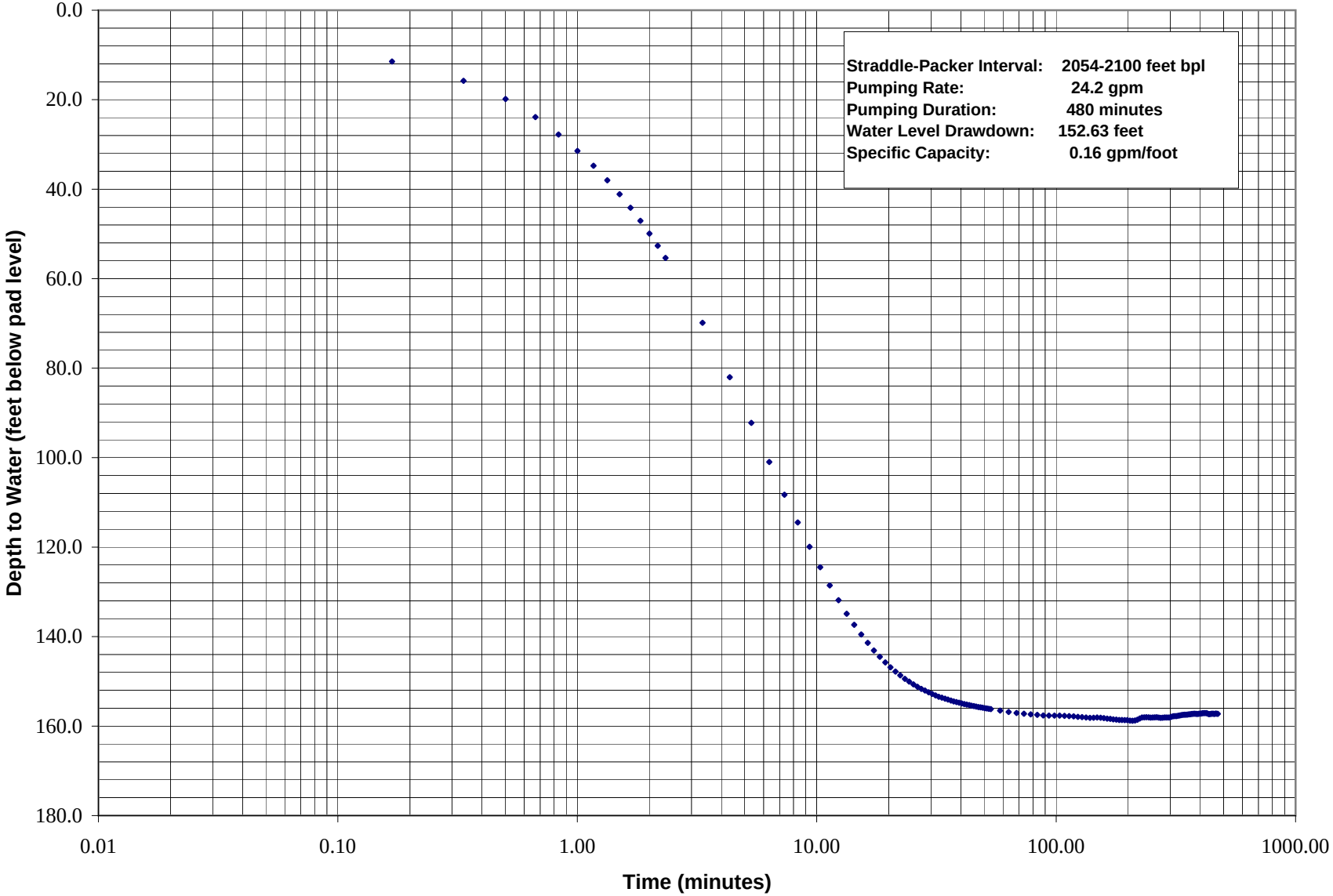
Date	Time	Minutes	Water Level	Depth to Water
		(from start pumping phase)	(feet above transducer)	(feet bpl)
01/12/03	20:00:31	93.33	11.33	157.67
01/12/03	20:05:31	98.33	11.34	157.66
01/12/03	20:10:31	103.33	11.33	157.67
01/12/03	20:15:31	108.33	11.28	157.72
01/12/03	20:20:31	113.33	11.22	157.78
01/12/03	20:25:31	118.33	11.19	157.81
01/12/03	20:30:31	123.33	11.07	157.93
01/12/03	20:35:31	128.33	11.01	157.99
01/12/03	20:40:31	133.33	10.93	158.07
01/12/03	20:45:31	138.33	10.84	158.16
01/12/03	20:50:31	143.33	10.88	158.12
01/12/03	20:55:31	148.33	10.91	158.09
01/12/03	21:00:31	153.33	10.85	158.15
01/12/03	21:05:31	158.33	10.77	158.23
01/12/03	21:10:31	163.33	10.66	158.34
01/12/03	21:15:31	168.33	10.60	158.40
01/12/03	21:20:31	173.33	10.51	158.49
01/12/03	21:25:31	178.33	10.45	158.55
01/12/03	21:30:31	183.33	10.37	158.63
01/12/03	21:35:31	188.33	10.36	158.64
01/12/03	21:40:31	193.33	10.34	158.66
01/12/03	21:45:31	198.33	10.32	158.68
01/12/03	21:50:31	203.33	10.23	158.77
01/12/03	21:55:31	208.33	10.20	**158.80**
01/12/03	22:00:31	213.33	10.25	158.75
01/12/03	22:05:31	218.33	10.42	158.58
01/12/03	22:10:31	223.33	10.69	158.31
01/12/03	22:15:31	228.33	10.93	158.07
01/12/03	22:20:31	233.33	10.95	158.05
01/12/03	22:25:31	238.33	10.99	158.01
01/12/03	22:30:31	243.33	10.95	158.05
01/12/03	22:35:31	248.33	10.89	158.11
01/12/03	22:40:31	253.33	10.92	158.08
01/12/03	22:45:31	258.33	10.96	158.04
01/12/03	22:50:31	263.33	10.99	158.01
01/12/03	22:55:31	268.33	10.89	158.11
01/12/03	23:00:31	273.33	10.84	158.16
01/12/03	23:05:31	278.33	10.85	158.15
01/12/03	23:10:31	283.33	10.91	158.09
01/12/03	23:15:31	288.33	10.92	158.08
01/12/03	23:20:31	293.33	10.93	158.07
01/12/03	23:25:31	298.33	10.93	158.07
01/12/03	23:30:31	303.33	11.09	157.91
01/12/03	23:35:31	308.33	11.21	157.79
01/12/03	23:40:31	313.33	11.24	157.76
01/12/03	23:45:31	318.33	11.24	157.76
01/12/03	23:50:31	323.33	11.30	157.70
01/12/03	23:55:31	328.33	11.37	157.63
01/13/03	0:00:31	333.33	11.47	157.53
01/13/03	0:05:31	338.33	11.51	157.49
01/13/03	0:10:31	343.33	11.53	157.47
01/13/03	0:15:31	348.33	11.53	157.47
01/13/03	0:20:31	353.33	11.56	157.44
01/13/03	0:25:31	358.33	11.61	157.39
01/13/03	0:30:31	363.33	11.66	157.34
01/13/03	0:35:31	368.33	11.71	157.29
01/13/03	0:40:31	373.33	11.73	157.27
01/13/03	0:45:31	378.33	11.76	157.24
01/13/03	0:50:31	383.33	11.73	157.27
01/13/03	0:55:31	388.33	11.72	157.28

Date	Time	Minutes (from start pumping phase)	Water Level (feet above transducer)	Depth to Water (feet bpl)
01/13/03	1:00:31	393.33	11.73	157.27
01/13/03	1:05:31	398.33	11.79	157.21
01/13/03	1:10:31	403.33	11.79	157.21
01/13/03	1:15:31	408.33	11.87	157.13
01/13/03	1:20:31	413.33	11.92	157.08
01/13/03	1:25:31	418.33	11.89	157.11
01/13/03	1:30:31	423.33	11.89	157.11
01/13/03	1:35:31	428.33	11.83	157.17
01/13/03	1:40:31	433.33	11.67	157.33
01/13/03	1:45:31	438.33	11.68	157.32
01/13/03	1:50:31	443.33	11.73	157.27
01/13/03	1:55:31	448.33	11.76	157.24
01/13/03	2:00:31	453.33	11.76	157.24
01/13/03	2:05:31	458.33	11.72	157.28
01/13/03	2:10:31	463.33	11.78	157.22
01/13/03	2:15:31	468.33	11.76	157.24
01/13/03	2:20:31	473.33	11.73	157.27

Straddle-Packer Test No. 1 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



Straddle-Packer Test No. 1 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



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Straddle-Packer Test No. 1 - Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well

Packer Depth Interval:	2054-2100 feet bpl	**Assumed Stabilized DTW:**	158.80 feet bpl
Start of Logging:	1/13/03 2:25:31	**Start of Pumping:**	01/12/03 18:27:11
End of Logging:	1/13/03 6:47:32	**Pumping Duration:**	480 minutes
Pumping Rate:	24 gpm	**Total Test Time:**	741.91 minutes

Data collected with Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\REC1.DAT

Note: Double line indicates end of pumping

Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/13/03	2:25:31		11.73	157.27	
1/13/03	2:25:31		11.74	157.26	
1/13/03	2:25:31		11.75	157.25	
1/13/03	2:25:31		11.73	157.27	
1/13/03	2:25:31		11.71	157.29	
1/13/03	2:25:31		11.74	157.26	
1/13/03	2:25:31		11.72	157.28	
1/13/03	2:25:31		11.73	157.27	
1/13/03	2:25:31		11.72	157.28	
1/13/03	2:25:32		11.71	157.29	
1/13/03	2:25:32		11.74	157.26	
1/13/03	2:25:32		11.73	157.27	
1/13/03	2:25:32		11.71	157.29	
1/13/03	2:25:32		11.74	157.26	
1/13/03	2:25:32		11.73	157.27	
1/13/03	2:25:32		11.72	157.28	
1/13/03	2:25:32		11.72	157.28	
1/13/03	2:25:32		11.73	157.27	
1/13/03	2:25:32		11.73	157.27	
1/13/03	2:25:33		11.72	157.28	
1/13/03	2:25:33		11.72	157.28	
1/13/03	2:25:33		11.73	157.27	
1/13/03	2:25:33		11.73	157.27	
1/13/03	2:25:33		11.73	157.27	
1/13/03	2:25:33		11.71	157.29	
1/13/03	2:25:33		11.73	157.27	
1/13/03	2:25:33		11.73	157.27	
1/13/03	2:25:33		11.74	157.26	
1/13/03	2:25:34		11.73	157.27	
1/13/03	2:25:34		11.71	157.29	
1/13/03	2:25:34		11.72	157.28	
1/13/03	2:25:34		11.68	157.32	
1/13/03	2:25:34		11.73	157.27	
1/13/03	2:25:34		11.74	157.26	
1/13/03	2:25:34		11.73	157.27	
1/13/03	2:25:34		11.76	157.24	
1/13/03	2:25:34		11.78	157.22	
1/13/03	2:25:34		11.72	157.28	
1/13/03	2:25:35		11.74	157.26	
1/13/03	2:25:35		11.72	157.28	
1/13/03	2:25:35		11.74	157.26	
1/13/03	2:25:35		11.76	157.24	
1/13/03	2:25:35		11.72	157.28	
1/13/03	2:25:35		11.76	157.24	
1/13/03	2:25:35		11.79	157.21	
1/13/03	2:25:35		11.73	157.27	
1/13/03	2:25:35		11.76	157.24	
1/13/03	2:25:36		11.77	157.23	

Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/13/03	2:25:36		11.74	157.26	
1/13/03	2:25:36		11.74	157.26	
1/13/03	2:25:36		11.73	157.27	
1/13/03	2:25:36		11.75	157.25	
1/13/03	2:25:36		11.76	157.24	
1/13/03	2:25:36		11.81	157.19	
1/13/03	2:25:36		11.77	157.23	
1/13/03	2:25:36		11.76	157.24	
1/13/03	2:25:36		11.74	157.26	
1/13/03	2:25:37		11.76	157.24	
1/13/03	2:25:37		11.73	157.27	
1/13/03	2:25:37		11.72	157.28	
1/13/03	2:25:37	0.00	11.88	157.12	1.68
1/13/03	2:25:37	0.00	12.19	156.81	1.99
1/13/03	2:25:37	0.00	12.41	156.59	2.21
1/13/03	2:25:37	0.01	12.57	156.43	2.37
1/13/03	2:25:37	0.01	12.45	156.55	2.25
1/13/03	2:25:37	0.01	12.38	156.62	2.18
1/13/03	2:25:37	0.01	12.24	156.76	2.04
1/13/03	2:25:38	0.01	12.16	156.84	1.96
1/13/03	2:25:38	0.01	11.91	157.09	1.71
1/13/03	2:25:38	0.02	12.45	156.55	2.25
1/13/03	2:25:38	0.02	12.62	156.38	2.42
1/13/03	2:25:38	0.02	12.77	156.23	2.57
1/13/03	2:25:38	0.02	12.76	156.24	2.56
1/13/03	2:25:38	0.02	12.85	156.15	2.65
1/13/03	2:25:38	0.02	12.90	156.10	2.70
1/13/03	2:25:38	0.03	13.00	156.00	2.80
1/13/03	2:25:39	0.03	13.27	155.73	3.07
1/13/03	2:25:39	0.03	13.19	155.81	2.99
1/13/03	2:25:39	0.03	13.37	155.63	3.17
1/13/03	2:25:39	0.03	13.48	155.52	3.28
1/13/03	2:25:39	0.03	13.49	155.51	3.29
1/13/03	2:25:39	0.04	13.57	155.43	3.37
1/13/03	2:25:39	0.04	13.67	155.33	3.47
1/13/03	2:25:39	0.04	13.76	155.24	3.56
1/13/03	2:25:39	0.04	14.12	154.88	3.92
1/13/03	2:25:39	0.04	14.02	154.98	3.82
1/13/03	2:25:40	0.05	14.12	154.88	3.92
1/13/03	2:25:40	0.05	14.21	154.79	4.01
1/13/03	2:25:40	0.05	14.27	154.73	4.07
1/13/03	2:25:40	0.05	14.36	154.64	4.16
1/13/03	2:25:40	0.05	14.46	154.54	4.26
1/13/03	2:25:40	0.05	14.57	154.43	4.37
1/13/03	2:25:40	0.06	14.68	154.32	4.48
1/13/03	2:25:40	0.06	14.85	154.15	4.65
1/13/03	2:25:40	0.06	14.87	154.13	4.67
1/13/03	2:25:40	0.06	14.96	154.04	4.76
1/13/03	2:25:41	0.06	15.09	153.91	4.89
1/13/03	2:25:41	0.06	15.19	153.81	4.99
1/13/03	2:25:41	0.07	15.28	153.72	5.08
1/13/03	2:25:41	0.07	15.37	153.63	5.17
1/13/03	2:25:41	0.07	15.35	153.65	5.15
1/13/03	2:25:41	0.07	15.55	153.45	5.35
1/13/03	2:25:41	0.07	15.61	153.39	5.41
1/13/03	2:25:41	0.07	15.68	153.32	5.48
1/13/03	2:25:41	0.08	15.79	153.21	5.59
1/13/03	2:25:41	0.08	15.92	153.08	5.72
1/13/03	2:25:42	0.08	15.99	153.01	5.79
1/13/03	2:25:42	0.08	16.10	152.90	5.90
1/13/03	2:25:42	0.08	16.09	152.91	5.89

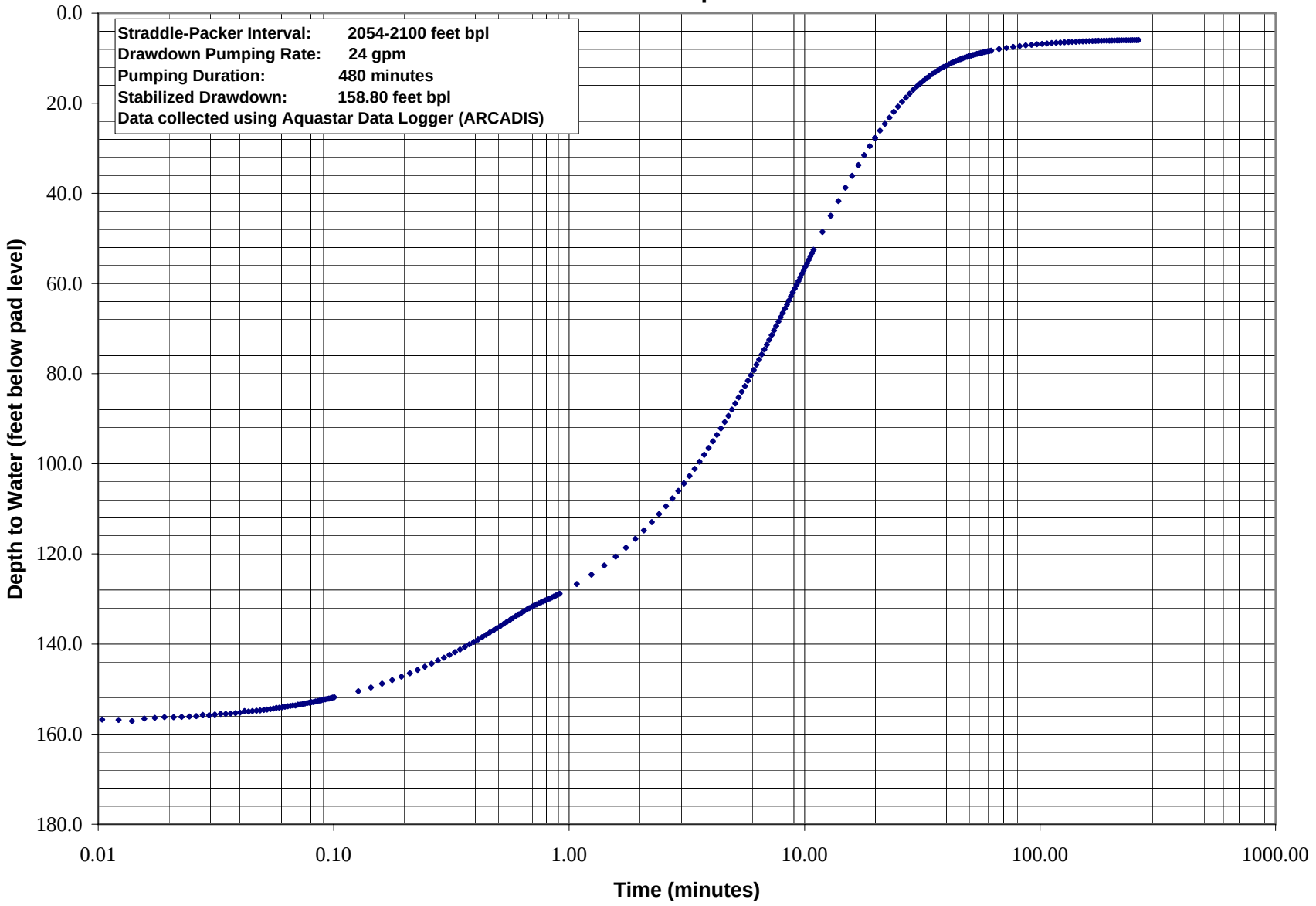
Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/13/03	2:25:42	0.08	16.26	152.74	6.06
1/13/03	2:25:42	0.09	16.35	152.65	6.15
1/13/03	2:25:42	0.09	16.44	152.56	6.24
1/13/03	2:25:42	0.09	16.54	152.46	6.34
1/13/03	2:25:42	0.09	16.64	152.36	6.44
1/13/03	2:25:42	0.09	16.73	152.27	6.53
1/13/03	2:25:42	0.09	16.84	152.16	6.64
1/13/03	2:25:43	0.10	16.89	152.11	6.69
1/13/03	2:25:43	0.10	16.97	152.03	6.77
1/13/03	2:25:43	0.10	17.10	151.90	6.90
1/13/03	2:25:43	0.10	17.19	151.81	6.99
1/13/03	2:25:45	0.13	18.55	150.45	8.35
1/13/03	2:25:46	0.14	19.35	149.65	9.15
1/13/03	2:25:47	0.16	20.20	148.80	10.00
1/13/03	2:25:48	0.18	21.00	148.00	10.80
1/13/03	2:25:49	0.19	21.78	147.22	11.58
1/13/03	2:25:50	0.21	22.52	146.48	12.32
1/13/03	2:25:51	0.23	23.27	145.73	13.07
1/13/03	2:25:52	0.24	23.97	145.03	13.77
1/13/03	2:25:53	0.26	24.66	144.34	14.46
1/13/03	2:25:54	0.28	25.34	143.66	15.14
1/13/03	2:25:55	0.29	25.97	143.03	15.77
1/13/03	2:25:56	0.31	26.60	142.40	16.40
1/13/03	2:25:57	0.33	27.21	141.79	17.01
1/13/03	2:25:58	0.34	27.79	141.21	17.59
1/13/03	2:25:59	0.36	28.36	140.64	18.16
1/13/03	2:26:00	0.38	28.92	140.08	18.72
1/13/03	2:26:01	0.39	29.47	139.53	19.27
1/13/03	2:26:02	0.41	30.00	139.00	19.80
1/13/03	2:26:03	0.43	30.53	138.47	20.33
1/13/03	2:26:04	0.44	31.04	137.96	20.84
1/13/03	2:26:05	0.46	31.56	137.44	21.36
1/13/03	2:26:06	0.48	32.04	136.96	21.84
1/13/03	2:26:07	0.49	32.53	136.47	22.33
1/13/03	2:26:08	0.51	33.00	136.00	22.80
1/13/03	2:26:09	0.53	33.46	135.54	23.26
1/13/03	2:26:10	0.54	33.91	135.09	23.71
1/13/03	2:26:11	0.56	34.34	134.66	24.14
1/13/03	2:26:12	0.58	34.77	134.23	24.57
1/13/03	2:26:13	0.59	35.19	133.81	24.99
1/13/03	2:26:14	0.61	35.58	133.42	25.38
1/13/03	2:26:15	0.63	35.95	133.05	25.75
1/13/03	2:26:16	0.64	36.30	132.70	26.10
1/13/03	2:26:17	0.66	36.65	132.35	26.45
1/13/03	2:26:18	0.68	36.97	132.03	26.77
1/13/03	2:26:19	0.69	37.27	131.73	27.07
1/13/03	2:26:20	0.71	37.55	131.45	27.35
1/13/03	2:26:21	0.73	37.80	131.20	27.60
1/13/03	2:26:22	0.74	38.04	130.96	27.84
1/13/03	2:26:23	0.76	38.27	130.73	28.07
1/13/03	2:26:24	0.78	38.49	130.51	28.29
1/13/03	2:26:25	0.79	38.70	130.30	28.50
1/13/03	2:26:26	0.81	38.91	130.09	28.71
1/13/03	2:26:27	0.83	39.12	129.88	28.92
1/13/03	2:26:28	0.84	39.33	129.67	29.13
1/13/03	2:26:29	0.86	39.54	129.46	29.34
1/13/03	2:26:30	0.88	39.75	129.25	29.55
1/13/03	2:26:31	0.89	39.97	129.03	29.77
1/13/03	2:26:32	0.91	40.18	128.82	29.98
1/13/03	2:26:41	1.08	42.31	126.69	32.11
1/13/03	2:26:51	1.24	44.39	124.61	34.19

Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/13/03	2:27:01	1.41	46.42	122.58	36.22
1/13/03	2:27:11	1.58	48.42	120.58	38.22
1/13/03	2:27:21	1.74	50.39	118.61	40.19
1/13/03	2:27:31	1.91	52.35	116.65	42.15
1/13/03	2:27:41	2.08	54.22	114.78	44.02
1/13/03	2:27:51	2.24	56.05	112.95	45.85
1/13/03	2:28:01	2.41	57.85	111.15	47.65
1/13/03	2:28:11	2.58	59.58	109.42	49.38
1/13/03	2:28:21	2.74	61.32	107.68	51.12
1/13/03	2:28:31	2.91	62.99	106.01	52.79
1/13/03	2:28:41	3.08	64.64	104.36	54.44
1/13/03	2:28:51	3.24	66.28	102.72	56.08
1/13/03	2:29:01	3.41	67.89	101.11	57.69
1/13/03	2:29:11	3.58	69.47	99.53	59.27
1/13/03	2:29:21	3.74	71.01	97.99	60.81
1/13/03	2:29:31	3.91	72.52	96.48	62.32
1/13/03	2:29:41	4.08	74.00	95.00	63.80
1/13/03	2:29:51	4.24	75.43	93.57	65.23
1/13/03	2:30:01	4.41	76.86	92.14	66.66
1/13/03	2:30:11	4.58	78.27	90.73	68.07
1/13/03	2:30:21	4.74	79.66	89.34	69.46
1/13/03	2:30:31	4.91	81.03	87.97	70.83
1/13/03	2:30:41	5.08	82.38	86.62	72.18
1/13/03	2:30:51	5.24	83.72	85.28	73.52
1/13/03	2:31:01	5.41	84.99	84.01	74.79
1/13/03	2:31:11	5.58	86.23	82.77	76.03
1/13/03	2:31:21	5.74	87.43	81.57	77.23
1/13/03	2:31:31	5.91	88.65	80.35	78.45
1/13/03	2:31:41	6.08	89.83	79.17	79.63
1/13/03	2:31:51	6.24	91.00	78.00	80.80
1/13/03	2:32:01	6.41	92.14	76.86	81.94
1/13/03	2:32:11	6.58	93.26	75.74	83.06
1/13/03	2:32:21	6.74	94.37	74.63	84.17
1/13/03	2:32:31	6.91	95.44	73.56	85.24
1/13/03	2:32:41	7.08	96.51	72.49	86.31
1/13/03	2:32:51	7.24	97.55	71.45	87.35
1/13/03	2:33:01	7.41	98.57	70.43	88.37
1/13/03	2:33:11	7.58	99.57	69.43	89.37
1/13/03	2:33:21	7.74	100.56	68.44	90.36
1/13/03	2:33:31	7.91	101.54	67.46	91.34
1/13/03	2:33:41	8.08	102.50	66.50	92.30
1/13/03	2:33:51	8.24	103.43	65.57	93.23
1/13/03	2:34:01	8.41	104.36	64.64	94.16
1/13/03	2:34:11	8.58	105.27	63.73	95.07
1/13/03	2:34:21	8.74	106.16	62.84	95.96
1/13/03	2:34:31	8.91	107.03	61.97	96.83
1/13/03	2:34:41	9.08	107.89	61.11	97.69
1/13/03	2:34:51	9.24	108.74	60.26	98.54
1/13/03	2:35:01	9.41	109.57	59.43	99.37
1/13/03	2:35:11	9.58	110.38	58.62	100.18
1/13/03	2:35:21	9.74	111.18	57.82	100.98
1/13/03	2:35:31	9.91	111.97	57.03	101.77
1/13/03	2:35:41	10.08	112.75	56.25	102.55
1/13/03	2:35:51	10.24	113.52	55.48	103.32
1/13/03	2:36:01	10.41	114.26	54.74	104.06
1/13/03	2:36:11	10.58	115.04	53.96	104.84
1/13/03	2:36:21	10.74	115.75	53.25	105.55
1/13/03	2:36:31	10.91	116.46	52.54	106.26
1/13/03	2:37:31	11.91	120.45	48.55	110.25
1/13/03	2:38:31	12.91	124.05	44.95	113.85
1/13/03	2:39:31	13.91	127.32	41.68	117.12

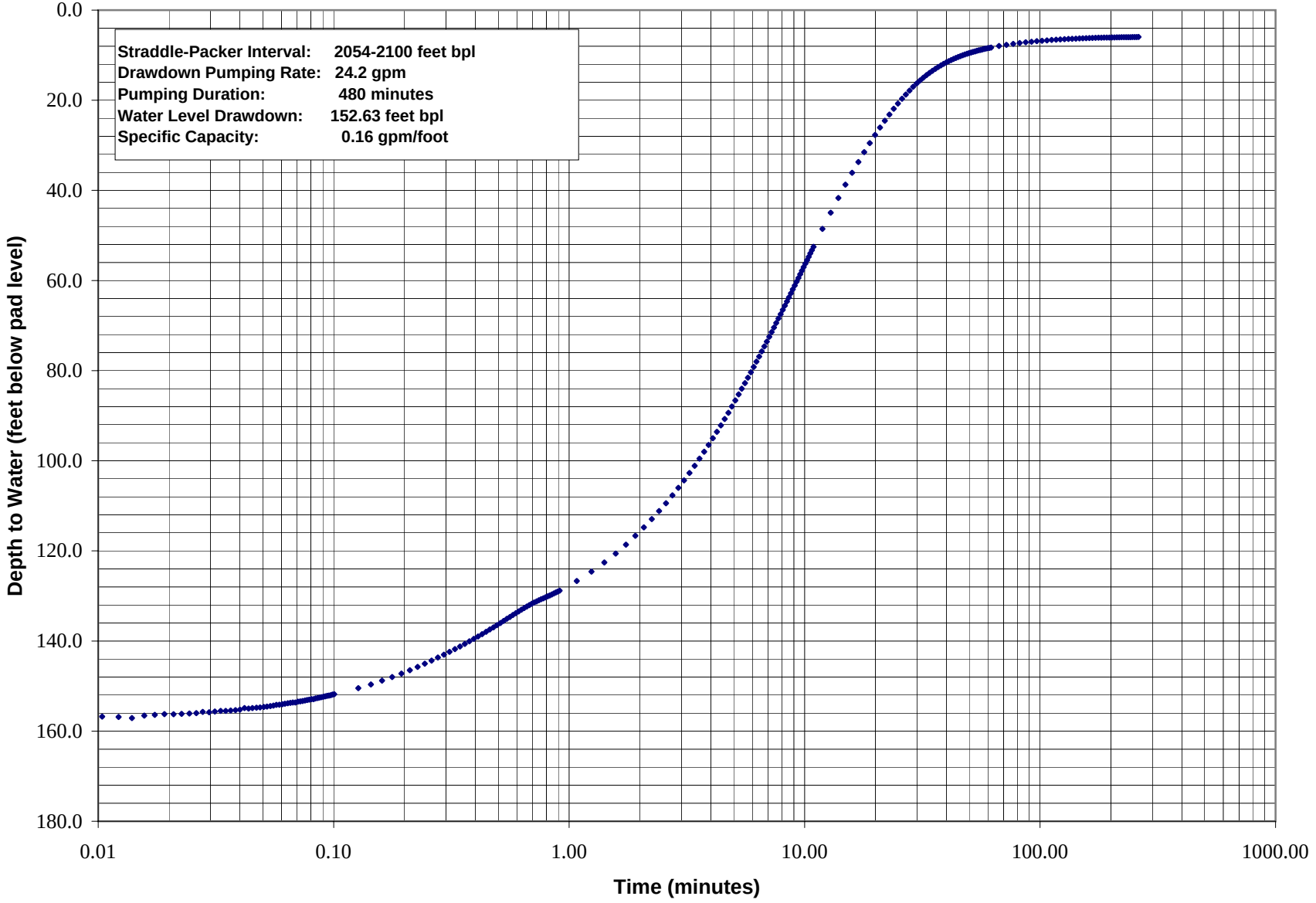
Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/13/03	2:40:31	14.91	130.26	38.74	120.06
1/13/03	2:41:31	15.91	132.89	36.11	122.69
1/13/03	2:42:31	16.91	135.29	33.71	125.09
1/13/03	2:43:31	17.91	137.49	31.51	127.29
1/13/03	2:44:31	18.91	139.49	29.51	129.29
1/13/03	2:45:31	19.91	141.29	27.71	131.09
1/13/03	2:46:31	20.91	142.95	26.05	132.75
1/13/03	2:47:31	21.91	144.45	24.55	134.25
1/13/03	2:48:31	22.91	145.83	23.17	135.63
1/13/03	2:49:31	23.91	147.12	21.88	136.92
1/13/03	2:50:31	24.91	148.27	20.73	138.07
1/13/03	2:51:31	25.91	149.32	19.68	139.12
1/13/03	2:52:31	26.91	150.27	18.73	140.07
1/13/03	2:53:31	27.91	151.16	17.84	140.96
1/13/03	2:54:31	28.91	151.99	17.01	141.79
1/13/03	2:55:31	29.91	152.72	16.28	142.52
1/13/03	2:56:31	30.91	153.40	15.60	143.20
1/13/03	2:57:31	31.91	154.00	15.00	143.80
1/13/03	2:58:31	32.91	154.56	14.44	144.36
1/13/03	2:59:31	33.91	155.08	13.92	144.88
1/13/03	3:00:31	34.91	155.54	13.46	145.34
1/13/03	3:01:31	35.91	155.98	13.02	145.78
1/13/03	3:02:31	36.91	156.38	12.62	146.18
1/13/03	3:03:31	37.91	156.74	12.26	146.54
1/13/03	3:04:31	38.91	157.06	11.94	146.86
1/13/03	3:05:31	39.91	157.37	11.63	147.17
1/13/03	3:06:31	40.91	157.67	11.33	147.47
1/13/03	3:07:31	41.91	157.92	11.08	147.72
1/13/03	3:08:31	42.91	158.17	10.83	147.97
1/13/03	3:09:31	43.91	158.39	10.61	148.19
1/13/03	3:10:31	44.91	158.60	10.40	148.40
1/13/03	3:11:31	45.91	158.80	10.20	148.60
1/13/03	3:12:31	46.91	158.98	10.02	148.78
1/13/03	3:13:31	47.91	159.15	9.85	148.95
1/13/03	3:14:31	48.91	159.31	9.69	149.11
1/13/03	3:15:31	49.91	159.45	9.55	149.25
1/13/03	3:16:31	50.91	159.60	9.40	149.40
1/13/03	3:17:31	51.91	159.73	9.27	149.53
1/13/03	3:18:31	52.91	159.85	9.15	149.65
1/13/03	3:19:31	53.91	159.97	9.03	149.77
1/13/03	3:20:31	54.91	160.07	8.93	149.87
1/13/03	3:21:31	55.91	160.18	8.82	149.98
1/13/03	3:22:31	56.91	160.28	8.72	150.08
1/13/03	3:23:31	57.91	160.38	8.62	150.18
1/13/03	3:24:31	58.91	160.46	8.54	150.26
1/13/03	3:25:31	59.91	160.55	8.45	150.35
1/13/03	3:26:31	60.91	160.62	8.38	150.42
1/13/03	3:27:31	61.91	160.70	8.30	150.50
1/13/03	3:32:31	66.91	161.03	7.97	150.83
1/13/03	3:37:32	71.91	161.29	7.71	151.09
1/13/03	3:42:31	76.91	161.51	7.49	151.31
1/13/03	3:47:32	81.91	161.71	7.29	151.51
1/13/03	3:52:32	86.91	161.86	7.14	151.66
1/13/03	3:57:32	91.91	161.99	7.01	151.79
1/13/03	4:02:32	96.91	162.10	6.90	151.90
1/13/03	4:07:32	101.91	162.21	6.79	152.01
1/13/03	4:12:32	106.91	162.29	6.71	152.09
1/13/03	4:17:32	111.91	162.38	6.62	152.18
1/13/03	4:22:32	116.91	162.44	6.56	152.24
1/13/03	4:27:32	121.91	162.50	6.50	152.30
1/13/03	4:32:32	126.91	162.55	6.45	152.35

Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/13/03	4:37:32	131.91	162.60	6.40	152.40
1/13/03	4:42:32	136.91	162.65	6.35	152.45
1/13/03	4:47:32	141.91	162.67	6.33	152.47
1/13/03	4:52:32	146.91	162.72	6.28	152.52
1/13/03	4:57:32	151.91	162.75	6.25	152.55
1/13/03	5:02:32	156.91	162.78	6.22	152.58
1/13/03	5:07:32	161.91	162.80	6.20	152.60
1/13/03	5:12:32	166.91	162.83	6.17	152.63
1/13/03	5:17:32	171.91	162.85	6.15	152.65
1/13/03	5:22:32	176.91	162.88	6.12	152.68
1/13/03	5:27:32	181.91	162.88	6.12	152.68
1/13/03	5:32:32	186.91	162.91	6.09	152.71
1/13/03	5:37:32	191.91	162.91	6.09	152.71
1/13/03	5:42:32	196.91	162.92	6.08	152.72
1/13/03	5:47:32	201.91	162.95	6.05	152.75
1/13/03	5:52:32	206.91	162.95	6.05	152.75
1/13/03	5:57:32	211.91	162.96	6.04	152.76
1/13/03	6:02:32	216.91	162.98	6.02	152.78
1/13/03	6:07:32	221.91	162.98	6.02	152.78
1/13/03	6:12:32	226.91	162.99	6.01	152.79
1/13/03	6:17:32	231.91	163.00	6.00	152.80
1/13/03	6:22:32	236.91	163.01	5.99	152.81
1/13/03	6:27:32	241.91	163.01	5.99	152.81
1/13/03	6:32:32	246.91	163.02	5.98	152.82
1/13/03	6:37:32	251.91	163.01	5.99	152.81
1/13/03	6:42:32	256.91	163.01	5.99	152.81
1/13/03	6:47:32	261.91	163.04	5.96	152.84

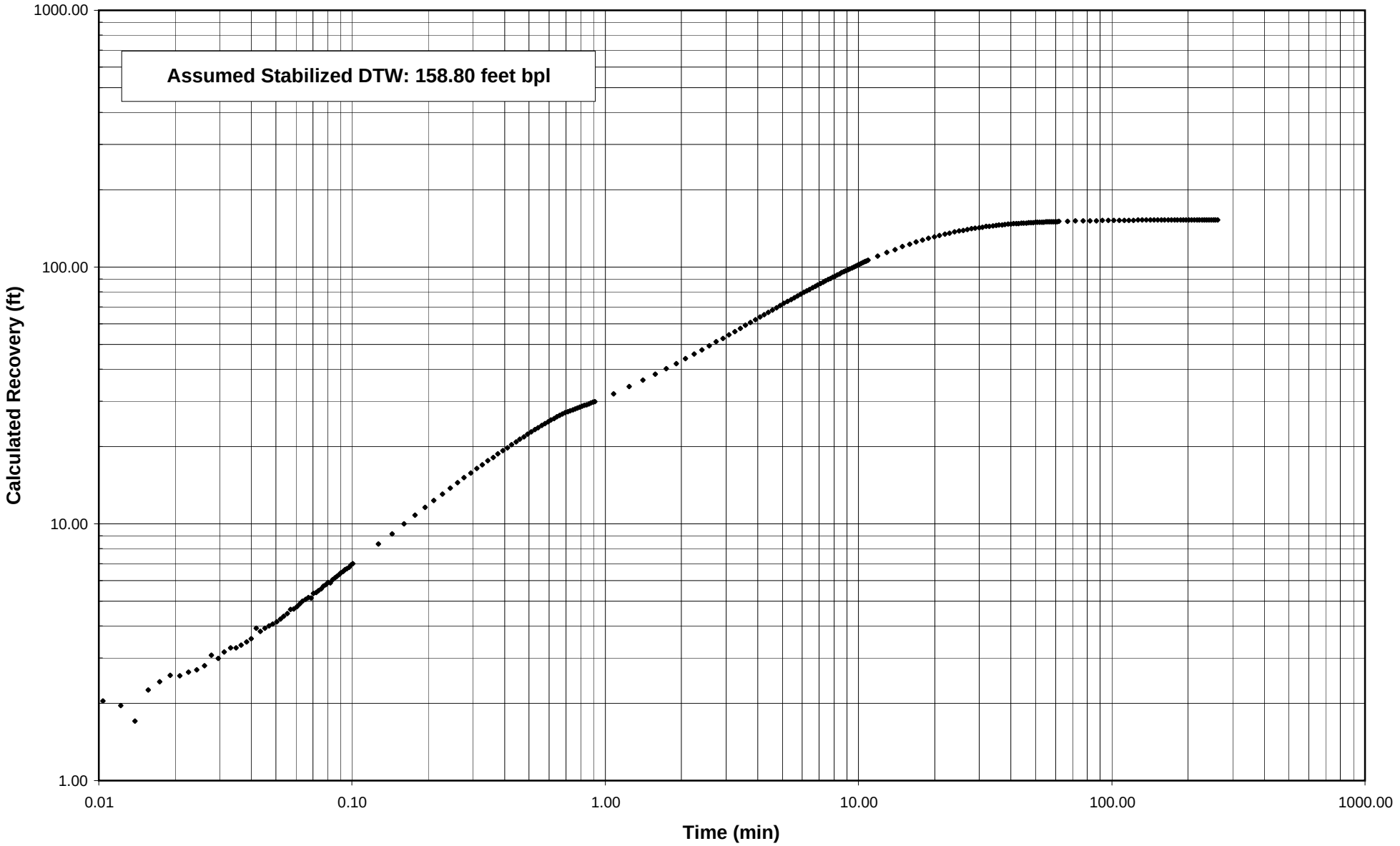
Straddle- Packer Test No. 1- Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



Straddle- Packer Test No. 1- Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



Dual-Zone Deep Monitor Well, Port St. Lucie
Port St. Lucie, Westport Injection Well System
Straddle-Packer Test No. 1 - Recovery



Straddle-Packer Test No. 2 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well

Packer Depth Interval:	1922-1968 feet bpl	**Static Water Level:**	0.24 feet bpl
Start of Logging:	1/13/2003 20:35	**Start of Pumping:**	01/13/03 20:35:55
End of Logging:	1/14/2003 2:02	**End of Pumping:**	1/14/03 2:05:37
Pumping Rate:	77.0 gpm	**Pumping Duration:**	330 minutes

Data Collected Using Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\PUMP2.DAT

Note: Double line indicates start of pumping

Bolded depth indicates assumed static water level

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
01/13/03	20:35:22		162.26	0.24
01/13/03	20:35:23		162.26	0.24
01/13/03	20:35:23		162.26	0.24
01/13/03	20:35:23		162.26	0.24
01/13/03	20:35:23		162.28	0.22
01/13/03	20:35:23		162.26	0.24
01/13/03	20:35:23		162.26	0.24
01/13/03	20:35:23		162.28	0.22
01/13/03	20:35:23		162.26	0.24
01/13/03	20:35:23		162.28	0.22
01/13/03	20:35:23		162.28	0.22
01/13/03	20:35:23		162.26	0.24
01/13/03	20:35:23		162.26	0.24
01/13/03	20:35:23		162.27	0.23
01/13/03	20:35:23		162.27	0.23
01/13/03	20:35:23		162.26	0.24
01/13/03	20:35:23		162.28	0.22
01/13/03	20:35:24		162.27	0.23
01/13/03	20:35:24		162.27	0.23
01/13/03	20:35:24		162.26	0.24
01/13/03	20:35:24		162.26	0.24
01/13/03	20:35:24		162.27	0.23
01/13/03	20:35:24		162.28	0.22
01/13/03	20:35:24		162.27	0.23
01/13/03	20:35:24		162.28	0.22
01/13/03	20:35:24		162.26	0.24
01/13/03	20:35:25		162.27	0.23
01/13/03	20:35:25		162.26	0.24
01/13/03	20:35:25		162.28	0.22
01/13/03	20:35:25		162.27	0.23
01/13/03	20:35:25		162.26	0.24
01/13/03	20:35:25		162.27	0.23
01/13/03	20:35:25		162.26	0.24
01/13/03	20:35:25		162.28	0.22
01/13/03	20:35:26		162.28	0.22
01/13/03	20:35:26		162.26	0.24
01/13/03	20:35:26		162.27	0.23
01/13/03	20:35:26		162.26	0.24
01/13/03	20:35:26		162.27	0.23
01/13/03	20:35:26		162.26	0.24
01/13/03	20:35:26		162.28	0.22
01/13/03	20:35:26		162.28	0.22
01/13/03	20:35:27		162.26	0.24
01/13/03	20:35:27		162.26	0.24
01/13/03	20:35:27		162.26	0.24
01/13/03	20:35:27		162.28	0.22

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/13/03	20:35:27		162.26	0.24
01/13/03	20:35:27		162.27	0.23
01/13/03	20:35:27		162.27	0.23
01/13/03	20:35:27		162.28	0.22
01/13/03	20:35:28		162.26	0.24
01/13/03	20:35:28		162.28	0.22
01/13/03	20:35:28		162.28	0.22
01/13/03	20:35:28		162.26	0.24
01/13/03	20:35:28		162.28	0.22
01/13/03	20:35:28		162.28	0.22
01/13/03	20:35:28		162.27	0.23
01/13/03	20:35:28		162.26	0.24
01/13/03	20:35:28		162.26	0.24
01/13/03	20:35:29		162.26	0.24
01/13/03	20:35:29		162.26	0.24
01/13/03	20:35:29		162.26	0.24
01/13/03	20:35:29		162.28	0.22
01/13/03	20:35:29		162.27	0.23
01/13/03	20:35:29		162.28	0.22
01/13/03	20:35:29		162.28	0.22
01/13/03	20:35:29		162.26	0.24
01/13/03	20:35:29		162.26	0.24
01/13/03	20:35:29		162.27	0.23
01/13/03	20:35:29		162.27	0.23
01/13/03	20:35:29		162.26	0.24
01/13/03	20:35:29		162.27	0.23
01/13/03	20:35:29		162.26	0.24
01/13/03	20:35:29		162.27	0.23
01/13/03	20:35:29		162.28	0.22
01/13/03	20:35:30		162.28	0.22
01/13/03	20:35:30		162.27	0.23
01/13/03	20:35:30		162.27	0.23
01/13/03	20:35:30		162.26	0.24
01/13/03	20:35:30		162.27	0.23
01/13/03	20:35:30		162.26	0.24
01/13/03	20:35:30		162.26	0.24
01/13/03	20:35:30		162.27	0.23
01/13/03	20:35:30		162.25	0.25
01/13/03	20:35:31		162.27	0.23
01/13/03	20:35:31		162.27	0.23
01/13/03	20:35:31		162.27	0.23
01/13/03	20:35:31		162.27	0.23
01/13/03	20:35:31		162.28	0.22
01/13/03	20:35:31		162.26	0.24
01/13/03	20:35:31		162.28	0.22
01/13/03	20:35:31		162.28	0.22
01/13/03	20:35:32		162.27	0.23
01/13/03	20:35:32		162.26	0.24
01/13/03	20:35:32		162.28	0.22
01/13/03	20:35:32		162.27	0.23
01/13/03	20:35:32		162.28	0.22
01/13/03	20:35:32		162.26	0.24
01/13/03	20:35:32		162.26	0.24
01/13/03	20:35:32		162.26	0.24
01/13/03	20:35:33		162.27	0.23
01/13/03	20:35:33		162.28	0.22
01/13/03	20:35:33		162.26	0.24
01/13/03	20:35:33		162.26	0.24
01/13/03	20:35:33		162.27	0.23
01/13/03	20:35:33		162.27	0.23

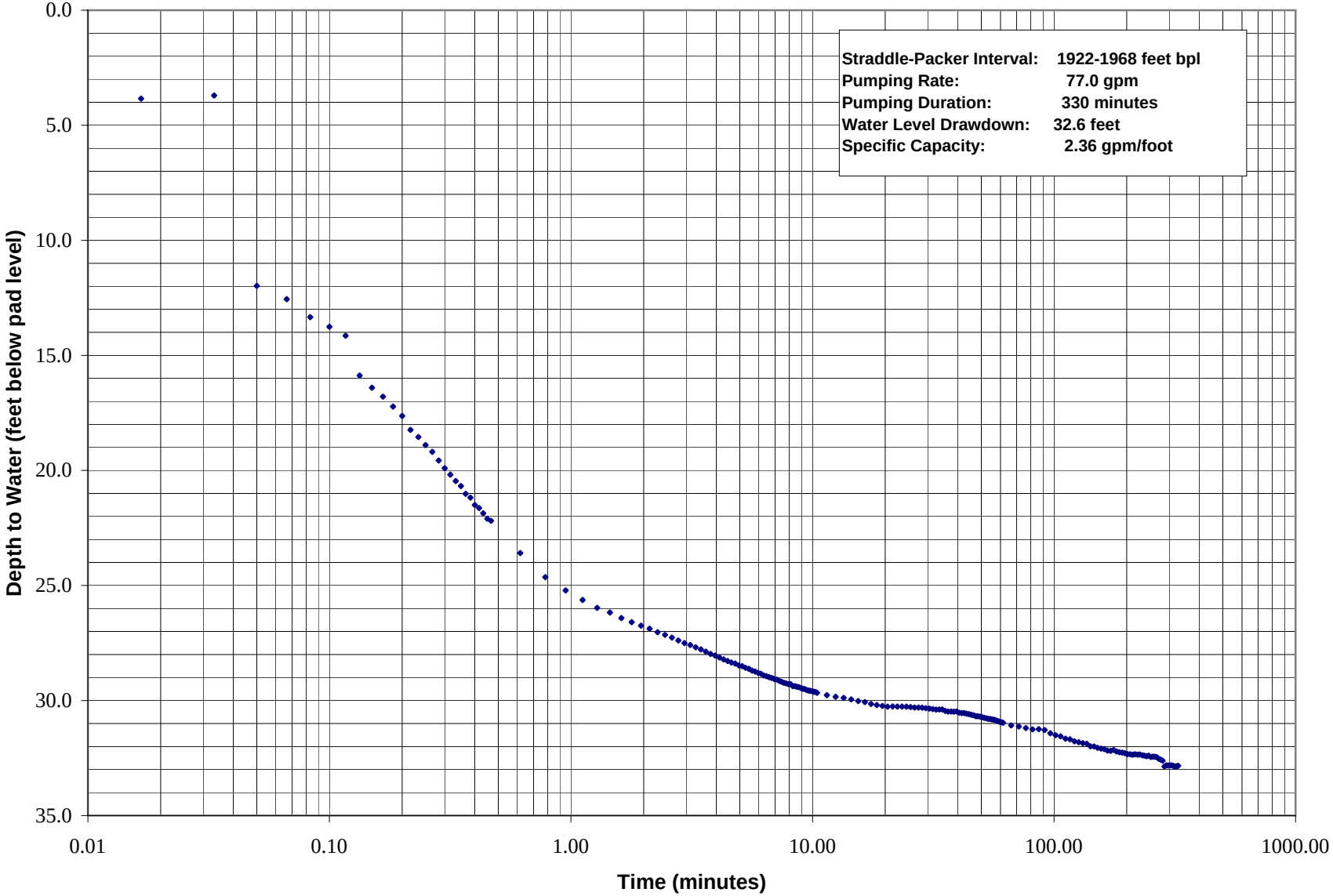
Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/13/03	20:35:33		162.26	0.24
01/13/03	20:35:33		162.27	0.23
01/13/03	20:35:33		162.27	0.23
01/13/03	20:35:34		162.28	0.22
01/13/03	20:35:34		162.28	0.22
01/13/03	20:35:34		162.27	0.23
01/13/03	20:35:34		162.28	0.22
01/13/03	20:35:34		162.27	0.23
01/13/03	20:35:34		162.26	0.24
01/13/03	20:35:34		162.27	0.23
01/13/03	20:35:34		162.27	0.23
01/13/03	20:35:34		162.26	0.24
01/13/03	20:35:35		162.26	0.24
01/13/03	20:35:35		162.27	0.23
01/13/03	20:35:36		162.26	0.24
01/13/03	20:35:37		162.26	0.24
01/13/03	20:35:38		162.26	0.24
01/13/03	20:35:39		162.25	0.25
01/13/03	20:35:40		162.26	0.24
01/13/03	20:35:41		162.26	0.24
01/13/03	20:35:42		162.26	0.24
01/13/03	20:35:43		162.26	0.24
01/13/03	20:35:44		162.26	0.24
01/13/03	20:35:45		162.26	0.24
01/13/03	20:35:46		162.26	0.24
01/13/03	20:35:47		162.26	0.24
01/13/03	20:35:48		162.26	0.24
01/13/03	20:35:49		162.26	0.24
01/13/03	20:35:50		162.26	0.24
01/13/03	20:35:51		162.26	0.24
01/13/03	20:35:52		162.26	0.24
01/13/03	20:35:53		162.26	0.24
01/13/03	20:35:54		162.26	**0.24**
01/13/03	20:35:55	0.00	158.57	3.93
01/13/03	20:35:56	0.02	158.66	3.84
01/13/03	20:35:57	0.03	158.80	3.70
01/13/03	20:35:58	0.05	150.52	11.98
01/13/03	20:35:59	0.07	149.94	12.56
01/13/03	20:36:00	0.08	149.16	13.34
01/13/03	20:36:01	0.10	148.74	13.76
01/13/03	20:36:02	0.12	148.35	14.15
01/13/03	20:36:03	0.13	146.62	15.88
01/13/03	20:36:04	0.15	146.09	16.41
01/13/03	20:36:05	0.17	145.70	16.80
01/13/03	20:36:06	0.18	145.28	17.22
01/13/03	20:36:07	0.20	144.87	17.63
01/13/03	20:36:08	0.22	144.26	18.24
01/13/03	20:36:09	0.23	143.95	18.55
01/13/03	20:36:10	0.25	143.60	18.90
01/13/03	20:36:11	0.27	143.31	19.19
01/13/03	20:36:12	0.28	142.93	19.57
01/13/03	20:36:13	0.30	142.59	19.91
01/13/03	20:36:14	0.32	142.32	20.18
01/13/03	20:36:15	0.33	142.04	20.46
01/13/03	20:36:16	0.35	141.82	20.68
01/13/03	20:36:17	0.37	141.48	21.02
01/13/03	20:36:18	0.38	141.32	21.18
01/13/03	20:36:19	0.40	141.00	21.50
01/13/03	20:36:20	0.42	140.87	21.63
01/13/03	20:36:21	0.43	140.63	21.87

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/13/03	20:36:22	0.45	140.40	22.10
01/13/03	20:36:23	0.47	140.31	22.19
01/13/03	20:36:32	0.62	138.91	23.59
01/13/03	20:36:42	0.78	137.86	24.64
01/13/03	20:36:52	0.95	137.28	25.22
01/13/03	20:37:02	1.12	136.87	25.63
01/13/03	20:37:12	1.28	136.53	25.97
01/13/03	20:37:22	1.45	136.32	26.18
01/13/03	20:37:32	1.62	136.09	26.41
01/13/03	20:37:42	1.78	135.90	26.60
01/13/03	20:37:52	1.95	135.75	26.75
01/13/03	20:38:02	2.12	135.62	26.88
01/13/03	20:38:12	2.28	135.47	27.03
01/13/03	20:38:22	2.45	135.36	27.14
01/13/03	20:38:32	2.62	135.23	27.27
01/13/03	20:38:42	2.78	135.11	27.39
01/13/03	20:38:52	2.95	134.99	27.51
01/13/03	20:39:02	3.12	134.92	27.58
01/13/03	20:39:12	3.28	134.81	27.69
01/13/03	20:39:22	3.45	134.72	27.78
01/13/03	20:39:32	3.62	134.63	27.87
01/13/03	20:39:42	3.78	134.53	27.97
01/13/03	20:39:52	3.95	134.45	28.05
01/13/03	20:40:02	4.12	134.37	28.13
01/13/03	20:40:12	4.28	134.29	28.21
01/13/03	20:40:22	4.45	134.21	28.29
01/13/03	20:40:32	4.62	134.15	28.35
01/13/03	20:40:42	4.78	134.11	28.39
01/13/03	20:40:52	4.95	134.03	28.47
01/13/03	20:41:02	5.12	133.99	28.51
01/13/03	20:41:12	5.28	133.92	28.58
01/13/03	20:41:22	5.45	133.88	28.62
01/13/03	20:41:32	5.62	133.80	28.70
01/13/03	20:41:42	5.78	133.76	28.74
01/13/03	20:41:52	5.95	133.70	28.80
01/13/03	20:42:02	6.12	133.66	28.84
01/13/03	20:42:12	6.28	133.59	28.91
01/13/03	20:42:22	6.45	133.56	28.94
01/13/03	20:42:32	6.62	133.51	28.99
01/13/03	20:42:42	6.78	133.48	29.02
01/13/03	20:42:52	6.95	133.43	29.07
01/13/03	20:43:02	7.12	133.41	29.09
01/13/03	20:43:12	7.28	133.36	29.14
01/13/03	20:43:22	7.45	133.31	29.19
01/13/03	20:43:32	7.62	133.27	29.23
01/13/03	20:43:42	7.78	133.25	29.25
01/13/03	20:43:52	7.95	133.21	29.29
01/13/03	20:44:02	8.12	133.21	29.29
01/13/03	20:44:12	8.28	133.12	29.38
01/13/03	20:44:22	8.45	133.12	29.38
01/13/03	20:44:32	8.62	133.10	29.40
01/13/03	20:44:42	8.78	133.08	29.42
01/13/03	20:44:52	8.95	133.05	29.45
01/13/03	20:45:02	9.12	133.01	29.49
01/13/03	20:45:12	9.28	133.00	29.50
01/13/03	20:45:22	9.45	132.96	29.54
01/13/03	20:45:32	9.62	132.94	29.56
01/13/03	20:45:42	9.78	132.92	29.58
01/13/03	20:45:52	9.95	132.91	29.59
01/13/03	20:46:02	10.12	132.88	29.62

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/13/03	20:46:12	10.28	132.87	29.63
01/13/03	20:46:22	10.45	132.84	29.66
01/13/03	20:47:23	11.47	132.73	29.77
01/13/03	20:48:23	12.47	132.66	29.84
01/13/03	20:49:23	13.47	132.61	29.89
01/13/03	20:50:23	14.47	132.55	29.95
01/13/03	20:51:23	15.47	132.47	30.03
01/13/03	20:52:23	16.47	132.43	30.07
01/13/03	20:53:23	17.47	132.35	30.15
01/13/03	20:54:23	18.47	132.30	30.20
01/13/03	20:55:23	19.47	132.27	30.23
01/13/03	20:56:23	20.47	132.23	30.27
01/13/03	20:57:23	21.47	132.24	30.26
01/13/03	20:58:23	22.47	132.24	30.26
01/13/03	20:59:23	23.47	132.24	30.26
01/13/03	21:00:23	24.47	132.23	30.27
01/13/03	21:01:23	25.47	132.21	30.29
01/13/03	21:02:23	26.47	132.19	30.31
01/13/03	21:03:23	27.47	132.19	30.31
01/13/03	21:04:23	28.47	132.19	30.31
01/13/03	21:05:23	29.47	132.16	30.34
01/13/03	21:06:23	30.47	132.15	30.35
01/13/03	21:07:23	31.47	132.13	30.37
01/13/03	21:08:23	32.47	132.11	30.39
01/13/03	21:09:23	33.47	132.11	30.39
01/13/03	21:10:23	34.47	132.11	30.39
01/13/03	21:11:23	35.47	132.05	30.45
01/13/03	21:12:23	36.47	132.02	30.48
01/13/03	21:13:23	37.47	132.03	30.47
01/13/03	21:14:23	38.47	132.01	30.49
01/13/03	21:15:23	39.47	132.03	30.47
01/13/03	21:16:23	40.47	131.97	30.53
01/13/03	21:17:23	41.47	131.95	30.55
01/13/03	21:18:23	42.47	131.95	30.55
01/13/03	21:19:23	43.47	131.93	30.57
01/13/03	21:20:23	44.47	131.91	30.59
01/13/03	21:21:23	45.47	131.88	30.62
01/13/03	21:22:23	46.47	131.86	30.64
01/13/03	21:23:23	47.47	131.82	30.68
01/13/03	21:24:23	48.47	131.82	30.68
01/13/03	21:25:23	49.47	131.80	30.70
01/13/03	21:26:23	50.47	131.77	30.73
01/13/03	21:27:23	51.47	131.75	30.75
01/13/03	21:28:23	52.47	131.72	30.78
01/13/03	21:29:23	53.47	131.70	30.80
01/13/03	21:30:23	54.47	131.69	30.81
01/13/03	21:31:23	55.47	131.67	30.83
01/13/03	21:32:23	56.47	131.67	30.83
01/13/03	21:33:23	57.47	131.64	30.86
01/13/03	21:34:23	58.47	131.61	30.89
01/13/03	21:35:23	59.47	131.58	30.92
01/13/03	21:36:23	60.47	131.56	30.94
01/13/03	21:37:23	61.47	131.54	30.96
01/13/03	21:42:23	66.47	131.42	31.08
01/13/03	21:47:23	71.47	131.37	31.13
01/13/03	21:52:23	76.47	131.30	31.20
01/13/03	21:57:23	81.47	131.25	31.25
01/13/03	22:02:23	86.47	131.25	31.25
01/13/03	22:07:23	91.47	131.22	31.28
01/13/03	22:12:23	96.47	131.07	31.43

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/13/03	22:17:23	101.47	130.99	31.51
01/13/03	22:22:23	106.47	130.94	31.56
01/13/03	22:27:23	111.47	130.84	31.66
01/13/03	22:32:23	116.47	130.81	31.69
01/13/03	22:37:23	121.47	130.73	31.77
01/13/03	22:42:23	126.47	130.69	31.81
01/13/03	22:47:23	131.47	130.65	31.85
01/13/03	22:52:23	136.47	130.63	31.87
01/13/03	22:57:23	141.47	130.51	31.99
01/13/03	23:02:23	146.47	130.50	32.00
01/13/03	23:07:23	151.47	130.45	32.05
01/13/03	23:12:23	156.47	130.41	32.09
01/13/03	23:17:23	161.47	130.39	32.11
01/13/03	23:22:23	166.47	130.32	32.18
01/13/03	23:27:23	171.47	130.32	32.18
01/13/03	23:32:23	176.47	130.35	32.15
01/13/03	23:37:23	181.47	130.29	32.21
01/13/03	23:42:23	186.47	130.25	32.25
01/13/03	23:47:23	191.47	130.24	32.26
01/13/03	23:52:23	196.47	130.21	32.29
01/13/03	23:57:23	201.47	130.17	32.33
01/14/03	0:02:23	206.47	130.16	32.34
01/14/03	0:07:23	211.47	130.14	32.36
01/14/03	0:12:23	216.47	130.16	32.34
01/14/03	0:17:23	221.47	130.15	32.35
01/14/03	0:22:23	226.47	130.16	32.34
01/14/03	0:27:23	231.47	130.12	32.38
01/14/03	0:32:23	236.47	130.11	32.39
01/14/03	0:37:23	241.47	130.08	32.42
01/14/03	0:42:23	246.47	130.11	32.39
01/14/03	0:47:23	251.47	130.05	32.45
01/14/03	0:52:23	256.47	130.06	32.44
01/14/03	0:57:23	261.47	130.06	32.44
01/14/03	1:02:23	266.47	130.04	32.46
01/14/03	1:07:23	271.47	129.96	32.54
01/14/03	1:12:23	276.47	129.93	32.57
01/14/03	1:17:23	281.47	129.89	32.61
01/14/03	1:22:23	286.47	129.63	32.87
01/14/03	1:27:23	291.47	129.68	32.82
01/14/03	1:32:23	296.47	129.68	32.82
01/14/03	1:37:23	301.47	129.68	32.82
01/14/03	1:42:23	306.47	129.69	32.81
01/14/03	1:47:23	311.47	129.66	32.84
01/14/03	1:52:23	316.47	129.63	32.87
01/14/03	1:57:23	321.47	129.64	32.86
01/14/03	2:02:23	326.47	129.67	32.83

Straddle-Packer Test No. 2 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



Straddle-Packer Test No. 1 - Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well

Packer Depth Interval:	1922-1968 feet bpl	**Assumed Stabilized DTW:**	32.94 feet bpl
Start of Logging:	1/14/03 2:05:17	**Start of Pumping:**	01/13/03 20:35:55
End of Logging:	1/14/03 4:57:18	**Pumping Duration:**	480 minutes
Pumping Rate:	77.0 gpm	**Total Test Time:**	502 minutes

Data collected with Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\REC2.DAT

Note: Double line indicates end of pumping

Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/14/03	2:05:18		129.67	32.83	0.11
1/14/03	2:05:18		129.69	32.81	0.13
1/14/03	2:05:18		129.72	32.78	0.16
1/14/03	2:05:18		129.64	32.86	0.08
1/14/03	2:05:18		129.72	32.78	0.16
1/14/03	2:05:18		129.65	32.85	0.09
1/14/03	2:05:18		129.68	32.82	0.12
1/14/03	2:05:18		129.64	32.86	0.08
1/14/03	2:05:18		129.67	32.83	0.11
1/14/03	2:05:19		129.63	32.87	0.07
1/14/03	2:05:19		129.61	32.89	0.05
1/14/03	2:05:19		129.67	32.83	0.11
1/14/03	2:05:19		129.58	32.92	0.02
1/14/03	2:05:19		129.62	32.88	0.06
1/14/03	2:05:19		129.68	32.82	0.12
1/14/03	2:05:19		129.64	32.86	0.08
1/14/03	2:05:19		129.66	32.84	0.10
1/14/03	2:05:19		129.57	32.93	0.01
1/14/03	2:05:19		129.63	32.87	0.07
1/14/03	2:05:20		129.68	32.82	0.12
1/14/03	2:05:20		129.56	**32.94**	0.00
1/14/03	2:05:20		129.65	32.85	0.09
1/14/03	2:05:20		129.70	32.80	0.14
1/14/03	2:05:20		129.64	32.86	0.08
1/14/03	2:05:20		129.71	32.79	0.15
1/14/03	2:05:20		129.72	32.78	0.16
1/14/03	2:05:20		129.59	32.91	0.03
1/14/03	2:05:20		129.71	32.79	0.15
1/14/03	2:05:20		129.68	32.82	0.12
1/14/03	2:05:21		129.68	32.82	0.12
1/14/03	2:05:21		129.63	32.87	0.07
1/14/03	2:05:21		129.63	32.87	0.07
1/14/03	2:05:21		129.65	32.85	0.09
1/14/03	2:05:21		129.64	32.86	0.08
1/14/03	2:05:21		129.61	32.89	0.05
1/14/03	2:05:21		129.65	32.85	0.09
1/14/03	2:05:21		129.69	32.81	0.13
1/14/03	2:05:21		129.61	32.89	0.05
1/14/03	2:05:22		129.70	32.80	0.14
1/14/03	2:05:22		129.59	32.91	0.03
1/14/03	2:05:22		129.67	32.83	0.11
1/14/03	2:05:22		129.68	32.82	0.12
1/14/03	2:05:22		129.64	32.86	0.08
1/14/03	2:05:22		129.64	32.86	0.08
1/14/03	2:05:22		129.60	32.90	0.04
1/14/03	2:05:22		129.67	32.83	0.11
1/14/03	2:05:22		129.63	32.87	0.07
1/14/03	2:05:22		129.65	32.85	0.09

Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/14/03	2:05:23		129.68	32.82	0.12
1/14/03	2:05:23		129.70	32.80	0.14
1/14/03	2:05:23		129.72	32.78	0.16
1/14/03	2:05:23		129.59	32.91	0.03
1/14/03	2:05:23		129.62	32.88	0.06
1/14/03	2:05:23		129.67	32.83	0.11
1/14/03	2:05:23		129.64	32.86	0.08
1/14/03	2:05:23		129.68	32.82	0.12
1/14/03	2:05:23		129.64	32.86	0.08
1/14/03	2:05:23		129.59	32.91	0.03
1/14/03	2:05:24		129.66	32.84	0.10
1/14/03	2:05:24		129.67	32.83	0.11
1/14/03	2:05:24		129.67	32.83	0.11
1/14/03	2:05:24		129.69	32.81	0.13
1/14/03	2:05:24		129.67	32.83	0.11
1/14/03	2:05:24		129.68	32.82	0.12
1/14/03	2:05:24		129.67	32.83	0.11
1/14/03	2:05:24		129.65	32.85	0.09
1/14/03	2:05:24		129.66	32.84	0.10
1/14/03	2:05:25		129.65	32.85	0.09
1/14/03	2:05:25		129.67	32.83	0.11
1/14/03	2:05:25		129.70	32.80	0.14
1/14/03	2:05:25		129.64	32.86	0.08
1/14/03	2:05:25		129.69	32.81	0.13
1/14/03	2:05:25		129.72	32.78	0.16
1/14/03	2:05:25		129.63	32.87	0.07
1/14/03	2:05:25		129.65	32.85	0.09
1/14/03	2:05:25		129.69	32.81	0.13
1/14/03	2:05:25		129.65	32.85	0.09
1/14/03	2:05:26		129.64	32.86	0.08
1/14/03	2:05:26		129.59	32.91	0.03
1/14/03	2:05:26		129.64	32.86	0.08
1/14/03	2:05:26		129.59	32.91	0.03
1/14/03	2:05:26		129.71	32.79	0.15
1/14/03	2:05:26		129.69	32.81	0.13
1/14/03	2:05:26		129.69	32.81	0.13
1/14/03	2:05:26		129.65	32.85	0.09
1/14/03	2:05:26		129.72	32.78	0.16
1/14/03	2:05:26		129.61	32.89	0.05
1/14/03	2:05:27		129.61	32.89	0.05
1/14/03	2:05:27		129.68	32.82	0.12
1/14/03	2:05:27		129.66	32.84	0.10
1/14/03	2:05:27		129.58	32.92	0.02
1/14/03	2:05:27		129.66	32.84	0.10
1/14/03	2:05:27		129.62	32.88	0.06
1/14/03	2:05:27		129.66	32.84	0.10
1/14/03	2:05:27		129.71	32.79	0.15
1/14/03	2:05:27		129.68	32.82	0.12
1/14/03	2:05:28		129.67	32.83	0.11
1/14/03	2:05:28		129.70	32.80	0.14
1/14/03	2:05:28		129.69	32.81	0.13
1/14/03	2:05:28		129.68	32.82	0.12
1/14/03	2:05:28		129.62	32.88	0.06
1/14/03	2:05:28		129.61	32.89	0.05
1/14/03	2:05:28		129.69	32.81	0.13
1/14/03	2:05:28		129.62	32.88	0.06
1/14/03	2:05:28		129.61	32.89	0.05
1/14/03	2:05:28		129.65	32.85	0.09
1/14/03	2:05:29		129.64	32.86	0.08
1/14/03	2:05:29		129.68	32.82	0.12
1/14/03	2:05:29		129.66	32.84	0.10

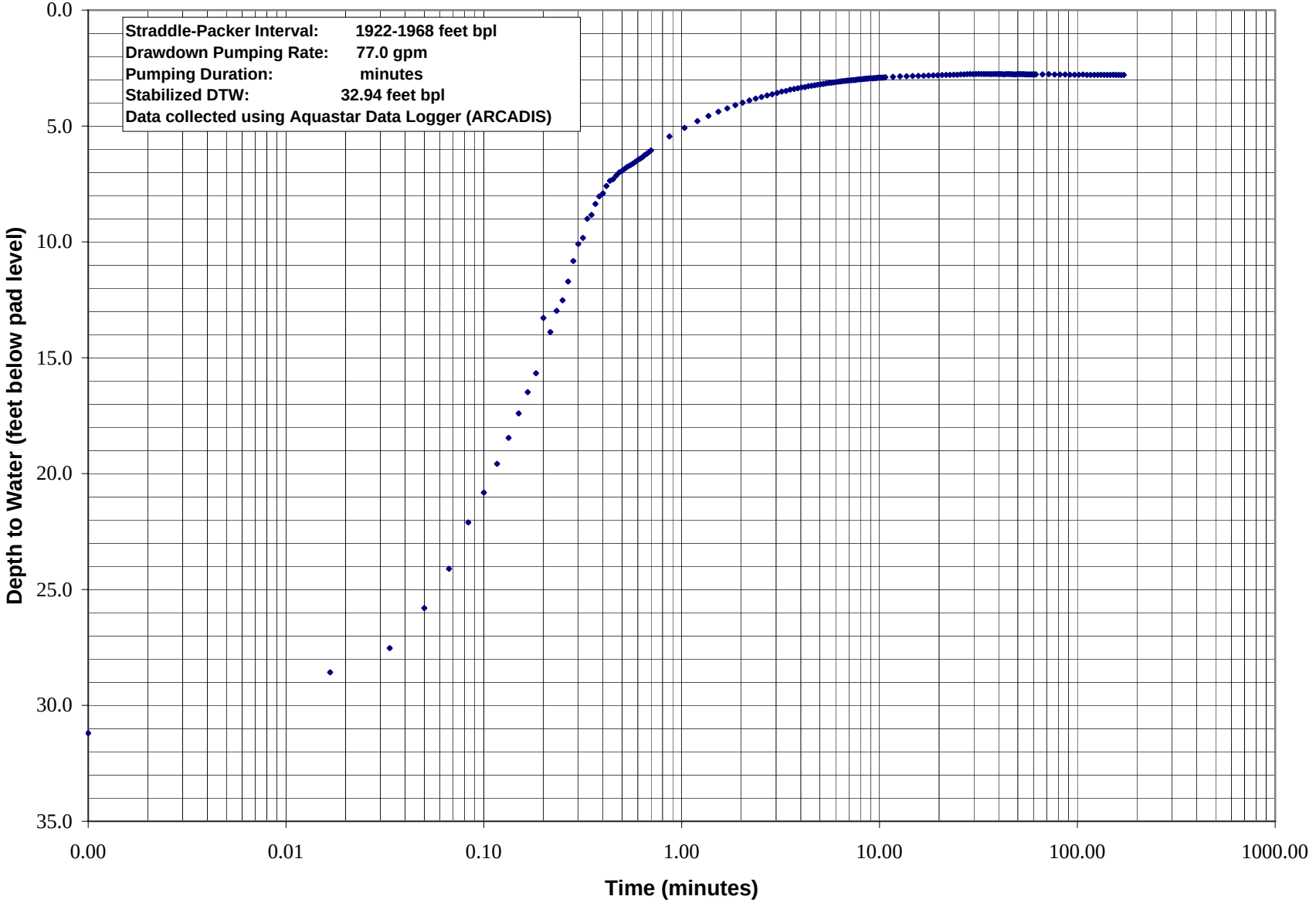
Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/14/03	2:05:29		129.70	32.80	0.14
1/14/03	2:05:29		129.69	32.81	0.13
1/14/03	2:05:29		129.61	32.89	0.05
1/14/03	2:05:29		129.66	32.84	0.10
1/14/03	2:05:29		129.62	32.88	0.06
1/14/03	2:05:29		129.64	32.86	0.08
1/14/03	2:05:29		129.63	32.87	0.07
1/14/03	2:05:30		129.67	32.83	0.11
1/14/03	2:05:30		129.65	32.85	0.09
1/14/03	2:05:30		129.69	32.81	0.13
1/14/03	2:05:30		129.64	32.86	0.08
1/14/03	2:05:31		129.65	32.85	0.09
1/14/03	2:05:33		129.67	32.83	0.11
1/14/03	2:05:34		129.66	32.84	0.10
1/14/03	2:05:35		129.65	32.85	0.09
1/14/03	2:05:36		129.64	32.86	0.08
1/14/03	2:05:37	0.00	131.30	31.20	1.74
1/14/03	2:05:38	0.02	133.93	28.57	4.37
1/14/03	2:05:39	0.03	134.97	27.53	5.41
1/14/03	2:05:40	0.05	136.70	25.80	7.14
1/14/03	2:05:41	0.07	138.40	24.10	8.84
1/14/03	2:05:42	0.08	140.40	22.10	10.84
1/14/03	2:05:43	0.10	141.68	20.82	12.12
1/14/03	2:05:44	0.12	142.92	19.58	13.36
1/14/03	2:05:45	0.13	144.04	18.46	14.48
1/14/03	2:05:46	0.15	145.10	17.40	15.54
1/14/03	2:05:47	0.17	146.01	16.49	16.45
1/14/03	2:05:48	0.18	146.83	15.67	17.27
1/14/03	2:05:49	0.20	149.21	13.29	19.65
1/14/03	2:05:50	0.22	148.61	13.89	19.05
1/14/03	2:05:51	0.23	149.52	12.98	19.96
1/14/03	2:05:52	0.25	149.98	12.52	20.42
1/14/03	2:05:53	0.27	150.79	11.71	21.23
1/14/03	2:05:54	0.28	151.68	10.82	22.12
1/14/03	2:05:55	0.30	152.41	10.09	22.85
1/14/03	2:05:56	0.32	152.67	9.83	23.11
1/14/03	2:05:57	0.33	153.50	9.00	23.94
1/14/03	2:05:58	0.35	153.66	8.84	24.10
1/14/03	2:05:59	0.37	154.14	8.36	24.58
1/14/03	2:06:00	0.38	154.46	8.04	24.90
1/14/03	2:06:01	0.40	154.59	7.91	25.03
1/14/03	2:06:02	0.42	154.91	7.59	25.35
1/14/03	2:06:03	0.43	155.13	7.37	25.57
1/14/03	2:06:04	0.45	155.21	7.29	25.65
1/14/03	2:06:05	0.47	155.36	7.14	25.80
1/14/03	2:06:06	0.48	155.50	7.00	25.94
1/14/03	2:06:07	0.50	155.57	6.93	26.01
1/14/03	2:06:08	0.52	155.66	6.84	26.10
1/14/03	2:06:09	0.53	155.75	6.75	26.19
1/14/03	2:06:10	0.55	155.81	6.69	26.25
1/14/03	2:06:11	0.57	155.88	6.62	26.32
1/14/03	2:06:12	0.58	155.95	6.55	26.39
1/14/03	2:06:13	0.60	156.03	6.47	26.47
1/14/03	2:06:14	0.62	156.09	6.41	26.53
1/14/03	2:06:15	0.63	156.15	6.35	26.59
1/14/03	2:06:16	0.65	156.24	6.26	26.68
1/14/03	2:06:17	0.67	156.30	6.20	26.74
1/14/03	2:06:18	0.68	156.38	6.12	26.82
1/14/03	2:06:19	0.70	156.45	6.05	26.89
1/14/03	2:06:28	0.87	157.05	5.45	27.49
1/14/03	2:06:38	1.03	157.42	5.08	27.86

Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/14/03	2:06:48	1.20	157.71	4.79	28.15
1/14/03	2:06:58	1.37	157.94	4.56	28.38
1/14/03	2:07:08	1.53	158.12	4.38	28.56
1/14/03	2:07:18	1.70	158.26	4.24	28.70
1/14/03	2:07:28	1.87	158.40	4.10	28.84
1/14/03	2:07:38	2.03	158.51	3.99	28.95
1/14/03	2:07:48	2.20	158.60	3.90	29.04
1/14/03	2:07:58	2.37	158.68	3.82	29.12
1/14/03	2:08:08	2.53	158.75	3.75	29.19
1/14/03	2:08:18	2.70	158.82	3.68	29.26
1/14/03	2:08:28	2.87	158.87	3.63	29.31
1/14/03	2:08:38	3.03	158.93	3.57	29.37
1/14/03	2:08:48	3.20	158.98	3.52	29.42
1/14/03	2:08:58	3.37	159.01	3.49	29.45
1/14/03	2:09:08	3.53	159.07	3.43	29.51
1/14/03	2:09:18	3.70	159.10	3.40	29.54
1/14/03	2:09:28	3.87	159.13	3.37	29.57
1/14/03	2:09:38	4.03	159.16	3.34	29.60
1/14/03	2:09:48	4.20	159.18	3.32	29.62
1/14/03	2:09:58	4.37	159.22	3.28	29.66
1/14/03	2:10:08	4.53	159.24	3.26	29.68
1/14/03	2:10:18	4.70	159.26	3.24	29.70
1/14/03	2:10:28	4.87	159.28	3.22	29.72
1/14/03	2:10:38	5.03	159.30	3.20	29.74
1/14/03	2:10:48	5.20	159.32	3.18	29.76
1/14/03	2:10:58	5.37	159.34	3.16	29.78
1/14/03	2:11:08	5.53	159.36	3.14	29.80
1/14/03	2:11:18	5.70	159.37	3.13	29.81
1/14/03	2:11:28	5.87	159.38	3.12	29.82
1/14/03	2:11:38	6.03	159.40	3.10	29.84
1/14/03	2:11:48	6.20	159.41	3.09	29.85
1/14/03	2:11:58	6.37	159.42	3.08	29.86
1/14/03	2:12:08	6.53	159.44	3.06	29.88
1/14/03	2:12:18	6.70	159.45	3.05	29.89
1/14/03	2:12:28	6.87	159.46	3.04	29.90
1/14/03	2:12:38	7.03	159.47	3.03	29.91
1/14/03	2:12:48	7.20	159.47	3.03	29.91
1/14/03	2:12:58	7.37	159.48	3.02	29.92
1/14/03	2:13:08	7.53	159.49	3.01	29.93
1/14/03	2:13:18	7.70	159.50	3.00	29.94
1/14/03	2:13:28	7.87	159.51	2.99	29.95
1/14/03	2:13:38	8.03	159.52	2.98	29.96
1/14/03	2:13:48	8.20	159.53	2.97	29.97
1/14/03	2:13:58	8.37	159.53	2.97	29.97
1/14/03	2:14:08	8.53	159.54	2.96	29.98
1/14/03	2:14:18	8.70	159.55	2.95	29.99
1/14/03	2:14:28	8.87	159.55	2.95	29.99
1/14/03	2:14:38	9.03	159.56	2.94	30.00
1/14/03	2:14:48	9.20	159.55	2.95	29.99
1/14/03	2:14:58	9.37	159.57	2.93	30.01
1/14/03	2:15:08	9.53	159.57	2.93	30.01
1/14/03	2:15:18	9.70	159.58	2.92	30.02
1/14/03	2:15:28	9.87	159.58	2.92	30.02
1/14/03	2:15:38	10.03	159.59	2.91	30.03
1/14/03	2:15:48	10.20	159.58	2.92	30.02
1/14/03	2:15:58	10.37	159.59	2.91	30.03
1/14/03	2:16:08	10.53	159.59	2.91	30.03
1/14/03	2:16:18	10.70	159.60	2.90	30.04
1/14/03	2:17:19	11.70	159.62	2.88	30.06
1/14/03	2:18:18	12.70	159.64	2.86	30.08
1/14/03	2:19:18	13.70	159.65	2.85	30.09

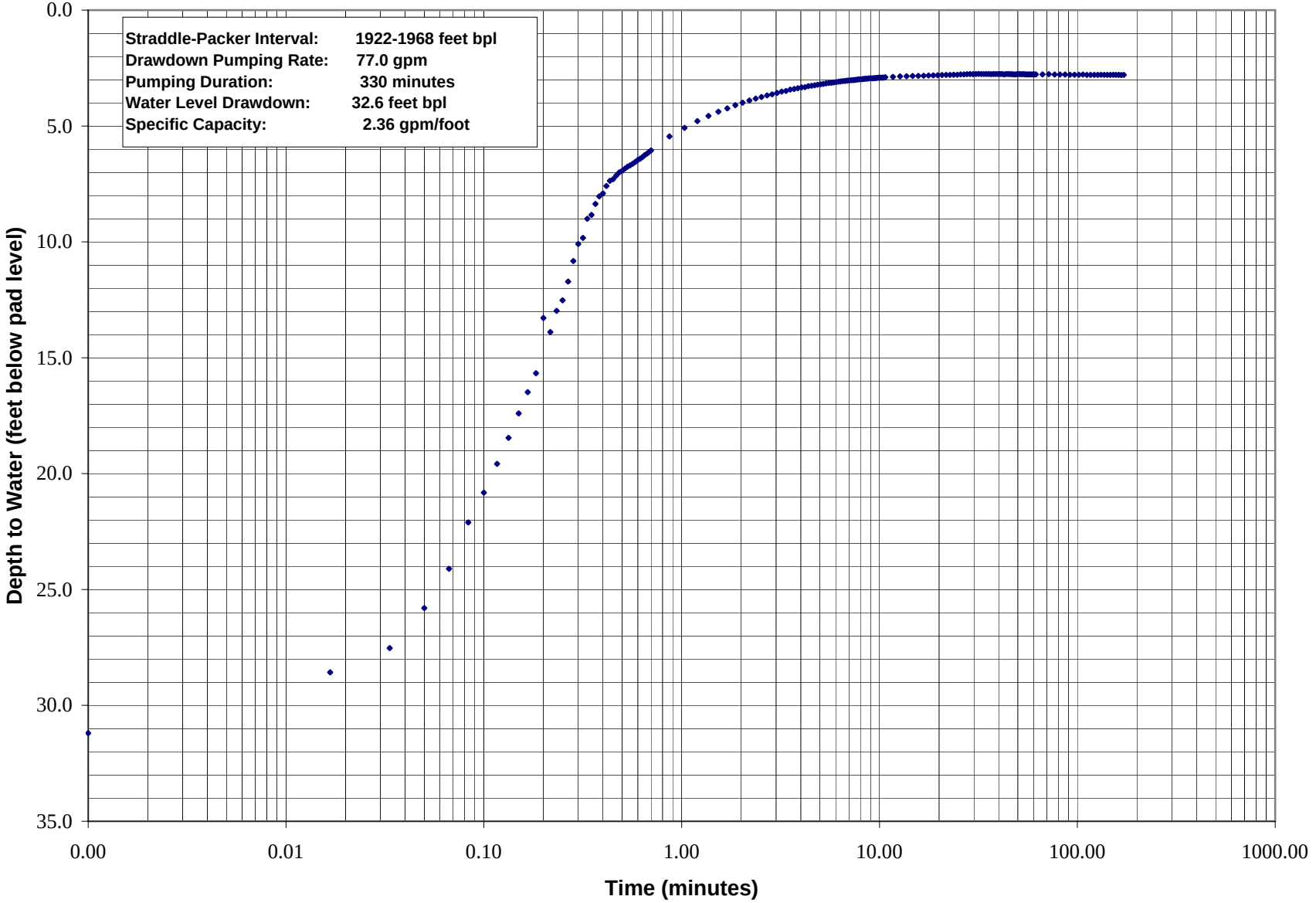
Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/14/03	2:20:18	14.70	159.66	2.84	30.10
1/14/03	2:21:18	15.70	159.66	2.84	30.10
1/14/03	2:22:18	16.70	159.67	2.83	30.11
1/14/03	2:23:18	17.70	159.68	2.82	30.12
1/14/03	2:24:18	18.70	159.68	2.82	30.12
1/14/03	2:25:18	19.70	159.69	2.81	30.13
1/14/03	2:26:18	20.70	159.70	2.80	30.14
1/14/03	2:27:18	21.70	159.71	2.79	30.15
1/14/03	2:28:18	22.70	159.71	2.79	30.15
1/14/03	2:29:18	23.70	159.71	2.79	30.15
1/14/03	2:30:18	24.70	159.71	2.79	30.15
1/14/03	2:31:18	25.70	159.73	2.77	30.17
1/14/03	2:32:18	26.70	159.73	2.77	30.17
1/14/03	2:33:18	27.70	159.73	2.77	30.17
1/14/03	2:34:18	28.70	159.74	2.76	30.18
1/14/03	2:35:18	29.70	159.73	2.77	30.17
1/14/03	2:36:18	30.70	159.74	2.76	30.18
1/14/03	2:37:18	31.70	159.75	2.75	30.19
1/14/03	2:38:18	32.70	159.74	2.76	30.18
1/14/03	2:39:18	33.70	159.74	2.76	30.18
1/14/03	2:40:18	34.70	159.74	2.76	30.18
1/14/03	2:41:18	35.70	159.74	2.76	30.18
1/14/03	2:42:18	36.70	159.73	2.77	30.17
1/14/03	2:43:18	37.70	159.74	2.76	30.18
1/14/03	2:44:18	38.70	159.74	2.76	30.18
1/14/03	2:45:18	39.70	159.74	2.76	30.18
1/14/03	2:46:18	40.70	159.74	2.76	30.18
1/14/03	2:47:18	41.70	159.74	2.76	30.18
1/14/03	2:48:18	42.70	159.73	2.77	30.17
1/14/03	2:49:18	43.70	159.74	2.76	30.18
1/14/03	2:50:18	44.70	159.74	2.76	30.18
1/14/03	2:51:18	45.70	159.73	2.77	30.17
1/14/03	2:52:18	46.70	159.73	2.77	30.17
1/14/03	2:53:18	47.70	159.73	2.77	30.17
1/14/03	2:54:18	48.70	159.73	2.77	30.17
1/14/03	2:55:18	49.70	159.73	2.77	30.17
1/14/03	2:56:18	50.70	159.74	2.76	30.18
1/14/03	2:57:18	51.70	159.73	2.77	30.17
1/14/03	2:58:18	52.70	159.73	2.77	30.17
1/14/03	2:59:18	53.70	159.73	2.77	30.17
1/14/03	3:00:18	54.70	159.73	2.77	30.17
1/14/03	3:01:18	55.70	159.73	2.77	30.17
1/14/03	3:02:18	56.70	159.73	2.77	30.17
1/14/03	3:03:18	57.70	159.73	2.77	30.17
1/14/03	3:04:18	58.70	159.73	2.77	30.17
1/14/03	3:05:18	59.70	159.73	2.77	30.17
1/14/03	3:06:18	60.70	159.73	2.77	30.17
1/14/03	3:07:18	61.70	159.73	2.77	30.17
1/14/03	3:12:18	66.70	159.73	2.77	30.17
1/14/03	3:17:18	71.70	159.73	2.77	30.17
1/14/03	3:22:19	76.70	159.72	2.78	30.16
1/14/03	3:27:19	81.70	159.72	2.78	30.16
1/14/03	3:32:19	86.70	159.72	2.78	30.16
1/14/03	3:37:19	91.70	159.71	2.79	30.15
1/14/03	3:42:19	96.70	159.71	2.79	30.15
1/14/03	3:47:19	101.70	159.71	2.79	30.15
1/14/03	3:52:19	106.70	159.72	2.78	30.16
1/14/03	3:57:19	111.70	159.71	2.79	30.15
1/14/03	4:02:19	116.70	159.71	2.79	30.15
1/14/03	4:07:19	121.70	159.71	2.79	30.15
1/14/03	4:12:19	126.70	159.71	2.79	30.15

Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/14/03	4:17:19	131.70	159.71	2.79	30.15
1/14/03	4:22:19	136.70	159.71	2.79	30.15
1/14/03	4:27:19	141.70	159.71	2.79	30.15
1/14/03	4:32:19	146.70	159.71	2.79	30.15
1/14/03	4:37:19	151.70	159.71	2.79	30.15
1/14/03	4:42:19	156.70	159.71	2.79	30.15
1/14/03	4:47:19	161.70	159.71	2.79	30.15
1/14/03	4:52:19	166.70	159.70	2.80	30.14
1/14/03	4:57:19	171.70	159.71	2.79	30.15

Straddle- Packer Test No. 2- Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



Straddle- Packer Test No. 2- Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



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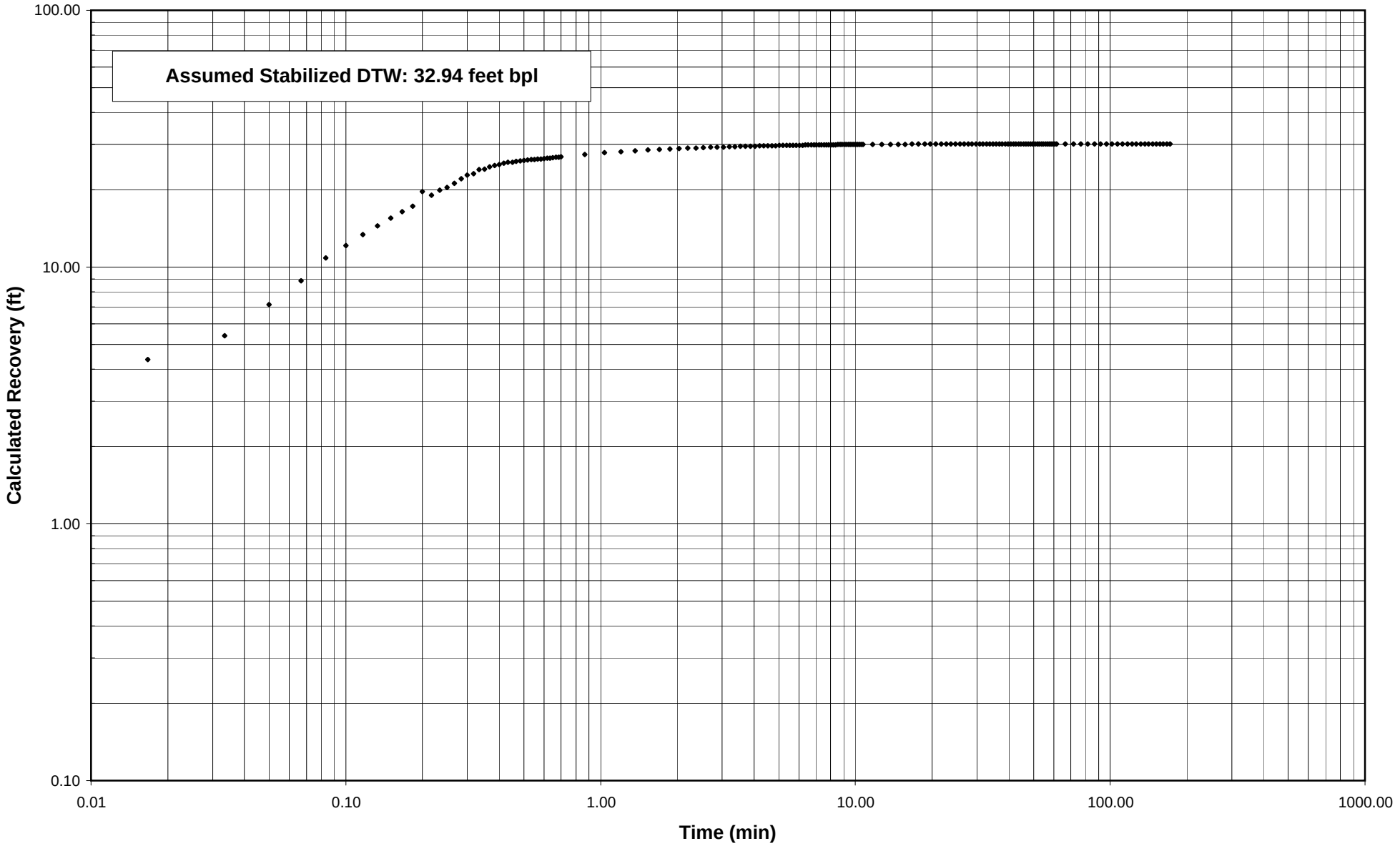
Dual-Zone Deep Monitor Well, Port St. Lucie
Port St. Lucie, Westport Injection Well System
Straddle-Packer Test No. 2 - Recovery



g:aproject\reesemacon\pf001153.0003\MW Packer Tests\Test#2\#2 Recovery.xls\Rec Log-log

Straddle-Packer Test No. 3 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well

Packer Depth Interval:	1855-1901 feet bpl	**Static Water Level:**	4.7 feet above pad level
Start of Logging:	1/15/2003 0:07	**Start of Pumping:**	1/15/2003 0:07
End of Logging:	1/15/2003 14:29	**End of Pumping:**	1/15/2003 17:18
Pumping Rate:	9.54 gpm	**Pumping Duration:**	1031 minutes

Data Collected Using Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\WESTPORT\PUMP3.DAT

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
01/15/03	0:07:22	0.00	162.00	-0.60
01/15/03	0:07:22	0.00	162.05	-0.65
01/15/03	0:07:22	0.00	163.32	-1.92
01/15/03	0:07:22	0.01	160.64	0.76
01/15/03	0:07:22	0.01	161.83	-0.43
01/15/03	0:07:22	0.01	162.31	-0.91
01/15/03	0:07:22	0.01	162.43	-1.03
01/15/03	0:07:22	0.01	161.64	-0.24
01/15/03	0:07:22	0.01	161.85	-0.45
01/15/03	0:07:23	0.02	162.25	-0.85
01/15/03	0:07:23	0.02	162.07	-0.67
01/15/03	0:07:23	0.02	161.24	0.16
01/15/03	0:07:23	0.02	161.94	-0.54
01/15/03	0:07:23	0.02	161.53	-0.13
01/15/03	0:07:23	0.02	161.55	-0.15
01/15/03	0:07:23	0.03	161.48	-0.08
01/15/03	0:07:23	0.03	161.84	-0.44
01/15/03	0:07:23	0.03	162.02	-0.62
01/15/03	0:07:23	0.03	161.05	0.35
01/15/03	0:07:24	0.03	161.24	0.16
01/15/03	0:07:24	0.03	161.98	-0.58
01/15/03	0:07:24	0.04	161.71	-0.31
01/15/03	0:07:24	0.04	161.32	0.08
01/15/03	0:07:24	0.04	161.22	0.18
01/15/03	0:07:24	0.04	161.45	-0.05
01/15/03	0:07:24	0.04	161.16	0.24
01/15/03	0:07:24	0.05	161.32	0.08
01/15/03	0:07:24	0.05	161.20	0.20
01/15/03	0:07:25	0.05	161.06	0.34
01/15/03	0:07:25	0.05	161.09	0.31
01/15/03	0:07:25	0.05	160.95	0.45
01/15/03	0:07:25	0.05	161.17	0.23
01/15/03	0:07:25	0.06	161.10	0.30
01/15/03	0:07:25	0.06	160.83	0.57
01/15/03	0:07:25	0.06	160.88	0.52
01/15/03	0:07:25	0.06	161.13	0.27
01/15/03	0:07:25	0.06	161.32	0.08
01/15/03	0:07:25	0.06	160.74	0.66
01/15/03	0:07:26	0.07	160.86	0.54
01/15/03	0:07:26	0.07	160.87	0.53
01/15/03	0:07:26	0.07	160.64	0.76
01/15/03	0:07:26	0.07	161.01	0.39
01/15/03	0:07:26	0.07	160.59	0.81
01/15/03	0:07:26	0.07	160.59	0.81
01/15/03	0:07:26	0.08	160.51	0.89
01/15/03	0:07:26	0.08	160.70	0.70

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/15/03	0:07:26	0.08	160.81	0.59
01/15/03	0:07:27	0.08	160.52	0.88
01/15/03	0:07:27	0.08	160.49	0.91
01/15/03	0:07:27	0.09	160.75	0.65
01/15/03	0:07:27	0.09	160.45	0.95
01/15/03	0:07:27	0.09	160.73	0.67
01/15/03	0:07:27	0.09	160.20	1.20
01/15/03	0:07:27	0.09	160.26	1.14
01/15/03	0:07:27	0.09	160.46	0.94
01/15/03	0:07:27	0.10	160.49	0.91
01/15/03	0:07:27	0.10	160.12	1.28
01/15/03	0:07:28	0.10	160.45	0.95
01/15/03	0:07:28	0.10	160.24	1.16
01/15/03	0:07:28	0.10	160.40	1.00
01/15/03	0:07:28	0.10	160.18	1.22
01/15/03	0:07:28	0.11	160.18	1.22
01/15/03	0:07:28	0.11	160.04	1.36
01/15/03	0:07:28	0.11	160.02	1.38
01/15/03	0:07:28	0.11	160.07	1.33
01/15/03	0:07:28	0.11	160.35	1.05
01/15/03	0:07:28	0.11	159.42	1.98
01/15/03	0:07:29	0.12	160.28	1.12
01/15/03	0:07:29	0.12	160.15	1.25
01/15/03	0:07:29	0.12	159.87	1.53
01/15/03	0:07:29	0.12	160.07	1.33
01/15/03	0:07:29	0.12	159.74	1.66
01/15/03	0:07:29	0.13	159.58	1.82
01/15/03	0:07:29	0.13	160.52	0.88
01/15/03	0:07:29	0.13	159.53	1.87
01/15/03	0:07:29	0.13	159.71	1.69
01/15/03	0:07:30	0.13	159.55	1.85
01/15/03	0:07:30	0.13	159.88	1.52
01/15/03	0:07:30	0.14	159.62	1.78
01/15/03	0:07:30	0.14	159.71	1.69
01/15/03	0:07:30	0.14	159.36	2.04
01/15/03	0:07:30	0.14	159.55	1.85
01/15/03	0:07:30	0.14	159.57	1.83
01/15/03	0:07:30	0.14	159.83	1.57
01/15/03	0:07:30	0.15	159.22	2.18
01/15/03	0:07:30	0.15	159.51	1.89
01/15/03	0:07:31	0.15	159.63	1.77
01/15/03	0:07:31	0.15	159.42	1.98
01/15/03	0:07:31	0.15	159.62	1.78
01/15/03	0:07:31	0.15	159.11	2.29
01/15/03	0:07:31	0.16	159.80	1.60
01/15/03	0:07:31	0.16	159.16	2.24
01/15/03	0:07:31	0.16	159.47	1.93
01/15/03	0:07:31	0.16	159.07	2.33
01/15/03	0:07:31	0.16	159.29	2.11
01/15/03	0:07:31	0.16	159.29	2.11
01/15/03	0:07:32	0.17	159.34	2.06
01/15/03	0:07:32	0.17	159.23	2.17
01/15/03	0:07:32	0.17	159.17	2.23
01/15/03	0:07:32	0.17	159.05	2.35
01/15/03	0:07:32	0.17	159.09	2.31
01/15/03	0:07:32	0.17	159.34	2.06
01/15/03	0:07:32	0.18	158.86	2.54
01/15/03	0:07:32	0.18	159.17	2.23
01/15/03	0:07:32	0.18	158.70	2.70
01/15/03	0:07:32	0.18	159.02	2.38

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/15/03	0:07:33	0.18	158.94	2.46
01/15/03	0:07:33	0.18	158.89	2.51
01/15/03	0:07:33	0.19	158.70	2.70
01/15/03	0:07:33	0.19	158.97	2.43
01/15/03	0:07:33	0.19	158.95	2.45
01/15/03	0:07:33	0.19	158.76	2.64
01/15/03	0:07:33	0.19	158.88	2.52
01/15/03	0:07:33	0.19	158.69	2.71
01/15/03	0:07:33	0.20	158.98	2.42
01/15/03	0:07:33	0.20	158.53	2.87
01/15/03	0:07:34	0.20	158.78	2.62
01/15/03	0:07:34	0.20	158.80	2.60
01/15/03	0:07:34	0.20	158.70	2.70
01/15/03	0:07:34	0.20	158.55	2.85
01/15/03	0:07:36	0.23	158.25	3.15
01/15/03	0:07:37	0.25	158.09	3.31
01/15/03	0:07:38	0.26	157.86	3.54
01/15/03	0:07:39	0.28	157.61	3.79
01/15/03	0:07:40	0.30	157.40	4.00
01/15/03	0:07:41	0.31	157.23	4.17
01/15/03	0:07:42	0.33	157.11	4.29
01/15/03	0:07:43	0.35	156.83	4.57
01/15/03	0:07:44	0.36	156.77	4.63
01/15/03	0:07:45	0.38	156.53	4.87
01/15/03	0:07:46	0.40	156.35	5.05
01/15/03	0:07:47	0.41	156.16	5.24
01/15/03	0:07:48	0.43	156.01	5.39
01/15/03	0:07:49	0.45	155.84	5.56
01/15/03	0:07:50	0.46	155.73	5.67
01/15/03	0:07:51	0.48	155.57	5.83
01/15/03	0:07:52	0.50	155.44	5.96
01/15/03	0:07:53	0.51	155.30	6.10
01/15/03	0:07:54	0.53	155.16	6.24
01/15/03	0:07:55	0.55	155.05	6.35
01/15/03	0:07:56	0.56	154.87	6.53
01/15/03	0:07:57	0.58	154.79	6.61
01/15/03	0:07:58	0.60	154.48	6.92
01/15/03	0:07:59	0.61	154.52	6.88
01/15/03	0:08:00	0.63	154.43	6.97
01/15/03	0:08:01	0.65	154.24	7.16
01/15/03	0:08:02	0.66	154.00	7.40
01/15/03	0:08:03	0.68	153.99	7.41
01/15/03	0:08:04	0.70	153.94	7.46
01/15/03	0:08:05	0.71	153.81	7.59
01/15/03	0:08:06	0.73	153.61	7.79
01/15/03	0:08:07	0.75	153.65	7.75
01/15/03	0:08:08	0.76	153.42	7.98
01/15/03	0:08:09	0.78	153.32	8.08
01/15/03	0:08:10	0.80	153.27	8.13
01/15/03	0:08:11	0.81	153.21	8.19
01/15/03	0:08:12	0.83	153.02	8.38
01/15/03	0:08:13	0.85	152.92	8.48
01/15/03	0:08:14	0.86	152.83	8.57
01/15/03	0:08:15	0.88	152.81	8.59
01/15/03	0:08:16	0.90	152.60	8.80
01/15/03	0:08:17	0.91	152.59	8.81
01/15/03	0:08:18	0.93	152.46	8.94
01/15/03	0:08:19	0.95	152.46	8.94
01/15/03	0:08:20	0.96	152.24	9.16
01/15/03	0:08:21	0.98	152.35	9.05

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/15/03	0:08:22	1.00	152.19	9.21
01/15/03	0:08:23	1.01	152.19	9.21
01/15/03	0:08:33	1.18	151.42	9.98
01/15/03	0:08:43	1.35	151.05	10.35
01/15/03	0:08:53	1.51	150.83	10.57
01/15/03	0:09:03	1.68	150.66	10.74
01/15/03	0:09:13	1.85	150.71	10.69
01/15/03	0:09:23	2.01	150.69	10.71
01/15/03	0:09:33	2.18	150.75	10.65
01/15/03	0:09:43	2.35	150.79	10.61
01/15/03	0:09:53	2.51	150.76	10.64
01/15/03	0:10:03	2.68	150.19	11.21
01/15/03	0:10:13	2.85	148.48	12.92
01/15/03	0:10:23	3.01	146.79	14.61
01/15/03	0:10:33	3.18	145.52	15.88
01/15/03	0:10:43	3.35	144.27	17.13
01/15/03	0:10:53	3.51	143.34	18.06
01/15/03	0:11:03	3.68	142.37	19.03
01/15/03	0:11:13	3.85	141.52	19.88
01/15/03	0:11:23	4.01	141.00	20.40
01/15/03	0:11:33	4.18	140.87	20.53
01/15/03	0:11:43	4.35	140.70	20.70
01/15/03	0:11:53	4.51	140.53	20.87
01/15/03	0:12:03	4.68	140.35	21.05
01/15/03	0:12:13	4.85	139.88	21.52
01/15/03	0:12:23	5.01	139.14	22.26
01/15/03	0:12:33	5.18	138.60	22.80
01/15/03	0:12:43	5.35	138.00	23.40
01/15/03	0:12:53	5.51	137.53	23.87
01/15/03	0:13:03	5.68	137.27	24.13
01/15/03	0:13:13	5.85	135.29	26.11
01/15/03	0:13:23	6.01	133.85	27.55
01/15/03	0:13:33	6.18	132.65	28.75
01/15/03	0:13:43	6.35	131.43	29.97
01/15/03	0:13:53	6.51	130.44	30.96
01/15/03	0:14:03	6.68	129.42	31.98
01/15/03	0:14:13	6.85	128.55	32.85
01/15/03	0:14:23	7.01	127.69	33.71
01/15/03	0:14:33	7.18	126.94	34.46
01/15/03	0:14:43	7.35	126.08	35.32
01/15/03	0:14:53	7.51	125.40	36.00
01/15/03	0:15:03	7.68	124.79	36.61
01/15/03	0:15:13	7.85	124.04	37.36
01/15/03	0:15:23	8.01	123.30	38.10
01/15/03	0:15:33	8.18	122.68	38.72
01/15/03	0:15:43	8.35	122.11	39.29
01/15/03	0:15:53	8.51	121.48	39.92
01/15/03	0:16:03	8.68	120.78	40.62
01/15/03	0:16:13	8.85	120.22	41.18
01/15/03	0:16:23	9.01	119.62	41.78
01/15/03	0:16:33	9.18	119.13	42.27
01/15/03	0:16:43	9.35	118.52	42.88
01/15/03	0:16:53	9.51	117.78	43.62
01/15/03	0:17:03	9.68	117.07	44.33
01/15/03	0:17:13	9.85	116.32	45.08
01/15/03	0:17:23	10.01	115.63	45.77
01/15/03	0:17:33	10.18	114.98	46.42
01/15/03	0:17:43	10.35	114.33	47.07
01/15/03	0:17:53	10.51	113.68	47.72
01/15/03	0:18:03	10.68	113.18	48.22

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/15/03	0:18:13	10.85	112.69	48.71
01/15/03	0:18:23	11.01	112.25	49.15
01/15/03	0:19:23	12.01	109.28	52.12
01/15/03	0:20:23	13.01	106.70	54.70
01/15/03	0:21:23	14.01	104.55	56.85
01/15/03	0:22:23	15.01	102.81	58.59
01/15/03	0:23:23	16.01	101.39	60.01
01/15/03	0:24:23	17.01	99.99	61.41
01/15/03	0:25:23	18.01	98.60	62.80
01/15/03	0:26:23	19.01	97.35	64.05
01/15/03	0:27:23	20.01	96.10	65.30
01/15/03	0:28:23	21.01	94.98	66.42
01/15/03	0:29:23	22.01	93.80	67.60
01/15/03	0:30:23	23.01	92.74	68.66
01/15/03	0:31:23	24.01	91.76	69.64
01/15/03	0:32:23	25.01	90.93	70.47
01/15/03	0:33:23	26.01	90.10	71.30
01/15/03	0:34:23	27.01	89.32	72.08
01/15/03	0:35:23	28.01	88.32	73.08
01/15/03	0:36:23	29.01	87.92	73.48
01/15/03	0:37:23	30.01	87.67	73.73
01/15/03	0:38:23	31.01	87.31	74.09
01/15/03	0:39:23	32.01	87.07	74.33
01/15/03	0:40:23	33.01	86.81	74.59
01/15/03	0:41:23	34.01	86.55	74.85
01/15/03	0:42:23	35.01	86.27	75.13
01/15/03	0:43:23	36.01	86.03	75.37
01/15/03	0:44:23	37.01	85.85	75.55
01/15/03	0:45:23	38.01	85.63	75.77
01/15/03	0:46:23	39.01	85.45	75.95
01/15/03	0:47:23	40.01	85.35	76.05

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/15/03	0:48:23	41.01	85.20	76.20
01/15/03	0:49:23	42.01	85.14	76.26
01/15/03	0:50:23	43.01	85.03	76.37
01/15/03	0:51:23	44.01	85.04	76.36
01/15/03	0:52:23	45.01	84.97	76.43
01/15/03	0:53:23	46.01	84.90	76.50
01/15/03	0:54:23	47.01	84.89	76.51
01/15/03	0:55:23	48.01	84.77	76.63
01/15/03	0:56:23	49.01	84.86	76.54
01/15/03	0:57:23	50.01	84.80	76.60
01/15/03	0:58:23	51.01	84.77	76.63
01/15/03	0:59:23	52.01	84.79	76.61
01/15/03	1:00:23	53.01	84.76	76.64
01/15/03	1:01:23	54.01	84.84	76.56
01/15/03	1:02:23	55.01	84.79	76.61
01/15/03	1:03:23	56.01	84.79	76.61
01/15/03	1:04:23	57.01	84.91	76.49
01/15/03	1:05:23	58.01	84.85	76.55
01/15/03	1:06:23	59.01	84.77	76.63
01/15/03	1:07:23	60.01	84.87	76.53
01/15/03	1:08:23	61.01	84.81	76.59
01/15/03	1:09:23	62.01	84.80	76.60
01/15/03	1:14:23	67.01	84.77	76.63
01/15/03	1:19:23	72.01	85.63	75.77
01/15/03	1:24:23	77.01	86.86	74.54
01/15/03	1:29:23	82.01	87.94	73.46
01/15/03	1:34:23	87.01	88.69	72.71
01/15/03	1:39:23	92.01	89.20	72.20
01/15/03	1:44:23	97.01	89.72	71.68
01/15/03	1:49:23	102.01	89.81	71.59
01/15/03	1:54:23	107.01	90.09	71.31
01/15/03	1:59:23	112.01	90.38	71.02
01/15/03	2:04:23	117.01	90.77	70.63
01/15/03	2:09:23	122.01	91.00	70.40
01/15/03	2:14:23	127.01	91.37	70.03
01/15/03	2:19:23	132.01	91.65	69.75
01/15/03	2:24:23	137.01	91.95	69.45
01/15/03	2:29:23	142.01	91.98	69.42
01/15/03	2:34:23	147.01	92.05	69.35
01/15/03	2:39:23	152.01	92.18	69.22
01/15/03	2:44:23	157.01	92.25	69.15
01/15/03	2:49:23	162.01	92.38	69.02
01/15/03	2:54:23	167.01	92.56	68.84
01/15/03	2:59:23	172.01	92.58	68.82
01/15/03	3:04:23	177.01	92.77	68.63
01/15/03	3:09:23	182.01	92.97	68.43
01/15/03	3:14:23	187.01	92.69	68.71
01/15/03	3:19:23	192.01	92.69	68.71
01/15/03	3:24:23	197.01	90.17	71.23
01/15/03	3:29:23	202.01	86.32	75.08
01/15/03	3:34:23	207.01	84.28	77.12
01/15/03	3:39:23	212.01	82.81	78.59
01/15/03	3:44:23	217.01	81.87	79.53
01/15/03	3:49:23	222.01	81.64	79.76
01/15/03	3:54:23	227.01	81.64	79.76
01/15/03	3:59:23	232.01	81.74	79.66
01/15/03	4:04:23	237.01	81.84	79.56
01/15/03	4:09:23	242.01	82.10	79.30
01/15/03	4:14:23	247.01	82.10	79.30
01/15/03	4:19:23	252.01	81.87	79.53

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/15/03	4:24:23	257.01	81.83	79.57
01/15/03	4:29:23	262.01	82.01	79.39
01/15/03	4:34:23	267.01	82.39	79.01
01/15/03	4:39:23	272.01	81.82	79.58
01/15/03	4:44:23	277.01	80.51	80.89
01/15/03	4:49:23	282.01	78.59	82.81
01/15/03	4:54:23	287.01	77.98	83.42
01/15/03	4:59:23	292.01	78.17	83.23
01/15/03	5:04:23	297.01	78.54	82.86
01/15/03	5:09:23	302.01	79.28	82.12
01/15/03	5:14:23	307.01	79.87	81.53
01/15/03	5:19:23	312.01	80.50	80.90
01/15/03	5:24:23	317.01	80.92	80.48
01/15/03	5:29:23	322.01	81.40	80.00
01/15/03	5:34:23	327.01	81.69	79.71
01/15/03	5:39:23	332.01	81.48	79.92
01/15/03	5:44:23	337.01	81.52	79.88
01/15/03	5:49:23	342.01	81.90	79.50
01/15/03	5:54:23	347.01	82.11	79.29
01/15/03	5:59:23	352.01	82.28	79.12
01/15/03	6:04:23	357.01	82.47	78.93
01/15/03	6:09:23	362.01	82.82	78.58
01/15/03	6:14:23	367.01	83.23	78.17
01/15/03	6:19:23	372.01	83.04	78.36
01/15/03	6:24:23	377.01	83.30	78.10
01/15/03	6:29:23	382.01	83.04	78.36
01/15/03	6:34:23	387.01	82.76	78.64
01/15/03	6:39:23	392.01	82.52	78.88
01/15/03	6:44:23	397.01	82.38	79.02
01/15/03	6:49:23	402.01	82.29	79.11
01/15/03	6:54:23	407.01	82.39	79.01
01/15/03	6:59:23	412.01	82.45	78.95
01/15/03	7:04:23	417.01	82.58	78.82
01/15/03	7:09:23	422.01	82.68	78.72
01/15/03	7:14:23	427.01	82.68	78.72
01/15/03	7:19:23	432.01	82.58	78.82
01/15/03	7:24:23	437.01	82.64	78.76
01/15/03	7:29:23	442.01	82.81	78.59
01/15/03	7:34:23	447.01	82.90	78.50
01/15/03	7:39:23	452.01	82.98	78.42
01/15/03	7:44:23	457.01	82.91	78.49
01/15/03	7:49:23	462.01	82.86	78.54
01/15/03	7:54:23	467.01	82.85	78.55
01/15/03	7:59:23	472.01	82.83	78.57
01/15/03	8:04:23	477.01	82.95	78.45
01/15/03	8:09:23	482.01	83.04	78.36
01/15/03	8:14:23	487.01	83.04	78.36
01/15/03	8:19:23	492.01	83.09	78.31
01/15/03	8:24:23	497.01	83.04	78.36
01/15/03	8:29:23	502.01	83.79	77.61
01/15/03	8:34:23	507.01	85.29	76.11
01/15/03	8:39:23	512.01	82.23	79.17
01/15/03	8:44:23	517.01	80.06	81.34
01/15/03	8:49:23	522.01	79.19	82.21
01/15/03	8:54:23	527.01	78.92	82.48
01/15/03	8:59:23	532.01	78.81	82.59
01/15/03	9:04:23	537.01	78.71	82.69
01/15/03	9:09:23	542.01	78.85	82.55
01/15/03	9:14:23	547.01	78.93	82.47
01/15/03	9:19:23	552.01	78.88	82.52

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/15/03	9:24:23	557.01	78.88	82.52
01/15/03	9:29:23	562.01	78.81	82.59
01/15/03	9:34:23	567.01	78.72	82.68
01/15/03	9:39:23	572.01	78.88	82.52
01/15/03	9:44:23	577.01	78.68	82.72
01/15/03	9:49:23	582.01	78.79	82.61
01/15/03	9:54:23	587.01	78.83	82.57
01/15/03	9:59:23	592.01	79.11	82.29
01/15/03	10:04:23	597.01	79.09	82.31
01/15/03	10:09:23	602.01	78.42	82.98
01/15/03	10:14:23	607.01	78.04	83.36
01/15/03	10:19:23	612.01	77.84	83.56
01/15/03	10:24:23	617.01	77.83	83.57
01/15/03	10:29:23	622.01	77.91	83.49
01/15/03	10:34:23	627.01	77.89	83.51
01/15/03	10:39:23	632.01	77.91	83.49
01/15/03	10:44:23	637.01	77.77	83.63
01/15/03	10:49:23	642.01	77.90	83.50
01/15/03	10:54:23	647.01	78.00	83.40
01/15/03	10:59:23	652.01	78.00	83.40
01/15/03	11:04:23	657.01	77.48	83.92
01/15/03	11:09:23	662.01	76.93	84.47
01/15/03	11:14:23	667.01	76.81	84.59
01/15/03	11:19:23	672.01	76.65	84.75
01/15/03	11:24:23	677.01	76.65	84.75
01/15/03	11:29:23	682.01	76.63	84.77
01/15/03	11:34:23	687.01	76.71	84.69
01/15/03	11:39:23	692.01	76.84	84.56
01/15/03	11:44:23	697.01	76.90	84.50
01/15/03	11:49:23	702.01	77.05	84.35
01/15/03	11:54:23	707.01	77.36	84.04
01/15/03	11:59:23	712.01	77.86	83.54
01/15/03	12:04:23	717.01	78.23	83.17
01/15/03	12:09:23	722.01	78.70	82.70
01/15/03	12:14:23	727.01	78.91	82.49
01/15/03	12:19:23	732.01	78.29	83.11
01/15/03	12:24:23	737.01	78.07	83.33
01/15/03	12:29:23	742.01	78.06	83.34
01/15/03	12:34:23	747.01	78.03	83.37
01/15/03	12:39:23	752.01	78.09	83.31
01/15/03	12:44:23	757.01	78.29	83.11
01/15/03	12:49:23	762.01	78.21	83.19
01/15/03	12:54:23	767.01	78.05	83.35
01/15/03	12:59:23	772.01	78.07	83.33
01/15/03	13:04:23	777.01	78.08	83.32
01/15/03	13:09:23	782.01	78.09	83.31
01/15/03	13:14:23	787.01	79.14	82.26
01/15/03	13:19:23	792.01	80.24	81.16
01/15/03	13:24:23	797.01	79.85	81.55
01/15/03	13:29:23	802.01	79.62	81.78
01/15/03	13:34:23	807.01	79.33	82.07
01/15/03	13:39:23	812.01	79.37	82.03
01/15/03	13:44:23	817.01	79.85	81.55
01/15/03	13:49:23	822.01	79.80	81.60
01/15/03	13:54:23	827.01	80.17	81.23
01/15/03	13:59:23	832.01	80.56	80.84
01/15/03	14:04:23	837.01	81.00	80.40
01/15/03	14:09:23	842.01	81.33	80.07
01/15/03	14:14:23	847.01	81.47	79.93
01/15/03	14:19:23	852.01	81.64	79.76

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/15/03	14:24:23	857.01	81.78	79.62
01/15/03	14:29:23	862.01	81.88	79.52
01/15/03	15:15:02	907.66	83.34	78.06
01/15/03	15:15:02	907.66	83.36	78.04
01/15/03	15:15:02	907.66	83.33	78.07
01/15/03	15:15:02	907.67	83.30	78.10
01/15/03	15:15:03	907.67	83.55	77.85
01/15/03	15:15:03	907.67	83.20	78.20
01/15/03	15:15:03	907.67	83.22	78.18
01/15/03	15:15:03	907.67	83.37	78.03
01/15/03	15:15:03	907.67	83.43	77.97
01/15/03	15:15:03	907.68	83.34	78.06
01/15/03	15:15:03	907.68	83.37	78.03
01/15/03	15:15:03	907.68	83.44	77.96
01/15/03	15:15:03	907.68	83.33	78.07
01/15/03	15:15:03	907.68	83.56	77.84
01/15/03	15:15:04	907.68	83.25	78.15
01/15/03	15:15:04	907.69	83.53	77.87
01/15/03	15:15:04	907.69	83.14	78.26
01/15/03	15:15:04	907.69	83.28	78.12
01/15/03	15:15:04	907.69	83.38	78.02
01/15/03	15:15:04	907.69	83.38	78.02
01/15/03	15:15:04	907.69	83.12	78.28
01/15/03	15:15:04	907.70	83.70	77.70
01/15/03	15:15:04	907.70	83.35	78.05
01/15/03	15:15:04	907.70	83.38	78.02
01/15/03	15:15:05	907.70	83.45	77.95
01/15/03	15:15:05	907.70	83.46	77.94
01/15/03	15:15:05	907.71	83.43	77.97
01/15/03	15:15:05	907.71	83.43	77.97
01/15/03	15:15:05	907.71	83.30	78.10
01/15/03	15:15:05	907.71	83.44	77.96
01/15/03	15:15:05	907.71	83.54	77.86
01/15/03	15:15:05	907.71	83.48	77.92
01/15/03	15:15:05	907.72	83.28	78.12
01/15/03	15:15:06	907.72	83.31	78.09
01/15/03	15:15:06	907.72	83.36	78.04
01/15/03	15:15:06	907.72	83.55	77.85
01/15/03	15:15:06	907.72	83.20	78.20
01/15/03	15:15:06	907.72	83.25	78.15
01/15/03	15:15:06	907.73	83.35	78.05
01/15/03	15:15:06	907.73	83.18	78.22
01/15/03	15:15:06	907.73	83.55	77.85
01/15/03	15:15:06	907.73	83.37	78.03
01/15/03	15:15:06	907.73	83.24	78.16
01/15/03	15:15:07	907.73	83.54	77.86
01/15/03	15:15:07	907.74	83.38	78.02
01/15/03	15:15:07	907.74	83.23	78.17
01/15/03	15:15:07	907.74	83.41	77.99
01/15/03	15:15:07	907.74	83.43	77.97
01/15/03	15:15:07	907.74	83.43	77.97
01/15/03	15:15:07	907.75	83.25	78.15
01/15/03	15:15:07	907.75	83.46	77.94
01/15/03	15:15:07	907.75	83.49	77.91
01/15/03	15:15:08	907.75	83.56	77.84
01/15/03	15:15:08	907.75	83.58	77.82
01/15/03	15:15:08	907.75	83.30	78.10
01/15/03	15:15:08	907.76	83.44	77.96
01/15/03	15:15:08	907.76	83.33	78.07
01/15/03	15:15:08	907.76	83.51	77.89

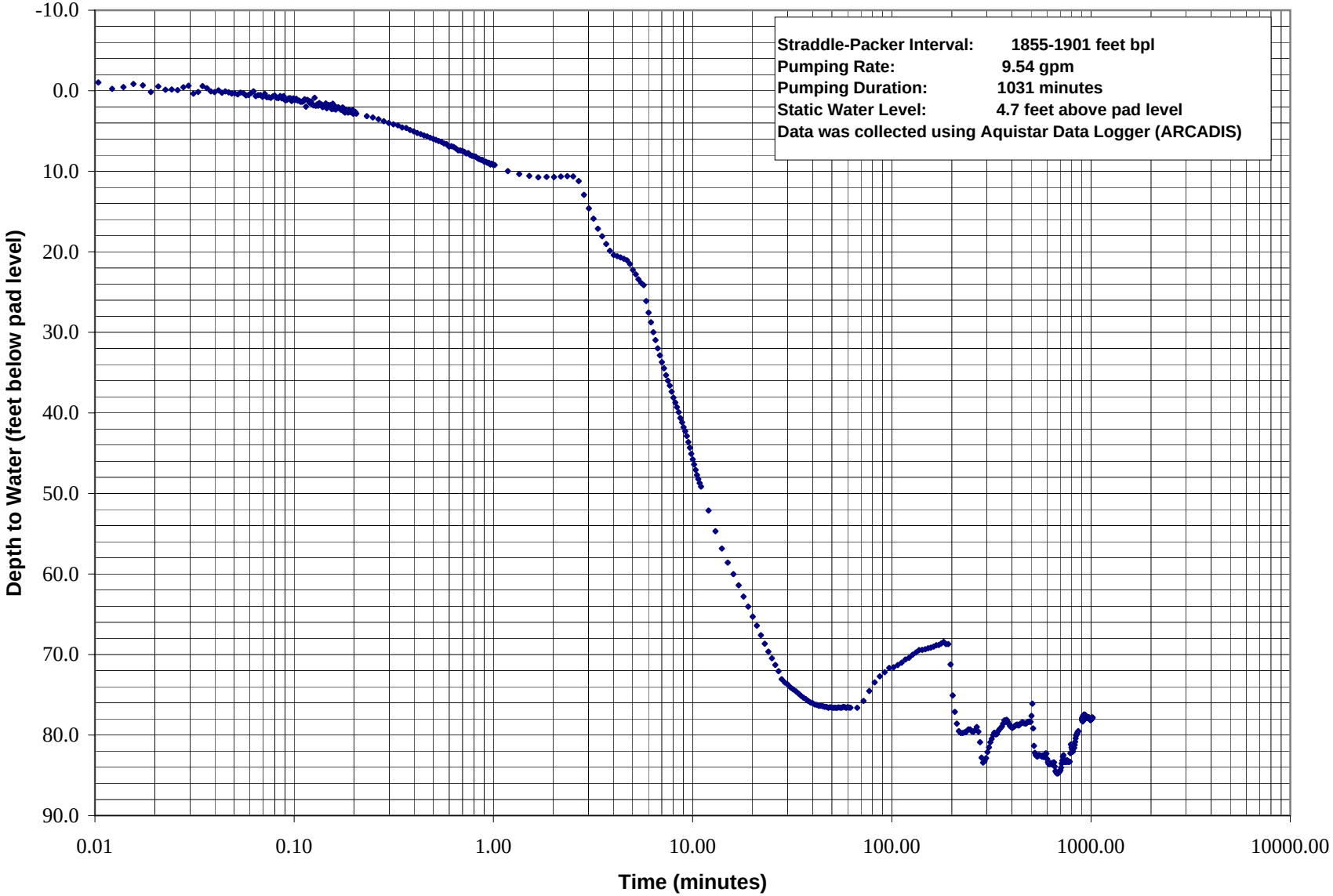
Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/15/03	15:15:08	907.76	83.38	78.02
01/15/03	15:15:08	907.76	83.24	78.16
01/15/03	15:15:08	907.76	83.30	78.10
01/15/03	15:15:08	907.77	83.18	78.22
01/15/03	15:15:09	907.77	83.46	77.94
01/15/03	15:15:09	907.77	83.28	78.12
01/15/03	15:15:09	907.77	83.43	77.97
01/15/03	15:15:09	907.77	83.39	78.01
01/15/03	15:15:09	907.77	83.26	78.14
01/15/03	15:15:09	907.78	83.30	78.10
01/15/03	15:15:09	907.78	83.49	77.91
01/15/03	15:15:09	907.78	83.53	77.87
01/15/03	15:15:09	907.78	83.33	78.07
01/15/03	15:15:09	907.78	83.34	78.06
01/15/03	15:15:10	907.79	83.44	77.96
01/15/03	15:15:10	907.79	83.36	78.04
01/15/03	15:15:10	907.79	83.56	77.84
01/15/03	15:15:10	907.79	83.40	78.00
01/15/03	15:15:10	907.79	83.23	78.17
01/15/03	15:15:10	907.79	83.35	78.05
01/15/03	15:15:10	907.80	83.22	78.18
01/15/03	15:15:10	907.80	83.42	77.98
01/15/03	15:15:10	907.80	83.23	78.17
01/15/03	15:15:11	907.80	83.44	77.96
01/15/03	15:15:11	907.80	83.28	78.12
01/15/03	15:15:11	907.80	83.30	78.10
01/15/03	15:15:11	907.81	83.43	77.97
01/15/03	15:15:11	907.81	83.33	78.07
01/15/03	15:15:11	907.81	83.56	77.84
01/15/03	15:15:11	907.81	83.45	77.95
01/15/03	15:15:11	907.81	83.09	78.31
01/15/03	15:15:11	907.81	83.42	77.98
01/15/03	15:15:11	907.82	83.20	78.20
01/15/03	15:15:12	907.82	83.61	77.79
01/15/03	15:15:12	907.82	83.34	78.06
01/15/03	15:15:12	907.82	83.25	78.15
01/15/03	15:15:12	907.82	83.28	78.12
01/15/03	15:15:12	907.82	83.37	78.03
01/15/03	15:15:12	907.83	83.46	77.94
01/15/03	15:15:12	907.83	83.37	78.03
01/15/03	15:15:12	907.83	83.43	77.97
01/15/03	15:15:12	907.83	83.34	78.06
01/15/03	15:15:12	907.83	83.25	78.15
01/15/03	15:15:13	907.83	83.20	78.20
01/15/03	15:15:13	907.84	83.36	78.04
01/15/03	15:15:13	907.84	83.49	77.91
01/15/03	15:15:13	907.84	83.54	77.86
01/15/03	15:15:13	907.84	83.43	77.97
01/15/03	15:15:13	907.84	83.53	77.87
01/15/03	15:15:13	907.84	83.25	78.15
01/15/03	15:15:13	907.85	83.53	77.87
01/15/03	15:15:13	907.85	83.40	78.00
01/15/03	15:15:13	907.85	83.38	78.02
01/15/03	15:15:14	907.85	83.32	78.08
01/15/03	15:15:14	907.85	83.23	78.17
01/15/03	15:15:14	907.85	83.44	77.96
01/15/03	15:15:14	907.86	83.39	78.01
01/15/03	15:15:14	907.86	83.46	77.94
01/15/03	15:15:14	907.86	83.51	77.89
01/15/03	15:15:14	907.86	83.28	78.12

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/15/03	15:15:14	907.86	83.38	78.02
01/15/03	15:15:14	907.86	83.41	77.99
01/15/03	15:15:16	907.89	83.40	78.00
01/15/03	15:15:17	907.91	83.33	78.07
01/15/03	15:15:18	907.92	83.40	78.00
01/15/03	15:15:19	907.94	83.38	78.02
01/15/03	15:15:20	907.96	83.36	78.04
01/15/03	15:15:21	907.97	83.41	77.99
01/15/03	15:15:22	907.99	83.36	78.04
01/15/03	15:15:23	908.01	83.34	78.06
01/15/03	15:15:24	908.02	83.37	78.03
01/15/03	15:15:25	908.04	83.40	78.00
01/15/03	15:15:26	908.06	83.33	78.07
01/15/03	15:15:27	908.07	83.36	78.04
01/15/03	15:15:28	908.09	83.36	78.04
01/15/03	15:15:29	908.11	83.38	78.02
01/15/03	15:15:30	908.12	83.38	78.02
01/15/03	15:15:31	908.14	83.38	78.02
01/15/03	15:15:32	908.16	83.35	78.05
01/15/03	15:15:33	908.17	83.37	78.03
01/15/03	15:15:34	908.19	83.41	77.99
01/15/03	15:15:35	908.21	83.38	78.02
01/15/03	15:15:36	908.22	83.38	78.02
01/15/03	15:15:37	908.24	83.36	78.04
01/15/03	15:15:38	908.26	83.37	78.03
01/15/03	15:15:39	908.27	83.35	78.05
01/15/03	15:15:40	908.29	83.32	78.08
01/15/03	15:15:41	908.31	83.43	77.97
01/15/03	15:15:42	908.32	83.38	78.02
01/15/03	15:15:43	908.34	83.38	78.02
01/15/03	15:15:44	908.36	83.30	78.10
01/15/03	15:15:45	908.37	83.34	78.06
01/15/03	15:15:46	908.39	83.33	78.07
01/15/03	15:15:47	908.41	83.39	78.01
01/15/03	15:15:48	908.42	83.36	78.04
01/15/03	15:15:49	908.44	83.34	78.06
01/15/03	15:15:50	908.46	83.34	78.06
01/15/03	15:15:51	908.47	83.33	78.07
01/15/03	15:15:52	908.49	83.31	78.09
01/15/03	15:15:53	908.51	83.36	78.04
01/15/03	15:15:54	908.52	83.43	77.97
01/15/03	15:15:55	908.54	83.33	78.07
01/15/03	15:15:56	908.56	83.38	78.02
01/15/03	15:15:57	908.57	83.33	78.07
01/15/03	15:15:58	908.59	83.35	78.05
01/15/03	15:15:59	908.61	83.39	78.01
01/15/03	15:16:00	908.62	83.39	78.01
01/15/03	15:16:01	908.64	83.31	78.09
01/15/03	15:16:02	908.66	83.37	78.03
01/15/03	15:16:03	908.67	83.29	78.11
01/15/03	15:16:13	908.84	83.38	78.02
01/15/03	15:16:23	909.01	83.36	78.04
01/15/03	15:16:33	909.17	83.36	78.04
01/15/03	15:16:43	909.34	83.35	78.05
01/15/03	15:16:53	909.51	83.36	78.04
01/15/03	15:17:03	909.67	83.34	78.06
01/15/03	15:17:13	909.84	83.37	78.03
01/15/03	15:17:23	910.01	83.38	78.02
01/15/03	15:17:33	910.17	83.41	77.99
01/15/03	15:17:43	910.34	83.36	78.04

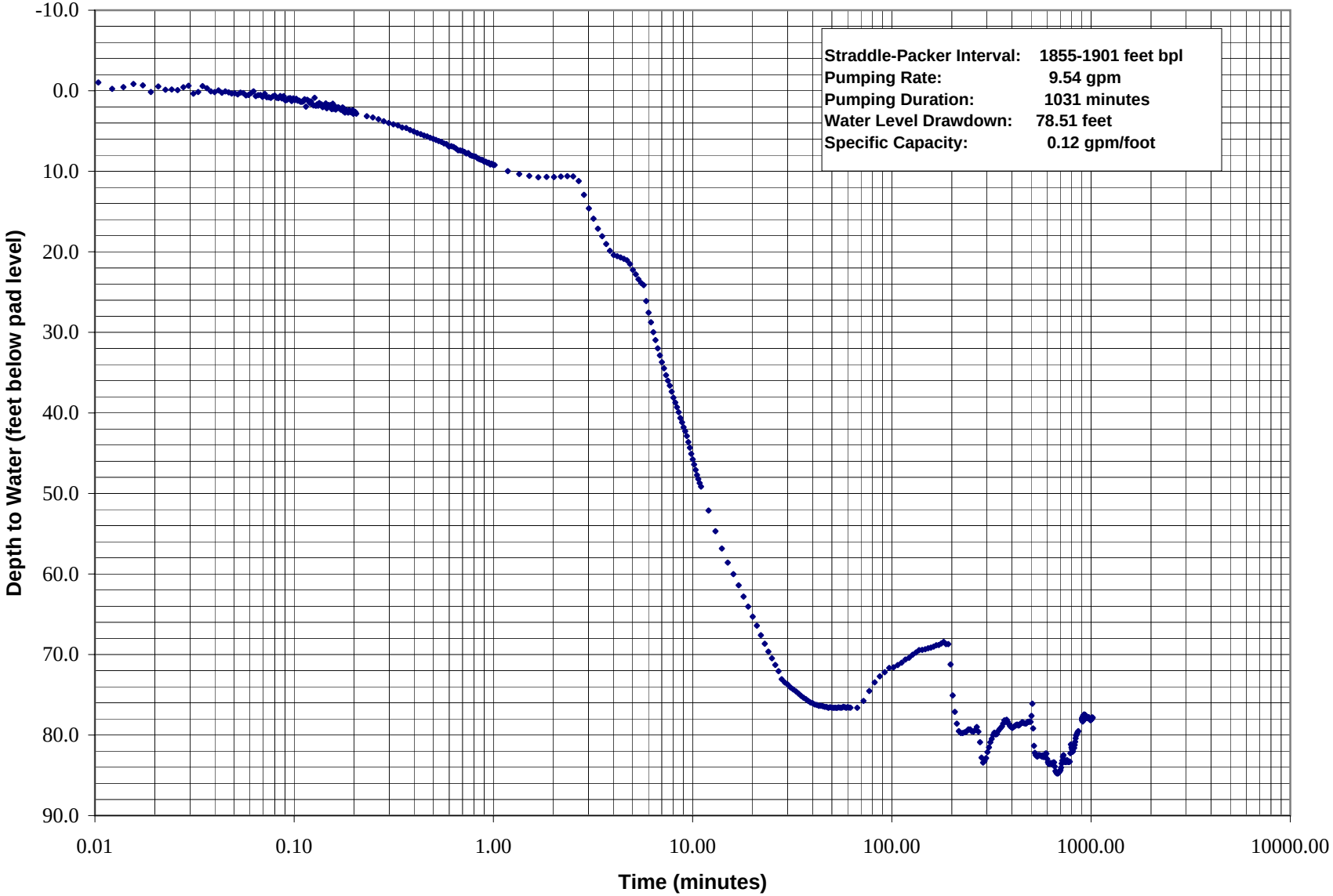
Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/15/03	15:17:53	910.51	83.41	77.99
01/15/03	15:18:03	910.67	83.34	78.06
01/15/03	15:18:13	910.84	83.37	78.03
01/15/03	15:18:23	911.01	83.36	78.04
01/15/03	15:18:33	911.17	83.46	77.94
01/15/03	15:18:43	911.34	83.43	77.97
01/15/03	15:18:53	911.51	83.41	77.99
01/15/03	15:19:03	911.67	83.38	78.02
01/15/03	15:19:13	911.84	83.41	77.99
01/15/03	15:19:23	912.01	83.34	78.06
01/15/03	15:19:33	912.17	83.36	78.04
01/15/03	15:19:43	912.34	83.36	78.04
01/15/03	15:19:53	912.51	83.38	78.02
01/15/03	15:20:03	912.67	83.43	77.97
01/15/03	15:20:13	912.84	83.44	77.96
01/15/03	15:20:23	913.01	83.43	77.97
01/15/03	15:20:33	913.17	83.33	78.07
01/15/03	15:20:43	913.34	83.40	78.00
01/15/03	15:20:53	913.51	83.35	78.05
01/15/03	15:21:03	913.67	83.36	78.04
01/15/03	15:21:13	913.84	83.43	77.97
01/15/03	15:21:23	914.01	83.44	77.96
01/15/03	15:21:33	914.17	83.43	77.97
01/15/03	15:21:43	914.34	83.41	77.99
01/15/03	15:21:53	914.51	83.39	78.01
01/15/03	15:22:03	914.67	83.42	77.98
01/15/03	15:22:13	914.84	83.46	77.94
01/15/03	15:22:23	915.01	83.47	77.93
01/15/03	15:22:33	915.17	83.50	77.90
01/15/03	15:22:43	915.34	83.47	77.93
01/15/03	15:22:53	915.51	83.52	77.88
01/15/03	15:23:03	915.67	83.53	77.87
01/15/03	15:23:13	915.84	83.53	77.87
01/15/03	15:23:23	916.01	83.52	77.88
01/15/03	15:23:33	916.17	83.62	77.78
01/15/03	15:23:43	916.34	83.65	77.75
01/15/03	15:23:53	916.51	83.61	77.79
01/15/03	15:24:03	916.67	83.65	77.75
01/15/03	15:24:13	916.84	83.61	77.79
01/15/03	15:24:23	917.01	83.71	77.69
01/15/03	15:24:33	917.17	83.62	77.78
01/15/03	15:24:43	917.34	83.62	77.78
01/15/03	15:24:53	917.51	83.76	77.64
01/15/03	15:25:03	917.67	83.75	77.65
01/15/03	15:25:13	917.84	83.74	77.66
01/15/03	15:25:23	918.01	83.77	77.63
01/15/03	15:25:33	918.17	83.82	77.58
01/15/03	15:25:43	918.34	83.76	77.64
01/15/03	15:25:53	918.51	83.77	77.63
01/15/03	15:26:03	918.67	83.82	77.58
01/15/03	15:27:03	919.67	83.87	77.53
01/15/03	15:28:03	920.67	83.92	77.48
01/15/03	15:29:03	921.67	83.88	77.52
01/15/03	15:30:03	922.67	83.93	77.47
01/15/03	15:31:03	923.67	83.93	77.47
01/15/03	15:32:03	924.67	83.92	77.48
01/15/03	15:33:03	925.67	83.87	77.53
01/15/03	15:34:03	926.67	83.88	77.52
01/15/03	15:35:03	927.67	83.90	77.50
01/15/03	15:36:03	928.67	83.84	77.56

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/15/03	15:37:03	929.67	83.93	77.47
01/15/03	15:38:03	930.67	83.86	77.54
01/15/03	15:39:03	931.67	83.84	77.56
01/15/03	15:40:03	932.67	83.90	77.50
01/15/03	15:41:03	933.67	83.74	77.66
01/15/03	15:42:03	934.67	83.78	77.62
01/15/03	15:43:03	935.67	83.67	77.73
01/15/03	15:44:03	936.67	83.69	77.71
01/15/03	15:45:03	937.67	83.61	77.79
01/15/03	15:46:03	938.67	83.65	77.75
01/15/03	15:47:03	939.67	83.55	77.85
01/15/03	15:48:03	940.67	83.49	77.91
01/15/03	15:49:03	941.67	83.51	77.89
01/15/03	15:50:03	942.67	83.55	77.85
01/15/03	15:51:03	943.67	83.52	77.88
01/15/03	15:52:03	944.67	83.54	77.86
01/15/03	15:53:03	945.67	83.56	77.84
01/15/03	15:54:03	946.67	83.55	77.85
01/15/03	15:55:03	947.67	83.52	77.88
01/15/03	15:56:03	948.67	83.59	77.81
01/15/03	15:57:03	949.67	83.55	77.85
01/15/03	15:58:03	950.67	83.57	77.83
01/15/03	15:59:03	951.67	83.59	77.81
01/15/03	16:00:03	952.67	83.65	77.75
01/15/03	16:01:03	953.67	83.61	77.79
01/15/03	16:02:03	954.67	83.63	77.77
01/15/03	16:03:03	955.67	83.65	77.75
01/15/03	16:04:03	956.67	83.58	77.82
01/15/03	16:05:03	957.67	83.63	77.77
01/15/03	16:06:03	958.67	83.56	77.84
01/15/03	16:07:03	959.67	83.59	77.81
01/15/03	16:08:03	960.67	83.51	77.89
01/15/03	16:09:03	961.67	83.54	77.86
01/15/03	16:10:03	962.67	83.56	77.84
01/15/03	16:11:03	963.67	83.55	77.85
01/15/03	16:12:03	964.67	83.55	77.85
01/15/03	16:13:03	965.67	83.50	77.90
01/15/03	16:14:03	966.67	83.59	77.81
01/15/03	16:15:03	967.67	83.59	77.81
01/15/03	16:16:03	968.67	83.52	77.88
01/15/03	16:17:03	969.67	83.59	77.81
01/15/03	16:22:03	974.67	83.61	77.79
01/15/03	16:27:03	979.67	83.46	77.94
01/15/03	16:32:03	984.67	83.37	78.03
01/15/03	16:37:03	989.67	83.26	78.14
01/15/03	16:42:03	994.67	83.25	78.15
01/15/03	16:47:03	999.67	83.30	78.10
01/15/03	16:52:03	1004.67	83.33	78.07
01/15/03	16:57:03	1009.67	83.43	77.97
01/15/03	17:02:03	1014.67	83.59	77.81
01/15/03	17:07:03	1019.67	83.54	77.86

Straddle-Packer Test No. 3 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



Straddle-Packer Test No. 3 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



Straddle-Packer Test No. 3 - Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well

Packer Depth Interval:	1855-1901 feet bpl	**Assumed Stabilized DTW:**	78.95 feet bpl
Start of Logging:	1/15/03 17:17:42	**Start of Pumping:**	1/15/2003 0:07
End of Logging:	1/15/03 19:49:43	**Pumping Duration:**	1031 minutes
Pumping Rate:	9.54 gpm	**Total Test Time:**	1182 minutes

Data collected with Aquastar Data Logger (ARCADIS)

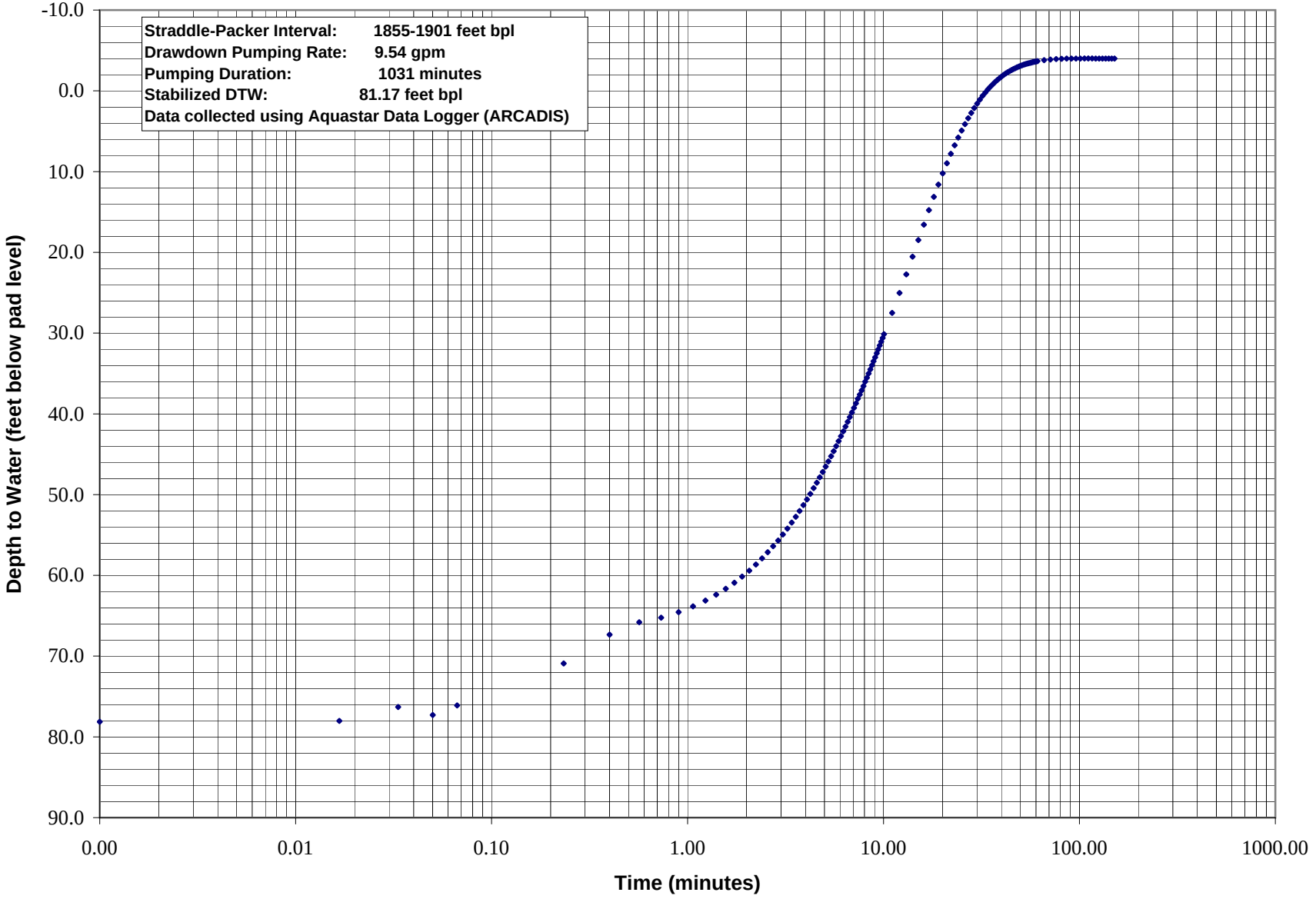
Source File: C:\AQUA4\PT3REC.DAT

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/15/03	17:18:39	0.00	83.28	78.12	0.83
1/15/03	17:18:40	0.02	83.37	78.03	0.92
1/15/03	17:18:41	0.03	85.10	76.30	2.65
1/15/03	17:18:42	0.05	84.11	77.29	1.66
1/15/03	17:18:43	0.07	85.30	76.10	2.85
1/15/03	17:18:53	0.23	90.49	70.91	8.04
1/15/03	17:19:03	0.40	94.06	67.34	11.61
1/15/03	17:19:13	0.57	95.60	65.80	13.15
1/15/03	17:19:23	0.73	96.17	65.23	13.72
1/15/03	17:19:33	0.90	96.85	64.55	14.40
1/15/03	17:19:43	1.07	97.56	63.84	15.11
1/15/03	17:19:53	1.23	98.27	63.13	15.82
1/15/03	17:20:03	1.40	99.00	62.40	16.55
1/15/03	17:20:13	1.57	99.74	61.66	17.29
1/15/03	17:20:23	1.73	100.49	60.91	18.04
1/15/03	17:20:33	1.90	101.24	60.16	18.79
1/15/03	17:20:43	2.07	101.99	59.41	19.54
1/15/03	17:20:53	2.23	102.74	58.66	20.29
1/15/03	17:21:03	2.40	103.50	57.90	21.05
1/15/03	17:21:13	2.57	104.26	57.14	21.81
1/15/03	17:21:23	2.73	105.01	56.39	22.56
1/15/03	17:21:33	2.90	105.72	55.68	23.27
1/15/03	17:21:43	3.07	106.46	54.94	24.01
1/15/03	17:21:53	3.23	107.19	54.21	24.74
1/15/03	17:22:03	3.40	107.94	53.46	25.49
1/15/03	17:22:13	3.57	108.66	52.74	26.21
1/15/03	17:22:23	3.73	109.37	52.03	26.92
1/15/03	17:22:33	3.90	110.10	51.30	27.65
1/15/03	17:22:43	4.07	110.80	50.60	28.35
1/15/03	17:22:53	4.23	111.49	49.91	29.04
1/15/03	17:23:03	4.40	112.20	49.20	29.75
1/15/03	17:23:13	4.57	112.88	48.52	30.43
1/15/03	17:23:23	4.73	113.55	47.85	31.10
1/15/03	17:23:33	4.90	114.20	47.20	31.75
1/15/03	17:23:43	5.07	114.87	46.53	32.42
1/15/03	17:23:53	5.23	115.50	45.90	33.05
1/15/03	17:24:03	5.40	116.15	45.25	33.70
1/15/03	17:24:13	5.57	116.78	44.62	34.33
1/15/03	17:24:23	5.73	117.40	44.00	34.95
1/15/03	17:24:33	5.90	118.02	43.38	35.57
1/15/03	17:24:43	6.07	118.63	42.77	36.18
1/15/03	17:24:53	6.23	119.23	42.17	36.78
1/15/03	17:25:03	6.40	119.82	41.58	37.37
1/15/03	17:25:13	6.57	120.41	40.99	37.96
1/15/03	17:25:23	6.73	120.99	40.41	38.54
1/15/03	17:25:33	6.90	121.57	39.83	39.12
1/15/03	17:25:43	7.07	122.14	39.26	39.69
1/15/03	17:25:53	7.23	122.70	38.70	40.25

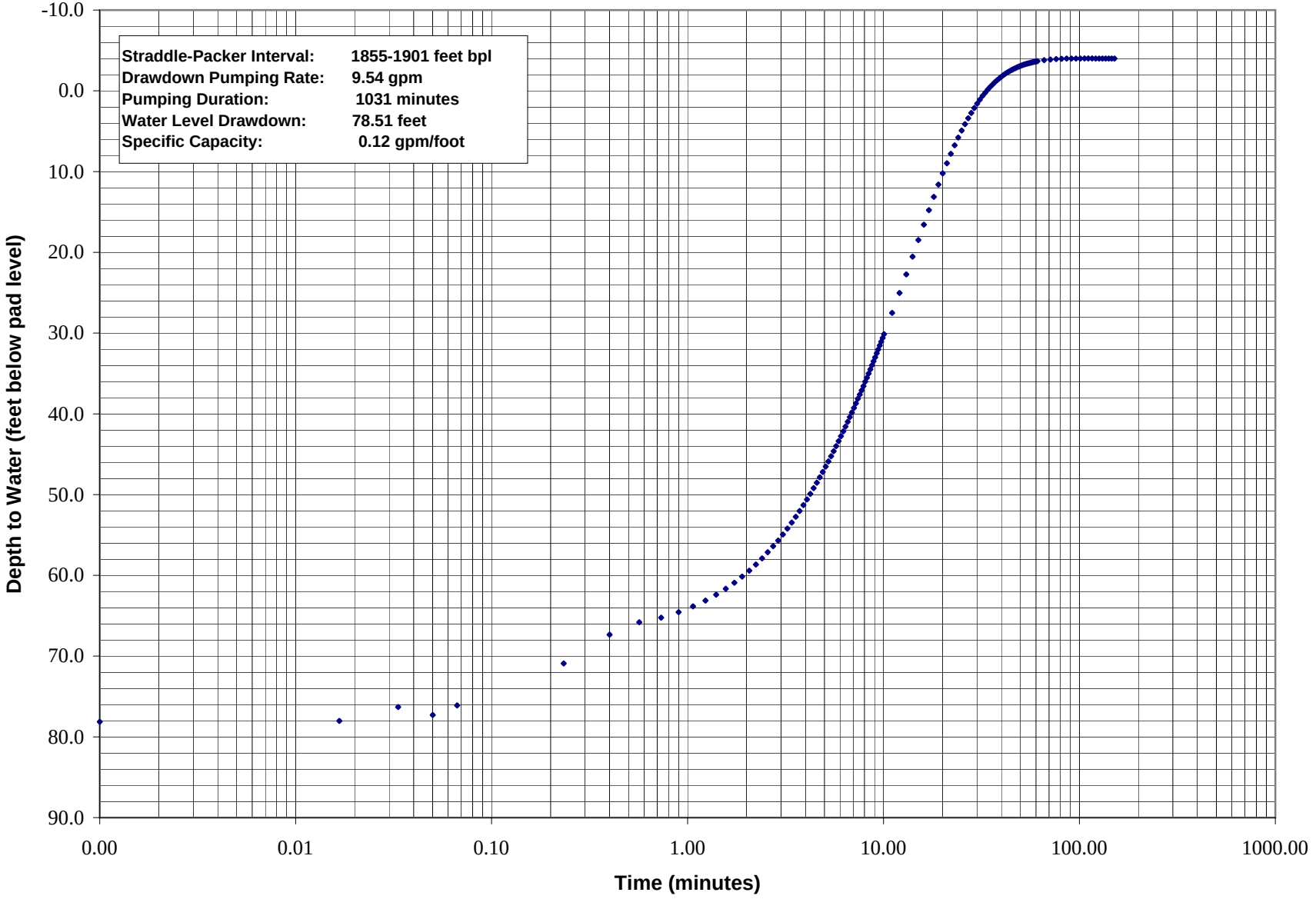
Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/15/03	17:26:03	7.40	123.26	38.14	40.81
1/15/03	17:26:13	7.57	123.78	37.62	41.33
1/15/03	17:26:23	7.73	124.30	37.10	41.85
1/15/03	17:26:33	7.90	124.84	36.56	42.39
1/15/03	17:26:43	8.07	125.38	36.02	42.93
1/15/03	17:26:53	8.23	125.87	35.53	43.42
1/15/03	17:27:03	8.40	126.39	35.01	43.94
1/15/03	17:27:13	8.57	126.91	34.49	44.46
1/15/03	17:27:23	8.73	127.41	33.99	44.96
1/15/03	17:27:33	8.90	127.92	33.48	45.47
1/15/03	17:27:43	9.07	128.41	32.99	45.96
1/15/03	17:27:53	9.23	128.90	32.50	46.45
1/15/03	17:28:03	9.40	129.38	32.02	46.93
1/15/03	17:28:13	9.57	129.86	31.54	47.41
1/15/03	17:28:23	9.73	130.33	31.07	47.88
1/15/03	17:28:33	9.90	130.80	30.60	48.35
1/15/03	17:28:43	10.07	131.26	30.14	48.81
1/15/03	17:29:43	11.07	133.90	27.50	51.45
1/15/03	17:30:43	12.07	136.37	25.03	53.92
1/15/03	17:31:43	13.07	138.67	22.73	56.22
1/15/03	17:32:43	14.07	140.86	20.54	58.41
1/15/03	17:33:43	15.07	142.92	18.48	60.47
1/15/03	17:34:43	16.07	144.83	16.57	62.38
1/15/03	17:35:43	17.07	146.62	14.78	64.17
1/15/03	17:36:43	18.07	148.27	13.13	65.82
1/15/03	17:37:43	19.07	149.79	11.61	67.34
1/15/03	17:38:43	20.07	151.18	10.22	68.73
1/15/03	17:39:43	21.07	152.43	8.97	69.98
1/15/03	17:40:43	22.07	153.60	7.80	71.15
1/15/03	17:41:43	23.07	154.66	6.74	72.21
1/15/03	17:42:43	24.07	155.61	5.79	73.16
1/15/03	17:43:43	25.07	156.49	4.91	74.04
1/15/03	17:44:43	26.07	157.28	4.12	74.83
1/15/03	17:45:43	27.07	158.01	3.39	75.56
1/15/03	17:46:43	28.07	158.67	2.73	76.22
1/15/03	17:47:43	29.07	159.27	2.13	76.82
1/15/03	17:48:43	30.07	159.81	1.59	77.36
1/15/03	17:49:43	31.07	160.31	1.09	77.86
1/15/03	17:50:43	32.07	160.77	0.63	78.32
1/15/03	17:51:43	33.07	161.18	0.22	78.73
1/15/03	17:52:43	34.07	161.55	-0.15	79.10
1/15/03	17:53:43	35.07	161.89	-0.49	79.44
1/15/03	17:54:43	36.07	162.19	-0.79	79.74
1/15/03	17:55:43	37.07	162.48	-1.08	80.03
1/15/03	17:56:43	38.07	162.73	-1.33	80.28
1/15/03	17:57:43	39.07	162.96	-1.56	80.51
1/15/03	17:58:43	40.07	163.17	-1.77	80.72
1/15/03	17:59:43	41.07	163.37	-1.97	80.92
1/15/03	18:00:43	42.07	163.55	-2.15	81.10
1/15/03	18:01:43	43.07	163.71	-2.31	81.26
1/15/03	18:02:43	44.07	163.84	-2.44	81.39
1/15/03	18:03:43	45.07	163.97	-2.57	81.52
1/15/03	18:04:43	46.07	164.10	-2.70	81.65
1/15/03	18:05:43	47.07	164.21	-2.81	81.76
1/15/03	18:06:43	48.07	164.31	-2.91	81.86
1/15/03	18:07:43	49.07	164.41	-3.01	81.96
1/15/03	18:08:43	50.07	164.49	-3.09	82.04
1/15/03	18:09:43	51.07	164.57	-3.17	82.12
1/15/03	18:10:43	52.07	164.65	-3.25	82.20
1/15/03	18:11:43	53.07	164.71	-3.31	82.26
1/15/03	18:12:43	54.07	164.78	-3.38	82.33

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/15/03	18:13:43	55.07	164.82	-3.42	82.37
1/15/03	18:14:43	56.07	164.87	-3.47	82.42
1/15/03	18:15:43	57.07	164.91	-3.51	82.46
1/15/03	18:16:43	58.07	164.96	-3.56	82.51
1/15/03	18:17:43	59.07	165.00	-3.60	82.55
1/15/03	18:18:43	60.07	165.04	-3.64	82.59
1/15/03	18:19:43	61.07	165.07	-3.67	82.62
1/15/03	18:24:43	66.07	165.19	-3.79	82.74
1/15/03	18:29:43	71.07	165.27	-3.87	82.82
1/15/03	18:34:43	76.07	165.33	-3.93	82.88
1/15/03	18:39:43	81.07	165.37	-3.97	82.92
1/15/03	18:44:43	86.07	165.39	-3.99	82.94
1/15/03	18:49:43	91.07	165.40	-4.00	82.95
1/15/03	18:54:43	96.07	165.40	-4.00	82.95
1/15/03	18:59:43	101.07	165.40	-4.00	82.95
1/15/03	19:04:43	106.07	165.41	-4.01	82.96
1/15/03	19:09:43	111.07	165.41	-4.01	82.96
1/15/03	19:14:43	116.07	165.41	-4.01	82.96
1/15/03	19:19:43	121.07	165.40	-4.00	82.95
1/15/03	19:24:43	126.07	165.40	-4.00	82.95
1/15/03	19:29:43	131.07	165.40	-4.00	82.95
1/15/03	19:34:43	136.07	165.40	-4.00	82.95
1/15/03	19:39:43	141.07	165.40	-4.00	82.95
1/15/03	19:44:43	146.07	165.40	-4.00	82.95
1/15/03	19:49:43	151.07	165.39	-3.99	82.94

Straddle- Packer Test No. 3- Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



Straddle- Packer Test No. 3- Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



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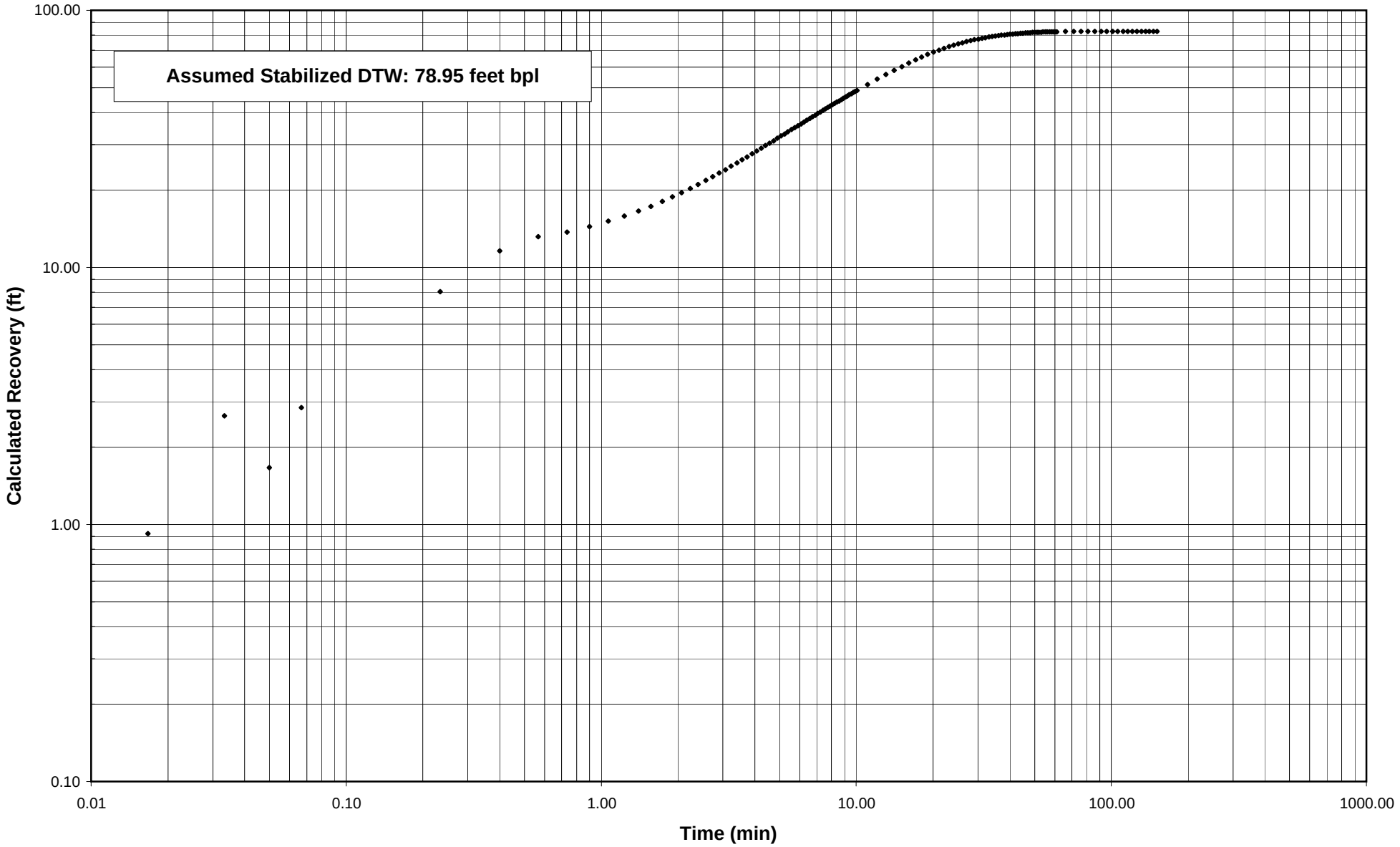
Dual-Zone Deep Monitor Well, Port St. Lucie
Port St. Lucie, Westport Injection Well System
Straddle-Packer Test No. 3 - Recovery



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Source File:
Location: INW 2052005
Start: 1/15/2003 17:17
End: 1/15/2003 19:49

Straddle- Packer 1855-1901 feet bpl recovery data.

Date & Time (day hr:min)	Recovery time (min)	Water- level (feet of water above transducer)	Depth to wate (feet bpl)	Water-level change (feet)	Comments
				0.00	Pump-off
				0.09	
				1.82	
				0.83	
				2.02	
				7.21	
				10.78	
				12.32	
				12.89	
				13.57	
				14.28	
				14.99	
				15.72	
				16.46	
				17.21	
				17.96	
				18.71	
				19.46	
				20.22	
				20.98	
				21.73	
				22.44	
				23.18	
				23.91	
				24.66	
				25.38	
				26.09	
				26.82	
				27.52	
				28.21	
				28.92	
				29.60	
				30.27	
				30.92	
				31.59	
				32.22	
				32.87	
				33.50	
				34.12	
				34.74	
				35.35	
				35.95	

Date & Time (day hr:min)	Recovery time (min)	Water- level (feet of water above transducer)	Depth to wate (feet bpl)	Water-level change (feet)	Comments
				36.54	
				37.13	
				37.71	
				38.29	
				38.86	
				39.42	
				39.98	
				40.50	
				41.02	
				41.56	
				42.10	
				42.59	
				43.11	
				43.63	
				44.13	
				44.64	
				45.13	
				45.62	
				46.10	
				46.58	
				47.05	
				47.52	
				47.98	
				50.62	
				53.09	
				55.39	
				57.58	
				59.64	
				61.55	
				63.34	
				64.99	
				66.51	
				67.90	
				69.15	
				70.32	
				71.38	
				72.33	
				73.21	
				74.00	
				74.73	
				75.39	
				75.99	
				76.53	
				77.03	
				77.49	
				77.90	
				78.27	
				78.61	
				78.91	

Date & Time (day hr:min)	Recovery time (min)	Water- level (feet of water above transducer)	Depth to wate (feet bpl)	Water-level change (feet)	Comments
				79.20	
				79.45	
				79.68	
				79.89	
				80.09	
				80.27	
				80.43	
				80.56	
				80.69	
				80.82	
				80.93	
				81.03	
				81.13	
				81.21	
				81.29	
				81.37	
				81.43	
				81.50	
				81.54	
				81.59	
				81.63	
				81.68	
				81.72	
				81.76	
				81.79	
				81.91	
				81.99	
				82.05	
				82.09	
				82.11	
				82.12	
				82.12	
				82.12	
				82.13	
				82.13	
				82.13	
				82.12	
				82.12	
				82.12	
				82.12	
				82.12	
				82.12	
				82.11	

Straddle-Packer Test No. 4 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well

Packer Depth Interval:	1750-1796 feet bpl	**Static Water Level:**	24.06 feet above pad level
Start of Logging:	1/16/2003 22:15	**Start of Pumping:**	1/16/2003 22:15
End of Logging:	1/17/2003 0:17	**End of Pumping:**	1/17/2003 0:23
Pumping Rate:	82.71 gpm	**Pumping Duration:**	128 minutes

Data Collected Using Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\WESTPORT\PUMP3.DAT

Note: Bold number indicates assumed stabilized depth to water at the end of pumping

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
01/16/03	22:15:59	0.00	185.31	-23.91
01/16/03	22:15:59	0.00	177.49	-16.09
01/16/03	22:15:59	0.00	176.35	-14.95
01/16/03	22:15:59	0.01	172.47	-11.07
01/16/03	22:15:59	0.01	166.20	-4.80
01/16/03	22:15:59	0.01	164.87	-3.47
01/16/03	22:15:59	0.01	163.45	-2.05
01/16/03	22:16:00	0.01	161.92	-0.52
01/16/03	22:16:00	0.01	160.97	0.43
01/16/03	22:16:00	0.02	158.84	2.56
01/16/03	22:16:00	0.02	160.79	0.61
01/16/03	22:16:00	0.02	157.81	3.59
01/16/03	22:16:00	0.02	156.77	4.63
01/16/03	22:16:00	0.02	157.80	3.60
01/16/03	22:16:00	0.02	157.83	3.57
01/16/03	22:16:00	0.03	158.38	3.02
01/16/03	22:16:00	0.03	156.70	4.70
01/16/03	22:16:01	0.03	159.55	1.85
01/16/03	22:16:01	0.03	158.98	2.42
01/16/03	22:16:01	0.03	157.72	3.68
01/16/03	22:16:01	0.03	159.24	2.16
01/16/03	22:16:01	0.04	160.12	1.28
01/16/03	22:16:01	0.04	160.98	0.42
01/16/03	22:16:01	0.04	161.32	0.08
01/16/03	22:16:01	0.04	162.62	-1.22
01/16/03	22:16:01	0.04	164.05	-2.65
01/16/03	22:16:02	0.05	163.61	-2.21
01/16/03	22:16:02	0.05	164.70	-3.30
01/16/03	22:16:02	0.05	166.09	-4.69
01/16/03	22:16:02	0.05	166.88	-5.48
01/16/03	22:16:02	0.05	167.75	-6.35
01/16/03	22:16:02	0.05	167.49	-6.09
01/16/03	22:16:02	0.06	168.83	-7.43
01/16/03	22:16:02	0.06	168.35	-6.95
01/16/03	22:16:02	0.06	167.79	-6.39
01/16/03	22:16:02	0.06	168.08	-6.68
01/16/03	22:16:03	0.06	167.76	-6.36
01/16/03	22:16:03	0.06	167.36	-5.96
01/16/03	22:16:03	0.07	166.32	-4.92
01/16/03	22:16:03	0.07	166.26	-4.86
01/16/03	22:16:03	0.07	165.56	-4.16
01/16/03	22:16:03	0.07	164.30	-2.90
01/16/03	22:16:03	0.07	164.09	-2.69
01/16/03	22:16:03	0.07	163.76	-2.36
01/16/03	22:16:03	0.08	163.24	-1.84
01/16/03	22:16:03	0.08	162.79	-1.39

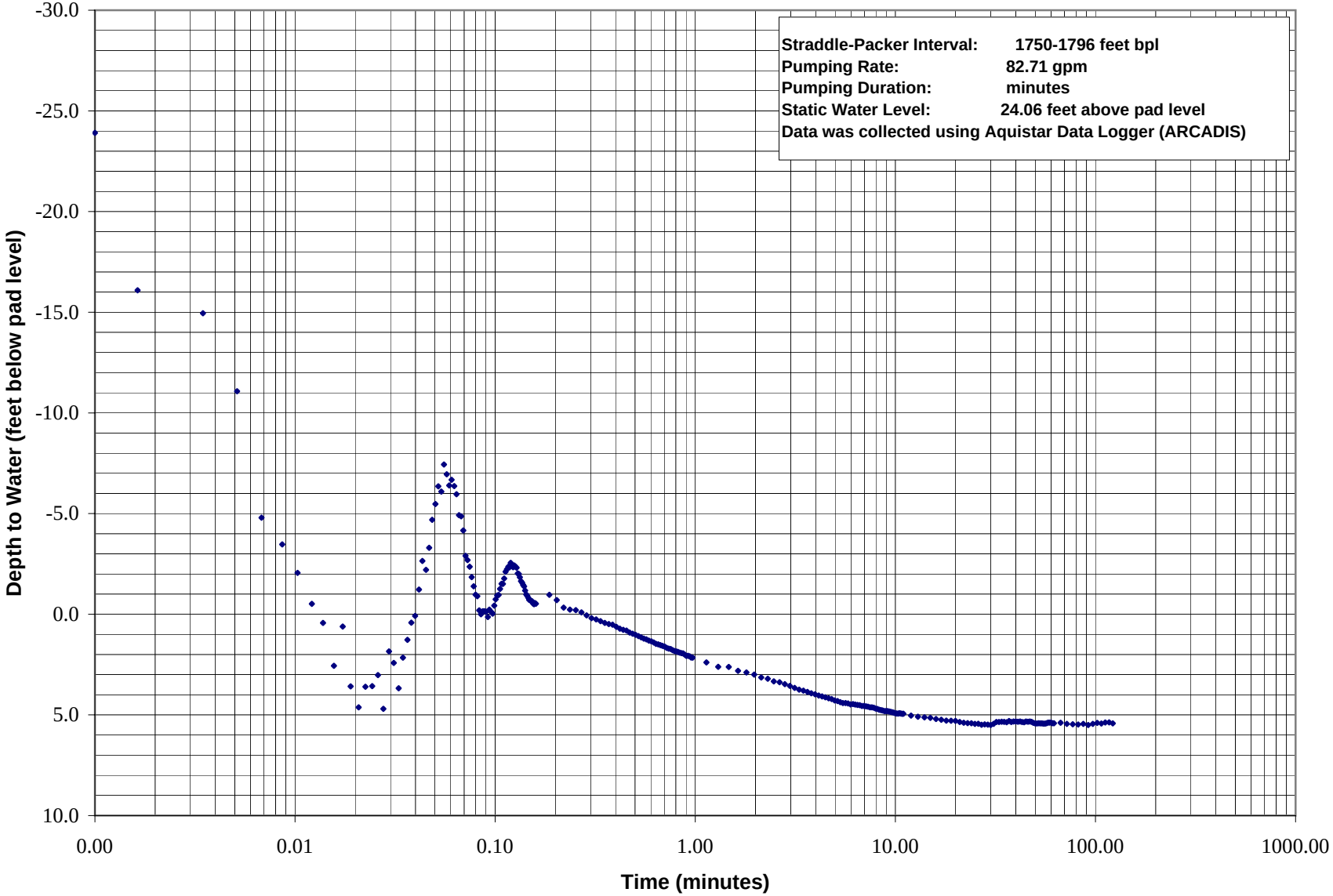
Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/16/03	22:16:04	0.08	162.37	-0.97
01/16/03	22:16:04	0.08	162.30	-0.90
01/16/03	22:16:04	0.08	161.59	-0.19
01/16/03	22:16:04	0.08	161.40	0.00
01/16/03	22:16:04	0.09	161.55	-0.15
01/16/03	22:16:04	0.09	161.55	-0.15
01/16/03	22:16:04	0.09	161.53	-0.13
01/16/03	22:16:04	0.09	161.26	0.14
01/16/03	22:16:04	0.09	161.63	-0.23
01/16/03	22:16:05	0.10	161.52	-0.12
01/16/03	22:16:05	0.10	161.43	-0.03
01/16/03	22:16:05	0.10	161.83	-0.43
01/16/03	22:16:05	0.10	162.14	-0.74
01/16/03	22:16:05	0.10	162.33	-0.93
01/16/03	22:16:05	0.10	162.36	-0.96
01/16/03	22:16:05	0.11	162.66	-1.26
01/16/03	22:16:05	0.11	162.91	-1.51
01/16/03	22:16:05	0.11	162.91	-1.51
01/16/03	22:16:05	0.11	163.17	-1.77
01/16/03	22:16:06	0.11	163.51	-2.11
01/16/03	22:16:06	0.11	163.63	-2.23
01/16/03	22:16:06	0.12	163.76	-2.36
01/16/03	22:16:06	0.12	163.73	-2.33
01/16/03	22:16:06	0.12	163.95	-2.55
01/16/03	22:16:06	0.12	163.79	-2.39
01/16/03	22:16:06	0.12	163.74	-2.34
01/16/03	22:16:06	0.12	163.82	-2.42
01/16/03	22:16:06	0.13	163.76	-2.36
01/16/03	22:16:06	0.13	163.71	-2.31
01/16/03	22:16:07	0.13	163.42	-2.02
01/16/03	22:16:07	0.13	163.40	-2.00
01/16/03	22:16:07	0.13	163.24	-1.84
01/16/03	22:16:07	0.13	163.04	-1.64
01/16/03	22:16:07	0.14	162.97	-1.57
01/16/03	22:16:07	0.14	162.85	-1.45
01/16/03	22:16:07	0.14	162.78	-1.38
01/16/03	22:16:07	0.14	162.57	-1.17
01/16/03	22:16:07	0.14	162.39	-0.99
01/16/03	22:16:07	0.14	162.31	-0.91
01/16/03	22:16:08	0.15	162.22	-0.82
01/16/03	22:16:08	0.15	162.12	-0.72
01/16/03	22:16:08	0.15	162.09	-0.69
01/16/03	22:16:08	0.15	162.07	-0.67
01/16/03	22:16:08	0.15	162.05	-0.65
01/16/03	22:16:08	0.15	161.93	-0.53
01/16/03	22:16:08	0.16	161.89	-0.49
01/16/03	22:16:08	0.16	161.95	-0.55
01/16/03	22:16:08	0.16	161.92	-0.52
01/16/03	22:16:10	0.19	162.36	-0.96
01/16/03	22:16:11	0.20	162.10	-0.70
01/16/03	22:16:12	0.22	161.73	-0.33
01/16/03	22:16:13	0.24	161.63	-0.23
01/16/03	22:16:14	0.25	161.61	-0.21
01/16/03	22:16:15	0.27	161.49	-0.09
01/16/03	22:16:16	0.29	161.35	0.05
01/16/03	22:16:17	0.30	161.21	0.19
01/16/03	22:16:18	0.32	161.14	0.26
01/16/03	22:16:19	0.34	161.06	0.34
01/16/03	22:16:20	0.35	160.97	0.43
01/16/03	22:16:21	0.37	160.91	0.49

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/16/03	22:16:22	0.39	160.88	0.52
01/16/03	22:16:23	0.40	160.77	0.63
01/16/03	22:16:24	0.42	160.68	0.72
01/16/03	22:16:25	0.44	160.62	0.78
01/16/03	22:16:26	0.45	160.59	0.81
01/16/03	22:16:27	0.47	160.49	0.91
01/16/03	22:16:28	0.49	160.44	0.96
01/16/03	22:16:29	0.50	160.38	1.02
01/16/03	22:16:30	0.52	160.31	1.09
01/16/03	22:16:31	0.54	160.25	1.15
01/16/03	22:16:32	0.55	160.19	1.21
01/16/03	22:16:33	0.57	160.15	1.25
01/16/03	22:16:34	0.59	160.09	1.31
01/16/03	22:16:35	0.60	160.05	1.35
01/16/03	22:16:36	0.62	159.99	1.41
01/16/03	22:16:37	0.64	159.93	1.47
01/16/03	22:16:38	0.65	159.90	1.50
01/16/03	22:16:39	0.67	159.86	1.54
01/16/03	22:16:40	0.69	159.83	1.57
01/16/03	22:16:41	0.70	159.79	1.61
01/16/03	22:16:42	0.72	159.73	1.67
01/16/03	22:16:43	0.74	159.69	1.71
01/16/03	22:16:44	0.75	159.67	1.73
01/16/03	22:16:45	0.77	159.62	1.78
01/16/03	22:16:46	0.79	159.58	1.82
01/16/03	22:16:47	0.80	159.55	1.85
01/16/03	22:16:48	0.82	159.53	1.87
01/16/03	22:16:49	0.84	159.49	1.91
01/16/03	22:16:50	0.85	159.47	1.93
01/16/03	22:16:51	0.87	159.45	1.95
01/16/03	22:16:52	0.89	159.40	2.00
01/16/03	22:16:53	0.90	159.33	2.07
01/16/03	22:16:54	0.92	159.34	2.06
01/16/03	22:16:55	0.94	159.31	2.09
01/16/03	22:16:56	0.95	159.25	2.15
01/16/03	22:16:57	0.97	159.24	2.16
01/16/03	22:17:07	1.14	159.01	2.39
01/16/03	22:17:17	1.30	158.79	2.61
01/16/03	22:17:27	1.47	158.78	2.62
01/16/03	22:17:37	1.64	158.59	2.81
01/16/03	22:17:47	1.80	158.51	2.89
01/16/03	22:17:57	1.97	158.40	3.00
01/16/03	22:18:07	2.14	158.26	3.14
01/16/03	22:18:17	2.30	158.20	3.20
01/16/03	22:18:27	2.47	158.07	3.33
01/16/03	22:18:37	2.64	158.02	3.38
01/16/03	22:18:47	2.80	157.93	3.47
01/16/03	22:18:57	2.97	157.84	3.56
01/16/03	22:19:07	3.14	157.74	3.66
01/16/03	22:19:17	3.30	157.66	3.74
01/16/03	22:19:27	3.47	157.60	3.80
01/16/03	22:19:37	3.64	157.54	3.86
01/16/03	22:19:47	3.80	157.47	3.93
01/16/03	22:19:57	3.97	157.42	3.98
01/16/03	22:20:07	4.14	157.36	4.04
01/16/03	22:20:17	4.30	157.32	4.08
01/16/03	22:20:27	4.47	157.27	4.13
01/16/03	22:20:37	4.64	157.22	4.18
01/16/03	22:20:47	4.80	157.19	4.21
01/16/03	22:20:57	4.97	157.12	4.28

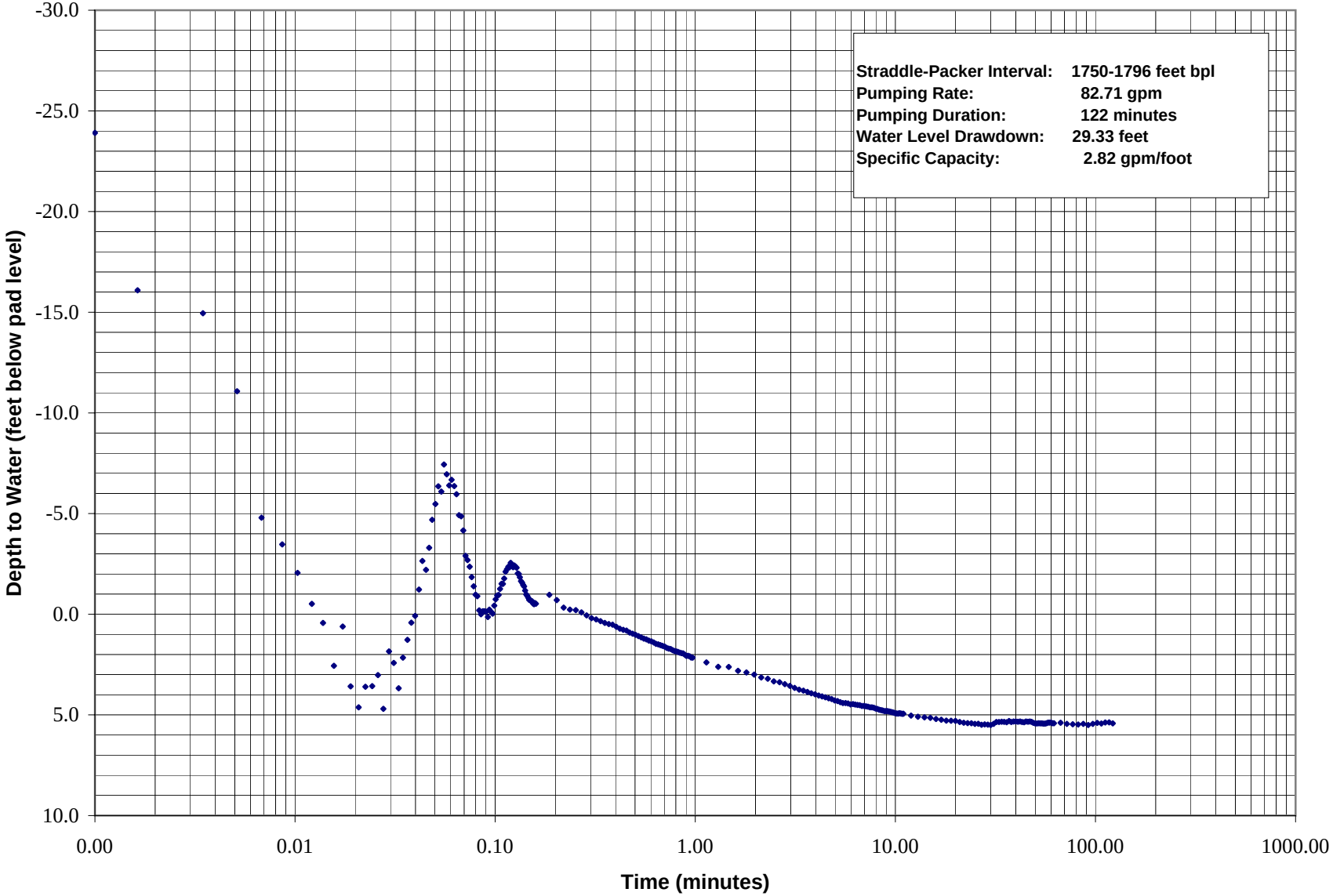
Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/16/03	22:21:07	5.14	157.08	4.32
01/16/03	22:21:17	5.30	157.03	4.37
01/16/03	22:21:27	5.47	156.99	4.41
01/16/03	22:21:37	5.64	156.99	4.41
01/16/03	22:21:47	5.80	156.97	4.43
01/16/03	22:21:57	5.97	156.92	4.48
01/16/03	22:22:07	6.14	156.94	4.46
01/16/03	22:22:17	6.30	156.91	4.49
01/16/03	22:22:27	6.47	156.90	4.50
01/16/03	22:22:37	6.64	156.88	4.52
01/16/03	22:22:47	6.80	156.85	4.55
01/16/03	22:22:57	6.97	156.85	4.55
01/16/03	22:23:07	7.14	156.82	4.58
01/16/03	22:23:17	7.30	156.81	4.59
01/16/03	22:23:27	7.47	156.77	4.63
01/16/03	22:23:37	7.64	156.77	4.63
01/16/03	22:23:47	7.80	156.76	4.64
01/16/03	22:23:57	7.97	156.72	4.68
01/16/03	22:24:07	8.14	156.69	4.71
01/16/03	22:24:17	8.30	156.66	4.74
01/16/03	22:24:27	8.47	156.64	4.76
01/16/03	22:24:37	8.64	156.62	4.78
01/16/03	22:24:47	8.80	156.59	4.81
01/16/03	22:24:57	8.97	156.59	4.81
01/16/03	22:25:07	9.14	156.59	4.81
01/16/03	22:25:17	9.30	156.57	4.83
01/16/03	22:25:27	9.47	156.55	4.85
01/16/03	22:25:37	9.64	156.54	4.86
01/16/03	22:25:47	9.80	156.51	4.89
01/16/03	22:25:57	9.97	156.49	4.91
01/16/03	22:26:07	10.14	156.47	4.93
01/16/03	22:26:17	10.30	156.46	4.94
01/16/03	22:26:27	10.47	156.49	4.91
01/16/03	22:26:37	10.64	156.47	4.93
01/16/03	22:26:47	10.80	156.45	4.95
01/16/03	22:26:57	10.97	156.46	4.94
01/16/03	22:27:57	11.97	156.36	5.04
01/16/03	22:28:57	12.97	156.31	5.09
01/16/03	22:29:57	13.97	156.28	5.12
01/16/03	22:30:57	14.97	156.25	5.15
01/16/03	22:31:57	15.97	156.20	5.20
01/16/03	22:32:57	16.97	156.16	5.24
01/16/03	22:33:57	17.97	156.12	5.28
01/16/03	22:34:57	18.97	156.11	5.29
01/16/03	22:35:57	19.97	156.10	5.30
01/16/03	22:36:57	20.97	156.04	5.36
01/16/03	22:37:57	21.97	156.01	5.39
01/16/03	22:38:57	22.97	155.99	5.41
01/16/03	22:39:57	23.97	155.99	5.41
01/16/03	22:40:57	24.97	155.95	5.45
01/16/03	22:41:57	25.97	155.96	5.44
01/16/03	22:42:57	26.97	155.91	5.49
01/16/03	22:43:57	27.97	155.93	5.47
01/16/03	22:44:57	28.97	155.91	5.49
01/16/03	22:45:57	29.97	155.90	5.50
01/16/03	22:46:57	30.97	155.95	5.45
01/16/03	22:47:57	31.97	156.04	5.36
01/16/03	22:48:57	32.97	156.04	5.36
01/16/03	22:49:57	33.97	156.06	5.34
01/16/03	22:50:57	34.97	156.05	5.35

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/16/03	22:51:57	35.97	156.04	5.36
01/16/03	22:52:57	36.97	156.10	5.30
01/16/03	22:53:57	37.97	156.04	5.36
01/16/03	22:54:57	38.97	156.07	5.33
01/16/03	22:55:57	39.97	156.07	5.33
01/16/03	22:56:57	40.97	156.06	5.34
01/16/03	22:57:57	41.97	156.07	5.33
01/16/03	22:58:57	42.97	156.04	5.36
01/16/03	22:59:57	43.97	156.04	5.36
01/16/03	23:00:57	44.97	156.07	5.33
01/16/03	23:01:57	45.97	156.06	5.34
01/16/03	23:02:57	46.97	156.07	5.33
01/16/03	23:03:57	47.97	156.05	5.35
01/16/03	23:04:57	48.97	156.00	5.40
01/16/03	23:05:57	49.97	155.98	5.42
01/16/03	23:06:57	50.97	155.97	5.43
01/16/03	23:07:57	51.97	155.99	5.41
01/16/03	23:08:57	52.97	155.98	5.42
01/16/03	23:09:57	53.97	155.98	5.42
01/16/03	23:10:57	54.97	155.97	5.43
01/16/03	23:11:57	55.97	155.97	5.43
01/16/03	23:12:57	56.97	155.99	5.41
01/16/03	23:13:57	57.97	156.02	5.38
01/16/03	23:14:57	58.97	156.02	5.38
01/16/03	23:15:57	59.97	156.02	5.38
01/16/03	23:16:57	60.97	155.99	5.41
01/16/03	23:17:57	61.97	155.99	5.41
01/16/03	23:22:57	66.97	156.01	5.39
01/16/03	23:27:57	71.97	155.95	5.45
01/16/03	23:32:57	76.97	155.94	5.46
01/16/03	23:37:57	81.97	155.92	5.48
01/16/03	23:42:57	86.97	155.95	5.45
01/16/03	23:47:57	91.97	155.90	**5.50**
01/16/03	23:52:57	96.97	155.95	5.45
01/16/03	23:57:57	101.97	156.00	5.40
01/17/03	0:02:57	106.97	155.97	5.43
01/17/03	0:07:57	111.97	156.02	5.38
01/17/03	0:12:57	116.97	156.03	5.37
01/17/03	0:17:57	121.97	155.98	5.42

Straddle-Packer Test No. 4 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



Straddle-Packer Test No. 4 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



g:aproject\reesemacon\pf001153.0003\MW Packer Tests\Test #4\#4 Drawdown.xls\spec cap.

Straddle-Packer Test No. 4 - Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well

Packer Depth Interval:	1750-1796 feet bpl	**Assumed Stabilized DTW:**	5.50 feet bpl
Start of Logging:	1/17/03 0:23:37	**Start of Pumping:**	1/16/2003 22:15
End of Logging:	1/17/03 1:24:38	**Pumping Duration:**	128 minutes
Pumping Rate:	82.71 gpm	**Total Test Time:**	193 minutes

Data collected with Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\PT4REC.DAT

Note: Double line indicates end of pumping

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/17/03	0:23:38		155.95	5.45	0.05
1/17/03	0:23:38		155.99	5.41	0.09
1/17/03	0:23:38		155.94	5.46	0.04
1/17/03	0:23:38		155.98	5.42	0.08
1/17/03	0:23:38		155.99	5.41	0.09
1/17/03	0:23:38		155.97	5.43	0.07
1/17/03	0:23:38		156.06	5.34	0.16
1/17/03	0:23:38		155.95	5.45	0.05
1/17/03	0:23:38		156.04	5.36	0.14
1/17/03	0:23:39		155.94	5.46	0.04
1/17/03	0:23:39		155.96	5.44	0.06
1/17/03	0:23:39		155.95	5.45	0.05
1/17/03	0:23:39		155.99	5.41	0.09
1/17/03	0:23:39		155.95	5.45	0.05
1/17/03	0:23:39		155.96	5.44	0.06
1/17/03	0:23:39		155.96	5.44	0.06
1/17/03	0:23:39		155.98	5.42	0.08
1/17/03	0:23:39		155.96	5.44	0.06
1/17/03	0:23:39		155.98	5.42	0.08
1/17/03	0:23:40		155.99	5.41	0.09
1/17/03	0:23:40		155.93	5.47	0.03
1/17/03	0:23:40		156.02	5.38	0.12
1/17/03	0:23:40		155.94	5.46	0.04
1/17/03	0:23:40		156.01	5.39	0.11
1/17/03	0:23:40		156.02	5.38	0.12
1/17/03	0:23:40		156.04	5.36	0.14
1/17/03	0:23:40		155.98	5.42	0.08
1/17/03	0:23:40		156.00	5.40	0.10
1/17/03	0:23:41		156.02	5.38	0.12
1/17/03	0:23:41		155.94	5.46	0.04
1/17/03	0:23:41		155.99	5.41	0.09
1/17/03	0:23:41		155.96	5.44	0.06
1/17/03	0:23:41		155.99	5.41	0.09
1/17/03	0:23:41		155.97	5.43	0.07
1/17/03	0:23:41		156.00	5.40	0.10
1/17/03	0:23:41		155.93	5.47	0.03
1/17/03	0:23:41		155.94	5.46	0.04
1/17/03	0:23:41		155.99	5.41	0.09
1/17/03	0:23:42		155.99	5.41	0.09
1/17/03	0:23:42		155.97	5.43	0.07
1/17/03	0:23:42		155.97	5.43	0.07
1/17/03	0:23:42		155.99	5.41	0.09
1/17/03	0:23:42		155.97	5.43	0.07
1/17/03	0:23:42		155.98	5.42	0.08
1/17/03	0:23:42		155.98	5.42	0.08
1/17/03	0:23:42		155.97	5.43	0.07
1/17/03	0:23:42	0.00	155.95	5.45	0.05
1/17/03	0:23:43	0.00	155.97	5.43	0.07

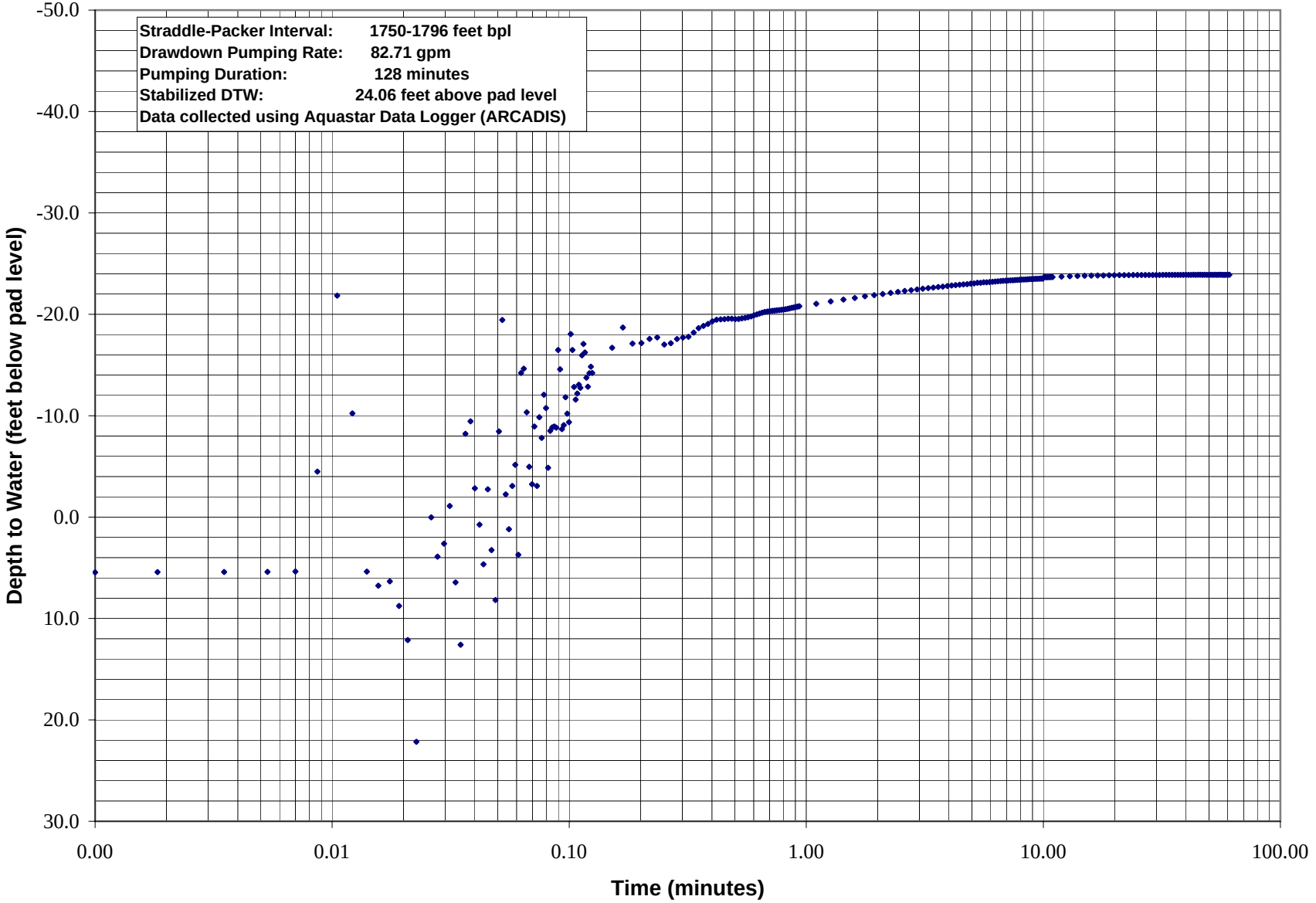
Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/17/03	0:23:43	0.00	155.99	5.41	0.09
1/17/03	0:23:43	0.01	156.00	5.40	0.10
1/17/03	0:23:43	0.01	156.03	5.37	0.13
1/17/03	0:23:43	0.01	165.89	-4.49	9.99
1/17/03	0:23:43	0.01	183.25	-21.85	27.35
1/17/03	0:23:43	0.01	171.62	-10.22	15.72
1/17/03	0:23:43	0.01	156.02	5.38	0.12
1/17/03	0:23:43	0.02	154.63	6.77	
1/17/03	0:23:43	0.02	155.06	6.34	
1/17/03	0:23:44	0.02	152.63	8.77	
1/17/03	0:23:44	0.02	149.27	12.13	
1/17/03	0:23:44	0.02	139.24	22.16	
1/17/03	0:23:44	0.02	200.77	-39.37	44.87
1/17/03	0:23:44	0.03	161.37	0.03	5.47
1/17/03	0:23:44	0.03	157.50	3.90	1.60
1/17/03	0:23:44	0.03	158.77	2.63	2.87
1/17/03	0:23:44	0.03	162.49	-1.09	6.59
1/17/03	0:23:44	0.03	154.96	6.44	
1/17/03	0:23:44	0.03	148.81	12.59	
1/17/03	0:23:45	0.04	169.61	-8.21	13.71
1/17/03	0:23:45	0.04	170.84	-9.44	14.94
1/17/03	0:23:45	0.04	164.23	-2.83	8.33
1/17/03	0:23:45	0.04	160.66	0.74	4.76
1/17/03	0:23:45	0.04	156.75	4.65	0.85
1/17/03	0:23:45	0.05	164.14	-2.74	8.24
1/17/03	0:23:45	0.05	158.14	3.26	2.24
1/17/03	0:23:45	0.05	153.21	8.19	
1/17/03	0:23:45	0.05	169.85	-8.45	13.95
1/17/03	0:23:46	0.05	180.84	-19.44	24.94
1/17/03	0:23:46	0.05	163.64	-2.24	7.74
1/17/03	0:23:46	0.06	160.20	1.20	4.30
1/17/03	0:23:46	0.06	164.46	-3.06	8.56
1/17/03	0:23:46	0.06	166.55	-5.15	10.65
1/17/03	0:23:46	0.06	157.68	3.72	1.78
1/17/03	0:23:46	0.06	175.61	-14.21	19.71
1/17/03	0:23:46	0.06	176.04	-14.64	20.14
1/17/03	0:23:46	0.07	171.73	-10.33	15.83
1/17/03	0:23:46	0.07	166.36	-4.96	10.46
1/17/03	0:23:47	0.07	164.65	-3.25	8.75
1/17/03	0:23:47	0.07	170.33	-8.93	14.43
1/17/03	0:23:47	0.07	164.47	-3.07	8.57
1/17/03	0:23:47	0.07	171.25	-9.85	15.35
1/17/03	0:23:47	0.08	169.22	-7.82	13.32
1/17/03	0:23:47	0.08	173.47	-12.07	17.57
1/17/03	0:23:47	0.08	172.16	-10.76	16.26
1/17/03	0:23:47	0.08	166.26	-4.86	10.36
1/17/03	0:23:47	0.08	169.90	-8.50	14.00
1/17/03	0:23:47	0.08	170.25	-8.85	14.35
1/17/03	0:23:48	0.09	170.34	-8.94	14.44
1/17/03	0:23:48	0.09	170.22	-8.82	14.32
1/17/03	0:23:48	0.09	177.87	-16.47	21.97
1/17/03	0:23:48	0.09	175.98	-14.58	20.08
1/17/03	0:23:48	0.09	170.08	-8.68	14.18
1/17/03	0:23:48	0.09	170.47	-9.07	14.57
1/17/03	0:23:48	0.10	173.22	-11.82	17.32
1/17/03	0:23:48	0.10	171.61	-10.21	15.71
1/17/03	0:23:48	0.10	170.75	-9.35	14.85
1/17/03	0:23:48	0.10	179.46	-18.06	23.56
1/17/03	0:23:49	0.10	177.88	-16.48	21.98
1/17/03	0:23:49	0.10	174.24	-12.84	18.34
1/17/03	0:23:49	0.11	172.99	-11.59	17.09

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/17/03	0:23:49	0.11	173.59	-12.19	17.69
1/17/03	0:23:49	0.11	174.46	-13.06	18.56
1/17/03	0:23:49	0.11	174.15	-12.75	18.25
1/17/03	0:23:49	0.11	177.35	-15.95	21.45
1/17/03	0:23:49	0.11	178.47	-17.07	22.57
1/17/03	0:23:49	0.12	177.64	-16.24	21.74
1/17/03	0:23:49	0.12	175.15	-13.75	19.25
1/17/03	0:23:50	0.12	174.26	-12.86	18.36
1/17/03	0:23:50	0.12	175.59	-14.19	19.69
1/17/03	0:23:50	0.12	176.23	-14.83	20.33
1/17/03	0:23:50	0.13	175.61	-14.21	19.71
1/17/03	0:23:51	0.15	178.10	-16.70	22.20
1/17/03	0:23:53	0.17	180.10	-18.70	24.20
1/17/03	0:23:54	0.19	178.51	-17.11	22.61
1/17/03	0:23:55	0.20	178.56	-17.16	22.66
1/17/03	0:23:56	0.22	178.97	-17.57	23.07
1/17/03	0:23:57	0.24	179.12	-17.72	23.22
1/17/03	0:23:58	0.25	178.41	-17.01	22.51
1/17/03	0:23:59	0.27	178.55	-17.15	22.65
1/17/03	0:24:00	0.29	178.96	-17.56	23.06
1/17/03	0:24:01	0.30	179.11	-17.71	23.21
1/17/03	0:24:02	0.32	179.18	-17.78	23.28
1/17/03	0:24:03	0.34	179.59	-18.19	23.69
1/17/03	0:24:04	0.35	180.03	-18.63	24.13
1/17/03	0:24:05	0.37	180.26	-18.86	24.36
1/17/03	0:24:06	0.39	180.45	-19.05	24.55
1/17/03	0:24:07	0.40	180.71	-19.31	24.81
1/17/03	0:24:08	0.42	180.86	-19.46	24.96
1/17/03	0:24:09	0.44	180.91	-19.51	25.01
1/17/03	0:24:10	0.45	180.92	-19.52	25.02
1/17/03	0:24:11	0.47	180.96	-19.56	25.06
1/17/03	0:24:12	0.49	180.96	-19.56	25.06
1/17/03	0:24:13	0.50	180.93	-19.53	25.03
1/17/03	0:24:14	0.52	180.94	-19.54	25.04
1/17/03	0:24:15	0.54	180.99	-19.59	25.09
1/17/03	0:24:16	0.55	181.04	-19.64	25.14
1/17/03	0:24:17	0.57	181.11	-19.71	25.21
1/17/03	0:24:18	0.59	181.20	-19.80	25.30
1/17/03	0:24:19	0.60	181.30	-19.90	25.40
1/17/03	0:24:20	0.62	181.39	-19.99	25.49
1/17/03	0:24:21	0.64	181.48	-20.08	25.58
1/17/03	0:24:22	0.65	181.56	-20.16	25.66
1/17/03	0:24:23	0.67	181.64	-20.24	25.74
1/17/03	0:24:24	0.69	181.67	-20.27	25.77
1/17/03	0:24:25	0.70	181.72	-20.32	25.82
1/17/03	0:24:26	0.72	181.75	-20.35	25.85
1/17/03	0:24:27	0.74	181.77	-20.37	25.87
1/17/03	0:24:28	0.75	181.79	-20.39	25.89
1/17/03	0:24:29	0.77	181.81	-20.41	25.91
1/17/03	0:24:30	0.79	181.84	-20.44	25.94
1/17/03	0:24:31	0.80	181.87	-20.47	25.97
1/17/03	0:24:32	0.82	181.90	-20.50	26.00
1/17/03	0:24:33	0.84	181.94	-20.54	26.04
1/17/03	0:24:34	0.85	181.99	-20.59	26.09
1/17/03	0:24:35	0.87	182.03	-20.63	26.13
1/17/03	0:24:36	0.89	182.08	-20.68	26.18
1/17/03	0:24:37	0.90	182.12	-20.72	26.22
1/17/03	0:24:38	0.92	182.16	-20.76	26.26
1/17/03	0:24:39	0.94	182.19	-20.79	26.29
1/17/03	0:24:49	1.10	182.44	-21.04	26.54
1/17/03	0:24:58	1.27	182.67	-21.27	26.77

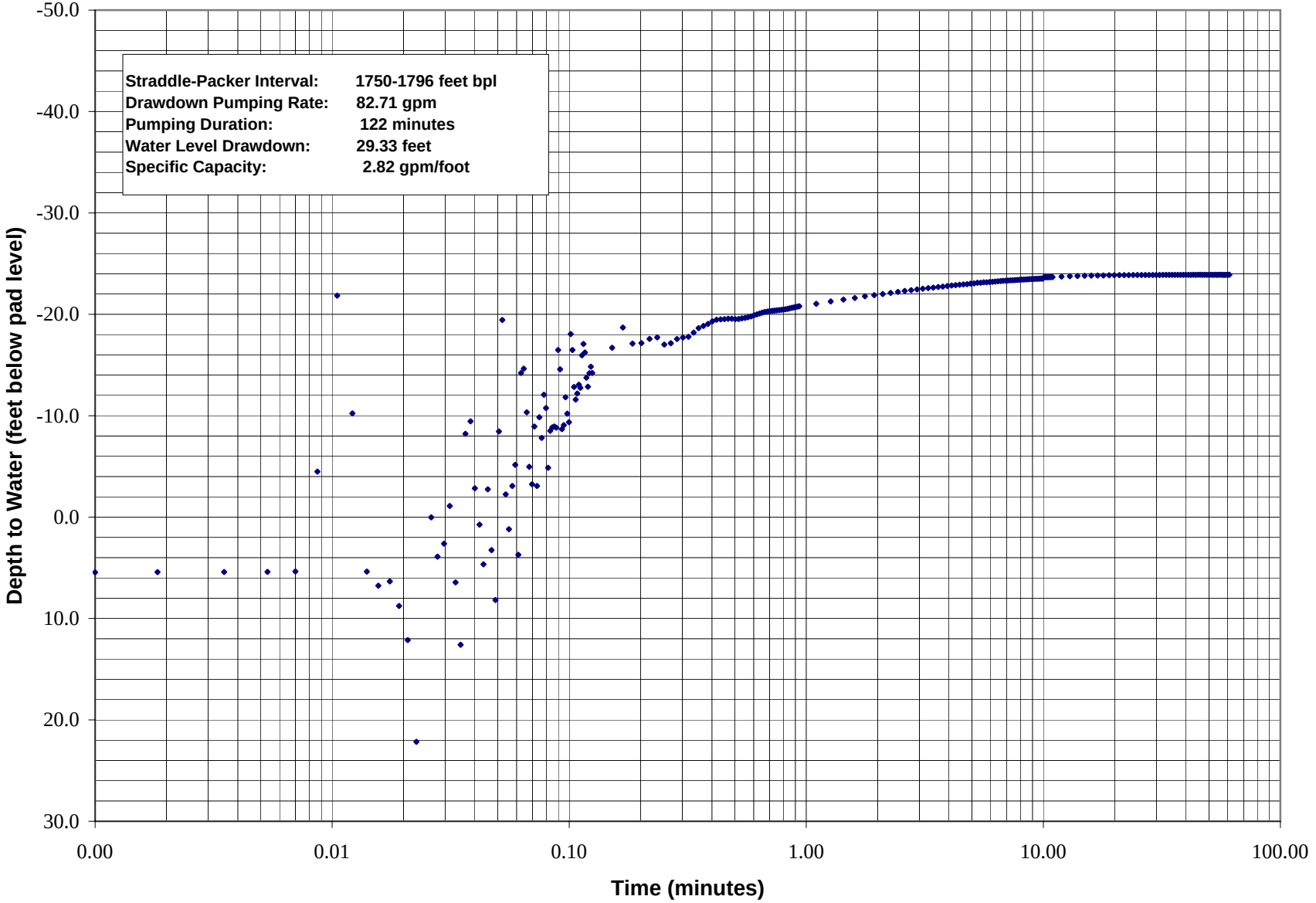
Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/17/03	0:25:08	1.44	182.86	-21.46	26.96
1/17/03	0:25:18	1.60	183.02	-21.62	27.12
1/17/03	0:25:28	1.77	183.18	-21.78	27.28
1/17/03	0:25:38	1.94	183.29	-21.89	27.39
1/17/03	0:25:48	2.10	183.41	-22.01	27.51
1/17/03	0:25:58	2.27	183.51	-22.11	27.61
1/17/03	0:26:08	2.44	183.61	-22.21	27.71
1/17/03	0:26:18	2.60	183.70	-22.30	27.80
1/17/03	0:26:28	2.77	183.77	-22.37	27.87
1/17/03	0:26:38	2.94	183.85	-22.45	27.95
1/17/03	0:26:48	3.10	183.93	-22.53	28.03
1/17/03	0:26:58	3.27	183.98	-22.58	28.08
1/17/03	0:27:08	3.44	184.03	-22.63	28.13
1/17/03	0:27:18	3.60	184.09	-22.69	28.19
1/17/03	0:27:28	3.77	184.14	-22.74	28.24
1/17/03	0:27:38	3.94	184.19	-22.79	28.29
1/17/03	0:27:48	4.10	184.24	-22.84	28.34
1/17/03	0:27:58	4.27	184.27	-22.87	28.37
1/17/03	0:28:08	4.44	184.32	-22.92	28.42
1/17/03	0:28:18	4.60	184.35	-22.95	28.45
1/17/03	0:28:28	4.77	184.38	-22.98	28.48
1/17/03	0:28:38	4.94	184.42	-23.02	28.52
1/17/03	0:28:48	5.10	184.45	-23.05	28.55
1/17/03	0:28:58	5.27	184.50	-23.10	28.60
1/17/03	0:29:08	5.44	184.51	-23.11	28.61
1/17/03	0:29:18	5.60	184.55	-23.15	28.65
1/17/03	0:29:28	5.77	184.56	-23.16	28.66
1/17/03	0:29:38	5.94	184.58	-23.18	28.68
1/17/03	0:29:48	6.10	184.61	-23.21	28.71
1/17/03	0:29:58	6.27	184.63	-23.23	28.73
1/17/03	0:30:08	6.44	184.66	-23.26	28.76
1/17/03	0:30:18	6.60	184.68	-23.28	28.78
1/17/03	0:30:28	6.77	184.70	-23.30	28.80
1/17/03	0:30:38	6.94	184.71	-23.31	28.81
1/17/03	0:30:48	7.10	184.73	-23.33	28.83
1/17/03	0:30:58	7.27	184.75	-23.35	28.85
1/17/03	0:31:08	7.44	184.76	-23.36	28.86
1/17/03	0:31:18	7.60	184.78	-23.38	28.88
1/17/03	0:31:28	7.77	184.79	-23.39	28.89
1/17/03	0:31:38	7.94	184.81	-23.41	28.91
1/17/03	0:31:48	8.10	184.82	-23.42	28.92
1/17/03	0:31:58	8.27	184.83	-23.43	28.93
1/17/03	0:32:08	8.44	184.84	-23.44	28.94
1/17/03	0:32:18	8.60	184.85	-23.45	28.95
1/17/03	0:32:28	8.77	184.87	-23.47	28.97
1/17/03	0:32:38	8.94	184.88	-23.48	28.98
1/17/03	0:32:48	9.10	184.89	-23.49	28.99
1/17/03	0:32:58	9.27	184.89	-23.49	28.99
1/17/03	0:33:08	9.44	184.90	-23.50	29.00
1/17/03	0:33:18	9.60	184.91	-23.51	29.01
1/17/03	0:33:28	9.77	184.92	-23.52	29.02
1/17/03	0:33:38	9.94	184.91	-23.51	29.01
1/17/03	0:33:48	10.10	185.10	-23.70	29.20
1/17/03	0:33:58	10.27	185.05	-23.65	29.15
1/17/03	0:34:08	10.44	185.05	-23.65	29.15
1/17/03	0:34:18	10.60	185.06	-23.66	29.16
1/17/03	0:34:28	10.77	185.07	-23.67	29.17
1/17/03	0:34:38	10.94	185.07	-23.67	29.17
1/17/03	0:35:38	11.94	185.12	-23.72	29.22
1/17/03	0:36:38	12.94	185.15	-23.75	29.25
1/17/03	0:37:38	13.94	185.18	-23.78	29.28

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/17/03	0:38:38	14.94	185.20	-23.80	29.30
1/17/03	0:39:38	15.94	185.22	-23.82	29.32
1/17/03	0:40:38	16.94	185.23	-23.83	29.33
1/17/03	0:41:38	17.94	185.23	-23.83	29.33
1/17/03	0:42:38	18.94	185.25	-23.85	29.35
1/17/03	0:43:38	19.94	185.25	-23.85	29.35
1/17/03	0:44:38	20.94	185.27	-23.87	29.37
1/17/03	0:45:38	21.94	185.27	-23.87	29.37
1/17/03	0:46:38	22.94	185.27	-23.87	29.37
1/17/03	0:47:38	23.94	185.28	-23.88	29.38
1/17/03	0:48:38	24.94	185.28	-23.88	29.38
1/17/03	0:49:38	25.94	185.28	-23.88	29.38
1/17/03	0:50:38	26.94	185.28	-23.88	29.38
1/17/03	0:51:38	27.94	185.28	-23.88	29.38
1/17/03	0:52:38	28.94	185.28	-23.88	29.38
1/17/03	0:53:38	29.94	185.28	-23.88	29.38
1/17/03	0:54:38	30.94	185.28	-23.88	29.38
1/17/03	0:55:38	31.94	185.29	-23.89	29.39
1/17/03	0:56:38	32.94	185.29	-23.89	29.39
1/17/03	0:57:38	33.94	185.29	-23.89	29.39
1/17/03	0:58:38	34.94	185.29	-23.89	29.39
1/17/03	0:59:38	35.94	185.29	-23.89	29.39
1/17/03	1:00:38	36.94	185.29	-23.89	29.39
1/17/03	1:01:38	37.94	185.29	-23.89	29.39
1/17/03	1:02:38	38.94	185.29	-23.89	29.39
1/17/03	1:03:38	39.94	185.30	-23.90	29.40
1/17/03	1:04:38	40.94	185.29	-23.89	29.39
1/17/03	1:05:38	41.94	185.29	-23.89	29.39
1/17/03	1:06:38	42.94	185.30	-23.90	29.40
1/17/03	1:07:38	43.94	185.29	-23.89	29.39
1/17/03	1:08:38	44.94	185.30	-23.90	29.40
1/17/03	1:09:38	45.94	185.30	-23.90	29.40
1/17/03	1:10:38	46.94	185.29	-23.89	29.39
1/17/03	1:11:38	47.94	185.30	-23.90	29.40
1/17/03	1:12:38	48.94	185.29	-23.89	29.39
1/17/03	1:13:38	49.94	185.29	-23.89	29.39
1/17/03	1:14:38	50.94	185.31	-23.91	29.41
1/17/03	1:15:38	51.94	185.29	-23.89	29.39
1/17/03	1:16:38	52.94	185.31	-23.91	29.41
1/17/03	1:17:38	53.94	185.29	-23.89	29.39
1/17/03	1:18:38	54.94	185.30	-23.90	29.40
1/17/03	1:19:38	55.94	185.30	-23.90	29.40
1/17/03	1:20:38	56.94	185.29	-23.89	29.39
1/17/03	1:21:38	57.94	185.29	-23.89	29.39
1/17/03	1:22:38	58.94	185.29	-23.89	29.39
1/17/03	1:23:38	59.94	185.30	-23.90	29.40
1/17/03	1:24:38	60.94	185.30	-23.90	29.40

Straddle- Packer Test No. 4- Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



Straddle- Packer Test No. 4- Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



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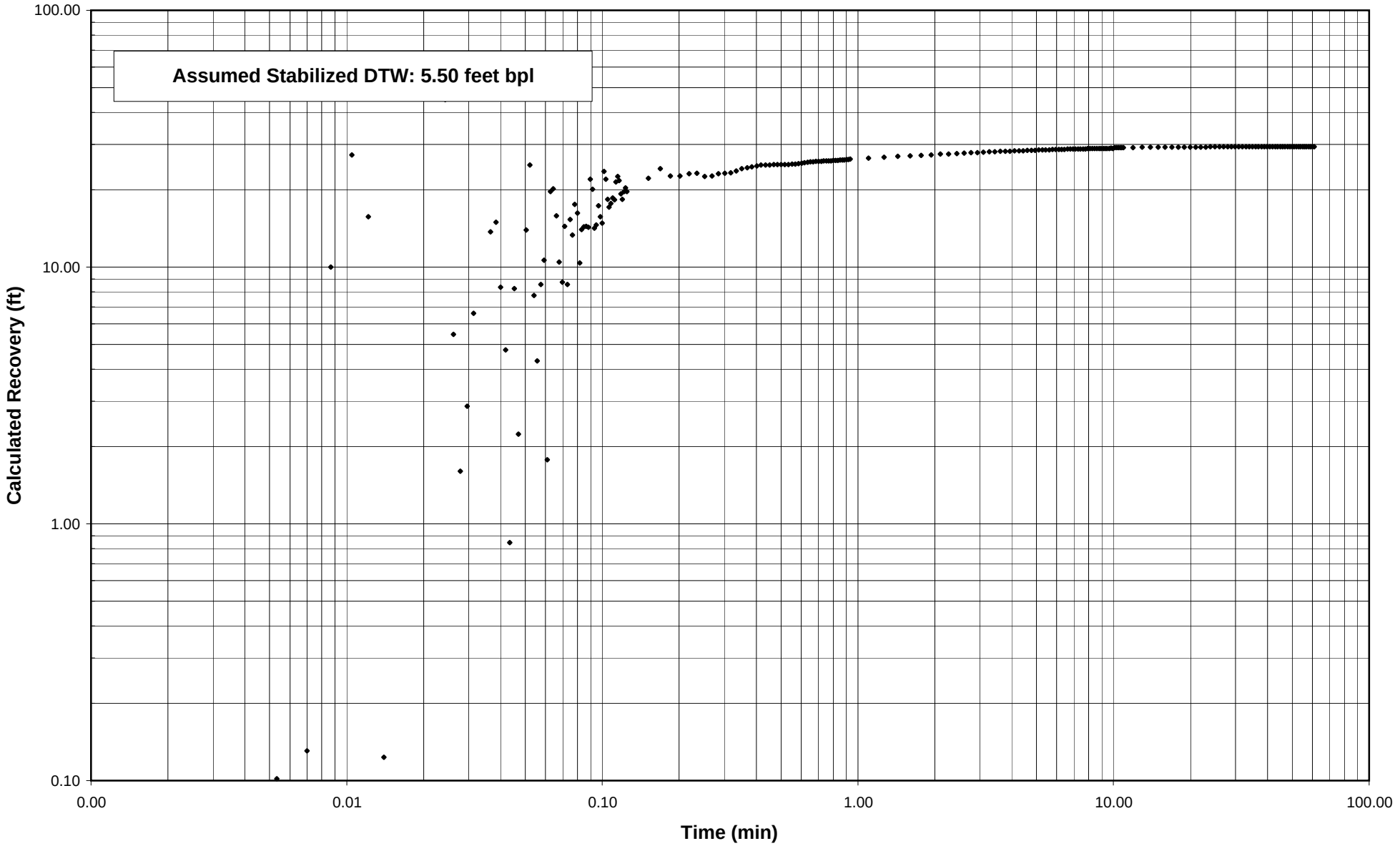
Dual-Zone Deep Monitor Well, Port St. Lucie
Port St. Lucie, Westport Injection Well System
Straddle-Packer Test No. 4 - Recovery



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Straddle-Packer Test No. 5 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well

Packer Depth Interval:	1650-1696 feet bpl	**Static Water Level:**	27.02 above pad level
Start of Logging:	1/17/2003 12:54	**Start of Pumping:**	1/17/2003 12:56
End of Logging:	1/17/2003 15:51	**End of Pumping:**	1/17/2003 15:58
Pumping Rate:	82.0 gpm	**Pumping Duration:**	183 minutes

Data Collected Using Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\WESTPORT\PUMP3.DAT

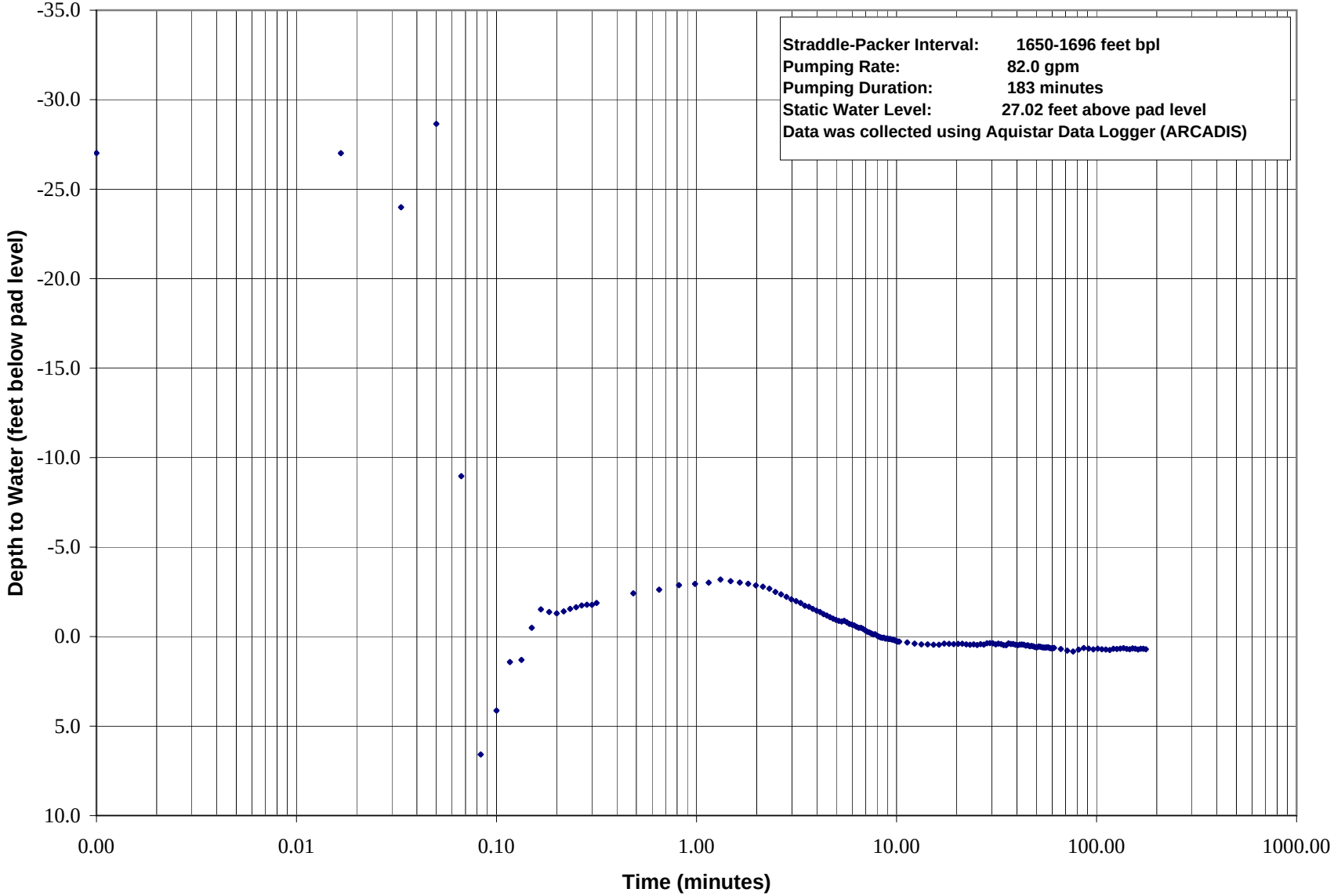
Note: Bold number indicates assumed static water level before pumping

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
01/17/03	12:55:27	0.00	188.42	**-27.02**
01/17/03	12:55:28	0.02	188.41	-27.01
01/17/03	12:55:29	0.03	185.39	-23.99
01/17/03	12:55:30	0.05	190.05	-28.65
01/17/03	12:55:31	0.07	170.36	-8.96
01/17/03	12:55:32	0.08	154.81	6.59
01/17/03	12:55:33	0.10	157.27	4.13
01/17/03	12:55:34	0.12	159.98	1.42
01/17/03	12:55:35	0.13	160.10	1.30
01/17/03	12:55:36	0.15	161.89	-0.49
01/17/03	12:55:37	0.17	162.92	-1.52
01/17/03	12:55:38	0.18	162.78	-1.38
01/17/03	12:55:39	0.20	162.70	-1.30
01/17/03	12:55:40	0.22	162.81	-1.41
01/17/03	12:55:41	0.23	162.95	-1.55
01/17/03	12:55:42	0.25	163.04	-1.64
01/17/03	12:55:43	0.27	163.14	-1.74
01/17/03	12:55:44	0.28	163.18	-1.78
01/17/03	12:55:45	0.30	163.17	-1.77
01/17/03	12:55:46	0.32	163.28	-1.88
01/17/03	12:55:56	0.48	163.82	-2.42
01/17/03	12:56:06	0.65	164.02	-2.62
01/17/03	12:56:16	0.82	164.28	-2.88
01/17/03	12:56:26	0.98	164.34	-2.94
01/17/03	12:56:36	1.15	164.41	-3.01
01/17/03	12:56:46	1.32	164.59	-3.19
01/17/03	12:56:56	1.48	164.50	-3.10
01/17/03	12:57:06	1.65	164.42	-3.02
01/17/03	12:57:16	1.81	164.35	-2.95
01/17/03	12:57:26	1.98	164.26	-2.86
01/17/03	12:57:36	2.15	164.19	-2.79
01/17/03	12:57:46	2.31	164.07	-2.67
01/17/03	12:57:56	2.48	163.89	-2.49
01/17/03	12:58:06	2.65	163.76	-2.36
01/17/03	12:58:16	2.81	163.62	-2.22
01/17/03	12:58:26	2.98	163.48	-2.08
01/17/03	12:58:36	3.15	163.38	-1.98
01/17/03	12:58:46	3.31	163.28	-1.88
01/17/03	12:58:56	3.48	163.12	-1.72
01/17/03	12:59:06	3.65	163.07	-1.67
01/17/03	12:59:16	3.81	162.95	-1.55
01/17/03	12:59:26	3.98	162.85	-1.45
01/17/03	12:59:36	4.15	162.78	-1.38
01/17/03	12:59:46	4.31	162.65	-1.25
01/17/03	12:59:56	4.48	162.58	-1.18
01/17/03	13:00:06	4.65	162.49	-1.09

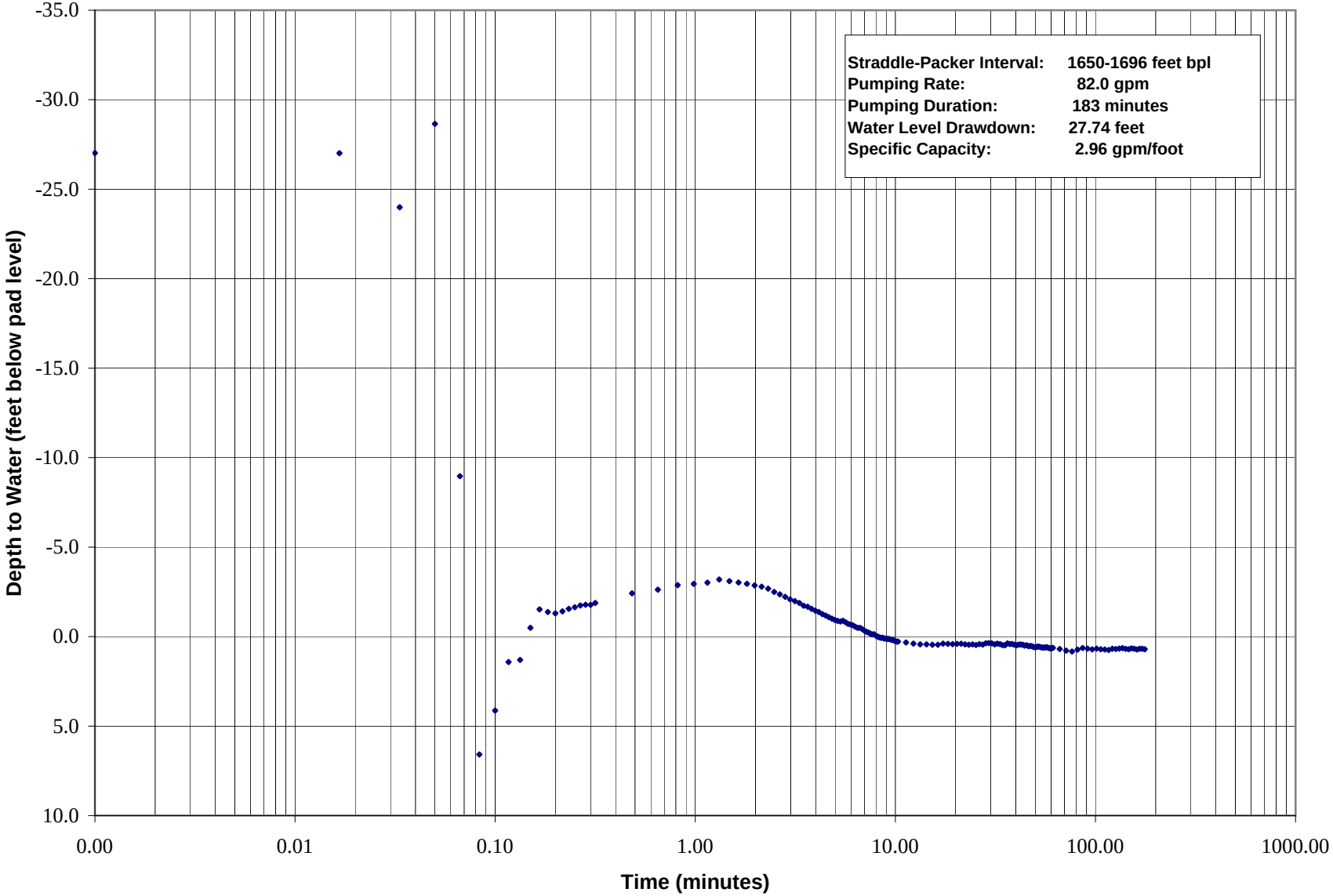
Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/17/03	13:00:16	4.81	162.40	-1.00
01/17/03	13:00:26	4.98	162.33	-0.93
01/17/03	13:00:36	5.15	162.28	-0.88
01/17/03	13:00:46	5.31	162.24	-0.84
01/17/03	13:00:56	5.48	162.28	-0.88
01/17/03	13:01:06	5.65	162.20	-0.80
01/17/03	13:01:16	5.81	162.11	-0.71
01/17/03	13:01:26	5.98	162.07	-0.67
01/17/03	13:01:36	6.15	162.02	-0.62
01/17/03	13:01:46	6.31	161.94	-0.54
01/17/03	13:01:56	6.48	161.89	-0.49
01/17/03	13:02:06	6.65	161.89	-0.49
01/17/03	13:02:16	6.81	161.83	-0.43
01/17/03	13:02:26	6.98	161.74	-0.34
01/17/03	13:02:36	7.15	161.68	-0.28
01/17/03	13:02:46	7.31	161.63	-0.23
01/17/03	13:02:56	7.48	161.58	-0.18
01/17/03	13:03:06	7.65	161.52	-0.12
01/17/03	13:03:16	7.81	161.53	-0.13
01/17/03	13:03:26	7.98	161.45	-0.05
01/17/03	13:03:36	8.15	161.40	0.00
01/17/03	13:03:46	8.31	161.36	0.04
01/17/03	13:03:56	8.48	161.33	0.07
01/17/03	13:04:06	8.65	161.34	0.06
01/17/03	13:04:16	8.81	161.29	0.11
01/17/03	13:04:26	8.98	161.29	0.11
01/17/03	13:04:36	9.15	161.27	0.13
01/17/03	13:04:46	9.31	161.27	0.13
01/17/03	13:04:56	9.48	161.23	0.17
01/17/03	13:05:06	9.65	161.22	0.18
01/17/03	13:05:16	9.81	161.19	0.21
01/17/03	13:05:26	9.98	161.15	0.25
01/17/03	13:05:36	10.15	161.12	0.28
01/17/03	13:05:46	10.31	161.12	0.28
01/17/03	13:06:46	11.31	161.07	0.33
01/17/03	13:07:46	12.31	161.01	0.39
01/17/03	13:08:46	13.31	160.97	0.43
01/17/03	13:09:46	14.31	160.97	0.43
01/17/03	13:10:46	15.31	160.95	0.45
01/17/03	13:11:46	16.31	160.95	0.45
01/17/03	13:12:46	17.31	161.01	0.39
01/17/03	13:13:46	18.31	160.99	0.41
01/17/03	13:14:46	19.31	160.98	0.42
01/17/03	13:15:46	20.31	160.99	0.41
01/17/03	13:16:46	21.31	161.00	0.40
01/17/03	13:17:46	22.31	160.97	0.43
01/17/03	13:18:46	23.31	160.95	0.45
01/17/03	13:19:46	24.31	160.97	0.43
01/17/03	13:20:46	25.31	160.93	0.47
01/17/03	13:21:46	26.31	160.98	0.42
01/17/03	13:22:46	27.31	160.96	0.44
01/17/03	13:23:46	28.31	161.03	0.37
01/17/03	13:24:46	29.31	161.03	0.37
01/17/03	13:25:46	30.31	161.02	0.38
01/17/03	13:26:46	31.31	160.97	0.43
01/17/03	13:27:46	32.31	161.01	0.39
01/17/03	13:28:46	33.31	160.98	0.42
01/17/03	13:29:46	34.31	160.93	0.47
01/17/03	13:30:46	35.31	160.92	0.48
01/17/03	13:31:46	36.31	161.02	0.38

Date	Time	Minutes	Water Level	Depth to Water
		(from start of pumping)	(feet above transducer)	(feet bpl)
01/17/03	13:32:46	37.31	160.98	0.42
01/17/03	13:33:46	38.31	160.98	0.42
01/17/03	13:34:46	39.31	160.95	0.45
01/17/03	13:35:46	40.31	160.92	0.48
01/17/03	13:36:46	41.31	160.96	0.44
01/17/03	13:37:46	42.31	160.96	0.44
01/17/03	13:38:46	43.31	160.95	0.45
01/17/03	13:39:46	44.31	160.90	0.50
01/17/03	13:40:46	45.31	160.92	0.48
01/17/03	13:41:46	46.31	160.86	0.54
01/17/03	13:42:46	47.31	160.88	0.52
01/17/03	13:43:46	48.31	160.85	0.55
01/17/03	13:44:46	49.31	160.81	0.59
01/17/03	13:45:46	50.31	160.80	0.60
01/17/03	13:46:46	51.31	160.85	0.55
01/17/03	13:47:46	52.31	160.83	0.57
01/17/03	13:48:46	53.31	160.80	0.60
01/17/03	13:49:46	54.31	160.79	0.61
01/17/03	13:50:46	55.31	160.78	0.62
01/17/03	13:51:46	56.31	160.80	0.60
01/17/03	13:52:46	57.31	160.80	0.60
01/17/03	13:53:46	58.31	160.76	0.64
01/17/03	13:54:46	59.31	160.75	0.65
01/17/03	13:55:46	60.31	160.75	0.65
01/17/03	13:56:46	61.31	160.77	0.63
01/17/03	14:01:46	66.31	160.71	0.69
01/17/03	14:06:46	71.31	160.62	0.78
01/17/03	14:11:46	76.31	160.57	0.83
01/17/03	14:16:46	81.31	160.67	0.73
01/17/03	14:21:46	86.31	160.76	0.64
01/17/03	14:26:46	91.31	160.73	0.67
01/17/03	14:31:46	96.31	160.69	0.71
01/17/03	14:36:46	101.31	160.73	0.67
01/17/03	14:41:46	106.31	160.70	0.70
01/17/03	14:46:46	111.31	160.68	0.72
01/17/03	14:51:46	116.31	160.65	0.75
01/17/03	14:56:46	121.31	160.72	0.68
01/17/03	15:01:46	126.31	160.71	0.69
01/17/03	15:06:46	131.31	160.73	0.67
01/17/03	15:11:46	136.31	160.75	0.65
01/17/03	15:16:46	141.31	160.72	0.68
01/17/03	15:21:46	146.31	160.70	0.70
01/17/03	15:26:46	151.31	160.74	0.66
01/17/03	15:31:46	156.31	160.72	0.68
01/17/03	15:36:46	161.31	160.68	0.72
01/17/03	15:41:46	166.31	160.72	0.68
01/17/03	15:46:46	171.31	160.72	0.68
01/17/03	15:51:46	176.31	160.70	0.70

Straddle-Packer Test No. 5 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



Straddle-Packer Test No. 5 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



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Source File: C:\AQUA4\WESTPORT\PUMP5.DAT
Location: INW 2052005
Start: 1/17/03 12:54
End: 1/17/03 15:51

Straddle- Packer 1650-1696 feet bpl pump test data.

Average pumping rate: 82 gpm
Pumping duration: 179 min.

Date Time (hr:min:sec)	Time elapsed (min)	Water-leve (feet of wa above transducer)	Drawdown (feet)	Pumping Rate (gpm)
			0.00	Pump- on.
			0.01	83
			3.03	
			-1.63	
			18.06	
			33.61	
			31.15	
			28.44	
			28.32	
			26.53	
			25.50	
			25.64	
			25.72	
			25.61	
			25.47	
			25.38	
			25.28	
			25.24	
			25.25	
			25.14	
			24.60	
			24.40	
			24.14	
			24.08	
			24.01	
			23.83	
			23.92	
			24.00	
			24.07	
			24.16	
			24.23	
			24.35	
			24.53	
			24.66	
			24.80	
			24.94	
			25.04	
			25.14	
			25.30	
			25.35	
			25.47	
			25.57	
			25.64	
			25.77	
			25.84	
			25.93	
			26.02	
			26.09	

Date Time (hr:min:sec)	Time elapsed (min)	Water-level (feet of water above transducer)	Drawdown (feet)	Pumping Rate (gpm)
			26.14	83
			26.18	
			26.14	
			26.22	
			26.31	
			26.35	
			26.40	
			26.48	
			26.53	
			26.53	
			26.59	
			26.68	
			26.74	
			26.79	
			26.84	
			26.90	
			26.89	
			26.97	
			27.02	
			27.06	
			27.09	
			27.08	
			27.13	
			27.13	
			27.15	
			27.15	
			27.19	
			27.20	
			27.23	
			27.27	
			27.30	
			27.30	
			27.35	
			27.41	
			27.45	
			27.45	
			27.47	
			27.47	
			27.41	
			27.43	
			27.44	
			27.43	82
			27.42	
			27.45	
			27.47	
			27.45	
			27.49	
			27.44	
			27.46	
			27.39	
			27.39	
			27.40	
			27.45	
			27.41	
			27.44	

Date Time (hr:min:sec)	Time elapsed (min)	Water-level (feet of water above transducer)	Drawdown (feet)	Pumping Rate (gpm)
			27.49	
			27.50	
			27.40	
			27.44	
			27.44	
			27.47	
			27.50	
			27.46	
			27.46	
			27.47	
			27.52	
			27.50	
			27.56	
			27.54	
			27.57	
			27.61	
			27.62	
			27.57	
			27.59	
			27.62	
			27.63	
			27.64	81
			27.62	
			27.62	
			27.66	
			27.67	
			27.67	
			27.65	
			27.71	
			27.80	
			27.85	
			27.75	
			27.66	
			27.69	
			27.73	82
			27.69	
			27.72	
			27.74	
			27.77	
			27.70	
			27.71	82
			27.69	
			27.67	
			27.70	82
			27.72	
			27.68	
			27.70	82
			27.74	
			27.70	
			27.70	
			27.72	

Straddle-Packer Test No. 5 - Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well

Packer Depth Interval:	1650-1696 feet bpl	**Assumed Stabilized DTW:**	0.77 feet bpl
Start of Logging:	1/17/03 15:58:15	**Start of Pumping:**	1/17/2003 12:56
End of Logging:	1/17/03 17:35:16	**Pumping Duration:**	183 minutes
Pumping Rate:	82.0 gpm	**Total Test Time:**	280 minutes

Data collected with Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\WESTPORT\PT5REC.DAT

Note: Double line indicates end of pumping

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/17/03	15:58:15	0.00	160.64	0.76	0.01
1/17/03	15:58:15	0.00	160.64	0.76	0.01
1/17/03	15:58:15	0.00	160.65	0.75	0.02
1/17/03	15:58:15	0.01	160.66	0.74	0.03
1/17/03	15:58:16	0.01	160.63	0.77	0.00
1/17/03	15:58:16	0.01	160.67	0.73	0.04
1/17/03	15:58:16	0.01	160.67	0.73	0.04
1/17/03	15:58:16	0.01	160.71	0.69	0.08
1/17/03	15:58:16	0.01	160.67	0.73	0.04
1/17/03	15:58:16	0.02	160.72	0.68	0.09
1/17/03	15:58:16	0.02	160.77	0.63	0.14
1/17/03	15:58:16	0.02	160.70	0.70	0.07
1/17/03	15:58:16	0.02	160.69	0.71	0.06
1/17/03	15:58:16	0.02	160.64	0.76	0.01
1/17/03	15:58:17	0.02	160.71	0.69	0.08
1/17/03	15:58:17	0.03	160.64	0.76	0.01
1/17/03	15:58:17	0.03	160.63	0.77	0.00
1/17/03	15:58:17	0.03	160.74	0.66	0.11
1/17/03	15:58:17	0.03	160.73	0.67	0.10
1/17/03	15:58:17	0.03	160.71	0.69	0.08
1/17/03	15:58:17	0.03	160.70	0.70	0.07
1/17/03	15:58:17	0.04	160.66	0.74	0.03
1/17/03	15:58:17	0.04	160.69	0.71	0.06
1/17/03	15:58:17	0.04	160.62	0.78	
1/17/03	15:58:18	0.04	160.61	0.79	
1/17/03	15:58:18	0.04	160.71	0.69	0.08
1/17/03	15:58:18	0.04	160.69	0.71	0.06
1/17/03	15:58:18	0.05	160.70	0.70	0.07
1/17/03	15:58:18	0.05	160.64	0.76	0.01
1/17/03	15:58:18	0.05	160.70	0.70	0.07
1/17/03	15:58:18	0.05	160.64	0.76	0.01
1/17/03	15:58:18	0.05	160.64	0.76	0.01
1/17/03	15:58:18	0.06	168.47	-7.07	7.84
1/17/03	15:58:19	0.06	175.79	-14.39	15.16
1/17/03	15:58:19	0.06	172.50	-11.10	11.87
1/17/03	15:58:19	0.06	169.40	-8.00	8.77
1/17/03	15:58:19	0.06	167.48	-6.08	6.85
1/17/03	15:58:19	0.06	167.06	-5.66	6.43
1/17/03	15:58:19	0.07	168.02	-6.62	7.39
1/17/03	15:58:19	0.07	169.47	-8.07	8.84
1/17/03	15:58:19	0.07	162.85	-1.45	2.22
1/17/03	15:58:19	0.07	163.37	-1.97	2.74
1/17/03	15:58:19	0.07	162.63	-1.23	2.00
1/17/03	15:58:20	0.07	163.32	-1.92	2.69
1/17/03	15:58:20	0.08	175.93	-14.53	15.30
1/17/03	15:58:20	0.08	154.23	7.17	
1/17/03	15:58:20	0.08	167.28	-5.88	6.65
1/17/03	15:58:20	0.08	165.13	-3.73	4.50

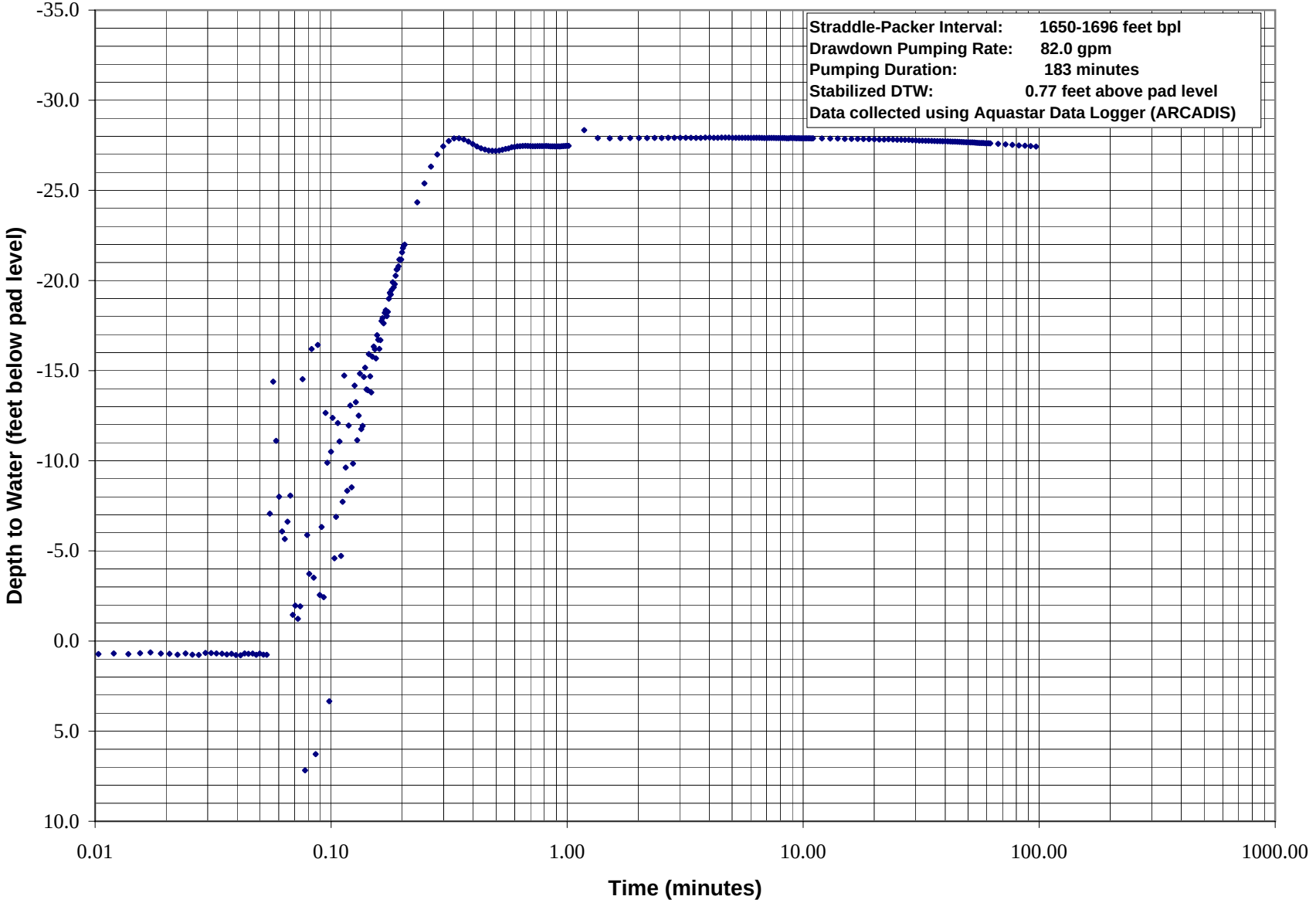
Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/17/03	15:58:20	0.08	177.60	-16.20	16.97
1/17/03	15:58:20	0.08	164.91	-3.51	4.28
1/17/03	15:58:20	0.09	155.12	6.28	
1/17/03	15:58:20	0.09	177.82	-16.42	17.19
1/17/03	15:58:20	0.09	163.95	-2.55	3.32
1/17/03	15:58:21	0.09	167.73	-6.33	7.10
1/17/03	15:58:21	0.09	163.83	-2.43	3.20
1/17/03	15:58:21	0.09	174.05	-12.65	13.42
1/17/03	15:58:21	0.10	171.29	-9.89	10.66
1/17/03	15:58:21	0.10	158.06	3.34	
1/17/03	15:58:21	0.10	171.90	-10.50	11.27
1/17/03	15:58:21	0.10	173.78	-12.38	13.15
1/17/03	15:58:21	0.10	165.99	-4.59	5.36
1/17/03	15:58:21	0.11	168.28	-6.88	7.65
1/17/03	15:58:22	0.11	173.49	-12.09	12.86
1/17/03	15:58:22	0.11	172.47	-11.07	11.84
1/17/03	15:58:22	0.11	166.12	-4.72	5.49
1/17/03	15:58:22	0.11	169.12	-7.72	8.49
1/17/03	15:58:22	0.11	176.13	-14.73	15.50
1/17/03	15:58:22	0.12	171.02	-9.62	10.39
1/17/03	15:58:22	0.12	169.74	-8.34	9.11
1/17/03	15:58:22	0.12	173.35	-11.95	12.72
1/17/03	15:58:22	0.12	174.47	-13.07	13.84
1/17/03	15:58:22	0.12	169.92	-8.52	9.29
1/17/03	15:58:23	0.12	171.25	-9.85	10.62
1/17/03	15:58:23	0.13	175.57	-14.17	14.94
1/17/03	15:58:23	0.13	174.65	-13.25	14.02
1/17/03	15:58:23	0.13	172.54	-11.14	11.91
1/17/03	15:58:23	0.13	173.90	-12.50	13.27
1/17/03	15:58:23	0.13	176.24	-14.84	15.61
1/17/03	15:58:23	0.13	173.16	-11.76	12.53
1/17/03	15:58:23	0.14	173.33	-11.93	12.70
1/17/03	15:58:23	0.14	176.05	-14.65	15.42
1/17/03	15:58:23	0.14	176.56	-15.16	15.93
1/17/03	15:58:24	0.14	175.35	-13.95	14.72
1/17/03	15:58:24	0.14	175.32	-13.92	14.69
1/17/03	15:58:24	0.14	177.32	-15.92	16.69
1/17/03	15:58:24	0.15	176.08	-14.68	15.45
1/17/03	15:58:24	0.15	175.20	-13.80	14.57
1/17/03	15:58:24	0.15	177.17	-15.77	16.54
1/17/03	15:58:24	0.15	177.74	-16.34	17.11
1/17/03	15:58:24	0.15	177.59	-16.19	16.96
1/17/03	15:58:24	0.15	177.08	-15.68	16.45
1/17/03	15:58:25	0.16	178.37	-16.97	17.74
1/17/03	15:58:25	0.16	178.11	-16.71	17.48
1/17/03	15:58:25	0.16	177.61	-16.21	16.98
1/17/03	15:58:25	0.16	178.09	-16.69	17.46
1/17/03	15:58:25	0.16	179.15	-17.75	18.52
1/17/03	15:58:25	0.17	179.31	-17.91	18.68
1/17/03	15:58:25	0.17	179.02	-17.62	18.39
1/17/03	15:58:25	0.17	179.61	-18.21	18.98
1/17/03	15:58:25	0.17	179.75	-18.35	19.12
1/17/03	15:58:25	0.17	179.42	-18.02	18.79
1/17/03	15:58:26	0.17	179.67	-18.27	19.04
1/17/03	15:58:26	0.18	180.39	-18.99	19.76
1/17/03	15:58:26	0.18	180.72	-19.32	20.09
1/17/03	15:58:26	0.18	180.63	-19.23	20.00
1/17/03	15:58:26	0.18	180.89	-19.49	20.26
1/17/03	15:58:26	0.18	181.30	-19.90	20.67
1/17/03	15:58:26	0.18	181.03	-19.63	20.40
1/17/03	15:58:26	0.19	181.20	-19.80	20.57

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/17/03	15:58:26	0.19	181.67	-20.27	21.04
1/17/03	15:58:26	0.19	182.01	-20.61	21.38
1/17/03	15:58:27	0.19	182.04	-20.64	21.41
1/17/03	15:58:27	0.19	182.19	-20.79	21.56
1/17/03	15:58:27	0.19	182.56	-21.16	21.93
1/17/03	15:58:27	0.20	182.53	-21.13	21.90
1/17/03	15:58:27	0.20	182.56	-21.16	21.93
1/17/03	15:58:27	0.20	182.96	-21.56	22.33
1/17/03	15:58:27	0.20	183.20	-21.80	22.57
1/17/03	15:58:27	0.20	183.34	-21.94	22.71
1/17/03	15:58:27	0.20	183.39	-21.99	22.76
1/17/03	15:58:29	0.23	185.74	-24.34	25.11
1/17/03	15:58:30	0.25	186.79	-25.39	26.16
1/17/03	15:58:31	0.27	187.72	-26.32	27.09
1/17/03	15:58:32	0.28	188.39	-26.99	27.76
1/17/03	15:58:33	0.30	188.84	-27.44	28.21
1/17/03	15:58:34	0.32	189.14	-27.74	28.51
1/17/03	15:58:35	0.33	189.28	-27.88	28.65
1/17/03	15:58:36	0.35	189.29	-27.89	28.66
1/17/03	15:58:37	0.37	189.23	-27.83	28.60
1/17/03	15:58:38	0.38	189.11	-27.71	28.48
1/17/03	15:58:39	0.40	188.97	-27.57	28.34
1/17/03	15:58:40	0.42	188.84	-27.44	28.21
1/17/03	15:58:41	0.43	188.74	-27.34	28.11
1/17/03	15:58:42	0.45	188.66	-27.26	28.03
1/17/03	15:58:43	0.47	188.61	-27.21	27.98
1/17/03	15:58:44	0.48	188.60	-27.20	27.97
1/17/03	15:58:45	0.50	188.59	-27.19	27.96
1/17/03	15:58:46	0.52	188.61	-27.21	27.98
1/17/03	15:58:47	0.53	188.65	-27.25	28.02
1/17/03	15:58:48	0.55	188.70	-27.30	28.07
1/17/03	15:58:49	0.57	188.73	-27.33	28.10
1/17/03	15:58:50	0.58	188.79	-27.39	28.16
1/17/03	15:58:51	0.60	188.81	-27.41	28.18
1/17/03	15:58:52	0.62	188.84	-27.44	28.21
1/17/03	15:58:53	0.63	188.85	-27.45	28.22
1/17/03	15:58:54	0.65	188.87	-27.47	28.24
1/17/03	15:58:55	0.67	188.87	-27.47	28.24
1/17/03	15:58:56	0.68	188.87	-27.47	28.24
1/17/03	15:58:57	0.70	188.86	-27.46	28.23
1/17/03	15:58:58	0.72	188.85	-27.45	28.22
1/17/03	15:58:59	0.73	188.85	-27.45	28.22
1/17/03	15:59:00	0.75	188.86	-27.46	28.23
1/17/03	15:59:01	0.77	188.86	-27.46	28.23
1/17/03	15:59:02	0.78	188.86	-27.46	28.23
1/17/03	15:59:03	0.80	188.86	-27.46	28.23
1/17/03	15:59:04	0.82	188.87	-27.47	28.24
1/17/03	15:59:05	0.83	188.86	-27.46	28.23
1/17/03	15:59:06	0.85	188.84	-27.44	28.21
1/17/03	15:59:07	0.87	188.84	-27.44	28.21
1/17/03	15:59:08	0.88	188.84	-27.44	28.21
1/17/03	15:59:09	0.90	188.84	-27.44	28.21
1/17/03	15:59:10	0.92	188.84	-27.44	28.21
1/17/03	15:59:11	0.93	188.84	-27.44	28.21
1/17/03	15:59:12	0.95	188.85	-27.45	28.22
1/17/03	15:59:13	0.97	188.86	-27.46	28.23
1/17/03	15:59:14	0.98	188.87	-27.47	28.24
1/17/03	15:59:15	1.00	188.87	-27.47	28.24
1/17/03	15:59:16	1.02	188.87	-27.47	28.24
1/17/03	15:59:26	1.18	189.74	-28.34	29.11
1/17/03	15:59:36	1.35	189.31	-27.91	28.68

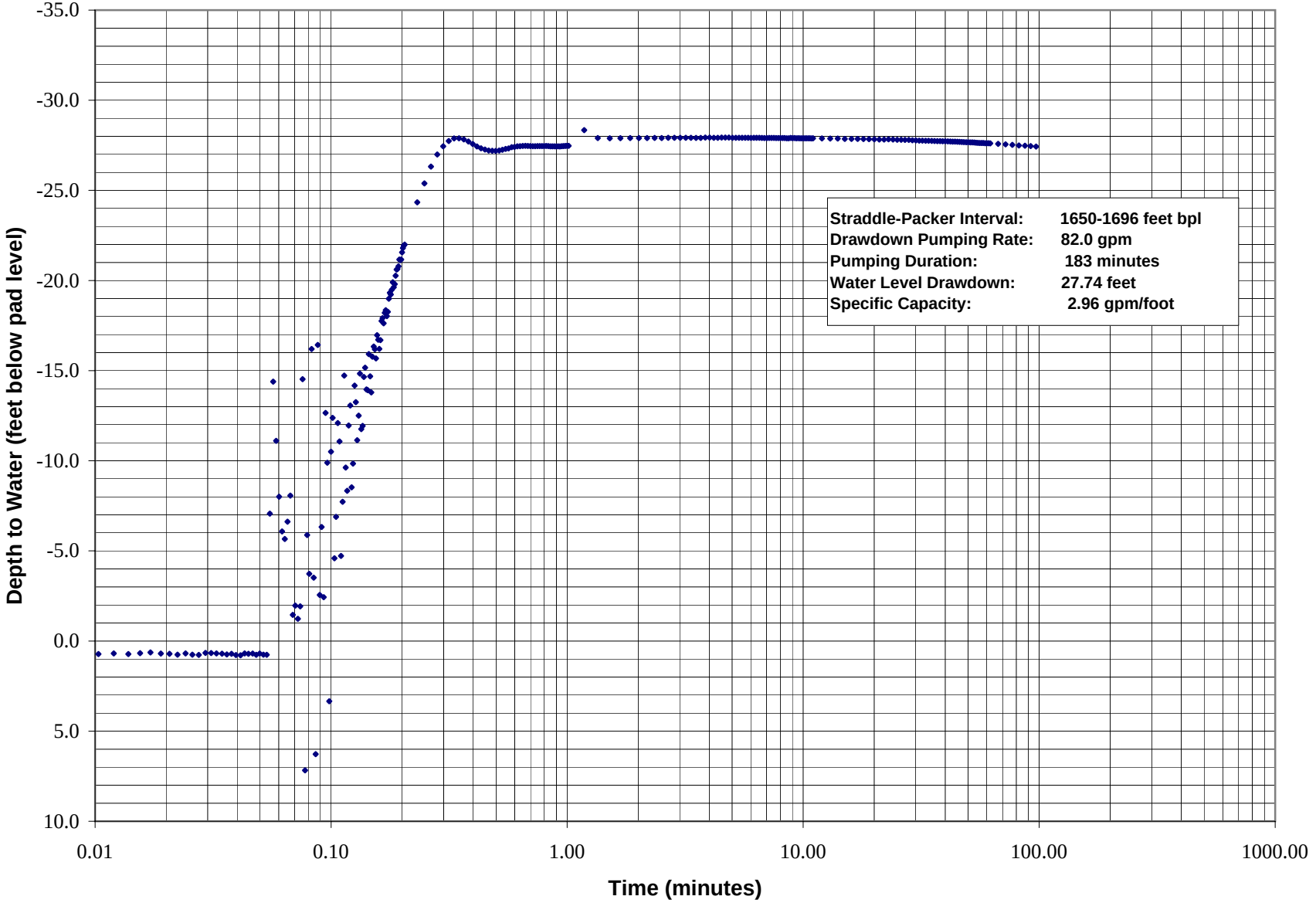
Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/17/03	15:59:46	1.52	189.29	-27.89	28.66
1/17/03	15:59:56	1.68	189.30	-27.90	28.67
1/17/03	16:00:06	1.85	189.31	-27.91	28.68
1/17/03	16:00:16	2.02	189.31	-27.91	28.68
1/17/03	16:00:26	2.18	189.31	-27.91	28.68
1/17/03	16:00:36	2.35	189.31	-27.91	28.68
1/17/03	16:00:46	2.52	189.31	-27.91	28.68
1/17/03	16:00:56	2.68	189.32	-27.92	28.69
1/17/03	16:01:06	2.85	189.32	-27.92	28.69
1/17/03	16:01:16	3.02	189.32	-27.92	28.69
1/17/03	16:01:26	3.18	189.32	-27.92	28.69
1/17/03	16:01:36	3.35	189.32	-27.92	28.69
1/17/03	16:01:46	3.52	189.31	-27.91	28.68
1/17/03	16:01:56	3.68	189.31	-27.91	28.68
1/17/03	16:02:06	3.85	189.33	-27.93	28.70
1/17/03	16:02:16	4.02	189.33	-27.93	28.70
1/17/03	16:02:26	4.18	189.32	-27.92	28.69
1/17/03	16:02:36	4.35	189.32	-27.92	28.69
1/17/03	16:02:46	4.52	189.33	-27.93	28.70
1/17/03	16:02:56	4.68	189.33	-27.93	28.70
1/17/03	16:03:06	4.85	189.33	-27.93	28.70
1/17/03	16:03:16	5.02	189.32	-27.92	28.69
1/17/03	16:03:26	5.18	189.32	-27.92	28.69
1/17/03	16:03:36	5.35	189.32	-27.92	28.69
1/17/03	16:03:46	5.52	189.32	-27.92	28.69
1/17/03	16:03:56	5.68	189.32	-27.92	28.69
1/17/03	16:04:06	5.85	189.32	-27.92	28.69
1/17/03	16:04:16	6.02	189.31	-27.91	28.68
1/17/03	16:04:26	6.18	189.32	-27.92	28.69
1/17/03	16:04:36	6.35	189.32	-27.92	28.69
1/17/03	16:04:46	6.52	189.32	-27.92	28.69
1/17/03	16:04:56	6.68	189.31	-27.91	28.68
1/17/03	16:05:06	6.85	189.31	-27.91	28.68
1/17/03	16:05:16	7.02	189.31	-27.91	28.68
1/17/03	16:05:26	7.18	189.31	-27.91	28.68
1/17/03	16:05:36	7.35	189.31	-27.91	28.68
1/17/03	16:05:46	7.52	189.31	-27.91	28.68
1/17/03	16:05:56	7.68	189.31	-27.91	28.68
1/17/03	16:06:06	7.85	189.31	-27.91	28.68
1/17/03	16:06:16	8.02	189.31	-27.91	28.68
1/17/03	16:06:26	8.18	189.31	-27.91	28.68
1/17/03	16:06:36	8.35	189.31	-27.91	28.68
1/17/03	16:06:46	8.52	189.29	-27.89	28.66
1/17/03	16:06:56	8.68	189.29	-27.89	28.66
1/17/03	16:07:06	8.85	189.31	-27.91	28.68
1/17/03	16:07:16	9.02	189.30	-27.90	28.67
1/17/03	16:07:26	9.18	189.31	-27.91	28.68
1/17/03	16:07:36	9.35	189.29	-27.89	28.66
1/17/03	16:07:46	9.52	189.30	-27.90	28.67
1/17/03	16:07:56	9.68	189.29	-27.89	28.66
1/17/03	16:08:06	9.85	189.29	-27.89	28.66
1/17/03	16:08:16	10.02	189.29	-27.89	28.66
1/17/03	16:08:26	10.18	189.29	-27.89	28.66
1/17/03	16:08:36	10.35	189.29	-27.89	28.66
1/17/03	16:08:46	10.52	189.29	-27.89	28.66
1/17/03	16:08:56	10.68	189.29	-27.89	28.66
1/17/03	16:09:06	10.85	189.28	-27.88	28.65
1/17/03	16:09:16	11.02	189.29	-27.89	28.66
1/17/03	16:10:16	12.02	189.28	-27.88	28.65
1/17/03	16:11:16	13.02	189.28	-27.88	28.65
1/17/03	16:12:16	14.02	189.28	-27.88	28.65

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
1/17/03	16:13:16	15.02	189.26	-27.86	28.63
1/17/03	16:14:16	16.02	189.26	-27.86	28.63
1/17/03	16:15:16	17.02	189.26	-27.86	28.63
1/17/03	16:16:16	18.02	189.25	-27.85	28.62
1/17/03	16:17:16	19.02	189.24	-27.84	28.61
1/17/03	16:18:16	20.02	189.23	-27.83	28.60
1/17/03	16:19:16	21.02	189.22	-27.82	28.59
1/17/03	16:20:16	22.02	189.22	-27.82	28.59
1/17/03	16:21:16	23.02	189.23	-27.83	28.60
1/17/03	16:22:16	24.02	189.22	-27.82	28.59
1/17/03	16:23:16	25.02	189.20	-27.80	28.57
1/17/03	16:24:16	26.02	189.20	-27.80	28.57
1/17/03	16:25:16	27.02	189.20	-27.80	28.57
1/17/03	16:26:16	28.02	189.20	-27.80	28.57
1/17/03	16:27:16	29.02	189.18	-27.78	28.55
1/17/03	16:28:16	30.02	189.18	-27.78	28.55
1/17/03	16:29:16	31.02	189.16	-27.76	28.53
1/17/03	16:30:16	32.02	189.16	-27.76	28.53
1/17/03	16:31:16	33.02	189.15	-27.75	28.52
1/17/03	16:32:16	34.02	189.15	-27.75	28.52
1/17/03	16:33:16	35.02	189.15	-27.75	28.52
1/17/03	16:34:16	36.02	189.14	-27.74	28.51
1/17/03	16:35:16	37.02	189.13	-27.73	28.50
1/17/03	16:36:16	38.02	189.13	-27.73	28.50
1/17/03	16:37:16	39.02	189.13	-27.73	28.50
1/17/03	16:38:16	40.02	189.13	-27.73	28.50
1/17/03	16:39:16	41.02	189.12	-27.72	28.49
1/17/03	16:40:16	42.02	189.11	-27.71	28.48
1/17/03	16:41:16	43.02	189.10	-27.70	28.47
1/17/03	16:42:16	44.02	189.10	-27.70	28.47
1/17/03	16:43:16	45.02	189.10	-27.70	28.47
1/17/03	16:44:16	46.02	189.09	-27.69	28.46
1/17/03	16:45:16	47.02	189.08	-27.68	28.45
1/17/03	16:46:16	48.02	189.07	-27.67	28.44
1/17/03	16:47:16	49.02	189.07	-27.67	28.44
1/17/03	16:48:16	50.02	189.07	-27.67	28.44
1/17/03	16:49:16	51.02	189.06	-27.66	28.43
1/17/03	16:50:16	52.02	189.06	-27.66	28.43
1/17/03	16:51:16	53.02	189.05	-27.65	28.42
1/17/03	16:52:16	54.02	189.05	-27.65	28.42
1/17/03	16:53:16	55.02	189.04	-27.64	28.41
1/17/03	16:54:16	56.02	189.03	-27.63	28.40
1/17/03	16:55:16	57.02	189.03	-27.63	28.40
1/17/03	16:56:16	58.02	189.03	-27.63	28.40
1/17/03	16:57:16	59.02	189.02	-27.62	28.39
1/17/03	16:58:16	60.02	189.02	-27.62	28.39
1/17/03	16:59:16	61.02	189.02	-27.62	28.39
1/17/03	17:00:16	62.02	189.01	-27.61	28.38
1/17/03	17:05:16	67.02	188.98	-27.58	28.35
1/17/03	17:10:16	72.02	188.95	-27.55	28.32
1/17/03	17:15:16	77.02	188.92	-27.52	28.29
1/17/03	17:20:16	82.02	188.89	-27.49	28.26
1/17/03	17:25:16	87.02	188.88	-27.48	28.25
1/17/03	17:30:16	92.02	188.86	-27.46	28.23
1/17/03	17:35:16	97.02	188.83	-27.43	28.20

Straddle- Packer Test No. 5- Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well

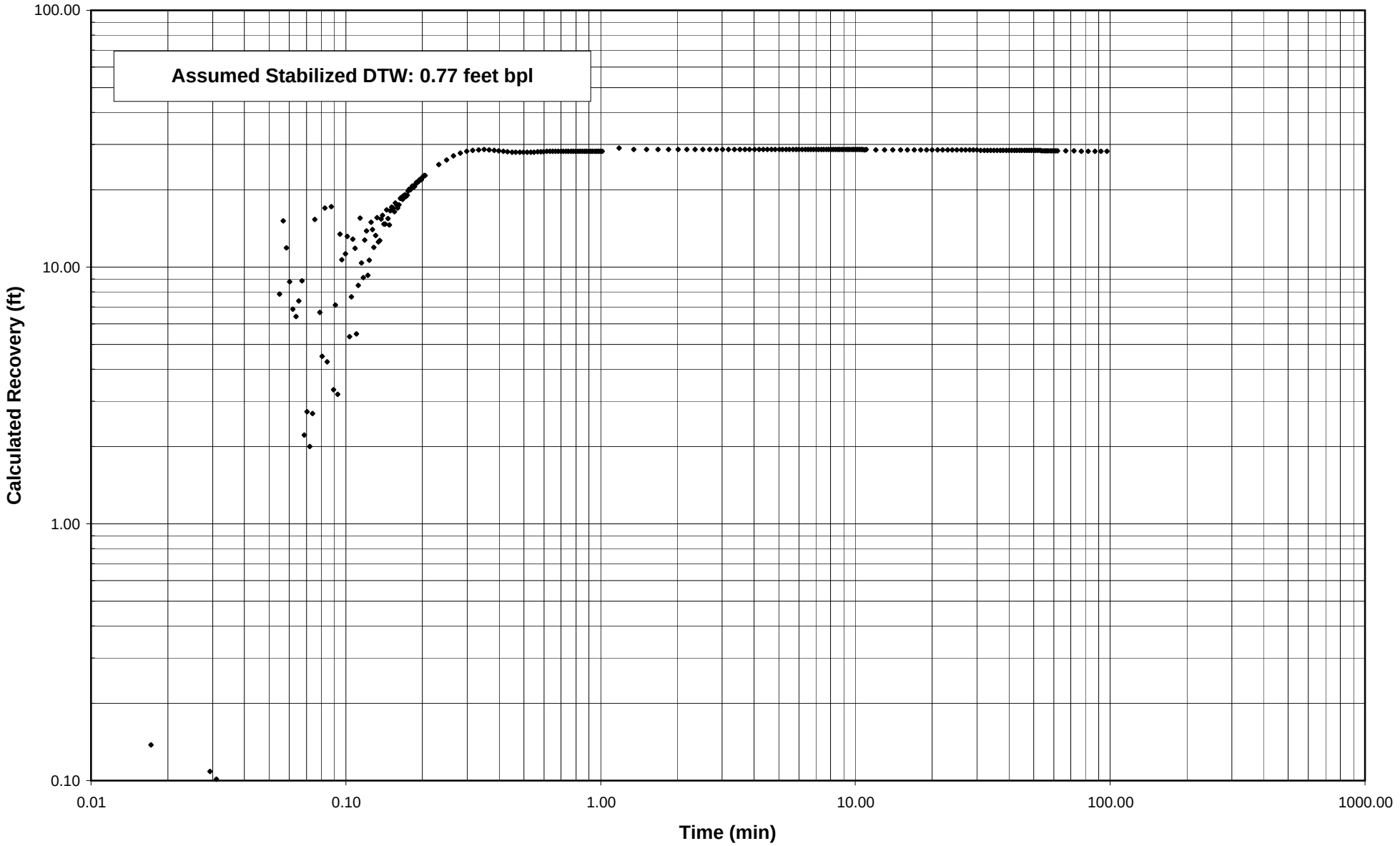


Straddle- Packer Test No. 5- Recovery
City of Port St. Lucie, Westport Injection Well System
Dual-Zone Deep Monitor Well



g:aproject\reesemacon\pf001153.0003\MW Packer Tests\Test #5\#5 Recovery.xls\spec cap.

Dual-Zone Deep Monitor Well, Port St. Lucie
Port St. Lucie, Westport Injection Well System
Straddle-Packer Test No. 5 - Recovery



g:aproject\reesemacon\pf001153.0003\MW Packer Tests\Test#5\#5 Recovery.xls\Rec Log-log

Source File:
Location: INW 2052005
Start: 1/17/2003 15:58
End: 1/17/2003 17:35

Straddle- Packer 1650-1696 feet bpl recovery data.

Date & Time (day hr:min)	Time elapsed (min)	Water- level (feet above transducer)	Water- level (feet bpl/above pl)
			0
			0.76
			0.75
			0.74
			0.77
			0.73
			0.73
			0.69
			0.73
			0.68
			0.63
			0.70
			0.71
			0.76
			0.69
			0.76
			0.77
			0.66
			0.67
			0.69
			0.70
			0.74
			0.71
			0.78
			0.79
			0.69
			0.71
			0.70
			0.76
			0.70
			0.76
			0.76
			-7.07
			-14.39
			-11.10
			-8.00
			-6.08
			-5.66
			-6.62
			-8.07
			-1.45
			-1.97
			-1.23

Date & Time (day hr:min)	Time elapsed (min)	Water- level (feet above transducer)	Water- level (feet bpl/above pl)
			-1.92
			-14.53
			7.17
			-5.88
			-3.73
			-16.20
			-3.51
			6.28
			-16.42
			-2.55
			-6.33
			-2.43
			-12.65
			-9.89
			3.34
			-10.50
			-12.38
			-4.59
			-6.88
			-12.09
			-11.07
			-4.72
			-7.72
			-14.73
			-9.62
			-8.34
			-11.95
			-13.07
			-8.52
			-9.85
			-14.17
			-13.25
			-11.14
			-12.50
			-14.84
			-11.76
			-11.93
			-14.65
			-15.16
			-13.95
			-13.92
			-15.92
			-14.68
			-13.80
			-15.77
			-16.34
			-16.19
			-15.68
			-16.97
			-16.71

Date & Time (day hr:min)	Time elapsed (min)	Water- level (feet above transducer)	Water- level (feet bpl/above pl)
			-16.21
			-16.69
			-17.75
			-17.91
			-17.62
			-18.21
			-18.35
			-18.02
			-18.27
			-18.99
			-19.32
			-19.23
			-19.49
			-19.90
			-19.63
			-19.80
			-20.27
			-20.61
			-20.64
			-20.79
			-21.16
			-21.13
			-21.16
			-21.56
			-21.80
			-21.94
			-21.99
			-24.34
			-25.39
			-26.32
			-26.99
			-27.44
			-27.74
			-27.88
			-27.89
			-27.83
			-27.71
			-27.57
			-27.44
			-27.34
			-27.26
			-27.21
			-27.20
			-27.19
			-27.21
			-27.25
			-27.30
			-27.33
			-27.39
			-27.41

Date & Time (day hr:min)	Time elapsed (min)	Water- level (feet above transducer)	Water- level (feet bpl/above pl)
			-27.44
			-27.45
			-27.47
			-27.47
			-27.47
			-27.46
			-27.45
			-27.45
			-27.46
			-27.46
			-27.46
			-27.46
			-27.47
			-27.46
			-27.44
			-27.44
			-27.44
			-27.44
			-27.44
			-27.44
			-27.45
			-27.46
			-27.47
			-27.47
			-27.47
			-28.34
			-27.91
			-27.89
			-27.90
			-27.91
			-27.91
			-27.91
			-27.91
			-27.91
			-27.92
			-27.92
			-27.92
			-27.92
			-27.92
			-27.91
			-27.91
			-27.93
			-27.93
			-27.92
			-27.92
			-27.93
			-27.93
			-27.93
			-27.92
			-27.92

Date & Time (day hr:min)	Time elapsed (min)	Water- level (feet above transducer)	Water- level (feet bpl/above pl)
			-27.92
			-27.92
			-27.92
			-27.92
			-27.91
			-27.92
			-27.92
			-27.92
			-27.91
			-27.91
			-27.91
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			-27.89
			-27.89
			-27.91
			-27.90
			-27.91
			-27.89
			-27.90
			-27.89
			-27.89
			-27.89
			-27.89
			-27.89
			-27.89
			-27.89
			-27.88
			-27.89
			-27.88
			-27.88
			-27.88
			-27.86
			-27.86
			-27.86
			-27.85
			-27.84
			-27.83
			-27.82
			-27.82
			-27.83
			-27.82
			-27.80
			-27.80

Date & Time (day hr:min)	Time elapsed (min)	Water- level (feet above transducer)	Water- level (feet bpl/above pl)
			-27.80
			-27.80
			-27.78
			-27.78
			-27.76
			-27.76
			-27.75
			-27.75
			-27.75
			-27.74
			-27.73
			-27.73
			-27.73
			-27.73
			-27.72
			-27.71
			-27.70
			-27.70
			-27.70
			-27.69
			-27.68
			-27.67
			-27.67
			-27.67
			-27.66
			-27.66
			-27.65
			-27.65
			-27.64
			-27.63
			-27.63
			-27.63
			-27.62
			-27.62
			-27.62
			-27.61
			-27.58
			-27.55
			-27.52
			-27.49
			-27.48
			-27.46
			-27.43

Straddle-Packer Test No. 6 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Injection Well No.1

Packer Depth Interval:	2880-2898 feet bpl	**Static Water Level:**	3.65 feet below pad level
Start of Logging:	4/25/2003 18:55	**Start of Pumping:**	18:55:51
End of Logging:	4/26/2003 2:57	**End of Pumping:**	3:02:48
Pumping Rate:	8.8 gpm	**Pumping Duration:**	483 minutes

Data Collected Using Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\WESTPORT\PT6DD.DAT

Note: Bold number indicates assumed stabilized depth to water at the end of pumping (187.32 feet bpl)

Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/25/03	18:55:45		208.77	4.23	0.58
04/25/03	18:55:46		208.76	4.24	0.59
04/25/03	18:55:47		208.76	4.24	0.59
04/25/03	18:55:49		208.76	4.24	0.59
04/25/03	18:55:50		208.76	4.24	0.59
04/25/03	18:55:51		208.77	4.23	0.58
04/25/03	18:55:51		210.05	2.95	
04/25/03	18:55:52		209.80	3.20	
04/25/03	18:55:53		209.02	3.98	0.33
04/25/03	18:55:55	0.00	207.49	5.51	1.86
04/25/03	18:55:56	0.02	207.63	5.37	1.72
04/25/03	18:55:57	0.03	207.50	5.50	1.85
04/25/03	18:55:58	0.05	207.19	5.81	2.16
04/25/03	18:55:58	0.07	207.00	6.00	2.35
04/25/03	18:55:59	0.08	206.84	6.16	2.51
04/25/03	18:56:00	0.10	206.65	6.35	2.70
04/25/03	18:56:02	0.12	206.46	6.54	2.89
04/25/03	18:56:03	0.13	206.26	6.74	3.09
04/25/03	18:56:04	0.15	206.06	6.94	3.29
04/25/03	18:56:04	0.17	205.90	7.10	3.45
04/25/03	18:56:05	0.18	205.70	7.30	3.65
04/25/03	18:56:06	0.20	205.52	7.48	3.83
04/25/03	18:56:08	0.22	205.35	7.65	4.00
04/25/03	18:56:09	0.23	205.14	7.86	4.21
04/25/03	18:56:10	0.25	204.96	8.04	4.39
04/25/03	18:56:10	0.27	204.80	8.20	4.55
04/25/03	18:56:11	0.28	204.60	8.40	4.75
04/25/03	18:56:12	0.30	204.38	8.62	4.97
04/25/03	18:56:14	0.32	204.23	8.77	5.12
04/25/03	18:56:15	0.33	204.04	8.96	5.31
04/25/03	18:56:16	0.35	203.86	9.14	5.49
04/25/03	18:56:17	0.37	203.65	9.35	5.70
04/25/03	18:56:17	0.38	203.47	9.53	5.88
04/25/03	18:56:18	0.40	203.29	9.71	6.06
04/25/03	18:56:19	0.42	203.11	9.89	6.24
04/25/03	18:56:21	0.43	202.95	10.05	6.40
04/25/03	18:56:22	0.45	202.75	10.25	6.60
04/25/03	18:56:23	0.47	202.57	10.43	6.78

Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/25/03	18:56:23	0.48	202.41	10.59	6.94
04/25/03	18:56:24	0.50	202.20	10.80	7.15
04/25/03	18:56:25	0.52	202.05	10.95	7.30
04/25/03	18:56:27	0.53	201.86	11.14	7.49
04/25/03	18:56:28	0.55	201.68	11.32	7.67
04/25/03	18:56:29	0.57	201.50	11.50	7.85
04/25/03	18:56:29	0.58	201.32	11.68	8.03
04/25/03	18:56:30	0.60	201.13	11.87	8.22
04/25/03	18:56:31	0.62	200.95	12.05	8.40
04/25/03	18:56:33	0.63	200.80	12.20	8.55
04/25/03	18:56:34	0.65	200.60	12.40	8.75
04/25/03	18:56:35	0.67	200.44	12.56	8.91
04/25/03	18:56:36	0.68	200.25	12.75	9.10
04/25/03	18:56:36	0.70	200.09	12.91	9.26
04/25/03	18:56:37	0.72	199.89	13.11	9.46
04/25/03	18:56:38	0.73	199.72	13.28	9.63
04/25/03	18:56:40	0.75	199.53	13.47	9.82
04/25/03	18:56:41	0.77	199.37	13.63	9.98
04/25/03	18:56:42	0.78	199.18	13.82	10.17
04/25/03	18:56:42	0.80	199.03	13.97	10.32
04/25/03	18:56:43	0.82	198.83	14.17	10.52
04/25/03	18:56:44	0.83	198.66	14.34	10.69
04/25/03	18:56:46	0.85	198.50	14.50	10.85
04/25/03	18:56:47	0.87	198.31	14.69	11.04
04/25/03	18:56:48	0.88	198.13	14.87	11.22
04/25/03	18:56:48	0.90	197.96	15.04	11.39
04/25/03	18:56:49	0.92	197.77	15.23	11.58
04/25/03	18:56:50	0.93	197.58	15.42	11.77
04/25/03	18:56:51	0.95	197.43	15.57	11.92
04/25/03	18:56:53	0.97	197.26	15.74	12.09
04/25/03	18:56:54	0.98	197.08	15.92	12.27
04/25/03	18:56:55	1.00	196.88	16.12	12.47
04/25/03	18:56:55	1.02	196.72	16.28	12.63
04/25/03	18:56:56	1.03	196.56	16.44	12.79
04/25/03	18:56:57	1.05	196.38	16.62	12.97
04/25/03	18:56:59	1.07	196.20	16.80	13.15
04/25/03	18:57:00	1.08	196.01	16.99	13.34
04/25/03	18:57:01	1.10	195.83	17.17	13.52
04/25/03	18:57:01	1.12	195.67	17.33	13.68
04/25/03	18:57:02	1.13	195.49	17.51	13.86
04/25/03	18:57:03	1.15	195.31	17.69	14.04
04/25/03	18:57:05	1.17	195.13	17.87	14.22
04/25/03	18:57:06	1.18	194.98	18.02	14.37
04/25/03	18:57:07	1.20	194.78	18.22	14.57
04/25/03	18:57:07	1.22	194.64	18.36	14.71
04/25/03	18:57:08	1.23	194.45	18.55	14.90
04/25/03	18:57:09	1.25	194.28	18.72	15.07
04/25/03	18:57:10	1.27	194.11	18.89	15.24
04/25/03	18:57:12	1.28	193.93	19.07	15.42
04/25/03	18:57:13	1.30	193.77	19.23	15.58

Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/25/03	18:57:14	1.32	193.59	19.41	15.76
04/25/03	18:57:14	1.33	193.42	19.58	15.93
04/25/03	18:57:15	1.35	193.26	19.74	16.09
04/25/03	18:57:16	1.37	193.10	19.90	16.25
04/25/03	18:57:18	1.38	192.92	20.08	16.43
04/25/03	18:57:19	1.40	192.76	20.24	16.59
04/25/03	18:57:20	1.42	192.59	20.41	16.76
04/25/03	18:57:20	1.43	192.39	20.61	16.96
04/25/03	18:57:21	1.45	192.25	20.75	17.10
04/25/03	18:57:22	1.47	192.07	20.93	17.28
04/25/03	18:57:24	1.48	191.92	21.08	17.43
04/25/03	18:57:25	1.50	191.74	21.26	17.61
04/25/03	18:57:26	1.52	191.57	21.43	17.78
04/25/03	18:57:26	1.53	191.39	21.61	17.96
04/25/03	18:57:27	1.55	191.23	21.77	18.12
04/25/03	18:57:28	1.57	191.07	21.93	18.28
04/25/03	18:57:29	1.58	190.89	22.11	18.46
04/25/03	18:57:31	1.60	190.74	22.26	18.61
04/25/03	18:57:32	1.62	190.56	22.44	18.79
04/25/03	18:57:33	1.63	190.37	22.63	18.98
04/25/03	18:57:33	1.65	190.23	22.77	19.12
04/25/03	18:57:34	1.67	190.06	22.94	19.29
04/25/03	18:57:35	1.68	189.88	23.12	19.47
04/25/03	18:57:37	1.70	189.74	23.26	19.61
04/25/03	18:57:38	1.72	189.56	23.44	19.79
04/25/03	18:57:39	1.73	189.38	23.62	19.97
04/25/03	18:57:39	1.75	189.23	23.77	20.12
04/25/03	18:57:40	1.77	189.05	23.95	20.30
04/25/03	18:57:41	1.78	188.89	24.11	20.46
04/25/03	18:57:43	1.80	188.71	24.29	20.64
04/25/03	18:57:44	1.82	188.54	24.46	20.81
04/25/03	18:57:45	1.83	188.42	24.58	20.93
04/25/03	18:57:54	2.00	186.76	26.24	22.59
04/25/03	18:58:05	2.17	185.12	27.88	24.23
04/25/03	18:58:15	2.33	183.54	29.46	25.81
04/25/03	18:58:24	2.50	181.95	31.05	27.40
04/25/03	18:58:35	2.67	180.36	32.64	28.99
04/25/03	18:58:44	2.83	178.81	34.19	30.54
04/25/03	18:58:55	3.00	177.28	35.72	32.07
04/25/03	18:59:04	3.17	175.75	37.25	33.60
04/25/03	18:59:14	3.33	174.22	38.78	35.13
04/25/03	18:59:25	3.50	172.71	40.29	36.64
04/25/03	18:59:34	3.67	171.22	41.78	38.13
04/25/03	18:59:45	3.83	169.75	43.25	39.60
04/25/03	18:59:54	4.00	168.31	44.69	41.04
04/25/03	19:00:05	4.17	166.85	46.15	42.50
04/25/03	19:00:14	4.33	165.43	47.57	43.92
04/25/03	19:00:24	4.50	163.99	49.01	45.36
04/25/03	19:00:35	4.67	162.56	50.44	46.79
04/25/03	19:00:44	4.83	161.17	51.83	48.18

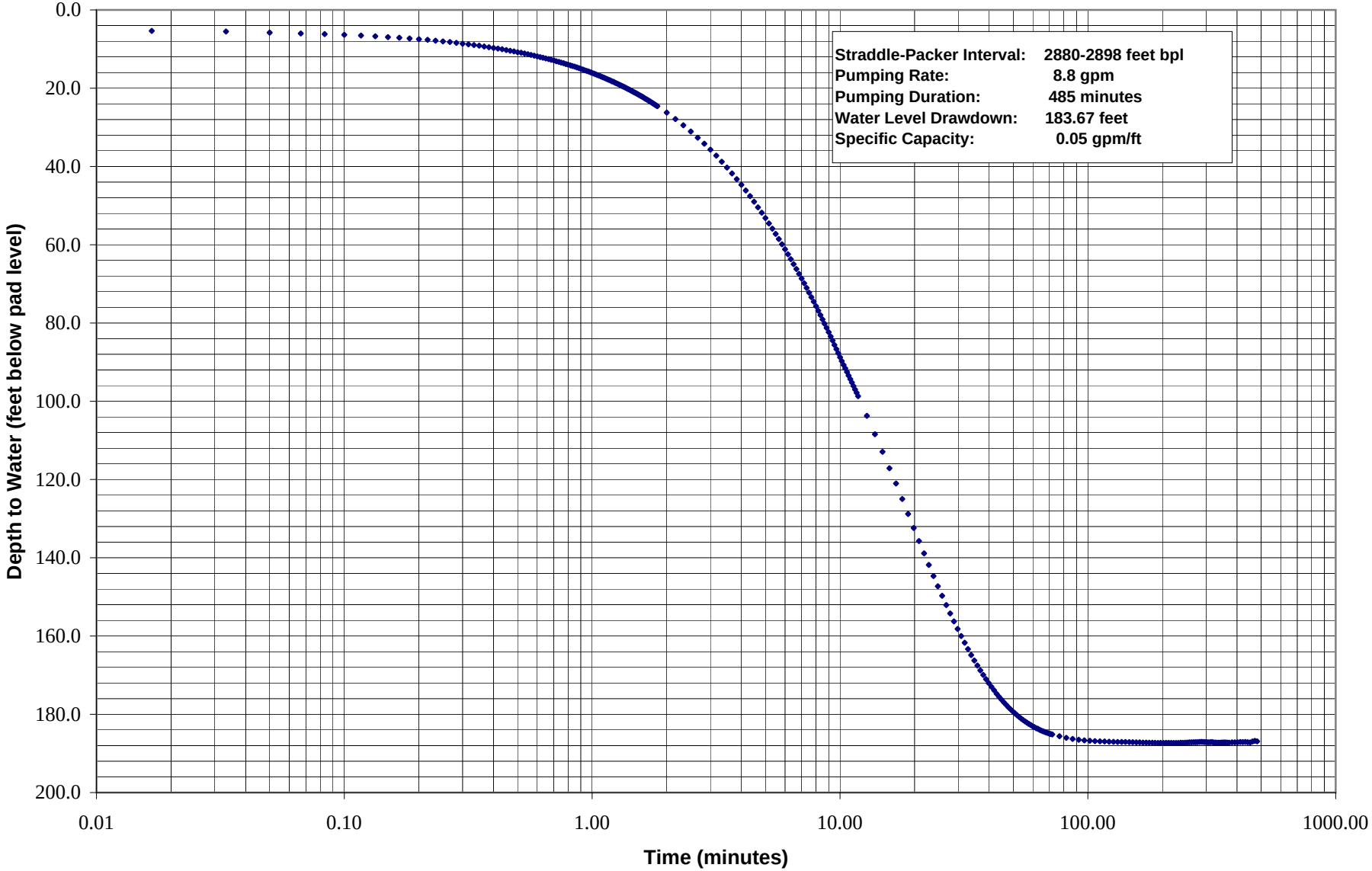
Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/25/03	19:00:55	5.00	159.81	53.19	49.54
04/25/03	19:01:04	5.17	158.45	54.55	50.90
04/25/03	19:01:15	5.33	157.09	55.91	52.26
04/25/03	19:01:24	5.50	155.77	57.23	53.58
04/25/03	19:01:34	5.67	154.45	58.55	54.90
04/25/03	19:01:45	5.83	153.13	59.87	56.22
04/25/03	19:01:54	6.00	151.83	61.17	57.52
04/25/03	19:02:05	6.17	150.56	62.44	58.79
04/25/03	19:02:14	6.33	149.31	63.69	60.04
04/25/03	19:02:25	6.50	148.03	64.97	61.32
04/25/03	19:02:34	6.67	146.80	66.20	62.55
04/25/03	19:02:44	6.83	145.55	67.45	63.80
04/25/03	19:02:55	7.00	144.35	68.65	65.00
04/25/03	19:03:04	7.17	143.14	69.86	66.21
04/25/03	19:03:15	7.33	141.95	71.05	67.40
04/25/03	19:03:24	7.50	140.76	72.24	68.59
04/25/03	19:03:35	7.67	139.60	73.40	69.75
04/25/03	19:03:45	7.83	138.44	74.56	70.91
04/25/03	19:03:54	8.00	137.29	75.71	72.06
04/25/03	19:04:05	8.17	136.14	76.86	73.21
04/25/03	19:04:14	8.33	135.01	77.99	74.34
04/25/03	19:04:25	8.50	133.93	79.07	75.42
04/25/03	19:04:34	8.67	132.80	80.20	76.55
04/25/03	19:04:45	8.83	131.75	81.25	77.60
04/25/03	19:04:55	9.00	130.64	82.36	78.71
04/25/03	19:05:04	9.17	129.55	83.45	79.80
04/25/03	19:05:15	9.33	128.49	84.51	80.86
04/25/03	19:05:24	9.50	127.38	85.62	81.97
04/25/03	19:05:35	9.67	126.33	86.67	83.02
04/25/03	19:05:44	9.83	125.30	87.70	84.05
04/25/03	19:05:55	10.00	124.24	88.76	85.11
04/25/03	19:06:05	10.17	123.26	89.74	86.09
04/25/03	19:06:14	10.33	122.26	90.74	87.09
04/25/03	19:06:25	10.50	121.38	91.62	87.97
04/25/03	19:06:34	10.67	120.45	92.55	88.90
04/25/03	19:06:45	10.83	119.55	93.45	89.80
04/25/03	19:06:54	11.00	118.65	94.35	90.70
04/25/03	19:07:05	11.17	117.77	95.23	91.58
04/25/03	19:07:15	11.33	116.88	96.12	92.47
04/25/03	19:07:24	11.50	116.01	96.99	93.34
04/25/03	19:07:35	11.67	115.15	97.85	94.20
04/25/03	19:07:44	11.83	114.29	98.71	95.06
04/25/03	19:08:45	12.83	109.27	103.73	100.08
04/25/03	19:09:44	13.83	104.58	108.42	104.77
04/25/03	19:10:45	14.83	100.09	112.91	109.26
04/25/03	19:11:44	15.83	95.88	117.12	113.47
04/25/03	19:12:45	16.83	91.99	121.01	117.36
04/25/03	19:13:45	17.83	88.01	124.99	121.34
04/25/03	19:14:44	18.83	84.20	128.80	125.15
04/25/03	19:15:45	19.83	80.61	132.39	128.74

Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/25/03	19:16:44	20.83	77.28	135.72	132.07
04/25/03	19:17:45	21.83	74.13	138.87	135.22
04/25/03	19:18:44	22.83	71.16	141.84	138.19
04/25/03	19:19:45	23.83	68.35	144.65	141.00
04/25/03	19:20:44	24.83	65.71	147.29	143.64
04/25/03	19:21:45	25.83	63.29	149.71	146.06
04/25/03	19:22:45	26.83	60.93	152.07	148.42
04/25/03	19:23:44	27.83	58.77	154.23	150.58
04/25/03	19:24:45	28.83	56.73	156.27	152.62
04/25/03	19:25:44	29.83	54.81	158.19	154.54
04/25/03	19:26:45	30.83	53.01	159.99	156.34
04/25/03	19:27:44	31.83	51.30	161.70	158.05
04/25/03	19:28:45	32.83	49.67	163.33	159.68
04/25/03	19:29:44	33.83	48.15	164.85	161.20
04/25/03	19:30:45	34.83	46.74	166.26	162.61
04/25/03	19:31:45	35.83	45.46	167.54	163.89
04/25/03	19:32:44	36.83	44.21	168.79	165.14
04/25/03	19:33:45	37.83	43.07	169.93	166.28
04/25/03	19:34:44	38.83	41.99	171.01	167.36
04/25/03	19:35:45	39.83	40.97	172.03	168.38
04/25/03	19:36:44	40.83	40.05	172.95	169.30
04/25/03	19:37:45	41.83	39.14	173.86	170.21
04/25/03	19:38:44	42.83	38.25	174.75	171.10
04/25/03	19:39:45	43.83	37.47	175.53	171.88
04/25/03	19:40:45	44.83	36.74	176.26	172.61
04/25/03	19:41:44	45.83	36.06	176.94	173.29
04/25/03	19:42:45	46.83	35.43	177.57	173.92
04/25/03	19:43:44	47.83	34.79	178.21	174.56
04/25/03	19:44:45	48.83	34.24	178.76	175.11
04/25/03	19:45:44	49.83	33.72	179.28	175.63
04/25/03	19:46:45	50.83	33.22	179.78	176.13
04/25/03	19:47:44	51.83	32.76	180.24	176.59
04/25/03	19:48:45	52.83	32.31	180.69	177.04
04/25/03	19:49:45	53.83	31.93	181.07	177.42
04/25/03	19:50:44	54.83	31.55	181.45	177.80
04/25/03	19:51:45	55.83	31.20	181.80	178.15
04/25/03	19:52:44	56.83	30.85	182.15	178.50
04/25/03	19:53:45	57.83	30.55	182.45	178.80
04/25/03	19:54:44	58.83	30.26	182.74	179.09
04/25/03	19:55:45	59.83	29.95	183.05	179.40
04/25/03	19:56:44	60.83	29.72	183.28	179.63
04/25/03	19:57:45	61.83	29.46	183.54	179.89
04/25/03	19:58:45	62.83	29.28	183.72	180.07
04/25/03	19:59:44	63.83	29.05	183.95	180.30
04/25/03	20:00:45	64.83	28.86	184.14	180.49
04/25/03	20:01:44	65.83	28.66	184.34	180.69
04/25/03	20:02:45	66.83	28.52	184.48	180.83
04/25/03	20:03:44	67.83	28.37	184.63	180.98
04/25/03	20:04:45	68.83	28.23	184.77	181.12
04/25/03	20:05:44	69.83	28.08	184.92	181.27

Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/25/03	20:06:45	70.83	27.97	185.03	181.38
04/25/03	20:07:45	71.83	27.87	185.13	181.48
04/25/03	20:12:44	76.83	27.38	185.62	181.97
04/25/03	20:17:44	81.83	26.99	186.01	182.36
04/25/03	20:22:45	86.83	26.72	186.28	182.63
04/25/03	20:27:45	91.83	26.49	186.51	182.86
04/25/03	20:32:44	96.83	26.34	186.66	183.01
04/25/03	20:37:44	101.83	26.25	186.75	183.10
04/25/03	20:42:45	106.83	26.15	186.85	183.20
04/25/03	20:47:45	111.83	26.09	186.91	183.26
04/25/03	20:52:45	116.83	26.05	186.95	183.30
04/25/03	20:57:44	121.83	25.99	187.01	183.36
04/25/03	21:02:44	126.83	25.96	187.04	183.39
04/25/03	21:07:45	131.83	25.93	187.07	183.42
04/25/03	21:12:45	136.83	25.92	187.08	183.43
04/25/03	21:17:44	141.83	25.92	187.08	183.43
04/25/03	21:22:44	146.83	25.90	187.10	183.45
04/25/03	21:27:45	151.83	25.87	187.13	183.48
04/25/03	21:32:45	156.83	25.84	187.16	183.51
04/25/03	21:37:45	161.83	25.84	187.16	183.51
04/25/03	21:42:44	166.83	25.79	187.21	183.56
04/25/03	21:47:44	171.83	25.79	187.21	183.56
04/25/03	21:52:45	176.83	25.75	187.25	183.60
04/25/03	21:57:45	181.83	25.74	187.26	183.61
04/25/03	22:02:44	186.83	25.72	187.28	183.63
04/25/03	22:07:44	191.83	25.69	187.31	183.66
04/25/03	22:12:45	196.83	25.71	187.29	183.64
04/25/03	22:17:45	201.83	25.68	**187.32**	183.67
04/25/03	22:22:45	206.83	25.70	187.30	183.65
04/25/03	22:27:44	211.83	25.72	187.28	183.63
04/25/03	22:32:44	216.83	25.69	187.31	183.66
04/25/03	22:37:45	221.83	25.69	187.31	183.66
04/25/03	22:42:45	226.83	25.69	187.31	183.66
04/25/03	22:47:44	231.83	25.69	187.31	183.66
04/25/03	22:52:44	236.83	25.74	187.26	183.61
04/25/03	22:57:45	241.83	25.71	187.29	183.64
04/25/03	23:02:45	246.83	25.74	187.26	183.61
04/25/03	23:07:45	251.83	25.77	187.23	183.58
04/25/03	23:12:44	256.83	25.82	187.18	183.53
04/25/03	23:17:44	261.83	25.84	187.16	183.51
04/25/03	23:22:45	266.83	25.87	187.13	183.48
04/25/03	23:27:45	271.83	25.88	187.12	183.47
04/25/03	23:32:44	276.83	25.88	187.12	183.47
04/25/03	23:37:44	281.83	25.92	187.08	183.43
04/25/03	23:42:45	286.83	25.95	187.05	183.40
04/25/03	23:47:45	291.83	25.92	187.08	183.43
04/25/03	23:52:45	296.83	25.90	187.10	183.45
04/25/03	23:57:44	301.83	25.86	187.14	183.49
04/26/03	0:02:44	306.83	25.84	187.16	183.51
04/26/03	0:07:45	311.83	25.87	187.13	183.48

Date	Time	Minutes (start of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/26/03	0:12:45	316.83	25.90	187.10	183.45
04/26/03	0:17:44	321.83	25.82	187.18	183.53
04/26/03	0:22:44	326.83	25.77	187.23	183.58
04/26/03	0:27:45	331.83	25.73	187.27	183.62
04/26/03	0:32:45	336.83	25.75	187.25	183.60
04/26/03	0:37:45	341.83	25.76	187.24	183.59
04/26/03	0:42:44	346.83	25.79	187.21	183.56
04/26/03	0:47:44	351.83	25.81	187.19	183.54
04/26/03	0:52:45	356.83	25.79	187.21	183.56
04/26/03	0:57:45	361.83	25.77	187.23	183.58
04/26/03	1:02:44	366.83	25.74	187.26	183.61
04/26/03	1:07:44	371.83	25.74	187.26	183.61
04/26/03	1:17:45	381.83	25.85	187.15	183.50
04/26/03	1:27:44	391.83	25.85	187.15	183.50
04/26/03	1:37:45	401.83	25.85	187.15	183.50
04/26/03	1:47:44	411.83	25.92	187.08	183.43
04/26/03	1:57:45	421.83	25.91	187.09	183.44
04/26/03	2:07:45	431.83	25.93	187.07	183.42
04/26/03	2:17:44	441.83	25.87	187.13	183.48
04/26/03	2:27:45	451.83	25.79	187.21	183.56
04/26/03	2:37:44	461.83	26.05	186.95	183.30
04/26/03	2:47:45	471.83	26.21	186.79	183.14
04/26/03	2:57:44	481.83	26.08	186.92	183.27

Straddle-Packer Test No. 6 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Injection Well No. 1



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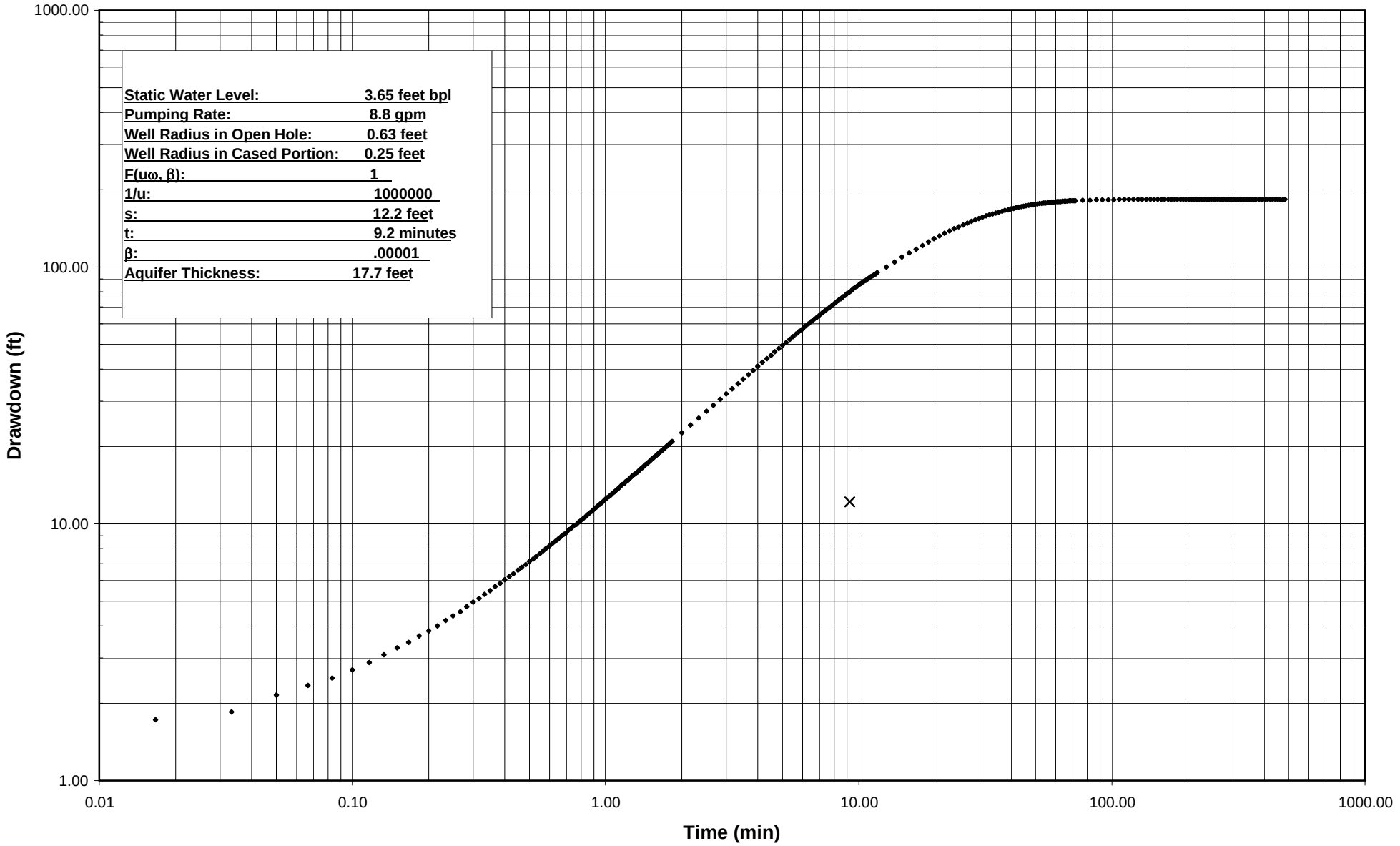
Injection Well No.1, Port St. Lucie
Port St. Lucie, Westport Injection Well System
Straddle-Packer Test No. 6 - Drawdown



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Straddle-Packer Test No. 6 - Recovery
City of Port St. Lucie, Westport Injection Well System
Injection Well No. 1

Packer Depth Interval:	2880-2898 feet bpl	**Assumed Stabilized DTW:**	187.32 feet bpl
Start of Logging:	4/26/03 3:01:00	**Start of Pumping:**	4/25/03 18:55:55
End of Logging:	4/26/03 7:18:00	**Pumping Duration:**	483 minutes
Pumping Rate:	8.8 gpm	**Total Test Time:**	737 minutes

Data collected with Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\PT6REC.DAT

Note: Double line indicates end of pumping

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
4/26/03	3:01:25		26.08	186.92	0.40
4/26/03	3:01:26		26.10	186.90	0.42
4/26/03	3:01:27		26.10	186.90	0.42
4/26/03	3:01:28		26.09	186.91	0.41
4/26/03	3:01:29		26.08	186.92	0.40
4/26/03	3:01:30		26.08	186.92	0.40
4/26/03	3:01:31		26.08	186.92	0.40
4/26/03	3:01:32		26.10	186.90	0.42
4/26/03	3:01:33		26.08	186.92	0.40
4/26/03	3:01:34		26.06	186.94	0.38
4/26/03	3:01:35		26.08	186.92	0.40
4/26/03	3:01:36		26.08	186.92	0.40
4/26/03	3:01:37		26.10	186.90	0.42
4/26/03	3:01:38		26.08	186.92	0.40
4/26/03	3:01:39		26.09	186.91	0.41
4/26/03	3:01:40		26.10	186.90	0.42
4/26/03	3:01:41		26.08	186.92	0.40
4/26/03	3:01:42		26.09	186.91	0.41
4/26/03	3:01:43		26.09	186.91	0.41
4/26/03	3:01:44		26.09	186.91	0.41
4/26/03	3:01:45		25.92	187.08	0.24
4/26/03	3:01:46		26.36	186.64	0.68
4/26/03	3:01:47		26.25	186.75	0.57
4/26/03	3:01:48		26.09	186.91	0.41
4/26/03	3:01:49		26.13	186.87	0.45
4/26/03	3:01:50		26.08	186.92	0.40
4/26/03	3:01:51		26.16	186.84	0.48
4/26/03	3:01:52		26.13	186.87	0.45
4/26/03	3:01:53		26.13	186.87	0.45
4/26/03	3:01:54		26.10	186.90	0.42
4/26/03	3:01:55		26.12	186.88	0.44
4/26/03	3:01:56		26.10	186.90	0.42
4/26/03	3:01:57		26.10	186.90	0.42
4/26/03	3:01:58		26.13	186.87	0.45
4/26/03	3:01:59		26.11	186.89	0.43
4/26/03	3:02:00		26.13	186.87	0.45
4/26/03	3:02:01		26.11	186.89	0.43
4/26/03	3:02:02		26.10	186.90	0.42
4/26/03	3:02:03		26.12	186.88	0.44

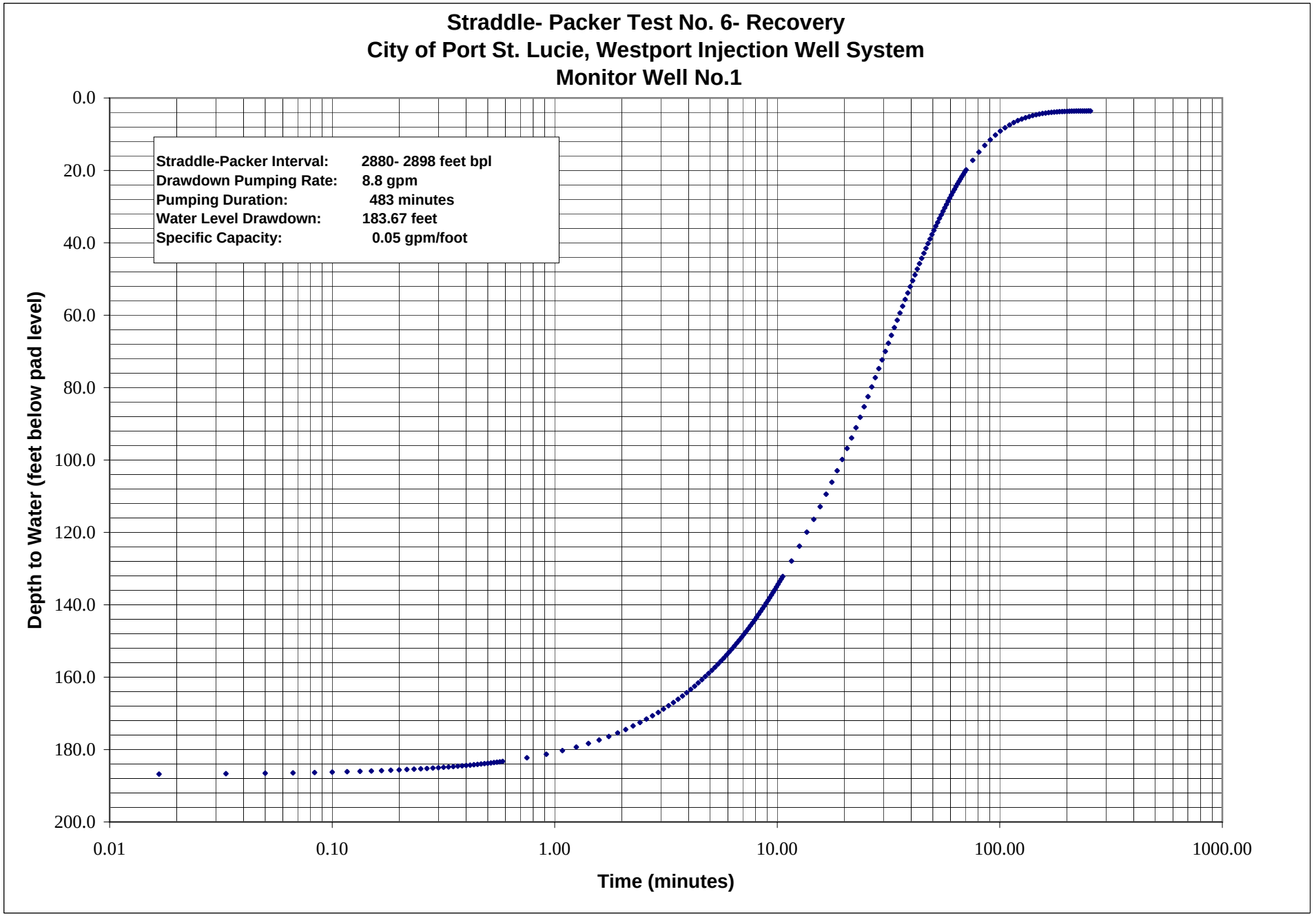
Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
4/26/03	3:02:04		26.10	186.90	0.42
4/26/03	3:02:05		26.15	186.85	0.47
4/26/03	3:02:06		26.11	186.89	0.43
4/26/03	3:02:07		26.12	186.88	0.44
4/26/03	3:02:08		26.13	186.87	0.45
4/26/03	3:02:09		26.11	186.89	0.43
4/26/03	3:02:10		26.12	186.88	0.44
4/26/03	3:02:11		26.10	186.90	0.42
4/26/03	3:02:12		26.13	186.87	0.45
4/26/03	3:02:13		26.10	186.90	0.42
4/26/03	3:02:14		26.11	186.89	0.43
4/26/03	3:02:15		26.11	186.89	0.43
4/26/03	3:02:16		26.10	186.90	0.42
4/26/03	3:02:17		26.11	186.89	0.43
4/26/03	3:02:18		26.08	186.92	0.40
4/26/03	3:02:19		26.10	186.90	0.42
4/26/03	3:02:20		26.12	186.88	0.44
4/26/03	3:02:21		26.11	186.89	0.43
4/26/03	3:02:22		26.10	186.90	0.42
4/26/03	3:02:23		26.10	186.90	0.42
4/26/03	3:02:24		26.13	186.87	0.45
4/26/03	3:02:25		26.11	186.89	0.43
4/26/03	3:02:26		26.12	186.88	0.44
4/26/03	3:02:27		26.13	186.87	0.45
4/26/03	3:02:28		26.11	186.89	0.43
4/26/03	3:02:29		26.12	186.88	0.44
4/26/03	3:02:30		26.10	186.90	0.42
4/26/03	3:02:31		26.11	186.89	0.43
4/26/03	3:02:32		26.10	186.90	0.42
4/26/03	3:02:33		26.10	186.90	0.42
4/26/03	3:02:34		26.12	186.88	0.44
4/26/03	3:02:35		26.10	186.90	0.42
4/26/03	3:02:36		26.08	186.92	0.40
4/26/03	3:02:37		26.12	186.88	0.44
4/26/03	3:02:38		26.08	186.92	0.40
4/26/03	3:02:39		26.13	186.87	0.45
4/26/03	3:02:40		26.11	186.89	0.43
4/26/03	3:02:41		26.11	186.89	0.43
4/26/03	3:02:42		26.10	186.90	0.42
4/26/03	3:02:43		26.11	186.89	0.43
4/26/03	3:02:44		26.12	186.88	0.44
4/26/03	3:02:45		26.11	186.89	0.43
4/26/03	3:02:46		26.12	186.88	0.44
4/26/03	3:02:47		26.11	186.89	0.43
4/26/03	3:02:48		26.12	186.88	0.44
4/26/03	3:02:49	0.00	26.10	186.90	0.42
4/26/03	3:02:50	0.02	26.21	186.79	0.53
4/26/03	3:02:51	0.03	26.35	186.65	0.67
4/26/03	3:02:52	0.05	26.47	186.53	0.79

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
4/26/03	3:02:53	0.07	26.55	186.45	0.87
4/26/03	3:02:54	0.08	26.66	186.34	0.98
4/26/03	3:02:55	0.10	26.78	186.22	1.10
4/26/03	3:02:56	0.12	26.88	186.12	1.20
4/26/03	3:02:57	0.13	26.97	186.03	1.29
4/26/03	3:02:58	0.15	27.07	185.93	1.39
4/26/03	3:02:59	0.17	27.18	185.82	1.50
4/26/03	3:03:00	0.18	27.28	185.72	1.60
4/26/03	3:03:01	0.20	27.38	185.62	1.70
4/26/03	3:03:02	0.22	27.49	185.51	1.81
4/26/03	3:03:03	0.23	27.59	185.41	1.91
4/26/03	3:03:04	0.25	27.69	185.31	2.01
4/26/03	3:03:05	0.27	27.79	185.21	2.11
4/26/03	3:03:06	0.28	27.90	185.10	2.22
4/26/03	3:03:07	0.30	28.00	185.00	2.32
4/26/03	3:03:08	0.32	28.10	184.90	2.42
4/26/03	3:03:09	0.33	28.20	184.80	2.52
4/26/03	3:03:10	0.35	28.30	184.70	2.62
4/26/03	3:03:11	0.37	28.40	184.60	2.72
4/26/03	3:03:12	0.38	28.50	184.50	2.82
4/26/03	3:03:13	0.40	28.61	184.39	2.93
4/26/03	3:03:14	0.42	28.70	184.30	3.02
4/26/03	3:03:15	0.43	28.81	184.19	3.13
4/26/03	3:03:16	0.45	28.91	184.09	3.23
4/26/03	3:03:17	0.47	29.01	183.99	3.33
4/26/03	3:03:18	0.48	29.12	183.88	3.44
4/26/03	3:03:19	0.50	29.21	183.79	3.53
4/26/03	3:03:20	0.52	29.31	183.69	3.63
4/26/03	3:03:21	0.53	29.42	183.58	3.74
4/26/03	3:03:22	0.55	29.51	183.49	3.83
4/26/03	3:03:23	0.57	29.61	183.39	3.93
4/26/03	3:03:24	0.58	29.72	183.28	4.04
4/26/03	3:03:33	0.75	30.73	182.27	5.05
4/26/03	3:03:43	0.92	31.72	181.28	6.04
4/26/03	3:03:53	1.08	32.71	180.29	7.03
4/26/03	3:04:03	1.25	33.70	179.30	8.02
4/26/03	3:04:13	1.42	34.68	178.32	9.00
4/26/03	3:04:23	1.58	35.65	177.35	9.97
4/26/03	3:04:33	1.75	36.62	176.38	10.94
4/26/03	3:04:43	1.92	37.58	175.42	11.90
4/26/03	3:04:53	2.08	38.54	174.46	12.86
4/26/03	3:05:03	2.25	39.52	173.48	13.84
4/26/03	3:05:13	2.42	40.47	172.53	14.79
4/26/03	3:05:23	2.58	41.41	171.59	15.73
4/26/03	3:05:33	2.75	42.34	170.66	16.66
4/26/03	3:05:43	2.92	43.26	169.74	17.58
4/26/03	3:05:53	3.08	44.19	168.81	18.51
4/26/03	3:06:03	3.25	45.10	167.90	19.42
4/26/03	3:06:13	3.42	45.98	167.02	20.30

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
4/26/03	3:06:23	3.58	46.92	166.08	21.24
4/26/03	3:06:33	3.75	47.80	165.20	22.12
4/26/03	3:06:43	3.92	48.71	164.29	23.03
4/26/03	3:06:53	4.08	49.61	163.39	23.93
4/26/03	3:07:03	4.25	50.51	162.49	24.83
4/26/03	3:07:13	4.42	51.41	161.59	25.73
4/26/03	3:07:23	4.58	52.30	160.70	26.62
4/26/03	3:07:33	4.75	53.18	159.82	27.50
4/26/03	3:07:43	4.92	54.04	158.96	28.36
4/26/03	3:07:53	5.08	54.90	158.10	29.22
4/26/03	3:08:03	5.25	55.75	157.25	30.07
4/26/03	3:08:13	5.42	56.61	156.39	30.93
4/26/03	3:08:23	5.58	57.45	155.55	31.77
4/26/03	3:08:33	5.75	58.28	154.72	32.60
4/26/03	3:08:43	5.92	59.11	153.89	33.43
4/26/03	3:08:53	6.08	59.94	153.06	34.26
4/26/03	3:09:03	6.25	60.77	152.23	35.09
4/26/03	3:09:13	6.42	61.59	151.41	35.91
4/26/03	3:09:23	6.58	62.41	150.59	36.73
4/26/03	3:09:33	6.75	63.22	149.78	37.54
4/26/03	3:09:43	6.92	64.03	148.97	38.35
4/26/03	3:09:53	7.08	64.83	148.17	39.15
4/26/03	3:10:03	7.25	65.63	147.37	39.95
4/26/03	3:10:13	7.42	66.43	146.57	40.75
4/26/03	3:10:23	7.58	67.22	145.78	41.54
4/26/03	3:10:33	7.75	68.00	145.00	42.32
4/26/03	3:10:43	7.92	68.78	144.22	43.10
4/26/03	3:10:53	8.08	69.56	143.44	43.88
4/26/03	3:11:03	8.25	70.35	142.65	44.67
4/26/03	3:11:13	8.42	71.15	141.85	45.47
4/26/03	3:11:23	8.58	71.92	141.08	46.24
4/26/03	3:11:33	8.75	72.68	140.32	47.00
4/26/03	3:11:43	8.92	73.43	139.57	47.75
4/26/03	3:11:53	9.08	74.19	138.81	48.51
4/26/03	3:12:03	9.25	74.94	138.06	49.26
4/26/03	3:12:13	9.42	75.69	137.31	50.01
4/26/03	3:12:23	9.58	76.43	136.57	50.75
4/26/03	3:12:33	9.75	77.17	135.83	51.49
4/26/03	3:12:43	9.92	77.90	135.10	52.22
4/26/03	3:12:53	10.08	78.64	134.36	52.96
4/26/03	3:13:03	10.25	79.37	133.63	53.69
4/26/03	3:13:13	10.42	80.10	132.90	54.42
4/26/03	3:13:23	10.58	80.82	132.18	55.14
4/26/03	3:14:24	11.58	85.09	127.91	59.41
4/26/03	3:15:23	12.58	89.20	123.80	63.52
4/26/03	3:16:23	13.58	93.06	119.94	67.38
4/26/03	3:17:23	14.58	96.61	116.39	70.93
4/26/03	3:18:23	15.58	100.11	112.89	74.43
4/26/03	3:19:23	16.58	103.55	109.45	77.87

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
4/26/03	3:20:23	17.58	106.85	106.15	81.17
4/26/03	3:21:23	18.58	110.04	102.96	84.36
4/26/03	3:22:23	19.58	113.15	99.85	87.47
4/26/03	3:23:23	20.58	116.17	96.83	90.49
4/26/03	3:24:23	21.58	119.09	93.91	93.41
4/26/03	3:25:23	22.58	121.90	91.10	96.22
4/26/03	3:26:23	23.58	124.79	88.21	99.11
4/26/03	3:27:23	24.58	127.69	85.31	102.01
4/26/03	3:28:23	25.58	130.50	82.50	104.82
4/26/03	3:29:23	26.58	133.17	79.83	107.49
4/26/03	3:30:23	27.58	135.75	77.25	110.07
4/26/03	3:31:23	28.58	138.25	74.75	112.57
4/26/03	3:32:23	29.58	140.66	72.34	114.98
4/26/03	3:33:23	30.58	143.00	70.00	117.32
4/26/03	3:34:23	31.58	145.26	67.74	119.58
4/26/03	3:35:23	32.58	147.45	65.55	121.77
4/26/03	3:36:23	33.58	149.56	63.44	123.88
4/26/03	3:37:23	34.58	151.60	61.40	125.92
4/26/03	3:38:23	35.58	153.58	59.42	127.90
4/26/03	3:39:23	36.58	155.49	57.51	129.81
4/26/03	3:40:23	37.58	157.34	55.66	131.66
4/26/03	3:41:23	38.58	159.13	53.87	133.45
4/26/03	3:42:23	39.58	160.86	52.14	135.18
4/26/03	3:43:23	40.58	162.53	50.47	136.85
4/26/03	3:44:23	41.58	164.15	48.85	138.47
4/26/03	3:45:23	42.58	165.74	47.26	140.06
4/26/03	3:46:23	43.58	167.25	45.75	141.57
4/26/03	3:47:23	44.58	168.70	44.30	143.02
4/26/03	3:48:23	45.58	170.11	42.89	144.43
4/26/03	3:49:23	46.58	171.47	41.53	145.79
4/26/03	3:50:23	47.58	172.78	40.22	147.10
4/26/03	3:51:23	48.58	174.05	38.95	148.37
4/26/03	3:52:23	49.58	175.27	37.73	149.59
4/26/03	3:53:23	50.58	176.45	36.55	150.77
4/26/03	3:54:23	51.58	177.59	35.41	151.91
4/26/03	3:55:23	52.58	178.65	34.35	152.97
4/26/03	3:56:23	53.58	179.72	33.28	154.04
4/26/03	3:57:23	54.58	180.71	32.29	155.03
4/26/03	3:58:23	55.58	181.70	31.30	156.02
4/26/03	3:59:23	56.58	182.66	30.34	156.98
4/26/03	4:00:23	57.58	183.58	29.42	157.90
4/26/03	4:01:23	58.58	184.48	28.52	158.80
4/26/03	4:02:23	59.58	185.34	27.66	159.66
4/26/03	4:03:23	60.58	186.19	26.81	160.51
4/26/03	4:04:23	61.58	187.00	26.00	161.32
4/26/03	4:05:23	62.58	187.78	25.22	162.10
4/26/03	4:06:23	63.58	188.53	24.47	162.85
4/26/03	4:07:23	64.58	189.26	23.74	163.58
4/26/03	4:08:23	65.58	189.96	23.04	164.28

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
4/26/03	4:09:23	66.58	190.64	22.36	164.96
4/26/03	4:10:23	67.58	191.30	21.70	165.62
4/26/03	4:11:23	68.58	191.93	21.07	166.25
4/26/03	4:12:23	69.58	192.53	20.47	166.85
4/26/03	4:13:23	70.58	193.13	19.87	167.45
4/26/03	4:18:23	75.58	195.78	17.22	170.10
4/26/03	4:23:23	80.58	198.04	14.96	172.36
4/26/03	4:28:24	85.58	199.90	13.10	174.22
4/26/03	4:33:24	90.58	201.46	11.54	175.78
4/26/03	4:38:24	95.58	202.77	10.23	177.09
4/26/03	4:43:24	100.58	203.86	9.14	178.18
4/26/03	4:48:24	105.58	204.77	8.23	179.09
4/26/03	4:53:24	110.58	205.54	7.46	179.86
4/26/03	4:58:24	115.58	206.20	6.80	180.52
4/26/03	5:03:24	120.58	206.74	6.26	181.06
4/26/03	5:08:24	125.58	207.19	5.81	181.51
4/26/03	5:13:24	130.58	207.55	5.45	181.87
4/26/03	5:18:24	135.58	207.86	5.14	182.18
4/26/03	5:23:24	140.58	208.15	4.85	182.47
4/26/03	5:28:24	145.58	208.38	4.62	182.70
4/26/03	5:33:24	150.58	208.56	4.44	182.88
4/26/03	5:38:24	155.58	208.72	4.28	183.04
4/26/03	5:43:24	160.58	208.84	4.16	183.16
4/26/03	5:48:24	165.58	208.94	4.06	183.26
4/26/03	5:53:24	170.58	209.03	3.97	183.35
4/26/03	5:58:24	175.58	209.11	3.89	183.43
4/26/03	6:03:24	180.58	209.16	3.84	183.48
4/26/03	6:08:24	185.58	209.21	3.79	183.53
4/26/03	6:13:24	190.58	209.25	3.75	183.57
4/26/03	6:18:24	195.58	209.28	3.72	183.60
4/26/03	6:23:24	200.58	209.31	3.69	183.63
4/26/03	6:28:24	205.58	209.35	3.65	183.67
4/26/03	6:33:24	210.58	209.36	3.64	183.68
4/26/03	6:38:24	215.58	209.38	3.62	183.70
4/26/03	6:43:24	220.58	209.40	3.60	183.72
4/26/03	6:48:24	225.58	209.40	3.60	183.72
4/26/03	6:53:24	230.58	209.40	3.60	183.72
4/26/03	6:58:24	235.58	209.41	3.59	183.73
4/26/03	7:03:24	240.58	209.42	3.58	183.74
4/26/03	7:08:24	245.58	209.42	3.58	183.74
4/26/03	7:13:24	250.58	209.43	3.57	183.75
4/26/03	7:18:24	255.58	209.42	3.58	183.74



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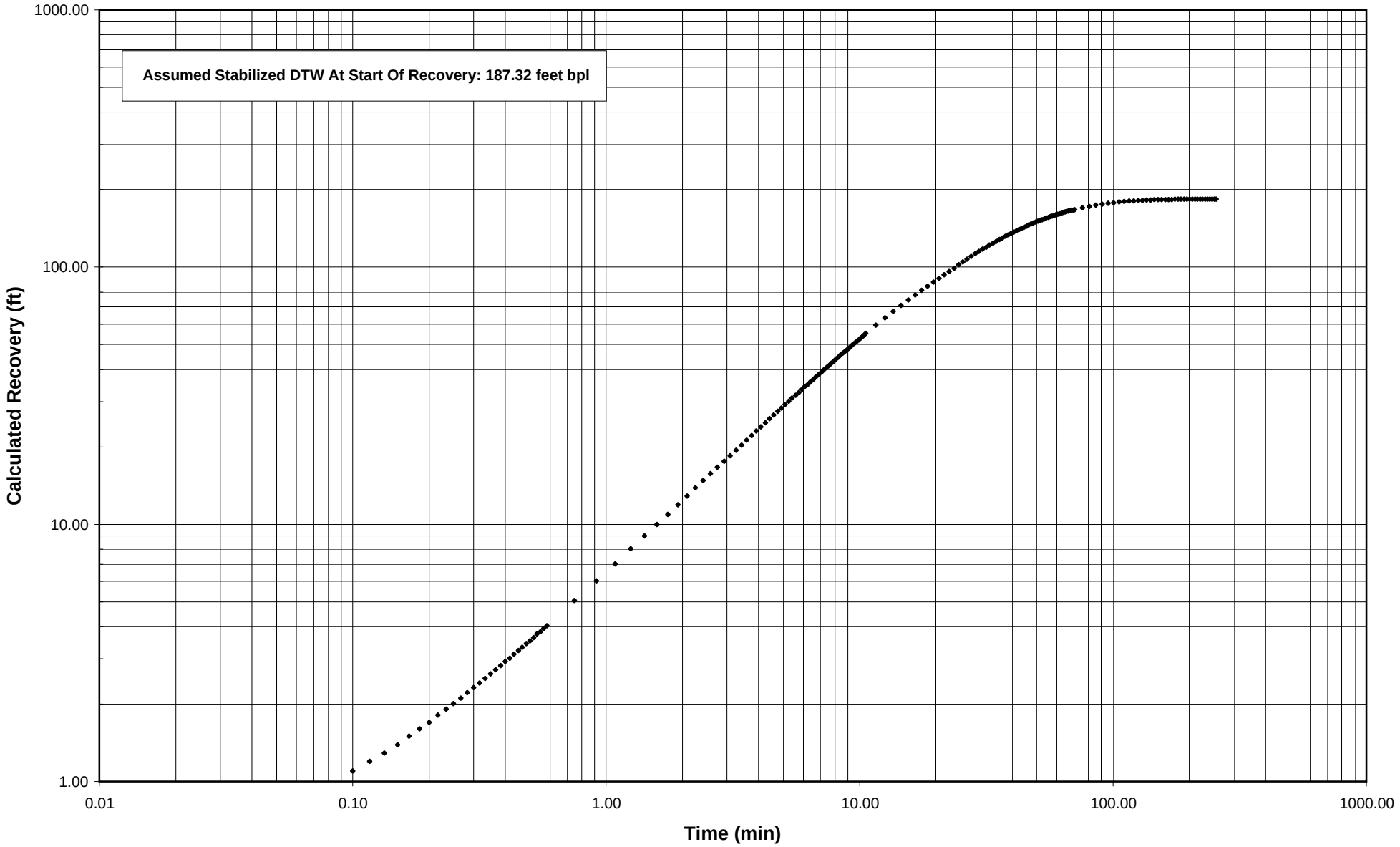
Injection Well No.1, Port St. Lucie
Port St. Lucie, Westport Injection Well System
Straddle-Packer Test No. 6 - Recovery



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Straddle-Packer Test No. 7 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Injection Well No.1

Packer Depth Interval:	2830-2880 feet bpl	**Static Water Level:**	13.12 feet below pad level
Start of Logging:	5/3/2003 6:17	**Start of Pumping:**	5/3/2003 6:17
End of Logging:	5/3/2003 14:19	**End of Pumping:**	14:23:47
Pumping Rate:	33.1 gpm	**Pumping Duration:**	486.00

Data Collected Using Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\WESTPORT\PT6DD.DAT

Note: Bold number indicates assumed stabilized depth to water at the end of pumping (99.97 feet bpl)

Double line indicates start of pump

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/03/03	6:17:12		206.88	13.12	0.00
05/03/03	6:17:12		206.87	13.13	0.01
05/03/03	6:17:12		206.88	13.12	0.00
05/03/03	6:17:12		206.87	13.13	0.01
05/03/03	6:17:12		206.88	13.12	0.00
05/03/03	6:17:12		206.88	13.12	0.00
05/03/03	6:17:12		206.88	13.12	0.00
05/03/03	6:17:12		206.88	13.12	0.00
05/03/03	6:17:13		206.87	13.13	0.01
05/03/03	6:17:13		206.87	13.13	0.01
05/03/03	6:17:13		206.88	13.12	0.00
05/03/03	6:17:13		206.88	13.12	0.00
05/03/03	6:17:13		206.88	13.12	0.00
05/03/03	6:17:13		206.88	13.12	0.00
05/03/03	6:17:13		206.87	13.13	0.01
05/03/03	6:17:13		206.88	13.12	0.00
05/03/03	6:17:13		206.88	13.12	0.00
05/03/03	6:17:13		206.88	13.12	0.00
05/03/03	6:17:14		206.88	13.12	0.00
05/03/03	6:17:14		206.88	13.12	0.00
05/03/03	6:17:14		206.87	13.13	0.01
05/03/03	6:17:14		206.88	13.12	0.00
05/03/03	6:17:14		206.87	13.13	0.01
05/03/03	6:17:14		206.88	13.12	0.00
05/03/03	6:17:14		206.87	13.13	0.01
05/03/03	6:17:14		206.87	13.13	0.01
05/03/03	6:17:14		206.87	13.13	0.01
05/03/03	6:17:14		206.87	13.13	0.01
05/03/03	6:17:15		206.87	13.13	0.01
05/03/03	6:17:15		206.88	13.12	0.00
05/03/03	6:17:15		206.87	13.13	0.01
05/03/03	6:17:15		206.87	13.13	0.01
05/03/03	6:17:15		206.88	13.12	0.00
05/03/03	6:17:15		206.88	13.12	0.00
05/03/03	6:17:15		206.88	13.12	0.00
05/03/03	6:17:15		206.88	13.12	0.00
05/03/03	6:17:15		206.88	13.12	0.00
05/03/03	6:17:16		206.87	13.13	0.01

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/03/03	6:17:16		206.87	13.13	0.01
05/03/03	6:17:16		206.88	13.12	0.00
05/03/03	6:17:16		206.87	13.13	0.01
05/03/03	6:17:16		206.87	13.13	0.01
05/03/03	6:17:16		206.87	13.13	0.01
05/03/03	6:17:16		206.87	13.13	0.01
05/03/03	6:17:16		206.87	13.13	0.01
05/03/03	6:17:16		206.86	13.14	0.02
05/03/03	6:17:16		206.88	13.12	0.00
05/03/03	6:17:17		206.88	13.12	0.00
05/03/03	6:17:17		206.88	13.12	0.00
05/03/03	6:17:17		206.87	13.13	0.01
05/03/03	6:17:17		206.87	13.13	0.01
05/03/03	6:17:17		206.88	13.12	0.00
05/03/03	6:17:17		206.88	13.12	0.00
05/03/03	6:17:17		206.87	13.13	0.01
05/03/03	6:17:17		206.87	13.13	0.01
05/03/03	6:17:17		206.88	13.12	0.00
05/03/03	6:17:17		206.88	13.12	0.00
05/03/03	6:17:18		206.87	13.13	0.01
05/03/03	6:17:18		206.87	13.13	0.01
05/03/03	6:17:18		206.87	13.13	0.01
05/03/03	6:17:18		206.87	13.13	0.01
05/03/03	6:17:18		206.87	13.13	0.01
05/03/03	6:17:18		206.87	13.13	0.01
05/03/03	6:17:18		206.86	13.14	0.02
05/03/03	6:17:18		206.87	13.13	0.01
05/03/03	6:17:18		206.87	13.13	0.01
05/03/03	6:17:19		206.88	13.12	0.00
05/03/03	6:17:19		206.88	13.12	0.00
05/03/03	6:17:19		206.88	13.12	0.00
05/03/03	6:17:19		206.87	13.13	0.01
05/03/03	6:17:19		206.87	13.13	0.01
05/03/03	6:17:19		206.88	13.12	0.00
05/03/03	6:17:19		206.88	13.12	0.00
05/03/03	6:17:19		206.88	13.12	0.00
05/03/03	6:17:19		206.87	13.13	0.01
05/03/03	6:17:19		206.88	13.12	0.00
05/03/03	6:17:20		206.87	13.13	0.01
05/03/03	6:17:20		206.88	13.12	0.00
05/03/03	6:17:20		206.87	13.13	0.01
05/03/03	6:17:20		206.88	13.12	0.00
05/03/03	6:17:20		206.87	13.13	0.01
05/03/03	6:17:20		206.87	13.13	0.01
05/03/03	6:17:20		206.88	13.12	0.00
05/03/03	6:17:20		206.88	13.12	0.00
05/03/03	6:17:20		206.87	13.13	0.01
05/03/03	6:17:20		206.87	13.13	0.01
05/03/03	6:17:21		206.87	13.13	0.01
05/03/03	6:17:21		206.88	13.12	0.00

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/03/03	6:17:21		206.87	13.13	0.01
05/03/03	6:17:21		206.88	13.12	0.00
05/03/03	6:17:21		206.87	13.13	0.01
05/03/03	6:17:21		206.87	13.13	0.01
05/03/03	6:17:21		206.88	13.12	0.00
05/03/03	6:17:21		206.88	13.12	0.00
05/03/03	6:17:21		206.87	13.13	0.01
05/03/03	6:17:22		206.87	13.13	0.01
05/03/03	6:17:22		206.87	13.13	0.01
05/03/03	6:17:22		206.86	13.14	0.02
05/03/03	6:17:22		206.87	13.13	0.01
05/03/03	6:17:22		206.87	13.13	0.01
05/03/03	6:17:22		206.88	13.12	0.00
05/03/03	6:17:22		206.87	13.13	0.01
05/03/03	6:17:22		206.87	13.13	0.01
05/03/03	6:17:22		206.87	13.13	0.01
05/03/03	6:17:22		206.88	13.12	0.00
05/03/03	6:17:23		206.87	13.13	0.01
05/03/03	6:17:23		206.87	13.13	0.01
05/03/03	6:17:23		206.87	13.13	0.01
05/03/03	6:17:23		206.88	13.12	0.00
05/03/03	6:17:23		206.87	13.13	0.01
05/03/03	6:17:23		206.87	13.13	0.01
05/03/03	6:17:23		206.87	13.13	0.01
05/03/03	6:17:23		206.87	13.13	0.01
05/03/03	6:17:23		206.88	13.12	0.00
05/03/03	6:17:24		206.88	13.12	0.00
05/03/03	6:17:24		206.87	13.13	0.01
05/03/03	6:17:24		206.88	13.12	0.00
05/03/03	6:17:24		206.88	13.12	0.00
05/03/03	6:17:24		206.87	13.13	0.01
05/03/03	6:17:24		206.88	13.12	0.00
05/03/03	6:17:24		206.87	13.13	0.01
05/03/03	6:17:24		206.88	13.12	0.00
05/03/03	6:17:24		206.87	13.13	0.01
05/03/03	6:17:24		206.87	13.13	0.01
05/03/03	6:17:25		206.88	13.12	0.00
05/03/03	6:17:25		206.88	13.12	0.00
05/03/03	6:17:25		206.87	13.13	0.01
05/03/03	6:17:25		206.88	13.12	0.00
05/03/03	6:17:25		206.87	13.13	0.01
05/03/03	6:17:25		206.88	13.12	0.00
05/03/03	6:17:25		206.88	13.12	0.00
05/03/03	6:17:25		206.88	13.12	0.00
05/03/03	6:17:25		206.88	13.12	0.00
05/03/03	6:17:26		206.88	13.12	0.00
05/03/03	6:17:26		206.88	13.12	0.00
05/03/03	6:17:26		206.87	13.13	0.01
05/03/03	6:17:26		206.88	13.12	0.00
05/03/03	6:17:26		206.87	13.13	0.01

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/03/03	6:17:26		206.87	13.13	0.01
05/03/03	6:17:26		206.87	13.13	0.01
05/03/03	6:17:26		206.88	13.12	0.00
05/03/03	6:17:26		206.88	13.12	0.00
05/03/03	6:17:26		206.87	13.13	0.01
05/03/03	6:17:27		206.87	13.13	0.01
05/03/03	6:17:27		206.87	13.13	0.01
05/03/03	6:17:27		206.88	13.12	0.00
05/03/03	6:17:27		206.88	13.12	0.00
05/03/03	6:17:27		206.88	13.12	0.00
05/03/03	6:17:27		206.88	13.12	0.00
05/03/03	6:17:27		206.88	13.12	0.00
05/03/03	6:17:27		206.88	13.12	0.00
05/03/03	6:17:27		206.88	13.12	0.00
05/03/03	6:17:28		206.87	13.13	0.01
05/03/03	6:17:28		206.88	13.12	0.00
05/03/03	6:17:28		206.88	13.12	0.00
05/03/03	6:17:28		206.87	13.13	0.01
05/03/03	6:17:28		206.88	13.12	0.00
05/03/03	6:17:28		206.88	13.12	0.00
05/03/03	6:17:28		206.87	13.13	0.01
05/03/03	6:17:28		206.87	13.13	0.01
05/03/03	6:17:28		206.88	13.12	0.00
05/03/03	6:17:28		206.88	13.12	0.00
05/03/03	6:17:29		206.88	13.12	0.00
05/03/03	6:17:29		206.88	13.12	0.00
05/03/03	6:17:29		206.87	13.13	0.01
05/03/03	6:17:29		206.88	13.12	0.00
05/03/03	6:17:29		206.87	13.13	0.01
05/03/03	6:17:29		206.88	13.12	0.00
05/03/03	6:17:29		206.87	13.13	0.01
05/03/03	6:17:29		206.88	13.12	0.00
05/03/03	6:17:29		206.87	13.13	0.01
05/03/03	6:17:30		206.88	13.12	0.00
05/03/03	6:17:30		206.87	13.13	0.01
05/03/03	6:17:30		206.88	13.12	0.00
05/03/03	6:17:30		206.87	13.13	0.01
05/03/03	6:17:30		206.88	13.12	0.00
05/03/03	6:17:30		206.88	13.12	0.00
05/03/03	6:17:30		206.88	13.12	0.00
05/03/03	6:17:30		206.87	13.13	0.01
05/03/03	6:17:30		206.87	13.13	0.01
05/03/03	6:17:30		206.87	13.13	0.01
05/03/03	6:17:31		206.88	13.12	0.00
05/03/03	6:17:31		206.87	13.13	0.01
05/03/03	6:17:31		206.88	13.12	0.00
05/03/03	6:17:31		206.88	13.12	0.00
05/03/03	6:17:31		206.88	13.12	0.00
05/03/03	6:17:31		206.87	13.13	0.01
05/03/03	6:17:31		206.88	13.12	0.00

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/03/03	6:17:31		206.87	13.13	0.01
05/03/03	6:17:31		206.88	13.12	0.00
05/03/03	6:17:32		206.88	13.12	0.00
05/03/03	6:17:32		206.88	13.12	0.00
05/03/03	6:17:32		206.88	13.12	0.00
05/03/03	6:17:32		206.88	13.12	0.00
05/03/03	6:17:32		206.88	13.12	0.00
05/03/03	6:17:32		206.88	13.12	0.00
05/03/03	6:17:32		206.87	13.13	0.01
05/03/03	6:17:32		206.88	13.12	0.00
05/03/03	6:17:32		206.88	13.12	0.00
05/03/03	6:17:32		206.88	13.12	0.00
05/03/03	6:17:33		206.87	13.13	0.01
05/03/03	6:17:33		206.88	13.12	0.00
05/03/03	6:17:33		206.88	13.12	0.00
05/03/03	6:17:33		206.88	13.12	0.00
05/03/03	6:17:33		206.88	13.12	0.00
05/03/03	6:17:33		206.88	13.12	0.00
05/03/03	6:17:33		206.87	13.13	0.01
05/03/03	6:17:33		206.88	13.12	0.00
05/03/03	6:17:33		206.88	13.12	0.00
05/03/03	6:17:34		206.88	13.12	0.00
05/03/03	6:17:34		206.88	13.12	0.00
05/03/03	6:17:34		206.88	13.12	0.00
05/03/03	6:17:34		206.88	13.12	0.00
05/03/03	6:17:34		206.87	13.13	0.01
05/03/03	6:17:34		206.87	13.13	0.01
05/03/03	6:17:34		206.87	13.13	0.01
05/03/03	6:17:34		206.88	13.12	0.00
05/03/03	6:17:34		206.88	13.12	0.00
05/03/03	6:17:34		206.88	13.12	0.00
05/03/03	6:17:35		206.88	13.12	0.00
05/03/03	6:17:35		206.88	13.12	0.00
05/03/03	6:17:35		206.88	13.12	0.00
05/03/03	6:17:35		206.88	13.12	0.00
05/03/03	6:17:35		206.88	13.12	0.00
05/03/03	6:17:35		206.88	13.12	0.00
05/03/03	6:17:35		206.88	13.12	0.00
05/03/03	6:17:35		206.87	13.13	0.01
05/03/03	6:17:35		206.88	13.12	0.00
05/03/03	6:17:36		206.88	13.12	0.00
05/03/03	6:17:36		206.88	13.12	0.00
05/03/03	6:17:36		206.88	13.12	0.00
05/03/03	6:17:36		206.87	13.13	0.01
05/03/03	6:17:36		206.88	13.12	0.00
05/03/03	6:17:36		206.88	13.12	0.00
05/03/03	6:17:36		206.88	13.12	0.00
05/03/03	6:17:36		206.88	13.12	0.00
05/03/03	6:17:36		206.88	13.12	0.00
05/03/03	6:17:36		206.88	13.12	0.00

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/03/03	6:17:37		206.88	13.12	0.00
05/03/03	6:17:37		206.87	13.13	0.01
05/03/03	6:17:37		206.88	13.12	0.00
05/03/03	6:17:37		206.88	13.12	0.00
05/03/03	6:17:37		206.88	13.12	0.00
05/03/03	6:17:37		206.88	13.12	0.00
05/03/03	6:17:37		206.88	13.12	0.00
05/03/03	6:17:37		206.88	13.12	0.00
05/03/03	6:17:37		206.88	13.12	0.00
05/03/03	6:17:38		206.88	13.12	0.00
05/03/03	6:17:38		206.88	13.12	0.00
05/03/03	6:17:38		206.87	13.13	0.01
05/03/03	6:17:38		206.87	13.13	0.01
05/03/03	6:17:38		206.87	13.13	0.01
05/03/03	6:17:38		206.87	13.13	0.01
05/03/03	6:17:38		206.88	13.12	0.00
05/03/03	6:17:38		206.88	13.12	0.00
05/03/03	6:17:38		206.88	13.12	0.00
05/03/03	6:17:38		206.87	13.13	0.01
05/03/03	6:17:39		206.88	13.12	0.00
05/03/03	6:17:39		206.88	13.12	0.00
05/03/03	6:17:39		206.88	13.12	0.00
05/03/03	6:17:39		206.88	13.12	0.00
05/03/03	6:17:39		206.88	13.12	0.00
05/03/03	6:17:39		206.88	13.12	0.00
05/03/03	6:17:39		206.88	13.12	0.00
05/03/03	6:17:39		206.88	13.12	0.00
05/03/03	6:17:39		206.88	13.12	0.00
05/03/03	6:17:40		206.87	13.13	0.01
05/03/03	6:17:40		206.88	13.12	0.00
05/03/03	6:17:40		206.88	13.12	0.00
05/03/03	6:17:40		206.87	13.13	0.01
05/03/03	6:17:40		206.88	13.12	0.00
05/03/03	6:17:40		206.88	13.12	0.00
05/03/03	6:17:40		206.87	13.13	0.01
05/03/03	6:17:40		206.88	13.12	0.00
05/03/03	6:17:40		206.88	13.12	0.00
05/03/03	6:17:40		206.88	13.12	0.00
05/03/03	6:17:41		206.88	13.12	0.00
05/03/03	6:17:41		206.87	13.13	0.01
05/03/03	6:17:41		206.88	13.12	0.00
05/03/03	6:17:41		206.88	13.12	0.00
05/03/03	6:17:41		206.88	13.12	0.00
05/03/03	6:17:41		206.88	13.12	0.00
05/03/03	6:17:41		206.88	13.12	0.00
05/03/03	6:17:41		206.88	13.12	0.00
05/03/03	6:17:41		206.88	13.12	0.00
05/03/03	6:17:42		206.88	13.12	0.00
05/03/03	6:17:42		206.88	13.12	0.00
05/03/03	6:17:42		206.88	13.12	0.00

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/03/03	6:17:42		206.87	13.13	0.01
05/03/03	6:17:42		206.88	13.12	0.00
05/03/03	6:17:42		206.88	13.12	0.00
05/03/03	6:17:42		206.88	13.12	0.00
05/03/03	6:17:42		206.88	13.12	0.00
05/03/03	6:17:42		206.88	13.12	0.00
05/03/03	6:17:42		206.88	13.12	0.00
05/03/03	6:17:43		206.88	13.12	0.00
05/03/03	6:17:43		206.88	13.12	0.00
05/03/03	6:17:43		206.87	13.13	0.01
05/03/03	6:17:43		206.88	13.12	0.00
05/03/03	6:17:44		206.87	13.13	0.01
05/03/03	6:17:46		206.88	13.12	0.00
05/03/03	6:17:47		206.87	13.13	0.01
05/03/03	6:17:48		206.87	13.13	0.01
05/03/03	6:17:49		206.87	13.13	0.01
05/03/03	6:17:50		206.88	13.12	0.00
05/03/03	6:17:51		206.88	13.12	0.00
05/03/03	6:17:52		206.88	13.12	0.00
05/03/03	6:17:53		206.87	13.13	0.01
05/03/03	6:17:54		206.88	13.12	0.00
05/03/03	6:17:55		206.88	13.12	0.00
05/03/03	6:17:56		197.42	22.58	9.46
05/03/03	6:17:57	0.00	208.15	11.85	
05/03/03	6:17:58	0.02	205.88	14.12	1.00
05/03/03	6:17:59	0.03	205.41	14.59	1.47
05/03/03	6:18:00	0.05	205.00	15.00	1.88
05/03/03	6:18:01	0.07	204.17	15.83	2.71
05/03/03	6:18:02	0.08	203.57	16.43	3.31
05/03/03	6:18:03	0.10	203.06	16.94	3.82
05/03/03	6:18:04	0.12	202.57	17.43	4.31
05/03/03	6:18:05	0.13	202.11	17.89	4.77
05/03/03	6:18:06	0.15	201.56	18.44	5.32
05/03/03	6:18:07	0.17	201.11	18.89	5.77
05/03/03	6:18:08	0.18	200.54	19.46	6.34
05/03/03	6:18:09	0.20	200.09	19.91	6.79
05/03/03	6:18:10	0.22	199.59	20.41	7.29
05/03/03	6:18:11	0.23	199.10	20.90	7.78
05/03/03	6:18:12	0.25	198.56	21.44	8.32
05/03/03	6:18:13	0.27	198.14	21.86	8.74
05/03/03	6:18:14	0.28	197.63	22.37	9.25
05/03/03	6:18:15	0.30	197.32	22.68	9.56
05/03/03	6:18:16	0.32	196.66	23.34	10.22
05/03/03	6:18:17	0.33	196.20	23.80	10.68
05/03/03	6:18:18	0.35	195.73	24.27	11.15
05/03/03	6:18:19	0.37	195.24	24.76	11.64
05/03/03	6:18:20	0.38	194.81	25.19	12.07
05/03/03	6:18:21	0.40	194.37	25.63	12.51
05/03/03	6:18:22	0.42	193.92	26.08	12.96
05/03/03	6:18:23	0.43	193.48	26.52	13.40

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/03/03	6:18:24	0.45	193.02	26.98	13.86
05/03/03	6:18:25	0.47	192.58	27.42	14.30
05/03/03	6:18:26	0.48	192.13	27.87	14.75
05/03/03	6:18:27	0.50	191.71	28.29	15.17
05/03/03	6:18:28	0.52	191.29	28.71	15.59
05/03/03	6:18:29	0.53	190.87	29.13	16.01
05/03/03	6:18:30	0.55	190.41	29.59	16.47
05/03/03	6:18:31	0.57	190.01	29.99	16.87
05/03/03	6:18:32	0.58	189.58	30.42	17.30
05/03/03	6:18:33	0.60	189.19	30.81	17.69
05/03/03	6:18:34	0.62	188.78	31.22	18.10
05/03/03	6:18:35	0.63	188.38	31.62	18.50
05/03/03	6:18:36	0.65	187.96	32.04	18.92
05/03/03	6:18:37	0.67	187.56	32.44	19.32
05/03/03	6:18:38	0.68	187.16	32.84	19.72
05/03/03	6:18:39	0.70	186.74	33.26	20.14
05/03/03	6:18:40	0.72	186.40	33.60	20.48
05/03/03	6:18:41	0.73	186.01	33.99	20.87
05/03/03	6:18:42	0.75	185.64	34.36	21.24
05/03/03	6:18:43	0.77	185.25	34.75	21.63
05/03/03	6:18:44	0.78	184.88	35.12	22.00
05/03/03	6:18:47	0.85	183.36	36.64	23.52
05/03/03	6:18:53	0.93	181.23	38.77	25.65
05/03/03	6:18:58	1.02	179.84	40.16	27.04
05/03/03	6:19:03	1.10	177.81	42.19	29.07
05/03/03	6:19:08	1.18	176.52	43.48	30.36
05/03/03	6:19:13	1.27	174.62	45.38	32.26
05/03/03	6:19:18	1.35	173.43	46.57	33.45
05/03/03	6:19:23	1.43	171.66	48.34	35.22
05/03/03	6:19:28	1.52	170.53	49.47	36.35
05/03/03	6:19:33	1.60	168.88	51.12	38.00
05/03/03	6:19:38	1.68	167.82	52.18	39.06
05/03/03	6:19:43	1.77	166.26	53.74	40.62
05/03/03	6:19:48	1.85	165.02	54.98	41.86
05/03/03	6:19:53	1.93	163.81	56.19	43.07
05/03/03	6:19:58	2.02	162.64	57.36	44.24
05/03/03	6:20:03	2.10	161.50	58.50	45.38
05/03/03	6:20:08	2.18	160.44	59.56	46.44
05/03/03	6:20:13	2.27	159.37	60.63	47.51
05/03/03	6:20:18	2.35	158.38	61.62	48.50
05/03/03	6:20:23	2.43	157.40	62.60	49.48
05/03/03	6:20:28	2.52	156.46	63.54	50.42
05/03/03	6:20:33	2.60	155.53	64.47	51.35
05/03/03	6:20:38	2.68	154.64	65.36	52.24
05/03/03	6:20:43	2.77	153.75	66.25	53.13
05/03/03	6:20:48	2.85	152.93	67.07	53.95
05/03/03	6:20:53	2.93	152.12	67.88	54.76
05/03/03	6:20:58	3.02	151.33	68.67	55.55
05/03/03	6:21:03	3.10	150.55	69.45	56.33
05/03/03	6:21:08	3.18	149.83	70.17	57.05

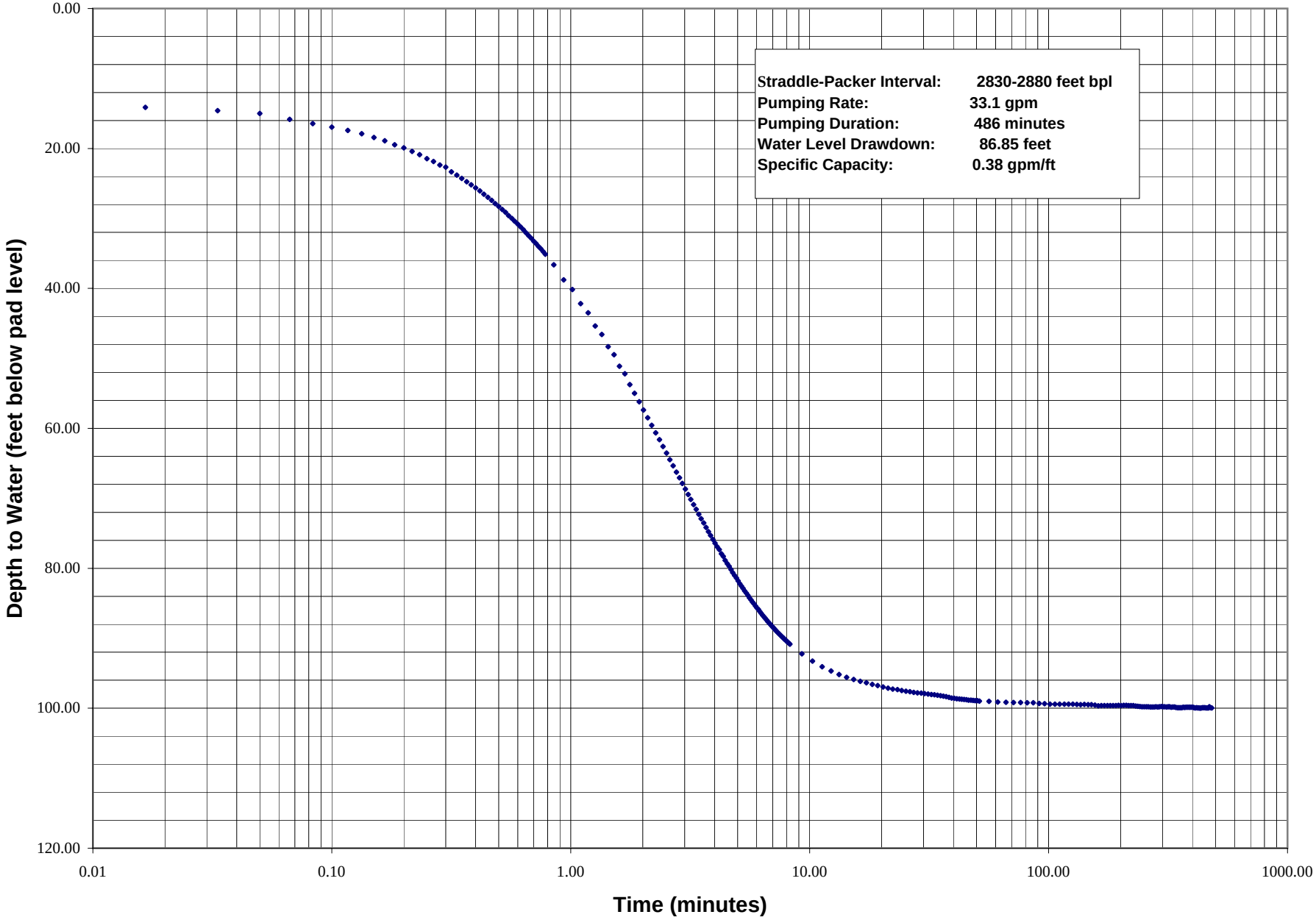
Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/03/03	6:21:13	3.27	149.09	70.91	57.79
05/03/03	6:21:18	3.35	148.42	71.58	58.46
05/03/03	6:21:23	3.43	147.74	72.26	59.14
05/03/03	6:21:28	3.52	147.08	72.92	59.80
05/03/03	6:21:33	3.60	146.47	73.53	60.41
05/03/03	6:21:38	3.68	145.84	74.16	61.04
05/03/03	6:21:43	3.77	145.25	74.75	61.63
05/03/03	6:21:48	3.85	144.69	75.31	62.19
05/03/03	6:21:53	3.93	144.12	75.88	62.76
05/03/03	6:21:58	4.02	143.60	76.40	63.28
05/03/03	6:22:03	4.10	143.07	76.93	63.81
05/03/03	6:22:08	4.18	142.67	77.33	64.21
05/03/03	6:22:13	4.27	142.06	77.94	64.82
05/03/03	6:22:18	4.35	141.69	78.31	65.19
05/03/03	6:22:23	4.43	141.13	78.87	65.75
05/03/03	6:22:28	4.52	140.66	79.34	66.22
05/03/03	6:22:33	4.60	140.28	79.72	66.60
05/03/03	6:22:38	4.68	139.83	80.17	67.05
05/03/03	6:22:43	4.77	139.40	80.60	67.48
05/03/03	6:22:48	4.85	138.99	81.01	67.89
05/03/03	6:22:53	4.93	138.61	81.39	68.27
05/03/03	6:22:58	5.02	138.21	81.79	68.67
05/03/03	6:23:03	5.10	137.81	82.19	69.07
05/03/03	6:23:08	5.18	137.48	82.52	69.40
05/03/03	6:23:13	5.27	137.13	82.87	69.75
05/03/03	6:23:18	5.35	136.76	83.24	70.12
05/03/03	6:23:23	5.43	136.46	83.54	70.42
05/03/03	6:23:28	5.52	136.11	83.89	70.77
05/03/03	6:23:33	5.60	135.80	84.20	71.08
05/03/03	6:23:38	5.68	135.49	84.51	71.39
05/03/03	6:23:43	5.77	135.18	84.82	71.70
05/03/03	6:23:48	5.85	134.89	85.11	71.99
05/03/03	6:23:53	5.93	134.60	85.40	72.28
05/03/03	6:23:58	6.02	134.35	85.65	72.53
05/03/03	6:24:03	6.10	134.12	85.88	72.76
05/03/03	6:24:08	6.18	133.82	86.18	73.06
05/03/03	6:24:13	6.27	133.55	86.45	73.33
05/03/03	6:24:18	6.35	133.31	86.69	73.57
05/03/03	6:24:23	6.43	133.06	86.94	73.82
05/03/03	6:24:28	6.52	132.86	87.14	74.02
05/03/03	6:24:33	6.60	132.61	87.39	74.27
05/03/03	6:24:38	6.68	132.40	87.60	74.48
05/03/03	6:24:43	6.77	132.18	87.82	74.70
05/03/03	6:24:48	6.85	131.98	88.02	74.90
05/03/03	6:24:53	6.93	131.75	88.25	75.13
05/03/03	6:24:58	7.02	131.57	88.43	75.31
05/03/03	6:25:03	7.10	131.38	88.62	75.50
05/03/03	6:25:08	7.18	131.20	88.80	75.68
05/03/03	6:25:13	7.27	131.02	88.98	75.86
05/03/03	6:25:18	7.35	130.84	89.16	76.04

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/03/03	6:25:23	7.43	130.66	89.34	76.22
05/03/03	6:25:28	7.52	130.50	89.50	76.38
05/03/03	6:25:33	7.60	130.34	89.66	76.54
05/03/03	6:25:38	7.68	130.16	89.84	76.72
05/03/03	6:25:43	7.77	130.03	89.97	76.85
05/03/03	6:25:48	7.85	129.87	90.13	77.01
05/03/03	6:25:53	7.93	129.73	90.27	77.15
05/03/03	6:25:58	8.02	129.58	90.42	77.30
05/03/03	6:26:03	8.10	129.41	90.59	77.47
05/03/03	6:26:08	8.18	129.29	90.71	77.59
05/03/03	6:26:13	8.27	129.15	90.85	77.73
05/03/03	6:27:13	9.28	127.77	92.23	79.11
05/03/03	6:28:13	10.28	126.73	93.27	80.15
05/03/03	6:29:13	11.28	125.93	94.07	80.95
05/03/03	6:30:13	12.28	125.32	94.68	81.56
05/03/03	6:31:13	13.28	124.83	95.17	82.05
05/03/03	6:32:13	14.28	124.43	95.57	82.45
05/03/03	6:33:13	15.28	124.11	95.89	82.77
05/03/03	6:34:13	16.28	123.83	96.17	83.05
05/03/03	6:35:13	17.28	123.64	96.36	83.24
05/03/03	6:36:13	18.28	123.41	96.59	83.47
05/03/03	6:37:13	19.28	123.22	96.78	83.66
05/03/03	6:38:13	20.28	123.04	96.96	83.84
05/03/03	6:39:13	21.28	122.88	97.12	84.00
05/03/03	6:40:13	22.28	122.75	97.25	84.13
05/03/03	6:41:13	23.28	122.65	97.35	84.23
05/03/03	6:42:13	24.28	122.54	97.46	84.34
05/03/03	6:43:13	25.28	122.44	97.56	84.44
05/03/03	6:44:13	26.28	122.36	97.64	84.52
05/03/03	6:45:13	27.28	122.26	97.74	84.62
05/03/03	6:46:13	28.28	122.21	97.79	84.67
05/03/03	6:47:13	29.28	122.15	97.85	84.73
05/03/03	6:48:13	30.28	122.08	97.92	84.80
05/03/03	6:49:13	31.28	122.02	97.98	84.86
05/03/03	6:50:13	32.28	121.97	98.03	84.91
05/03/03	6:51:13	33.28	121.92	98.08	84.96
05/03/03	6:52:13	34.28	121.86	98.14	85.02
05/03/03	6:53:13	35.28	121.79	98.21	85.09
05/03/03	6:54:13	36.28	121.74	98.26	85.14
05/03/03	6:55:13	37.28	121.66	98.34	85.22
05/03/03	6:56:13	38.28	121.54	98.46	85.34
05/03/03	6:57:13	39.28	121.46	98.54	85.42
05/03/03	6:58:13	40.28	121.42	98.58	85.46
05/03/03	6:59:13	41.28	121.37	98.63	85.51
05/03/03	7:00:13	42.28	121.32	98.68	85.56
05/03/03	7:01:13	43.28	121.29	98.71	85.59
05/03/03	7:02:13	44.28	121.25	98.75	85.63
05/03/03	7:03:13	45.28	121.21	98.79	85.67
05/03/03	7:04:13	46.28	121.16	98.84	85.72
05/03/03	7:05:13	47.28	121.14	98.86	85.74

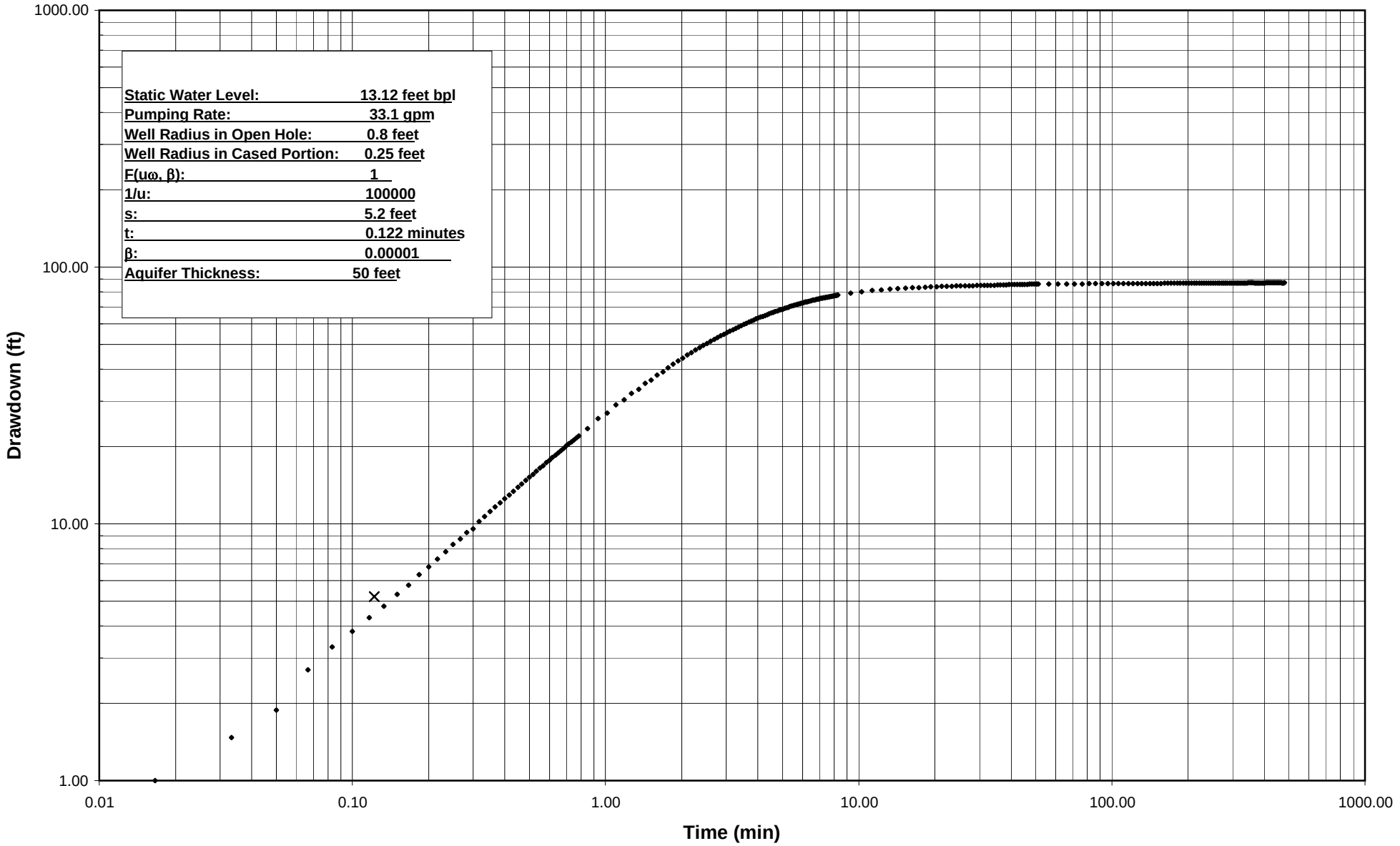
Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/03/03	7:06:13	48.28	121.12	98.88	85.76
05/03/03	7:07:13	49.28	121.09	98.91	85.79
05/03/03	7:08:13	50.28	121.09	98.91	85.79
05/03/03	7:09:13	51.28	121.04	98.96	85.84
05/03/03	7:14:14	56.28	120.99	99.01	85.89
05/03/03	7:19:14	61.28	120.90	99.10	85.98
05/03/03	7:24:14	66.28	120.86	99.14	86.02
05/03/03	7:29:14	71.28	120.83	99.17	86.05
05/03/03	7:34:14	76.28	120.80	99.20	86.08
05/03/03	7:39:14	81.28	120.79	99.21	86.09
05/03/03	7:44:14	86.28	120.78	99.22	86.10
05/03/03	7:49:14	91.28	120.69	99.31	86.19
05/03/03	7:54:14	96.28	120.65	99.35	86.23
05/03/03	7:59:14	101.28	120.59	99.41	86.29
05/03/03	8:04:14	106.28	120.58	99.42	86.30
05/03/03	8:09:14	111.28	120.59	99.41	86.29
05/03/03	8:14:14	116.28	120.57	99.43	86.31
05/03/03	8:19:14	121.28	120.57	99.43	86.31
05/03/03	8:24:14	126.28	120.57	99.43	86.31
05/03/03	8:29:14	131.28	120.54	99.46	86.34
05/03/03	8:34:14	136.28	120.53	99.47	86.35
05/03/03	8:39:14	141.28	120.54	99.46	86.34
05/03/03	8:44:14	146.28	120.50	99.50	86.38
05/03/03	8:49:14	151.28	120.51	99.49	86.37
05/03/03	8:54:14	156.28	120.44	99.56	86.44
05/03/03	8:59:14	161.28	120.36	99.64	86.52
05/03/03	9:04:14	166.28	120.39	99.61	86.49
05/03/03	9:09:14	171.28	120.39	99.61	86.49
05/03/03	9:14:14	176.28	120.36	99.64	86.52
05/03/03	9:19:14	181.28	120.36	99.64	86.52
05/03/03	9:24:14	186.28	120.38	99.62	86.50
05/03/03	9:29:14	191.28	120.38	99.62	86.50
05/03/03	9:34:14	196.28	120.40	99.60	86.48
05/03/03	9:39:14	201.28	120.38	99.62	86.50
05/03/03	9:44:14	206.28	120.40	99.60	86.48
05/03/03	9:49:14	211.28	120.42	99.58	86.46
05/03/03	9:54:14	216.28	120.39	99.61	86.49
05/03/03	9:59:14	221.28	120.39	99.61	86.49
05/03/03	10:04:14	226.28	120.39	99.61	86.49
05/03/03	10:09:14	231.28	120.31	99.69	86.57
05/03/03	10:14:14	236.28	120.28	99.72	86.60
05/03/03	10:19:14	241.28	120.24	99.76	86.64
05/03/03	10:24:14	246.28	120.21	99.79	86.67
05/03/03	10:29:14	251.28	120.21	99.79	86.67
05/03/03	10:34:14	256.28	120.20	99.80	86.68
05/03/03	10:39:14	261.28	120.22	99.78	86.66
05/03/03	10:44:14	266.28	120.19	99.81	86.69
05/03/03	10:49:14	271.28	120.17	99.83	86.71
05/03/03	10:54:14	276.28	120.18	99.82	86.70
05/03/03	10:59:14	281.28	120.21	99.79	86.67

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/03/03	11:04:14	286.28	120.18	99.82	86.70
05/03/03	11:09:14	291.28	120.20	99.80	86.68
05/03/03	11:14:14	296.28	120.23	99.77	86.65
05/03/03	11:19:14	301.28	120.21	99.79	86.67
05/03/03	11:24:14	306.28	120.21	99.79	86.67
05/03/03	11:29:14	311.28	120.18	99.82	86.70
05/03/03	11:34:14	316.28	120.20	99.80	86.68
05/03/03	11:39:14	321.28	120.22	99.78	86.66
05/03/03	11:44:14	326.28	120.16	99.84	86.72
05/03/03	11:49:14	331.28	120.19	99.81	86.69
05/03/03	11:54:14	336.28	120.18	99.82	86.70
05/03/03	11:59:14	341.28	120.10	99.90	86.78
05/03/03	12:04:14	346.28	120.08	99.92	86.80
05/03/03	12:09:14	351.28	120.08	99.92	86.80
05/03/03	12:14:14	356.28	120.08	99.92	86.80
05/03/03	12:19:14	361.28	120.08	99.92	86.80
05/03/03	12:24:14	366.28	120.13	99.87	86.75
05/03/03	12:29:14	371.28	120.11	99.89	86.77
05/03/03	12:34:14	376.28	120.16	99.84	86.72
05/03/03	12:39:14	381.28	120.13	99.87	86.75
05/03/03	12:44:14	386.28	120.16	99.84	86.72
05/03/03	12:49:14	391.28	120.13	99.87	86.75
05/03/03	12:54:14	396.28	120.13	99.87	86.75
05/03/03	12:59:14	401.28	120.13	99.87	86.75
05/03/03	13:04:14	406.28	120.07	99.93	86.81
05/03/03	13:09:14	411.28	120.05	99.95	86.83
05/03/03	13:14:14	416.28	120.07	99.93	86.81
05/03/03	13:19:14	421.28	120.03	99.97	86.85
05/03/03	13:24:14	426.28	120.03	99.97	86.85
05/03/03	13:29:14	431.28	120.03	99.97	86.85
05/03/03	13:34:14	436.28	120.03	99.97	86.85
05/03/03	13:39:14	441.28	120.07	99.93	86.81
05/03/03	13:44:14	446.28	120.08	99.92	86.80
05/03/03	13:49:14	451.28	120.07	99.93	86.81
05/03/03	13:54:14	456.28	120.03	99.97	86.85
05/03/03	13:59:14	461.28	120.03	**99.97**	86.85
05/03/03	14:04:14	466.28	120.04	99.96	86.84
05/03/03	14:09:14	471.28	120.22	99.78	86.66
05/03/03	14:14:14	476.28	120.09	99.91	86.79
05/03/03	14:19:14	481.28	120.05	99.95	86.83

Straddle-Packer Test No. 7 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Injection Well No. 1



Injection Well No.1, Port St. Lucie
Port St. Lucie, Westport Injection Well System
Straddle-Packer Test No. 7 - Drawdown



g:aproject\reesemacon\pf001153.0003\MW Packer Tests\Test#5\#7 Drawdown.xls\DD Log-log

Straddle-Packer Test No. 7 - Recovery
City of Port St. Lucie, Westport Injection Well System
Injection Well No.1

Packer Depth Interval:	2830-2880 feet bpl	**Assumed Stabilized DTW:**	99.97 feet bpl
Start of Logging:	5/3/03 14:23:10	**Start of Pumping:**	5/3/03 6:17:57
End of Logging:	5/3/03 18:05:11	**Pumping Duration:**	486 minutes
Pumping Rate:	33.1 gpm	**Total Test Time:**	703 minutes

Data Collected Using Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\WESTPORT\PT7REC.DAT

Note: Bold number indicates assumed stabilized depth to water

Double line indicates end of pumping

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/03/03	14:23:10		120.03	**99.97**	0.00
05/03/03	14:23:10		120.08	99.92	0.05
05/03/03	14:23:10		120.05	99.95	0.02
05/03/03	14:23:10		120.11	99.89	0.08
05/03/03	14:23:10		120.13	99.87	0.10
05/03/03	14:23:10		120.09	99.91	0.06
05/03/03	14:23:10		120.08	99.92	0.05
05/03/03	14:23:10		120.05	99.95	0.02
05/03/03	14:23:10		120.08	99.92	0.05
05/03/03	14:23:11		120.08	99.92	0.05
05/03/03	14:23:11		120.08	99.92	0.05
05/03/03	14:23:11		120.08	99.92	0.05
05/03/03	14:23:11		120.08	99.92	0.05
05/03/03	14:23:11		120.05	99.95	0.02
05/03/03	14:23:11		120.05	99.95	0.02
05/03/03	14:23:11		120.08	99.92	0.05
05/03/03	14:23:11		120.08	99.92	0.05
05/03/03	14:23:11		120.11	99.89	0.08
05/03/03	14:23:11		120.13	99.87	0.10
05/03/03	14:23:12		120.09	99.91	0.06
05/03/03	14:23:12		120.07	99.93	0.04
05/03/03	14:23:12		120.08	99.92	0.05
05/03/03	14:23:12		120.07	99.93	0.04
05/03/03	14:23:12		120.08	99.92	0.05
05/03/03	14:23:12		120.05	99.95	0.02
05/03/03	14:23:12		120.09	99.91	0.06
05/03/03	14:23:12		120.08	99.92	0.05
05/03/03	14:23:12		120.05	99.95	0.02
05/03/03	14:23:12		120.04	99.96	0.01
05/03/03	14:23:13		120.03	99.97	0.00
05/03/03	14:23:13		120.05	99.95	0.02
05/03/03	14:23:13		120.07	99.93	0.04
05/03/03	14:23:13		120.07	99.93	0.04
05/03/03	14:23:13		120.05	99.95	0.02
05/03/03	14:23:13		120.07	99.93	0.04
05/03/03	14:23:13		120.08	99.92	0.05
05/03/03	14:23:13		120.05	99.95	0.02
05/03/03	14:23:13		120.10	99.90	0.07
05/03/03	14:23:14		120.08	99.92	0.05
05/03/03	14:23:14		120.07	99.93	0.04
05/03/03	14:23:14		120.08	99.92	0.05
05/03/03	14:23:14		120.07	99.93	0.04
05/03/03	14:23:14		120.05	99.95	0.02

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/03/03	14:23:14		120.09	99.91	0.06
05/03/03	14:23:14		120.08	99.92	0.05
05/03/03	14:23:14		120.03	99.97	0.00
05/03/03	14:23:14		120.00	100.00	
05/03/03	14:23:14		120.05	99.95	0.02
05/03/03	14:23:15		120.08	99.92	0.05
05/03/03	14:23:15		120.05	99.95	0.02
05/03/03	14:23:15		120.05	99.95	0.02
05/03/03	14:23:15		120.05	99.95	0.02
05/03/03	14:23:15		120.07	99.93	0.04
05/03/03	14:23:15		120.02	99.98	
05/03/03	14:23:15		120.07	99.93	0.04
05/03/03	14:23:15		120.08	99.92	0.05
05/03/03	14:23:15		120.06	99.94	0.03
05/03/03	14:23:15		120.03	99.97	0.00
05/03/03	14:23:16		120.04	99.96	0.01
05/03/03	14:23:16		120.08	99.92	0.05
05/03/03	14:23:16		120.03	99.97	0.00
05/03/03	14:23:16		120.05	99.95	0.02
05/03/03	14:23:16		120.05	99.95	0.02
05/03/03	14:23:16		120.01	99.99	
05/03/03	14:23:16		120.07	99.93	0.04
05/03/03	14:23:16		120.10	99.90	0.07
05/03/03	14:23:16		120.05	99.95	0.02
05/03/03	14:23:17		120.05	99.95	0.02
05/03/03	14:23:17		120.08	99.92	0.05
05/03/03	14:23:17		120.10	99.90	0.07
05/03/03	14:23:17		120.08	99.92	0.05
05/03/03	14:23:17		120.08	99.92	0.05
05/03/03	14:23:17		120.05	99.95	0.02
05/03/03	14:23:17		120.07	99.93	0.04
05/03/03	14:23:17		120.10	99.90	0.07
05/03/03	14:23:17		120.08	99.92	0.05
05/03/03	14:23:17		120.08	99.92	0.05
05/03/03	14:23:18		120.12	99.88	0.09
05/03/03	14:23:18		120.09	99.91	0.06
05/03/03	14:23:18		120.08	99.92	0.05
05/03/03	14:23:18		120.07	99.93	0.04
05/03/03	14:23:18		120.05	99.95	0.02
05/03/03	14:23:18		120.06	99.94	0.03
05/03/03	14:23:18		120.03	99.97	
05/03/03	14:23:18		123.90	96.10	3.87
05/03/03	14:23:18	0.00	125.85	94.15	5.82
05/03/03	14:23:18	0.00	124.99	95.01	4.96
05/03/03	14:23:19	0.00	120.09	99.91	0.06
05/03/03	14:23:19	0.01	120.16	99.84	0.13
05/03/03	14:23:19	0.01	120.23	99.77	0.20
05/03/03	14:23:19	0.01	120.19	99.81	0.16
05/03/03	14:23:19	0.01	120.18	99.82	0.15
05/03/03	14:23:19	0.01	121.03	98.97	1.00
05/03/03	14:23:19	0.01	120.16	99.84	0.13
05/03/03	14:23:19	0.02	118.19	101.81	
05/03/03	14:23:19	0.02	119.73	100.27	
05/03/03	14:23:20	0.02	122.80	97.20	2.77

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/03/03	14:23:20	0.02	122.02	97.98	1.99
05/03/03	14:23:20	0.02	120.21	99.79	0.18
05/03/03	14:23:20	0.02	119.84	100.16	
05/03/03	14:23:20	0.03	120.70	99.30	0.67
05/03/03	14:23:20	0.03	120.45	99.55	0.42
05/03/03	14:23:20	0.03	120.88	99.12	0.85
05/03/03	14:23:20	0.03	121.51	98.49	1.48
05/03/03	14:23:20	0.03	120.86	99.14	0.83
05/03/03	14:23:20	0.03	121.64	98.36	1.61
05/03/03	14:23:21	0.04	122.62	97.38	2.59
05/03/03	14:23:21	0.04	123.68	96.32	3.65
05/03/03	14:23:21	0.04	121.04	98.96	1.01
05/03/03	14:23:21	0.04	121.63	98.37	1.60
05/03/03	14:23:21	0.04	120.18	99.82	0.15
05/03/03	14:23:21	0.05	121.84	98.16	1.81
05/03/03	14:23:21	0.05	121.28	98.72	1.25
05/03/03	14:23:21	0.05	121.63	98.37	1.60
05/03/03	14:23:21	0.05	121.14	98.86	1.11
05/03/03	14:23:22	0.05	121.04	98.96	1.01
05/03/03	14:23:22	0.05	121.66	98.34	1.63
05/03/03	14:23:22	0.06	121.02	98.98	0.99
05/03/03	14:23:22	0.06	121.57	98.43	1.54
05/03/03	14:23:22	0.06	120.72	99.28	0.69
05/03/03	14:23:22	0.06	122.69	97.31	2.66
05/03/03	14:23:22	0.06	121.05	98.95	1.02
05/03/03	14:23:22	0.06	122.44	97.56	2.41
05/03/03	14:23:22	0.07	121.64	98.36	1.61
05/03/03	14:23:22	0.07	122.19	97.81	2.16
05/03/03	14:23:23	0.07	121.46	98.54	1.43
05/03/03	14:23:23	0.07	122.02	97.98	1.99
05/03/03	14:23:23	0.07	121.76	98.24	1.73
05/03/03	14:23:23	0.08	120.90	99.10	0.87
05/03/03	14:23:23	0.08	121.72	98.28	1.69
05/03/03	14:23:23	0.08	122.13	97.87	2.10
05/03/03	14:23:23	0.08	122.66	97.34	2.63
05/03/03	14:23:23	0.08	121.45	98.55	1.42
05/03/03	14:23:23	0.08	122.47	97.53	2.44
05/03/03	14:23:24	0.09	121.95	98.05	1.92
05/03/03	14:23:24	0.09	122.34	97.66	2.31
05/03/03	14:23:24	0.09	122.47	97.53	2.44
05/03/03	14:23:24	0.09	123.12	96.88	3.09
05/03/03	14:23:24	0.09	122.67	97.33	2.64
05/03/03	14:23:24	0.09	122.72	97.28	2.69
05/03/03	14:23:24	0.10	123.43	96.57	3.40
05/03/03	14:23:24	0.10	123.41	96.59	3.38
05/03/03	14:23:24	0.10	122.52	97.48	2.49
05/03/03	14:23:24	0.10	122.36	97.64	2.33
05/03/03	14:23:25	0.10	122.73	97.27	2.70
05/03/03	14:23:25	0.11	122.96	97.04	2.93
05/03/03	14:23:25	0.11	123.00	97.00	2.97
05/03/03	14:23:25	0.11	123.02	96.98	2.99
05/03/03	14:23:25	0.11	123.01	96.99	2.98
05/03/03	14:23:25	0.11	122.75	97.25	2.72
05/03/03	14:23:25	0.11	123.27	96.73	3.24

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/03/03	14:23:25	0.12	123.46	96.54	3.43
05/03/03	14:23:25	0.12	123.27	96.73	3.24
05/03/03	14:23:26	0.12	122.70	97.30	2.67
05/03/03	14:23:26	0.12	123.53	96.47	3.50
05/03/03	14:23:26	0.12	123.26	96.74	3.23
05/03/03	14:23:26	0.12	123.74	96.26	3.71
05/03/03	14:23:26	0.13	123.38	96.62	3.35
05/03/03	14:23:26	0.13	123.44	96.56	3.41
05/03/03	14:23:26	0.13	123.04	96.96	3.01
05/03/03	14:23:26	0.13	123.24	96.76	3.21
05/03/03	14:23:26	0.13	123.42	96.58	3.39
05/03/03	14:23:26	0.13	123.17	96.83	3.14
05/03/03	14:23:27	0.14	123.34	96.66	3.31
05/03/03	14:23:27	0.14	123.41	96.59	3.38
05/03/03	14:23:27	0.14	124.01	95.99	3.98
05/03/03	14:23:27	0.14	123.52	96.48	3.49
05/03/03	14:23:27	0.14	124.02	95.98	3.99
05/03/03	14:23:27	0.15	123.54	96.46	3.51
05/03/03	14:23:27	0.15	123.87	96.13	3.84
05/03/03	14:23:27	0.15	123.92	96.08	3.89
05/03/03	14:23:27	0.15	124.31	95.69	4.28
05/03/03	14:23:28	0.15	124.13	95.87	4.10
05/03/03	14:23:28	0.15	123.99	96.01	3.96
05/03/03	14:23:28	0.16	124.26	95.74	4.23
05/03/03	14:23:28	0.16	124.31	95.69	4.28
05/03/03	14:23:28	0.16	124.22	95.78	4.19
05/03/03	14:23:28	0.16	124.01	95.99	3.98
05/03/03	14:23:28	0.16	124.34	95.66	4.31
05/03/03	14:23:28	0.16	124.18	95.82	4.15
05/03/03	14:23:28	0.17	124.47	95.53	4.44
05/03/03	14:23:28	0.17	124.52	95.48	4.49
05/03/03	14:23:29	0.17	124.68	95.32	4.65
05/03/03	14:23:29	0.17	124.44	95.56	4.41
05/03/03	14:23:29	0.17	124.69	95.31	4.66
05/03/03	14:23:29	0.18	124.85	95.15	4.82
05/03/03	14:23:29	0.18	124.72	95.28	4.69
05/03/03	14:23:29	0.18	124.66	95.34	4.63
05/03/03	14:23:29	0.18	124.68	95.32	4.65
05/03/03	14:23:29	0.18	124.84	95.16	4.81
05/03/03	14:23:29	0.18	124.78	95.22	4.75
05/03/03	14:23:30	0.19	124.95	95.05	4.92
05/03/03	14:23:30	0.19	124.94	95.06	4.91
05/03/03	14:23:30	0.19	124.93	95.07	4.90
05/03/03	14:23:30	0.19	124.83	95.17	4.80
05/03/03	14:23:30	0.19	125.09	94.91	5.06
05/03/03	14:23:30	0.19	125.17	94.83	5.14
05/03/03	14:23:30	0.20	125.09	94.91	5.06
05/03/03	14:23:30	0.20	125.04	94.96	5.01
05/03/03	14:23:30	0.20	125.35	94.65	5.32
05/03/03	14:23:30	0.20	125.27	94.73	5.24
05/03/03	14:23:31	0.20	125.40	94.60	5.37
05/03/03	14:23:31	0.21	125.32	94.68	5.29
05/03/03	14:23:31	0.21	125.33	94.67	5.30
05/03/03	14:23:31	0.21	125.23	94.77	5.20

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/03/03	14:23:31	0.21	125.38	94.62	5.35
05/03/03	14:23:31	0.21	125.51	94.49	5.48
05/03/03	14:23:31	0.21	125.44	94.56	5.41
05/03/03	14:23:31	0.22	125.49	94.51	5.46
05/03/03	14:23:31	0.22	125.58	94.42	5.55
05/03/03	14:23:32	0.22	125.75	94.25	5.72
05/03/03	14:23:32	0.22	125.60	94.40	5.57
05/03/03	14:23:32	0.22	125.81	94.19	5.78
05/03/03	14:23:32	0.22	125.69	94.31	5.66
05/03/03	14:23:32	0.23	125.88	94.12	5.85
05/03/03	14:23:32	0.23	125.95	94.05	5.92
05/03/03	14:23:32	0.23	126.11	93.89	6.08
05/03/03	14:23:32	0.23	126.03	93.97	6.00
05/03/03	14:23:32	0.23	126.01	93.99	5.98
05/03/03	14:23:32	0.23	126.10	93.90	6.07
05/03/03	14:23:33	0.24	126.15	93.85	6.12
05/03/03	14:23:33	0.24	126.16	93.84	6.13
05/03/03	14:23:33	0.24	126.13	93.87	6.10
05/03/03	14:23:33	0.24	126.28	93.72	6.25
05/03/03	14:23:33	0.24	126.21	93.79	6.18
05/03/03	14:23:33	0.25	126.39	93.61	6.36
05/03/03	14:23:33	0.25	126.40	93.60	6.37
05/03/03	14:23:33	0.25	126.45	93.55	6.42
05/03/03	14:23:33	0.25	126.38	93.62	6.35
05/03/03	14:23:34	0.25	126.52	93.48	6.49
05/03/03	14:23:34	0.25	126.59	93.41	6.56
05/03/03	14:23:34	0.26	126.59	93.41	6.56
05/03/03	14:23:34	0.26	126.60	93.40	6.57
05/03/03	14:23:34	0.26	126.71	93.29	6.68
05/03/03	14:23:34	0.26	126.73	93.27	6.70
05/03/03	14:23:34	0.26	126.76	93.24	6.73
05/03/03	14:23:34	0.26	126.79	93.21	6.76
05/03/03	14:23:34	0.27	126.78	93.22	6.75
05/03/03	14:23:34	0.27	126.77	93.23	6.74
05/03/03	14:23:35	0.27	126.83	93.17	6.80
05/03/03	14:23:35	0.27	126.95	93.05	6.92
05/03/03	14:23:35	0.27	126.97	93.03	6.94
05/03/03	14:23:35	0.28	126.99	93.01	6.96
05/03/03	14:23:35	0.28	127.04	92.96	7.01
05/03/03	14:23:35	0.28	127.13	92.87	7.10
05/03/03	14:23:35	0.28	127.11	92.89	7.08
05/03/03	14:23:35	0.28	127.22	92.78	7.19
05/03/03	14:23:35	0.28	127.21	92.79	7.18
05/03/03	14:23:36	0.29	127.29	92.71	7.26
05/03/03	14:23:36	0.29	127.34	92.66	7.31
05/03/03	14:23:36	0.29	127.43	92.57	7.40
05/03/03	14:23:36	0.29	127.43	92.57	7.40
05/03/03	14:23:36	0.29	127.43	92.57	7.40
05/03/03	14:23:36	0.29	127.49	92.51	7.46
05/03/03	14:23:36	0.30	127.54	92.46	7.51
05/03/03	14:23:36	0.30	127.59	92.41	7.56
05/03/03	14:23:36	0.30	127.59	92.41	7.56
05/03/03	14:23:36	0.30	127.67	92.33	7.64
05/03/03	14:23:37	0.30	127.67	92.33	7.64

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/03/03	14:23:37	0.31	127.78	92.22	7.75
05/03/03	14:23:37	0.31	127.80	92.20	7.77
05/03/03	14:23:37	0.31	127.87	92.13	7.84
05/03/03	14:23:37	0.31	127.84	92.16	7.81
05/03/03	14:23:37	0.31	127.93	92.07	7.90
05/03/03	14:23:37	0.31	127.98	92.02	7.95
05/03/03	14:23:37	0.32	128.01	91.99	7.98
05/03/03	14:23:37	0.32	128.05	91.95	8.02
05/03/03	14:23:38	0.32	128.09	91.91	8.06
05/03/03	14:23:38	0.32	128.13	91.87	8.10
05/03/03	14:23:38	0.32	128.14	91.86	8.11
05/03/03	14:23:38	0.32	128.21	91.79	8.18
05/03/03	14:23:38	0.33	128.21	91.79	8.18
05/03/03	14:23:38	0.33	128.24	91.76	8.21
05/03/03	14:23:38	0.33	128.28	91.72	8.25
05/03/03	14:23:38	0.33	128.37	91.63	8.34
05/03/03	14:23:38	0.33	128.39	91.61	8.36
05/03/03	14:23:38	0.33	128.42	91.58	8.39
05/03/03	14:23:39	0.34	128.47	91.53	8.44
05/03/03	14:23:39	0.34	128.52	91.48	8.49
05/03/03	14:23:39	0.34	128.54	91.46	8.51
05/03/03	14:23:39	0.34	128.61	91.39	8.58
05/03/03	14:23:39	0.34	128.64	91.36	8.61
05/03/03	14:23:39	0.35	128.68	91.32	8.65
05/03/03	14:23:39	0.35	128.70	91.30	8.67
05/03/03	14:23:39	0.35	128.76	91.24	8.73
05/03/03	14:23:39	0.35	128.83	91.17	8.80
05/03/03	14:23:40	0.35	128.83	91.17	8.80
05/03/03	14:23:40	0.35	128.87	91.13	8.84
05/03/03	14:23:40	0.36	128.92	91.08	8.89
05/03/03	14:23:40	0.36	128.96	91.04	8.93
05/03/03	14:23:40	0.36	128.99	91.01	8.96
05/03/03	14:23:40	0.36	129.07	90.93	9.04
05/03/03	14:23:40	0.36	129.09	90.91	9.06
05/03/03	14:23:40	0.36	129.15	90.85	9.12
05/03/03	14:23:40	0.37	129.19	90.81	9.16
05/03/03	14:23:40	0.37	129.25	90.75	9.22
05/03/03	14:23:41	0.37	129.27	90.73	9.24
05/03/03	14:23:41	0.37	129.30	90.70	9.27
05/03/03	14:23:41	0.37	129.35	90.65	9.32
05/03/03	14:23:41	0.38	129.38	90.62	9.35
05/03/03	14:23:42	0.40	130.01	89.99	9.98
05/03/03	14:23:44	0.42	130.38	89.62	10.35
05/03/03	14:23:45	0.44	130.76	89.24	10.73
05/03/03	14:23:46	0.45	131.13	88.87	11.10
05/03/03	14:23:47	0.47	131.51	88.49	11.48
05/03/03	14:23:48	0.49	131.88	88.12	11.85
05/03/03	14:23:49	0.50	132.24	87.76	12.21
05/03/03	14:23:50	0.52	132.60	87.40	12.57
05/03/03	14:23:51	0.54	132.97	87.03	12.94
05/03/03	14:23:52	0.55	133.33	86.67	13.30
05/03/03	14:23:53	0.57	133.71	86.29	13.68
05/03/03	14:23:54	0.59	134.08	85.92	14.05
05/03/03	14:23:55	0.60	134.44	85.56	14.41

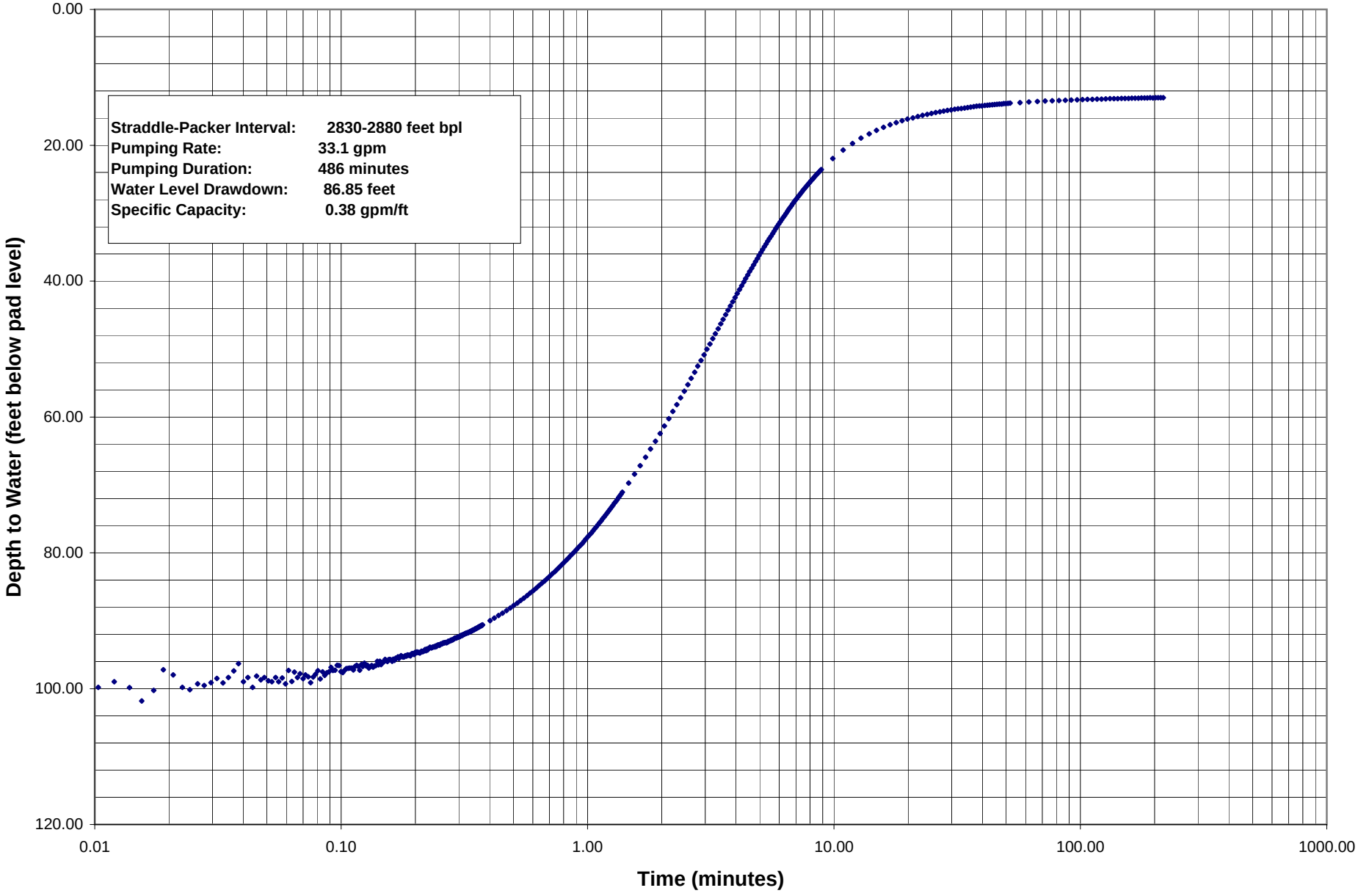
Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/03/03	14:23:56	0.62	134.79	85.21	14.76
05/03/03	14:23:57	0.64	135.15	84.85	15.12
05/03/03	14:23:58	0.65	135.51	84.49	15.48
05/03/03	14:23:59	0.67	135.84	84.16	15.81
05/03/03	14:24:00	0.69	136.19	83.81	16.16
05/03/03	14:24:01	0.70	136.53	83.47	16.50
05/03/03	14:24:02	0.72	136.88	83.12	16.85
05/03/03	14:24:03	0.74	137.21	82.79	17.18
05/03/03	14:24:04	0.75	137.55	82.45	17.52
05/03/03	14:24:05	0.77	137.89	82.11	17.86
05/03/03	14:24:06	0.79	138.22	81.78	18.19
05/03/03	14:24:07	0.80	138.55	81.45	18.52
05/03/03	14:24:08	0.82	138.88	81.12	18.85
05/03/03	14:24:09	0.84	139.21	80.79	19.18
05/03/03	14:24:10	0.85	139.54	80.46	19.51
05/03/03	14:24:11	0.87	139.86	80.14	19.83
05/03/03	14:24:12	0.89	140.19	79.81	20.16
05/03/03	14:24:13	0.90	140.48	79.52	20.45
05/03/03	14:24:14	0.92	140.78	79.22	20.75
05/03/03	14:24:15	0.94	141.10	78.90	21.07
05/03/03	14:24:16	0.95	141.39	78.61	21.36
05/03/03	14:24:17	0.97	141.71	78.29	21.68
05/03/03	14:24:18	0.99	142.04	77.96	22.01
05/03/03	14:24:19	1.00	142.35	77.65	22.32
05/03/03	14:24:20	1.02	142.63	77.37	22.60
05/03/03	14:24:21	1.04	142.92	77.08	22.89
05/03/03	14:24:22	1.05	143.21	76.79	23.18
05/03/03	14:24:23	1.07	143.52	76.48	23.49
05/03/03	14:24:24	1.09	143.82	76.18	23.79
05/03/03	14:24:25	1.10	144.12	75.88	24.09
05/03/03	14:24:26	1.12	144.41	75.59	24.38
05/03/03	14:24:27	1.14	144.71	75.29	24.68
05/03/03	14:24:28	1.15	145.00	75.00	24.97
05/03/03	14:24:29	1.17	145.29	74.71	25.26
05/03/03	14:24:30	1.19	145.57	74.43	25.54
05/03/03	14:24:31	1.20	145.86	74.14	25.83
05/03/03	14:24:32	1.22	146.14	73.86	26.11
05/03/03	14:24:33	1.24	146.43	73.57	26.40
05/03/03	14:24:34	1.25	146.71	73.29	26.68
05/03/03	14:24:35	1.27	147.00	73.00	26.97
05/03/03	14:24:36	1.29	147.28	72.72	27.25
05/03/03	14:24:37	1.30	147.55	72.45	27.52
05/03/03	14:24:38	1.32	147.83	72.17	27.80
05/03/03	14:24:39	1.34	148.11	71.89	28.08
05/03/03	14:24:40	1.35	148.38	71.62	28.35
05/03/03	14:24:41	1.37	148.65	71.35	28.62
05/03/03	14:24:42	1.39	148.92	71.08	28.89
05/03/03	14:24:46	1.47	150.27	69.73	30.24
05/03/03	14:24:51	1.55	151.57	68.43	31.54
05/03/03	14:24:57	1.64	152.83	67.17	32.80
05/03/03	14:25:02	1.72	154.06	65.94	34.03
05/03/03	14:25:07	1.80	155.26	64.74	35.23
05/03/03	14:25:12	1.89	156.43	63.57	36.40
05/03/03	14:25:17	1.97	157.57	62.43	37.54

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/03/03	14:25:22	2.05	158.67	61.33	38.64
05/03/03	14:25:27	2.14	159.75	60.25	39.72
05/03/03	14:25:32	2.22	160.80	59.20	40.77
05/03/03	14:25:37	2.30	161.82	58.18	41.79
05/03/03	14:25:42	2.39	162.82	57.18	42.79
05/03/03	14:25:47	2.47	163.79	56.21	43.76
05/03/03	14:25:52	2.55	164.75	55.25	44.72
05/03/03	14:25:57	2.64	165.70	54.30	45.67
05/03/03	14:26:02	2.72	166.60	53.40	46.57
05/03/03	14:26:07	2.80	167.47	52.53	47.44
05/03/03	14:26:12	2.89	168.33	51.67	48.30
05/03/03	14:26:17	2.97	169.16	50.84	49.13
05/03/03	14:26:22	3.05	169.97	50.03	49.94
05/03/03	14:26:27	3.14	170.75	49.25	50.72
05/03/03	14:26:32	3.22	171.51	48.49	51.48
05/03/03	14:26:37	3.30	172.26	47.74	52.23
05/03/03	14:26:42	3.39	172.98	47.02	52.95
05/03/03	14:26:47	3.47	173.69	46.31	53.66
05/03/03	14:26:52	3.55	174.38	45.62	54.35
05/03/03	14:26:57	3.64	175.05	44.95	55.02
05/03/03	14:27:02	3.72	175.70	44.30	55.67
05/03/03	14:27:07	3.80	176.35	43.65	56.32
05/03/03	14:27:12	3.89	176.97	43.03	56.94
05/03/03	14:27:17	3.97	177.57	42.43	57.54
05/03/03	14:27:22	4.05	178.16	41.84	58.13
05/03/03	14:27:27	4.14	178.74	41.26	58.71
05/03/03	14:27:32	4.22	179.30	40.70	59.27
05/03/03	14:27:37	4.30	179.86	40.14	59.83
05/03/03	14:27:42	4.39	180.39	39.61	60.36
05/03/03	14:27:47	4.47	180.91	39.09	60.88
05/03/03	14:27:52	4.55	181.42	38.58	61.39
05/03/03	14:27:57	4.64	181.92	38.08	61.89
05/03/03	14:28:02	4.72	182.40	37.60	62.37
05/03/03	14:28:07	4.80	182.88	37.12	62.85
05/03/03	14:28:12	4.89	183.33	36.67	63.30
05/03/03	14:28:17	4.97	183.78	36.22	63.75
05/03/03	14:28:22	5.05	184.22	35.78	64.19
05/03/03	14:28:27	5.14	184.65	35.35	64.62
05/03/03	14:28:32	5.22	185.07	34.93	65.04
05/03/03	14:28:37	5.30	185.48	34.52	65.45
05/03/03	14:28:42	5.39	185.88	34.12	65.85
05/03/03	14:28:47	5.47	186.27	33.73	66.24
05/03/03	14:28:52	5.55	186.62	33.38	66.59
05/03/03	14:28:57	5.64	186.99	33.01	66.96
05/03/03	14:29:02	5.72	187.33	32.67	67.30
05/03/03	14:29:07	5.80	187.71	32.29	67.68
05/03/03	14:29:12	5.89	188.06	31.94	68.03
05/03/03	14:29:17	5.97	188.41	31.59	68.38
05/03/03	14:29:22	6.05	188.71	31.29	68.68
05/03/03	14:29:27	6.14	189.04	30.96	69.01
05/03/03	14:29:32	6.22	189.36	30.64	69.33
05/03/03	14:29:37	6.30	189.66	30.34	69.63
05/03/03	14:29:42	6.39	189.96	30.04	69.93
05/03/03	14:29:47	6.47	190.26	29.74	70.23

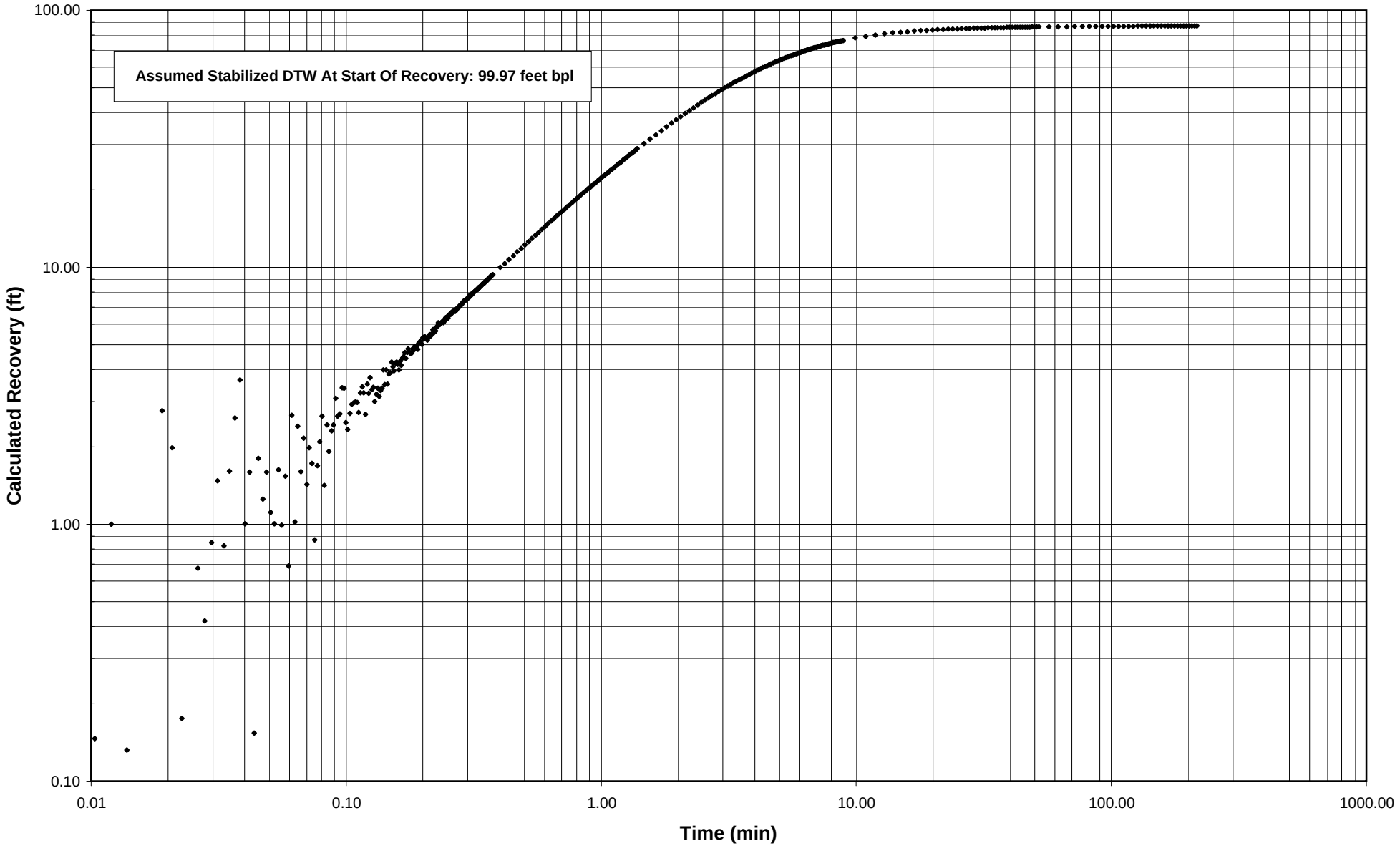
Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/03/03	14:29:52	6.55	190.55	29.45	70.52
05/03/03	14:29:57	6.64	190.83	29.17	70.80
05/03/03	14:30:02	6.72	191.10	28.90	71.07
05/03/03	14:30:07	6.80	191.37	28.63	71.34
05/03/03	14:30:12	6.89	191.64	28.36	71.61
05/03/03	14:30:17	6.97	191.88	28.12	71.85
05/03/03	14:30:22	7.05	192.14	27.86	72.11
05/03/03	14:30:27	7.14	192.38	27.62	72.35
05/03/03	14:30:32	7.22	192.62	27.38	72.59
05/03/03	14:30:37	7.30	192.85	27.15	72.82
05/03/03	14:30:42	7.39	193.08	26.92	73.05
05/03/03	14:30:47	7.47	193.30	26.70	73.27
05/03/03	14:30:52	7.55	193.52	26.48	73.49
05/03/03	14:30:57	7.64	193.73	26.27	73.70
05/03/03	14:31:02	7.72	193.94	26.06	73.91
05/03/03	14:31:07	7.80	194.14	25.86	74.11
05/03/03	14:31:12	7.89	194.35	25.65	74.32
05/03/03	14:31:17	7.97	194.53	25.47	74.50
05/03/03	14:31:22	8.05	194.73	25.27	74.70
05/03/03	14:31:27	8.14	194.91	25.09	74.88
05/03/03	14:31:32	8.22	195.09	24.91	75.06
05/03/03	14:31:37	8.30	195.27	24.73	75.24
05/03/03	14:31:42	8.39	195.44	24.56	75.41
05/03/03	14:31:47	8.47	195.62	24.38	75.59
05/03/03	14:31:52	8.55	195.78	24.22	75.75
05/03/03	14:31:57	8.64	195.95	24.05	75.92
05/03/03	14:32:02	8.72	196.11	23.89	76.08
05/03/03	14:32:07	8.80	196.27	23.73	76.24
05/03/03	14:32:12	8.89	196.43	23.57	76.40
05/03/03	14:33:12	9.89	198.04	21.96	78.01
05/03/03	14:34:12	10.89	199.29	20.71	79.26
05/03/03	14:35:11	11.89	200.25	19.75	80.22
05/03/03	14:36:11	12.89	201.04	18.96	81.01
05/03/03	14:37:11	13.89	201.69	18.31	81.66
05/03/03	14:38:11	14.89	202.20	17.80	82.17
05/03/03	14:39:11	15.89	202.64	17.36	82.61
05/03/03	14:40:11	16.89	203.02	16.98	82.99
05/03/03	14:41:11	17.89	203.35	16.65	83.32
05/03/03	14:42:11	18.89	203.62	16.38	83.59
05/03/03	14:43:11	19.89	203.85	16.15	83.82
05/03/03	14:44:11	20.89	204.04	15.96	84.01
05/03/03	14:45:11	21.89	204.23	15.77	84.20
05/03/03	14:46:11	22.89	204.41	15.59	84.38
05/03/03	14:47:11	23.89	204.56	15.44	84.53
05/03/03	14:48:11	24.89	204.69	15.31	84.66
05/03/03	14:49:11	25.89	204.81	15.19	84.78
05/03/03	14:50:11	26.89	204.93	15.07	84.90
05/03/03	14:51:11	27.89	205.03	14.97	85.00
05/03/03	14:52:11	28.89	205.12	14.88	85.09
05/03/03	14:53:11	29.89	205.21	14.79	85.18
05/03/03	14:54:11	30.89	205.29	14.71	85.26
05/03/03	14:55:11	31.89	205.36	14.64	85.33
05/03/03	14:56:11	32.89	205.42	14.58	85.39
05/03/03	14:57:11	33.89	205.49	14.51	85.46

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/03/03	14:58:11	34.89	205.55	14.45	85.52
05/03/03	14:59:11	35.89	205.63	14.37	85.60
05/03/03	15:00:11	36.89	205.69	14.31	85.66
05/03/03	15:01:11	37.89	205.74	14.26	85.71
05/03/03	15:02:11	38.89	205.78	14.22	85.75
05/03/03	15:03:11	39.89	205.81	14.19	85.78
05/03/03	15:04:11	40.89	205.85	14.15	85.82
05/03/03	15:05:11	41.89	205.89	14.11	85.86
05/03/03	15:06:11	42.89	205.93	14.07	85.90
05/03/03	15:07:11	43.89	205.95	14.05	85.92
05/03/03	15:08:11	44.89	205.99	14.01	85.96
05/03/03	15:09:11	45.89	206.03	13.97	86.00
05/03/03	15:10:11	46.89	206.05	13.95	86.02
05/03/03	15:11:11	47.89	206.08	13.92	86.05
05/03/03	15:12:11	48.89	206.13	13.87	86.10
05/03/03	15:13:11	49.89	206.15	13.85	86.12
05/03/03	15:14:11	50.89	206.17	13.83	86.14
05/03/03	15:15:11	51.89	206.20	13.80	86.17
05/03/03	15:20:11	56.89	206.29	13.71	86.26
05/03/03	15:25:12	61.89	206.38	13.62	86.35
05/03/03	15:30:12	66.89	206.44	13.56	86.41
05/03/03	15:35:11	71.89	206.51	13.49	86.48
05/03/03	15:40:12	76.89	206.55	13.45	86.52
05/03/03	15:45:12	81.89	206.59	13.41	86.56
05/03/03	15:50:12	86.89	206.64	13.36	86.61
05/03/03	15:55:12	91.89	206.66	13.34	86.63
05/03/03	16:00:12	96.89	206.69	13.31	86.66
05/03/03	16:05:12	101.89	206.72	13.28	86.69
05/03/03	16:10:12	106.89	206.77	13.23	86.74
05/03/03	16:15:12	111.89	206.77	13.23	86.74
05/03/03	16:20:12	116.89	206.80	13.20	86.77
05/03/03	16:25:12	121.89	206.81	13.19	86.78
05/03/03	16:30:12	126.89	206.84	13.16	86.81
05/03/03	16:35:12	131.89	206.85	13.15	86.82
05/03/03	16:40:12	136.89	206.87	13.13	86.84
05/03/03	16:45:12	141.89	206.88	13.12	86.85
05/03/03	16:50:12	146.89	206.90	13.10	86.87
05/03/03	16:55:12	151.89	206.90	13.10	86.87
05/03/03	17:00:12	156.89	206.91	13.09	86.88
05/03/03	17:05:12	161.89	206.93	13.07	86.90
05/03/03	17:10:12	166.89	206.93	13.07	86.90
05/03/03	17:15:12	171.89	206.93	13.07	86.90
05/03/03	17:20:12	176.89	206.96	13.04	86.93
05/03/03	17:25:12	181.89	206.95	13.05	86.92
05/03/03	17:30:12	186.89	206.96	13.04	86.93
05/03/03	17:35:12	191.89	206.98	13.02	86.95
05/03/03	17:40:12	196.89	206.97	13.03	86.94
05/03/03	17:45:12	201.89	206.98	13.02	86.95
05/03/03	17:50:12	206.89	207.00	13.00	86.97
05/03/03	17:55:12	211.89	207.00	13.00	86.97
05/03/03	18:00:12	216.89	207.00	13.00	86.97

Straddle-Packer Test No. 7 - Recovery
City of Port St. Lucie, Westport Injection Well System
Injection Well No. 1



Injection Well No. 1, Port St. Lucie
Port St. Lucie, Westport Injection Well System
Straddle-Packer Test No. 7 - Recovery



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Straddle-Packer Test No. 8 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Injection Well No. 1

Packer Depth Interval:	2636-2653.7 feet bpl	**Static Water Level:**	6.41 feet bpl
Start of Logging:	4/27/03 9:56:15	**Start of Pumping:**	4/27/03 9:56:30
End of Logging:	4/27/03 17:52:20	**End of Pumping:**	4/27/03 17:59:23
Pumping Rate:	6.6 gpm	**Pumping Duration:**	483 minutes

Data Collected Using Aquastar Data Logger (ARCADIS)

Note: Bold number indicates assumed stabilized depth to water at the end of pumping (198.72 feet bpl)

Double line indicates start of pump

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:56:15		208.59	6.41	0.00
04/27/03	9:56:15		208.58	6.42	0.01
04/27/03	9:56:15		208.58	6.42	0.01
04/27/03	9:56:15		208.59	6.41	0.00
04/27/03	9:56:15		208.59	6.41	0.00
04/27/03	9:56:15		208.58	6.42	0.01
04/27/03	9:56:15		208.57	6.43	0.02
04/27/03	9:56:16		208.59	6.41	0.00
04/27/03	9:56:16		208.59	6.41	0.00
04/27/03	9:56:16		208.59	6.41	0.00
04/27/03	9:56:16		208.59	6.41	0.00
04/27/03	9:56:16		208.59	6.41	0.00
04/27/03	9:56:16		208.59	6.41	0.00
04/27/03	9:56:16		208.59	6.41	0.00
04/27/03	9:56:16		208.59	6.41	0.00
04/27/03	9:56:16		208.59	6.41	0.00
04/27/03	9:56:16		208.59	6.41	0.00
04/27/03	9:56:17		208.58	6.42	0.01
04/27/03	9:56:17		208.59	6.41	0.00
04/27/03	9:56:17		208.59	6.41	0.00
04/27/03	9:56:17		208.59	6.41	0.00
04/27/03	9:56:17		208.58	6.42	0.01
04/27/03	9:56:17		208.59	6.41	0.00
04/27/03	9:56:17		208.57	6.43	0.02
04/27/03	9:56:17		208.59	6.41	0.00
04/27/03	9:56:17		208.58	6.42	0.01
04/27/03	9:56:18		208.59	6.41	0.00
04/27/03	9:56:18		208.58	6.42	0.01
04/27/03	9:56:18		208.59	6.41	0.00
04/27/03	9:56:18		208.59	6.41	0.00
04/27/03	9:56:18		208.58	6.42	0.01
04/27/03	9:56:18		208.58	6.42	0.01
04/27/03	9:56:18		208.59	6.41	0.00
04/27/03	9:56:18		208.59	6.41	0.00
04/27/03	9:56:18		208.59	6.41	0.00
04/27/03	9:56:18		208.58	6.42	0.01
04/27/03	9:56:19		208.58	6.42	0.01
04/27/03	9:56:19		208.58	6.42	0.01
04/27/03	9:56:19		208.59	6.41	0.00

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:56:19		208.58	6.42	0.01
04/27/03	9:56:19		208.58	6.42	0.01
04/27/03	9:56:19		208.58	6.42	0.01
04/27/03	9:56:19		208.59	6.41	0.00
04/27/03	9:56:19		208.59	6.41	0.00
04/27/03	9:56:19		208.59	6.41	0.00
04/27/03	9:56:20		208.57	6.43	0.02
04/27/03	9:56:20		208.59	6.41	0.00
04/27/03	9:56:20		208.58	6.42	0.01
04/27/03	9:56:20		208.59	6.41	0.00
04/27/03	9:56:20		208.59	6.41	0.00
04/27/03	9:56:20		208.58	6.42	0.01
04/27/03	9:56:20		208.58	6.42	0.01
04/27/03	9:56:20		208.59	6.41	0.00
04/27/03	9:56:20		208.58	6.42	0.01
04/27/03	9:56:20		208.59	6.41	0.00
04/27/03	9:56:21		208.59	6.41	0.00
04/27/03	9:56:21		208.57	6.43	0.02
04/27/03	9:56:21		208.59	6.41	0.00
04/27/03	9:56:21		208.58	6.42	0.01
04/27/03	9:56:21		208.59	6.41	0.00
04/27/03	9:56:21		208.58	6.42	0.01
04/27/03	9:56:21		208.59	6.41	0.00
04/27/03	9:56:21		208.58	6.42	0.01
04/27/03	9:56:21		208.58	6.42	0.01
04/27/03	9:56:21		208.57	6.43	0.02
04/27/03	9:56:22		208.57	6.43	0.02
04/27/03	9:56:22		208.59	6.41	0.00
04/27/03	9:56:22		208.59	6.41	0.00
04/27/03	9:56:22		208.58	6.42	0.01
04/27/03	9:56:22		208.59	6.41	0.00
04/27/03	9:56:22		208.57	6.43	0.02
04/27/03	9:56:22		208.59	6.41	0.00
04/27/03	9:56:22		208.59	6.41	0.00
04/27/03	9:56:22		208.59	6.41	0.00
04/27/03	9:56:23		208.57	6.43	0.02
04/27/03	9:56:23		208.58	6.42	0.01
04/27/03	9:56:23		208.58	6.42	0.01
04/27/03	9:56:23		208.59	6.41	0.00
04/27/03	9:56:23		208.59	6.41	0.00
04/27/03	9:56:23		208.58	6.42	0.01
04/27/03	9:56:23		208.59	6.41	0.00
04/27/03	9:56:23		208.59	6.41	0.00
04/27/03	9:56:23		208.58	6.42	0.01
04/27/03	9:56:23		208.58	6.42	0.01
04/27/03	9:56:24		208.59	6.41	0.00
04/27/03	9:56:24		208.58	6.42	0.01
04/27/03	9:56:24		208.58	6.42	0.01
04/27/03	9:56:24		208.58	6.42	0.01
04/27/03	9:56:24		208.59	6.41	0.00

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:56:24		208.59	6.41	0.00
04/27/03	9:56:24		208.59	6.41	0.00
04/27/03	9:56:24		208.58	6.42	0.01
04/27/03	9:56:24		208.57	6.43	0.02
04/27/03	9:56:25		208.59	6.41	0.00
04/27/03	9:56:25		208.59	6.41	0.00
04/27/03	9:56:25		208.58	6.42	0.01
04/27/03	9:56:25		208.59	6.41	0.00
04/27/03	9:56:25		208.58	6.42	0.01
04/27/03	9:56:25		208.59	6.41	0.00
04/27/03	9:56:25		208.58	6.42	0.01
04/27/03	9:56:25		208.58	6.42	0.01
04/27/03	9:56:25		208.58	6.42	0.01
04/27/03	9:56:25		208.58	6.42	0.01
04/27/03	9:56:26		208.58	6.42	0.01
04/27/03	9:56:26		208.59	6.41	0.00
04/27/03	9:56:26		208.59	6.41	0.00
04/27/03	9:56:26		208.59	6.41	0.00
04/27/03	9:56:26		208.59	6.41	0.00
04/27/03	9:56:26		208.59	6.41	0.00
04/27/03	9:56:26		208.58	6.42	0.01
04/27/03	9:56:26		208.59	6.41	0.00
04/27/03	9:56:26		208.59	6.41	0.00
04/27/03	9:56:26		208.59	6.41	0.00
04/27/03	9:56:27		208.59	6.41	0.00
04/27/03	9:56:27		208.59	6.41	0.00
04/27/03	9:56:27		208.59	6.41	0.00
04/27/03	9:56:27		208.59	6.41	0.00
04/27/03	9:56:27		208.59	6.41	0.00
04/27/03	9:56:27		208.59	6.41	0.00
04/27/03	9:56:27		208.59	6.41	0.00
04/27/03	9:56:27		208.58	6.42	0.01
04/27/03	9:56:27		208.59	6.41	0.00
04/27/03	9:56:28		208.59	6.41	0.00
04/27/03	9:56:28		208.59	6.41	0.00
04/27/03	9:56:28		208.59	6.41	0.00
04/27/03	9:56:28		208.57	6.43	0.02
04/27/03	9:56:28		208.59	6.41	0.00
04/27/03	9:56:28		208.59	6.41	0.00
04/27/03	9:56:28		208.57	6.43	0.02
04/27/03	9:56:28		208.58	6.42	0.01
04/27/03	9:56:28		208.58	6.42	0.01
04/27/03	9:56:28		208.59	6.41	0.00
04/27/03	9:56:29		208.59	6.41	0.00
04/27/03	9:56:29		208.58	6.42	0.01
04/27/03	9:56:29		208.59	6.41	0.00
04/27/03	9:56:29		208.58	6.42	0.01
04/27/03	9:56:29		208.59	6.41	0.00
04/27/03	9:56:29		208.58	6.42	0.01
04/27/03	9:56:29		208.59	6.41	0.00

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:56:29		208.58	6.42	0.01
04/27/03	9:56:29		208.59	6.41	0.00
04/27/03	9:56:30		208.59	6.41	0.00
04/27/03	9:56:30		208.58	6.42	0.01
04/27/03	9:56:30	0.00	208.59	6.41	0.00
04/27/03	9:56:30	0.00	203.97	11.03	4.62
04/27/03	9:56:30	0.00	195.81	19.19	12.78
04/27/03	9:56:30	0.01	227.07		
04/27/03	9:56:30	0.01	209.32	5.68	
04/27/03	9:56:30	0.01	208.29	6.71	0.30
04/27/03	9:56:30	0.01	208.55	6.45	0.04
04/27/03	9:56:30	0.01	208.15	6.85	0.44
04/27/03	9:56:31	0.01	209.07	5.93	
04/27/03	9:56:31	0.02	209.49	5.51	
04/27/03	9:56:31	0.02	209.18	5.82	
04/27/03	9:56:31	0.02	208.73	6.27	
04/27/03	9:56:31	0.02	200.68	14.32	7.91
04/27/03	9:56:31	0.02	222.26		
04/27/03	9:56:31	0.02	205.75	9.25	2.84
04/27/03	9:56:31	0.03	199.24	15.76	9.35
04/27/03	9:56:31	0.03	192.86	22.14	15.73
04/27/03	9:56:32	0.03	200.57	14.43	8.02
04/27/03	9:56:32	0.03	207.54	7.46	1.05
04/27/03	9:56:32	0.03	210.02	4.98	
04/27/03	9:56:32	0.03	210.41	4.59	
04/27/03	9:56:32	0.04	210.19	4.81	
04/27/03	9:56:32	0.04	208.69	6.31	
04/27/03	9:56:32	0.04	213.76	1.24	
04/27/03	9:56:32	0.04	209.89	5.11	
04/27/03	9:56:32	0.04	203.95	11.05	4.64
04/27/03	9:56:32	0.05	196.58	18.42	12.01
04/27/03	9:56:33	0.05	219.75		
04/27/03	9:56:33	0.05	214.46	0.54	
04/27/03	9:56:33	0.05	211.29	3.71	
04/27/03	9:56:33	0.05	209.14	5.86	
04/27/03	9:56:33	0.05	208.81	6.19	
04/27/03	9:56:33	0.06	208.65	6.35	
04/27/03	9:56:33	0.06	208.98	6.02	
04/27/03	9:56:33	0.06	206.55	8.45	2.04
04/27/03	9:56:33	0.06	203.19	11.81	5.40
04/27/03	9:56:33	0.06	213.52	1.48	
04/27/03	9:56:34	0.06	220.62		
04/27/03	9:56:34	0.07	200.67	14.33	7.92
04/27/03	9:56:34	0.07	203.89	11.11	4.70
04/27/03	9:56:34	0.07	205.79	9.21	2.80
04/27/03	9:56:34	0.07	207.58	7.42	1.01
04/27/03	9:56:34	0.07	207.40	7.60	1.19
04/27/03	9:56:34	0.07	206.91	8.09	1.68
04/27/03	9:56:34	0.08	207.13	7.87	1.46
04/27/03	9:56:34	0.08	208.43	6.57	0.16

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:56:35	0.08	211.66	3.34	
04/27/03	9:56:35	0.08	204.80	10.20	3.79
04/27/03	9:56:35	0.08	198.56	16.44	10.03
04/27/03	9:56:35	0.09	211.39	3.61	
04/27/03	9:56:35	0.09	210.52	4.48	
04/27/03	9:56:35	0.09	209.68	5.32	
04/27/03	9:56:35	0.09	208.05	6.95	0.54
04/27/03	9:56:35	0.09	207.89	7.11	0.70
04/27/03	9:56:35	0.09	208.67	6.33	
04/27/03	9:56:35	0.10	207.59	7.41	1.00
04/27/03	9:56:36	0.10	207.57	7.43	1.02
04/27/03	9:56:36	0.10	204.64	10.36	3.95
04/27/03	9:56:36	0.10	210.04	4.96	
04/27/03	9:56:36	0.10	212.91	2.09	
04/27/03	9:56:36	0.10	206.65	8.35	1.94
04/27/03	9:56:36	0.11	205.63	9.37	2.96
04/27/03	9:56:36	0.11	206.07	8.93	2.52
04/27/03	9:56:36	0.11	207.16	7.84	1.43
04/27/03	9:56:36	0.11	207.38	7.62	1.21
04/27/03	9:56:37	0.11	206.81	8.19	1.78
04/27/03	9:56:37	0.12	207.62	7.38	0.97
04/27/03	9:56:37	0.12	207.36	7.64	1.23
04/27/03	9:56:37	0.12	208.78	6.22	
04/27/03	9:56:37	0.12	205.72	9.28	2.87
04/27/03	9:56:37	0.12	205.29	9.71	3.30
04/27/03	9:56:37	0.12	206.54	8.46	2.05
04/27/03	9:56:37	0.13	208.28	6.72	0.31
04/27/03	9:56:37	0.13	208.21	6.79	0.38
04/27/03	9:56:37	0.13	207.86	7.14	0.73
04/27/03	9:56:38	0.13	207.32	7.68	1.27
04/27/03	9:56:38	0.13	207.52	7.48	1.07
04/27/03	9:56:38	0.13	207.27	7.73	1.32
04/27/03	9:56:38	0.14	207.37	7.63	1.22
04/27/03	9:56:38	0.14	206.76	8.24	1.83
04/27/03	9:56:38	0.14	208.18	6.82	0.41
04/27/03	9:56:38	0.14	207.43	7.57	1.16
04/27/03	9:56:38	0.14	208.62	6.38	
04/27/03	9:56:38	0.14	206.95	8.05	1.64
04/27/03	9:56:39	0.15	206.76	8.24	1.83
04/27/03	9:56:39	0.15	206.56	8.44	2.03
04/27/03	9:56:39	0.15	207.18	7.82	1.41
04/27/03	9:56:39	0.15	207.19	7.81	1.40
04/27/03	9:56:39	0.15	206.88	8.12	1.71
04/27/03	9:56:39	0.16	207.02	7.98	1.57
04/27/03	9:56:39	0.16	207.03	7.97	1.56
04/27/03	9:56:39	0.16	206.78	8.22	1.81
04/27/03	9:56:39	0.16	207.42	7.58	1.17
04/27/03	9:56:39	0.16	205.71	9.29	2.88
04/27/03	9:56:40	0.16	206.86	8.14	1.73
04/27/03	9:56:40	0.17	207.12	7.88	1.47

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:56:40	0.17	207.54	7.46	1.05
04/27/03	9:56:40	0.17	206.94	8.06	1.65
04/27/03	9:56:40	0.17	206.83	8.17	1.76
04/27/03	9:56:40	0.17	207.26	7.74	1.33
04/27/03	9:56:40	0.17	207.03	7.97	1.56
04/27/03	9:56:40	0.18	207.11	7.89	1.48
04/27/03	9:56:40	0.18	206.77	8.23	1.82
04/27/03	9:56:41	0.18	206.57	8.43	2.02
04/27/03	9:56:41	0.18	207.76	7.24	0.83
04/27/03	9:56:41	0.18	207.06	7.94	1.53
04/27/03	9:56:41	0.19	206.78	8.22	1.81
04/27/03	9:56:41	0.19	206.50	8.50	2.09
04/27/03	9:56:41	0.19	206.80	8.20	1.79
04/27/03	9:56:41	0.19	206.90	8.10	1.69
04/27/03	9:56:41	0.19	206.58	8.42	2.01
04/27/03	9:56:41	0.19	206.67	8.33	1.92
04/27/03	9:56:41	0.20	206.59	8.41	2.00
04/27/03	9:56:42	0.20	207.04	7.96	1.55
04/27/03	9:56:42	0.20	206.75	8.25	1.84
04/27/03	9:56:42	0.20	206.16	8.84	2.43
04/27/03	9:56:42	0.20	206.47	8.53	2.12
04/27/03	9:56:42	0.20	206.66	8.34	1.93
04/27/03	9:56:42	0.21	206.83	8.17	1.76
04/27/03	9:56:42	0.21	206.69	8.31	1.90
04/27/03	9:56:42	0.21	206.56	8.44	2.03
04/27/03	9:56:42	0.21	206.69	8.31	1.90
04/27/03	9:56:43	0.21	206.72	8.28	1.87
04/27/03	9:56:43	0.22	206.67	8.33	1.92
04/27/03	9:56:43	0.22	206.23	8.77	2.36
04/27/03	9:56:43	0.22	206.67	8.33	1.92
04/27/03	9:56:43	0.22	206.82	8.18	1.77
04/27/03	9:56:43	0.22	206.67	8.33	1.92
04/27/03	9:56:43	0.22	206.53	8.47	2.06
04/27/03	9:56:43	0.23	206.46	8.54	2.13
04/27/03	9:56:43	0.23	206.37	8.63	2.22
04/27/03	9:56:43	0.23	206.47	8.53	2.12
04/27/03	9:56:44	0.23	206.49	8.51	2.10
04/27/03	9:56:44	0.23	206.36	8.64	2.23
04/27/03	9:56:44	0.23	206.35	8.65	2.24
04/27/03	9:56:44	0.24	206.60	8.40	1.99
04/27/03	9:56:44	0.24	206.23	8.77	2.36
04/27/03	9:56:44	0.24	206.20	8.80	2.39
04/27/03	9:56:44	0.24	206.21	8.79	2.38
04/27/03	9:56:44	0.24	206.31	8.69	2.28
04/27/03	9:56:44	0.24	206.33	8.67	2.26
04/27/03	9:56:45	0.25	206.36	8.64	2.23
04/27/03	9:56:45	0.25	206.30	8.70	2.29
04/27/03	9:56:45	0.25	206.25	8.75	2.34
04/27/03	9:56:45	0.25	206.33	8.67	2.26
04/27/03	9:56:45	0.25	206.30	8.70	2.29

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:56:45	0.26	206.06	8.94	2.53
04/27/03	9:56:45	0.26	206.33	8.67	2.26
04/27/03	9:56:45	0.26	206.28	8.72	2.31
04/27/03	9:56:45	0.26	206.29	8.71	2.30
04/27/03	9:56:45	0.26	206.19	8.81	2.40
04/27/03	9:56:46	0.26	206.21	8.79	2.38
04/27/03	9:56:46	0.27	206.12	8.88	2.47
04/27/03	9:56:46	0.27	206.11	8.89	2.48
04/27/03	9:56:46	0.27	206.16	8.84	2.43
04/27/03	9:56:46	0.27	206.04	8.96	2.55
04/27/03	9:56:46	0.27	206.04	8.96	2.55
04/27/03	9:56:46	0.27	206.12	8.88	2.47
04/27/03	9:56:46	0.28	205.98	9.02	2.61
04/27/03	9:56:46	0.28	206.07	8.93	2.52
04/27/03	9:56:47	0.28	206.02	8.98	2.57
04/27/03	9:56:47	0.28	206.02	8.98	2.57
04/27/03	9:56:47	0.28	205.93	9.07	2.66
04/27/03	9:56:47	0.29	205.98	9.02	2.61
04/27/03	9:56:47	0.29	206.03	8.97	2.56
04/27/03	9:56:47	0.29	205.91	9.09	2.68
04/27/03	9:56:47	0.29	205.97	9.03	2.62
04/27/03	9:56:47	0.29	205.90	9.10	2.69
04/27/03	9:56:47	0.29	205.89	9.11	2.70
04/27/03	9:56:47	0.30	205.97	9.03	2.62
04/27/03	9:56:48	0.30	205.87	9.13	2.72
04/27/03	9:56:48	0.30	205.86	9.14	2.73
04/27/03	9:56:48	0.30	205.86	9.14	2.73
04/27/03	9:56:48	0.30	205.89	9.11	2.70
04/27/03	9:56:48	0.30	205.81	9.19	2.78
04/27/03	9:56:48	0.31	205.79	9.21	2.80
04/27/03	9:56:48	0.31	205.86	9.14	2.73
04/27/03	9:56:48	0.31	205.76	9.24	2.83
04/27/03	9:56:48	0.31	205.72	9.28	2.87
04/27/03	9:56:49	0.31	205.73	9.27	2.86
04/27/03	9:56:49	0.32	205.73	9.27	2.86
04/27/03	9:56:49	0.32	205.75	9.25	2.84
04/27/03	9:56:49	0.32	205.71	9.29	2.88
04/27/03	9:56:49	0.32	205.68	9.32	2.91
04/27/03	9:56:49	0.32	205.60	9.40	2.99
04/27/03	9:56:49	0.32	205.67	9.33	2.92
04/27/03	9:56:49	0.33	205.66	9.34	2.93
04/27/03	9:56:49	0.33	205.59	9.41	3.00
04/27/03	9:56:49	0.33	205.63	9.37	2.96
04/27/03	9:56:50	0.33	205.62	9.38	2.97
04/27/03	9:56:50	0.33	205.60	9.40	2.99
04/27/03	9:56:50	0.33	205.57	9.43	3.02
04/27/03	9:56:50	0.34	205.52	9.48	3.07
04/27/03	9:56:50	0.34	205.52	9.48	3.07
04/27/03	9:56:50	0.34	205.53	9.47	3.06
04/27/03	9:56:50	0.34	205.55	9.45	3.04

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:56:50	0.34	205.50	9.50	3.09
04/27/03	9:56:50	0.34	205.49	9.51	3.10
04/27/03	9:56:51	0.35	205.47	9.53	3.12
04/27/03	9:56:51	0.35	205.42	9.58	3.17
04/27/03	9:56:51	0.35	205.43	9.57	3.16
04/27/03	9:56:51	0.35	205.43	9.57	3.16
04/27/03	9:56:51	0.35	205.45	9.55	3.14
04/27/03	9:56:51	0.36	205.40	9.60	3.19
04/27/03	9:56:51	0.36	205.37	9.63	3.22
04/27/03	9:56:51	0.36	205.32	9.68	3.27
04/27/03	9:56:51	0.36	205.34	9.66	3.25
04/27/03	9:56:51	0.36	205.34	9.66	3.25
04/27/03	9:56:52	0.36	205.30	9.70	3.29
04/27/03	9:56:52	0.37	205.32	9.68	3.27
04/27/03	9:56:52	0.37	205.31	9.69	3.28
04/27/03	9:56:52	0.37	205.28	9.72	3.31
04/27/03	9:56:52	0.37	205.27	9.73	3.32
04/27/03	9:56:52	0.37	205.22	9.78	3.37
04/27/03	9:56:52	0.37	205.26	9.74	3.33
04/27/03	9:56:52	0.38	205.20	9.80	3.39
04/27/03	9:56:52	0.38	205.24	9.76	3.35
04/27/03	9:56:53	0.38	205.19	9.81	3.40
04/27/03	9:56:53	0.38	205.16	9.84	3.43
04/27/03	9:56:53	0.38	205.19	9.81	3.40
04/27/03	9:56:53	0.39	205.14	9.86	3.45
04/27/03	9:56:53	0.39	205.12	9.88	3.47
04/27/03	9:56:53	0.39	205.08	9.92	3.51
04/27/03	9:56:53	0.39	205.15	9.85	3.44
04/27/03	9:56:53	0.39	205.08	9.92	3.51
04/27/03	9:56:53	0.39	205.01	9.99	3.58
04/27/03	9:56:53	0.40	205.09	9.91	3.50
04/27/03	9:56:54	0.40	205.02	9.98	3.57
04/27/03	9:56:54	0.40	205.02	9.98	3.57
04/27/03	9:56:54	0.40	205.02	9.98	3.57
04/27/03	9:56:54	0.40	204.97	10.03	3.62
04/27/03	9:56:54	0.40	205.02	9.98	3.57
04/27/03	9:56:54	0.41	204.95	10.05	3.64
04/27/03	9:56:54	0.41	205.01	9.99	3.58
04/27/03	9:56:54	0.41	204.90	10.10	3.69
04/27/03	9:56:54	0.41	204.89	10.11	3.70
04/27/03	9:56:55	0.41	204.96	10.04	3.63
04/27/03	9:56:55	0.42	204.85	10.15	3.74
04/27/03	9:56:55	0.42	204.90	10.10	3.69
04/27/03	9:56:55	0.42	204.88	10.12	3.71
04/27/03	9:56:55	0.42	204.88	10.12	3.71
04/27/03	9:56:55	0.42	204.83	10.17	3.76
04/27/03	9:56:55	0.42	204.80	10.20	3.79
04/27/03	9:56:55	0.43	204.80	10.20	3.79
04/27/03	9:56:55	0.43	204.78	10.22	3.81
04/27/03	9:56:55	0.43	204.82	10.18	3.77

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:56:56	0.43	204.81	10.19	3.78
04/27/03	9:56:56	0.43	204.70	10.30	3.89
04/27/03	9:56:56	0.43	204.77	10.23	3.82
04/27/03	9:56:56	0.44	204.68	10.32	3.91
04/27/03	9:56:56	0.44	204.68	10.32	3.91
04/27/03	9:56:56	0.44	204.69	10.31	3.90
04/27/03	9:56:56	0.44	204.68	10.32	3.91
04/27/03	9:56:56	0.44	204.69	10.31	3.90
04/27/03	9:56:56	0.44	204.63	10.37	3.96
04/27/03	9:56:57	0.45	204.59	10.41	4.00
04/27/03	9:56:57	0.45	204.56	10.44	4.03
04/27/03	9:56:57	0.45	204.59	10.41	4.00
04/27/03	9:56:57	0.45	204.64	10.36	3.95
04/27/03	9:56:57	0.45	204.55	10.45	4.04
04/27/03	9:56:57	0.46	204.56	10.44	4.03
04/27/03	9:56:57	0.46	204.55	10.45	4.04
04/27/03	9:56:57	0.46	204.54	10.46	4.05
04/27/03	9:56:57	0.46	204.55	10.45	4.04
04/27/03	9:56:57	0.46	204.48	10.52	4.11
04/27/03	9:56:58	0.46	204.49	10.51	4.10
04/27/03	9:56:58	0.47	204.49	10.51	4.10
04/27/03	9:56:58	0.47	204.44	10.56	4.15
04/27/03	9:56:58	0.47	204.43	10.57	4.16
04/27/03	9:56:58	0.47	204.39	10.61	4.20
04/27/03	9:56:58	0.47	204.46	10.54	4.13
04/27/03	9:56:58	0.47	204.41	10.59	4.18
04/27/03	9:56:58	0.48	204.38	10.62	4.21
04/27/03	9:56:58	0.48	204.38	10.62	4.21
04/27/03	9:56:59	0.48	204.37	10.63	4.22
04/27/03	9:56:59	0.48	204.40	10.60	4.19
04/27/03	9:56:59	0.48	204.35	10.65	4.24
04/27/03	9:56:59	0.49	204.28	10.72	4.31
04/27/03	9:56:59	0.49	204.30	10.70	4.29
04/27/03	9:56:59	0.49	204.24	10.76	4.35
04/27/03	9:56:59	0.49	204.26	10.74	4.33
04/27/03	9:56:59	0.49	204.20	10.80	4.39
04/27/03	9:56:59	0.49	204.26	10.74	4.33
04/27/03	9:56:59	0.50	204.27	10.73	4.32
04/27/03	9:57:00	0.50	204.19	10.81	4.40
04/27/03	9:57:00	0.50	204.19	10.81	4.40
04/27/03	9:57:00	0.50	204.20	10.80	4.39
04/27/03	9:57:00	0.50	204.20	10.80	4.39
04/27/03	9:57:00	0.50	204.20	10.80	4.39
04/27/03	9:57:00	0.51	204.12	10.88	4.47
04/27/03	9:57:00	0.51	204.12	10.88	4.47
04/27/03	9:57:00	0.51	204.12	10.88	4.47
04/27/03	9:57:00	0.51	204.11	10.89	4.48
04/27/03	9:57:01	0.51	204.12	10.88	4.47
04/27/03	9:57:01	0.52	204.06	10.94	4.53
04/27/03	9:57:01	0.52	204.07	10.93	4.52

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:57:01	0.52	204.04	10.96	4.55
04/27/03	9:57:01	0.52	203.98	11.02	4.61
04/27/03	9:57:01	0.52	203.99	11.01	4.60
04/27/03	9:57:01	0.52	204.01	10.99	4.58
04/27/03	9:57:01	0.53	204.00	11.00	4.59
04/27/03	9:57:01	0.53	203.98	11.02	4.61
04/27/03	9:57:01	0.53	203.94	11.06	4.65
04/27/03	9:57:02	0.53	203.95	11.05	4.64
04/27/03	9:57:02	0.53	203.93	11.07	4.66
04/27/03	9:57:02	0.53	203.89	11.11	4.70
04/27/03	9:57:02	0.54	203.83	11.17	4.76
04/27/03	9:57:02	0.54	203.86	11.14	4.73
04/27/03	9:57:02	0.54	203.93	11.07	4.66
04/27/03	9:57:02	0.54	203.84	11.16	4.75
04/27/03	9:57:02	0.54	203.80	11.20	4.79
04/27/03	9:57:02	0.54	203.84	11.16	4.75
04/27/03	9:57:03	0.55	203.83	11.17	4.76
04/27/03	9:57:03	0.55	203.78	11.22	4.81
04/27/03	9:57:03	0.55	203.72	11.28	4.87
04/27/03	9:57:03	0.55	203.77	11.23	4.82
04/27/03	9:57:03	0.55	203.78	11.22	4.81
04/27/03	9:57:03	0.56	203.80	11.20	4.79
04/27/03	9:57:03	0.56	203.78	11.22	4.81
04/27/03	9:57:03	0.56	203.67	11.33	4.92
04/27/03	9:57:03	0.56	203.67	11.33	4.92
04/27/03	9:57:03	0.56	203.70	11.30	4.89
04/27/03	9:57:04	0.56	203.63	11.37	4.96
04/27/03	9:57:04	0.57	203.63	11.37	4.96
04/27/03	9:57:04	0.57	203.67	11.33	4.92
04/27/03	9:57:04	0.57	203.64	11.36	4.95
04/27/03	9:57:04	0.57	203.58	11.42	5.01
04/27/03	9:57:04	0.57	203.58	11.42	5.01
04/27/03	9:57:04	0.57	203.57	11.43	5.02
04/27/03	9:57:04	0.58	203.55	11.45	5.04
04/27/03	9:57:04	0.58	203.55	11.45	5.04
04/27/03	9:57:05	0.58	203.56	11.44	5.03
04/27/03	9:57:05	0.58	203.50	11.50	5.09
04/27/03	9:57:05	0.58	203.52	11.48	5.07
04/27/03	9:57:05	0.59	203.46	11.54	5.13
04/27/03	9:57:05	0.59	203.45	11.55	5.14
04/27/03	9:57:05	0.59	203.47	11.53	5.12
04/27/03	9:57:05	0.59	203.48	11.52	5.11
04/27/03	9:57:05	0.59	203.47	11.53	5.12
04/27/03	9:57:05	0.59	203.43	11.57	5.16
04/27/03	9:57:05	0.60	203.41	11.59	5.18
04/27/03	9:57:06	0.60	203.37	11.63	5.22
04/27/03	9:57:06	0.60	203.40	11.60	5.19
04/27/03	9:57:06	0.60	203.35	11.65	5.24
04/27/03	9:57:06	0.60	203.31	11.69	5.28
04/27/03	9:57:06	0.60	203.34	11.66	5.25

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:57:06	0.61	203.35	11.65	5.24
04/27/03	9:57:06	0.61	203.36	11.64	5.23
04/27/03	9:57:06	0.61	203.29	11.71	5.30
04/27/03	9:57:06	0.61	203.26	11.74	5.33
04/27/03	9:57:07	0.61	203.26	11.74	5.33
04/27/03	9:57:07	0.62	203.23	11.77	5.36
04/27/03	9:57:07	0.62	203.26	11.74	5.33
04/27/03	9:57:07	0.62	203.17	11.83	5.42
04/27/03	9:57:07	0.62	203.21	11.79	5.38
04/27/03	9:57:07	0.62	203.24	11.76	5.35
04/27/03	9:57:07	0.62	203.17	11.83	5.42
04/27/03	9:57:07	0.63	203.17	11.83	5.42
04/27/03	9:57:07	0.63	203.17	11.83	5.42
04/27/03	9:57:07	0.63	203.13	11.87	5.46
04/27/03	9:57:08	0.63	203.10	11.90	5.49
04/27/03	9:57:08	0.63	203.04	11.96	5.55
04/27/03	9:57:08	0.63	203.10	11.90	5.49
04/27/03	9:57:08	0.64	203.08	11.92	5.51
04/27/03	9:57:08	0.64	203.08	11.92	5.51
04/27/03	9:57:08	0.64	203.06	11.94	5.53
04/27/03	9:57:08	0.64	202.98	12.02	5.61
04/27/03	9:57:08	0.64	203.03	11.97	5.56
04/27/03	9:57:08	0.64	203.03	11.97	5.56
04/27/03	9:57:09	0.65	203.00	12.00	5.59
04/27/03	9:57:09	0.65	202.99	12.01	5.60
04/27/03	9:57:09	0.65	202.95	12.05	5.64
04/27/03	9:57:09	0.65	203.00	12.00	5.59
04/27/03	9:57:09	0.65	202.98	12.02	5.61
04/27/03	9:57:09	0.66	202.90	12.10	5.69
04/27/03	9:57:09	0.66	202.90	12.10	5.69
04/27/03	9:57:09	0.66	202.87	12.13	5.72
04/27/03	9:57:09	0.66	202.90	12.10	5.69
04/27/03	9:57:09	0.66	202.90	12.10	5.69
04/27/03	9:57:10	0.66	202.91	12.09	5.68
04/27/03	9:57:10	0.67	202.85	12.15	5.74
04/27/03	9:57:10	0.67	202.74	12.26	5.85
04/27/03	9:57:10	0.67	202.79	12.21	5.80
04/27/03	9:57:10	0.67	202.75	12.25	5.84
04/27/03	9:57:10	0.67	202.73	12.27	5.86
04/27/03	9:57:10	0.67	202.80	12.20	5.79
04/27/03	9:57:10	0.68	202.77	12.23	5.82
04/27/03	9:57:10	0.68	202.74	12.26	5.85
04/27/03	9:57:11	0.68	202.71	12.29	5.88
04/27/03	9:57:11	0.68	202.69	12.31	5.90
04/27/03	9:57:11	0.68	202.67	12.33	5.92
04/27/03	9:57:11	0.69	202.64	12.36	5.95
04/27/03	9:57:11	0.69	202.70	12.30	5.89
04/27/03	9:57:11	0.69	202.67	12.33	5.92
04/27/03	9:57:11	0.69	202.65	12.35	5.94
04/27/03	9:57:11	0.69	202.62	12.38	5.97

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:57:11	0.69	202.62	12.38	5.97
04/27/03	9:57:11	0.70	202.64	12.36	5.95
04/27/03	9:57:12	0.70	202.59	12.41	6.00
04/27/03	9:57:12	0.70	202.56	12.44	6.03
04/27/03	9:57:12	0.70	202.58	12.42	6.01
04/27/03	9:57:12	0.70	202.55	12.45	6.04
04/27/03	9:57:12	0.70	202.50	12.50	6.09
04/27/03	9:57:12	0.71	202.48	12.52	6.11
04/27/03	9:57:12	0.71	202.52	12.48	6.07
04/27/03	9:57:12	0.71	202.46	12.54	6.13
04/27/03	9:57:12	0.71	202.48	12.52	6.11
04/27/03	9:57:13	0.71	202.45	12.55	6.14
04/27/03	9:57:13	0.72	202.43	12.57	6.16
04/27/03	9:57:13	0.72	202.40	12.60	6.19
04/27/03	9:57:13	0.72	202.41	12.59	6.18
04/27/03	9:57:13	0.72	202.38	12.62	6.21
04/27/03	9:57:13	0.72	202.40	12.60	6.19
04/27/03	9:57:13	0.72	202.39	12.61	6.20
04/27/03	9:57:13	0.73	202.34	12.66	6.25
04/27/03	9:57:13	0.73	202.31	12.69	6.28
04/27/03	9:57:13	0.73	202.34	12.66	6.25
04/27/03	9:57:14	0.73	202.31	12.69	6.28
04/27/03	9:57:14	0.73	202.35	12.65	6.24
04/27/03	9:57:14	0.73	202.33	12.67	6.26
04/27/03	9:57:14	0.74	202.28	12.72	6.31
04/27/03	9:57:14	0.74	202.22	12.78	6.37
04/27/03	9:57:14	0.74	202.24	12.76	6.35
04/27/03	9:57:14	0.74	202.21	12.79	6.38
04/27/03	9:57:14	0.74	202.17	12.83	6.42
04/27/03	9:57:14	0.74	202.22	12.78	6.37
04/27/03	9:57:15	0.75	202.22	12.78	6.37
04/27/03	9:57:15	0.75	202.21	12.79	6.38
04/27/03	9:57:15	0.75	202.19	12.81	6.40
04/27/03	9:57:15	0.75	202.13	12.87	6.46
04/27/03	9:57:15	0.75	202.14	12.86	6.45
04/27/03	9:57:15	0.76	202.08	12.92	6.51
04/27/03	9:57:15	0.76	202.04	12.96	6.55
04/27/03	9:57:15	0.76	202.08	12.92	6.51
04/27/03	9:57:15	0.76	202.09	12.91	6.50
04/27/03	9:57:15	0.76	202.09	12.91	6.50
04/27/03	9:57:16	0.76	202.04	12.96	6.55
04/27/03	9:57:16	0.77	202.02	12.98	6.57
04/27/03	9:57:16	0.77	202.07	12.93	6.52
04/27/03	9:57:16	0.77	202.02	12.98	6.57
04/27/03	9:57:16	0.77	201.99	13.01	6.60
04/27/03	9:57:16	0.77	201.94	13.06	6.65
04/27/03	9:57:16	0.77	201.94	13.06	6.65
04/27/03	9:57:16	0.78	201.95	13.05	6.64
04/27/03	9:57:16	0.78	201.86	13.14	6.73
04/27/03	9:57:16	0.78	201.90	13.10	6.69

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:57:17	0.78	201.90	13.10	6.69
04/27/03	9:57:17	0.78	201.88	13.12	6.71
04/27/03	9:57:17	0.78	201.93	13.07	6.66
04/27/03	9:57:17	0.79	201.89	13.11	6.70
04/27/03	9:57:18	0.81	201.62	13.38	6.97
04/27/03	9:57:20	0.83	201.50	13.50	7.09
04/27/03	9:57:21	0.85	201.37	13.63	7.22
04/27/03	9:57:22	0.86	201.24	13.76	7.35
04/27/03	9:57:23	0.88	201.12	13.88	7.47
04/27/03	9:57:24	0.90	200.98	14.02	7.61
04/27/03	9:57:25	0.91	200.83	14.17	7.76
04/27/03	9:57:26	0.93	200.67	14.33	7.92
04/27/03	9:57:27	0.95	200.56	14.44	8.03
04/27/03	9:57:28	0.96	200.42	14.58	8.17
04/27/03	9:57:29	0.98	200.33	14.67	8.26
04/27/03	9:57:30	1.00	200.16	14.84	8.43
04/27/03	9:57:31	1.01	200.04	14.96	8.55
04/27/03	9:57:32	1.03	199.91	15.09	8.68
04/27/03	9:57:33	1.05	199.81	15.19	8.78
04/27/03	9:57:34	1.06	199.63	15.37	8.96
04/27/03	9:57:35	1.08	199.52	15.48	9.07
04/27/03	9:57:36	1.10	199.37	15.63	9.22
04/27/03	9:57:37	1.11	199.22	15.78	9.37
04/27/03	9:57:38	1.13	199.11	15.89	9.48
04/27/03	9:57:39	1.15	198.96	16.04	9.63
04/27/03	9:57:40	1.16	198.85	16.15	9.74
04/27/03	9:57:41	1.18	198.73	16.27	9.86
04/27/03	9:57:42	1.20	198.58	16.42	10.01
04/27/03	9:57:43	1.21	198.45	16.55	10.14
04/27/03	9:57:44	1.23	198.30	16.70	10.29
04/27/03	9:57:45	1.25	198.17	16.83	10.42
04/27/03	9:57:46	1.26	198.04	16.96	10.55
04/27/03	9:57:47	1.28	197.91	17.09	10.68
04/27/03	9:57:48	1.30	197.77	17.23	10.82
04/27/03	9:57:49	1.31	197.67	17.33	10.92
04/27/03	9:57:50	1.33	197.54	17.46	11.05
04/27/03	9:57:51	1.35	197.39	17.61	11.20
04/27/03	9:57:52	1.36	197.30	17.70	11.29
04/27/03	9:57:53	1.38	197.14	17.86	11.45
04/27/03	9:57:54	1.40	197.00	18.00	11.59
04/27/03	9:57:55	1.41	196.90	18.10	11.69
04/27/03	9:57:56	1.43	196.76	18.24	11.83
04/27/03	9:57:57	1.45	196.70	18.30	11.89
04/27/03	9:57:58	1.46	196.53	18.47	12.06
04/27/03	9:57:59	1.48	196.37	18.63	12.22
04/27/03	9:58:00	1.50	196.22	18.78	12.37
04/27/03	9:58:01	1.51	196.07	18.93	12.52
04/27/03	9:58:02	1.53	195.94	19.06	12.65
04/27/03	9:58:03	1.55	195.83	19.17	12.76
04/27/03	9:58:04	1.56	195.68	19.32	12.91

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:58:05	1.58	195.56	19.44	13.03
04/27/03	9:58:06	1.60	195.44	19.56	13.15
04/27/03	9:58:07	1.61	195.31	19.69	13.28
04/27/03	9:58:08	1.63	195.18	19.82	13.41
04/27/03	9:58:09	1.65	195.03	19.97	13.56
04/27/03	9:58:10	1.66	194.92	20.08	13.67
04/27/03	9:58:11	1.68	194.80	20.20	13.79
04/27/03	9:58:12	1.70	194.65	20.35	13.94
04/27/03	9:58:13	1.71	194.52	20.48	14.07
04/27/03	9:58:14	1.73	194.40	20.60	14.19
04/27/03	9:58:15	1.75	194.27	20.73	14.32
04/27/03	9:58:16	1.76	194.13	20.87	14.46
04/27/03	9:58:17	1.78	194.00	21.00	14.59
04/27/03	9:58:18	1.80	193.88	21.12	14.71
04/27/03	9:58:19	1.81	193.75	21.25	14.84
04/27/03	9:58:20	1.83	193.62	21.38	14.97
04/27/03	9:58:21	1.85	193.51	21.49	15.08
04/27/03	9:58:22	1.86	193.38	21.62	15.21
04/27/03	9:58:23	1.88	193.26	21.74	15.33
04/27/03	9:58:24	1.90	193.11	21.89	15.48
04/27/03	9:58:25	1.91	193.00	22.00	15.59
04/27/03	9:58:26	1.93	192.89	22.11	15.70
04/27/03	9:58:27	1.95	192.77	22.23	15.82
04/27/03	9:58:28	1.96	192.64	22.36	15.95
04/27/03	9:58:29	1.98	192.51	22.49	16.08
04/27/03	9:58:30	2.00	192.35	22.65	16.24
04/27/03	9:58:31	2.01	192.22	22.78	16.37
04/27/03	9:58:32	2.03	192.14	22.86	16.45
04/27/03	9:58:33	2.05	191.99	23.01	16.60
04/27/03	9:58:34	2.06	191.85	23.15	16.74
04/27/03	9:58:35	2.08	191.71	23.29	16.88
04/27/03	9:58:36	2.10	191.61	23.39	16.98
04/27/03	9:58:37	2.11	191.47	23.53	17.12
04/27/03	9:58:38	2.13	191.35	23.65	17.24
04/27/03	9:58:39	2.15	191.22	23.78	17.37
04/27/03	9:58:40	2.16	191.07	23.93	17.52
04/27/03	9:58:41	2.18	190.94	24.06	17.65
04/27/03	9:58:42	2.20	190.84	24.16	17.75
04/27/03	9:58:43	2.21	190.73	24.27	17.86
04/27/03	9:58:44	2.23	190.61	24.39	17.98
04/27/03	9:58:45	2.25	190.50	24.50	18.09
04/27/03	9:58:46	2.26	190.36	24.64	18.23
04/27/03	9:58:47	2.28	190.23	24.77	18.36
04/27/03	9:58:48	2.30	190.07	24.93	18.52
04/27/03	9:58:49	2.31	190.01	24.99	18.58
04/27/03	9:58:50	2.33	189.86	25.14	18.73
04/27/03	9:58:51	2.35	189.71	25.29	18.88
04/27/03	9:58:52	2.36	189.61	25.39	18.98
04/27/03	9:58:53	2.38	189.46	25.54	19.13
04/27/03	9:58:54	2.40	189.33	25.67	19.26

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	9:58:55	2.41	189.23	25.77	19.36
04/27/03	9:58:56	2.43	189.09	25.91	19.50
04/27/03	9:58:57	2.45	188.97	26.03	19.62
04/27/03	9:58:58	2.46	188.83	26.17	19.76
04/27/03	9:58:59	2.48	188.73	26.27	19.86
04/27/03	9:59:00	2.50	188.58	26.42	20.01
04/27/03	9:59:01	2.51	188.48	26.52	20.11
04/27/03	9:59:02	2.53	188.35	26.65	20.24
04/27/03	9:59:03	2.55	188.23	26.77	20.36
04/27/03	9:59:04	2.56	188.12	26.88	20.47
04/27/03	9:59:05	2.58	187.98	27.02	20.61
04/27/03	9:59:06	2.60	187.88	27.12	20.71
04/27/03	9:59:07	2.61	187.75	27.25	20.84
04/27/03	9:59:08	2.63	187.61	27.39	20.98
04/27/03	9:59:09	2.65	187.51	27.49	21.08
04/27/03	9:59:10	2.66	187.36	27.64	21.23
04/27/03	9:59:11	2.68	187.23	27.77	21.36
04/27/03	9:59:12	2.70	187.11	27.89	21.48
04/27/03	9:59:13	2.71	187.00	28.00	21.59
04/27/03	9:59:14	2.73	186.84	28.16	21.75
04/27/03	9:59:15	2.75	186.73	28.27	21.86
04/27/03	9:59:16	2.76	186.64	28.36	21.95
04/27/03	9:59:17	2.78	186.51	28.49	22.08
04/27/03	9:59:18	2.80	186.37	28.63	22.22
04/27/03	9:59:28	2.96	185.17	29.83	23.42
04/27/03	9:59:37	3.13	183.96	31.04	24.63
04/27/03	9:59:47	3.30	182.80	32.20	25.79
04/27/03	9:59:57	3.46	181.70	33.30	26.89
04/27/03	10:00:07	3.63	180.47	34.53	28.12
04/27/03	10:00:17	3.80	179.29	35.71	29.30
04/27/03	10:00:27	3.96	178.11	36.89	30.48
04/27/03	10:00:37	4.13	176.94	38.06	31.65
04/27/03	10:00:47	4.30	175.75	39.25	32.84
04/27/03	10:00:57	4.46	174.61	40.39	33.98
04/27/03	10:01:07	4.63	173.46	41.54	35.13
04/27/03	10:01:17	4.80	172.34	42.66	36.25
04/27/03	10:01:27	4.96	171.21	43.79	37.38
04/27/03	10:01:37	5.13	170.11	44.89	38.48
04/27/03	10:01:47	5.30	168.97	46.03	39.62
04/27/03	10:01:57	5.46	167.85	47.15	40.74
04/27/03	10:02:07	5.63	166.76	48.24	41.83
04/27/03	10:02:17	5.80	165.69	49.31	42.90
04/27/03	10:02:27	5.96	164.62	50.38	43.97
04/27/03	10:02:37	6.13	163.50	51.50	45.09
04/27/03	10:02:47	6.30	162.43	52.57	46.16
04/27/03	10:02:57	6.46	161.38	53.62	47.21
04/27/03	10:03:07	6.63	160.33	54.67	48.26
04/27/03	10:03:17	6.80	159.31	55.69	49.28
04/27/03	10:03:27	6.96	158.26	56.74	50.33
04/27/03	10:03:37	7.13	157.25	57.75	51.34

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	10:03:47	7.30	156.27	58.73	52.32
04/27/03	10:03:57	7.46	155.20	59.80	53.39
04/27/03	10:04:07	7.63	154.24	60.76	54.35
04/27/03	10:04:17	7.80	153.26	61.74	55.33
04/27/03	10:04:27	7.96	152.25	62.75	56.34
04/27/03	10:04:37	8.13	151.29	63.71	57.30
04/27/03	10:04:47	8.30	150.30	64.70	58.29
04/27/03	10:04:57	8.46	149.34	65.66	59.25
04/27/03	10:05:07	8.63	148.38	66.62	60.21
04/27/03	10:05:17	8.80	147.45	67.55	61.14
04/27/03	10:05:27	8.96	146.51	68.49	62.08
04/27/03	10:05:37	9.13	145.57	69.43	63.02
04/27/03	10:05:47	9.30	144.61	70.39	63.98
04/27/03	10:05:57	9.46	143.70	71.30	64.89
04/27/03	10:06:07	9.63	142.79	72.21	65.80
04/27/03	10:06:17	9.80	141.87	73.13	66.72
04/27/03	10:06:27	9.96	140.94	74.06	67.65
04/27/03	10:06:37	10.13	140.05	74.95	68.54
04/27/03	10:06:47	10.30	139.14	75.86	69.45
04/27/03	10:06:57	10.46	138.26	76.74	70.33
04/27/03	10:07:07	10.63	137.39	77.61	71.20
04/27/03	10:07:17	10.80	136.59	78.41	72.00
04/27/03	10:07:27	10.96	135.69	79.31	72.90
04/27/03	10:07:37	11.13	134.84	80.16	73.75
04/27/03	10:07:47	11.30	134.00	81.00	74.59
04/27/03	10:07:57	11.46	133.11	81.89	75.48
04/27/03	10:08:07	11.63	132.25	82.75	76.34
04/27/03	10:08:17	11.80	131.38	83.62	77.21
04/27/03	10:08:27	11.96	130.54	84.46	78.05
04/27/03	10:08:37	12.13	129.73	85.27	78.86
04/27/03	10:08:47	12.30	128.90	86.10	79.69
04/27/03	10:08:57	12.46	128.07	86.93	80.52
04/27/03	10:09:07	12.63	127.22	87.78	81.37
04/27/03	10:09:17	12.80	126.41	88.59	82.18
04/27/03	10:09:27	12.96	125.60	89.40	82.99
04/27/03	10:09:37	13.13	124.83	90.17	83.76
04/27/03	10:09:47	13.30	124.04	90.96	84.55
04/27/03	10:09:57	13.46	123.23	91.77	85.36
04/27/03	10:10:07	13.63	122.44	92.56	86.15
04/27/03	10:10:17	13.80	121.67	93.33	86.92
04/27/03	10:10:27	13.96	120.91	94.09	87.68
04/27/03	10:10:37	14.13	120.16	94.84	88.43
04/27/03	10:10:47	14.30	119.38	95.62	89.21
04/27/03	10:10:57	14.46	118.64	96.36	89.95
04/27/03	10:11:07	14.63	117.89	97.11	90.70
04/27/03	10:11:17	14.80	117.14	97.86	91.45
04/27/03	10:11:27	14.96	116.39	98.61	92.20
04/27/03	10:11:37	15.13	115.61	99.39	92.98
04/27/03	10:11:47	15.30	114.91	100.09	93.68
04/27/03	10:11:57	15.46	114.17	100.83	94.42

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	10:12:07	15.63	113.44	101.56	95.15
04/27/03	10:12:17	15.80	112.72	102.28	95.87
04/27/03	10:12:27	15.96	111.98	103.02	96.61
04/27/03	10:12:37	16.13	111.32	103.68	97.27
04/27/03	10:12:47	16.30	110.63	104.37	97.96
04/27/03	10:12:57	16.46	109.93	105.07	98.66
04/27/03	10:13:07	16.63	109.27	105.73	99.32
04/27/03	10:13:17	16.80	108.59	106.41	100.00
04/27/03	10:13:27	16.96	107.92	107.08	100.67
04/27/03	10:13:37	17.13	107.25	107.75	101.34
04/27/03	10:13:47	17.30	106.57	108.43	102.02
04/27/03	10:13:57	17.46	105.90	109.10	102.69
04/27/03	10:14:07	17.63	105.26	109.74	103.33
04/27/03	10:14:17	17.80	104.61	110.39	103.98
04/27/03	10:14:27	17.96	103.96	111.04	104.63
04/27/03	10:14:37	18.13	103.34	111.66	105.25
04/27/03	10:14:47	18.30	102.69	112.31	105.90
04/27/03	10:14:57	18.46	102.04	112.96	106.55
04/27/03	10:15:07	18.63	101.39	113.61	107.20
04/27/03	10:15:17	18.80	100.74	114.26	107.85
04/27/03	10:15:27	18.96	100.12	114.88	108.47
04/27/03	10:15:37	19.13	99.49	115.51	109.10
04/27/03	10:15:47	19.30	98.92	116.08	109.67
04/27/03	10:15:57	19.46	98.30	116.70	110.29
04/27/03	10:16:07	19.63	97.68	117.32	110.91
04/27/03	10:16:17	19.80	97.09	117.91	111.50
04/27/03	10:16:27	19.96	96.48	118.52	112.11
04/27/03	10:16:37	20.13	95.89	119.11	112.70
04/27/03	10:16:47	20.30	95.28	119.72	113.31
04/27/03	10:16:57	20.46	94.71	120.29	113.88
04/27/03	10:17:07	20.63	94.12	120.88	114.47
04/27/03	10:17:17	20.80	93.55	121.45	115.04
04/27/03	10:17:27	20.96	92.99	122.01	115.60
04/27/03	10:17:37	21.13	92.40	122.60	116.19
04/27/03	10:17:47	21.30	91.83	123.17	116.76
04/27/03	10:17:57	21.46	91.30	123.70	117.29
04/27/03	10:18:07	21.63	90.74	124.26	117.85
04/27/03	10:18:17	21.80	90.19	124.81	118.40
04/27/03	10:18:27	21.96	89.68	125.32	118.91
04/27/03	10:18:37	22.13	89.11	125.89	119.48
04/27/03	10:18:47	22.30	88.57	126.43	120.02
04/27/03	10:18:57	22.46	88.05	126.95	120.54
04/27/03	10:19:07	22.63	87.48	127.52	121.11
04/27/03	10:19:17	22.80	86.97	128.03	121.62
04/27/03	10:20:16	23.78	83.93	131.07	124.66
04/27/03	10:21:15	24.76	80.97	134.03	127.62
04/27/03	10:22:14	25.75	78.13	136.87	130.46
04/27/03	10:23:14	26.73	75.46	139.54	133.13
04/27/03	10:24:13	27.71	72.83	142.17	135.76
04/27/03	10:25:12	28.70	70.31	144.69	138.28

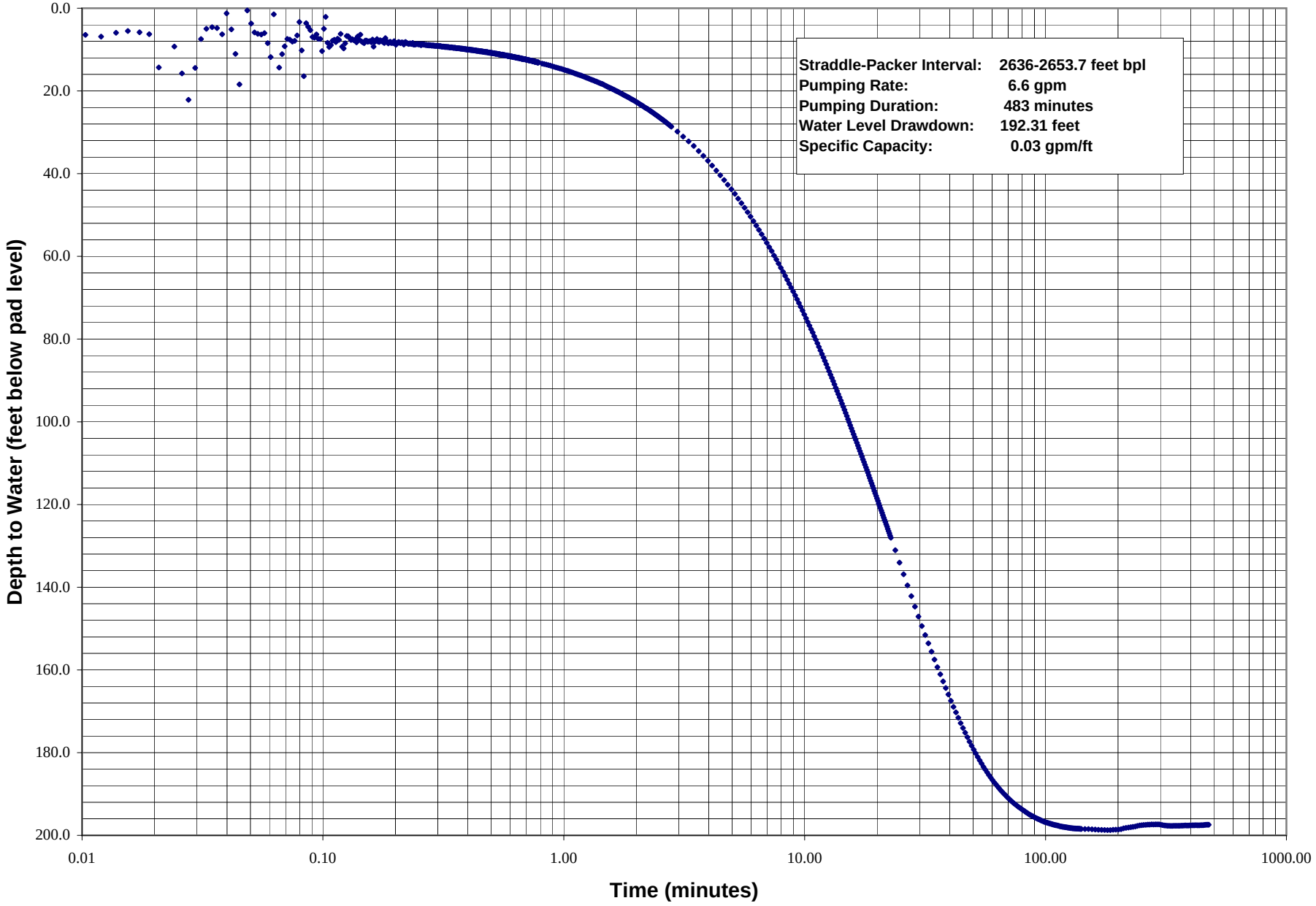
Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	10:26:11	29.68	67.90	147.10	140.69
04/27/03	10:27:10	30.66	65.61	149.39	142.98
04/27/03	10:28:09	31.65	63.43	151.57	145.16
04/27/03	10:29:08	32.63	61.45	153.55	147.14
04/27/03	10:30:07	33.61	59.42	155.58	149.17
04/27/03	10:31:06	34.60	57.51	157.49	151.08
04/27/03	10:32:05	35.58	55.66	159.34	152.93
04/27/03	10:33:04	36.56	53.95	161.05	154.64
04/27/03	10:34:03	37.55	52.24	162.76	156.35
04/27/03	10:35:02	38.53	50.61	164.39	157.98
04/27/03	10:36:01	39.51	49.05	165.95	159.54
04/27/03	10:37:00	40.50	47.54	167.46	161.05
04/27/03	10:37:59	41.48	46.08	168.92	162.51
04/27/03	10:38:58	42.46	44.74	170.26	163.85
04/27/03	10:39:57	43.45	43.45	171.55	165.14
04/27/03	10:40:56	44.43	42.14	172.86	166.45
04/27/03	10:41:55	45.41	40.97	174.03	167.62
04/27/03	10:42:54	46.40	39.83	175.17	168.76
04/27/03	10:43:53	47.38	38.73	176.27	169.86
04/27/03	10:44:52	48.36	37.67	177.33	170.92
04/27/03	10:45:51	49.35	36.66	178.34	171.93
04/27/03	10:46:50	50.33	35.75	179.25	172.84
04/27/03	10:47:49	51.31	34.83	180.17	173.76
04/27/03	10:48:48	52.30	33.95	181.05	174.64
04/27/03	10:49:47	53.28	33.13	181.87	175.46
04/27/03	10:50:46	54.26	32.37	182.63	176.22
04/27/03	10:51:45	55.25	31.58	183.42	177.01
04/27/03	10:52:44	56.23	30.89	184.11	177.70
04/27/03	10:53:43	57.21	30.24	184.76	178.35
04/27/03	10:54:42	58.20	29.59	185.41	179.00
04/27/03	10:55:41	59.18	28.99	186.01	179.60
04/27/03	10:56:40	60.16	28.39	186.61	180.20
04/27/03	10:57:39	61.15	27.86	187.14	180.73
04/27/03	10:58:38	62.13	27.36	187.64	181.23
04/27/03	10:59:37	63.11	26.85	188.15	181.74
04/27/03	11:00:36	64.10	26.41	188.59	182.18
04/27/03	11:01:35	65.08	25.92	189.08	182.67
04/27/03	11:02:34	66.06	25.53	189.47	183.06
04/27/03	11:03:33	67.05	25.12	189.88	183.47
04/27/03	11:04:32	68.03	24.73	190.27	183.86
04/27/03	11:05:31	69.01	24.36	190.64	184.23
04/27/03	11:06:30	70.00	24.00	191.00	184.59
04/27/03	11:07:29	70.98	23.67	191.33	184.92
04/27/03	11:08:28	71.96	23.34	191.66	185.25
04/27/03	11:09:27	72.95	23.04	191.96	185.55
04/27/03	11:10:26	73.93	22.75	192.25	185.84
04/27/03	11:11:25	74.91	22.48	192.52	186.11
04/27/03	11:12:24	75.90	22.23	192.77	186.36
04/27/03	11:13:23	76.88	21.96	193.04	186.63
04/27/03	11:14:22	77.86	21.73	193.27	186.86

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	11:15:21	78.85	21.51	193.49	187.08
04/27/03	11:16:20	79.83	21.27	193.73	187.32
04/27/03	11:17:19	80.81	21.07	193.93	187.52
04/27/03	11:18:18	81.80	20.88	194.12	187.71
04/27/03	11:19:17	82.78	20.62	194.38	187.97
04/27/03	11:20:16	83.76	20.45	194.55	188.14
04/27/03	11:21:15	84.75	20.24	194.76	188.35
04/27/03	11:22:14	85.73	20.04	194.96	188.55
04/27/03	11:23:13	86.71	19.89	195.11	188.70
04/27/03	11:24:12	87.70	19.72	195.28	188.87
04/27/03	11:25:11	88.68	19.59	195.41	189.00
04/27/03	11:26:10	89.66	19.44	195.56	189.15
04/27/03	11:27:09	90.65	19.27	195.73	189.32
04/27/03	11:28:08	91.63	19.15	195.85	189.44
04/27/03	11:29:07	92.61	19.02	195.98	189.57
04/27/03	11:30:06	93.60	18.91	196.09	189.68
04/27/03	11:31:05	94.58	18.78	196.22	189.81
04/27/03	11:32:04	95.56	18.65	196.35	189.94
04/27/03	11:33:03	96.55	18.54	196.46	190.05
04/27/03	11:34:02	97.53	18.44	196.56	190.15
04/27/03	11:35:01	98.51	18.31	196.69	190.28
04/27/03	11:36:00	99.50	18.21	196.79	190.38
04/27/03	11:36:59	100.48	18.14	196.86	190.45
04/27/03	11:37:58	101.46	18.07	196.93	190.52
04/27/03	11:38:57	102.45	18.00	197.00	190.59
04/27/03	11:39:56	103.43	17.90	197.10	190.69
04/27/03	11:40:55	104.41	17.85	197.15	190.74
04/27/03	11:41:54	105.40	17.76	197.24	190.83
04/27/03	11:42:53	106.38	17.71	197.29	190.88
04/27/03	11:43:52	107.36	17.63	197.37	190.96
04/27/03	11:44:51	108.35	17.57	197.43	191.02
04/27/03	11:45:50	109.33	17.52	197.48	191.07
04/27/03	11:46:49	110.31	17.46	197.54	191.13
04/27/03	11:47:48	111.30	17.42	197.58	191.17
04/27/03	11:48:47	112.28	17.37	197.63	191.22
04/27/03	11:49:46	113.26	17.31	197.69	191.28
04/27/03	11:50:45	114.25	17.24	197.76	191.35
04/27/03	11:51:44	115.23	17.19	197.81	191.40
04/27/03	11:52:43	116.21	17.14	197.86	191.45
04/27/03	11:53:42	117.20	17.09	197.91	191.50
04/27/03	11:54:41	118.18	17.06	197.94	191.53
04/27/03	11:55:40	119.16	17.03	197.97	191.56
04/27/03	11:56:39	120.15	16.99	198.01	191.60
04/27/03	11:57:38	121.13	16.96	198.04	191.63
04/27/03	11:58:37	122.11	16.95	198.05	191.64
04/27/03	11:59:36	123.10	16.91	198.09	191.68
04/27/03	12:00:35	124.08	16.87	198.13	191.72
04/27/03	12:01:34	125.06	16.83	198.17	191.76
04/27/03	12:02:33	126.05	16.80	198.20	191.79
04/27/03	12:03:32	127.03	16.76	198.24	191.83

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	12:04:31	128.01	16.75	198.25	191.84
04/27/03	12:05:30	129.00	16.72	198.28	191.87
04/27/03	12:06:29	129.98	16.70	198.30	191.89
04/27/03	12:07:28	130.96	16.70	198.30	191.89
04/27/03	12:08:27	131.95	16.67	198.33	191.92
04/27/03	12:09:26	132.93	16.66	198.34	191.93
04/27/03	12:10:25	133.91	16.65	198.35	191.94
04/27/03	12:11:24	134.90	16.64	198.36	191.95
04/27/03	12:12:23	135.88	16.63	198.37	191.96
04/27/03	12:13:22	136.86	16.62	198.38	191.97
04/27/03	12:14:21	137.85	16.62	198.38	191.97
04/27/03	12:15:20	138.83	16.59	198.41	192.00
04/27/03	12:16:19	139.81	16.57	198.43	192.02
04/27/03	12:17:18	140.80	16.56	198.44	192.03
04/27/03	12:22:17	145.80	16.54	198.46	192.05
04/27/03	12:27:18	150.80	16.52	198.48	192.07
04/27/03	12:32:17	155.80	16.46	198.54	192.13
04/27/03	12:37:18	160.80	16.41	198.59	192.18
04/27/03	12:42:18	165.80	16.36	198.64	192.23
04/27/03	12:47:18	170.80	16.33	198.67	192.26
04/27/03	12:52:18	175.80	16.30	198.70	192.29
04/27/03	12:57:18	180.80	16.28	198.72	192.31
04/27/03	13:02:18	185.80	16.28	**198.72**	192.31
04/27/03	13:07:18	190.80	16.34	198.66	192.25
04/27/03	13:12:18	195.80	16.38	198.62	192.21
04/27/03	13:17:18	200.80	16.41	198.59	192.18
04/27/03	13:22:18	205.80	16.50	198.50	192.09
04/27/03	13:27:18	210.80	16.70	198.30	191.89
04/27/03	13:32:18	215.80	16.80	198.20	191.79
04/27/03	13:37:18	220.80	16.91	198.09	191.68
04/27/03	13:42:18	225.80	16.98	198.02	191.61
04/27/03	13:47:18	230.80	17.06	197.94	191.53
04/27/03	13:52:18	235.80	17.15	197.85	191.44
04/27/03	13:57:18	240.80	17.29	197.71	191.30
04/27/03	14:02:18	245.80	17.39	197.61	191.20
04/27/03	14:07:18	250.80	17.45	197.55	191.14
04/27/03	14:12:18	255.80	17.50	197.50	191.09
04/27/03	14:17:18	260.80	17.54	197.46	191.05
04/27/03	14:22:18	265.80	17.61	197.39	190.98
04/27/03	14:27:18	270.80	17.61	197.39	190.98
04/27/03	14:32:18	275.80	17.64	197.36	190.95
04/27/03	14:37:18	280.80	17.63	197.37	190.96
04/27/03	14:42:18	285.80	17.66	197.34	190.93
04/27/03	14:47:18	290.80	17.66	197.34	190.93
04/27/03	14:52:18	295.80	17.65	197.35	190.94
04/27/03	14:57:18	300.80	17.58	197.42	191.01
04/27/03	15:02:18	305.80	17.48	197.52	191.11
04/27/03	15:07:18	310.80	17.41	197.59	191.18
04/27/03	15:12:18	315.80	17.36	197.64	191.23
04/27/03	15:17:18	320.80	17.32	197.68	191.27

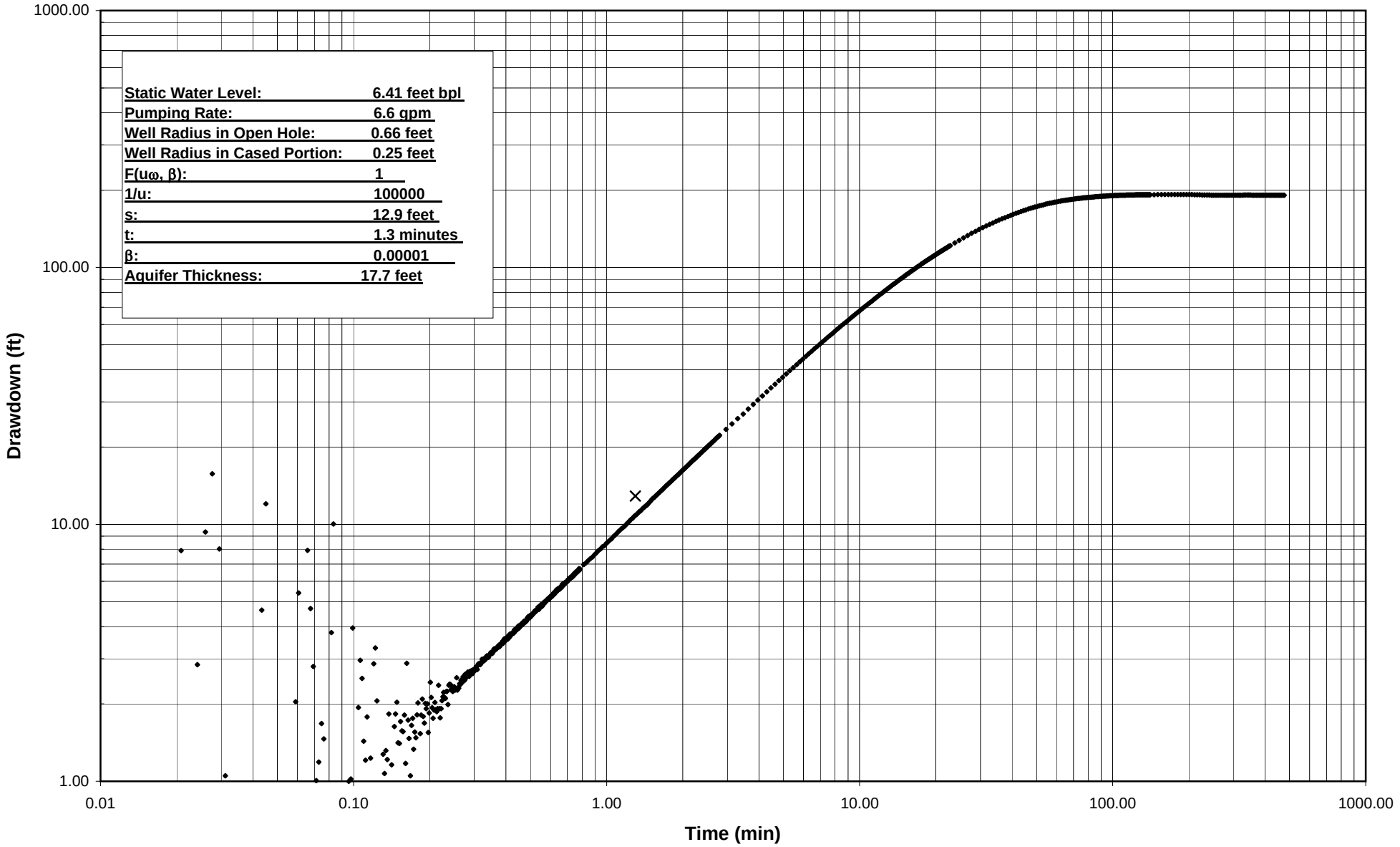
Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
04/27/03	15:22:18	325.80	17.32	197.68	191.27
04/27/03	15:27:18	330.80	17.29	197.71	191.30
04/27/03	15:32:18	335.80	17.29	197.71	191.30
04/27/03	15:37:18	340.80	17.31	197.69	191.28
04/27/03	15:42:18	345.80	17.30	197.70	191.29
04/27/03	15:47:18	350.80	17.31	197.69	191.28
04/27/03	15:52:18	355.80	17.32	197.68	191.27
04/27/03	15:57:18	360.80	17.32	197.68	191.27
04/27/03	16:02:18	365.80	17.33	197.67	191.26
04/27/03	16:07:18	370.80	17.33	197.67	191.26
04/27/03	16:12:18	375.80	17.37	197.63	191.22
04/27/03	16:17:18	380.80	17.39	197.61	191.20
04/27/03	16:22:18	385.80	17.37	197.63	191.22
04/27/03	16:27:18	390.80	17.37	197.63	191.22
04/27/03	16:32:18	395.80	17.39	197.61	191.20
04/27/03	16:37:18	400.80	17.41	197.59	191.18
04/27/03	16:42:18	405.80	17.43	197.57	191.16
04/27/03	16:47:18	410.80	17.43	197.57	191.16
04/27/03	16:52:18	415.80	17.42	197.58	191.17
04/27/03	16:57:18	420.80	17.45	197.55	191.14
04/27/03	17:02:18	425.80	17.44	197.56	191.15
04/27/03	17:07:18	430.80	17.43	197.57	191.16
04/27/03	17:12:18	435.80	17.44	197.56	191.15
04/27/03	17:17:18	440.80	17.45	197.55	191.14
04/27/03	17:22:18	445.80	17.47	197.53	191.12
04/27/03	17:27:18	450.80	17.46	197.54	191.13
04/27/03	17:32:18	455.80	17.53	197.47	191.06
04/27/03	17:37:18	460.80	17.54	197.46	191.05
04/27/03	17:42:18	465.80	17.57	197.43	191.02
04/27/03	17:47:18	470.80	17.57	197.43	191.02
04/27/03	17:52:18	475.80	17.56	197.44	191.03

Straddle-Packer Test No. 8 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Injection Well No. 1



g:aproject\reesemacon\pf001153.0003\MW Packer Tests\Test #4\#8 Drawdown.xls\chart

Injection Well No.1, Port St. Lucie
Port St. Lucie, Westport Injection Well System
Straddle-Packer Test No. 8 - Drawdown



g:aproject\reesemacon\pf001153.0003\MW Packer Tests\Test#5\#8 Drawdown.xls\DD Log-log

Straddle-Packer Test No. 8 - Recovery
City of Port St. Lucie, Westport Injection Well System
Injection Well No. 1

Packer Depth Interval:	2636-2653.7 feet bpl	**Assumed Stabilized DTW:**	198.72 feet bpl
Start of Logging:	4/27/03 17:59:11	**Start of Pumping:**	4/27/03 9:56:30
End of Logging:	4/27/03 22:00:14	**Pumping Duration:**	483 minutes
Pumping Rate:	6.6 gpm	**Total Test Time:**	724 minutes

Data collected with Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\PT4REC.DAT

Note: Double line indicates end of pumping

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	17:59:11		17.55	197.45	1.27
4/27/03	17:59:11		17.55	197.45	1.27
4/27/03	17:59:11		17.55	197.45	1.27
4/27/03	17:59:11		17.51	197.49	1.23
4/27/03	17:59:12		17.53	197.47	1.25
4/27/03	17:59:12		17.57	197.43	1.29
4/27/03	17:59:12		17.53	197.47	1.25
4/27/03	17:59:12		17.54	197.46	1.26
4/27/03	17:59:12		17.58	197.42	1.30
4/27/03	17:59:12		17.56	197.44	1.28
4/27/03	17:59:12		17.57	197.43	1.29
4/27/03	17:59:12		17.57	197.43	1.29
4/27/03	17:59:12		17.55	197.45	1.27
4/27/03	17:59:12		17.50	197.50	1.22
4/27/03	17:59:13		17.53	197.47	1.25
4/27/03	17:59:13		17.59	197.41	1.31
4/27/03	17:59:13		17.56	197.44	1.28
4/27/03	17:59:13		17.53	197.47	1.25
4/27/03	17:59:13		17.58	197.42	1.30
4/27/03	17:59:13		17.57	197.43	1.29
4/27/03	17:59:13		17.58	197.42	1.30
4/27/03	17:59:13		17.58	197.42	1.30
4/27/03	17:59:13		17.58	197.42	1.30
4/27/03	17:59:13		17.53	197.47	1.25
4/27/03	17:59:14		17.52	197.48	1.24
4/27/03	17:59:14		17.58	197.42	1.30
4/27/03	17:59:14		17.58	197.42	1.30
4/27/03	17:59:14		17.57	197.43	1.29
4/27/03	17:59:14		17.58	197.42	1.30
4/27/03	17:59:14		17.57	197.43	1.29
4/27/03	17:59:14		17.57	197.43	1.29
4/27/03	17:59:14		17.57	197.43	1.29
4/27/03	17:59:14		17.58	197.42	1.30
4/27/03	17:59:15		17.57	197.43	1.29
4/27/03	17:59:15		17.54	197.46	1.26
4/27/03	17:59:15		17.58	197.42	1.30
4/27/03	17:59:15		17.58	197.42	1.30
4/27/03	17:59:15		17.57	197.43	1.29
4/27/03	17:59:15		17.60	197.40	1.32

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	17:59:15		17.58	197.42	1.30
4/27/03	17:59:15		17.55	197.45	1.27
4/27/03	17:59:15		17.55	197.45	1.27
4/27/03	17:59:15		17.56	197.44	1.28
4/27/03	17:59:16		17.58	197.42	1.30
4/27/03	17:59:16		17.56	197.44	1.28
4/27/03	17:59:16		17.56	197.44	1.28
4/27/03	17:59:16		17.56	197.44	1.28
4/27/03	17:59:16		17.55	197.45	1.27
4/27/03	17:59:16		17.57	197.43	1.29
4/27/03	17:59:16		17.57	197.43	1.29
4/27/03	17:59:16		17.58	197.42	1.30
4/27/03	17:59:16		17.56	197.44	1.28
4/27/03	17:59:17		17.55	197.45	1.27
4/27/03	17:59:17		17.55	197.45	1.27
4/27/03	17:59:17		17.54	197.46	1.26
4/27/03	17:59:17		17.55	197.45	1.27
4/27/03	17:59:17		17.57	197.43	1.29
4/27/03	17:59:17		17.55	197.45	1.27
4/27/03	17:59:17		17.54	197.46	1.26
4/27/03	17:59:17		17.54	197.46	1.26
4/27/03	17:59:17		17.57	197.43	1.29
4/27/03	17:59:17		17.55	197.45	1.27
4/27/03	17:59:18		17.55	197.45	1.27
4/27/03	17:59:18		17.54	197.46	1.26
4/27/03	17:59:18		17.53	197.47	1.25
4/27/03	17:59:18		17.55	197.45	1.27
4/27/03	17:59:18		17.57	197.43	1.29
4/27/03	17:59:18		17.54	197.46	1.26
4/27/03	17:59:18		17.54	197.46	1.26
4/27/03	17:59:18		17.55	197.45	1.27
4/27/03	17:59:18		17.54	197.46	1.26
4/27/03	17:59:18		17.54	197.46	1.26
4/27/03	17:59:19		17.56	197.44	1.28
4/27/03	17:59:19		17.58	197.42	1.30
4/27/03	17:59:19		17.55	197.45	1.27
4/27/03	17:59:19		17.54	197.46	1.26
4/27/03	17:59:19		17.55	197.45	1.27
4/27/03	17:59:19		17.53	197.47	1.25
4/27/03	17:59:19		17.55	197.45	1.27
4/27/03	17:59:19		17.56	197.44	1.28
4/27/03	17:59:19		17.56	197.44	1.28
4/27/03	17:59:20		17.55	197.45	1.27
4/27/03	17:59:20		17.55	197.45	1.27
4/27/03	17:59:20		17.57	197.43	1.29
4/27/03	17:59:20		17.56	197.44	1.28
4/27/03	17:59:20		17.54	197.46	1.26
4/27/03	17:59:20		17.55	197.45	1.27
4/27/03	17:59:20		17.55	197.45	1.27
4/27/03	17:59:20		17.57	197.43	1.29

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	17:59:20		17.54	197.46	1.26
4/27/03	17:59:20		17.54	197.46	1.26
4/27/03	17:59:21		17.54	197.46	1.26
4/27/03	17:59:21		17.53	197.47	1.25
4/27/03	17:59:21		17.55	197.45	1.27
4/27/03	17:59:21		17.56	197.44	1.28
4/27/03	17:59:21		17.55	197.45	1.27
4/27/03	17:59:21		17.58	197.42	1.30
4/27/03	17:59:21		17.58	197.42	1.30
4/27/03	17:59:21		17.58	197.42	1.30
4/27/03	17:59:21		17.55	197.45	1.27
4/27/03	17:59:22		17.53	197.47	1.25
4/27/03	17:59:22		17.55	197.45	1.27
4/27/03	17:59:22		17.55	197.45	1.27
4/27/03	17:59:22		17.55	197.45	1.27
4/27/03	17:59:22		17.53	197.47	1.25
4/27/03	17:59:22		17.54	197.46	1.26
4/27/03	17:59:22		17.58	197.42	1.30
4/27/03	17:59:22		17.57	197.43	1.29
4/27/03	17:59:22		17.58	197.42	1.30
4/27/03	17:59:22		17.58	197.42	1.30
4/27/03	17:59:23		17.55	197.45	1.27
4/27/03	17:59:23		17.55	197.45	1.27
4/27/03	17:59:23		17.57	197.43	1.29
4/27/03	17:59:23		17.58	197.42	1.30
4/27/03	17:59:23		17.55	197.45	1.27
4/27/03	17:59:23		17.55	197.45	1.27
4/27/03	17:59:23		17.55	197.45	1.27
4/27/03	17:59:23		17.55	197.45	1.27
4/27/03	17:59:23		17.46	197.54	1.18
4/27/03	17:59:23	0.00	17.71	197.29	1.43
4/27/03	17:59:24	0.00	17.81	197.19	1.53
4/27/03	17:59:24	0.00	17.24	197.76	0.96
4/27/03	17:59:24	0.01	17.68	197.32	1.40
4/27/03	17:59:24	0.01	17.69	197.31	1.41
4/27/03	17:59:24	0.01	17.59	197.41	1.31
4/27/03	17:59:24	0.01	17.58	197.42	1.30
4/27/03	17:59:24	0.01	17.82	197.18	1.54
4/27/03	17:59:24	0.01	17.61	197.39	1.33
4/27/03	17:59:24	0.02	17.29	197.71	1.01
4/27/03	17:59:25	0.02	17.90	197.10	1.62
4/27/03	17:59:25	0.02	17.90	197.10	1.62
4/27/03	17:59:25	0.02	17.24	197.76	0.96
4/27/03	17:59:25	0.02	17.59	197.41	1.31
4/27/03	17:59:25	0.02	17.71	197.29	1.43
4/27/03	17:59:25	0.03	17.59	197.41	1.31
4/27/03	17:59:25	0.03	17.67	197.33	1.39
4/27/03	17:59:25	0.03	17.98	197.02	1.70
4/27/03	17:59:25	0.03	17.78	197.22	1.50
4/27/03	17:59:25	0.03	17.63	197.37	1.35

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	17:59:26	0.03	18.05	196.95	1.77
4/27/03	17:59:26	0.04	17.84	197.16	1.56
4/27/03	17:59:26	0.04	17.48	197.52	1.20
4/27/03	17:59:26	0.04	17.65	197.35	1.37
4/27/03	17:59:26	0.04	17.72	197.28	1.44
4/27/03	17:59:26	0.04	17.63	197.37	1.35
4/27/03	17:59:26	0.05	17.76	197.24	1.48
4/27/03	17:59:26	0.05	17.83	197.17	1.55
4/27/03	17:59:26	0.05	17.83	197.17	1.55
4/27/03	17:59:27	0.05	18.07	196.93	1.79
4/27/03	17:59:27	0.05	18.07	196.93	1.79
4/27/03	17:59:27	0.05	17.93	197.07	1.65
4/27/03	17:59:27	0.06	17.76	197.24	1.48
4/27/03	17:59:27	0.06	17.84	197.16	1.56
4/27/03	17:59:27	0.06	17.81	197.19	1.53
4/27/03	17:59:27	0.06	17.71	197.29	1.43
4/27/03	17:59:27	0.06	17.85	197.15	1.57
4/27/03	17:59:27	0.06	17.76	197.24	1.48
4/27/03	17:59:27	0.07	17.78	197.22	1.50
4/27/03	17:59:28	0.07	17.99	197.01	1.71
4/27/03	17:59:28	0.07	18.09	196.91	1.81
4/27/03	17:59:28	0.07	18.00	197.00	1.72
4/27/03	17:59:28	0.07	17.93	197.07	1.65
4/27/03	17:59:28	0.07	18.02	196.98	1.74
4/27/03	17:59:28	0.08	17.94	197.06	1.66
4/27/03	17:59:28	0.08	17.89	197.11	1.61
4/27/03	17:59:28	0.08	17.94	197.06	1.66
4/27/03	17:59:28	0.08	17.89	197.11	1.61
4/27/03	17:59:29	0.08	17.84	197.16	1.56
4/27/03	17:59:29	0.09	17.90	197.10	1.62
4/27/03	17:59:29	0.09	18.07	196.93	1.79
4/27/03	17:59:29	0.09	17.92	197.08	1.64
4/27/03	17:59:29	0.09	18.00	197.00	1.72
4/27/03	17:59:29	0.09	18.05	196.95	1.77
4/27/03	17:59:29	0.09	18.01	196.99	1.73
4/27/03	17:59:29	0.10	18.04	196.96	1.76
4/27/03	17:59:29	0.10	18.04	196.96	1.76
4/27/03	17:59:29	0.10	18.04	196.96	1.76
4/27/03	17:59:30	0.10	18.02	196.98	1.74
4/27/03	17:59:30	0.10	17.98	197.02	1.70
4/27/03	17:59:30	0.10	17.97	197.03	1.69
4/27/03	17:59:30	0.11	17.97	197.03	1.69
4/27/03	17:59:30	0.11	18.05	196.95	1.77
4/27/03	17:59:30	0.11	18.05	196.95	1.77
4/27/03	17:59:30	0.11	18.05	196.95	1.77
4/27/03	17:59:30	0.11	18.10	196.90	1.82
4/27/03	17:59:30	0.11	18.13	196.87	1.85
4/27/03	17:59:30	0.12	18.10	196.90	1.82
4/27/03	17:59:31	0.12	18.17	196.83	1.89
4/27/03	17:59:31	0.12	18.11	196.89	1.83

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	17:59:31	0.12	18.03	196.97	1.75
4/27/03	17:59:31	0.12	18.08	196.92	1.80
4/27/03	17:59:31	0.13	18.07	196.93	1.79
4/27/03	17:59:31	0.13	18.09	196.91	1.81
4/27/03	17:59:31	0.13	18.10	196.90	1.82
4/27/03	17:59:31	0.13	18.13	196.87	1.85
4/27/03	17:59:31	0.13	18.12	196.88	1.84
4/27/03	17:59:32	0.13	18.14	196.86	1.86
4/27/03	17:59:32	0.14	18.16	196.84	1.88
4/27/03	17:59:32	0.14	18.19	196.81	1.91
4/27/03	17:59:32	0.14	18.21	196.79	1.93
4/27/03	17:59:32	0.14	18.20	196.80	1.92
4/27/03	17:59:32	0.14	18.22	196.78	1.94
4/27/03	17:59:32	0.14	18.20	196.80	1.92
4/27/03	17:59:32	0.15	18.21	196.79	1.93
4/27/03	17:59:32	0.15	18.20	196.80	1.92
4/27/03	17:59:32	0.15	18.19	196.81	1.91
4/27/03	17:59:33	0.15	18.22	196.78	1.94
4/27/03	17:59:33	0.15	18.20	196.80	1.92
4/27/03	17:59:33	0.15	18.23	196.77	1.95
4/27/03	17:59:33	0.16	18.27	196.73	1.99
4/27/03	17:59:33	0.16	18.30	196.70	2.02
4/27/03	17:59:33	0.16	18.30	196.70	2.02
4/27/03	17:59:33	0.16	18.28	196.72	2.00
4/27/03	17:59:33	0.16	18.31	196.69	2.03
4/27/03	17:59:33	0.17	18.30	196.70	2.02
4/27/03	17:59:34	0.17	18.29	196.71	2.01
4/27/03	17:59:34	0.17	18.30	196.70	2.02
4/27/03	17:59:34	0.17	18.30	196.70	2.02
4/27/03	17:59:34	0.17	18.28	196.72	2.00
4/27/03	17:59:34	0.17	18.32	196.68	2.04
4/27/03	17:59:34	0.18	18.36	196.64	2.08
4/27/03	17:59:34	0.18	18.33	196.67	2.05
4/27/03	17:59:34	0.18	18.36	196.64	2.08
4/27/03	17:59:34	0.18	18.38	196.62	2.10
4/27/03	17:59:34	0.18	18.38	196.62	2.10
4/27/03	17:59:35	0.18	18.38	196.62	2.10
4/27/03	17:59:35	0.19	18.39	196.61	2.11
4/27/03	17:59:35	0.19	18.40	196.60	2.12
4/27/03	17:59:35	0.19	18.39	196.61	2.11
4/27/03	17:59:35	0.19	18.39	196.61	2.11
4/27/03	17:59:35	0.19	18.40	196.60	2.12
4/27/03	17:59:35	0.20	18.41	196.59	2.13
4/27/03	17:59:35	0.20	18.43	196.57	2.15
4/27/03	17:59:35	0.20	18.43	196.57	2.15
4/27/03	17:59:36	0.20	18.45	196.55	2.17
4/27/03	17:59:36	0.20	18.46	196.54	2.18
4/27/03	17:59:36	0.20	18.47	196.53	2.19
4/27/03	17:59:36	0.21	18.47	196.53	2.19
4/27/03	17:59:36	0.21	18.49	196.51	2.21

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	17:59:36	0.21	18.49	196.51	2.21
4/27/03	17:59:36	0.21	18.48	196.52	2.20
4/27/03	17:59:36	0.21	18.49	196.51	2.21
4/27/03	17:59:36	0.21	18.49	196.51	2.21
4/27/03	17:59:36	0.22	18.51	196.49	2.23
4/27/03	17:59:37	0.22	18.51	196.49	2.23
4/27/03	17:59:37	0.22	18.54	196.46	2.26
4/27/03	17:59:37	0.22	18.54	196.46	2.26
4/27/03	17:59:37	0.22	18.54	196.46	2.26
4/27/03	17:59:37	0.23	18.56	196.44	2.28
4/27/03	17:59:37	0.23	18.57	196.43	2.29
4/27/03	17:59:37	0.23	18.57	196.43	2.29
4/27/03	17:59:37	0.23	18.57	196.43	2.29
4/27/03	17:59:37	0.23	18.59	196.41	2.31
4/27/03	17:59:38	0.23	18.59	196.41	2.31
4/27/03	17:59:38	0.24	18.59	196.41	2.31
4/27/03	17:59:38	0.24	18.60	196.40	2.32
4/27/03	17:59:38	0.24	18.62	196.38	2.34
4/27/03	17:59:38	0.24	18.61	196.39	2.33
4/27/03	17:59:38	0.24	18.63	196.37	2.35
4/27/03	17:59:38	0.24	18.65	196.35	2.37
4/27/03	17:59:38	0.25	18.65	196.35	2.37
4/27/03	17:59:38	0.25	18.65	196.35	2.37
4/27/03	17:59:38	0.25	18.67	196.33	2.39
4/27/03	17:59:39	0.25	18.67	196.33	2.39
4/27/03	17:59:39	0.25	18.68	196.32	2.40
4/27/03	17:59:39	0.25	18.68	196.32	2.40
4/27/03	17:59:39	0.26	18.69	196.31	2.41
4/27/03	17:59:39	0.26	18.70	196.30	2.42
4/27/03	17:59:39	0.26	18.71	196.29	2.43
4/27/03	17:59:39	0.26	18.71	196.29	2.43
4/27/03	17:59:39	0.26	18.72	196.28	2.44
4/27/03	17:59:39	0.27	18.73	196.27	2.45
4/27/03	17:59:40	0.27	18.74	196.26	2.46
4/27/03	17:59:40	0.27	18.75	196.25	2.47
4/27/03	17:59:40	0.27	18.76	196.24	2.48
4/27/03	17:59:40	0.27	18.77	196.23	2.49
4/27/03	17:59:40	0.27	18.77	196.23	2.49
4/27/03	17:59:40	0.28	18.78	196.22	2.50
4/27/03	17:59:40	0.28	18.78	196.22	2.50
4/27/03	17:59:40	0.28	18.79	196.21	2.51
4/27/03	17:59:40	0.28	18.80	196.20	2.52
4/27/03	17:59:40	0.28	18.81	196.19	2.53
4/27/03	17:59:41	0.28	18.82	196.18	2.54
4/27/03	17:59:41	0.29	18.83	196.17	2.55
4/27/03	17:59:41	0.29	18.83	196.17	2.55
4/27/03	17:59:41	0.29	18.84	196.16	2.56
4/27/03	17:59:41	0.29	18.85	196.15	2.57
4/27/03	17:59:41	0.29	18.86	196.14	2.58
4/27/03	17:59:41	0.30	18.87	196.13	2.59

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	17:59:41	0.30	18.88	196.12	2.60
4/27/03	17:59:41	0.30	18.88	196.12	2.60
4/27/03	17:59:42	0.30	18.88	196.12	2.60
4/27/03	17:59:42	0.30	18.90	196.10	2.62
4/27/03	17:59:42	0.30	18.90	196.10	2.62
4/27/03	17:59:42	0.31	18.91	196.09	2.63
4/27/03	17:59:42	0.31	18.92	196.08	2.64
4/27/03	17:59:42	0.31	18.93	196.07	2.65
4/27/03	17:59:42	0.31	18.94	196.06	2.66
4/27/03	17:59:42	0.31	18.94	196.06	2.66
4/27/03	17:59:42	0.31	18.96	196.04	2.68
4/27/03	17:59:42	0.32	18.96	196.04	2.68
4/27/03	17:59:43	0.32	18.96	196.04	2.68
4/27/03	17:59:43	0.32	18.97	196.03	2.69
4/27/03	17:59:43	0.32	18.98	196.02	2.70
4/27/03	17:59:43	0.32	18.98	196.02	2.70
4/27/03	17:59:43	0.33	19.00	196.00	2.72
4/27/03	17:59:43	0.33	19.01	195.99	2.73
4/27/03	17:59:43	0.33	19.02	195.98	2.74
4/27/03	17:59:43	0.33	19.02	195.98	2.74
4/27/03	17:59:43	0.33	19.04	195.96	2.76
4/27/03	17:59:44	0.33	19.04	195.96	2.76
4/27/03	17:59:44	0.34	19.04	195.96	2.76
4/27/03	17:59:44	0.34	19.06	195.94	2.78
4/27/03	17:59:44	0.34	19.06	195.94	2.78
4/27/03	17:59:44	0.34	19.07	195.93	2.79
4/27/03	17:59:44	0.34	19.09	195.91	2.81
4/27/03	17:59:44	0.34	19.09	195.91	2.81
4/27/03	17:59:44	0.35	19.09	195.91	2.81
4/27/03	17:59:44	0.35	19.09	195.91	2.81
4/27/03	17:59:44	0.35	19.11	195.89	2.83
4/27/03	17:59:45	0.35	19.11	195.89	2.83
4/27/03	17:59:45	0.35	19.12	195.88	2.84
4/27/03	17:59:45	0.35	19.13	195.87	2.85
4/27/03	17:59:45	0.36	19.14	195.86	2.86
4/27/03	17:59:45	0.36	19.14	195.86	2.86
4/27/03	17:59:45	0.36	19.16	195.84	2.88
4/27/03	17:59:45	0.36	19.16	195.84	2.88
4/27/03	17:59:45	0.36	19.17	195.83	2.89
4/27/03	17:59:45	0.37	19.18	195.82	2.90
4/27/03	17:59:46	0.37	19.18	195.82	2.90
4/27/03	17:59:46	0.37	19.19	195.81	2.91
4/27/03	17:59:46	0.37	19.19	195.81	2.91
4/27/03	17:59:46	0.37	19.21	195.79	2.93
4/27/03	17:59:46	0.37	19.22	195.78	2.94
4/27/03	17:59:46	0.38	19.23	195.77	2.95
4/27/03	17:59:46	0.38	19.23	195.77	2.95
4/27/03	17:59:46	0.38	19.24	195.76	2.96
4/27/03	17:59:46	0.38	19.24	195.76	2.96
4/27/03	17:59:46	0.38	19.26	195.74	2.98

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	17:59:47	0.38	19.27	195.73	2.99
4/27/03	17:59:47	0.39	19.27	195.73	2.99
4/27/03	17:59:47	0.39	19.27	195.73	2.99
4/27/03	17:59:47	0.39	19.29	195.71	3.01
4/27/03	17:59:47	0.39	19.30	195.70	3.02
4/27/03	17:59:47	0.39	19.30	195.70	3.02
4/27/03	17:59:47	0.40	19.31	195.69	3.03
4/27/03	17:59:47	0.40	19.31	195.69	3.03
4/27/03	17:59:47	0.40	19.32	195.68	3.04
4/27/03	17:59:48	0.40	19.33	195.67	3.05
4/27/03	17:59:48	0.40	19.34	195.66	3.06
4/27/03	17:59:48	0.40	19.35	195.65	3.07
4/27/03	17:59:48	0.41	19.35	195.65	3.07
4/27/03	17:59:48	0.41	19.35	195.65	3.07
4/27/03	17:59:48	0.41	19.37	195.63	3.09
4/27/03	17:59:48	0.41	19.37	195.63	3.09
4/27/03	17:59:48	0.41	19.38	195.62	3.10
4/27/03	17:59:48	0.41	19.38	195.62	3.10
4/27/03	17:59:48	0.42	19.40	195.60	3.12
4/27/03	17:59:49	0.42	19.40	195.60	3.12
4/27/03	17:59:49	0.42	19.40	195.60	3.12
4/27/03	17:59:49	0.42	19.41	195.59	3.13
4/27/03	17:59:49	0.42	19.42	195.58	3.14
4/27/03	17:59:49	0.43	19.43	195.57	3.15
4/27/03	17:59:49	0.43	19.43	195.57	3.15
4/27/03	17:59:49	0.43	19.44	195.56	3.16
4/27/03	17:59:49	0.43	19.45	195.55	3.17
4/27/03	17:59:49	0.43	19.45	195.55	3.17
4/27/03	17:59:50	0.43	19.47	195.53	3.19
4/27/03	17:59:50	0.44	19.47	195.53	3.19
4/27/03	17:59:50	0.44	19.48	195.52	3.20
4/27/03	17:59:50	0.44	19.48	195.52	3.20
4/27/03	17:59:50	0.44	19.49	195.51	3.21
4/27/03	17:59:50	0.44	19.50	195.50	3.22
4/27/03	17:59:50	0.44	19.51	195.49	3.23
4/27/03	17:59:50	0.45	19.51	195.49	3.23
4/27/03	17:59:50	0.45	19.52	195.48	3.24
4/27/03	17:59:50	0.45	19.53	195.47	3.25
4/27/03	17:59:51	0.45	19.53	195.47	3.25
4/27/03	17:59:51	0.45	19.54	195.46	3.26
4/27/03	17:59:51	0.45	19.55	195.45	3.27
4/27/03	17:59:51	0.46	19.56	195.44	3.28
4/27/03	17:59:51	0.46	19.57	195.43	3.29
4/27/03	17:59:51	0.46	19.57	195.43	3.29
4/27/03	17:59:51	0.46	19.58	195.42	3.30
4/27/03	17:59:51	0.46	19.58	195.42	3.30
4/27/03	17:59:51	0.47	19.60	195.40	3.32
4/27/03	17:59:52	0.47	19.60	195.40	3.32
4/27/03	17:59:52	0.47	19.61	195.39	3.33
4/27/03	17:59:52	0.47	19.61	195.39	3.33

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	17:59:52	0.47	19.62	195.38	3.34
4/27/03	17:59:52	0.47	19.63	195.37	3.35
4/27/03	17:59:52	0.48	19.64	195.36	3.36
4/27/03	17:59:52	0.48	19.64	195.36	3.36
4/27/03	17:59:52	0.48	19.66	195.34	3.38
4/27/03	17:59:52	0.48	19.66	195.34	3.38
4/27/03	17:59:52	0.48	19.66	195.34	3.38
4/27/03	17:59:53	0.48	19.68	195.32	3.40
4/27/03	17:59:53	0.49	19.68	195.32	3.40
4/27/03	17:59:53	0.49	19.69	195.31	3.41
4/27/03	17:59:53	0.49	19.70	195.30	3.42
4/27/03	17:59:53	0.49	19.71	195.29	3.43
4/27/03	17:59:53	0.49	19.71	195.29	3.43
4/27/03	17:59:53	0.50	19.71	195.29	3.43
4/27/03	17:59:53	0.50	19.72	195.28	3.44
4/27/03	17:59:53	0.50	19.73	195.27	3.45
4/27/03	17:59:54	0.50	19.74	195.26	3.46
4/27/03	17:59:54	0.50	19.74	195.26	3.46
4/27/03	17:59:54	0.50	19.75	195.25	3.47
4/27/03	17:59:54	0.51	19.76	195.24	3.48
4/27/03	17:59:54	0.51	19.77	195.23	3.49
4/27/03	17:59:54	0.51	19.78	195.22	3.50
4/27/03	17:59:54	0.51	19.78	195.22	3.50
4/27/03	17:59:54	0.51	19.79	195.21	3.51
4/27/03	17:59:54	0.51	19.79	195.21	3.51
4/27/03	17:59:54	0.52	19.80	195.20	3.52
4/27/03	17:59:55	0.52	19.82	195.18	3.54
4/27/03	17:59:55	0.52	19.83	195.17	3.55
4/27/03	17:59:55	0.52	19.83	195.17	3.55
4/27/03	17:59:55	0.52	19.84	195.16	3.56
4/27/03	17:59:55	0.53	19.84	195.16	3.56
4/27/03	17:59:55	0.53	19.85	195.15	3.57
4/27/03	17:59:55	0.53	19.86	195.14	3.58
4/27/03	17:59:55	0.53	19.87	195.13	3.59
4/27/03	17:59:55	0.53	19.88	195.12	3.60
4/27/03	17:59:56	0.53	19.88	195.12	3.60
4/27/03	17:59:56	0.54	19.89	195.11	3.61
4/27/03	17:59:56	0.54	19.90	195.10	3.62
4/27/03	17:59:56	0.54	19.90	195.10	3.62
4/27/03	17:59:56	0.54	19.92	195.08	3.64
4/27/03	17:59:56	0.54	19.92	195.08	3.64
4/27/03	17:59:56	0.54	19.93	195.07	3.65
4/27/03	17:59:56	0.55	19.94	195.06	3.66
4/27/03	17:59:56	0.55	19.95	195.05	3.67
4/27/03	17:59:56	0.55	19.95	195.05	3.67
4/27/03	17:59:57	0.55	19.97	195.03	3.69
4/27/03	17:59:57	0.55	19.97	195.03	3.69
4/27/03	17:59:57	0.55	19.97	195.03	3.69
4/27/03	17:59:57	0.56	19.98	195.02	3.70
4/27/03	17:59:57	0.56	19.99	195.01	3.71

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	17:59:57	0.56	20.00	195.00	3.72
4/27/03	17:59:57	0.56	20.01	194.99	3.73
4/27/03	17:59:57	0.56	20.02	194.98	3.74
4/27/03	17:59:57	0.57	20.02	194.98	3.74
4/27/03	17:59:58	0.57	20.02	194.98	3.74
4/27/03	17:59:58	0.57	20.04	194.96	3.76
4/27/03	17:59:58	0.57	20.04	194.96	3.76
4/27/03	17:59:58	0.57	20.05	194.95	3.77
4/27/03	17:59:58	0.57	20.06	194.94	3.78
4/27/03	17:59:58	0.58	20.07	194.93	3.79
4/27/03	17:59:58	0.58	20.08	194.92	3.80
4/27/03	17:59:58	0.58	20.08	194.92	3.80
4/27/03	17:59:58	0.58	20.09	194.91	3.81
4/27/03	17:59:58	0.58	20.10	194.90	3.82
4/27/03	17:59:59	0.58	20.10	194.90	3.82
4/27/03	17:59:59	0.59	20.11	194.89	3.83
4/27/03	17:59:59	0.59	20.12	194.88	3.84
4/27/03	17:59:59	0.59	20.13	194.87	3.85
4/27/03	17:59:59	0.59	20.14	194.86	3.86
4/27/03	17:59:59	0.59	20.15	194.85	3.87
4/27/03	17:59:59	0.60	20.15	194.85	3.87
4/27/03	17:59:59	0.60	20.15	194.85	3.87
4/27/03	17:59:59	0.60	20.17	194.83	3.89
4/27/03	18:00:00	0.60	20.18	194.82	3.90
4/27/03	18:00:00	0.60	20.18	194.82	3.90
4/27/03	18:00:00	0.60	20.19	194.81	3.91
4/27/03	18:00:00	0.61	20.20	194.80	3.92
4/27/03	18:00:00	0.61	20.20	194.80	3.92
4/27/03	18:00:00	0.61	20.22	194.78	3.94
4/27/03	18:00:00	0.61	20.22	194.78	3.94
4/27/03	18:00:00	0.61	20.23	194.77	3.95
4/27/03	18:00:00	0.61	20.23	194.77	3.95
4/27/03	18:00:00	0.62	20.24	194.76	3.96
4/27/03	18:00:01	0.62	20.25	194.75	3.97
4/27/03	18:00:01	0.62	20.26	194.74	3.98
4/27/03	18:00:01	0.62	20.26	194.74	3.98
4/27/03	18:00:01	0.62	20.28	194.72	4.00
4/27/03	18:00:01	0.63	20.28	194.72	4.00
4/27/03	18:00:01	0.63	20.28	194.72	4.00
4/27/03	18:00:01	0.63	20.28	194.72	4.00
4/27/03	18:00:01	0.63	20.31	194.69	4.03
4/27/03	18:00:01	0.63	20.31	194.69	4.03
4/27/03	18:00:02	0.63	20.31	194.69	4.03
4/27/03	18:00:02	0.64	20.33	194.67	4.05
4/27/03	18:00:02	0.64	20.34	194.66	4.06
4/27/03	18:00:02	0.64	20.35	194.65	4.07
4/27/03	18:00:02	0.64	20.35	194.65	4.07
4/27/03	18:00:02	0.64	20.36	194.64	4.08
4/27/03	18:00:02	0.64	20.36	194.64	4.08
4/27/03	18:00:02	0.65	20.37	194.63	4.09

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	18:00:02	0.65	20.39	194.61	4.11
4/27/03	18:00:02	0.65	20.39	194.61	4.11
4/27/03	18:00:03	0.65	20.40	194.60	4.12
4/27/03	18:00:03	0.65	20.41	194.59	4.13
4/27/03	18:00:03	0.65	20.42	194.58	4.14
4/27/03	18:00:03	0.66	20.42	194.58	4.14
4/27/03	18:00:03	0.66	20.43	194.57	4.15
4/27/03	18:00:03	0.66	20.44	194.56	4.16
4/27/03	18:00:03	0.66	20.44	194.56	4.16
4/27/03	18:00:03	0.66	20.45	194.55	4.17
4/27/03	18:00:03	0.67	20.46	194.54	4.18
4/27/03	18:00:04	0.67	20.47	194.53	4.19
4/27/03	18:00:04	0.67	20.47	194.53	4.19
4/27/03	18:00:04	0.67	20.49	194.51	4.21
4/27/03	18:00:04	0.67	20.49	194.51	4.21
4/27/03	18:00:04	0.67	20.50	194.50	4.22
4/27/03	18:00:04	0.68	20.51	194.49	4.23
4/27/03	18:00:04	0.68	20.51	194.49	4.23
4/27/03	18:00:04	0.68	20.52	194.48	4.24
4/27/03	18:00:04	0.68	20.52	194.48	4.24
4/27/03	18:00:04	0.68	20.52	194.48	4.24
4/27/03	18:00:05	0.68	20.54	194.46	4.26
4/27/03	18:00:05	0.69	20.55	194.45	4.27
4/27/03	18:00:05	0.69	20.56	194.44	4.28
4/27/03	18:00:05	0.69	20.56	194.44	4.28
4/27/03	18:00:05	0.69	20.57	194.43	4.29
4/27/03	18:00:05	0.69	20.57	194.43	4.29
4/27/03	18:00:05	0.70	20.59	194.41	4.31
4/27/03	18:00:05	0.70	20.60	194.40	4.32
4/27/03	18:00:05	0.70	20.60	194.40	4.32
4/27/03	18:00:06	0.70	20.61	194.39	4.33
4/27/03	18:00:06	0.70	20.62	194.38	4.34
4/27/03	18:00:06	0.70	20.62	194.38	4.34
4/27/03	18:00:06	0.71	20.63	194.37	4.35
4/27/03	18:00:06	0.71	20.64	194.36	4.36
4/27/03	18:00:06	0.71	20.65	194.35	4.37
4/27/03	18:00:06	0.71	20.65	194.35	4.37
4/27/03	18:00:06	0.71	20.66	194.34	4.38
4/27/03	18:00:06	0.71	20.67	194.33	4.39
4/27/03	18:00:06	0.72	20.67	194.33	4.39
4/27/03	18:00:07	0.72	20.68	194.32	4.40
4/27/03	18:00:07	0.72	20.70	194.30	4.42
4/27/03	18:00:07	0.72	20.70	194.30	4.42
4/27/03	18:00:07	0.72	20.71	194.29	4.43
4/27/03	18:00:07	0.73	20.72	194.28	4.44
4/27/03	18:00:07	0.73	20.73	194.27	4.45
4/27/03	18:00:07	0.73	20.73	194.27	4.45
4/27/03	18:00:07	0.73	20.73	194.27	4.45
4/27/03	18:00:07	0.73	20.75	194.25	4.47
4/27/03	18:00:08	0.73	20.76	194.24	4.48

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	18:00:08	0.74	20.77	194.23	4.49
4/27/03	18:00:08	0.74	20.77	194.23	4.49
4/27/03	18:00:08	0.74	20.78	194.22	4.50
4/27/03	18:00:08	0.74	20.78	194.22	4.50
4/27/03	18:00:08	0.74	20.79	194.21	4.51
4/27/03	18:00:08	0.74	20.80	194.20	4.52
4/27/03	18:00:08	0.75	20.80	194.20	4.52
4/27/03	18:00:08	0.75	20.81	194.19	4.53
4/27/03	18:00:08	0.75	20.82	194.18	4.54
4/27/03	18:00:09	0.75	20.83	194.17	4.55
4/27/03	18:00:09	0.75	20.84	194.16	4.56
4/27/03	18:00:09	0.75	20.85	194.15	4.57
4/27/03	18:00:09	0.76	20.86	194.14	4.58
4/27/03	18:00:09	0.76	20.86	194.14	4.58
4/27/03	18:00:09	0.76	20.87	194.13	4.59
4/27/03	18:00:09	0.76	20.87	194.13	4.59
4/27/03	18:00:09	0.76	20.88	194.12	4.60
4/27/03	18:00:09	0.77	20.89	194.11	4.61
4/27/03	18:00:10	0.77	20.90	194.10	4.62
4/27/03	18:00:10	0.77	20.91	194.09	4.63
4/27/03	18:00:10	0.77	20.91	194.09	4.63
4/27/03	18:00:10	0.77	20.92	194.08	4.64
4/27/03	18:00:10	0.77	20.93	194.07	4.65
4/27/03	18:00:10	0.78	20.93	194.07	4.65
4/27/03	18:00:10	0.78	20.95	194.05	4.67
4/27/03	18:00:10	0.78	20.96	194.04	4.68
4/27/03	18:00:10	0.78	20.96	194.04	4.68
4/27/03	18:00:10	0.78	20.97	194.03	4.69
4/27/03	18:00:11	0.78	20.98	194.02	4.70
4/27/03	18:00:11	0.79	20.99	194.01	4.71
4/27/03	18:00:11	0.79	20.99	194.01	4.71
4/27/03	18:00:11	0.79	20.99	194.01	4.71
4/27/03	18:00:11	0.79	21.01	193.99	4.73
4/27/03	18:00:11	0.79	21.02	193.98	4.74
4/27/03	18:00:11	0.80	21.02	193.98	4.74
4/27/03	18:00:11	0.80	21.04	193.96	4.76
4/27/03	18:00:11	0.80	21.04	193.96	4.76
4/27/03	18:00:12	0.80	21.04	193.96	4.76
4/27/03	18:00:12	0.80	21.06	193.94	4.78
4/27/03	18:00:12	0.80	21.06	193.94	4.78
4/27/03	18:00:12	0.81	21.07	193.93	4.79
4/27/03	18:00:12	0.81	21.07	193.93	4.79
4/27/03	18:00:12	0.81	21.08	193.92	4.80
4/27/03	18:00:12	0.81	21.09	193.91	4.81
4/27/03	18:00:12	0.81	21.10	193.90	4.82
4/27/03	18:00:12	0.81	21.11	193.89	4.83
4/27/03	18:00:12	0.82	21.12	193.88	4.84
4/27/03	18:00:13	0.82	21.12	193.88	4.84
4/27/03	18:00:13	0.82	21.13	193.87	4.85
4/27/03	18:00:13	0.82	21.14	193.86	4.86

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	18:00:13	0.82	21.14	193.86	4.86
4/27/03	18:00:13	0.82	21.15	193.85	4.87
4/27/03	18:00:13	0.83	21.17	193.83	4.89
4/27/03	18:00:13	0.83	21.17	193.83	4.89
4/27/03	18:00:13	0.83	21.18	193.82	4.90
4/27/03	18:00:13	0.83	21.19	193.81	4.91
4/27/03	18:00:13	0.83	21.19	193.81	4.91
4/27/03	18:00:14	0.83	21.20	193.80	4.92
4/27/03	18:00:14	0.84	21.21	193.79	4.93
4/27/03	18:00:14	0.84	21.22	193.78	4.94
4/27/03	18:00:14	0.84	21.22	193.78	4.94
4/27/03	18:00:15	0.87	21.34	193.66	5.06
4/27/03	18:00:16	0.88	21.42	193.58	5.14
4/27/03	18:00:18	0.90	21.48	193.52	5.20
4/27/03	18:00:19	0.92	21.56	193.44	5.28
4/27/03	18:00:20	0.93	21.63	193.37	5.35
4/27/03	18:00:21	0.95	21.70	193.30	5.42
4/27/03	18:00:22	0.97	21.78	193.22	5.50
4/27/03	18:00:23	0.98	21.84	193.16	5.56
4/27/03	18:00:24	1.00	21.92	193.08	5.64
4/27/03	18:00:25	1.02	21.99	193.01	5.71
4/27/03	18:00:26	1.03	22.06	192.94	5.78
4/27/03	18:00:27	1.05	22.13	192.87	5.85
4/27/03	18:00:28	1.07	22.21	192.79	5.93
4/27/03	18:00:29	1.08	22.28	192.72	6.00
4/27/03	18:00:30	1.10	22.36	192.64	6.08
4/27/03	18:00:31	1.12	22.43	192.57	6.15
4/27/03	18:00:32	1.13	22.49	192.51	6.21
4/27/03	18:00:33	1.15	22.57	192.43	6.29
4/27/03	18:00:34	1.17	22.64	192.36	6.36
4/27/03	18:00:35	1.18	22.71	192.29	6.43
4/27/03	18:00:36	1.20	22.78	192.22	6.50
4/27/03	18:00:37	1.22	22.86	192.14	6.58
4/27/03	18:00:38	1.23	22.93	192.07	6.65
4/27/03	18:00:39	1.25	23.01	191.99	6.73
4/27/03	18:00:40	1.27	23.07	191.93	6.79
4/27/03	18:00:41	1.28	23.15	191.85	6.87
4/27/03	18:00:42	1.30	23.22	191.78	6.94
4/27/03	18:00:43	1.32	23.29	191.71	7.01
4/27/03	18:00:44	1.33	23.37	191.63	7.09
4/27/03	18:00:45	1.35	23.43	191.57	7.15
4/27/03	18:00:46	1.37	23.51	191.49	7.23
4/27/03	18:00:47	1.38	23.58	191.42	7.30
4/27/03	18:00:48	1.40	23.65	191.35	7.37
4/27/03	18:00:49	1.42	23.72	191.28	7.44
4/27/03	18:00:50	1.43	23.79	191.21	7.51
4/27/03	18:00:51	1.45	23.87	191.13	7.59
4/27/03	18:00:52	1.47	23.94	191.06	7.66
4/27/03	18:00:53	1.48	24.01	190.99	7.73
4/27/03	18:00:54	1.50	24.08	190.92	7.80

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	18:00:55	1.52	24.16	190.84	7.88
4/27/03	18:00:56	1.53	24.23	190.77	7.95
4/27/03	18:00:57	1.55	24.30	190.70	8.02
4/27/03	18:00:58	1.57	24.37	190.63	8.09
4/27/03	18:00:59	1.58	24.44	190.56	8.16
4/27/03	18:01:00	1.60	24.52	190.48	8.24
4/27/03	18:01:01	1.62	24.59	190.41	8.31
4/27/03	18:01:02	1.63	24.65	190.35	8.37
4/27/03	18:01:03	1.65	24.73	190.27	8.45
4/27/03	18:01:04	1.67	24.80	190.20	8.52
4/27/03	18:01:05	1.68	24.87	190.13	8.59
4/27/03	18:01:06	1.70	24.94	190.06	8.66
4/27/03	18:01:07	1.72	25.01	189.99	8.73
4/27/03	18:01:08	1.73	25.09	189.91	8.81
4/27/03	18:01:09	1.75	25.16	189.84	8.88
4/27/03	18:01:10	1.77	25.23	189.77	8.95
4/27/03	18:01:11	1.78	25.30	189.70	9.02
4/27/03	18:01:12	1.80	25.38	189.62	9.10
4/27/03	18:01:13	1.82	25.44	189.56	9.16
4/27/03	18:01:14	1.83	25.51	189.49	9.23
4/27/03	18:01:15	1.85	25.59	189.41	9.31
4/27/03	18:01:16	1.87	25.66	189.34	9.38
4/27/03	18:01:17	1.88	25.73	189.27	9.45
4/27/03	18:01:18	1.90	25.79	189.21	9.51
4/27/03	18:01:19	1.92	25.87	189.13	9.59
4/27/03	18:01:20	1.93	25.95	189.05	9.67
4/27/03	18:01:21	1.95	26.01	188.99	9.73
4/27/03	18:01:22	1.97	26.08	188.92	9.80
4/27/03	18:01:23	1.98	26.16	188.84	9.88
4/27/03	18:01:24	2.00	26.23	188.77	9.95
4/27/03	18:01:25	2.02	26.31	188.69	10.03
4/27/03	18:01:26	2.03	26.37	188.63	10.09
4/27/03	18:01:27	2.05	26.44	188.56	10.16
4/27/03	18:01:28	2.07	26.52	188.48	10.24
4/27/03	18:01:29	2.08	26.59	188.41	10.31
4/27/03	18:01:30	2.10	26.65	188.35	10.37
4/27/03	18:01:31	2.12	26.73	188.27	10.45
4/27/03	18:01:32	2.13	26.80	188.20	10.52
4/27/03	18:01:33	2.15	26.87	188.13	10.59
4/27/03	18:01:34	2.17	26.94	188.06	10.66
4/27/03	18:01:35	2.18	27.01	187.99	10.73
4/27/03	18:01:36	2.20	27.08	187.92	10.80
4/27/03	18:01:37	2.22	27.15	187.85	10.87
4/27/03	18:01:38	2.23	27.22	187.78	10.94
4/27/03	18:01:39	2.25	27.30	187.70	11.02
4/27/03	18:01:40	2.27	27.37	187.63	11.09
4/27/03	18:01:41	2.28	27.44	187.56	11.16
4/27/03	18:01:42	2.30	27.51	187.49	11.23
4/27/03	18:01:43	2.32	27.58	187.42	11.30
4/27/03	18:01:44	2.33	27.64	187.36	11.36

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	18:01:45	2.35	27.72	187.28	11.44
4/27/03	18:01:46	2.37	27.79	187.21	11.51
4/27/03	18:01:47	2.38	27.86	187.14	11.58
4/27/03	18:01:48	2.40	27.93	187.07	11.65
4/27/03	18:01:49	2.42	28.00	187.00	11.72
4/27/03	18:01:50	2.43	28.08	186.92	11.80
4/27/03	18:01:51	2.45	28.14	186.86	11.86
4/27/03	18:01:52	2.47	28.21	186.79	11.93
4/27/03	18:01:53	2.48	28.29	186.71	12.01
4/27/03	18:01:54	2.50	28.35	186.65	12.07
4/27/03	18:01:55	2.52	28.42	186.58	12.14
4/27/03	18:01:56	2.53	28.50	186.50	12.22
4/27/03	18:01:57	2.55	28.57	186.43	12.29
4/27/03	18:01:58	2.57	28.64	186.36	12.36
4/27/03	18:01:59	2.58	28.70	186.30	12.42
4/27/03	18:02:00	2.60	28.78	186.22	12.50
4/27/03	18:02:01	2.62	28.85	186.15	12.57
4/27/03	18:02:02	2.63	28.91	186.09	12.63
4/27/03	18:02:03	2.65	28.99	186.01	12.71
4/27/03	18:02:04	2.67	29.05	185.95	12.77
4/27/03	18:02:05	2.68	29.13	185.87	12.85
4/27/03	18:02:06	2.70	29.20	185.80	12.92
4/27/03	18:02:07	2.72	29.27	185.73	12.99
4/27/03	18:02:08	2.73	29.34	185.66	13.06
4/27/03	18:02:09	2.75	29.41	185.59	13.13
4/27/03	18:02:10	2.77	29.48	185.52	13.20
4/27/03	18:02:11	2.78	29.54	185.46	13.26
4/27/03	18:02:12	2.80	29.61	185.39	13.33
4/27/03	18:02:13	2.82	29.69	185.31	13.41
4/27/03	18:02:14	2.83	29.76	185.24	13.48
4/27/03	18:02:15	2.85	29.82	185.18	13.54
4/27/03	18:02:24	3.02	30.53	184.47	14.25
4/27/03	18:02:34	3.18	31.22	183.78	14.94
4/27/03	18:02:44	3.35	31.92	183.08	15.64
4/27/03	18:02:54	3.52	32.62	182.38	16.34
4/27/03	18:03:04	3.68	33.30	181.70	17.02
4/27/03	18:03:14	3.85	33.99	181.01	17.71
4/27/03	18:03:24	4.02	34.68	180.32	18.40
4/27/03	18:03:34	4.18	35.36	179.64	19.08
4/27/03	18:03:44	4.35	36.05	178.95	19.77
4/27/03	18:03:54	4.52	36.73	178.27	20.45
4/27/03	18:04:04	4.68	37.41	177.59	21.13
4/27/03	18:04:14	4.85	38.08	176.92	21.80
4/27/03	18:04:24	5.02	38.77	176.23	22.49
4/27/03	18:04:34	5.18	39.46	175.54	23.18
4/27/03	18:04:44	5.35	40.14	174.86	23.86
4/27/03	18:04:54	5.52	40.80	174.20	24.52
4/27/03	18:05:04	5.68	41.46	173.54	25.18
4/27/03	18:05:14	5.85	42.13	172.87	25.85
4/27/03	18:05:24	6.02	42.79	172.21	26.51

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	18:05:34	6.18	43.45	171.55	27.17
4/27/03	18:05:44	6.35	44.11	170.89	27.83
4/27/03	18:05:54	6.52	44.76	170.24	28.48
4/27/03	18:06:04	6.68	45.41	169.59	29.13
4/27/03	18:06:14	6.85	46.05	168.95	29.77
4/27/03	18:06:24	7.02	46.70	168.30	30.42
4/27/03	18:06:34	7.18	47.34	167.66	31.06
4/27/03	18:06:44	7.35	47.99	167.01	31.71
4/27/03	18:06:54	7.52	48.62	166.38	32.34
4/27/03	18:07:04	7.68	49.26	165.74	32.98
4/27/03	18:07:14	7.85	49.90	165.10	33.62
4/27/03	18:07:24	8.02	50.53	164.47	34.25
4/27/03	18:07:34	8.18	51.16	163.84	34.88
4/27/03	18:07:44	8.35	51.78	163.22	35.50
4/27/03	18:07:54	8.52	52.41	162.59	36.13
4/27/03	18:08:04	8.68	53.03	161.97	36.75
4/27/03	18:08:14	8.85	53.65	161.35	37.37
4/27/03	18:08:24	9.02	54.27	160.73	37.99
4/27/03	18:08:34	9.18	54.89	160.11	38.61
4/27/03	18:08:44	9.35	55.50	159.50	39.22
4/27/03	18:08:54	9.52	56.11	158.89	39.83
4/27/03	18:09:04	9.68	56.72	158.28	40.44
4/27/03	18:09:14	9.85	57.32	157.68	41.04
4/27/03	18:09:24	10.02	57.92	157.08	41.64
4/27/03	18:09:34	10.18	58.53	156.47	42.25
4/27/03	18:09:44	10.35	59.13	155.87	42.85
4/27/03	18:09:54	10.52	59.71	155.29	43.43
4/27/03	18:10:04	10.68	60.32	154.68	44.04
4/27/03	18:10:14	10.85	60.90	154.10	44.62
4/27/03	18:10:24	11.02	61.48	153.52	45.20
4/27/03	18:10:34	11.18	62.07	152.93	45.79
4/27/03	18:10:44	11.35	62.66	152.34	46.38
4/27/03	18:10:54	11.52	63.25	151.75	46.97
4/27/03	18:11:04	11.68	63.81	151.19	47.53
4/27/03	18:11:14	11.85	64.38	150.62	48.10
4/27/03	18:11:24	12.02	64.98	150.02	48.70
4/27/03	18:11:34	12.18	65.53	149.47	49.25
4/27/03	18:11:44	12.35	66.10	148.90	49.82
4/27/03	18:11:54	12.52	66.68	148.32	50.40
4/27/03	18:12:04	12.68	67.26	147.74	50.98
4/27/03	18:12:14	12.85	67.83	147.17	51.55
4/27/03	18:12:24	13.02	68.40	146.60	52.12
4/27/03	18:12:34	13.18	68.98	146.02	52.70
4/27/03	18:12:44	13.35	69.55	145.45	53.27
4/27/03	18:12:54	13.52	70.13	144.87	53.85
4/27/03	18:13:04	13.68	70.71	144.29	54.43
4/27/03	18:13:14	13.85	71.27	143.73	54.99
4/27/03	18:13:24	14.02	71.83	143.17	55.55
4/27/03	18:13:34	14.18	72.39	142.61	56.11
4/27/03	18:13:44	14.35	72.95	142.05	56.67

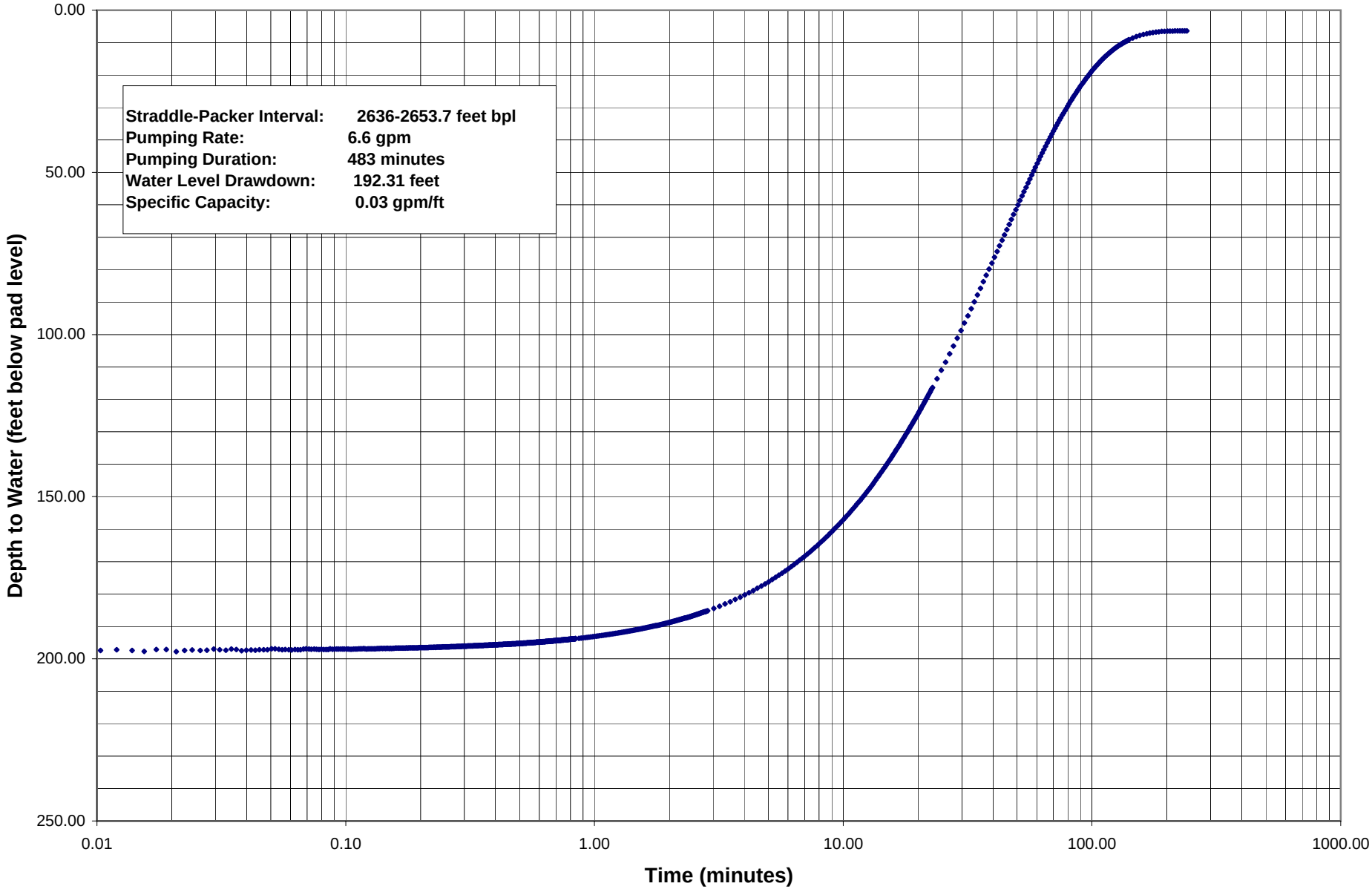
Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	18:13:54	14.52	73.51	141.49	57.23
4/27/03	18:14:04	14.68	74.05	140.95	57.77
4/27/03	18:14:14	14.85	74.60	140.40	58.32
4/27/03	18:14:24	15.02	75.14	139.86	58.86
4/27/03	18:14:34	15.18	75.69	139.31	59.41
4/27/03	18:14:44	15.35	76.24	138.76	59.96
4/27/03	18:14:54	15.52	76.77	138.23	60.49
4/27/03	18:15:04	15.68	77.31	137.69	61.03
4/27/03	18:15:14	15.85	77.84	137.16	61.56
4/27/03	18:15:24	16.02	78.38	136.62	62.10
4/27/03	18:15:34	16.18	78.91	136.09	62.63
4/27/03	18:15:44	16.35	79.45	135.55	63.17
4/27/03	18:15:54	16.52	79.98	135.02	63.70
4/27/03	18:16:04	16.68	80.50	134.50	64.22
4/27/03	18:16:14	16.85	81.02	133.98	64.74
4/27/03	18:16:24	17.02	81.55	133.45	65.27
4/27/03	18:16:34	17.18	82.06	132.94	65.78
4/27/03	18:16:44	17.35	82.58	132.42	66.30
4/27/03	18:16:54	17.52	83.10	131.90	66.82
4/27/03	18:17:04	17.68	83.62	131.38	67.34
4/27/03	18:17:14	17.85	84.13	130.87	67.85
4/27/03	18:17:24	18.02	84.64	130.36	68.36
4/27/03	18:17:34	18.18	85.15	129.85	68.87
4/27/03	18:17:44	18.35	85.66	129.34	69.38
4/27/03	18:17:54	18.52	86.16	128.84	69.88
4/27/03	18:18:04	18.68	86.67	128.33	70.39
4/27/03	18:18:14	18.85	87.17	127.83	70.89
4/27/03	18:18:24	19.02	87.67	127.33	71.39
4/27/03	18:18:34	19.18	88.17	126.83	71.89
4/27/03	18:18:44	19.35	88.66	126.34	72.38
4/27/03	18:18:54	19.52	89.15	125.85	72.87
4/27/03	18:19:04	19.68	89.65	125.35	73.37
4/27/03	18:19:14	19.85	90.14	124.86	73.86
4/27/03	18:19:24	20.02	90.63	124.37	74.35
4/27/03	18:19:34	20.18	91.12	123.88	74.84
4/27/03	18:19:44	20.35	91.59	123.41	75.31
4/27/03	18:19:54	20.52	92.09	122.91	75.81
4/27/03	18:20:04	20.68	92.56	122.44	76.28
4/27/03	18:20:14	20.85	93.04	121.96	76.76
4/27/03	18:20:24	21.02	93.52	121.48	77.24
4/27/03	18:20:34	21.18	93.99	121.01	77.71
4/27/03	18:20:44	21.35	94.48	120.52	78.20
4/27/03	18:20:54	21.52	94.95	120.05	78.67
4/27/03	18:21:04	21.68	95.41	119.59	79.13
4/27/03	18:21:14	21.85	95.88	119.12	79.60
4/27/03	18:21:24	22.02	96.35	118.65	80.07
4/27/03	18:21:34	22.18	96.81	118.19	80.53
4/27/03	18:21:44	22.35	97.28	117.72	81.00
4/27/03	18:21:54	22.52	97.73	117.27	81.45
4/27/03	18:22:04	22.68	98.20	116.80	81.92

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	18:22:14	22.85	98.66	116.34	82.38
4/27/03	18:23:13	23.83	101.34	113.66	85.06
4/27/03	18:24:13	24.82	103.97	111.03	87.69
4/27/03	18:25:12	25.80	106.51	108.49	90.23
4/27/03	18:26:10	26.78	109.01	105.99	92.73
4/27/03	18:27:09	27.77	111.43	103.57	95.15
4/27/03	18:28:09	28.75	113.84	101.16	97.56
4/27/03	18:29:08	29.73	116.21	98.79	99.93
4/27/03	18:30:07	30.72	118.54	96.46	102.26
4/27/03	18:31:06	31.70	120.75	94.25	104.47
4/27/03	18:32:05	32.68	122.96	92.04	106.68
4/27/03	18:33:04	33.67	125.10	89.90	108.82
4/27/03	18:34:03	34.65	127.22	87.78	110.94
4/27/03	18:35:02	35.63	129.28	85.72	113.00
4/27/03	18:36:01	36.62	131.30	83.70	115.02
4/27/03	18:37:00	37.60	133.28	81.72	117.00
4/27/03	18:37:59	38.58	135.20	79.80	118.92
4/27/03	18:38:58	39.57	137.05	77.95	120.77
4/27/03	18:39:57	40.55	138.84	76.16	122.56
4/27/03	18:40:56	41.53	140.62	74.38	124.34
4/27/03	18:41:55	42.52	142.36	72.64	126.08
4/27/03	18:42:54	43.50	144.06	70.94	127.78
4/27/03	18:43:53	44.48	145.73	69.27	129.45
4/27/03	18:44:52	45.47	147.35	67.65	131.07
4/27/03	18:45:51	46.45	148.93	66.07	132.65
4/27/03	18:46:50	47.43	150.49	64.51	134.21
4/27/03	18:47:49	48.42	152.01	62.99	135.73
4/27/03	18:48:48	49.40	153.49	61.51	137.21
4/27/03	18:49:47	50.38	154.93	60.07	138.65
4/27/03	18:50:46	51.37	156.35	58.65	140.07
4/27/03	18:51:45	52.35	157.73	57.27	141.45
4/27/03	18:52:44	53.33	159.08	55.92	142.80
4/27/03	18:53:43	54.32	160.40	54.60	144.12
4/27/03	18:54:42	55.30	161.69	53.31	145.41
4/27/03	18:55:41	56.28	162.96	52.04	146.68
4/27/03	18:56:40	57.27	164.18	50.82	147.90
4/27/03	18:57:39	58.25	165.42	49.58	149.14
4/27/03	18:58:38	59.23	166.59	48.41	150.31
4/27/03	18:59:37	60.22	167.74	47.26	151.46
4/27/03	19:00:36	61.20	168.85	46.15	152.57
4/27/03	19:01:35	62.18	169.94	45.06	153.66
4/27/03	19:02:34	63.17	170.99	44.01	154.71
4/27/03	19:03:33	64.15	172.04	42.96	155.76
4/27/03	19:04:32	65.13	173.04	41.96	156.76
4/27/03	19:05:31	66.12	174.03	40.97	157.75
4/27/03	19:06:30	67.10	174.99	40.01	158.71
4/27/03	19:07:29	68.08	175.93	39.07	159.65
4/27/03	19:08:28	69.07	176.85	38.15	160.57
4/27/03	19:09:27	70.05	177.75	37.25	161.47
4/27/03	19:10:26	71.03	178.62	36.38	162.34

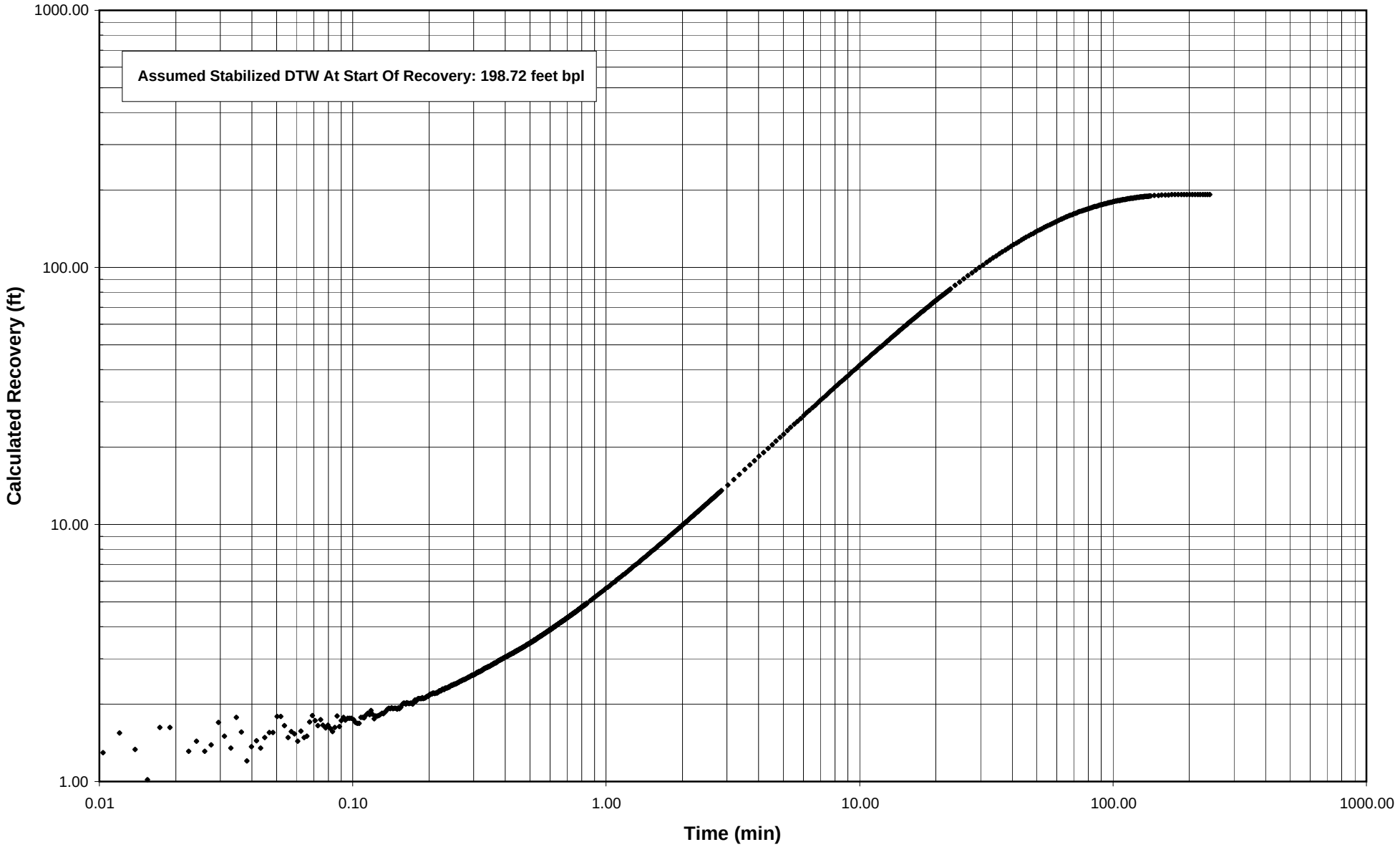
Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	19:11:25	72.02	179.47	35.53	163.19
4/27/03	19:12:24	73.00	180.29	34.71	164.01
4/27/03	19:13:23	73.98	181.06	33.94	164.78
4/27/03	19:14:22	74.97	181.84	33.16	165.56
4/27/03	19:15:21	75.95	182.61	32.39	166.33
4/27/03	19:16:20	76.93	183.33	31.67	167.05
4/27/03	19:17:19	77.92	184.05	30.95	167.77
4/27/03	19:18:18	78.90	184.76	30.24	168.48
4/27/03	19:19:17	79.88	185.45	29.55	169.17
4/27/03	19:20:16	80.87	186.11	28.89	169.83
4/27/03	19:21:15	81.85	186.77	28.23	170.49
4/27/03	19:22:14	82.83	187.41	27.59	171.13
4/27/03	19:23:13	83.82	188.04	26.96	171.76
4/27/03	19:24:12	84.80	188.64	26.36	172.36
4/27/03	19:25:11	85.78	189.24	25.76	172.96
4/27/03	19:26:10	86.77	189.81	25.19	173.53
4/27/03	19:27:09	87.75	190.37	24.63	174.09
4/27/03	19:28:08	88.73	190.92	24.08	174.64
4/27/03	19:29:07	89.72	191.46	23.54	175.18
4/27/03	19:30:06	90.70	191.98	23.02	175.70
4/27/03	19:31:05	91.68	192.48	22.52	176.20
4/27/03	19:32:04	92.67	192.98	22.02	176.70
4/27/03	19:33:03	93.65	193.46	21.54	177.18
4/27/03	19:34:02	94.63	193.92	21.08	177.64
4/27/03	19:35:01	95.62	194.38	20.62	178.10
4/27/03	19:36:00	96.60	194.82	20.18	178.54
4/27/03	19:36:59	97.58	195.26	19.74	178.98
4/27/03	19:37:58	98.57	195.68	19.32	179.40
4/27/03	19:38:57	99.55	196.11	18.89	179.83
4/27/03	19:39:56	100.53	196.51	18.49	180.23
4/27/03	19:40:55	101.52	196.90	18.10	180.62
4/27/03	19:41:54	102.50	197.28	17.72	181.00
4/27/03	19:42:53	103.48	197.65	17.35	181.37
4/27/03	19:43:52	104.47	197.99	17.01	181.71
4/27/03	19:44:51	105.45	198.34	16.66	182.06
4/27/03	19:45:50	106.43	198.68	16.32	182.40
4/27/03	19:46:49	107.42	199.01	15.99	182.73
4/27/03	19:47:48	108.40	199.32	15.68	183.04
4/27/03	19:48:47	109.38	199.63	15.37	183.35
4/27/03	19:49:46	110.37	199.93	15.07	183.65
4/27/03	19:50:45	111.35	200.22	14.78	183.94
4/27/03	19:51:44	112.33	200.50	14.50	184.22
4/27/03	19:52:43	113.32	200.77	14.23	184.49
4/27/03	19:53:42	114.30	201.05	13.95	184.77
4/27/03	19:54:41	115.28	201.31	13.69	185.03
4/27/03	19:55:40	116.27	201.55	13.45	185.27
4/27/03	19:56:39	117.25	201.81	13.19	185.53
4/27/03	19:57:38	118.23	202.04	12.96	185.76
4/27/03	19:58:37	119.22	202.28	12.72	186.00
4/27/03	19:59:36	120.20	202.50	12.50	186.22

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/27/03	20:00:35	121.18	202.71	12.29	186.43
4/27/03	20:01:34	122.17	202.93	12.07	186.65
4/27/03	20:02:33	123.15	203.13	11.87	186.85
4/27/03	20:03:32	124.13	203.33	11.67	187.05
4/27/03	20:04:31	125.12	203.52	11.48	187.24
4/27/03	20:05:30	126.10	203.71	11.29	187.43
4/27/03	20:06:29	127.08	203.88	11.12	187.60
4/27/03	20:07:28	128.07	204.07	10.93	187.79
4/27/03	20:08:27	129.05	204.23	10.77	187.95
4/27/03	20:09:26	130.03	204.39	10.61	188.11
4/27/03	20:10:25	131.02	204.55	10.45	188.27
4/27/03	20:11:24	132.00	204.71	10.29	188.43
4/27/03	20:12:23	132.98	204.86	10.14	188.58
4/27/03	20:13:22	133.97	205.00	10.00	188.72
4/27/03	20:14:21	134.95	205.14	9.86	188.86
4/27/03	20:15:20	135.93	205.28	9.72	189.00
4/27/03	20:16:19	136.92	205.42	9.58	189.14
4/27/03	20:17:18	137.90	205.54	9.46	189.26
4/27/03	20:18:17	138.88	205.66	9.34	189.38
4/27/03	20:19:16	139.87	205.78	9.22	189.50
4/27/03	20:20:15	140.85	205.89	9.11	189.61
4/27/03	20:25:14	145.85	206.41	8.59	190.13
4/27/03	20:30:14	150.85	206.86	8.14	190.58
4/27/03	20:35:15	155.85	207.22	7.78	190.94
4/27/03	20:40:15	160.85	207.53	7.47	191.25
4/27/03	20:45:15	165.85	207.78	7.22	191.50
4/27/03	20:50:15	170.85	207.97	7.03	191.69
4/27/03	20:55:15	175.85	208.13	6.87	191.85
4/27/03	21:00:15	180.85	208.26	6.74	191.98
4/27/03	21:05:15	185.85	208.36	6.64	192.08
4/27/03	21:10:15	190.85	208.45	6.55	192.17
4/27/03	21:15:15	195.85	208.51	6.49	192.23
4/27/03	21:20:15	200.85	208.52	6.48	192.24
4/27/03	21:25:15	205.85	208.56	6.44	192.28
4/27/03	21:30:15	210.85	208.59	6.41	192.31
4/27/03	21:35:15	215.85	208.60	6.40	192.32
4/27/03	21:40:15	220.85	208.61	6.39	192.33
4/27/03	21:45:15	225.85	208.61	6.39	192.33
4/27/03	21:50:15	230.85	208.62	6.38	192.34
4/27/03	21:55:15	235.85	208.62	6.38	192.34
4/27/03	22:00:15	240.85	208.64	6.36	192.36

Straddle-Packer Test No. 8 - Recovery
City of Port St. Lucie, Westport Injection Well System
Injection Well No. 1



Injection Well No.1, Port St. Lucie
Port St. Lucie, Westport Injection Well System
Straddle-Packer Test No. 8 - Recovery



g:aproject\reesemacon\pf001153.0003\MW Packer Tests\Test#5\#8 Recovery.xls\Rec Log-log

Straddle-Packer Test No. 9 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Injection Well No. 1

Packer Depth Interval:	2580-2598 feet bpl	**Static Water Level:**	18.71 feet bpl
Start of Logging:	4/28/03 15:17:00	**Start of Pumping:**	4/28/03 15:17:00
End of Logging:	4/28/03 18:03:00	**End of Pumping:**	4/28/03 18:06:31
Pumping Rate:	2.0 gpm	**Pumping Duration:**	169 minutes

Data Collected Using Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\WESTPORT\PT9DD.DAT

Note: Double line indicates the start of pump

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:17:30		195.28	18.72
04/28/03	15:17:30		195.27	18.73
04/28/03	15:17:30		195.29	18.71
04/28/03	15:17:30		195.29	18.71
04/28/03	15:17:31		195.29	18.71
04/28/03	15:17:31		195.29	18.71
04/28/03	15:17:31		195.27	18.73
04/28/03	15:17:31		195.28	18.72
04/28/03	15:17:31		195.29	18.71
04/28/03	15:17:31		195.28	18.72
04/28/03	15:17:31		195.28	18.72
04/28/03	15:17:31		195.29	18.71
04/28/03	15:17:31		195.29	18.71
04/28/03	15:17:31		195.29	18.71
04/28/03	15:17:32		195.29	18.71
04/28/03	15:17:32		195.29	18.71
04/28/03	15:17:32		195.27	18.73
04/28/03	15:17:32		195.29	18.71
04/28/03	15:17:32		195.30	18.70
04/28/03	15:17:32		195.28	18.72
04/28/03	15:17:32		195.28	18.72
04/28/03	15:17:32		195.29	18.71
04/28/03	15:17:32		195.28	18.72
04/28/03	15:17:32		195.28	18.72
04/28/03	15:17:33		195.29	18.71
04/28/03	15:17:33		195.29	18.71
04/28/03	15:17:33		195.29	18.71
04/28/03	15:17:33		195.29	18.71
04/28/03	15:17:33		195.29	18.71
04/28/03	15:17:33		195.29	18.71
04/28/03	15:17:33		195.28	18.72
04/28/03	15:17:33		195.27	18.73
04/28/03	15:17:34		195.30	18.70
04/28/03	15:17:34		195.29	18.71
04/28/03	15:17:34		195.28	18.72
04/28/03	15:17:34		195.28	18.72
04/28/03	15:17:34		195.27	18.73
04/28/03	15:17:34		195.28	18.72

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:17:34		195.29	18.71
04/28/03	15:17:34		195.29	18.71
04/28/03	15:17:34		195.28	18.72
04/28/03	15:17:34		195.29	18.71
04/28/03	15:17:35		195.30	18.70
04/28/03	15:17:35		195.27	18.73
04/28/03	15:17:35		195.27	18.73
04/28/03	15:17:35		195.29	18.71
04/28/03	15:17:35		195.28	18.72
04/28/03	15:17:35		195.29	18.71
04/28/03	15:17:35		195.29	18.71
04/28/03	15:17:35		195.29	18.71
04/28/03	15:17:35		195.27	18.73
04/28/03	15:17:36		195.29	18.71
04/28/03	15:17:36		195.29	18.71
04/28/03	15:17:36		195.27	18.73
04/28/03	15:17:36		195.29	18.71
04/28/03	15:17:36		195.29	18.71
04/28/03	15:17:36		195.28	18.72
04/28/03	15:17:36		195.27	18.73
04/28/03	15:17:36		195.29	18.71
04/28/03	15:17:36		195.27	18.73
04/28/03	15:17:36		195.29	18.71
04/28/03	15:17:37		195.29	18.71
04/28/03	15:17:37		195.29	18.71
04/28/03	15:17:37		195.29	18.71
04/28/03	15:17:37		195.29	18.71
04/28/03	15:17:37		195.28	18.72
04/28/03	15:17:37		195.28	18.72
04/28/03	15:17:37		195.29	18.71
04/28/03	15:17:37		195.29	18.71
04/28/03	15:17:37		195.29	18.71
04/28/03	15:17:37		195.28	18.72
04/28/03	15:17:38		195.28	18.72
04/28/03	15:17:38		195.29	18.71
04/28/03	15:17:38		195.29	18.71
04/28/03	15:17:38		195.28	18.72
04/28/03	15:17:38		195.29	18.71
04/28/03	15:17:38		195.29	18.71
04/28/03	15:17:38		195.29	18.71
04/28/03	15:17:38		195.29	18.71
04/28/03	15:17:38		195.28	18.72
04/28/03	15:17:39		195.27	18.73
04/28/03	15:17:39		195.28	18.72
04/28/03	15:17:39		195.29	18.71
04/28/03	15:17:39		195.29	18.71
04/28/03	15:17:39		195.29	18.71
04/28/03	15:17:39		195.29	18.71
04/28/03	15:17:39		195.29	18.71
04/28/03	15:17:39		195.28	18.72

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:17:39		195.28	18.72
04/28/03	15:17:39		195.28	18.72
04/28/03	15:17:40		195.29	18.71
04/28/03	15:17:40		195.29	18.71
04/28/03	15:17:40		195.29	18.71
04/28/03	15:17:40		195.29	18.71
04/28/03	15:17:40		195.29	18.71
04/28/03	15:17:40		195.29	18.71
04/28/03	15:17:40		195.29	18.71
04/28/03	15:17:40		195.28	18.72
04/28/03	15:17:41		195.29	18.71
04/28/03	15:17:41		195.29	18.71
04/28/03	15:17:41		195.29	18.71
04/28/03	15:17:41		195.27	18.73
04/28/03	15:17:41		195.28	18.72
04/28/03	15:17:41		195.29	18.71
04/28/03	15:17:41		195.29	18.71
04/28/03	15:17:41		195.29	18.71
04/28/03	15:17:41		195.28	18.72
04/28/03	15:17:41		195.29	18.71
04/28/03	15:17:42		195.28	18.72
04/28/03	15:17:42		195.29	18.71
04/28/03	15:17:42		195.29	18.71
04/28/03	15:17:42		195.29	18.71
04/28/03	15:17:42		195.29	18.71
04/28/03	15:17:42		195.28	18.72
04/28/03	15:17:42		195.29	18.71
04/28/03	15:17:42		195.29	18.71
04/28/03	15:17:42		195.28	18.72
04/28/03	15:17:43		195.28	18.72
04/28/03	15:17:43		195.28	18.72
04/28/03	15:17:43		195.29	18.71
04/28/03	15:17:43		195.29	18.71
04/28/03	15:17:43		195.29	18.71
04/28/03	15:17:43		195.28	18.72
04/28/03	15:17:43		195.28	18.72
04/28/03	15:17:43		195.29	18.71
04/28/03	15:17:43		195.29	18.71
04/28/03	15:17:43		195.29	18.71
04/28/03	15:17:44		195.29	18.71
04/28/03	15:17:44		195.29	18.71
04/28/03	15:17:44		195.29	18.71
04/28/03	15:17:44		195.28	18.72
04/28/03	15:17:44		195.29	18.71
04/28/03	15:17:44		195.28	18.72
04/28/03	15:17:44		195.29	18.71
04/28/03	15:17:44		195.28	18.72
04/28/03	15:17:44		195.29	18.71
04/28/03	15:17:45		195.28	18.72

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:17:45		195.29	18.71
04/28/03	15:17:45		195.29	18.71
04/28/03	15:17:45		195.29	18.71
04/28/03	15:17:45		195.29	18.71
04/28/03	15:17:45		195.29	18.71
04/28/03	15:17:45		195.28	18.72
04/28/03	15:17:45		195.29	18.71
04/28/03	15:17:45		195.29	18.71
04/28/03	15:17:45		195.29	18.71
04/28/03	15:17:46		195.29	18.71
04/28/03	15:17:46		195.28	18.72
04/28/03	15:17:46		195.29	18.71
04/28/03	15:17:46		195.30	18.70
04/28/03	15:17:46		195.29	18.71
04/28/03	15:17:46		195.29	18.71
04/28/03	15:17:46		195.29	18.71
04/28/03	15:17:46		195.29	18.71
04/28/03	15:17:46		195.29	18.71
04/28/03	15:17:47		195.28	18.72
04/28/03	15:17:47		195.29	18.71
04/28/03	15:17:47		195.29	18.71
04/28/03	15:17:47		195.29	18.71
04/28/03	15:17:47		195.29	18.71
04/28/03	15:17:47		195.28	18.72
04/28/03	15:17:47		195.29	18.71
04/28/03	15:17:47		195.29	18.71
04/28/03	15:17:47		195.29	18.71
04/28/03	15:17:47		195.29	18.71
04/28/03	15:17:48		195.29	18.71
04/28/03	15:17:48		195.29	18.71
04/28/03	15:17:48		195.29	18.71
04/28/03	15:17:48		195.29	18.71
04/28/03	15:17:48		195.28	18.72
04/28/03	15:17:48		195.29	18.71
04/28/03	15:17:48		195.29	18.71
04/28/03	15:17:48		195.29	18.71
04/28/03	15:17:48		195.29	18.71
04/28/03	15:17:49		195.29	18.71
04/28/03	15:17:49		195.29	18.71
04/28/03	15:17:49		195.29	18.71
04/28/03	15:17:49		195.29	18.71
04/28/03	15:17:49		195.28	18.72
04/28/03	15:17:49		195.29	18.71
04/28/03	15:17:49		195.29	18.71
04/28/03	15:17:49		195.29	18.71
04/28/03	15:17:49		195.28	18.72
04/28/03	15:17:49		195.29	18.71
04/28/03	15:17:50		195.29	18.71
04/28/03	15:17:50		195.29	18.71
04/28/03	15:17:50		195.29	18.71

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:17:50		195.28	18.72
04/28/03	15:17:50		195.29	18.71
04/28/03	15:17:50		195.29	18.71
04/28/03	15:17:50		195.29	18.71
04/28/03	15:17:50		195.29	18.71
04/28/03	15:17:50		195.30	18.70
04/28/03	15:17:51		195.29	18.71
04/28/03	15:17:51		195.29	18.71
04/28/03	15:17:51		195.29	18.71
04/28/03	15:17:51		195.29	18.71
04/28/03	15:17:51		195.28	18.72
04/28/03	15:17:51		195.29	18.71
04/28/03	15:17:51		195.29	18.71
04/28/03	15:17:51		195.29	18.71
04/28/03	15:17:51	0.00	195.29	18.71
04/28/03	15:17:51	0.00	192.69	21.31
04/28/03	15:17:52	0.00	182.38	31.62
04/28/03	15:17:52	0.01	183.29	30.71
04/28/03	15:17:52	0.01	191.42	22.58
04/28/03	15:17:52	0.01	193.92	20.08
04/28/03	15:17:52	0.01	194.89	19.11
04/28/03	15:17:52	0.01	194.92	19.08
04/28/03	15:17:52	0.01	194.85	19.15
04/28/03	15:17:52	0.02	194.83	19.17
04/28/03	15:17:52	0.02	194.68	19.32
04/28/03	15:17:53	0.02	192.43	21.57
04/28/03	15:17:53	0.02	184.55	29.45
04/28/03	15:17:53	0.02	195.58	18.42
04/28/03	15:17:53	0.02	199.93	14.07
04/28/03	15:17:53	0.03	197.99	16.01
04/28/03	15:17:53	0.03	195.66	18.34
04/28/03	15:17:53	0.03	194.58	19.42
04/28/03	15:17:53	0.03	194.35	19.65
04/28/03	15:17:53	0.03	194.43	19.57
04/28/03	15:17:53	0.04	194.30	19.70
04/28/03	15:17:54	0.04	194.35	19.65
04/28/03	15:17:54	0.04	196.37	17.63
04/28/03	15:17:54	0.04	202.49	11.51
04/28/03	15:17:54	0.04	194.11	19.89
04/28/03	15:17:54	0.04	190.01	23.99
04/28/03	15:17:54	0.05	190.63	23.37
04/28/03	15:17:54	0.05	192.56	21.44
04/28/03	15:17:54	0.05	193.57	20.43
04/28/03	15:17:54	0.05	193.66	20.34
04/28/03	15:17:55	0.05	193.39	20.61
04/28/03	15:17:55	0.05	193.58	20.42
04/28/03	15:17:55	0.06	193.51	20.49
04/28/03	15:17:55	0.06	191.41	22.59
04/28/03	15:17:55	0.06	186.71	27.29
04/28/03	15:17:55	0.06	192.54	21.46

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:17:55	0.06	196.55	17.45
04/28/03	15:17:55	0.06	196.36	17.64
04/28/03	15:17:55	0.07	194.75	19.25
04/28/03	15:17:55	0.07	193.62	20.38
04/28/03	15:17:56	0.07	193.24	20.76
04/28/03	15:17:56	0.07	193.60	20.40
04/28/03	15:17:56	0.07	193.15	20.85
04/28/03	15:17:56	0.08	192.92	21.08
04/28/03	15:17:56	0.08	195.20	18.80
04/28/03	15:17:56	0.08	199.13	14.87
04/28/03	15:17:56	0.08	193.15	20.85
04/28/03	15:17:56	0.08	190.15	23.85
04/28/03	15:17:56	0.08	190.05	23.95
04/28/03	15:17:57	0.09	191.19	22.81
04/28/03	15:17:57	0.09	192.30	21.70
04/28/03	15:17:57	0.09	192.52	21.48
04/28/03	15:17:57	0.09	192.05	21.95
04/28/03	15:17:57	0.09	192.39	21.61
04/28/03	15:17:57	0.09	192.71	21.29
04/28/03	15:17:57	0.10	190.58	23.42
04/28/03	15:17:57	0.10	186.74	27.26
04/28/03	15:17:57	0.10	191.85	22.15
04/28/03	15:17:57	0.10	194.29	19.71
04/28/03	15:17:58	0.10	194.68	19.32
04/28/03	15:17:58	0.11	193.68	20.32
04/28/03	15:17:58	0.11	192.53	21.47
04/28/03	15:17:58	0.11	192.22	21.78
04/28/03	15:17:58	0.11	192.61	21.39
04/28/03	15:17:58	0.11	192.19	21.81
04/28/03	15:17:58	0.11	191.51	22.49
04/28/03	15:17:58	0.12	193.59	20.41
04/28/03	15:17:58	0.12	196.70	17.30
04/28/03	15:17:59	0.12	192.66	21.34
04/28/03	15:17:59	0.12	190.23	23.77
04/28/03	15:17:59	0.12	189.59	24.41
04/28/03	15:17:59	0.12	190.21	23.79
04/28/03	15:17:59	0.13	191.23	22.77
04/28/03	15:17:59	0.13	191.44	22.56
04/28/03	15:17:59	0.13	190.97	23.03
04/28/03	15:17:59	0.13	191.30	22.70
04/28/03	15:17:59	0.13	191.89	22.11
04/28/03	15:17:59	0.14	189.99	24.01
04/28/03	15:18:00	0.14	187.13	26.87
04/28/03	15:18:00	0.14	190.37	23.63
04/28/03	15:18:00	0.14	192.45	21.55
04/28/03	15:18:00	0.14	193.16	20.84
04/28/03	15:18:00	0.14	192.66	21.34
04/28/03	15:18:00	0.15	191.62	22.38
04/28/03	15:18:00	0.15	191.53	22.47
04/28/03	15:18:00	0.15	191.78	22.22

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:18:00	0.15	191.54	22.46
04/28/03	15:18:01	0.15	190.75	23.25
04/28/03	15:18:01	0.15	192.96	21.04
04/28/03	15:18:01	0.16	194.68	19.32
04/28/03	15:18:01	0.16	191.71	22.29
04/28/03	15:18:01	0.16	190.08	23.92
04/28/03	15:18:01	0.16	189.41	24.59
04/28/03	15:18:01	0.16	189.73	24.27
04/28/03	15:18:01	0.16	190.74	23.26
04/28/03	15:18:01	0.17	190.27	23.73
04/28/03	15:18:01	0.17	190.30	23.70
04/28/03	15:18:02	0.17	190.52	23.48
04/28/03	15:18:02	0.17	190.50	23.50
04/28/03	15:18:02	0.17	187.76	26.24
04/28/03	15:18:02	0.18	188.38	25.62
04/28/03	15:18:02	0.18	190.57	23.43
04/28/03	15:18:02	0.18	191.64	22.36
04/28/03	15:18:02	0.18	191.91	22.09
04/28/03	15:18:02	0.18	191.31	22.69
04/28/03	15:18:02	0.18	190.63	23.37
04/28/03	15:18:03	0.19	191.08	22.92
04/28/03	15:18:03	0.19	190.95	23.05
04/28/03	15:18:03	0.19	190.71	23.29
04/28/03	15:18:03	0.19	190.70	23.30
04/28/03	15:18:03	0.19	193.15	20.85
04/28/03	15:18:03	0.19	192.63	21.37
04/28/03	15:18:03	0.20	190.84	23.16
04/28/03	15:18:03	0.20	189.78	24.22
04/28/03	15:18:03	0.20	189.42	24.58
04/28/03	15:18:03	0.20	189.89	24.11
04/28/03	15:18:04	0.20	190.47	23.53
04/28/03	15:18:04	0.21	189.98	24.02
04/28/03	15:18:04	0.21	190.10	23.90
04/28/03	15:18:04	0.21	190.39	23.61
04/28/03	15:18:04	0.21	190.44	23.56
04/28/03	15:18:04	0.21	188.30	25.70
04/28/03	15:18:04	0.21	188.62	25.38
04/28/03	15:18:04	0.22	190.06	23.94
04/28/03	15:18:04	0.22	190.88	23.12
04/28/03	15:18:05	0.22	191.28	22.72
04/28/03	15:18:05	0.22	190.79	23.21
04/28/03	15:18:05	0.22	190.15	23.85
04/28/03	15:18:05	0.22	190.56	23.44
04/28/03	15:18:05	0.23	190.47	23.53
04/28/03	15:18:05	0.23	190.21	23.79
04/28/03	15:18:05	0.23	190.14	23.86
04/28/03	15:18:05	0.23	191.91	22.09
04/28/03	15:18:05	0.23	191.55	22.45
04/28/03	15:18:05	0.24	190.27	23.73
04/28/03	15:18:06	0.24	189.40	24.60

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:18:06	0.24	188.91	25.09
04/28/03	15:18:06	0.24	189.23	24.77
04/28/03	15:18:06	0.24	189.80	24.20
04/28/03	15:18:06	0.24	189.36	24.64
04/28/03	15:18:06	0.25	189.23	24.77
04/28/03	15:18:06	0.25	189.59	24.41
04/28/03	15:18:06	0.25	189.56	24.44
04/28/03	15:18:06	0.25	187.92	26.08
04/28/03	15:18:07	0.25	188.23	25.77
04/28/03	15:18:07	0.25	189.30	24.70
04/28/03	15:18:07	0.26	190.11	23.89
04/28/03	15:18:07	0.26	190.49	23.51
04/28/03	15:18:07	0.26	190.36	23.64
04/28/03	15:18:07	0.26	189.78	24.22
04/28/03	15:18:07	0.26	190.09	23.91
04/28/03	15:18:07	0.26	190.27	23.73
04/28/03	15:18:07	0.27	190.01	23.99
04/28/03	15:18:07	0.27	189.98	24.02
04/28/03	15:18:08	0.27	191.41	22.59
04/28/03	15:18:08	0.27	191.23	22.77
04/28/03	15:18:08	0.27	190.19	23.81
04/28/03	15:18:08	0.28	189.48	24.52
04/28/03	15:18:08	0.28	189.06	24.94
04/28/03	15:18:08	0.28	189.33	24.67
04/28/03	15:18:08	0.28	189.69	24.31
04/28/03	15:18:08	0.28	189.30	24.70
04/28/03	15:18:08	0.28	189.00	25.00
04/28/03	15:18:09	0.29	189.35	24.65
04/28/03	15:18:09	0.29	189.52	24.48
04/28/03	15:18:09	0.29	188.22	25.78
04/28/03	15:18:09	0.29	188.35	25.65
04/28/03	15:18:09	0.29	189.16	24.84
04/28/03	15:18:09	0.29	189.90	24.10
04/28/03	15:18:09	0.30	190.25	23.75
04/28/03	15:18:09	0.30	190.02	23.98
04/28/03	15:18:09	0.30	189.57	24.43
04/28/03	15:18:09	0.30	189.87	24.13
04/28/03	15:18:10	0.30	190.14	23.86
04/28/03	15:18:10	0.31	189.92	24.08
04/28/03	15:18:10	0.31	189.80	24.20
04/28/03	15:18:10	0.31	191.07	22.93
04/28/03	15:18:10	0.31	190.86	23.14
04/28/03	15:18:10	0.31	190.17	23.83
04/28/03	15:18:10	0.31	189.49	24.51
04/28/03	15:18:10	0.32	189.06	24.94
04/28/03	15:18:10	0.32	189.32	24.68
04/28/03	15:18:11	0.32	189.59	24.41
04/28/03	15:18:11	0.32	189.44	24.56
04/28/03	15:18:11	0.32	189.18	24.82
04/28/03	15:18:11	0.32	189.42	24.58

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:18:11	0.33	189.26	24.74
04/28/03	15:18:11	0.33	188.30	25.70
04/28/03	15:18:11	0.33	188.45	25.55
04/28/03	15:18:11	0.33	189.07	24.93
04/28/03	15:18:11	0.33	189.57	24.43
04/28/03	15:18:11	0.34	190.07	23.93
04/28/03	15:18:12	0.34	189.88	24.12
04/28/03	15:18:12	0.34	189.64	24.36
04/28/03	15:18:12	0.34	189.76	24.24
04/28/03	15:18:12	0.34	190.06	23.94
04/28/03	15:18:12	0.34	189.88	24.12
04/28/03	15:18:12	0.35	189.86	24.14
04/28/03	15:18:12	0.35	190.63	23.37
04/28/03	15:18:12	0.35	190.30	23.70
04/28/03	15:18:12	0.35	189.95	24.05
04/28/03	15:18:13	0.35	189.57	24.43
04/28/03	15:18:13	0.35	189.42	24.58
04/28/03	15:18:13	0.36	189.37	24.63
04/28/03	15:18:13	0.36	189.51	24.49
04/28/03	15:18:13	0.36	189.48	24.52
04/28/03	15:18:13	0.36	189.24	24.76
04/28/03	15:18:13	0.36	189.28	24.72
04/28/03	15:18:13	0.36	189.06	24.94
04/28/03	15:18:13	0.37	188.22	25.78
04/28/03	15:18:13	0.37	188.59	25.41
04/28/03	15:18:14	0.37	189.17	24.83
04/28/03	15:18:14	0.37	189.83	24.17
04/28/03	15:18:14	0.37	189.80	24.20
04/28/03	15:18:14	0.38	189.68	24.32
04/28/03	15:18:14	0.38	189.39	24.61
04/28/03	15:18:14	0.38	189.53	24.47
04/28/03	15:18:14	0.38	189.71	24.29
04/28/03	15:18:14	0.38	189.68	24.32
04/28/03	15:18:14	0.38	189.76	24.24
04/28/03	15:18:15	0.39	190.44	23.56
04/28/03	15:18:15	0.39	190.50	23.50
04/28/03	15:18:15	0.39	190.17	23.83
04/28/03	15:18:15	0.39	189.59	24.41
04/28/03	15:18:15	0.39	189.15	24.85
04/28/03	15:18:15	0.39	189.26	24.74
04/28/03	15:18:15	0.40	189.33	24.67
04/28/03	15:18:15	0.40	189.31	24.69
04/28/03	15:18:15	0.40	189.30	24.70
04/28/03	15:18:15	0.40	189.28	24.72
04/28/03	15:18:16	0.40	189.17	24.83
04/28/03	15:18:16	0.41	188.64	25.36
04/28/03	15:18:16	0.41	188.74	25.26
04/28/03	15:18:16	0.41	189.05	24.95
04/28/03	15:18:16	0.41	189.25	24.75
04/28/03	15:18:16	0.41	189.54	24.46

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:18:16	0.41	189.46	24.54
04/28/03	15:18:16	0.42	189.59	24.41
04/28/03	15:18:16	0.42	189.54	24.46
04/28/03	15:18:17	0.42	189.52	24.48
04/28/03	15:18:17	0.42	189.43	24.57
04/28/03	15:18:17	0.42	189.72	24.28
04/28/03	15:18:17	0.42	190.33	23.67
04/28/03	15:18:17	0.43	190.35	23.65
04/28/03	15:18:17	0.43	189.99	24.01
04/28/03	15:18:17	0.43	189.57	24.43
04/28/03	15:18:17	0.43	189.30	24.70
04/28/03	15:18:17	0.43	189.38	24.62
04/28/03	15:18:17	0.44	189.08	24.92
04/28/03	15:18:18	0.44	189.15	24.85
04/28/03	15:18:18	0.44	189.15	24.85
04/28/03	15:18:18	0.44	189.46	24.54
04/28/03	15:18:18	0.44	189.26	24.74
04/28/03	15:18:18	0.44	188.89	25.11
04/28/03	15:18:18	0.45	188.97	25.03
04/28/03	15:18:18	0.45	188.99	25.01
04/28/03	15:18:18	0.45	189.09	24.91
04/28/03	15:18:18	0.45	189.10	24.90
04/28/03	15:18:19	0.45	189.02	24.98
04/28/03	15:18:19	0.45	189.26	24.74
04/28/03	15:18:19	0.46	189.67	24.33
04/28/03	15:18:19	0.46	189.68	24.32
04/28/03	15:18:19	0.46	189.60	24.40
04/28/03	15:18:19	0.46	189.80	24.20
04/28/03	15:18:19	0.46	190.12	23.88
04/28/03	15:18:19	0.46	189.99	24.01
04/28/03	15:18:19	0.47	189.68	24.32
04/28/03	15:18:19	0.47	189.28	24.72
04/28/03	15:18:20	0.47	189.24	24.76
04/28/03	15:18:20	0.47	189.53	24.47
04/28/03	15:18:20	0.47	189.59	24.41
04/28/03	15:18:20	0.48	189.26	24.74
04/28/03	15:18:20	0.48	189.07	24.93
04/28/03	15:18:20	0.48	189.18	24.82
04/28/03	15:18:20	0.48	189.18	24.82
04/28/03	15:18:20	0.48	188.90	25.10
04/28/03	15:18:20	0.48	188.75	25.25
04/28/03	15:18:21	0.49	188.74	25.26
04/28/03	15:18:21	0.49	189.00	25.00
04/28/03	15:18:21	0.49	189.36	24.64
04/28/03	15:18:21	0.49	189.28	24.72
04/28/03	15:18:21	0.49	189.30	24.70
04/28/03	15:18:21	0.49	189.44	24.56
04/28/03	15:18:21	0.50	189.44	24.56
04/28/03	15:18:21	0.50	189.36	24.64
04/28/03	15:18:21	0.50	189.55	24.45

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:18:21	0.50	189.83	24.17
04/28/03	15:18:22	0.50	189.76	24.24
04/28/03	15:18:22	0.51	189.76	24.24
04/28/03	15:18:22	0.51	189.56	24.44
04/28/03	15:18:22	0.51	189.39	24.61
04/28/03	15:18:22	0.51	189.33	24.67
04/28/03	15:18:22	0.51	189.26	24.74
04/28/03	15:18:22	0.51	189.11	24.89
04/28/03	15:18:22	0.52	189.02	24.98
04/28/03	15:18:22	0.52	189.15	24.85
04/28/03	15:18:23	0.52	189.05	24.95
04/28/03	15:18:23	0.52	188.80	25.20
04/28/03	15:18:23	0.52	188.87	25.13
04/28/03	15:18:23	0.52	188.92	25.08
04/28/03	15:18:23	0.53	189.04	24.96
04/28/03	15:18:23	0.53	189.11	24.89
04/28/03	15:18:23	0.53	189.08	24.92
04/28/03	15:18:23	0.53	189.10	24.90
04/28/03	15:18:23	0.53	189.31	24.69
04/28/03	15:18:23	0.54	189.46	24.54
04/28/03	15:18:24	0.54	189.36	24.64
04/28/03	15:18:24	0.54	189.44	24.56
04/28/03	15:18:24	0.54	189.65	24.35
04/28/03	15:18:24	0.54	189.76	24.24
04/28/03	15:18:24	0.54	189.58	24.42
04/28/03	15:18:24	0.55	189.36	24.64
04/28/03	15:18:24	0.55	189.30	24.70
04/28/03	15:18:24	0.55	189.31	24.69
04/28/03	15:18:24	0.55	189.33	24.67
04/28/03	15:18:25	0.55	189.13	24.87
04/28/03	15:18:25	0.55	188.94	25.06
04/28/03	15:18:25	0.56	188.97	25.03
04/28/03	15:18:25	0.56	189.06	24.94
04/28/03	15:18:25	0.56	188.94	25.06
04/28/03	15:18:25	0.56	189.02	24.98
04/28/03	15:18:25	0.56	189.00	25.00
04/28/03	15:18:25	0.56	189.00	25.00
04/28/03	15:18:25	0.57	189.01	24.99
04/28/03	15:18:25	0.57	188.74	25.26
04/28/03	15:18:26	0.57	188.99	25.01
04/28/03	15:18:26	0.57	189.15	24.85
04/28/03	15:18:26	0.57	189.39	24.61
04/28/03	15:18:26	0.58	189.43	24.57
04/28/03	15:18:26	0.58	189.49	24.51
04/28/03	15:18:26	0.58	189.59	24.41
04/28/03	15:18:26	0.58	189.58	24.42
04/28/03	15:18:26	0.58	189.34	24.66
04/28/03	15:18:26	0.58	189.09	24.91
04/28/03	15:18:27	0.59	188.92	25.08
04/28/03	15:18:27	0.59	189.22	24.78

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:18:27	0.59	189.45	24.55
04/28/03	15:18:27	0.59	189.38	24.62
04/28/03	15:18:27	0.59	189.22	24.78
04/28/03	15:18:27	0.59	189.00	25.00
04/28/03	15:18:27	0.60	188.88	25.12
04/28/03	15:18:27	0.60	188.80	25.20
04/28/03	15:18:27	0.60	188.80	25.20
04/28/03	15:18:27	0.60	188.88	25.12
04/28/03	15:18:28	0.60	188.90	25.10
04/28/03	15:18:28	0.61	188.89	25.11
04/28/03	15:18:28	0.61	189.00	25.00
04/28/03	15:18:28	0.61	189.00	25.00
04/28/03	15:18:28	0.61	189.06	24.94
04/28/03	15:18:28	0.61	189.13	24.87
04/28/03	15:18:28	0.61	189.15	24.85
04/28/03	15:18:28	0.62	189.31	24.69
04/28/03	15:18:28	0.62	189.41	24.59
04/28/03	15:18:29	0.62	189.39	24.61
04/28/03	15:18:29	0.62	189.21	24.79
04/28/03	15:18:29	0.62	189.15	24.85
04/28/03	15:18:29	0.62	189.16	24.84
04/28/03	15:18:29	0.63	189.30	24.70
04/28/03	15:18:29	0.63	189.31	24.69
04/28/03	15:18:29	0.63	189.22	24.78
04/28/03	15:18:29	0.63	189.10	24.90
04/28/03	15:18:29	0.63	189.03	24.97
04/28/03	15:18:29	0.64	188.88	25.12
04/28/03	15:18:30	0.64	188.66	25.34
04/28/03	15:18:30	0.64	188.64	25.36
04/28/03	15:18:30	0.64	188.81	25.19
04/28/03	15:18:30	0.64	189.10	24.90
04/28/03	15:18:30	0.64	189.16	24.84
04/28/03	15:18:30	0.65	189.05	24.95
04/28/03	15:18:30	0.65	188.99	25.01
04/28/03	15:18:30	0.65	189.12	24.88
04/28/03	15:18:30	0.65	189.18	24.82
04/28/03	15:18:30	0.65	189.01	24.99
04/28/03	15:18:31	0.65	188.93	25.07
04/28/03	15:18:31	0.66	189.03	24.97
04/28/03	15:18:31	0.66	189.28	24.72
04/28/03	15:18:31	0.66	189.49	24.51
04/28/03	15:18:31	0.66	189.23	24.77
04/28/03	15:18:31	0.66	189.12	24.88
04/28/03	15:18:31	0.66	189.23	24.77
04/28/03	15:18:31	0.67	189.21	24.79
04/28/03	15:18:31	0.67	189.02	24.98
04/28/03	15:18:31	0.67	188.81	25.19
04/28/03	15:18:32	0.67	188.92	25.08
04/28/03	15:18:32	0.67	188.95	25.05
04/28/03	15:18:32	0.67	188.92	25.08

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:18:32	0.68	188.78	25.22
04/28/03	15:18:32	0.68	188.68	25.32
04/28/03	15:18:32	0.68	188.72	25.28
04/28/03	15:18:32	0.68	189.05	24.95
04/28/03	15:18:32	0.68	188.92	25.08
04/28/03	15:18:32	0.68	189.02	24.98
04/28/03	15:18:32	0.69	188.93	25.07
04/28/03	15:18:33	0.69	188.84	25.16
04/28/03	15:18:33	0.69	188.84	25.16
04/28/03	15:18:33	0.69	188.97	25.03
04/28/03	15:18:33	0.69	188.99	25.01
04/28/03	15:18:35	0.72	188.78	25.22
04/28/03	15:18:36	0.74	189.07	24.93
04/28/03	15:18:37	0.75	188.71	25.29
04/28/03	15:18:38	0.77	188.94	25.06
04/28/03	15:18:39	0.79	188.81	25.19
04/28/03	15:18:40	0.80	188.69	25.31
04/28/03	15:18:41	0.82	188.89	25.11
04/28/03	15:18:42	0.84	188.63	25.37
04/28/03	15:18:43	0.85	188.75	25.25
04/28/03	15:18:44	0.87	188.56	25.44
04/28/03	15:18:45	0.89	188.73	25.27
04/28/03	15:18:46	0.90	188.63	25.37
04/28/03	15:18:47	0.92	188.57	25.43
04/28/03	15:18:48	0.94	188.58	25.42
04/28/03	15:18:49	0.95	188.49	25.51
04/28/03	15:18:50	0.97	188.57	25.43
04/28/03	15:18:51	0.99	188.40	25.60
04/28/03	15:18:52	1.00	188.52	25.48
04/28/03	15:18:53	1.02	188.50	25.50
04/28/03	15:18:54	1.04	188.32	25.68
04/28/03	15:18:55	1.05	188.45	25.55
04/28/03	15:18:56	1.07	188.32	25.68
04/28/03	15:18:57	1.09	188.44	25.56
04/28/03	15:18:58	1.10	188.21	25.79
04/28/03	15:18:59	1.12	188.37	25.63
04/28/03	15:19:00	1.14	188.31	25.69
04/28/03	15:19:01	1.15	188.17	25.83
04/28/03	15:19:02	1.17	188.28	25.72
04/28/03	15:19:03	1.19	188.17	25.83
04/28/03	15:19:04	1.20	188.17	25.83
04/28/03	15:19:05	1.22	188.14	25.86
04/28/03	15:19:06	1.24	188.10	25.90
04/28/03	15:19:07	1.25	188.04	25.96
04/28/03	15:19:08	1.27	188.04	25.96
04/28/03	15:19:09	1.29	188.07	25.93
04/28/03	15:19:10	1.30	188.02	25.98
04/28/03	15:19:11	1.32	188.10	25.90
04/28/03	15:19:12	1.34	188.02	25.98
04/28/03	15:19:13	1.35	187.93	26.07

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:19:14	1.37	187.96	26.04
04/28/03	15:19:15	1.39	187.98	26.02
04/28/03	15:19:16	1.40	187.90	26.10
04/28/03	15:19:17	1.42	187.86	26.14
04/28/03	15:19:18	1.44	187.85	26.15
04/28/03	15:19:19	1.45	187.80	26.20
04/28/03	15:19:20	1.47	187.73	26.27
04/28/03	15:19:21	1.49	187.70	26.30
04/28/03	15:19:22	1.50	187.76	26.24
04/28/03	15:19:23	1.52	187.64	26.36
04/28/03	15:19:24	1.54	187.72	26.28
04/28/03	15:19:25	1.55	187.62	26.38
04/28/03	15:19:26	1.57	187.59	26.41
04/28/03	15:19:27	1.59	187.58	26.42
04/28/03	15:19:28	1.60	187.55	26.45
04/28/03	15:19:29	1.62	187.55	26.45
04/28/03	15:19:30	1.64	187.54	26.46
04/28/03	15:19:31	1.65	187.49	26.51
04/28/03	15:19:32	1.67	187.45	26.55
04/28/03	15:19:33	1.69	187.45	26.55
04/28/03	15:19:34	1.70	187.46	26.54
04/28/03	15:19:35	1.72	187.40	26.60
04/28/03	15:19:36	1.74	187.33	26.67
04/28/03	15:19:37	1.75	187.35	26.65
04/28/03	15:19:38	1.77	187.31	26.69
04/28/03	15:19:39	1.79	187.32	26.68
04/28/03	15:19:40	1.80	187.29	26.71
04/28/03	15:19:41	1.82	187.23	26.77
04/28/03	15:19:42	1.84	187.18	26.82
04/28/03	15:19:43	1.85	187.26	26.74
04/28/03	15:19:44	1.87	187.15	26.85
04/28/03	15:19:45	1.89	187.26	26.74
04/28/03	15:19:46	1.90	187.14	26.86
04/28/03	15:19:47	1.92	187.13	26.87
04/28/03	15:19:48	1.94	187.10	26.90
04/28/03	15:19:49	1.95	187.09	26.91
04/28/03	15:19:50	1.97	187.02	26.98
04/28/03	15:19:51	1.99	187.02	26.98
04/28/03	15:19:52	2.00	186.97	27.03
04/28/03	15:19:53	2.02	186.97	27.03
04/28/03	15:19:54	2.04	186.83	27.17
04/28/03	15:19:55	2.05	186.89	27.11
04/28/03	15:19:56	2.07	186.90	27.10
04/28/03	15:19:57	2.09	186.88	27.12
04/28/03	15:19:58	2.10	186.85	27.15
04/28/03	15:19:59	2.12	186.78	27.22
04/28/03	15:20:00	2.14	186.78	27.22
04/28/03	15:20:01	2.15	186.78	27.22
04/28/03	15:20:02	2.17	186.77	27.23
04/28/03	15:20:03	2.19	186.71	27.29

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:20:04	2.20	186.67	27.33
04/28/03	15:20:05	2.22	186.71	27.29
04/28/03	15:20:06	2.24	186.63	27.37
04/28/03	15:20:07	2.25	186.58	27.42
04/28/03	15:20:08	2.27	186.66	27.34
04/28/03	15:20:09	2.29	186.61	27.39
04/28/03	15:20:10	2.30	186.54	27.46
04/28/03	15:20:11	2.32	186.53	27.47
04/28/03	15:20:12	2.34	186.50	27.50
04/28/03	15:20:13	2.35	186.46	27.54
04/28/03	15:20:14	2.37	186.49	27.51
04/28/03	15:20:15	2.39	186.35	27.65
04/28/03	15:20:16	2.40	186.40	27.60
04/28/03	15:20:17	2.42	186.34	27.66
04/28/03	15:20:18	2.44	186.29	27.71
04/28/03	15:20:19	2.45	186.35	27.65
04/28/03	15:20:20	2.47	186.31	27.69
04/28/03	15:20:21	2.49	186.25	27.75
04/28/03	15:20:22	2.50	186.20	27.80
04/28/03	15:20:23	2.52	186.23	27.77
04/28/03	15:20:24	2.54	186.16	27.84
04/28/03	15:20:25	2.55	186.22	27.78
04/28/03	15:20:26	2.57	186.16	27.84
04/28/03	15:20:27	2.59	186.14	27.86
04/28/03	15:20:28	2.60	186.11	27.89
04/28/03	15:20:29	2.62	186.06	27.94
04/28/03	15:20:30	2.64	186.05	27.95
04/28/03	15:20:31	2.65	186.03	27.97
04/28/03	15:20:32	2.67	186.07	27.93
04/28/03	15:20:33	2.69	185.96	28.04
04/28/03	15:20:34	2.70	185.93	28.07
04/28/03	15:20:44	2.87	185.73	28.27
04/28/03	15:20:54	3.04	185.43	28.57
04/28/03	15:21:04	3.20	185.25	28.75
04/28/03	15:21:13	3.37	185.00	29.00
04/28/03	15:21:23	3.54	184.81	29.19
04/28/03	15:21:33	3.70	184.57	29.43
04/28/03	15:21:43	3.87	184.21	29.79
04/28/03	15:21:53	4.04	184.06	29.94
04/28/03	15:22:03	4.20	183.77	30.23
04/28/03	15:22:13	4.37	183.57	30.43
04/28/03	15:22:23	4.54	183.26	30.74
04/28/03	15:22:33	4.70	182.98	31.02
04/28/03	15:22:43	4.87	182.73	31.27
04/28/03	15:22:53	5.04	182.55	31.45
04/28/03	15:23:03	5.20	182.39	31.61
04/28/03	15:23:13	5.37	182.02	31.98
04/28/03	15:23:23	5.54	181.74	32.26
04/28/03	15:23:33	5.70	181.59	32.41
04/28/03	15:23:43	5.87	181.26	32.74

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:23:53	6.04	181.13	32.87
04/28/03	15:24:03	6.20	180.82	33.18
04/28/03	15:24:13	6.37	180.65	33.35
04/28/03	15:24:23	6.54	180.38	33.62
04/28/03	15:24:33	6.70	180.11	33.89
04/28/03	15:24:43	6.87	179.86	34.14
04/28/03	15:24:53	7.04	179.69	34.31
04/28/03	15:25:03	7.20	179.45	34.55
04/28/03	15:25:13	7.37	179.20	34.80
04/28/03	15:25:23	7.54	178.95	35.05
04/28/03	15:25:33	7.70	178.62	35.38
04/28/03	15:25:43	7.87	178.41	35.59
04/28/03	15:25:53	8.04	178.25	35.75
04/28/03	15:26:03	8.20	177.96	36.04
04/28/03	15:26:13	8.37	177.69	36.31
04/28/03	15:26:23	8.54	177.54	36.46
04/28/03	15:26:33	8.70	177.20	36.80
04/28/03	15:26:43	8.87	177.09	36.91
04/28/03	15:26:53	9.04	176.67	37.33
04/28/03	15:27:03	9.20	176.43	37.57
04/28/03	15:27:13	9.37	176.40	37.60
04/28/03	15:27:23	9.54	176.08	37.92
04/28/03	15:27:33	9.70	175.84	38.16
04/28/03	15:27:43	9.87	175.61	38.39
04/28/03	15:27:53	10.04	175.28	38.72
04/28/03	15:28:03	10.20	175.04	38.96
04/28/03	15:28:13	10.37	174.82	39.18
04/28/03	15:28:23	10.54	174.58	39.42
04/28/03	15:28:33	10.70	174.32	39.68
04/28/03	15:28:43	10.87	174.05	39.95
04/28/03	15:28:53	11.04	173.92	40.08
04/28/03	15:29:03	11.20	173.60	40.40
04/28/03	15:29:13	11.37	173.34	40.66
04/28/03	15:29:23	11.54	173.10	40.90
04/28/03	15:29:33	11.70	172.92	41.08
04/28/03	15:29:43	11.87	172.65	41.35
04/28/03	15:29:53	12.04	172.49	41.51
04/28/03	15:30:03	12.20	172.12	41.88
04/28/03	15:30:13	12.37	171.97	42.03
04/28/03	15:30:23	12.54	171.66	42.34
04/28/03	15:30:33	12.70	171.50	42.50
04/28/03	15:30:43	12.87	171.33	42.67
04/28/03	15:30:53	13.04	171.03	42.97
04/28/03	15:31:03	13.20	170.81	43.19
04/28/03	15:31:13	13.37	170.52	43.48
04/28/03	15:31:23	13.54	170.23	43.77
04/28/03	15:31:33	13.70	170.06	43.94
04/28/03	15:31:43	13.87	169.82	44.18
04/28/03	15:31:53	14.04	169.56	44.44
04/28/03	15:32:03	14.20	169.27	44.73

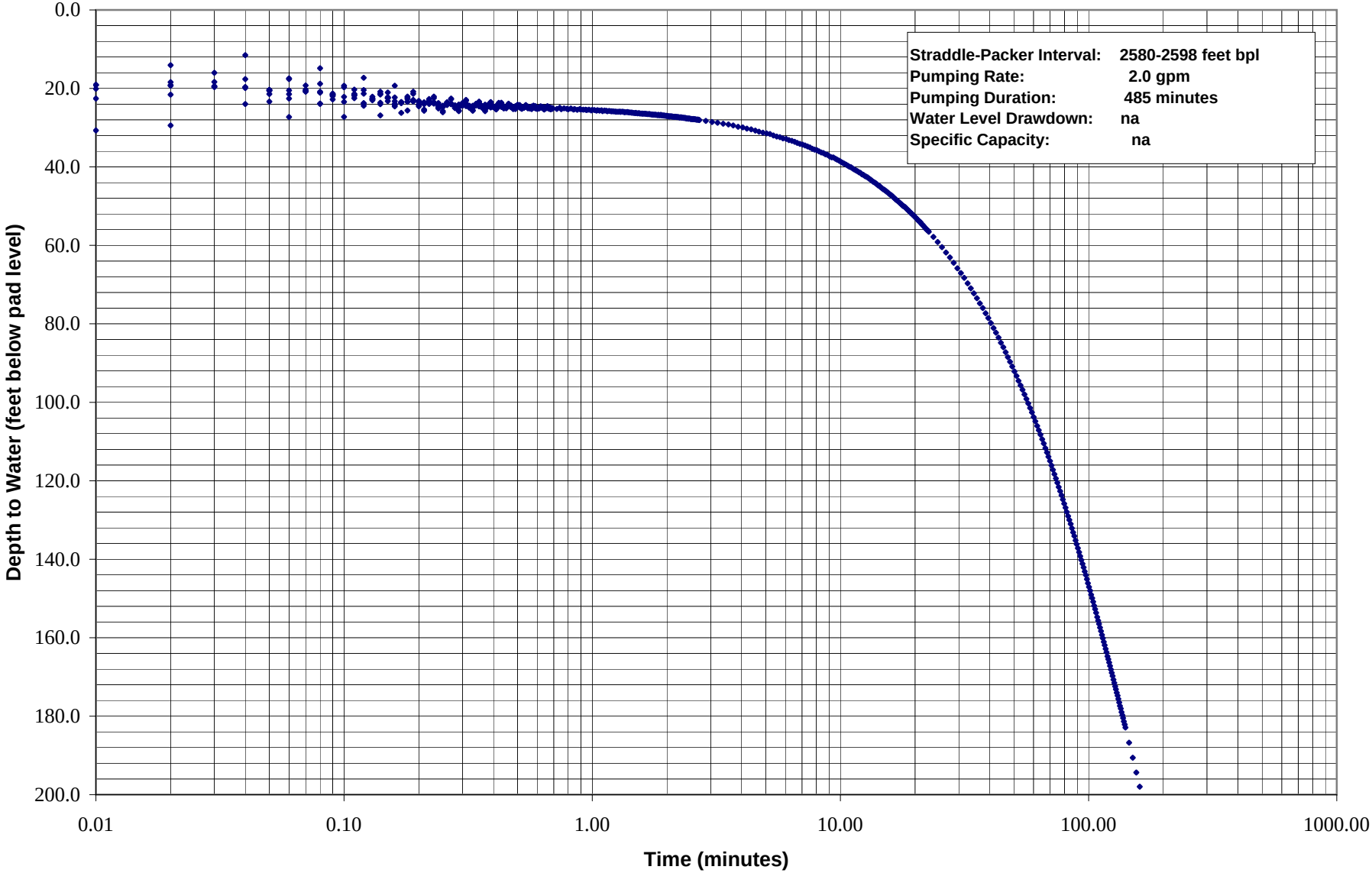
Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:32:13	14.37	169.14	44.86
04/28/03	15:32:23	14.54	168.79	45.21
04/28/03	15:32:33	14.70	168.54	45.46
04/28/03	15:32:43	14.87	168.30	45.70
04/28/03	15:32:53	15.04	168.14	45.86
04/28/03	15:33:03	15.20	167.94	46.06
04/28/03	15:33:13	15.37	167.66	46.34
04/28/03	15:33:23	15.54	167.45	46.55
04/28/03	15:33:33	15.70	167.14	46.86
04/28/03	15:33:43	15.87	166.94	47.06
04/28/03	15:33:53	16.04	166.79	47.21
04/28/03	15:34:03	16.20	166.50	47.50
04/28/03	15:34:13	16.37	166.23	47.77
04/28/03	15:34:23	16.54	165.98	48.02
04/28/03	15:34:33	16.70	165.71	48.29
04/28/03	15:34:43	16.87	165.47	48.53
04/28/03	15:34:53	17.04	165.32	48.68
04/28/03	15:35:03	17.20	165.06	48.94
04/28/03	15:35:13	17.37	164.79	49.21
04/28/03	15:35:23	17.54	164.58	49.42
04/28/03	15:35:33	17.70	164.33	49.67
04/28/03	15:35:43	17.87	164.03	49.97
04/28/03	15:35:53	18.04	163.94	50.06
04/28/03	15:36:03	18.20	163.79	50.21
04/28/03	15:36:13	18.37	163.52	50.48
04/28/03	15:36:23	18.54	163.23	50.77
04/28/03	15:36:33	18.70	163.00	51.00
04/28/03	15:36:43	18.87	162.78	51.22
04/28/03	15:36:53	19.04	162.50	51.50
04/28/03	15:37:03	19.20	162.28	51.72
04/28/03	15:37:13	19.37	162.10	51.90
04/28/03	15:37:23	19.54	161.83	52.17
04/28/03	15:37:33	19.70	161.68	52.32
04/28/03	15:37:43	19.87	161.40	52.60
04/28/03	15:37:53	20.04	161.16	52.84
04/28/03	15:38:03	20.20	160.95	53.05
04/28/03	15:38:13	20.37	160.69	53.31
04/28/03	15:38:23	20.54	160.44	53.56
04/28/03	15:38:33	20.70	160.18	53.82
04/28/03	15:38:43	20.87	160.04	53.96
04/28/03	15:38:53	21.04	159.87	54.13
04/28/03	15:39:03	21.20	159.46	54.54
04/28/03	15:39:13	21.37	159.26	54.74
04/28/03	15:39:23	21.54	159.08	54.92
04/28/03	15:39:33	21.70	158.84	55.16
04/28/03	15:39:43	21.87	158.55	55.45
04/28/03	15:39:53	22.04	158.36	55.64
04/28/03	15:40:03	22.20	158.08	55.92
04/28/03	15:40:13	22.37	157.91	56.09
04/28/03	15:40:23	22.54	157.79	56.21

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	15:40:33	22.70	157.47	56.53
04/28/03	15:41:32	23.69	156.15	57.85
04/28/03	15:42:31	24.67	154.84	59.16
04/28/03	15:43:31	25.65	153.54	60.46
04/28/03	15:44:30	26.64	152.17	61.83
04/28/03	15:45:29	27.62	150.92	63.08
04/28/03	15:46:28	28.60	149.55	64.45
04/28/03	15:47:27	29.59	148.16	65.84
04/28/03	15:48:26	30.57	146.95	67.05
04/28/03	15:49:25	31.55	145.72	68.28
04/28/03	15:50:24	32.54	144.31	69.69
04/28/03	15:51:23	33.52	143.05	70.95
04/28/03	15:52:22	34.50	141.78	72.22
04/28/03	15:53:21	35.49	140.53	73.47
04/28/03	15:54:20	36.47	139.22	74.78
04/28/03	15:55:19	37.45	138.02	75.98
04/28/03	15:56:18	38.44	136.70	77.30
04/28/03	15:57:17	39.42	135.48	78.52
04/28/03	15:58:16	40.40	134.19	79.81
04/28/03	15:59:15	41.39	132.92	81.08
04/28/03	16:00:14	42.37	131.75	82.25
04/28/03	16:01:13	43.35	130.50	83.50
04/28/03	16:02:12	44.34	129.18	84.82
04/28/03	16:03:11	45.32	128.02	85.98
04/28/03	16:04:10	46.30	126.77	87.23
04/28/03	16:05:09	47.29	125.51	88.49
04/28/03	16:06:08	48.27	124.34	89.66
04/28/03	16:07:07	49.25	123.11	90.89
04/28/03	16:08:06	50.24	121.86	92.14
04/28/03	16:09:05	51.22	120.71	93.29
04/28/03	16:10:04	52.20	119.47	94.53
04/28/03	16:11:03	53.19	118.30	95.70
04/28/03	16:12:02	54.17	117.19	96.81
04/28/03	16:13:01	55.15	116.01	97.99
04/28/03	16:14:00	56.14	114.87	99.13
04/28/03	16:14:59	57.12	113.71	100.29
04/28/03	16:15:58	58.10	112.56	101.44
04/28/03	16:16:57	59.09	111.44	102.56
04/28/03	16:17:56	60.07	110.25	103.75
04/28/03	16:18:55	61.05	109.16	104.84
04/28/03	16:19:54	62.04	107.98	106.02
04/28/03	16:20:53	63.02	106.89	107.11
04/28/03	16:21:52	64.00	105.75	108.25
04/28/03	16:22:51	64.99	104.59	109.41
04/28/03	16:23:50	65.97	103.49	110.51
04/28/03	16:24:49	66.95	102.30	111.70
04/28/03	16:25:48	67.94	101.21	112.79
04/28/03	16:26:47	68.92	100.11	113.89
04/28/03	16:27:46	69.90	99.03	114.97
04/28/03	16:28:45	70.89	97.90	116.10

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	16:29:44	71.87	96.79	117.21
04/28/03	16:30:43	72.85	95.68	118.32
04/28/03	16:31:42	73.84	94.58	119.42
04/28/03	16:32:41	74.82	93.49	120.51
04/28/03	16:33:40	75.80	92.41	121.59
04/28/03	16:34:39	76.79	91.34	122.66
04/28/03	16:35:38	77.77	90.32	123.68
04/28/03	16:36:37	78.75	89.23	124.77
04/28/03	16:37:36	79.74	88.17	125.83
04/28/03	16:38:35	80.72	87.13	126.87
04/28/03	16:39:34	81.70	86.03	127.97
04/28/03	16:40:33	82.69	84.99	129.01
04/28/03	16:41:32	83.67	84.01	129.99
04/28/03	16:42:31	84.65	82.99	131.01
04/28/03	16:43:30	85.64	81.91	132.09
04/28/03	16:44:29	86.62	80.84	133.16
04/28/03	16:45:28	87.60	79.92	134.08
04/28/03	16:46:27	88.59	78.80	135.20
04/28/03	16:47:26	89.57	77.82	136.18
04/28/03	16:48:25	90.55	76.81	137.19
04/28/03	16:49:24	91.54	75.80	138.20
04/28/03	16:50:23	92.52	74.77	139.23
04/28/03	16:51:22	93.50	73.79	140.21
04/28/03	16:52:21	94.49	72.84	141.16
04/28/03	16:53:20	95.47	71.90	142.10
04/28/03	16:54:19	96.45	70.88	143.12
04/28/03	16:55:18	97.44	69.97	144.03
04/28/03	16:56:17	98.42	68.90	145.10
04/28/03	16:57:16	99.40	67.90	146.10
04/28/03	16:58:15	100.39	66.92	147.08
04/28/03	16:59:14	101.37	65.99	148.01
04/28/03	17:00:13	102.35	64.96	149.04
04/28/03	17:01:12	103.34	64.10	149.90
04/28/03	17:02:11	104.32	63.15	150.85
04/28/03	17:03:10	105.30	62.15	151.85
04/28/03	17:04:09	106.29	61.28	152.72
04/28/03	17:05:08	107.27	60.36	153.64
04/28/03	17:06:07	108.25	59.25	154.75
04/28/03	17:07:06	109.24	58.34	155.66
04/28/03	17:08:05	110.22	57.52	156.48
04/28/03	17:09:04	111.20	56.59	157.41
04/28/03	17:10:03	112.19	55.68	158.32
04/28/03	17:11:02	113.17	54.70	159.30
04/28/03	17:12:01	114.15	53.86	160.14
04/28/03	17:13:00	115.14	52.93	161.07
04/28/03	17:13:59	116.12	52.09	161.91
04/28/03	17:14:58	117.10	51.17	162.83
04/28/03	17:15:57	118.09	50.29	163.71
04/28/03	17:16:56	119.07	49.26	164.74
04/28/03	17:17:55	120.05	48.52	165.48

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)
04/28/03	17:18:54	121.04	47.67	166.33
04/28/03	17:19:53	122.02	46.80	167.20
04/28/03	17:20:52	123.00	45.88	168.12
04/28/03	17:21:51	123.99	45.05	168.95
04/28/03	17:22:50	124.97	44.26	169.74
04/28/03	17:23:49	125.95	43.30	170.70
04/28/03	17:24:48	126.94	42.48	171.52
04/28/03	17:25:47	127.92	41.61	172.39
04/28/03	17:26:46	128.90	40.86	173.14
04/28/03	17:27:45	129.89	39.99	174.01
04/28/03	17:28:44	130.87	39.23	174.77
04/28/03	17:29:43	131.85	38.38	175.62
04/28/03	17:30:42	132.84	37.49	176.51
04/28/03	17:31:41	133.82	36.62	177.38
04/28/03	17:32:40	134.80	35.92	178.08
04/28/03	17:33:39	135.79	35.03	178.97
04/28/03	17:34:38	136.77	34.26	179.74
04/28/03	17:35:37	137.75	33.54	180.46
04/28/03	17:36:36	138.74	32.65	181.35
04/28/03	17:37:35	139.72	31.87	182.13
04/28/03	17:38:34	140.70	31.09	182.91
04/28/03	17:43:33	145.70	27.23	186.77
04/28/03	17:48:34	150.70	23.40	190.60
04/28/03	17:53:34	155.70	19.64	194.36
04/28/03	17:58:34	160.70	16.02	197.98
04/28/03	18:03:34	165.70	12.54	201.46

Straddle-Packer Test No. 9 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Injection Well No. 1



g:aproject\reesemacon\pf001153.0003\MW Packer Tests\Test #4\#9 Drawdown.xls\chart

Straddle-Packer Test No. 9 - Recovery
City of Port St. Lucie, Westport Injection Well System
Injection Well No. 1

Packer Depth Interval:	2580-2597.7 feet bpl	**Assumed Stabilized DTW:**	12.11 feet bpl
Start of Logging:	4/28/03 18:05:00	**Start of Pumping:**	4/28/03 15:15:00
End of Logging:	4/29/03 19:16:00	**Pumping Duration:**	165 minutes
Pumping Rate:	2.0 gpm	**Total Test Time:**	28 hrs

Data collected with Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\PT4REC.DAT

Note: Double line indicates end of pumping

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:05:28		11.16	202.84	
4/28/03	18:05:29		11.19	202.81	
4/28/03	18:05:29		11.21	202.79	
4/28/03	18:05:29		11.22	202.78	
4/28/03	18:05:29		11.23	202.77	
4/28/03	18:05:29		11.26	202.74	
4/28/03	18:05:29		11.22	202.78	
4/28/03	18:05:29		11.21	202.79	
4/28/03	18:05:29		11.20	202.80	
4/28/03	18:05:30		11.20	202.80	
4/28/03	18:05:30		11.21	202.79	
4/28/03	18:05:30		11.27	202.73	
4/28/03	18:05:30		11.29	202.71	
4/28/03	18:05:30		11.24	202.76	
4/28/03	18:05:30		11.19	202.81	
4/28/03	18:05:30		11.15	202.85	
4/28/03	18:05:30		11.18	202.82	
4/28/03	18:05:30		11.17	202.83	
4/28/03	18:05:31		11.20	202.80	
4/28/03	18:05:31		11.19	202.81	
4/28/03	18:05:31		11.16	202.84	
4/28/03	18:05:31		11.17	202.83	
4/28/03	18:05:31		11.17	202.83	
4/28/03	18:05:31		11.20	202.80	
4/28/03	18:05:31		11.17	202.83	
4/28/03	18:05:31		11.14	202.86	
4/28/03	18:05:32		11.16	202.84	
4/28/03	18:05:32		11.22	202.78	
4/28/03	18:05:32		11.23	202.77	
4/28/03	18:05:32		11.26	202.74	
4/28/03	18:05:32		11.24	202.76	
4/28/03	18:05:32		11.20	202.80	
4/28/03	18:05:32		11.20	202.80	
4/28/03	18:05:32		11.18	202.82	
4/28/03	18:05:33		11.19	202.81	
4/28/03	18:05:33		11.17	202.83	
4/28/03	18:05:33		11.12	202.88	
4/28/03	18:05:33		11.12	202.88	
4/28/03	18:05:33		11.15	202.85	
4/28/03	18:05:33		11.15	202.85	
4/28/03	18:05:33		11.14	202.86	
4/28/03	18:05:33		11.15	202.85	
4/28/03	18:05:33		11.17	202.83	
4/28/03	18:05:34		11.21	202.79	
4/28/03	18:05:34		11.19	202.81	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:05:34		11.19	202.81	
4/28/03	18:05:34		11.21	202.79	
4/28/03	18:05:34		11.21	202.79	
4/28/03	18:05:34		11.22	202.78	
4/28/03	18:05:34		11.21	202.79	
4/28/03	18:05:34		11.15	202.85	
4/28/03	18:05:34		11.10	202.90	
4/28/03	18:05:34		11.05	202.95	
4/28/03	18:05:34		11.07	202.93	
4/28/03	18:05:34		11.16	202.84	
4/28/03	18:05:34		11.23	202.77	
4/28/03	18:05:34		11.20	202.80	
4/28/03	18:05:34		11.19	202.81	
4/28/03	18:05:34		11.22	202.78	
4/28/03	18:05:34		11.20	202.80	
4/28/03	18:05:35		11.17	202.83	
4/28/03	18:05:35		11.16	202.84	
4/28/03	18:05:35		11.14	202.86	
4/28/03	18:05:35		11.14	202.86	
4/28/03	18:05:35		11.14	202.86	
4/28/03	18:05:35		11.15	202.85	
4/28/03	18:05:35		11.16	202.84	
4/28/03	18:05:35		11.11	202.89	
4/28/03	18:05:36		11.05	202.95	
4/28/03	18:05:36		11.05	202.95	
4/28/03	18:05:36		11.08	202.92	
4/28/03	18:05:36		11.10	202.90	
4/28/03	18:05:36		11.12	202.88	
4/28/03	18:05:36		11.12	202.88	
4/28/03	18:05:36		11.14	202.86	
4/28/03	18:05:36		11.18	202.82	
4/28/03	18:05:37		11.21	202.79	
4/28/03	18:05:37		11.19	202.81	
4/28/03	18:05:37		11.16	202.84	
4/28/03	18:05:37		11.14	202.86	
4/28/03	18:05:37		11.10	202.90	
4/28/03	18:05:37		11.12	202.88	
4/28/03	18:05:37		11.11	202.89	
4/28/03	18:05:37		11.14	202.86	
4/28/03	18:05:37		11.19	202.81	
4/28/03	18:05:38		11.16	202.84	
4/28/03	18:05:38		11.11	202.89	
4/28/03	18:05:38		11.06	202.94	
4/28/03	18:05:38		11.06	202.94	
4/28/03	18:05:38		11.08	202.92	
4/28/03	18:05:38		11.10	202.90	
4/28/03	18:05:38		11.06	202.94	
4/28/03	18:05:38		11.10	202.90	
4/28/03	18:05:39		11.18	202.82	
4/28/03	18:05:39		11.20	202.80	
4/28/03	18:05:39		11.16	202.84	
4/28/03	18:05:39		11.15	202.85	
4/28/03	18:05:39		11.13	202.87	
4/28/03	18:05:39		11.10	202.90	
4/28/03	18:05:39		11.06	202.94	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:05:39		11.03	202.97	
4/28/03	18:05:40		11.06	202.94	
4/28/03	18:05:40		11.16	202.84	
4/28/03	18:05:40		11.19	202.81	
4/28/03	18:05:40		11.16	202.84	
4/28/03	18:05:40		11.15	202.85	
4/28/03	18:05:40		11.07	202.93	
4/28/03	18:05:40		11.05	202.95	
4/28/03	18:05:40		11.08	202.92	
4/28/03	18:05:40		11.10	202.90	
4/28/03	18:05:40		11.14	202.86	
4/28/03	18:05:40		11.21	202.79	
4/28/03	18:05:40		11.10	202.90	
4/28/03	18:05:40		11.02	202.98	
4/28/03	18:05:40		11.12	202.88	
4/28/03	18:05:40		11.09	202.91	
4/28/03	18:05:40		11.03	202.97	
4/28/03	18:05:40		11.17	202.83	
4/28/03	18:05:41		11.05	202.95	
4/28/03	18:05:41		11.06	202.94	
4/28/03	18:05:41		11.10	202.90	
4/28/03	18:05:41		11.01	202.99	
4/28/03	18:05:41		10.82	203.18	
4/28/03	18:05:41		11.19	202.81	
4/28/03	18:05:41		11.18	202.82	
4/28/03	18:05:41		10.98	203.02	
4/28/03	18:05:42		11.15	202.85	
4/28/03	18:05:42		11.14	202.86	
4/28/03	18:05:42		11.06	202.94	
4/28/03	18:05:42		11.11	202.89	
4/28/03	18:05:42		11.12	202.88	
4/28/03	18:05:42		11.06	202.94	
4/28/03	18:05:42		11.26	202.74	
4/28/03	18:05:42		11.12	202.88	
4/28/03	18:05:43		11.02	202.98	
4/28/03	18:05:43		11.13	202.87	
4/28/03	18:05:43		11.10	202.90	
4/28/03	18:05:43		11.03	202.97	
4/28/03	18:05:43		11.11	202.89	
4/28/03	18:05:43		11.11	202.89	
4/28/03	18:05:43		11.09	202.91	
4/28/03	18:05:43		11.16	202.84	
4/28/03	18:05:44		11.07	202.93	
4/28/03	18:05:44		11.04	202.96	
4/28/03	18:05:44		11.14	202.86	
4/28/03	18:05:44		11.10	202.90	
4/28/03	18:05:44		11.12	202.88	
4/28/03	18:05:44		11.11	202.89	
4/28/03	18:05:44		11.11	202.89	
4/28/03	18:05:44		11.08	202.92	
4/28/03	18:05:45		11.10	202.90	
4/28/03	18:05:45		11.03	202.97	
4/28/03	18:05:45		11.10	202.90	
4/28/03	18:05:45		11.11	202.89	
4/28/03	18:05:45		11.11	202.89	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:05:45		11.08	202.92	
4/28/03	18:05:45		11.10	202.90	
4/28/03	18:05:45		11.11	202.89	
4/28/03	18:05:45		11.11	202.89	
4/28/03	18:05:46		11.11	202.89	
4/28/03	18:05:46		11.12	202.88	
4/28/03	18:05:46		11.13	202.87	
4/28/03	18:05:46		11.14	202.86	
4/28/03	18:05:46		11.11	202.89	
4/28/03	18:05:46		11.11	202.89	
4/28/03	18:05:46		11.11	202.89	
4/28/03	18:05:46		11.10	202.90	
4/28/03	18:05:46		11.08	202.92	
4/28/03	18:05:46		11.10	202.90	
4/28/03	18:05:46		11.10	202.90	
4/28/03	18:05:46		11.10	202.90	
4/28/03	18:05:46		11.11	202.89	
4/28/03	18:05:46		11.08	202.92	
4/28/03	18:05:46		11.10	202.90	
4/28/03	18:05:46		11.11	202.89	
4/28/03	18:05:47		11.11	202.89	
4/28/03	18:05:47		11.11	202.89	
4/28/03	18:05:47		11.12	202.88	
4/28/03	18:05:47		11.11	202.89	
4/28/03	18:05:47		11.12	202.88	
4/28/03	18:05:47		11.11	202.89	
4/28/03	18:05:47		11.10	202.90	
4/28/03	18:05:47		11.11	202.89	
4/28/03	18:05:48		11.11	202.89	
4/28/03	18:05:48		11.11	202.89	
4/28/03	18:05:48		11.11	202.89	
4/28/03	18:05:48		11.11	202.89	
4/28/03	18:05:48		11.10	202.90	
4/28/03	18:05:48		11.10	202.90	
4/28/03	18:05:48		11.10	202.90	
4/28/03	18:05:48		11.11	202.89	
4/28/03	18:05:49		11.12	202.88	
4/28/03	18:05:49		11.09	202.91	
4/28/03	18:05:49		11.11	202.89	
4/28/03	18:05:49		11.11	202.89	
4/28/03	18:05:49		11.11	202.89	
4/28/03	18:05:49		11.11	202.89	
4/28/03	18:05:49		11.12	202.88	
4/28/03	18:05:49		11.11	202.89	
4/28/03	18:05:49		11.11	202.89	
4/28/03	18:05:50		11.10	202.90	
4/28/03	18:05:50		11.10	202.90	
4/28/03	18:05:50		11.11	202.89	
4/28/03	18:05:50		11.11	202.89	
4/28/03	18:05:50		11.11	202.89	
4/28/03	18:05:50		11.11	202.89	
4/28/03	18:05:50		11.11	202.89	
4/28/03	18:05:50		11.12	202.88	
4/28/03	18:05:51		11.11	202.89	
4/28/03	18:05:51		11.12	202.88	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:05:51		11.12	202.88	
4/28/03	18:05:51		11.13	202.87	
4/28/03	18:05:51		11.12	202.88	
4/28/03	18:05:51		11.13	202.87	
4/28/03	18:05:51		11.11	202.89	
4/28/03	18:05:51		11.12	202.88	
4/28/03	18:05:52		11.11	202.89	
4/28/03	18:05:52		11.11	202.89	
4/28/03	18:05:52		11.11	202.89	
4/28/03	18:05:52		11.11	202.89	
4/28/03	18:05:52		11.11	202.89	
4/28/03	18:05:52		11.11	202.89	
4/28/03	18:05:52		11.11	202.89	
4/28/03	18:05:52		11.11	202.89	
4/28/03	18:05:53		11.11	202.89	
4/28/03	18:05:53		11.12	202.88	
4/28/03	18:05:53		11.12	202.88	
4/28/03	18:05:53		11.12	202.88	
4/28/03	18:05:53		11.12	202.88	
4/28/03	18:05:53		11.14	202.86	
4/28/03	18:05:53		11.12	202.88	
4/28/03	18:05:53		11.12	202.88	
4/28/03	18:05:53		11.12	202.88	
4/28/03	18:05:53		11.12	202.88	
4/28/03	18:05:53		11.13	202.87	
4/28/03	18:05:53		11.12	202.88	
4/28/03	18:05:53		11.12	202.88	
4/28/03	18:05:53		11.12	202.88	
4/28/03	18:05:53		11.12	202.88	
4/28/03	18:05:53		11.13	202.87	
4/28/03	18:05:54		11.13	202.87	
4/28/03	18:05:54		11.12	202.88	
4/28/03	18:05:54		11.12	202.88	
4/28/03	18:05:54		11.12	202.88	
4/28/03	18:05:54		11.12	202.88	
4/28/03	18:05:54		11.13	202.87	
4/28/03	18:05:54		11.13	202.87	
4/28/03	18:05:54		11.12	202.88	
4/28/03	18:05:55		11.13	202.87	
4/28/03	18:05:55		11.12	202.88	
4/28/03	18:05:55		11.12	202.88	
4/28/03	18:05:55		11.13	202.87	
4/28/03	18:05:55		11.11	202.89	
4/28/03	18:05:55		11.14	202.86	
4/28/03	18:05:55		11.12	202.88	
4/28/03	18:05:55		11.13	202.87	
4/28/03	18:05:56		11.13	202.87	
4/28/03	18:05:56		11.13	202.87	
4/28/03	18:05:56		11.14	202.86	
4/28/03	18:05:56		11.14	202.86	
4/28/03	18:05:56		11.13	202.87	
4/28/03	18:05:56		11.13	202.87	
4/28/03	18:05:56		11.13	202.87	
4/28/03	18:05:56		11.13	202.87	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:05:57		11.14	202.86	
4/28/03	18:05:57		11.13	202.87	
4/28/03	18:05:57		11.13	202.87	
4/28/03	18:05:57		11.13	202.87	
4/28/03	18:05:57		11.14	202.86	
4/28/03	18:05:57		11.13	202.87	
4/28/03	18:05:57		11.13	202.87	
4/28/03	18:05:57		11.13	202.87	
4/28/03	18:05:57		11.13	202.87	
4/28/03	18:05:58		11.14	202.86	
4/28/03	18:05:58		11.14	202.86	
4/28/03	18:05:58		11.14	202.86	
4/28/03	18:05:58		11.14	202.86	
4/28/03	18:05:58		11.14	202.86	
4/28/03	18:05:58		11.14	202.86	
4/28/03	18:05:58		11.13	202.87	
4/28/03	18:05:58		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:05:59		11.14	202.86	
4/28/03	18:06:00		11.14	202.86	
4/28/03	18:06:00		11.14	202.86	
4/28/03	18:06:00		11.14	202.86	
4/28/03	18:06:00		11.14	202.86	
4/28/03	18:06:00		11.14	202.86	
4/28/03	18:06:00		11.14	202.86	
4/28/03	18:06:00		11.14	202.86	
4/28/03	18:06:00		11.14	202.86	
4/28/03	18:06:01		11.14	202.86	
4/28/03	18:06:01		11.14	202.86	
4/28/03	18:06:01		11.14	202.86	
4/28/03	18:06:01		11.14	202.86	
4/28/03	18:06:01		11.14	202.86	
4/28/03	18:06:01		11.14	202.86	
4/28/03	18:06:01		11.14	202.86	
4/28/03	18:06:01		11.14	202.86	
4/28/03	18:06:01		11.14	202.86	
4/28/03	18:06:02		11.14	202.86	
4/28/03	18:06:02		11.15	202.85	
4/28/03	18:06:02		11.15	202.85	
4/28/03	18:06:02		11.14	202.86	
4/28/03	18:06:02		11.14	202.86	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:06:02		11.14	202.86	
4/28/03	18:06:02		11.14	202.86	
4/28/03	18:06:02		11.14	202.86	
4/28/03	18:06:03		11.14	202.86	
4/28/03	18:06:03		11.15	202.85	
4/28/03	18:06:03		11.14	202.86	
4/28/03	18:06:03		11.15	202.85	
4/28/03	18:06:03		11.15	202.85	
4/28/03	18:06:03		11.15	202.85	
4/28/03	18:06:03		11.14	202.86	
4/28/03	18:06:03		11.15	202.85	
4/28/03	18:06:04		11.15	202.85	
4/28/03	18:06:04		11.15	202.85	
4/28/03	18:06:04		11.14	202.86	
4/28/03	18:06:04		11.14	202.86	
4/28/03	18:06:04		11.14	202.86	
4/28/03	18:06:04		11.15	202.85	
4/28/03	18:06:04		11.15	202.85	
4/28/03	18:06:04		11.15	202.85	
4/28/03	18:06:05		11.14	202.86	
4/28/03	18:06:05		11.15	202.85	
4/28/03	18:06:05		11.14	202.86	
4/28/03	18:06:05		11.15	202.85	
4/28/03	18:06:05		11.15	202.85	
4/28/03	18:06:05		11.15	202.85	
4/28/03	18:06:05		11.15	202.85	
4/28/03	18:06:05		11.15	202.85	
4/28/03	18:06:05		11.15	202.85	
4/28/03	18:06:05		11.15	202.85	
4/28/03	18:06:05		11.15	202.85	
4/28/03	18:06:05		11.16	202.84	
4/28/03	18:06:05		11.15	202.85	
4/28/03	18:06:05		11.15	202.85	
4/28/03	18:06:05		11.15	202.85	
4/28/03	18:06:05		11.15	202.85	
4/28/03	18:06:06		11.15	202.85	
4/28/03	18:06:06		11.15	202.85	
4/28/03	18:06:06		11.16	202.84	
4/28/03	18:06:06		11.15	202.85	
4/28/03	18:06:06		11.15	202.85	
4/28/03	18:06:06		11.15	202.85	
4/28/03	18:06:06		11.16	202.84	
4/28/03	18:06:06		11.16	202.84	
4/28/03	18:06:07		11.15	202.85	
4/28/03	18:06:07		11.16	202.84	
4/28/03	18:06:07		11.16	202.84	
4/28/03	18:06:07		11.16	202.84	
4/28/03	18:06:07		11.16	202.84	
4/28/03	18:06:07		11.16	202.84	
4/28/03	18:06:07		11.16	202.84	
4/28/03	18:06:07		11.15	202.85	
4/28/03	18:06:08		11.15	202.85	
4/28/03	18:06:08		11.15	202.85	
4/28/03	18:06:08		11.16	202.84	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:06:08		11.16	202.84	
4/28/03	18:06:08		11.16	202.84	
4/28/03	18:06:08		11.15	202.85	
4/28/03	18:06:08		11.16	202.84	
4/28/03	18:06:08		11.16	202.84	
4/28/03	18:06:09		11.16	202.84	
4/28/03	18:06:09		11.16	202.84	
4/28/03	18:06:09		11.16	202.84	
4/28/03	18:06:09		11.16	202.84	
4/28/03	18:06:09		11.16	202.84	
4/28/03	18:06:09		11.16	202.84	
4/28/03	18:06:09		11.16	202.84	
4/28/03	18:06:09		11.16	202.84	
4/28/03	18:06:10		11.16	202.84	
4/28/03	18:06:10		11.16	202.84	
4/28/03	18:06:10		11.16	202.84	
4/28/03	18:06:10		11.16	202.84	
4/28/03	18:06:10		11.16	202.84	
4/28/03	18:06:10		11.16	202.84	
4/28/03	18:06:10		11.16	202.84	
4/28/03	18:06:10		11.16	202.84	
4/28/03	18:06:10		11.16	202.84	
4/28/03	18:06:11		11.16	202.84	
4/28/03	18:06:11		11.16	202.84	
4/28/03	18:06:11		11.16	202.84	
4/28/03	18:06:11		11.16	202.84	
4/28/03	18:06:11		11.16	202.84	
4/28/03	18:06:11		11.16	202.84	
4/28/03	18:06:11		11.16	202.84	
4/28/03	18:06:11		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.16	202.84	
4/28/03	18:06:12		11.17	202.83	
4/28/03	18:06:13		11.16	202.84	
4/28/03	18:06:13		11.16	202.84	
4/28/03	18:06:13		11.17	202.83	
4/28/03	18:06:13		11.17	202.83	
4/28/03	18:06:13		11.17	202.83	
4/28/03	18:06:13		11.17	202.83	
4/28/03	18:06:13		11.16	202.84	
4/28/03	18:06:13		11.17	202.83	
4/28/03	18:06:14		11.16	202.84	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:06:14		11.17	202.83	
4/28/03	18:06:14		11.17	202.83	
4/28/03	18:06:14		11.17	202.83	
4/28/03	18:06:14		11.17	202.83	
4/28/03	18:06:14		11.17	202.83	
4/28/03	18:06:14		11.17	202.83	
4/28/03	18:06:14		11.17	202.83	
4/28/03	18:06:14		11.17	202.83	
4/28/03	18:06:15		11.17	202.83	
4/28/03	18:06:15		11.17	202.83	
4/28/03	18:06:15		11.17	202.83	
4/28/03	18:06:15		11.17	202.83	
4/28/03	18:06:15		11.17	202.83	
4/28/03	18:06:15		11.17	202.83	
4/28/03	18:06:15		11.17	202.83	
4/28/03	18:06:16		11.17	202.83	
4/28/03	18:06:16		11.17	202.83	
4/28/03	18:06:16		11.17	202.83	
4/28/03	18:06:16		11.17	202.83	
4/28/03	18:06:16		11.17	202.83	
4/28/03	18:06:16		11.17	202.83	
4/28/03	18:06:16		11.18	202.82	
4/28/03	18:06:16		11.18	202.82	
4/28/03	18:06:17		11.17	202.83	
4/28/03	18:06:17		11.17	202.83	
4/28/03	18:06:17		11.19	202.81	
4/28/03	18:06:17		11.17	202.83	
4/28/03	18:06:17		11.18	202.82	
4/28/03	18:06:17		11.17	202.83	
4/28/03	18:06:17		11.17	202.83	
4/28/03	18:06:17		11.18	202.82	
4/28/03	18:06:18		11.17	202.83	
4/28/03	18:06:18		11.18	202.82	
4/28/03	18:06:18		11.18	202.82	
4/28/03	18:06:18		11.18	202.82	
4/28/03	18:06:18		11.18	202.82	
4/28/03	18:06:18		11.19	202.81	
4/28/03	18:06:18		11.18	202.82	
4/28/03	18:06:18		11.18	202.82	
4/28/03	18:06:18		11.18	202.82	
4/28/03	18:06:18		11.19	202.81	
4/28/03	18:06:18		11.18	202.82	
4/28/03	18:06:18		11.18	202.82	
4/28/03	18:06:18		11.18	202.82	
4/28/03	18:06:18		11.18	202.82	
4/28/03	18:06:18		11.19	202.81	
4/28/03	18:06:18		11.18	202.82	
4/28/03	18:06:18		11.19	202.81	
4/28/03	18:06:19		11.19	202.81	
4/28/03	18:06:19		11.19	202.81	
4/28/03	18:06:19		11.18	202.82	
4/28/03	18:06:19		11.19	202.81	
4/28/03	18:06:19		11.18	202.82	
4/28/03	18:06:19		11.19	202.81	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:06:19		11.19	202.81	
4/28/03	18:06:19		11.19	202.81	
4/28/03	18:06:20		11.19	202.81	
4/28/03	18:06:20		11.19	202.81	
4/28/03	18:06:20		11.19	202.81	
4/28/03	18:06:20		11.19	202.81	
4/28/03	18:06:20		11.19	202.81	
4/28/03	18:06:20		11.19	202.81	
4/28/03	18:06:20		11.19	202.81	
4/28/03	18:06:20		11.19	202.81	
4/28/03	18:06:21		11.19	202.81	
4/28/03	18:06:21		11.19	202.81	
4/28/03	18:06:21		11.19	202.81	
4/28/03	18:06:21		11.19	202.81	
4/28/03	18:06:21		11.19	202.81	
4/28/03	18:06:21		11.19	202.81	
4/28/03	18:06:21		11.19	202.81	
4/28/03	18:06:21		11.19	202.81	
4/28/03	18:06:22		11.19	202.81	
4/28/03	18:06:22		11.19	202.81	
4/28/03	18:06:22		11.19	202.81	
4/28/03	18:06:22		11.19	202.81	
4/28/03	18:06:22		11.19	202.81	
4/28/03	18:06:22		11.19	202.81	
4/28/03	18:06:22		11.19	202.81	
4/28/03	18:06:22		11.19	202.81	
4/28/03	18:06:23		11.19	202.81	
4/28/03	18:06:23		11.19	202.81	
4/28/03	18:06:23		11.19	202.81	
4/28/03	18:06:23		11.19	202.81	
4/28/03	18:06:23		11.19	202.81	
4/28/03	18:06:23		11.19	202.81	
4/28/03	18:06:23		11.19	202.81	
4/28/03	18:06:23		11.19	202.81	
4/28/03	18:06:24		11.20	202.80	
4/28/03	18:06:24		11.19	202.81	
4/28/03	18:06:24		11.19	202.81	
4/28/03	18:06:24		11.19	202.81	
4/28/03	18:06:24		11.19	202.81	
4/28/03	18:06:24		11.19	202.81	
4/28/03	18:06:24		11.19	202.81	
4/28/03	18:06:24		11.19	202.81	
4/28/03	18:06:24		11.20	202.80	
4/28/03	18:06:24		11.19	202.81	
4/28/03	18:06:24		11.20	202.80	
4/28/03	18:06:24		11.20	202.80	
4/28/03	18:06:24		11.19	202.81	
4/28/03	18:06:24		11.20	202.80	
4/28/03	18:06:24		11.19	202.81	
4/28/03	18:06:24		11.20	202.80	
4/28/03	18:06:24		11.20	202.80	
4/28/03	18:06:24		11.19	202.81	
4/28/03	18:06:25		11.20	202.80	
4/28/03	18:06:25		11.20	202.80	
4/28/03	18:06:25		11.20	202.80	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:06:25		11.20	202.80	
4/28/03	18:06:25		11.20	202.80	
4/28/03	18:06:25		11.20	202.80	
4/28/03	18:06:25		11.20	202.80	
4/28/03	18:06:25		11.20	202.80	
4/28/03	18:06:26		11.20	202.80	
4/28/03	18:06:26		11.20	202.80	
4/28/03	18:06:26		11.20	202.80	
4/28/03	18:06:26		11.20	202.80	
4/28/03	18:06:26		11.20	202.80	
4/28/03	18:06:26		11.21	202.79	
4/28/03	18:06:26		11.20	202.80	
4/28/03	18:06:26		11.20	202.80	
4/28/03	18:06:27		11.20	202.80	
4/28/03	18:06:27		11.20	202.80	
4/28/03	18:06:27		11.21	202.79	
4/28/03	18:06:27		11.21	202.79	
4/28/03	18:06:27		11.20	202.80	
4/28/03	18:06:27		11.20	202.80	
4/28/03	18:06:27		11.20	202.80	
4/28/03	18:06:27		11.20	202.80	
4/28/03	18:06:27		11.20	202.80	
4/28/03	18:06:28		11.20	202.80	
4/28/03	18:06:28		11.20	202.80	
4/28/03	18:06:28		11.20	202.80	
4/28/03	18:06:28		11.20	202.80	
4/28/03	18:06:28		11.20	202.80	
4/28/03	18:06:28		11.20	202.80	
4/28/03	18:06:28		11.21	202.79	
4/28/03	18:06:28		11.20	202.80	
4/28/03	18:06:29		11.20	202.80	
4/28/03	18:06:29		11.20	202.80	
4/28/03	18:06:29		11.21	202.79	
4/28/03	18:06:29		11.21	202.79	
4/28/03	18:06:29		11.21	202.79	
4/28/03	18:06:29		11.21	202.79	
4/28/03	18:06:29		11.21	202.79	
4/28/03	18:06:29		11.21	202.79	
4/28/03	18:06:30		11.21	202.79	
4/28/03	18:06:30		11.21	202.79	
4/28/03	18:06:30		11.21	202.79	
4/28/03	18:06:30		11.21	202.79	
4/28/03	18:06:30		11.21	202.79	
4/28/03	18:06:30		11.21	202.79	
4/28/03	18:06:30		11.21	202.79	
4/28/03	18:06:30		11.21	202.79	
4/28/03	18:06:31		11.21	202.79	
4/28/03	18:06:31		11.21	202.79	
4/28/03	18:06:31		11.21	202.79	
4/28/03	18:06:31		11.21	202.79	
4/28/03	18:06:31		11.21	202.79	
4/28/03	18:06:31		11.21	202.79	
4/28/03	18:06:31		11.21	202.79	
4/28/03	18:06:31		11.21	202.79	
4/28/03	18:06:31	0.00	11.21	202.79	Pump-off

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:06:31	0.00	11.21	202.79	
4/28/03	18:06:31	0.00	11.21	202.79	
4/28/03	18:06:31	0.00	11.21	202.79	
4/28/03	18:06:31	0.01	11.21	202.79	
4/28/03	18:06:33	0.03	11.21	202.79	
4/28/03	18:06:34	0.05	11.21	202.79	
4/28/03	18:06:35	0.07	11.21	202.79	
4/28/03	18:06:36	0.08	11.22	202.78	
4/28/03	18:06:37	0.10	11.22	202.78	
4/28/03	18:06:38	0.12	11.22	202.78	
4/28/03	18:06:39	0.13	11.23	202.77	
4/28/03	18:06:40	0.15	11.23	202.77	
4/28/03	18:06:41	0.17	11.23	202.77	
4/28/03	18:06:42	0.18	11.23	202.77	
4/28/03	18:06:43	0.20	11.24	202.76	
4/28/03	18:06:44	0.22	11.24	202.76	
4/28/03	18:06:45	0.23	11.24	202.76	
4/28/03	18:06:46	0.25	11.24	202.76	
4/28/03	18:06:47	0.27	11.24	202.76	
4/28/03	18:06:48	0.28	11.25	202.75	
4/28/03	18:06:49	0.30	11.25	202.75	
4/28/03	18:06:50	0.32	11.25	202.75	
4/28/03	18:06:51	0.33	11.26	202.74	
4/28/03	18:06:52	0.35	11.26	202.74	
4/28/03	18:06:53	0.37	11.26	202.74	
4/28/03	18:06:54	0.38	11.27	202.73	
4/28/03	18:06:55	0.40	11.27	202.73	
4/28/03	18:06:56	0.42	11.27	202.73	
4/28/03	18:06:57	0.43	11.27	202.73	
4/28/03	18:06:58	0.45	11.27	202.73	
4/28/03	18:06:59	0.47	11.27	202.73	
4/28/03	18:07:00	0.48	11.27	202.73	
4/28/03	18:07:01	0.50	11.28	202.72	
4/28/03	18:07:02	0.52	11.28	202.72	
4/28/03	18:07:03	0.53	11.28	202.72	
4/28/03	18:07:04	0.55	11.29	202.71	
4/28/03	18:07:05	0.57	11.29	202.71	
4/28/03	18:07:06	0.58	11.29	202.71	
4/28/03	18:07:07	0.60	11.29	202.71	
4/28/03	18:07:08	0.62	11.29	202.71	
4/28/03	18:07:09	0.63	11.30	202.70	
4/28/03	18:07:10	0.65	11.30	202.70	
4/28/03	18:07:11	0.67	11.30	202.70	
4/28/03	18:07:12	0.68	11.30	202.70	
4/28/03	18:07:13	0.70	11.31	202.69	
4/28/03	18:07:14	0.72	11.31	202.69	
4/28/03	18:07:15	0.73	11.31	202.69	
4/28/03	18:07:16	0.75	11.32	202.68	
4/28/03	18:07:17	0.77	11.32	202.68	
4/28/03	18:07:18	0.78	11.32	202.68	
4/28/03	18:07:19	0.80	11.32	202.68	
4/28/03	18:07:20	0.82	11.32	202.68	
4/28/03	18:07:21	0.83	11.32	202.68	
4/28/03	18:07:22	0.85	11.33	202.67	
4/28/03	18:07:23	0.87	11.33	202.67	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:07:24	0.88	11.33	202.67	
4/28/03	18:07:25	0.90	11.34	202.66	
4/28/03	18:07:26	0.92	11.34	202.66	
4/28/03	18:07:27	0.93	11.34	202.66	
4/28/03	18:07:28	0.95	11.34	202.66	
4/28/03	18:07:29	0.97	11.34	202.66	
4/28/03	18:07:30	0.98	11.34	202.66	
4/28/03	18:07:31	1.00	11.35	202.65	
4/28/03	18:07:32	1.02	11.35	202.65	
4/28/03	18:07:33	1.03	11.35	202.65	
4/28/03	18:07:34	1.05	11.35	202.65	
4/28/03	18:07:35	1.07	11.36	202.64	
4/28/03	18:07:36	1.08	11.36	202.64	
4/28/03	18:07:37	1.10	11.37	202.63	
4/28/03	18:07:38	1.12	11.37	202.63	
4/28/03	18:07:39	1.13	11.36	202.64	
4/28/03	18:07:40	1.15	11.37	202.63	
4/28/03	18:07:41	1.17	11.37	202.63	
4/28/03	18:07:42	1.18	11.37	202.63	
4/28/03	18:07:43	1.20	11.38	202.62	
4/28/03	18:07:44	1.22	11.38	202.62	
4/28/03	18:07:45	1.23	11.38	202.62	
4/28/03	18:07:46	1.25	11.38	202.62	
4/28/03	18:07:47	1.27	11.39	202.61	
4/28/03	18:07:48	1.28	11.39	202.61	
4/28/03	18:07:49	1.30	11.39	202.61	
4/28/03	18:07:50	1.32	11.39	202.61	
4/28/03	18:07:51	1.33	11.40	202.60	
4/28/03	18:07:52	1.35	11.40	202.60	
4/28/03	18:07:53	1.37	11.40	202.60	
4/28/03	18:07:54	1.38	11.40	202.60	
4/28/03	18:07:55	1.40	11.40	202.60	
4/28/03	18:07:56	1.42	11.41	202.59	
4/28/03	18:07:57	1.43	11.40	202.60	
4/28/03	18:07:58	1.45	11.41	202.59	
4/28/03	18:07:59	1.47	11.42	202.58	
4/28/03	18:08:00	1.48	11.42	202.58	
4/28/03	18:08:01	1.50	11.42	202.58	
4/28/03	18:08:02	1.52	11.42	202.58	
4/28/03	18:08:03	1.53	11.42	202.58	
4/28/03	18:08:04	1.55	11.42	202.58	
4/28/03	18:08:05	1.57	11.42	202.58	
4/28/03	18:08:06	1.58	11.42	202.58	
4/28/03	18:08:07	1.60	11.42	202.58	
4/28/03	18:08:08	1.62	11.43	202.57	
4/28/03	18:08:09	1.63	11.43	202.57	
4/28/03	18:08:10	1.65	11.44	202.56	
4/28/03	18:08:11	1.67	11.44	202.56	
4/28/03	18:08:12	1.68	11.44	202.56	
4/28/03	18:08:13	1.70	11.45	202.55	
4/28/03	18:08:14	1.72	11.45	202.55	
4/28/03	18:08:15	1.73	11.45	202.55	
4/28/03	18:08:16	1.75	11.45	202.55	
4/28/03	18:08:17	1.77	11.45	202.55	
4/28/03	18:08:18	1.78	11.46	202.54	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:08:19	1.80	11.46	202.54	
4/28/03	18:08:20	1.82	11.46	202.54	
4/28/03	18:08:21	1.83	11.47	202.53	
4/28/03	18:08:22	1.85	11.47	202.53	
4/28/03	18:08:23	1.87	11.47	202.53	
4/28/03	18:08:24	1.88	11.47	202.53	
4/28/03	18:08:25	1.90	11.47	202.53	
4/28/03	18:08:26	1.92	11.47	202.53	
4/28/03	18:08:27	1.93	11.47	202.53	
4/28/03	18:08:28	1.95	11.48	202.52	
4/28/03	18:08:29	1.97	11.48	202.52	
4/28/03	18:08:30	1.98	11.48	202.52	
4/28/03	18:08:31	2.00	11.49	202.51	
4/28/03	18:08:32	2.02	11.49	202.51	
4/28/03	18:08:42	2.18	11.51	202.49	
4/28/03	18:08:52	2.35	11.54	202.46	
4/28/03	18:09:02	2.52	11.56	202.44	
4/28/03	18:09:12	2.68	11.58	202.42	
4/28/03	18:09:22	2.85	11.60	202.40	
4/28/03	18:09:32	3.02	11.63	202.37	
4/28/03	18:09:42	3.18	11.66	202.34	
4/28/03	18:09:52	3.35	11.68	202.32	
4/28/03	18:10:02	3.52	11.70	202.30	
4/28/03	18:10:12	3.68	11.73	202.27	
4/28/03	18:10:22	3.85	11.75	202.25	
4/28/03	18:10:32	4.02	11.77	202.23	
4/28/03	18:10:42	4.18	11.79	202.21	
4/28/03	18:10:52	4.35	11.81	202.19	
4/28/03	18:11:02	4.52	11.84	202.16	
4/28/03	18:11:12	4.68	11.86	202.14	
4/28/03	18:11:22	4.85	11.89	202.11	
4/28/03	18:11:32	5.02	11.91	202.09	
4/28/03	18:11:42	5.18	11.93	202.07	
4/28/03	18:11:52	5.35	11.95	202.05	
4/28/03	18:12:02	5.52	11.98	202.02	
4/28/03	18:12:12	5.68	12.00	202.00	
4/28/03	18:12:22	5.85	12.02	201.98	
4/28/03	18:12:32	6.02	12.05	201.95	
4/28/03	18:12:42	6.18	12.07	201.93	
4/28/03	18:12:52	6.35	12.10	201.90	
4/28/03	18:13:02	6.52	12.12	201.88	
4/28/03	18:13:12	6.68	12.15	201.85	
4/28/03	18:13:22	6.85	12.16	201.84	
4/28/03	18:13:32	7.02	12.19	201.81	
4/28/03	18:13:42	7.18	12.20	201.80	
4/28/03	18:13:52	7.35	12.23	201.77	
4/28/03	18:14:02	7.52	12.25	201.75	
4/28/03	18:14:12	7.68	12.28	201.72	
4/28/03	18:14:22	7.85	12.30	201.70	
4/28/03	18:14:32	8.02	12.33	201.67	
4/28/03	18:14:42	8.18	12.35	201.65	
4/28/03	18:14:52	8.35	12.37	201.63	
4/28/03	18:15:02	8.52	12.39	201.61	
4/28/03	18:15:12	8.68	12.41	201.59	
4/28/03	18:15:22	8.85	12.44	201.56	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:15:32	9.02	12.46	201.54	
4/28/03	18:15:42	9.18	12.49	201.51	
4/28/03	18:15:52	9.35	12.51	201.49	
4/28/03	18:16:02	9.52	12.53	201.47	
4/28/03	18:16:12	9.68	12.55	201.45	
4/28/03	18:16:22	9.85	12.57	201.43	
4/28/03	18:16:32	10.02	12.60	201.40	
4/28/03	18:16:42	10.18	12.62	201.38	
4/28/03	18:16:52	10.35	12.64	201.36	
4/28/03	18:17:02	10.52	12.67	201.33	
4/28/03	18:17:12	10.68	12.69	201.31	
4/28/03	18:17:22	10.85	12.72	201.28	
4/28/03	18:17:32	11.02	12.74	201.26	
4/28/03	18:17:42	11.18	12.76	201.24	
4/28/03	18:17:52	11.35	12.79	201.21	
4/28/03	18:18:02	11.52	12.80	201.20	
4/28/03	18:18:12	11.68	12.83	201.17	
4/28/03	18:18:22	11.85	12.85	201.15	
4/28/03	18:18:32	12.02	12.88	201.12	
4/28/03	18:18:42	12.18	12.90	201.10	
4/28/03	18:18:52	12.35	12.92	201.08	
4/28/03	18:19:02	12.52	12.94	201.06	
4/28/03	18:19:12	12.68	12.96	201.04	
4/28/03	18:19:22	12.85	12.99	201.01	
4/28/03	18:19:32	13.02	13.01	200.99	
4/28/03	18:19:42	13.18	13.03	200.97	
4/28/03	18:19:52	13.35	13.06	200.94	
4/28/03	18:20:02	13.52	13.08	200.92	
4/28/03	18:20:12	13.68	13.11	200.89	
4/28/03	18:20:22	13.85	13.13	200.87	
4/28/03	18:20:32	14.02	13.16	200.84	
4/28/03	18:20:42	14.18	13.17	200.83	
4/28/03	18:20:52	14.35	13.20	200.80	
4/28/03	18:21:02	14.52	13.22	200.78	
4/28/03	18:21:12	14.68	13.24	200.76	
4/28/03	18:21:22	14.85	13.27	200.73	
4/28/03	18:21:32	15.02	13.29	200.71	
4/28/03	18:21:42	15.18	13.32	200.68	
4/28/03	18:21:52	15.35	13.34	200.66	
4/28/03	18:22:02	15.52	13.36	200.64	
4/28/03	18:22:12	15.68	13.38	200.62	
4/28/03	18:22:22	15.85	13.40	200.60	
4/28/03	18:22:32	16.02	13.42	200.58	
4/28/03	18:22:42	16.18	13.45	200.55	
4/28/03	18:22:52	16.35	13.47	200.53	
4/28/03	18:23:02	16.52	13.50	200.50	
4/28/03	18:23:12	16.68	13.52	200.48	
4/28/03	18:23:22	16.85	13.54	200.46	
4/28/03	18:23:32	17.02	13.56	200.44	
4/28/03	18:23:42	17.18	13.58	200.42	
4/28/03	18:23:52	17.35	13.60	200.40	
4/28/03	18:24:02	17.52	13.63	200.37	
4/28/03	18:24:12	17.68	13.66	200.34	
4/28/03	18:24:22	17.85	13.68	200.32	
4/28/03	18:24:32	18.02	13.70	200.30	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	18:24:42	18.18	13.72	200.28	
4/28/03	18:24:52	18.35	13.75	200.25	
4/28/03	18:25:02	18.52	13.77	200.23	
4/28/03	18:25:12	18.68	13.79	200.21	
4/28/03	18:25:22	18.85	13.81	200.19	
4/28/03	18:25:32	19.02	13.84	200.16	
4/28/03	18:25:42	19.18	13.86	200.14	
4/28/03	18:25:52	19.35	13.88	200.12	
4/28/03	18:26:02	19.52	13.90	200.10	
4/28/03	18:26:12	19.68	13.93	200.07	
4/28/03	18:26:22	19.85	13.95	200.05	
4/28/03	18:26:32	20.02	13.97	200.03	
4/28/03	18:26:42	20.18	13.99	200.01	
4/28/03	18:26:52	20.35	14.02	199.98	
4/28/03	18:27:02	20.52	14.05	199.95	
4/28/03	18:27:12	20.68	14.07	199.93	
4/28/03	18:27:22	20.85	14.09	199.91	
4/28/03	18:27:32	21.02	14.11	199.89	
4/28/03	18:27:42	21.18	14.13	199.87	
4/28/03	18:27:52	21.35	14.16	199.84	
4/28/03	18:28:02	21.52	14.18	199.82	
4/28/03	18:28:12	21.68	14.20	199.80	
4/28/03	18:28:22	21.85	14.23	199.77	
4/28/03	18:28:32	22.02	14.25	199.75	
4/28/03	18:29:31	23.00	14.38	199.62	
4/28/03	18:30:30	23.98	14.52	199.48	
4/28/03	18:31:29	24.97	14.65	199.35	
4/28/03	18:32:28	25.95	14.78	199.22	
4/28/03	18:33:27	26.93	14.92	199.08	
4/28/03	18:34:26	27.92	15.05	198.95	
4/28/03	18:35:25	28.90	15.19	198.81	
4/28/03	18:36:24	29.88	15.32	198.68	
4/28/03	18:37:23	30.87	15.45	198.55	
4/28/03	18:38:22	31.85	15.58	198.42	
4/28/03	18:39:21	32.83	15.72	198.28	
4/28/03	18:40:20	33.82	15.85	198.15	
4/28/03	18:41:19	34.80	15.99	198.01	
4/28/03	18:42:18	35.78	16.12	197.88	
4/28/03	18:43:17	36.77	16.26	197.74	
4/28/03	18:44:16	37.75	16.39	197.61	
4/28/03	18:45:15	38.73	16.52	197.48	
4/28/03	18:46:14	39.72	16.66	197.34	
4/28/03	18:47:13	40.70	16.80	197.20	
4/28/03	18:48:12	41.68	16.93	197.07	
4/28/03	18:49:11	42.67	17.08	196.92	
4/28/03	18:50:10	43.65	17.22	196.78	
4/28/03	18:51:09	44.63	17.36	196.64	
4/28/03	18:52:08	45.62	17.49	196.51	
4/28/03	18:53:07	46.60	17.63	196.37	
4/28/03	18:54:06	47.58	17.76	196.24	
4/28/03	18:55:05	48.57	17.90	196.10	
4/28/03	18:56:04	49.55	18.04	195.96	
4/28/03	18:57:03	50.53	18.17	195.83	
4/28/03	18:58:02	51.52	18.31	195.69	
4/28/03	18:59:01	52.50	18.44	195.56	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	19:00:00	53.48	18.57	195.43	
4/28/03	19:00:59	54.47	18.70	195.30	
4/28/03	19:01:58	55.45	18.83	195.17	
4/28/03	19:02:57	56.43	18.96	195.04	
4/28/03	19:03:56	57.42	19.10	194.90	
4/28/03	19:04:55	58.40	19.22	194.78	
4/28/03	19:05:54	59.38	19.36	194.64	
4/28/03	19:06:53	60.37	19.50	194.50	
4/28/03	19:07:52	61.35	19.63	194.37	
4/28/03	19:08:51	62.33	19.76	194.24	
4/28/03	19:09:50	63.32	19.89	194.11	
4/28/03	19:10:49	64.30	20.02	193.98	
4/28/03	19:11:48	65.28	20.15	193.85	
4/28/03	19:12:47	66.27	20.29	193.71	
4/28/03	19:13:46	67.25	20.41	193.59	
4/28/03	19:14:45	68.23	20.54	193.46	
4/28/03	19:15:44	69.22	20.67	193.33	
4/28/03	19:16:43	70.20	20.81	193.19	
4/28/03	19:17:42	71.18	20.93	193.07	
4/28/03	19:18:41	72.17	21.07	192.93	
4/28/03	19:19:40	73.15	21.20	192.80	
4/28/03	19:20:39	74.13	21.33	192.67	
4/28/03	19:21:38	75.12	21.45	192.55	
4/28/03	19:22:37	76.10	21.58	192.42	
4/28/03	19:23:36	77.08	21.71	192.29	
4/28/03	19:24:35	78.07	21.84	192.16	
4/28/03	19:25:34	79.05	21.98	192.02	
4/28/03	19:26:33	80.03	22.11	191.89	
4/28/03	19:27:32	81.02	22.24	191.76	
4/28/03	19:28:31	82.00	22.37	191.63	
4/28/03	19:29:30	82.98	22.50	191.50	
4/28/03	19:30:29	83.97	22.63	191.37	
4/28/03	19:31:28	84.95	22.76	191.24	
4/28/03	19:32:27	85.93	22.89	191.11	
4/28/03	19:33:26	86.92	23.02	190.98	
4/28/03	19:34:25	87.90	23.16	190.84	
4/28/03	19:35:24	88.88	23.29	190.71	
4/28/03	19:36:23	89.87	23.42	190.58	
4/28/03	19:37:22	90.85	23.54	190.46	
4/28/03	19:38:21	91.83	23.67	190.33	
4/28/03	19:39:20	92.82	23.80	190.20	
4/28/03	19:40:19	93.80	23.93	190.07	
4/28/03	19:41:18	94.78	24.05	189.95	
4/28/03	19:42:17	95.77	24.18	189.82	
4/28/03	19:43:16	96.75	24.31	189.69	
4/28/03	19:44:15	97.73	24.44	189.56	
4/28/03	19:45:14	98.72	24.56	189.44	
4/28/03	19:46:13	99.70	24.69	189.31	
4/28/03	19:47:12	100.68	24.81	189.19	
4/28/03	19:48:11	101.67	24.94	189.06	
4/28/03	19:49:10	102.65	25.07	188.93	
4/28/03	19:50:09	103.63	25.20	188.80	
4/28/03	19:51:08	104.62	25.33	188.67	
4/28/03	19:52:07	105.60	25.45	188.55	
4/28/03	19:53:06	106.58	25.57	188.43	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	19:54:05	107.57	25.70	188.30	
4/28/03	19:55:04	108.55	25.82	188.18	
4/28/03	19:56:03	109.53	25.95	188.05	
4/28/03	19:57:02	110.52	26.08	187.92	
4/28/03	19:58:01	111.50	26.21	187.79	
4/28/03	19:59:00	112.48	26.34	187.66	
4/28/03	19:59:59	113.47	26.47	187.53	
4/28/03	20:00:58	114.45	26.60	187.40	
4/28/03	20:01:57	115.43	26.72	187.28	
4/28/03	20:02:56	116.42	26.85	187.15	
4/28/03	20:03:55	117.40	26.97	187.03	
4/28/03	20:04:54	118.38	27.09	186.91	
4/28/03	20:05:53	119.37	27.21	186.79	
4/28/03	20:06:52	120.35	27.33	186.67	
4/28/03	20:07:51	121.33	27.46	186.54	
4/28/03	20:08:50	122.32	27.59	186.41	
4/28/03	20:09:49	123.30	27.71	186.29	
4/28/03	20:10:48	124.28	27.82	186.18	
4/28/03	20:11:47	125.27	27.93	186.07	
4/28/03	20:12:46	126.25	28.06	185.94	
4/28/03	20:13:45	127.23	28.18	185.82	
4/28/03	20:14:44	128.22	28.31	185.69	
4/28/03	20:15:43	129.20	28.44	185.56	
4/28/03	20:16:42	130.18	28.57	185.43	
4/28/03	20:17:41	131.17	28.70	185.30	
4/28/03	20:18:40	132.15	28.83	185.17	
4/28/03	20:19:39	133.13	28.95	185.05	
4/28/03	20:20:38	134.12	29.07	184.93	
4/28/03	20:21:37	135.10	29.18	184.82	
4/28/03	20:22:36	136.08	29.30	184.70	
4/28/03	20:23:35	137.07	29.43	184.57	
4/28/03	20:24:34	138.05	29.54	184.46	
4/28/03	20:25:33	139.03	29.67	184.33	
4/28/03	20:26:32	140.02	29.80	184.20	
4/28/03	20:31:32	145.02	30.42	183.58	
4/28/03	20:36:32	150.02	31.04	182.96	
4/28/03	20:41:32	155.02	31.65	182.35	
4/28/03	20:46:32	160.02	32.26	181.74	
4/28/03	20:51:32	165.02	32.88	181.12	
4/28/03	20:56:32	170.02	33.49	180.51	
4/28/03	21:01:32	175.02	34.10	179.90	
4/28/03	21:06:32	180.02	34.71	179.29	
4/28/03	21:11:32	185.02	35.32	178.68	
4/28/03	21:16:32	190.02	35.93	178.07	
4/28/03	21:21:32	195.02	36.53	177.47	
4/28/03	21:26:32	200.02	37.12	176.88	
4/28/03	21:31:32	205.02	37.72	176.28	
4/28/03	21:36:32	210.02	38.36	175.64	
4/28/03	21:41:32	215.02	38.97	175.03	
4/28/03	21:46:32	220.02	39.58	174.42	
4/28/03	21:51:32	225.02	40.19	173.81	
4/28/03	21:56:32	230.02	40.79	173.21	
4/28/03	22:01:32	235.02	41.39	172.61	
4/28/03	22:06:32	240.02	41.98	172.02	
4/28/03	22:11:32	245.02	42.58	171.42	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/28/03	22:16:32	250.02	43.17	170.83	
4/28/03	22:21:32	255.02	43.76	170.24	
4/28/03	22:26:32	260.02	44.35	169.65	
4/28/03	22:31:32	265.02	44.93	169.07	
4/28/03	22:36:32	270.02	45.52	168.48	
4/28/03	22:41:32	275.02	46.10	167.90	
4/28/03	22:46:32	280.02	46.69	167.31	
4/28/03	22:51:32	285.02	47.26	166.74	
4/28/03	22:56:32	290.02	47.84	166.16	
4/28/03	23:01:32	295.02	48.42	165.58	
4/28/03	23:06:32	300.02	48.99	165.01	
4/28/03	23:11:32	305.02	49.56	164.44	
4/28/03	23:16:32	310.02	50.13	163.87	
4/28/03	23:21:32	315.02	50.69	163.31	
4/28/03	23:26:32	320.02	51.26	162.74	
4/28/03	23:31:32	325.02	51.83	162.17	
4/28/03	23:36:32	330.02	52.39	161.61	
4/28/03	23:41:32	335.02	52.95	161.05	
4/28/03	23:46:32	340.02	53.50	160.50	
4/28/03	23:51:32	345.02	54.06	159.94	
4/28/03	23:56:32	350.02	54.61	159.39	
4/29/03	0:01:32	355.02	55.17	158.83	
4/29/03	0:06:32	360.02	55.72	158.28	
4/29/03	0:11:32	365.02	56.26	157.74	
4/29/03	0:16:32	370.02	56.81	157.19	
4/29/03	0:21:32	375.02	57.35	156.65	
4/29/03	0:26:32	380.02	57.89	156.11	
4/29/03	0:31:32	385.02	58.43	155.57	
4/29/03	0:36:32	390.02	58.97	155.03	
4/29/03	0:41:32	395.02	59.50	154.50	
4/29/03	0:46:32	400.02	60.05	153.95	
4/29/03	0:51:32	405.02	60.57	153.43	
4/29/03	0:56:32	410.02	61.11	152.89	
4/29/03	1:01:32	415.02	61.63	152.37	
4/29/03	1:06:32	420.02	62.16	151.84	
4/29/03	1:11:32	425.02	62.68	151.32	
4/29/03	1:16:32	430.02	63.21	150.79	
4/29/03	1:21:32	435.02	63.73	150.27	
4/29/03	1:26:32	440.02	64.25	149.75	
4/29/03	1:31:32	445.02	64.76	149.24	
4/29/03	1:36:32	450.02	65.28	148.72	
4/29/03	1:41:32	455.02	65.79	148.21	
4/29/03	1:46:32	460.02	66.31	147.69	
4/29/03	1:51:32	465.02	66.82	147.18	
4/29/03	1:56:32	470.02	67.32	146.68	
4/29/03	2:01:32	475.02	67.83	146.17	
4/29/03	2:06:32	480.02	68.33	145.67	
4/29/03	2:11:32	485.02	68.83	145.17	
4/29/03	2:16:32	490.02	69.34	144.66	
4/29/03	2:21:32	495.02	69.86	144.14	
4/29/03	2:26:32	500.02	70.36	143.64	
4/29/03	2:31:32	505.02	70.86	143.14	
4/29/03	2:36:32	510.02	71.35	142.65	
4/29/03	2:41:32	515.02	71.84	142.16	
4/29/03	2:46:32	520.02	72.34	141.66	

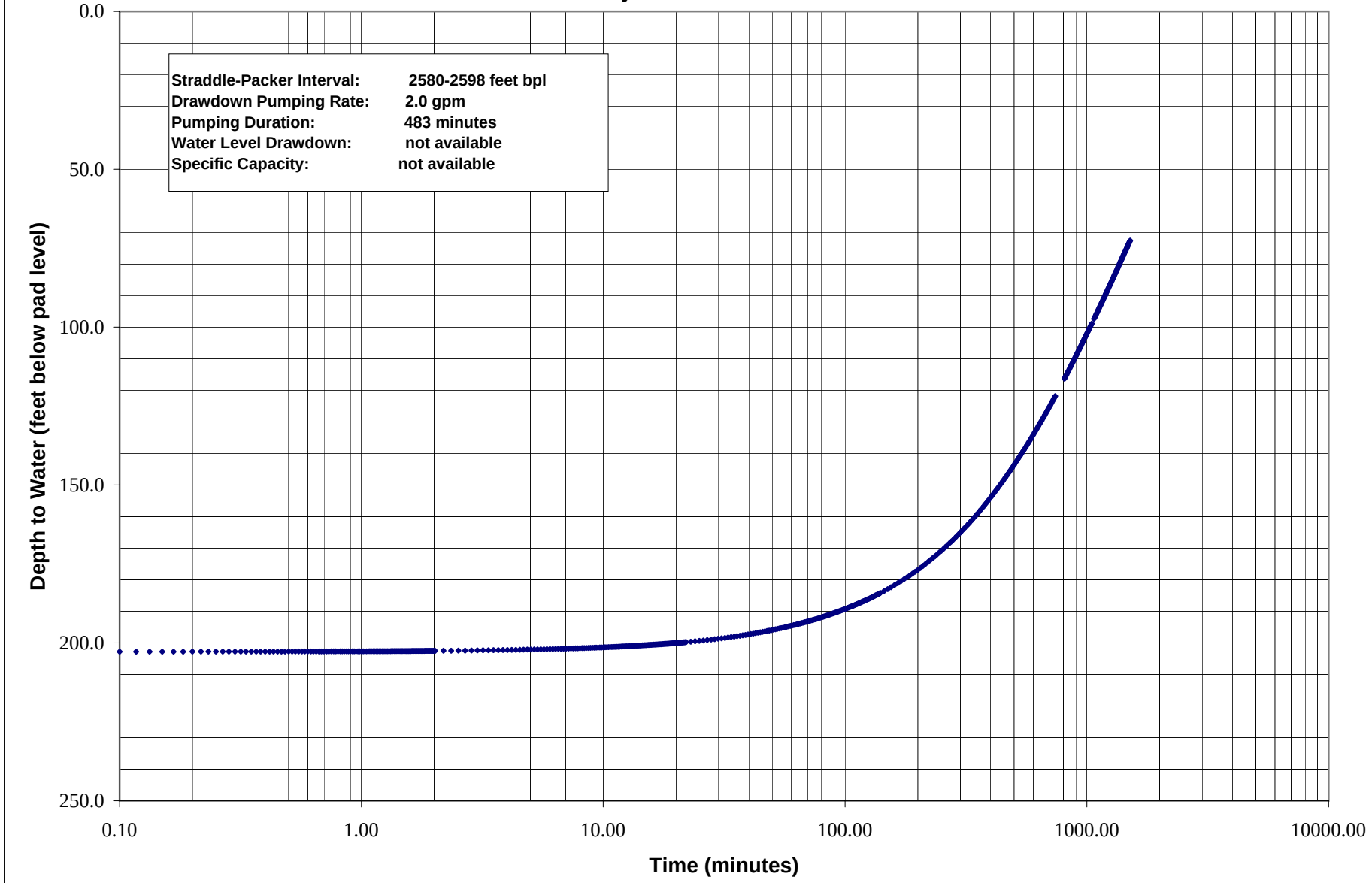
Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/29/03	2:51:32	525.02	72.82	141.18	
4/29/03	2:56:32	530.02	73.29	140.71	
4/29/03	3:01:32	535.02	73.75	140.25	
4/29/03	3:06:32	540.02	74.24	139.76	
4/29/03	3:11:32	545.02	74.73	139.27	
4/29/03	3:16:32	550.02	75.17	138.83	
4/29/03	3:21:32	555.02	75.65	138.35	
4/29/03	3:26:32	560.02	76.13	137.87	
4/29/03	3:31:32	565.02	76.60	137.40	
4/29/03	3:36:32	570.02	77.07	136.93	
4/29/03	3:41:32	575.02	77.55	136.45	
4/29/03	3:46:32	580.02	78.02	135.98	
4/29/03	3:51:32	585.02	78.48	135.52	
4/29/03	3:56:32	590.02	78.94	135.06	
4/29/03	4:01:32	595.02	79.41	134.59	
4/29/03	4:06:32	600.02	79.87	134.13	
4/29/03	4:11:32	605.02	80.33	133.67	
4/29/03	4:16:32	610.02	80.79	133.21	
4/29/03	4:21:32	615.02	81.25	132.75	
4/29/03	4:26:32	620.02	81.70	132.30	
4/29/03	4:31:32	625.02	82.16	131.84	
4/29/03	4:36:32	630.02	82.60	131.40	
4/29/03	4:41:32	635.02	83.06	130.94	
4/29/03	4:46:32	640.02	83.50	130.50	
4/29/03	4:51:32	645.02	83.95	130.05	
4/29/03	4:56:32	650.02	84.39	129.61	
4/29/03	5:01:32	655.02	84.84	129.16	
4/29/03	5:06:32	660.02	85.28	128.72	
4/29/03	5:11:32	665.02	85.72	128.28	
4/29/03	5:16:32	670.02	86.16	127.84	
4/29/03	5:21:32	675.02	86.60	127.40	
4/29/03	5:26:32	680.02	87.03	126.97	
4/29/03	5:31:32	685.02	87.47	126.53	
4/29/03	5:36:32	690.02	87.90	126.10	
4/29/03	5:41:32	695.02	88.32	125.68	
4/29/03	5:46:32	700.02	88.76	125.24	
4/29/03	5:51:32	705.02	89.18	124.82	
4/29/03	5:56:32	710.02	89.61	124.39	
4/29/03	6:01:32	715.02	90.04	123.96	
4/29/03	6:06:32	720.02	90.46	123.54	
4/29/03	6:11:32	725.02	90.88	123.12	
4/29/03	6:16:32	730.02	91.30	122.70	
4/29/03	6:21:32	735.02	91.72	122.28	
4/29/03	6:26:32	740.02	92.14	121.86	
4/29/03	7:34:29	807.97	97.67	116.33	
4/29/03	7:39:29	812.97	98.07	115.93	
4/29/03	7:44:29	817.97	98.46	115.54	
4/29/03	7:49:29	822.97	98.86	115.14	
4/29/03	7:54:29	827.97	99.25	114.75	
4/29/03	7:59:29	832.97	99.64	114.36	
4/29/03	8:04:29	837.97	100.03	113.97	
4/29/03	8:09:29	842.97	100.42	113.58	
4/29/03	8:14:29	847.97	100.81	113.19	
4/29/03	8:19:29	852.97	101.21	112.79	
4/29/03	8:24:29	857.97	101.60	112.40	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/29/03	8:29:29	862.97	101.99	112.01	
4/29/03	8:34:29	867.97	102.36	111.64	
4/29/03	8:39:29	872.97	102.74	111.26	14.84
4/29/03	8:44:29	877.97	103.12	110.88	
4/29/03	8:49:29	882.97	103.50	110.50	
4/29/03	8:54:29	887.97	103.87	110.13	
4/29/03	8:59:29	892.97	104.24	109.76	
4/29/03	9:04:29	897.97	104.61	109.39	
4/29/03	9:09:29	902.97	104.98	109.02	
4/29/03	9:14:29	907.97	105.34	108.66	
4/29/03	9:19:29	912.97	105.72	108.28	
4/29/03	9:24:29	917.97	106.09	107.91	
4/29/03	9:29:29	922.97	106.44	107.56	
4/29/03	9:34:29	927.97	106.81	107.19	
4/29/03	9:39:29	932.97	107.17	106.83	
4/29/03	9:44:29	937.97	107.52	106.48	
4/29/03	9:49:29	942.97	107.89	106.11	
4/29/03	9:54:29	947.97	108.25	105.75	
4/29/03	9:59:29	952.97	108.60	105.40	
4/29/03	10:04:29	957.97	108.95	105.05	
4/29/03	10:09:29	962.97	109.32	104.68	
4/29/03	10:14:29	967.97	109.68	104.32	
4/29/03	10:19:29	972.97	110.02	103.98	
4/29/03	10:24:29	977.97	110.37	103.63	
4/29/03	10:29:29	982.97	110.72	103.28	
4/29/03	10:34:29	987.97	111.06	102.94	
4/29/03	10:39:29	992.97	111.41	102.59	
4/29/03	10:44:29	997.97	111.76	102.24	
4/29/03	10:49:29	1002.97	112.10	101.90	
4/29/03	10:54:29	1007.97	112.44	101.56	
4/29/03	10:59:29	1012.97	112.78	101.22	
4/29/03	11:04:29	1017.97	113.11	100.89	
4/29/03	11:09:29	1022.97	113.45	100.55	
4/29/03	11:14:29	1027.97	113.79	100.21	
4/29/03	11:19:29	1032.97	114.13	99.87	
4/29/03	11:24:29	1037.97	114.46	99.54	
4/29/03	11:29:29	1042.97	114.78	99.22	
4/29/03	11:34:29	1047.97	115.11	98.89	
4/29/03	11:57:13	1070.72	116.61	97.39	
4/29/03	12:02:13	1075.72	116.94	97.06	
4/29/03	12:07:13	1080.72	117.26	96.74	
4/29/03	12:12:13	1085.72	117.58	96.42	
4/29/03	12:17:13	1090.72	117.91	96.09	
4/29/03	12:22:13	1095.72	118.23	95.77	
4/29/03	12:27:13	1100.72	118.54	95.46	
4/29/03	12:32:13	1105.72	118.86	95.14	
4/29/03	12:37:13	1110.72	119.15	94.85	
4/29/03	12:42:13	1115.72	119.48	94.52	
4/29/03	12:47:13	1120.72	119.77	94.23	
4/29/03	12:52:13	1125.72	120.10	93.90	
4/29/03	12:57:13	1130.72	120.42	93.58	
4/29/03	13:02:13	1135.72	120.74	93.26	
4/29/03	13:07:13	1140.72	121.04	92.96	
4/29/03	13:12:13	1145.72	121.33	92.67	
4/29/03	13:17:13	1150.72	121.64	92.36	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/29/03	13:22:13	1155.72	121.95	92.05	
4/29/03	13:27:13	1160.72	122.26	91.74	
4/29/03	13:32:13	1165.72	122.57	91.43	
4/29/03	13:37:13	1170.72	122.88	91.12	
4/29/03	13:42:13	1175.72	123.20	90.80	
4/29/03	13:47:13	1180.72	123.50	90.50	
4/29/03	13:52:13	1185.72	123.80	90.20	
4/29/03	13:57:13	1190.72	124.11	89.89	
4/29/03	14:02:13	1195.72	124.42	89.58	
4/29/03	14:07:13	1200.72	124.71	89.29	
4/29/03	14:12:13	1205.72	125.01	88.99	
4/29/03	14:17:13	1210.72	125.31	88.69	
4/29/03	14:22:13	1215.72	125.59	88.41	
4/29/03	14:27:13	1220.72	125.88	88.12	
4/29/03	14:32:13	1225.72	126.18	87.82	
4/29/03	14:37:13	1230.72	126.47	87.53	
4/29/03	14:42:13	1235.72	126.78	87.22	
4/29/03	14:47:13	1240.72	127.07	86.93	
4/29/03	14:52:13	1245.72	127.35	86.65	
4/29/03	14:57:13	1250.72	127.64	86.36	
4/29/03	15:02:13	1255.72	127.93	86.07	
4/29/03	15:07:13	1260.72	128.22	85.78	
4/29/03	15:12:13	1265.72	128.51	85.49	
4/29/03	15:17:13	1270.72	128.80	85.20	
4/29/03	15:22:13	1275.72	129.08	84.92	
4/29/03	15:27:13	1280.72	129.37	84.63	
4/29/03	15:32:13	1285.72	129.66	84.34	
4/29/03	15:37:13	1290.72	129.93	84.07	
4/29/03	15:42:13	1295.72	130.21	83.79	
4/29/03	15:47:13	1300.72	130.49	83.51	
4/29/03	15:52:13	1305.72	130.76	83.24	
4/29/03	15:57:13	1310.72	131.04	82.96	
4/29/03	16:02:13	1315.72	131.32	82.68	
4/29/03	16:07:13	1320.72	131.59	82.41	
4/29/03	16:12:13	1325.72	131.87	82.13	
4/29/03	16:17:13	1330.72	132.14	81.86	
4/29/03	16:22:13	1335.72	132.42	81.58	
4/29/03	16:27:13	1340.72	132.71	81.29	
4/29/03	16:32:13	1345.72	132.99	81.01	
4/29/03	16:37:13	1350.72	133.27	80.73	
4/29/03	16:42:13	1355.72	133.54	80.46	
4/29/03	16:47:13	1360.72	133.82	80.18	
4/29/03	16:52:13	1365.72	134.08	79.92	
4/29/03	16:57:13	1370.72	134.34	79.66	
4/29/03	17:02:13	1375.72	134.61	79.39	
4/29/03	17:07:13	1380.72	134.87	79.13	
4/29/03	17:12:13	1385.72	135.14	78.86	
4/29/03	17:17:13	1390.72	135.41	78.59	
4/29/03	17:22:13	1395.72	135.67	78.33	
4/29/03	17:27:13	1400.72	135.93	78.07	
4/29/03	17:32:13	1405.72	136.19	77.81	
4/29/03	17:37:13	1410.72	136.44	77.56	
4/29/03	17:42:13	1415.72	136.70	77.30	
4/29/03	17:47:13	1420.72	136.96	77.04	
4/29/03	17:52:13	1425.72	137.21	76.79	

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft.)
4/29/03	17:57:13	1430.72	137.46	76.54	
4/29/03	18:02:13	1435.72	137.72	76.28	
4/29/03	18:07:13	1440.72	137.98	76.02	
4/29/03	18:12:13	1445.72	138.22	75.78	
4/29/03	18:17:13	1450.72	138.48	75.52	
4/29/03	18:22:13	1455.72	138.74	75.26	
4/29/03	18:27:13	1460.72	138.98	75.02	
4/29/03	18:32:13	1465.72	139.23	74.77	
4/29/03	18:37:13	1470.72	139.48	74.52	
4/29/03	18:42:13	1475.72	139.72	74.28	
4/29/03	18:47:13	1480.72	139.98	74.02	
4/29/03	18:52:13	1485.72	140.22	73.78	
4/29/03	18:57:13	1490.72	140.46	73.54	
4/29/03	19:02:13	1495.72	140.70	73.30	
4/29/03	19:07:13	1500.72	140.95	73.05	
4/29/03	19:12:13	1505.72	141.19	72.81	
4/29/03	19:17:13	1510.72	141.43	72.57	

Straddle- Packer Test No. 9- Recovery
City of Port St. Lucie, Westport Injection Well System
Injection Well No.1



Straddle-Packer Test No.10 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Injection Well No. 1

Packer Depth Interval:	2217-2235 feet bpl	**Static Water Level:**	7.17 feet bpl
Start of Logging:	5/1/03 9:37:20	**Start of Pumping:**	5/1/03 9:37:25
End of Logging:	5/1/03 18:09:22	**End of Pumping:**	5/1/03 18:19:13
Pumping Rate:	2.6 gpm	**Pumping Duration:**	512 minutes

Data Collected Using Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\PT10DD.DAT

Note: Bold number indicates assumed stabilized depth to water at the end of pumping (193.35 feet bpl)

Double line indicates start of pump

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/01/03	9:37:20		212.81	7.19	0.02
05/01/03	9:37:20		212.82	7.18	0.01
05/01/03	9:37:20		212.80	7.20	0.03
05/01/03	9:37:20		212.83	7.17	0.00
05/01/03	9:37:20		212.82	7.18	0.01
05/01/03	9:37:20		212.83	7.17	0.00
05/01/03	9:37:21		212.83	7.17	0.00
05/01/03	9:37:21		212.80	7.20	0.03
05/01/03	9:37:21		212.81	7.19	0.02
05/01/03	9:37:21		212.82	7.18	0.01
05/01/03	9:37:21		212.82	7.18	0.01
05/01/03	9:37:21		212.81	7.19	0.02
05/01/03	9:37:21		212.83	7.17	0.00
05/01/03	9:37:21		212.81	7.19	0.02
05/01/03	9:37:22		212.82	7.18	0.01
05/01/03	9:37:22		212.82	7.18	0.01
05/01/03	9:37:22		212.82	7.18	0.01
05/01/03	9:37:22		212.81	7.19	0.02
05/01/03	9:37:22		212.82	7.18	0.01
05/01/03	9:37:22		212.82	7.18	0.01
05/01/03	9:37:22		212.82	7.18	0.01
05/01/03	9:37:22		212.82	7.18	0.01
05/01/03	9:37:22		212.82	7.18	0.01
05/01/03	9:37:23		212.82	7.18	0.01
05/01/03	9:37:23		212.81	7.19	0.02
05/01/03	9:37:23		212.83	7.17	0.00
05/01/03	9:37:23		212.82	7.18	0.01
05/01/03	9:37:23		212.82	7.18	0.01
05/01/03	9:37:23		212.83	7.17	0.00
05/01/03	9:37:23		212.82	7.18	0.01
05/01/03	9:37:23		212.81	7.19	0.02
05/01/03	9:37:24		212.81	7.19	0.02
05/01/03	9:37:24		212.82	7.18	0.01
05/01/03	9:37:24		212.83	7.17	0.00
05/01/03	9:37:24		212.82	7.18	0.01
05/01/03	9:37:24		212.81	7.19	0.02
05/01/03	9:37:24		212.81	7.19	0.02
05/01/03	9:37:24		212.83	7.17	0.00

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/01/03	9:37:24		212.82	7.18	0.01
05/01/03	9:37:25		212.80	7.20	0.03
05/01/03	9:37:25		212.81	7.19	0.02
05/01/03	9:37:25	0.00	212.82	7.18	0.01
05/01/03	9:37:25	0.00	211.35	8.65	1.48
05/01/03	9:37:25	0.00	200.95	19.05	11.88
05/01/03	9:37:25	0.01	200.15	19.85	12.68
05/01/03	9:37:25	0.01	207.57	12.43	5.26
05/01/03	9:37:25	0.01	212.15	7.85	0.68
05/01/03	9:37:26	0.01	213.94	6.06	
05/01/03	9:37:26	0.01	214.49	5.51	
05/01/03	9:37:26	0.01	214.62	5.38	
05/01/03	9:37:26	0.02	214.65	5.35	
05/01/03	9:37:26	0.02	205.60	14.40	7.23
05/01/03	9:37:26	0.02	208.80	11.20	4.03
05/01/03	9:37:26	0.02	218.86	1.14	
05/01/03	9:37:26	0.02	219.25	0.75	
05/01/03	9:37:26	0.02	216.46	3.54	
05/01/03	9:37:26	0.03	215.07	4.93	
05/01/03	9:37:26	0.03	214.42	5.58	
05/01/03	9:37:26	0.03	213.95	6.05	
05/01/03	9:37:26	0.03	213.50	6.50	
05/01/03	9:37:26	0.03	214.79	5.21	
05/01/03	9:37:26	0.03	220.21		
05/01/03	9:37:26	0.04	213.53	6.47	
05/01/03	9:37:26	0.04	208.60	11.40	4.23
05/01/03	9:37:27	0.04	208.68	11.32	4.15
05/01/03	9:37:27	0.04	210.23	9.77	2.60
05/01/03	9:37:27	0.04	210.96	9.04	1.87
05/01/03	9:37:27	0.05	211.34	8.66	1.49
05/01/03	9:37:27	0.05	211.41	8.59	1.42
05/01/03	9:37:27	0.05	212.91	7.09	
05/01/03	9:37:27	0.05	207.27	12.73	5.56
05/01/03	9:37:27	0.05	206.58	13.42	6.25
05/01/03	9:37:28	0.05	214.38	5.62	
05/01/03	9:37:28	0.06	215.42	4.58	
05/01/03	9:37:28	0.06	214.23	5.77	
05/01/03	9:37:28	0.06	213.44	6.56	
05/01/03	9:37:28	0.06	213.01	6.99	
05/01/03	9:37:28	0.06	212.81	7.19	0.02
05/01/03	9:37:28	0.06	212.71	7.29	0.12
05/01/03	9:37:28	0.07	213.83	6.17	
05/01/03	9:37:28	0.07	216.95	3.05	
05/01/03	9:37:29	0.07	214.28	5.72	
05/01/03	9:37:29	0.07	210.31	9.69	2.52
05/01/03	9:37:29	0.07	209.93	10.07	2.90
05/01/03	9:37:29	0.07	210.75	9.25	2.08
05/01/03	9:37:29	0.08	211.03	8.97	1.80
05/01/03	9:37:29	0.08	211.22	8.78	1.61

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/01/03	9:37:29	0.08	211.16	8.84	1.67
05/01/03	9:37:29	0.08	212.83	7.17	
05/01/03	9:37:30	0.08	208.80	11.20	4.03
05/01/03	9:37:30	0.09	207.66	12.34	5.17
05/01/03	9:37:30	0.09	212.19	7.81	0.64
05/01/03	9:37:30	0.09	213.75	6.25	
05/01/03	9:37:30	0.09	213.44	6.56	
05/01/03	9:37:30	0.09	212.97	7.03	
05/01/03	9:37:30	0.09	212.88	7.12	
05/01/03	9:37:30	0.10	212.77	7.23	0.06
05/01/03	9:37:31	0.10	211.92	8.08	0.91
05/01/03	9:37:31	0.10	213.61	6.39	
05/01/03	9:37:31	0.10	215.84	4.16	
05/01/03	9:37:31	0.10	213.07	6.93	
05/01/03	9:37:31	0.10	211.11	8.89	1.72
05/01/03	9:37:31	0.11	210.86	9.14	1.97
05/01/03	9:37:31	0.11	211.04	8.96	1.79
05/01/03	9:37:31	0.11	211.17	8.83	1.66
05/01/03	9:37:32	0.11	211.30	8.70	1.53
05/01/03	9:37:32	0.11	210.98	9.02	1.85
05/01/03	9:37:32	0.11	211.76	8.24	1.07
05/01/03	9:37:32	0.12	209.68	10.32	3.15
05/01/03	9:37:32	0.12	208.98	11.02	3.85
05/01/03	9:37:32	0.12	211.58	8.42	1.25
05/01/03	9:37:32	0.12	212.60	7.40	0.23
05/01/03	9:37:32	0.12	212.49	7.51	0.34
05/01/03	9:37:32	0.13	212.42	7.58	0.41
05/01/03	9:37:32	0.13	212.56	7.44	0.27
05/01/03	9:37:32	0.13	212.58	7.42	0.25
05/01/03	9:37:32	0.13	211.63	8.37	1.20
05/01/03	9:37:32	0.13	212.85	7.15	
05/01/03	9:37:32	0.13	214.49	5.51	
05/01/03	9:37:32	0.14	213.11	6.89	
05/01/03	9:37:32	0.14	211.50	8.50	1.33
05/01/03	9:37:32	0.14	211.24	8.76	1.59
05/01/03	9:37:33	0.14	211.30	8.70	1.53
05/01/03	9:37:33	0.14	211.29	8.71	1.54
05/01/03	9:37:33	0.14	211.24	8.76	1.59
05/01/03	9:37:33	0.15	210.90	9.10	1.93
05/01/03	9:37:33	0.15	211.57	8.43	1.26
05/01/03	9:37:33	0.15	210.23	9.77	2.60
05/01/03	9:37:33	0.15	209.61	10.39	3.22
05/01/03	9:37:33	0.15	211.03	8.97	1.80
05/01/03	9:37:34	0.16	211.85	8.15	0.98
05/01/03	9:37:34	0.16	211.94	8.06	0.89
05/01/03	9:37:34	0.16	212.00	8.00	0.83
05/01/03	9:37:34	0.16	212.04	7.96	0.79
05/01/03	9:37:34	0.16	212.24	7.76	0.59
05/01/03	9:37:34	0.16	211.63	8.37	1.20
05/01/03	9:37:34	0.17	212.23	7.77	0.60

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/01/03	9:37:34	0.17	213.56	6.44	
05/01/03	9:37:35	0.17	212.88	7.12	
05/01/03	9:37:35	0.17	211.84	8.16	0.99
05/01/03	9:37:35	0.17	211.48	8.52	1.35
05/01/03	9:37:35	0.17	211.42	8.58	1.41
05/01/03	9:37:35	0.18	211.22	8.78	1.61
05/01/03	9:37:35	0.18	211.26	8.74	1.57
05/01/03	9:37:35	0.18	210.99	9.01	1.84
05/01/03	9:37:35	0.18	211.42	8.58	1.41
05/01/03	9:37:36	0.18	210.64	9.36	2.19
05/01/03	9:37:36	0.19	210.02	9.98	2.81
05/01/03	9:37:36	0.19	210.71	9.29	2.12
05/01/03	9:37:36	0.19	211.34	8.66	1.49
05/01/03	9:37:36	0.19	211.47	8.53	1.36
05/01/03	9:37:36	0.19	211.64	8.36	1.19
05/01/03	9:37:36	0.19	211.75	8.25	1.08
05/01/03	9:37:36	0.20	211.94	8.06	0.89
05/01/03	9:37:36	0.20	211.55	8.45	1.28
05/01/03	9:37:37	0.20	211.77	8.23	1.06
05/01/03	9:37:37	0.20	212.73	7.27	0.10
05/01/03	9:37:37	0.20	212.49	7.51	0.34
05/01/03	9:37:37	0.20	211.89	8.11	0.94
05/01/03	9:37:37	0.21	211.57	8.43	1.26
05/01/03	9:37:37	0.21	211.50	8.50	1.33
05/01/03	9:37:37	0.21	211.26	8.74	1.57
05/01/03	9:37:37	0.21	211.26	8.74	1.57
05/01/03	9:37:38	0.21	211.12	8.88	1.71
05/01/03	9:37:38	0.21	211.30	8.70	1.53
05/01/03	9:37:38	0.22	210.80	9.20	2.03
05/01/03	9:37:38	0.22	210.26	9.74	2.57
05/01/03	9:37:38	0.22	210.75	9.25	2.08
05/01/03	9:37:38	0.22	211.09	8.91	1.74
05/01/03	9:37:38	0.22	211.28	8.72	1.55
05/01/03	9:37:38	0.23	211.39	8.61	1.44
05/01/03	9:37:38	0.23	211.33	8.67	1.50
05/01/03	9:37:38	0.23	211.58	8.42	1.25
05/01/03	9:37:38	0.23	211.39	8.61	1.44
05/01/03	9:37:38	0.23	211.48	8.52	1.35
05/01/03	9:37:38	0.23	212.18	7.82	0.65
05/01/03	9:37:38	0.24	212.16	7.84	0.67
05/01/03	9:37:38	0.24	211.80	8.20	1.03
05/01/03	9:37:38	0.24	211.61	8.39	1.22
05/01/03	9:37:39	0.24	211.45	8.55	1.38
05/01/03	9:37:39	0.24	211.27	8.73	1.56
05/01/03	9:37:39	0.24	211.16	8.84	1.67
05/01/03	9:37:39	0.25	211.06	8.94	1.77
05/01/03	9:37:39	0.25	211.17	8.83	1.66
05/01/03	9:37:39	0.25	210.88	9.12	1.95
05/01/03	9:37:39	0.25	210.51	9.49	2.32
05/01/03	9:37:39	0.25	210.64	9.36	2.19

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/01/03	9:37:39	0.26	210.93	9.07	1.90
05/01/03	9:37:40	0.26	211.01	8.99	1.82
05/01/03	9:37:40	0.26	211.12	8.88	1.71
05/01/03	9:37:40	0.26	211.16	8.84	1.67
05/01/03	9:37:40	0.26	211.28	8.72	1.55
05/01/03	9:37:40	0.26	211.18	8.82	1.65
05/01/03	9:37:40	0.27	211.35	8.65	1.48
05/01/03	9:37:40	0.27	211.84	8.16	0.99
05/01/03	9:37:40	0.27	211.75	8.25	1.08
05/01/03	9:37:41	0.27	211.59	8.41	1.24
05/01/03	9:37:41	0.27	211.35	8.65	1.48
05/01/03	9:37:41	0.27	211.34	8.66	1.49
05/01/03	9:37:41	0.28	211.26	8.74	1.57
05/01/03	9:37:41	0.28	211.04	8.96	1.79
05/01/03	9:37:41	0.28	211.07	8.93	1.76
05/01/03	9:37:41	0.28	211.14	8.86	1.69
05/01/03	9:37:41	0.28	210.87	9.13	1.96
05/01/03	9:37:42	0.28	210.49	9.51	2.34
05/01/03	9:37:42	0.29	210.66	9.34	2.17
05/01/03	9:37:42	0.29	210.77	9.23	2.06
05/01/03	9:37:42	0.29	210.83	9.17	2.00
05/01/03	9:37:42	0.29	210.95	9.05	1.88
05/01/03	9:37:42	0.29	211.04	8.96	1.79
05/01/03	9:37:42	0.30	211.12	8.88	1.71
05/01/03	9:37:42	0.30	211.01	8.99	1.82
05/01/03	9:37:43	0.30	211.11	8.89	1.72
05/01/03	9:37:43	0.30	211.35	8.65	1.48
05/01/03	9:37:43	0.30	211.53	8.47	1.30
05/01/03	9:37:43	0.30	211.34	8.66	1.49
05/01/03	9:37:43	0.31	211.24	8.76	1.59
05/01/03	9:37:43	0.31	211.24	8.76	1.59
05/01/03	9:37:43	0.31	211.16	8.84	1.67
05/01/03	9:37:43	0.31	210.95	9.05	1.88
05/01/03	9:37:43	0.31	210.90	9.10	1.93
05/01/03	9:37:44	0.31	211.03	8.97	1.80
05/01/03	9:37:44	0.32	210.77	9.23	2.06
05/01/03	9:37:44	0.32	210.72	9.28	2.11
05/01/03	9:37:44	0.32	210.64	9.36	2.19
05/01/03	9:37:44	0.32	210.68	9.32	2.15
05/01/03	9:37:44	0.32	210.59	9.41	2.24
05/01/03	9:37:44	0.32	210.73	9.27	2.10
05/01/03	9:37:44	0.33	210.80	9.20	2.03
05/01/03	9:37:45	0.33	210.88	9.12	1.95
05/01/03	9:37:45	0.33	210.89	9.11	1.94
05/01/03	9:37:45	0.33	210.90	9.10	1.93
05/01/03	9:37:45	0.33	211.09	8.91	1.74
05/01/03	9:37:45	0.34	211.16	8.84	1.67
05/01/03	9:37:45	0.34	211.23	8.77	1.60
05/01/03	9:37:45	0.34	211.01	8.99	1.82
05/01/03	9:37:45	0.34	210.99	9.01	1.84

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/01/03	9:37:45	0.34	210.98	9.02	1.85
05/01/03	9:37:45	0.34	210.93	9.07	1.90
05/01/03	9:37:45	0.35	210.90	9.10	1.93
05/01/03	9:37:45	0.35	210.88	9.12	1.95
05/01/03	9:37:45	0.35	210.71	9.29	2.12
05/01/03	9:37:45	0.35	210.50	9.50	2.33
05/01/03	9:37:45	0.35	210.57	9.43	2.26
05/01/03	9:37:45	0.35	210.59	9.41	2.24
05/01/03	9:37:45	0.36	210.60	9.40	2.23
05/01/03	9:37:46	0.36	210.64	9.36	2.19
05/01/03	9:37:46	0.36	210.69	9.31	2.14
05/01/03	9:37:46	0.36	210.73	9.27	2.10
05/01/03	9:37:46	0.36	210.66	9.34	2.17
05/01/03	9:37:46	0.36	210.73	9.27	2.10
05/01/03	9:37:46	0.37	210.82	9.18	2.01
05/01/03	9:37:46	0.37	210.96	9.04	1.87
05/01/03	9:37:46	0.37	210.92	9.08	1.91
05/01/03	9:37:47	0.37	210.91	9.09	1.92
05/01/03	9:37:47	0.37	210.86	9.14	1.97
05/01/03	9:37:47	0.38	210.88	9.12	1.95
05/01/03	9:37:47	0.38	210.79	9.21	2.04
05/01/03	9:37:47	0.38	210.67	9.33	2.16
05/01/03	9:37:47	0.38	210.75	9.25	2.08
05/01/03	9:37:47	0.38	210.67	9.33	2.16
05/01/03	9:37:47	0.38	210.45	9.55	2.38
05/01/03	9:37:48	0.39	210.42	9.58	2.41
05/01/03	9:37:48	0.39	210.47	9.53	2.36
05/01/03	9:37:48	0.39	210.52	9.48	2.31
05/01/03	9:37:48	0.39	210.51	9.49	2.32
05/01/03	9:37:48	0.39	210.52	9.48	2.31
05/01/03	9:37:48	0.39	210.54	9.46	2.29
05/01/03	9:37:48	0.40	210.44	9.56	2.39
05/01/03	9:37:48	0.40	210.53	9.47	2.30
05/01/03	9:37:49	0.40	210.68	9.32	2.15
05/01/03	9:37:49	0.40	210.78	9.22	2.05
05/01/03	9:37:49	0.40	210.78	9.22	2.05
05/01/03	9:37:49	0.40	210.75	9.25	2.08
05/01/03	9:37:49	0.41	210.68	9.32	2.15
05/01/03	9:37:49	0.41	210.64	9.36	2.19
05/01/03	9:37:49	0.41	210.56	9.44	2.27
05/01/03	9:37:49	0.41	210.57	9.43	2.26
05/01/03	9:37:49	0.41	210.62	9.38	2.21
05/01/03	9:37:50	0.41	210.67	9.33	2.16
05/01/03	9:37:50	0.42	210.49	9.51	2.34
05/01/03	9:37:50	0.42	210.36	9.64	2.47
05/01/03	9:37:50	0.42	210.26	9.74	2.57
05/01/03	9:37:50	0.42	210.33	9.67	2.50
05/01/03	9:37:50	0.42	210.40	9.60	2.43
05/01/03	9:37:50	0.43	210.42	9.58	2.41
05/01/03	9:37:50	0.43	210.39	9.61	2.44

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/01/03	9:37:51	0.43	210.45	9.55	2.38
05/01/03	9:37:51	0.43	210.37	9.63	2.46
05/01/03	9:37:51	0.43	210.45	9.55	2.38
05/01/03	9:37:51	0.43	210.54	9.46	2.29
05/01/03	9:37:51	0.44	210.54	9.46	2.29
05/01/03	9:37:51	0.44	210.49	9.51	2.34
05/01/03	9:37:51	0.44	210.47	9.53	2.36
05/01/03	9:37:51	0.44	210.49	9.51	2.34
05/01/03	9:37:51	0.44	210.44	9.56	2.39
05/01/03	9:37:51	0.45	210.54	9.46	2.29
05/01/03	9:37:51	0.45	210.43	9.57	2.40
05/01/03	9:37:51	0.45	210.33	9.67	2.50
05/01/03	9:37:53	0.48	210.35	9.65	2.48
05/01/03	9:37:54	0.49	210.10	9.90	2.73
05/01/03	9:37:55	0.51	210.16	9.84	2.67
05/01/03	9:37:56	0.53	209.97	10.03	2.86
05/01/03	9:37:57	0.54	210.02	9.98	2.81
05/01/03	9:37:58	0.56	209.84	10.16	2.99
05/01/03	9:37:59	0.58	209.87	10.13	2.96
05/01/03	9:38:00	0.59	209.69	10.31	3.14
05/01/03	9:38:01	0.61	209.71	10.29	3.12
05/01/03	9:38:02	0.63	209.59	10.41	3.24
05/01/03	9:38:03	0.64	209.51	10.49	3.32
05/01/03	9:38:04	0.66	209.42	10.58	3.41
05/01/03	9:38:05	0.68	209.43	10.57	3.40
05/01/03	9:38:06	0.69	209.34	10.66	3.49
05/01/03	9:38:07	0.71	209.24	10.76	3.59
05/01/03	9:38:08	0.73	209.16	10.84	3.67
05/01/03	9:38:09	0.74	209.14	10.86	3.69
05/01/03	9:38:10	0.76	209.05	10.95	3.78
05/01/03	9:38:11	0.78	208.96	11.04	3.87
05/01/03	9:38:12	0.79	208.93	11.07	3.90
05/01/03	9:38:13	0.81	208.80	11.20	4.03
05/01/03	9:38:14	0.83	208.77	11.23	4.06
05/01/03	9:38:15	0.84	208.67	11.33	4.16
05/01/03	9:38:16	0.86	208.65	11.35	4.18
05/01/03	9:38:17	0.88	208.55	11.45	4.28
05/01/03	9:38:18	0.89	208.50	11.50	4.33
05/01/03	9:38:19	0.91	208.42	11.58	4.41
05/01/03	9:38:20	0.93	208.35	11.65	4.48
05/01/03	9:38:21	0.94	208.30	11.70	4.53
05/01/03	9:38:22	0.96	208.22	11.78	4.61
05/01/03	9:38:23	0.98	208.11	11.89	4.72
05/01/03	9:38:24	0.99	208.10	11.90	4.73
05/01/03	9:38:25	1.01	207.94	12.06	4.89
05/01/03	9:38:26	1.03	207.94	12.06	4.89
05/01/03	9:38:27	1.04	207.86	12.14	4.97
05/01/03	9:38:28	1.06	207.79	12.21	5.04
05/01/03	9:38:29	1.08	207.68	12.32	5.15
05/01/03	9:38:30	1.09	207.66	12.34	5.17

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/01/03	9:38:31	1.11	207.55	12.45	5.28
05/01/03	9:38:32	1.13	207.52	12.48	5.31
05/01/03	9:38:33	1.14	207.45	12.55	5.38
05/01/03	9:38:34	1.16	207.39	12.61	5.44
05/01/03	9:38:35	1.18	207.31	12.69	5.52
05/01/03	9:38:36	1.19	207.24	12.76	5.59
05/01/03	9:38:37	1.21	207.17	12.83	5.66
05/01/03	9:38:38	1.23	207.08	12.92	5.75
05/01/03	9:38:39	1.24	207.02	12.98	5.81
05/01/03	9:38:40	1.26	206.94	13.06	5.89
05/01/03	9:38:41	1.28	206.89	13.11	5.94
05/01/03	9:38:42	1.29	206.80	13.20	6.03
05/01/03	9:38:43	1.31	206.75	13.25	6.08
05/01/03	9:38:44	1.33	206.69	13.31	6.14
05/01/03	9:38:45	1.34	206.63	13.37	6.20
05/01/03	9:38:46	1.36	206.52	13.48	6.31
05/01/03	9:38:47	1.38	206.51	13.49	6.32
05/01/03	9:38:48	1.39	206.38	13.62	6.45
05/01/03	9:38:49	1.41	206.34	13.66	6.49
05/01/03	9:38:50	1.43	206.28	13.72	6.55
05/01/03	9:38:51	1.44	206.19	13.81	6.64
05/01/03	9:38:52	1.46	206.10	13.90	6.73
05/01/03	9:38:57	1.54	205.84	14.16	6.99
05/01/03	9:39:02	1.63	205.45	14.55	7.38
05/01/03	9:39:07	1.71	205.10	14.90	7.73
05/01/03	9:39:12	1.79	204.75	15.25	8.08
05/01/03	9:39:17	1.88	204.40	15.60	8.43
05/01/03	9:39:22	1.96	204.10	15.90	8.73
05/01/03	9:39:27	2.04	203.76	16.24	9.07
05/01/03	9:39:32	2.13	203.38	16.62	9.45
05/01/03	9:39:37	2.21	203.05	16.95	9.78
05/01/03	9:39:42	2.29	202.80	17.20	10.03
05/01/03	9:39:47	2.38	202.47	17.53	10.36
05/01/03	9:39:52	2.46	202.18	17.82	10.65
05/01/03	9:39:57	2.54	201.90	18.10	10.93
05/01/03	9:40:02	2.63	201.58	18.42	11.25
05/01/03	9:40:07	2.71	201.27	18.73	11.56
05/01/03	9:40:12	2.79	201.03	18.97	11.80
05/01/03	9:40:17	2.88	200.66	19.34	12.17
05/01/03	9:40:22	2.96	200.41	19.59	12.42
05/01/03	9:40:27	3.04	200.07	19.93	12.76
05/01/03	9:40:32	3.13	199.82	20.18	13.01
05/01/03	9:40:37	3.21	199.51	20.49	13.32
05/01/03	9:40:42	3.29	199.20	20.80	13.63
05/01/03	9:40:47	3.38	198.92	21.08	13.91
05/01/03	9:40:52	3.46	198.61	21.39	14.22
05/01/03	9:40:57	3.54	198.30	21.70	14.53
05/01/03	9:41:02	3.63	198.04	21.96	14.79
05/01/03	9:41:07	3.71	197.77	22.23	15.06
05/01/03	9:41:12	3.79	197.44	22.56	15.39

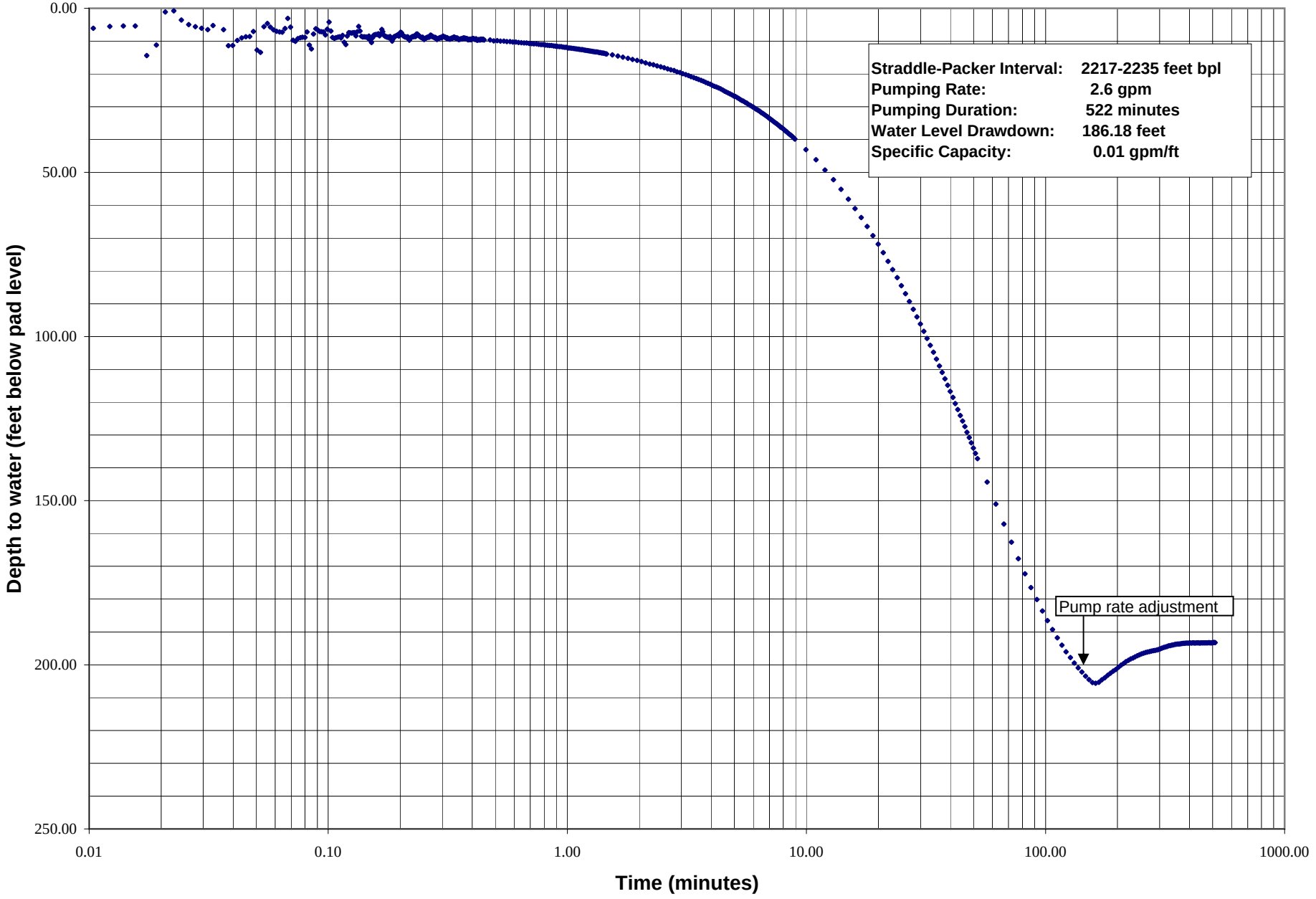
Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/01/03	9:41:17	3.88	197.17	22.83	15.66
05/01/03	9:41:22	3.96	196.89	23.11	15.94
05/01/03	9:41:27	4.04	196.55	23.45	16.28
05/01/03	9:41:32	4.13	196.25	23.75	16.58
05/01/03	9:41:37	4.21	196.01	23.99	16.82
05/01/03	9:41:42	4.29	195.75	24.25	17.08
05/01/03	9:41:47	4.38	195.44	24.56	17.39
05/01/03	9:41:52	4.46	195.13	24.87	17.70
05/01/03	9:41:57	4.54	194.79	25.21	18.04
05/01/03	9:42:02	4.63	194.50	25.50	18.33
05/01/03	9:42:07	4.71	194.22	25.78	18.61
05/01/03	9:42:12	4.79	193.91	26.09	18.92
05/01/03	9:42:17	4.88	193.65	26.35	19.18
05/01/03	9:42:22	4.96	193.34	26.66	19.49
05/01/03	9:42:27	5.04	193.13	26.87	19.70
05/01/03	9:42:32	5.13	192.79	27.21	20.04
05/01/03	9:42:37	5.21	192.53	27.47	20.30
05/01/03	9:42:42	5.29	192.21	27.79	20.62
05/01/03	9:42:47	5.38	191.90	28.10	20.93
05/01/03	9:42:52	5.46	191.67	28.33	21.16
05/01/03	9:42:57	5.54	191.34	28.66	21.49
05/01/03	9:43:02	5.63	191.14	28.86	21.69
05/01/03	9:43:07	5.71	190.82	29.18	22.01
05/01/03	9:43:12	5.79	190.50	29.50	22.33
05/01/03	9:43:17	5.88	190.27	29.73	22.56
05/01/03	9:43:22	5.96	189.97	30.03	22.86
05/01/03	9:43:27	6.04	189.70	30.30	23.13
05/01/03	9:43:32	6.13	189.40	30.60	23.43
05/01/03	9:43:37	6.21	189.18	30.82	23.65
05/01/03	9:43:42	6.29	188.88	31.12	23.95
05/01/03	9:43:47	6.38	188.66	31.34	24.17
05/01/03	9:43:52	6.46	188.27	31.73	24.56
05/01/03	9:43:57	6.54	188.06	31.94	24.77
05/01/03	9:44:02	6.63	187.77	32.23	25.06
05/01/03	9:44:07	6.71	187.50	32.50	25.33
05/01/03	9:44:12	6.79	187.20	32.80	25.63
05/01/03	9:44:17	6.88	186.97	33.03	25.86
05/01/03	9:44:22	6.96	186.62	33.38	26.21
05/01/03	9:44:27	7.04	186.38	33.62	26.45
05/01/03	9:44:32	7.13	186.03	33.97	26.80
05/01/03	9:44:37	7.21	185.79	34.21	27.04
05/01/03	9:44:42	7.29	185.50	34.50	27.33
05/01/03	9:44:47	7.38	185.28	34.72	27.55
05/01/03	9:44:52	7.46	184.99	35.01	27.84
05/01/03	9:44:57	7.54	184.74	35.26	28.09
05/01/03	9:45:02	7.63	184.45	35.55	28.38
05/01/03	9:45:07	7.71	184.24	35.76	28.59
05/01/03	9:45:12	7.79	183.83	36.17	29.00
05/01/03	9:45:17	7.88	183.66	36.34	29.17
05/01/03	9:45:22	7.96	183.35	36.65	29.48

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/01/03	9:45:27	8.04	183.12	36.88	29.71
05/01/03	9:45:32	8.13	182.81	37.19	30.02
05/01/03	9:45:37	8.21	182.54	37.46	30.29
05/01/03	9:45:42	8.29	182.29	37.71	30.54
05/01/03	9:45:47	8.38	182.01	37.99	30.82
05/01/03	9:45:52	8.46	181.79	38.21	31.04
05/01/03	9:45:57	8.54	181.49	38.51	31.34
05/01/03	9:46:02	8.63	181.28	38.72	31.55
05/01/03	9:46:07	8.71	180.97	39.03	31.86
05/01/03	9:46:12	8.79	180.72	39.28	32.11
05/01/03	9:46:17	8.88	180.46	39.54	32.37
05/01/03	9:46:22	8.96	180.15	39.85	32.68
05/01/03	9:47:22	9.96	176.98	43.02	35.85
05/01/03	9:48:22	10.96	173.85	46.15	38.98
05/01/03	9:49:22	11.96	170.75	49.25	42.08
05/01/03	9:50:22	12.96	167.76	52.24	45.07
05/01/03	9:51:22	13.96	164.85	55.15	47.98
05/01/03	9:52:22	14.96	161.88	58.12	50.95
05/01/03	9:53:22	15.96	159.01	60.99	53.82
05/01/03	9:54:22	16.96	156.27	63.73	56.56
05/01/03	9:55:22	17.96	153.53	66.47	59.30
05/01/03	9:56:22	18.96	150.75	69.25	62.08
05/01/03	9:57:22	19.96	148.15	71.85	64.68
05/01/03	9:58:22	20.96	145.56	74.44	67.27
05/01/03	9:59:22	21.96	142.94	77.06	69.89
05/01/03	10:00:22	22.96	140.41	79.59	72.42
05/01/03	10:01:22	23.96	137.94	82.06	74.89
05/01/03	10:02:22	24.96	135.49	84.51	77.34
05/01/03	10:03:22	25.96	133.07	86.93	79.76
05/01/03	10:04:22	26.96	130.67	89.33	82.16
05/01/03	10:05:22	27.96	128.33	91.67	84.50
05/01/03	10:06:22	28.96	126.03	93.97	86.80
05/01/03	10:07:22	29.96	123.82	96.18	89.01
05/01/03	10:08:22	30.96	121.58	98.42	91.25
05/01/03	10:09:22	31.96	119.42	100.58	93.41
05/01/03	10:10:22	32.96	117.30	102.70	95.53
05/01/03	10:11:22	33.96	115.20	104.80	97.63
05/01/03	10:12:22	34.96	113.13	106.87	99.70
05/01/03	10:13:22	35.96	111.05	108.95	101.78
05/01/03	10:14:22	36.96	109.08	110.92	103.75
05/01/03	10:15:22	37.96	107.13	112.87	105.70
05/01/03	10:16:22	38.96	105.19	114.81	107.64
05/01/03	10:17:22	39.96	103.30	116.70	109.53
05/01/03	10:18:22	40.96	101.47	118.53	111.36
05/01/03	10:19:22	41.96	99.59	120.41	113.24
05/01/03	10:20:22	42.96	97.78	122.22	115.05
05/01/03	10:21:22	43.96	95.96	124.04	116.87
05/01/03	10:22:22	44.96	94.27	125.73	118.56
05/01/03	10:23:22	45.96	92.56	127.44	120.27
05/01/03	10:24:22	46.96	90.87	129.13	121.96

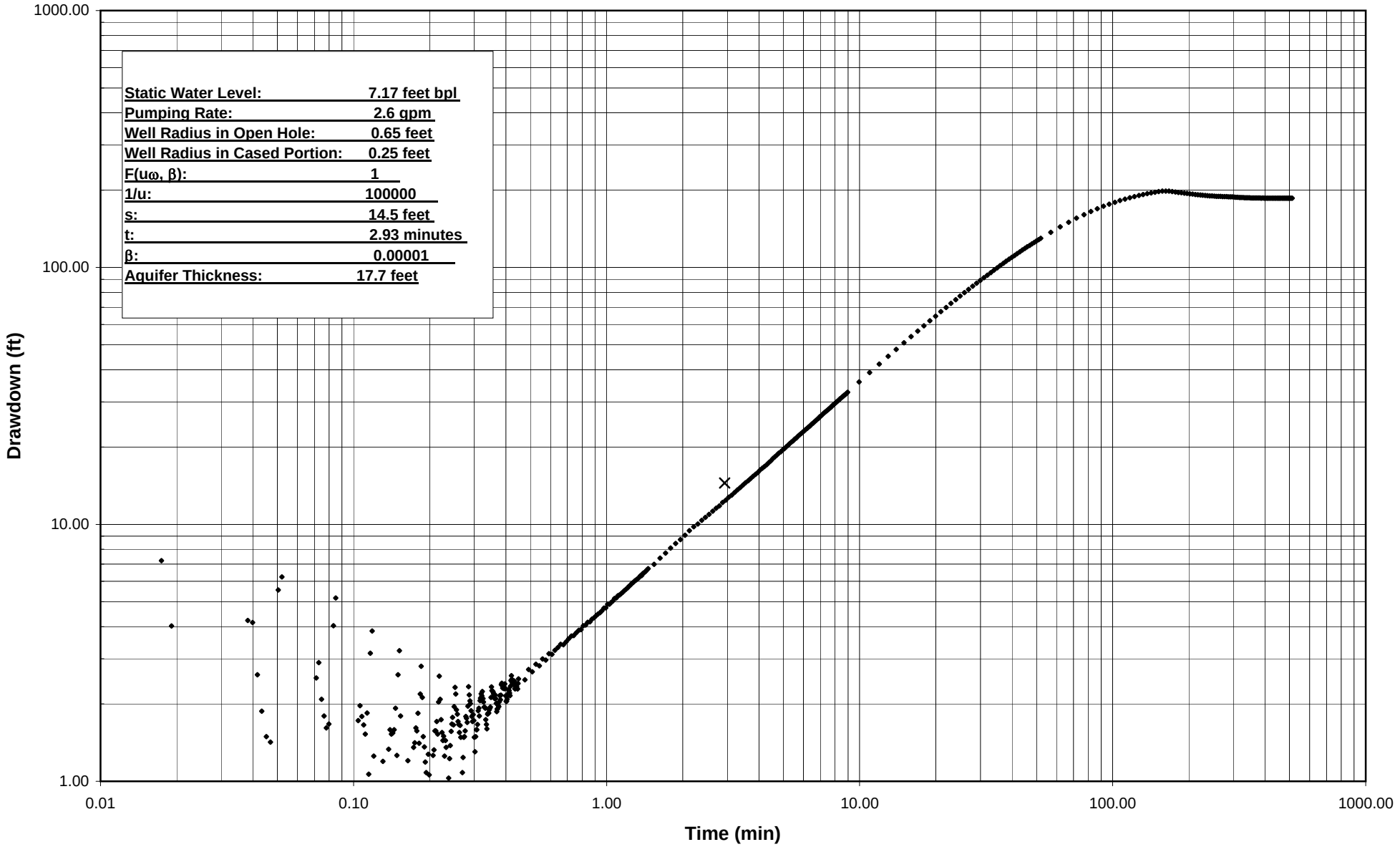
Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/01/03	10:25:22	47.96	89.22	130.78	123.61
05/01/03	10:26:22	48.96	87.65	132.35	125.18
05/01/03	10:27:22	49.96	86.00	134.00	126.83
05/01/03	10:28:22	50.96	84.44	135.56	128.39
05/01/03	10:29:22	51.96	82.83	137.17	130.00
05/01/03	10:34:22	56.96	75.70	144.30	137.13
05/01/03	10:39:22	61.96	68.98	151.02	143.85
05/01/03	10:44:22	66.96	62.90	157.10	149.93
05/01/03	10:49:22	71.96	57.33	162.67	155.50
05/01/03	10:54:22	76.96	52.30	167.70	160.53
05/01/03	10:59:22	81.96	47.70	172.30	165.13
05/01/03	11:04:22	86.96	43.54	176.46	169.29
05/01/03	11:09:22	91.96	39.86	180.14	172.97
05/01/03	11:14:22	96.96	36.40	183.60	176.43
05/01/03	11:19:22	101.96	33.45	186.55	179.38
05/01/03	11:24:22	106.96	30.73	189.27	182.10
05/01/03	11:29:22	111.96	28.22	191.78	184.61
05/01/03	11:34:22	116.96	26.00	194.00	186.83
05/01/03	11:39:22	121.96	23.96	196.04	188.87
05/01/03	11:44:22	126.96	22.18	197.82	190.65
05/01/03	11:49:22	131.96	20.55	199.45	192.28
05/01/03	11:54:22	136.96	19.07	200.93	193.76
05/01/03	11:59:22	141.96	17.79	202.21	195.04
05/01/03	12:04:22	146.96	16.57	203.43	196.26
05/01/03	12:09:22	151.96	15.51	204.49	197.32
05/01/03	12:14:22	156.96	14.61	205.39	198.22
05/01/03	12:19:22	161.96	14.38	**205.62**	198.45
05/01/03	12:24:22	166.96	14.65	205.35	198.18
05/01/03	12:29:22	171.96	15.43	204.57	197.40
05/01/03	12:34:22	176.96	16.08	203.92	196.75
05/01/03	12:39:22	181.96	16.80	203.20	196.03
05/01/03	12:44:22	186.96	17.45	202.55	195.38
05/01/03	12:49:22	191.96	18.05	201.95	194.78
05/01/03	12:54:22	196.96	18.60	201.40	194.23
05/01/03	12:59:22	201.96	19.30	200.70	193.53
05/01/03	13:04:22	206.96	19.91	200.09	192.92
05/01/03	13:09:22	211.96	20.40	199.60	192.43
05/01/03	13:14:22	216.96	20.94	199.06	191.89
05/01/03	13:19:22	221.96	21.39	198.61	191.44
05/01/03	13:24:22	226.96	21.76	198.24	191.07
05/01/03	13:29:22	231.96	22.10	197.90	190.73
05/01/03	13:34:22	236.96	22.41	197.59	190.42
05/01/03	13:39:22	241.96	22.75	197.25	190.08
05/01/03	13:44:22	246.96	23.06	196.94	189.77
05/01/03	13:49:22	251.96	23.30	196.70	189.53
05/01/03	13:54:22	256.96	23.52	196.48	189.31
05/01/03	13:59:22	261.96	23.72	196.28	189.11
05/01/03	14:04:22	266.96	23.86	196.14	188.97
05/01/03	14:09:22	271.96	24.05	195.95	188.78
05/01/03	14:14:22	276.96	24.16	195.84	188.67

Date	Time	Minutes (from start of pumping)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Drawdown (ft below static)
05/01/03	14:19:22	281.96	24.27	195.73	188.56
05/01/03	14:24:22	286.96	24.37	195.63	188.46
05/01/03	14:29:22	291.96	24.51	195.49	188.32
05/01/03	14:34:22	296.96	24.65	195.35	188.18
05/01/03	14:39:22	301.96	24.87	195.13	187.96
05/01/03	14:44:22	306.96	25.10	194.90	187.73
05/01/03	14:49:22	311.96	25.28	194.72	187.55
05/01/03	14:54:22	316.96	25.46	194.54	187.37
05/01/03	14:59:22	321.96	25.56	194.44	187.27
05/01/03	15:04:22	326.96	25.74	194.26	187.09
05/01/03	15:09:22	331.96	25.87	194.13	186.96
05/01/03	15:14:22	336.96	25.96	194.04	186.87
05/01/03	15:19:22	341.96	26.08	193.92	186.75
05/01/03	15:24:22	346.96	26.18	193.82	186.65
05/01/03	15:29:22	351.96	26.27	193.73	186.56
05/01/03	15:34:22	356.96	26.31	193.69	186.52
05/01/03	15:39:22	361.96	26.35	193.65	186.48
05/01/03	15:44:22	366.96	26.42	193.58	186.41
05/01/03	15:49:22	371.96	26.49	193.51	186.34
05/01/03	15:54:22	376.96	26.52	193.48	186.31
05/01/03	15:59:22	381.96	26.54	193.46	186.29
05/01/03	16:04:22	386.96	26.60	193.40	186.23
05/01/03	16:09:22	391.96	26.59	193.41	186.24
05/01/03	16:14:22	396.96	26.62	193.38	186.21
05/01/03	16:19:22	401.96	26.65	193.35	186.18
05/01/03	16:24:22	406.96	26.64	193.36	186.19
05/01/03	16:29:22	411.96	26.65	193.35	186.18
05/01/03	16:34:22	416.96	26.69	193.31	186.14
05/01/03	16:39:22	421.96	26.64	193.36	186.19
05/01/03	16:44:22	426.96	26.65	193.35	186.18
05/01/03	16:49:22	431.96	26.65	193.35	186.18
05/01/03	16:54:22	436.96	26.68	193.32	186.15
05/01/03	16:59:22	441.96	26.60	193.40	186.23
05/01/03	17:04:22	446.96	26.66	193.34	186.17
05/01/03	17:09:22	451.96	26.65	193.35	186.18
05/01/03	17:14:22	456.96	26.65	**193.35**	186.18
05/01/03	17:19:22	461.96	26.67	193.33	186.16
05/01/03	17:24:22	466.96	26.66	193.34	186.17
05/01/03	17:29:22	471.96	26.70	193.30	186.13
05/01/03	17:34:22	476.96	26.68	193.32	186.15
05/01/03	17:39:22	481.96	26.72	193.28	186.11
05/01/03	17:44:22	486.96	26.70	193.30	186.13
05/01/03	17:49:22	491.96	26.70	193.30	186.13
05/01/03	17:54:22	496.96	26.70	193.30	186.13
05/01/03	17:59:22	501.96	26.74	193.26	186.09
05/01/03	18:04:22	506.96	26.82	193.18	186.01
05/01/03	18:09:22	511.96	26.75	193.25	186.08

Straddle-Packer Test No. 10 - Drawdown
City of Port St. Lucie, Westport Injection Well System
Injection Well No. 1



Injection Well No.1, Port St. Lucie
Port St. Lucie, Westport Injection Well System
Straddle-Packer Test No. 10 - Drawdown



g:aproject\reesemacon\pf001153.0003\MW Packer Tests\Test#5\#10 Drawdown.xls\DD Log-log

Straddle-Packer Test No. 10 - Recovery
City of Port St. Lucie, Westport Injection Well System
Injection Well No. 1

Packer Depth Interval:	2217- 2235 feet bpl	**Assumed Stabilized DTW:**	193.35 feet bpl
Start of Logging:	5/1/03 18:19:13	**Start of Pumping:**	5/1/03 9:37:25
End of Logging:	5/2/03 6:21:15	**Pumping Duration:**	522
Pumping Rate:	2.6 gpm	**Total Recovery Time:**	1244 minutes

Data collected with Aquastar Data Logger (ARCADIS)

Source File: C:\AQUA4\PT10REC.DAT

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/01/03	18:19:13	0.00	26.79	193.21	0.14
05/01/03	18:19:13	0.00	26.73	193.27	0.08
05/01/03	18:19:13	0.00	26.70	193.30	0.05
05/01/03	18:19:13	0.01	26.68	193.32	0.03
05/01/03	18:19:13	0.01	26.73	193.27	0.08
05/01/03	18:19:13	0.01	26.83	193.17	0.18
05/01/03	18:19:13	0.01	26.84	193.16	0.19
05/01/03	18:19:13	0.01	26.83	193.17	0.18
05/01/03	18:19:14	0.01	26.79	193.21	0.14
05/01/03	18:19:14	0.02	26.75	193.25	0.10
05/01/03	18:19:14	0.02	26.78	193.22	0.13
05/01/03	18:19:14	0.02	26.83	193.17	0.18
05/01/03	18:19:14	0.02	26.86	193.14	0.21
05/01/03	18:19:14	0.02	26.79	193.21	0.14
05/01/03	18:19:14	0.02	26.70	193.30	0.05
05/01/03	18:19:14	0.03	26.78	193.22	0.13
05/01/03	18:19:15	0.03	26.77	193.23	0.12
05/01/03	18:19:15	0.03	26.83	193.17	0.18
05/01/03	18:19:15	0.03	26.82	193.18	0.17
05/01/03	18:19:15	0.03	26.73	193.27	0.08
05/01/03	18:19:15	0.03	26.72	193.28	0.07
05/01/03	18:19:15	0.04	26.81	193.19	0.16
05/01/03	18:19:15	0.04	26.88	193.12	0.23
05/01/03	18:19:15	0.04	26.85	193.15	0.20
05/01/03	18:19:16	0.04	26.77	193.23	0.12
05/01/03	18:19:16	0.04	26.72	193.28	0.07
05/01/03	18:19:16	0.05	26.75	193.25	0.10
05/01/03	18:19:16	0.05	26.89	193.11	0.24
05/01/03	18:19:16	0.05	26.87	193.13	0.22
05/01/03	18:19:16	0.05	26.81	193.19	0.16
05/01/03	18:19:16	0.05	26.75	193.25	0.10
05/01/03	18:19:16	0.05	26.75	193.25	0.10
05/01/03	18:19:16	0.06	26.80	193.20	0.15
05/01/03	18:19:17	0.06	26.84	193.16	0.19
05/01/03	18:19:17	0.06	26.81	193.19	0.16
05/01/03	18:19:17	0.06	26.75	193.25	0.10
05/01/03	18:19:17	0.06	26.70	193.30	0.05
05/01/03	18:19:17	0.06	26.77	193.23	0.12
05/01/03	18:19:17	0.07	26.87	193.13	0.22

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/01/03	18:19:17	0.07	26.84	193.16	0.19
05/01/03	18:19:17	0.07	26.73	193.27	0.08
05/01/03	18:19:18	0.07	26.67	193.33	0.02
05/01/03	18:19:18	0.07	26.75	193.25	0.10
05/01/03	18:19:18	0.07	26.84	193.16	0.19
05/01/03	18:19:18	0.08	26.88	193.12	0.23
05/01/03	18:19:18	0.08	26.79	193.21	0.14
05/01/03	18:19:18	0.08	26.73	193.27	0.08
05/01/03	18:19:18	0.08	26.77	193.23	0.12
05/01/03	18:19:18	0.08	26.78	193.22	0.13
05/01/03	18:19:19	0.09	26.81	193.19	0.16
05/01/03	18:19:19	0.09	26.86	193.14	0.21
05/01/03	18:19:19	0.09	26.84	193.16	0.19
05/01/03	18:19:19	0.09	26.77	193.23	0.12
05/01/03	18:19:19	0.09	26.76	193.24	0.11
05/01/03	18:19:19	0.09	26.83	193.17	0.18
05/01/03	18:19:19	0.10	26.95	193.05	0.30
05/01/03	18:19:19	0.10	26.85	193.15	0.20
05/01/03	18:19:19	0.10	26.83	193.17	0.18
05/01/03	18:19:19	0.10	26.72	193.28	0.07
05/01/03	18:19:19	0.10	26.85	193.15	0.20
05/01/03	18:19:19	0.10	26.88	193.12	0.23
05/01/03	18:19:19	0.11	26.84	193.16	0.19
05/01/03	18:19:19	0.11	26.78	193.22	0.13
05/01/03	18:19:19	0.11	26.83	193.17	0.18
05/01/03	18:19:19	0.11	26.80	193.20	0.15
05/01/03	18:19:19	0.11	26.78	193.22	0.13
05/01/03	18:19:20	0.11	26.91	193.09	0.26
05/01/03	18:19:20	0.12	26.77	193.23	0.12
05/01/03	18:19:20	0.12	26.86	193.14	0.21
05/01/03	18:19:20	0.12	26.86	193.14	0.21
05/01/03	18:19:20	0.12	26.75	193.25	0.10
05/01/03	18:19:20	0.12	26.81	193.19	0.16
05/01/03	18:19:20	0.13	26.83	193.17	0.18
05/01/03	18:19:20	0.13	26.96	193.04	0.31
05/01/03	18:19:21	0.13	26.75	193.25	0.10
05/01/03	18:19:21	0.13	26.89	193.11	0.24
05/01/03	18:19:21	0.13	26.87	193.13	0.22
05/01/03	18:19:21	0.13	26.78	193.22	0.13
05/01/03	18:19:21	0.14	26.84	193.16	0.19
05/01/03	18:19:21	0.14	26.78	193.22	0.13
05/01/03	18:19:21	0.14	26.91	193.09	0.26
05/01/03	18:19:21	0.14	26.85	193.15	0.20
05/01/03	18:19:21	0.14	26.86	193.14	0.21
05/01/03	18:19:22	0.14	26.86	193.14	0.21
05/01/03	18:19:22	0.15	26.88	193.12	0.23
05/01/03	18:19:22	0.15	26.81	193.19	0.16
05/01/03	18:19:22	0.15	26.84	193.16	0.19
05/01/03	18:19:22	0.15	26.88	193.12	0.23
05/01/03	18:19:22	0.15	26.88	193.12	0.23

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/01/03	18:19:22	0.15	26.89	193.11	0.24
05/01/03	18:19:22	0.16	26.89	193.11	0.24
05/01/03	18:19:23	0.16	26.87	193.13	0.22
05/01/03	18:19:23	0.16	26.87	193.13	0.22
05/01/03	18:19:23	0.16	26.94	193.06	0.29
05/01/03	18:19:23	0.16	26.88	193.12	0.23
05/01/03	18:19:23	0.16	26.92	193.08	0.27
05/01/03	18:19:23	0.17	26.92	193.08	0.27
05/01/03	18:19:23	0.17	26.91	193.09	0.26
05/01/03	18:19:23	0.17	26.93	193.07	0.28
05/01/03	18:19:24	0.17	26.88	193.12	0.23
05/01/03	18:19:24	0.17	26.93	193.07	0.28
05/01/03	18:19:24	0.18	26.91	193.09	0.26
05/01/03	18:19:24	0.18	26.92	193.08	0.27
05/01/03	18:19:24	0.18	26.93	193.07	0.28
05/01/03	18:19:24	0.18	26.94	193.06	0.29
05/01/03	18:19:24	0.18	26.96	193.04	0.31
05/01/03	18:19:24	0.18	26.91	193.09	0.26
05/01/03	18:19:25	0.19	26.93	193.07	0.28
05/01/03	18:19:25	0.19	26.92	193.08	0.27
05/01/03	18:19:25	0.19	26.97	193.03	0.32
05/01/03	18:19:25	0.19	26.92	193.08	0.27
05/01/03	18:19:25	0.19	26.99	193.01	0.34
05/01/03	18:19:25	0.19	26.93	193.07	0.28
05/01/03	18:19:25	0.20	26.92	193.08	0.27
05/01/03	18:19:25	0.20	26.96	193.04	0.31
05/01/03	18:19:26	0.20	26.93	193.07	0.28
05/01/03	18:19:26	0.20	27.01	192.99	0.36
05/01/03	18:19:26	0.20	26.93	193.07	0.28
05/01/03	18:19:26	0.21	26.97	193.03	0.32
05/01/03	18:19:26	0.21	26.98	193.02	0.33
05/01/03	18:19:26	0.21	26.99	193.01	0.34
05/01/03	18:19:26	0.21	26.96	193.04	0.31
05/01/03	18:19:26	0.21	26.99	193.01	0.34
05/01/03	18:19:26	0.21	26.98	193.02	0.33
05/01/03	18:19:26	0.22	26.97	193.03	0.32
05/01/03	18:19:26	0.22	26.98	193.02	0.33
05/01/03	18:19:26	0.22	27.01	192.99	0.36
05/01/03	18:19:26	0.22	26.97	193.03	0.32
05/01/03	18:19:26	0.22	26.98	193.02	0.33
05/01/03	18:19:26	0.22	27.00	193.00	0.35
05/01/03	18:19:26	0.23	26.98	193.02	0.33
05/01/03	18:19:26	0.23	27.03	192.97	0.38
05/01/03	18:19:27	0.23	26.99	193.01	0.34
05/01/03	18:19:27	0.23	27.04	192.96	0.39
05/01/03	18:19:27	0.23	26.97	193.03	0.32
05/01/03	18:19:27	0.24	26.99	193.01	0.34
05/01/03	18:19:27	0.24	27.02	192.98	0.37
05/01/03	18:19:27	0.24	27.01	192.99	0.36
05/01/03	18:19:27	0.24	27.03	192.97	0.38

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/01/03	18:19:27	0.24	27.01	192.99	0.36
05/01/03	18:19:28	0.24	27.03	192.97	0.38
05/01/03	18:19:28	0.25	27.01	192.99	0.36
05/01/03	18:19:28	0.25	27.01	192.99	0.36
05/01/03	18:19:28	0.25	27.08	192.92	0.43
05/01/03	18:19:28	0.25	27.01	192.99	0.36
05/01/03	18:19:28	0.25	27.06	192.94	0.41
05/01/03	18:19:28	0.25	27.06	192.94	0.41
05/01/03	18:19:28	0.26	27.04	192.96	0.39
05/01/03	18:19:29	0.26	27.07	192.93	0.42
05/01/03	18:19:29	0.26	27.03	192.97	0.38
05/01/03	18:19:29	0.26	27.05	192.95	0.40
05/01/03	18:19:29	0.26	27.02	192.98	0.37
05/01/03	18:19:29	0.26	27.07	192.93	0.42
05/01/03	18:19:29	0.27	27.04	192.96	0.39
05/01/03	18:19:29	0.27	27.03	192.97	0.38
05/01/03	18:19:29	0.27	27.14	192.86	0.49
05/01/03	18:19:29	0.27	27.01	192.99	0.36
05/01/03	18:19:30	0.27	27.08	192.92	0.43
05/01/03	18:19:30	0.28	27.04	192.96	0.39
05/01/03	18:19:30	0.28	27.10	192.90	0.45
05/01/03	18:19:30	0.28	27.08	192.92	0.43
05/01/03	18:19:30	0.28	27.08	192.92	0.43
05/01/03	18:19:30	0.28	27.12	192.88	0.47
05/01/03	18:19:30	0.28	27.07	192.93	0.42
05/01/03	18:19:30	0.29	27.12	192.88	0.47
05/01/03	18:19:31	0.29	27.04	192.96	0.39
05/01/03	18:19:31	0.29	27.13	192.87	0.48
05/01/03	18:19:31	0.29	27.09	192.91	0.44
05/01/03	18:19:31	0.29	27.17	192.83	0.52
05/01/03	18:19:31	0.29	27.07	192.93	0.42
05/01/03	18:19:31	0.30	27.12	192.88	0.47
05/01/03	18:19:31	0.30	27.11	192.89	0.46
05/01/03	18:19:31	0.30	27.13	192.87	0.48
05/01/03	18:19:32	0.30	27.14	192.86	0.49
05/01/03	18:19:32	0.30	27.08	192.92	0.43
05/01/03	18:19:32	0.31	27.14	192.86	0.49
05/01/03	18:19:32	0.31	27.12	192.88	0.47
05/01/03	18:19:32	0.31	27.13	192.87	0.48
05/01/03	18:19:32	0.31	27.11	192.89	0.46
05/01/03	18:19:32	0.31	27.13	192.87	0.48
05/01/03	18:19:32	0.31	27.12	192.88	0.47
05/01/03	18:19:32	0.32	27.12	192.88	0.47
05/01/03	18:19:32	0.32	27.14	192.86	0.49
05/01/03	18:19:32	0.32	27.15	192.85	0.50
05/01/03	18:19:32	0.32	27.15	192.85	0.50
05/01/03	18:19:32	0.32	27.18	192.82	0.53
05/01/03	18:19:32	0.32	27.08	192.92	0.43
05/01/03	18:19:32	0.33	27.17	192.83	0.52
05/01/03	18:19:32	0.33	27.14	192.86	0.49

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/01/03	18:19:33	0.33	27.22	192.78	0.57
05/01/03	18:19:33	0.33	27.14	192.86	0.49
05/01/03	18:19:33	0.33	27.12	192.88	0.47
05/01/03	18:19:33	0.34	27.17	192.83	0.52
05/01/03	18:19:33	0.34	27.10	192.90	0.45
05/01/03	18:19:33	0.34	27.17	192.83	0.52
05/01/03	18:19:33	0.34	27.20	192.80	0.55
05/01/03	18:19:33	0.34	27.14	192.86	0.49
05/01/03	18:19:33	0.34	27.18	192.82	0.53
05/01/03	18:19:34	0.35	27.15	192.85	0.50
05/01/03	18:19:34	0.35	27.23	192.77	0.58
05/01/03	18:19:34	0.35	27.17	192.83	0.52
05/01/03	18:19:34	0.35	27.21	192.79	0.56
05/01/03	18:19:34	0.35	27.20	192.80	0.55
05/01/03	18:19:34	0.35	27.20	192.80	0.55
05/01/03	18:19:34	0.36	27.20	192.80	0.55
05/01/03	18:19:34	0.36	27.25	192.75	0.60
05/01/03	18:19:35	0.36	27.18	192.82	0.53
05/01/03	18:19:35	0.36	27.20	192.80	0.55
05/01/03	18:19:35	0.36	27.22	192.78	0.57
05/01/03	18:19:35	0.36	27.20	192.80	0.55
05/01/03	18:19:35	0.37	27.20	192.80	0.55
05/01/03	18:19:35	0.37	27.22	192.78	0.57
05/01/03	18:19:35	0.37	27.24	192.76	0.59
05/01/03	18:19:35	0.37	27.20	192.80	0.55
05/01/03	18:19:36	0.37	27.24	192.76	0.59
05/01/03	18:19:36	0.38	27.27	192.73	0.62
05/01/03	18:19:36	0.38	27.24	192.76	0.59
05/01/03	18:19:36	0.38	27.23	192.77	0.58
05/01/03	18:19:36	0.38	27.27	192.73	0.62
05/01/03	18:19:36	0.38	27.23	192.77	0.58
05/01/03	18:19:36	0.38	27.22	192.78	0.57
05/01/03	18:19:36	0.39	27.28	192.72	0.63
05/01/03	18:19:36	0.39	27.24	192.76	0.59
05/01/03	18:19:37	0.39	27.25	192.75	0.60
05/01/03	18:19:37	0.39	27.23	192.77	0.58
05/01/03	18:19:37	0.39	27.27	192.73	0.62
05/01/03	18:19:37	0.39	27.25	192.75	0.60
05/01/03	18:19:37	0.40	27.29	192.71	0.64
05/01/03	18:19:37	0.40	27.26	192.74	0.61
05/01/03	18:19:37	0.40	27.25	192.75	0.60
05/01/03	18:19:37	0.40	27.32	192.68	0.67
05/01/03	18:19:38	0.40	27.23	192.77	0.58
05/01/03	18:19:38	0.40	27.33	192.67	0.68
05/01/03	18:19:38	0.41	27.24	192.76	0.59
05/01/03	18:19:38	0.41	27.27	192.73	0.62
05/01/03	18:19:38	0.41	27.26	192.74	0.61
05/01/03	18:19:38	0.41	27.30	192.70	0.65
05/01/03	18:19:38	0.41	27.26	192.74	0.61
05/01/03	18:19:38	0.41	27.29	192.71	0.64

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/01/03	18:19:38	0.42	27.34	192.66	0.69
05/01/03	18:19:38	0.42	27.24	192.76	0.59
05/01/03	18:19:38	0.42	27.32	192.68	0.67
05/01/03	18:19:38	0.42	27.26	192.74	0.61
05/01/03	18:19:38	0.42	27.34	192.66	0.69
05/01/03	18:19:38	0.43	27.32	192.68	0.67
05/01/03	18:19:38	0.43	27.32	192.68	0.67
05/01/03	18:19:38	0.43	27.34	192.66	0.69
05/01/03	18:19:39	0.43	27.31	192.69	0.66
05/01/03	18:19:39	0.43	27.37	192.63	0.72
05/01/03	18:19:39	0.43	27.27	192.73	0.62
05/01/03	18:19:39	0.44	27.35	192.65	0.70
05/01/03	18:19:39	0.44	27.28	192.72	0.63
05/01/03	18:19:39	0.44	27.30	192.70	0.65
05/01/03	18:19:39	0.44	27.33	192.67	0.68
05/01/03	18:19:39	0.44	27.33	192.67	0.68
05/01/03	18:19:39	0.44	27.32	192.68	0.67
05/01/03	18:19:40	0.45	27.31	192.69	0.66
05/01/03	18:19:40	0.45	27.37	192.63	0.72
05/01/03	18:19:40	0.45	27.32	192.68	0.67
05/01/03	18:19:40	0.45	27.35	192.65	0.70
05/01/03	18:19:40	0.45	27.38	192.62	0.73
05/01/03	18:19:40	0.45	27.33	192.67	0.68
05/01/03	18:19:40	0.46	27.39	192.61	0.74
05/01/03	18:19:40	0.46	27.35	192.65	0.70
05/01/03	18:19:41	0.46	27.40	192.60	0.75
05/01/03	18:19:41	0.46	27.37	192.63	0.72
05/01/03	18:19:41	0.46	27.38	192.62	0.73
05/01/03	18:19:41	0.47	27.40	192.60	0.75
05/01/03	18:19:41	0.47	27.36	192.64	0.71
05/01/03	18:19:41	0.47	27.43	192.57	0.78
05/01/03	18:19:41	0.47	27.35	192.65	0.70
05/01/03	18:19:41	0.47	27.40	192.60	0.75
05/01/03	18:19:42	0.47	27.38	192.62	0.73
05/01/03	18:19:42	0.48	27.35	192.65	0.70
05/01/03	18:19:42	0.48	27.41	192.59	0.76
05/01/03	18:19:42	0.48	27.41	192.59	0.76
05/01/03	18:19:42	0.48	27.40	192.60	0.75
05/01/03	18:19:42	0.48	27.38	192.62	0.73
05/01/03	18:19:42	0.48	27.44	192.56	0.79
05/01/03	18:19:42	0.49	27.39	192.61	0.74
05/01/03	18:19:42	0.49	27.40	192.60	0.75
05/01/03	18:19:43	0.49	27.42	192.58	0.77
05/01/03	18:19:43	0.49	27.40	192.60	0.75
05/01/03	18:19:43	0.49	27.43	192.57	0.78
05/01/03	18:19:43	0.49	27.41	192.59	0.76
05/01/03	18:19:43	0.50	27.44	192.56	0.79
05/01/03	18:19:43	0.50	27.39	192.61	0.74
05/01/03	18:19:43	0.50	27.39	192.61	0.74
05/01/03	18:19:43	0.50	27.47	192.53	0.82

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/01/03	18:19:44	0.50	27.40	192.60	0.75
05/01/03	18:19:44	0.51	27.51	192.49	0.86
05/01/03	18:19:44	0.51	27.39	192.61	0.74
05/01/03	18:19:44	0.51	27.46	192.54	0.81
05/01/03	18:19:44	0.51	27.42	192.58	0.77
05/01/03	18:19:44	0.51	27.48	192.52	0.83
05/01/03	18:19:44	0.51	27.48	192.52	0.83
05/01/03	18:19:44	0.52	27.40	192.60	0.75
05/01/03	18:19:45	0.52	27.51	192.49	0.86
05/01/03	18:19:45	0.52	27.40	192.60	0.75
05/01/03	18:19:45	0.52	27.47	192.53	0.82
05/01/03	18:19:46	0.55	27.51	192.49	0.86
05/01/03	18:19:47	0.56	27.54	192.46	0.89
05/01/03	18:19:48	0.58	27.53	192.47	0.88
05/01/03	18:19:49	0.60	27.59	192.41	0.94
05/01/03	18:19:50	0.61	27.61	192.39	0.96
05/01/03	18:19:51	0.63	27.64	192.36	0.99
05/01/03	18:19:52	0.65	27.65	192.35	1.00
05/01/03	18:19:53	0.66	27.69	192.31	1.04
05/01/03	18:19:54	0.68	27.71	192.29	1.06
05/01/03	18:19:55	0.70	27.74	192.26	1.09
05/01/03	18:19:56	0.71	27.76	192.24	1.11
05/01/03	18:19:57	0.73	27.77	192.23	1.12
05/01/03	18:19:58	0.75	27.84	192.16	1.19
05/01/03	18:19:59	0.76	27.82	192.18	1.17
05/01/03	18:20:00	0.78	27.86	192.14	1.21
05/01/03	18:20:01	0.80	27.91	192.09	1.26
05/01/03	18:20:02	0.81	27.93	192.07	1.28
05/01/03	18:20:03	0.83	27.95	192.05	1.30
05/01/03	18:20:04	0.85	27.96	192.04	1.31
05/01/03	18:20:05	0.86	28.01	191.99	1.36
05/01/03	18:20:06	0.88	28.04	191.96	1.39
05/01/03	18:20:07	0.90	28.05	191.95	1.40
05/01/03	18:20:08	0.91	28.09	191.91	1.44
05/01/03	18:20:09	0.93	28.10	191.90	1.45
05/01/03	18:20:10	0.95	28.13	191.87	1.48
05/01/03	18:20:11	0.96	28.19	191.81	1.54
05/01/03	18:20:12	0.98	28.17	191.83	1.52
05/01/03	18:20:13	1.00	28.19	191.81	1.54
05/01/03	18:20:14	1.01	28.25	191.75	1.60
05/01/03	18:20:15	1.03	28.26	191.74	1.61
05/01/03	18:20:16	1.05	28.27	191.73	1.62
05/01/03	18:20:17	1.06	28.32	191.68	1.67
05/01/03	18:20:18	1.08	28.34	191.66	1.69
05/01/03	18:20:19	1.10	28.36	191.64	1.71
05/01/03	18:20:20	1.11	28.39	191.61	1.74
05/01/03	18:20:21	1.13	28.42	191.58	1.77
05/01/03	18:20:22	1.15	28.44	191.56	1.79
05/01/03	18:20:23	1.16	28.48	191.52	1.83
05/01/03	18:20:24	1.18	28.50	191.50	1.85

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/01/03	18:20:25	1.20	28.53	191.47	1.88
05/01/03	18:20:26	1.21	28.54	191.46	1.89
05/01/03	18:20:27	1.23	28.59	191.41	1.94
05/01/03	18:20:28	1.25	28.60	191.40	1.95
05/01/03	18:20:29	1.26	28.63	191.37	1.98
05/01/03	18:20:30	1.28	28.65	191.35	2.00
05/01/03	18:20:31	1.30	28.68	191.32	2.03
05/01/03	18:20:32	1.31	28.72	191.28	2.07
05/01/03	18:20:33	1.33	28.74	191.26	2.09
05/01/03	18:20:34	1.35	28.77	191.23	2.12
05/01/03	18:20:35	1.36	28.78	191.22	2.13
05/01/03	18:20:36	1.38	28.81	191.19	2.16
05/01/03	18:20:37	1.40	28.85	191.15	2.20
05/01/03	18:20:38	1.41	28.87	191.13	2.22
05/01/03	18:20:39	1.43	28.89	191.11	2.24
05/01/03	18:20:40	1.45	28.92	191.08	2.27
05/01/03	18:20:41	1.46	28.93	191.07	2.28
05/01/03	18:20:42	1.48	28.96	191.04	2.31
05/01/03	18:20:43	1.50	29.01	190.99	2.36
05/01/03	18:20:44	1.51	29.02	190.98	2.37
05/01/03	18:20:45	1.53	29.05	190.95	2.40
05/01/03	18:20:49	1.60	29.17	190.83	2.52
05/01/03	18:20:54	1.68	29.28	190.72	2.63
05/01/03	18:20:59	1.76	29.43	190.57	2.78
05/01/03	18:21:04	1.85	29.55	190.45	2.90
05/01/03	18:21:09	1.93	29.71	190.29	3.06
05/01/03	18:21:14	2.01	29.83	190.17	3.18
05/01/03	18:21:19	2.10	29.95	190.05	3.30
05/01/03	18:21:24	2.18	30.08	189.92	3.43
05/01/03	18:21:29	2.26	30.21	189.79	3.56
05/01/03	18:21:34	2.35	30.34	189.66	3.69
05/01/03	18:21:39	2.43	30.48	189.52	3.83
05/01/03	18:21:44	2.51	30.62	189.38	3.97
05/01/03	18:21:49	2.60	30.73	189.27	4.08
05/01/03	18:21:54	2.68	30.86	189.14	4.21
05/01/03	18:21:59	2.76	31.01	188.99	4.36
05/01/03	18:22:04	2.85	31.13	188.87	4.48
05/01/03	18:22:09	2.93	31.25	188.75	4.60
05/01/03	18:22:14	3.01	31.39	188.61	4.74
05/01/03	18:22:19	3.10	31.53	188.47	4.88
05/01/03	18:22:24	3.18	31.67	188.33	5.02
05/01/03	18:22:29	3.26	31.77	188.23	5.12
05/01/03	18:22:34	3.35	31.87	188.13	5.22
05/01/03	18:22:39	3.43	31.99	188.01	5.34
05/01/03	18:22:44	3.51	32.12	187.88	5.47
05/01/03	18:22:49	3.60	32.26	187.74	5.61
05/01/03	18:22:54	3.68	32.37	187.63	5.72
05/01/03	18:22:59	3.76	32.49	187.51	5.84
05/01/03	18:23:04	3.85	32.61	187.39	5.96
05/01/03	18:23:09	3.93	32.76	187.24	6.11

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/01/03	18:23:14	4.01	32.89	187.11	6.24
05/01/03	18:23:19	4.10	33.01	186.99	6.36
05/01/03	18:23:24	4.18	33.15	186.85	6.50
05/01/03	18:23:29	4.26	33.28	186.72	6.63
05/01/03	18:23:34	4.35	33.40	186.60	6.75
05/01/03	18:23:39	4.43	33.54	186.46	6.89
05/01/03	18:23:44	4.51	33.65	186.35	7.00
05/01/03	18:23:49	4.60	33.77	186.23	7.12
05/01/03	18:23:54	4.68	33.89	186.11	7.24
05/01/03	18:23:59	4.76	34.00	186.00	7.35
05/01/03	18:24:04	4.85	34.13	185.87	7.48
05/01/03	18:24:09	4.93	34.28	185.72	7.63
05/01/03	18:24:14	5.01	34.39	185.61	7.74
05/01/03	18:24:19	5.10	34.51	185.49	7.86
05/01/03	18:24:24	5.18	34.65	185.35	8.00
05/01/03	18:24:29	5.26	34.77	185.23	8.12
05/01/03	18:24:34	5.35	34.90	185.10	8.25
05/01/03	18:24:39	5.43	35.02	184.98	8.37
05/01/03	18:24:44	5.51	35.17	184.83	8.52
05/01/03	18:24:49	5.60	35.28	184.72	8.63
05/01/03	18:24:54	5.68	35.41	184.59	8.76
05/01/03	18:24:59	5.76	35.53	184.47	8.88
05/01/03	18:25:04	5.85	35.66	184.34	9.01
05/01/03	18:25:09	5.93	35.79	184.21	9.14
05/01/03	18:25:14	6.01	35.90	184.10	9.25
05/01/03	18:25:19	6.10	36.03	183.97	9.38
05/01/03	18:25:24	6.18	36.16	183.84	9.51
05/01/03	18:25:29	6.26	36.27	183.73	9.62
05/01/03	18:25:34	6.35	36.40	183.60	9.75
05/01/03	18:25:39	6.43	36.54	183.46	9.89
05/01/03	18:25:44	6.51	36.67	183.33	10.02
05/01/03	18:25:49	6.60	36.82	183.18	10.17
05/01/03	18:25:54	6.68	36.91	183.09	10.26
05/01/03	18:25:59	6.76	37.03	182.97	10.38
05/01/03	18:26:04	6.85	37.18	182.82	10.53
05/01/03	18:26:09	6.93	37.30	182.70	10.65
05/01/03	18:26:14	7.01	37.42	182.58	10.77
05/01/03	18:26:19	7.10	37.56	182.44	10.91
05/01/03	18:26:24	7.18	37.70	182.30	11.05
05/01/03	18:26:29	7.26	37.83	182.17	11.18
05/01/03	18:26:34	7.35	37.95	182.05	11.30
05/01/03	18:26:39	7.43	38.07	181.93	11.42
05/01/03	18:26:44	7.51	38.22	181.78	11.57
05/01/03	18:26:49	7.60	38.32	181.68	11.67
05/01/03	18:26:54	7.68	38.44	181.56	11.79
05/01/03	18:26:59	7.76	38.58	181.42	11.93
05/01/03	18:27:04	7.85	38.69	181.31	12.04
05/01/03	18:27:09	7.93	38.81	181.19	12.16
05/01/03	18:27:14	8.01	38.94	181.06	12.29
05/01/03	18:27:19	8.10	39.10	180.90	12.45

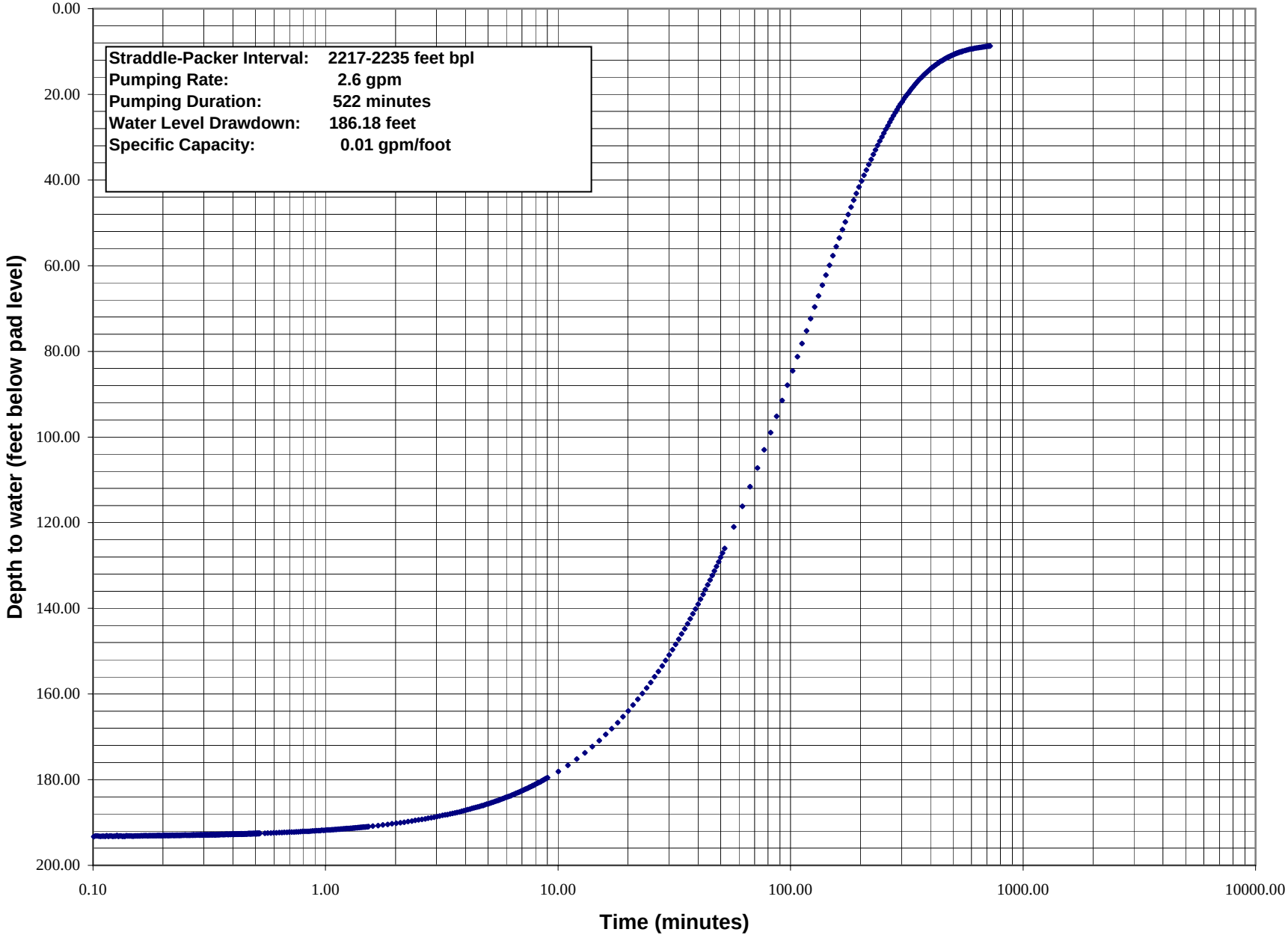
Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/01/03	18:27:24	8.18	39.21	180.79	12.56
05/01/03	18:27:29	8.26	39.34	180.66	12.69
05/01/03	18:27:34	8.35	39.44	180.56	12.79
05/01/03	18:27:39	8.43	39.57	180.43	12.92
05/01/03	18:27:44	8.51	39.71	180.29	13.06
05/01/03	18:27:49	8.60	39.81	180.19	13.16
05/01/03	18:27:54	8.68	39.96	180.04	13.31
05/01/03	18:27:59	8.76	40.10	179.90	13.45
05/01/03	18:28:04	8.85	40.21	179.79	13.56
05/01/03	18:28:09	8.93	40.32	179.68	13.67
05/01/03	18:28:14	9.01	40.42	179.58	13.77
05/01/03	18:29:15	10.03	41.90	178.10	15.25
05/01/03	18:30:15	11.03	43.37	176.63	16.72
05/01/03	18:31:15	12.03	44.84	175.16	18.19
05/01/03	18:32:15	13.03	46.29	173.71	19.64
05/01/03	18:33:15	14.03	47.71	172.29	21.06
05/01/03	18:34:15	15.03	49.12	170.88	22.47
05/01/03	18:35:15	16.03	50.54	169.46	23.89
05/01/03	18:36:15	17.03	51.93	168.07	25.28
05/01/03	18:37:15	18.03	53.33	166.67	26.68
05/01/03	18:38:15	19.03	54.70	165.30	28.05
05/01/03	18:39:15	20.03	56.07	163.93	29.42
05/01/03	18:40:15	21.03	57.42	162.58	30.77
05/01/03	18:41:15	22.03	58.76	161.24	32.11
05/01/03	18:42:15	23.03	60.10	159.90	33.45
05/01/03	18:43:15	24.03	61.42	158.58	34.77
05/01/03	18:44:15	25.03	62.72	157.28	36.07
05/01/03	18:45:15	26.03	64.02	155.98	37.37
05/01/03	18:46:15	27.03	65.28	154.72	38.63
05/01/03	18:47:15	28.03	66.56	153.44	39.91
05/01/03	18:48:15	29.03	67.82	152.18	41.17
05/01/03	18:49:15	30.03	69.11	150.89	42.46
05/01/03	18:50:15	31.03	70.37	149.63	43.72
05/01/03	18:51:15	32.03	71.58	148.42	44.93
05/01/03	18:52:15	33.03	72.78	147.22	46.13
05/01/03	18:53:15	34.03	74.01	145.99	47.36
05/01/03	18:54:15	35.03	75.20	144.80	48.55
05/01/03	18:55:15	36.03	76.40	143.60	49.75
05/01/03	18:56:15	37.03	77.57	142.43	50.92
05/01/03	18:57:15	38.03	78.70	141.30	52.05
05/01/03	18:58:15	39.03	79.86	140.14	53.21
05/01/03	18:59:15	40.03	80.99	139.01	54.34
05/01/03	19:00:15	41.03	82.12	137.88	55.47
05/01/03	19:01:15	42.03	83.26	136.74	56.61
05/01/03	19:02:15	43.03	84.37	135.63	57.72
05/01/03	19:03:15	44.03	85.49	134.51	58.84
05/01/03	19:04:15	45.03	86.59	133.41	59.94
05/01/03	19:05:15	46.03	87.67	132.33	61.02
05/01/03	19:06:15	47.03	88.74	131.26	62.09
05/01/03	19:07:15	48.03	89.81	130.19	63.16

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/01/03	19:08:15	49.03	90.86	129.14	64.21
05/01/03	19:09:15	50.03	91.90	128.10	65.25
05/01/03	19:10:15	51.03	92.93	127.07	66.28
05/01/03	19:11:15	52.03	93.96	126.04	67.31
05/01/03	19:16:15	57.03	98.99	121.01	72.34
05/01/03	19:21:15	62.03	103.81	116.19	77.16
05/01/03	19:26:15	67.03	108.40	111.60	81.75
05/01/03	19:31:15	72.03	112.78	107.22	86.13
05/01/03	19:36:15	77.03	117.01	102.99	90.36
05/01/03	19:41:15	82.03	121.04	98.96	94.39
05/01/03	19:46:15	87.03	124.85	95.15	98.20
05/01/03	19:51:15	92.03	128.52	91.48	101.87
05/01/03	19:56:15	97.03	132.10	87.90	105.45
05/01/03	20:01:15	102.03	135.48	84.52	108.83
05/01/03	20:06:15	107.03	138.74	81.26	112.09
05/01/03	20:11:15	112.03	141.80	78.20	115.15
05/01/03	20:16:15	117.03	144.77	75.23	118.12
05/01/03	20:21:15	122.03	147.62	72.38	120.97
05/01/03	20:26:15	127.03	150.35	69.65	123.70
05/01/03	20:31:15	132.03	152.93	67.07	126.28
05/01/03	20:36:15	137.03	155.45	64.55	128.80
05/01/03	20:41:15	142.03	157.82	62.18	131.17
05/01/03	20:46:15	147.03	160.11	59.89	133.46
05/01/03	20:51:15	152.03	162.31	57.69	135.66
05/01/03	20:56:15	157.03	164.45	55.55	137.80
05/01/03	21:01:15	162.03	166.47	53.53	139.82
05/01/03	21:06:15	167.03	168.40	51.60	141.75
05/01/03	21:11:15	172.03	170.21	49.79	143.56
05/01/03	21:16:15	177.03	171.95	48.05	145.30
05/01/03	21:21:15	182.03	173.68	46.32	147.03
05/01/03	21:26:15	187.03	175.28	44.72	148.63
05/01/03	21:31:15	192.03	176.87	43.13	150.22
05/01/03	21:36:15	197.03	178.34	41.66	151.69
05/01/03	21:41:15	202.03	179.74	40.26	153.09
05/01/03	21:46:15	207.03	181.13	38.87	154.48
05/01/03	21:51:15	212.03	182.34	37.66	155.69
05/01/03	21:56:15	217.03	183.62	36.38	156.97
05/01/03	22:01:15	222.03	184.81	35.19	158.16
05/01/03	22:06:15	227.03	185.96	34.04	159.31
05/01/03	22:11:15	232.03	187.03	32.97	160.38
05/01/03	22:16:15	237.03	188.08	31.92	161.43
05/01/03	22:21:15	242.03	189.08	30.92	162.43
05/01/03	22:26:15	247.03	190.04	29.96	163.39
05/01/03	22:31:15	252.03	190.95	29.05	164.30
05/01/03	22:36:15	257.03	191.83	28.17	165.18
05/01/03	22:41:15	262.03	192.69	27.31	166.04
05/01/03	22:46:15	267.03	193.51	26.49	166.86
05/01/03	22:51:15	272.03	194.26	25.74	167.61
05/01/03	22:56:15	277.03	195.03	24.97	168.38
05/01/03	23:01:15	282.03	195.73	24.27	169.08

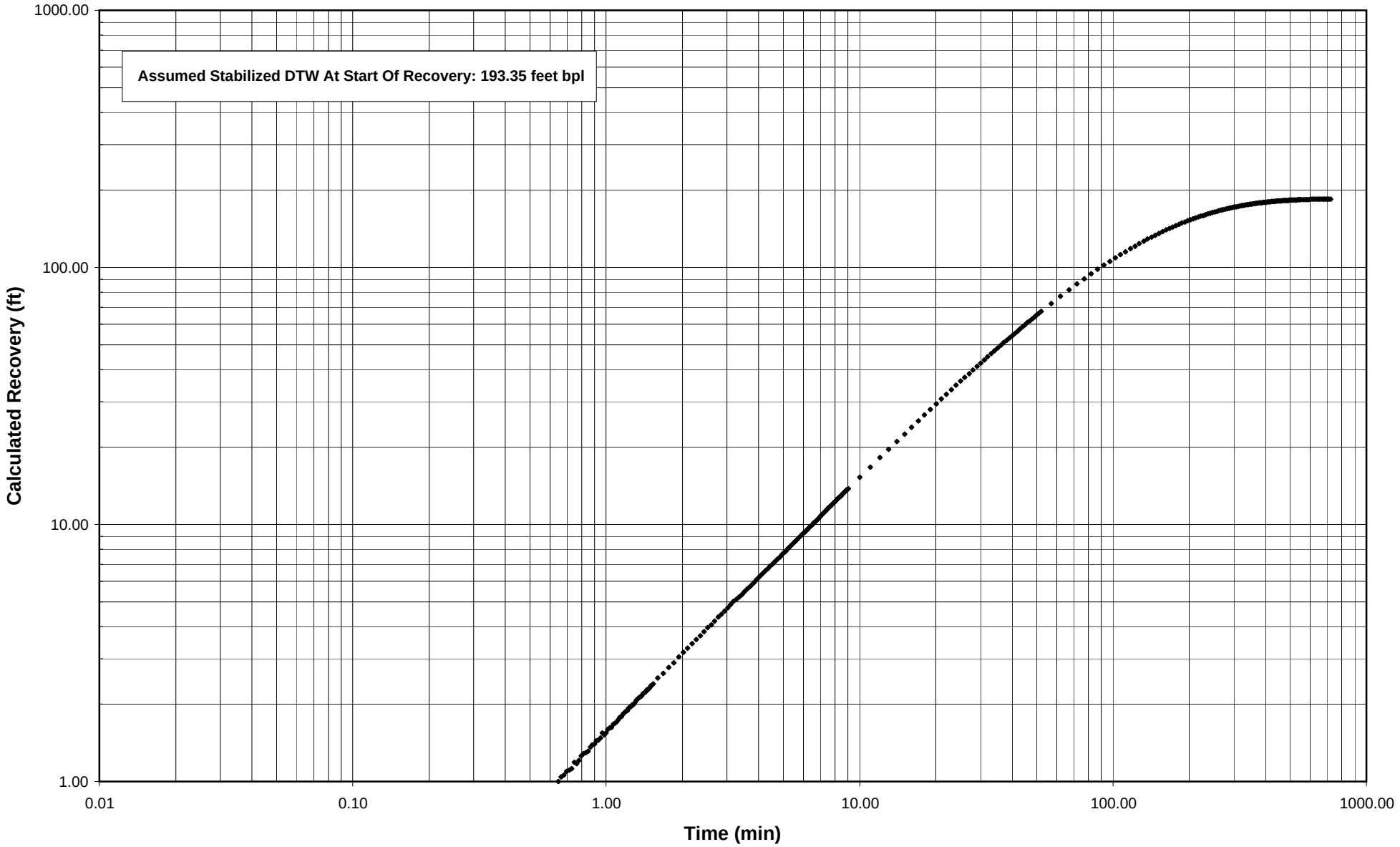
Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/01/03	23:06:15	287.03	196.44	23.56	169.79
05/01/03	23:11:15	292.03	197.06	22.94	170.41
05/01/03	23:16:15	297.03	197.70	22.30	171.05
05/01/03	23:21:15	302.03	198.27	21.73	171.62
05/01/03	23:26:15	307.03	198.86	21.14	172.21
05/01/03	23:31:15	312.03	199.41	20.59	172.76
05/01/03	23:36:15	317.03	199.93	20.07	173.28
05/01/03	23:41:15	322.03	200.41	19.59	173.76
05/01/03	23:46:15	327.03	200.90	19.10	174.25
05/01/03	23:51:15	332.03	201.36	18.64	174.71
05/01/03	23:56:15	337.03	201.79	18.21	175.14
05/02/03	0:01:15	342.03	202.21	17.79	175.56
05/02/03	0:06:15	347.03	202.61	17.39	175.96
05/02/03	0:11:15	352.03	203.00	17.00	176.35
05/02/03	0:16:15	357.03	203.39	16.61	176.74
05/02/03	0:21:15	362.03	203.71	16.29	177.06
05/02/03	0:26:15	367.03	204.04	15.96	177.39
05/02/03	0:31:15	372.03	204.38	15.62	177.73
05/02/03	0:36:15	377.03	204.70	15.30	178.05
05/02/03	0:41:15	382.03	204.98	15.02	178.33
05/02/03	0:46:15	387.03	205.24	14.76	178.59
05/02/03	0:51:15	392.03	205.55	14.45	178.90
05/02/03	0:56:15	397.03	205.79	14.21	179.14
05/02/03	1:01:15	402.03	206.05	13.95	179.40
05/02/03	1:06:15	407.03	206.28	13.72	179.63
05/02/03	1:11:15	412.03	206.50	13.50	179.85
05/02/03	1:16:15	417.03	206.74	13.26	180.09
05/02/03	1:21:15	422.03	206.95	13.05	180.30
05/02/03	1:26:15	427.03	207.12	12.88	180.47
05/02/03	1:31:15	432.03	207.32	12.68	180.67
05/02/03	1:36:15	437.03	207.52	12.48	180.87
05/02/03	1:41:15	442.03	207.70	12.30	181.05
05/02/03	1:46:15	447.03	207.83	12.17	181.18
05/02/03	1:51:15	452.03	208.01	11.99	181.36
05/02/03	1:56:15	457.03	208.16	11.84	181.51
05/02/03	2:01:15	462.03	208.31	11.69	181.66
05/02/03	2:06:15	467.03	208.45	11.55	181.80
05/02/03	2:11:15	472.03	208.59	11.41	181.94
05/02/03	2:16:15	477.03	208.71	11.29	182.06
05/02/03	2:21:15	482.03	208.85	11.15	182.20
05/02/03	2:26:15	487.03	208.96	11.04	182.31
05/02/03	2:31:15	492.03	209.06	10.94	182.41
05/02/03	2:36:15	497.03	209.18	10.82	182.53
05/02/03	2:41:15	502.03	209.27	10.73	182.62
05/02/03	2:46:15	507.03	209.38	10.62	182.73
05/02/03	2:51:15	512.03	209.47	10.53	182.82
05/02/03	2:56:15	517.03	209.58	10.42	182.93
05/02/03	3:01:15	522.03	209.66	10.34	183.01
05/02/03	3:06:15	527.03	209.73	10.27	183.08
05/02/03	3:11:15	532.03	209.81	10.19	183.16

Date	Time	Minutes (end of pump)	Water Level (feet above transducer)	Depth to Water (feet bpl)	Calculated Recovery (ft)
05/02/03	3:16:15	537.03	209.88	10.12	183.23
05/02/03	3:21:15	542.03	209.95	10.05	183.30
05/02/03	3:26:15	547.03	210.02	9.98	183.37
05/02/03	3:31:15	552.03	210.08	9.92	183.43
05/02/03	3:41:15	562.03	210.24	9.76	183.59
05/02/03	3:51:15	572.03	210.33	9.67	183.68
05/02/03	4:01:15	582.03	210.44	9.56	183.79
05/02/03	4:11:15	592.03	210.55	9.45	183.90
05/02/03	4:21:15	602.03	210.62	9.38	183.97
05/02/03	4:31:15	612.03	210.70	9.30	184.05
05/02/03	4:41:15	622.03	210.78	9.22	184.13
05/02/03	4:51:15	632.03	210.85	9.15	184.20
05/02/03	5:01:15	642.03	210.90	9.10	184.25
05/02/03	5:11:15	652.03	210.97	9.03	184.32
05/02/03	5:21:15	662.03	211.01	8.99	184.36
05/02/03	5:31:15	672.03	211.08	8.92	184.43
05/02/03	5:41:15	682.03	211.12	8.88	184.47
05/02/03	5:51:15	692.03	211.16	8.84	184.51
05/02/03	6:01:15	702.03	211.24	8.76	184.59
05/02/03	6:11:15	712.03	211.24	8.76	184.59
05/02/03	6:21:15	722.03	211.29	8.71	184.64

Straddle- Packer Test No. 10 Recovery
City of Port St. Lucie, Westport Injection Well System
Injection Well No.1



Injection Well No.1, Port St. Lucie
Port St. Lucie, Westport Injection Well System
Straddle-Packer Test No. 10 - Recovery



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Appendix D

MW1 and IW1 Casing Mill Certificates, FRP Product Cut Sheets, and Permox Coating Data

ARCADIS

City of Port St. Lucie, Westport Injection Well System

CASING TALLY FORM

Date:12/27/02

Dual-Zone Deep Monitor Well

30-inch Outside Diameter, 0.375- inch Wall Thickness Steel Conductor Casing

Section No.	Casing Length (feet)	Cumulative Length (feet)	Heat Number
1	31.15	31.15	V65440
2	50.01	81.16	T013418
3	50.17	131.33	V65440
4	52.86	184.19	T013418

The bottom of casing was set at 180.0 ft bpl (4.2 feet stick- up above pad level).

Sets of steel centralizers (4 centralizers per set) were welded onto casing at intervals specified in the Technical Specifications, at 5, 30, 80 and 130 feet above bottom of the casing.

Casing installation was completed on 12/27/02.

Submittal Data

FROM

Youngquist Brothers, Inc.

15465 Pine Ridge Road
Fort Myers, Fl. 33908
(239) 489-4444 Fax (239) 489-4545

JAN 07 2003

Project: **Port St. Lucie**
LTC and West Port Injection Well System

I have reviewed this submittal for general conformance with the design concepts and contract documents. Generally no conflict with materials or dimensions will arise from the approval of this shop drawing submittal.

Date: 1/6/03

Number of Copies: 10

Submittal Number: WP-11365-15-A

Specification Section Number: 11365

Item Submitted: DZMW 30"x.375" Casing

New Submittal: X

Resubmittal:

Youngquist Brothers, Inc. Representative: Maryann Rios

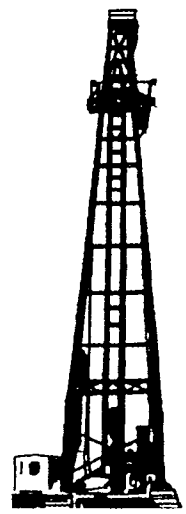
Transmittal Date:

- ☐ Approved
- ☐ Approved with Changes
- ☐ Rejected, Revise & Re-submit
- ☐ Not Reviewed

By:

Firm:

Date:



TELEPHONE: (416) 259-1113
FAX: (416) 259-6551

CANADIAN PHOENIX STEEL PRODUCTS

DIVISION OF 1046701 ONTARIO LIMITED
260 HORNER AVENUE
ETOBICOKE, ONTARIO,
CANADA
M8Z 4Y4

LABORATORY REPORT AND MILL TEST CERTIFICATE

DATE Aug 13/02 CUSTOMER

SPECIFICATION A139B CUSTOMER'S P.O 6871

DIA. & WALL 30" O.D. X .375 WT PHOENIX REF.# 02-3796B

HYDROTEST 700 PSI FOR 10 Sec.

PHYSICAL PROPERTIES

HEAT NO.	PIPE NO.	LONGITUDINAL TEST YIELD	LONGITUDINAL TEST TENSILE	% ELONGATION	TRANSVERSE WELD TENSILE	BREAK LOCATION
.5070A	1	58700	78300	37.5	81700	PM

LADLE ANALYSIS **CHEMICAL COMPOSITION**

HEAT NO	C	MN	S	P	SI	CR	NI	CU	MO	AL
5070A	.17	.95	.006	.011	.25	.03	.01	.04	.01	.045

The material listed on this report has been tested in accordance with the specification shown above.

M McNamara
Authorized Approval

... BROTHERS, INC
... Shop Drawing Submittal
No. LW2-11365-15A
... No. # Date 1/6/03
Signature

Shipp

Youngquist Bros.

VASS PIPE & STEEL CO., INC.

158 Third Street
Mineola, NY 11501
Phone 516 741 8398
Toll Free 800 272 8277
Fax 516 741 8210

BILL OF LADING - PACKING LIST

Ref # 27176

Ref Date 12-2-02

Released by

Freight [X] Prepaid [ ] Collect

Invoice Date

P. O. # 218029-003

To:
City of Pt St. Lucie,
Westport WWTP
851 SW Darwin Blvd.
Port St Lucie, Fl. Jimmy Brantly
Call 24hrs Ahead 239-560-4502

Date Shipped 12-9

F.O.B. Point Port Everglades, FL.

Sales Person S

Terms 30

ISSUED FOR ACCOUNT OF VASS PIPE & STEEL AS SPECIFIED

Shipped via N.C.

Freight

Miles

Quantity	DESCRIPTION OF PIPE TO BE RELEASED				B/L #	Ship Name	Specific Instructions	Unit Price	Total
	Bundles	Pcs/Bundle	Length S/R or O/R	Size and Type					
200.8	—	4	50 L	30" BPE-.375W A139B Spiralwelded					

Special Instructions: **CALL 24hrs AHEAD**

Received in good condition by _____ PRINT NAME _____ SIGNATURE _____ DATE

SIGNED BILL OF LADING MUST ACCOMP[illegible] FREIGHT INVOICE FOR PROMPT PAYMENT

CASING TALLY FORM

Date: 01/02/03

Dual-Zone Deep Monitor Well
24-inch Outside Diameter, 0.375- inch Wall Thickness Steel Surface Casing

Section No.	Casing Length (feet)	Cumulative Length (feet)	Heat Number
1	35.12	35.12	58938L
2	42.14	77.26	59179L
3	42.09	119.35	58938L
4	42.13	161.48	60188Q
5	42.11	203.59	60876Q
6	42.09	245.68	03839L
7	42.08	287.76	60876Q
8	42.08	329.84	93165L
9	42.12	371.96	93165L
10	42.11	414.07	58933L
11	42.18	456.25	58933L
12	42.12	498.37	58938L
13	42.06	540.43	93164L
14	42.14	582.57	58943L
15	42.12	624.69	60876Q
16	42.06	666.75	93165L
17	42.06	708.81	93165L
18	48.70	757.51	92751L

The bottom of Surface 24-inch O. D. casing was set at 750.0 ft bpl (7.5 feet stick- up above pad level).
Sets of steel centralizers (4 centralizers per set) were welded onto casing at intervals specified in the Technical Specifications: 20, 75, 117, 159, 377, 588, and735 feet above bottom of the casing.
Casing installation was completed on 01/02/03.

Submittal Data

FROM

Youngquist Brothers, Inc.

15465 Pine Ridge Road
Fort Myers, Fl. 33908
(239) 489-4444 Fax (239) 489-4545

JAN 0 7 2003

Project: **Port St. Lucie**
LTC and West Port Injection Well System

I have reviewed this submittal for general conformance with the design concepts and contract documents. Generally no conflict with materials or dimensions will arise from the approval of this shop drawing submittal.

Date: 1/6/03

Number of Copies: 10

Submittal Number: WP-11365-16-A

Specification Section Number: 11365

Item Submitted: DZMW 24"x.375" Casing

New Submittal: X

Resubmittal: _____

Youngquist Brothers, Inc. Representative: Maryellen Rios

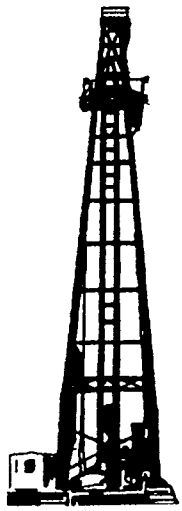
Transmittal Date: _____

- ☐ Approved
- ☐ Approved with Changes
- ☐ Rejected, Revise & Re-submit
- ☐ Not Reviewed

By: _____

Firm: _____

Date: _____



Shipp

Youngquist Bros.

VASS PIPE & STEEL CO., INC.

158 Third Street
Mineola, NY 11501
Phone 516 741 8398
Toll Free 800 272 8277
Fax 516 741 8210

BILL OF LADING- PACKING LIST

Ref # 27237 HT

Ref Date 12-6-02

Released by Ricky

Freight [X] Prepaid [ ] Collect

Invoice Date | P. O. # 218029-0C

To:
City of Pt St. Lucie,
Westport WWTP
851 SW Darwin Blvd.
Port St Lucie, Fl. Jimmy Brantly
Call 24hrs Ahead 239-560-4502

Date Shipped 12-17 | F.O.B. Point Port St Lucie, Fla.

Sales Person S | Terms 30

ISSUED FOR ACCOUNT OF VASS PIPE & STEEL AS SPECIFIED

Shipped via Rail | Freight | Miles

Quantity	DESCRIPTION OF PIPE TO BE RELEASED				BAR MILL	Ship Home	Specific Instructions	Unit Price	Total
	Bundles	Pcs/Bundle	Length S/R or D/R	Size and Type					
759.6	—	18	42.2'	24" BPE Std (.375w) A53B ERW	BAKRIE	ANGARA (V-D7)			
*	—	(2)	Truck loads						
				(12) pcs to go on	} Load #1				
				(6) pcs to go on	} Load #2				

Special Instructions: **CALL 24hrs AHEAD**

Received in good condition by _____ PRINT NAME _____ SIGNATURE _____ DATE

SIGNED BILL OF LADING MUST ACCOMPANY FREIGHT INVOICE FOR PROMPT PAYMENT

HOUSTON TUBULARS INC

HTI

10497 TOWN & COUNTRY WAY
SUITE 350
HOUSTON, TEXAS 77024
TEL: 713-465-6334
FAX: 713-465-0587

DATE: 12 9 02

SHIPPER NO.: B 13719

RELEASE NO.: 27237-1

FROM: Vass

ADDRESS:

TO: Vass

ADDRESS:

SHIPPED FROM: Angora NY 5-16

SIZE: 24 X.375 WEIGHT: 94.62 GRADE: A53B COUPLING:

RANGE: 3 THREAD: PETB MAKE: TYPE:

	TIER NO.	TIER NO.	TIER NO.	TIER NO.	TIER NO.
1	42 2	59179 L			
2	X	165L			
3	12				
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
TL					

TALLIED BY: Gilberto

TOTAL JOINTS: 12

TOTAL FOOTAGE: 506.4

REMARKS:

TRUCK NO.: 47 911

DRIVER: Dave Boyer

HOUSTON TUBULARS IRC

10497 TOWN & COUNTRY WAY
SUITE 350
HOUSTON, TEXAS 77024
TEL: 713-465-6334
FAX: 713-465-0587

DATE: DEC 17 2002

SHIPPER NO.: B1410

RELEASE NO.: 27237#2

FROM: Usa

ADDRESS:

TO: Usa

ADDRESS:

SHIPPED FROM: ANGOLA H-19

SIZE: 24X375 WEIGHT: 94.62 GRADE: A53B COUPLING:

RANGE: 3 THREAD: PEB MAKE: TYPE:

	TIER NO.	TIER NO.	TIER NO.	TIER NO.	TIER NO.
1	42	608760			
2		601880			
3		589382			
4		038394			
5		608768			
6	42	608766			
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
TL					

TALLIED BY

TOTAL JOINTS 6

TOTAL FOOTAGE 253.2

REMARKS:

TRUCK NO.: 7674 DRIVER: Ronnie Tolson

Form No. 18A
Revision 5

Serie No. : 0984144

MILL'S INSPECTION CERTIFICATE

Bakrie Pipe Industries

Jl. Raya Pejuang
Medan Satria 17131
Bekasi, Indonesia

Article Specification : NEW PRIME ERW STEEL PIPE PER API 5LX-42(PSL 1)/API 5LB/ ASTM A53B/ASME SA53B QUADRUPLE STENCILED, BLACK PLAIN BEVELED END, BLACK VARNISH COATED

Customer :

Contract No. : P.O.No.#: 11183-NJ-JTN-1 GULF COAST, HOUSTON, TEXAS

SPMB No. : D.2.1599/ ✓
MC No. : 3661/QAE/VI/02
Date : June 8, 2002

Shipper : ANGARA V.007

Item No.	Mill Work No.	Test No.	Ordered Sizes: Inside/Outside Diameter	Ordered Sizes: Thickness	Ordered Sizes: Length	Delivered Quantity: No. of Pieces & Total Length	Delivered Quantity: Net Weight	Description of Inspection & Test: Surface & Dimension	Hydrostatic Kg/cm/PSI/BAR	Flattening	Ultrasonic	Weld Ductility	Impact	Ratio Yield to Tensile Strenght	Heat Treatment
1 to 211			24" or 609.6mm	0.375" or 9.52mm	42 Feet per Piece	211 Pcs 8,862.000 Feet	380,724 Kgs	Sound	Sound	Sound	Sound	Sound	-	Sound	Sound

Test No.	Heat No.	Yield Strength PSI/MPa	Tensile Strength PSI/MPa	Gauge Length In	Elongation %	Hardness (HRB/HV 10)	Chemical Analysis (%) C	Si	Mn	P	S	Mo	Cr	V	Ni	Remarks
		See Attachment to Mill's Inspection Certificate														
		Attachment Products Analysis														
Standard	MAX															
	MIN															

We hereby certify that material described herein has been duly inspected in accordance with the above specification.

PT. Bakrie Pipe Industries

P.T. BAKRIE PIPE INDUSTRIES JAKARTA

Ir. Endang Kusnadi
QA / QC Manager

CUSTOMER (ORIGINAL)

PT: BAKRIE PIPE INDUSTRIES
JL. Raya Pejuang
Medan Satria 17131-Bekasi, Indonesia

SPMB : B.2.1599
Mill No. : 3661/QAEA/V/02
Date : June ,08, 2002
Page : 1 of 3

ATTACHMENT TO MILL'S INSPECTION CERTIFICATE (Product Analysis)

No	Test Number	Heat Number	Yield Strength (Psi)	Tensile Strength (Psi)			Gauge Length	Elong	Hydro	Chemical Analysis (%)													
				Long	Trans	Weld	(inc)	(%)	(Psi)	C	Si	Mn	P	S	Cu	Cr	Ni	Mo	V	Ti	Nb	I
1	421918 000001 000007	59179L	48542	-	69890	72052	2	36.22	1180	0.140	0.207	0.886	0.007	0.003	0.032	0.032	0.034	0.008	0.004	0.001	0.001	0.102
2	421918 000004 000079	60875Q	49195	-	70218	75053	2	36.02	1180	0.140 0.095	0.209 0.205	0.906 0.866	0.008 0.010	0.003 0.004	0.033 0.056	0.033 0.103	0.034 0.033	0.008 0.008	0.004 0.006	0.001 0.004	0.001 0.004	0.104 0.204
3	421918 000007 000121	92751L	43493	-	65638	74029	2	38.58	1180	0.130 0.110	0.198 0.223	0.869 0.913	0.011 0.007	0.004 0.004	0.055 0.038	0.090 0.020	0.039 0.037	0.009 0.008	0.009 0.005	0.004 0.002	0.004 0.002	0.193 0.100
4	421918 000011 000190	58935L	47404	-	66186	76177	2	36.81	1180	0.120 0.130	0.228 0.258	0.920 1.018	0.007 0.013	0.004 0.002	0.039 0.030	0.025 0.026	0.038 0.037	0.009 0.008	0.005 0.006	0.002 0.002	0.002 0.002	0.107 0.099
5	421918 000013 000244	58938L	47603	-	66249	74556	2	40.16	1180	0.140 0.150	0.259 0.209	1.022 0.904	0.013 0.007	0.002 0.002	0.030 0.041	0.028 0.089	0.036 0.041	0.008 0.019	0.006 0.005	0.003 0.002	0.003 0.002	0.100 0.176
6	421918 000016 000288	58933L	46002	-	68824	78637	2	38.09	1180	0.140 0.120	0.213 0.225	0.903 0.955	0.007 0.009	0.003 0.004	0.042 0.023	0.097 0.077	0.041 0.039	0.020 0.012	0.005 0.004	0.003 0.004	0.003 0.004	0.185 0.143
7	421918 000021 000381	91235Q	45029	-	67544	72664	2	37.99	1180	0.160 0.160	0.219 0.239	0.960 0.895	0.009 0.009	0.004 0.004	0.023 0.022	0.081 0.029	0.037 0.034	0.012 0.008	0.005 0.005	0.004 0.004	0.004 0.007	0.126 0.090
8	421918 000022 000396	92903L	43152	-	67302	76874	2	37.99	1180	0.160 0.160	0.238 0.228	0.898 0.909	0.009 0.008	0.004 0.005	0.022 0.030	0.033 0.019	0.034 0.033	0.008 0.009	0.005 0.005	0.004 0.003	0.006 0.003	0.094 0.087
9	421918 000023 000417	58943L	44986	-	67871	72294	2	38.19	1160	0.140 0.150	0.229 0.240	0.903 0.845	0.008 0.012	0.005 0.009	0.030 0.064	0.020 0.059	0.033 0.040	0.009 0.009	0.005 0.006	0.007 0.005	0.014 0.007	0.083 0.179
10	421918 000026 000468	03425L	42441	-	54657	77898	2	37.99	1180	0.150 0.110 0.120	0.227 0.240 0.240	0.865 0.925 0.920	0.011 0.006 0.006	0.007 0.004 0.004	0.063 0.034 0.035	0.036 0.036 0.035	0.038 0.035 0.035	0.008 0.009 0.009	0.005 0.005 0.004	0.007 0.005 0.004	0.007 0.007 0.007	0.142 0.110 0.109
Standard API 5LB 2000 year edition	MAX									0.260	-	1.200	0.030	0.030	-	-	-	-	-	-	-	-
	MIN	35000	60000				28.00															
Standard API 5LX-42 2000 year edition	MAX									0.260	-	1.300	0.030	0.030	-	-	-	-	-	-	-	-
	MIN	42000	60000				28.00															
Standard ASTM A53B 2000 year edition	MAX									0.300	-	1.200	0.050	0.045	0.400	0.400	0.400	0.150	0.080	-	-	1.000
	MIN	35000	60000				28.00															
Standard ASME SA53B 2000 year edition	MAX									0.300	-	1.200	0.050	0.045	0.400	0.400	0.400	0.150	0.080	-	-	1.000
	MIN	35000	60000				28.00															

ote 1-> Cu+Cr+Ni+V = 1.000 %

he materials has been manufactured, sampled tested, and inspected in accordance with is specification (including year of issue), and has been found to meet the requirements.

P.T. BAKRIE PIPE INDUSTRIES JAKARTA

PT. BAKRIE PIPE INDUSTRIES
JL. Raya Pejuang
Medan Satria 17131-Bekasi, Indonesia

SPMB : B.2.1599
Mill No. : 3661/QAEM/02
Date : June ,08, 2002
Page : 3 of 3

ATTACHMENT TO MILL'S INSPECTION CERTIFICATE (Product Analysis)

No	Test Number	Heat Number	Yield Strength (Psi)	Tensile Strength (Psi)			Gauge Length	Elong	Hydro	Chemical Analysis (%)													
				Long	Trans	Weld	(Inc)	(%)	(Psi)	C	Si	Mn	P	S	Cu	Cr	Ni	Mo	V	Ti	Nb	1
21	421918 000055 001037	93165L	45427	-	68340	75437	2	40.16	1180	0.160	0.216	0.902	0.009	0.004	0.036	0.024	0.046	0.009	0.005	0.002	0.002	0.1
22	421918 000057 001079	93167L	42620	-	64145	73560	2	41.54	1180	0.160 0.120 0.120	0.218 0.204 0.207	0.907 0.885 0.880	0.009 0.008 0.009	0.004 0.003 0.003	0.036 0.042 0.042	0.023 0.025 0.031	0.048 0.037 0.037	0.010 0.009 0.009	0.005 0.005 0.005	0.002 0.002 0.003	0.003 0.002 0.003	0.11 0.11 0.115
Standard API 5LB 2000 year edition		MAX																					
		MIN	35000	60000				28.00		0.260	-	1.200	0.030	0.030	-	-	-	-	-	-	-	-
Standard API 5LX-42 2000 year edition		MAX																					
		MIN	42000	60000				28.00		0.260	-	1.300	0.030	0.030	-	-	-	-	-	-	-	-
Standard ASTM A53B 2000 year edition		MAX																					
		MIN	35000	60000				28.00		0.300	-	1.200	0.050	0.045	0.400	0.400	0.400	0.150	0.080	-	-	1.000
Standard ASME SA53B 2000 year edition		MAX																					
		MIN	35000	60000				28.00		0.300	-	1.200	0.050	0.045	0.400	0.400	0.400	0.150	0.080	-	-	1.000

Note 1-> Cu+Cr+Ni+V = 1.000 %

The materials has been manufactured, sampled testad, and inspected in accordance with this specification (including year of issue), and has been found to meet the requirements.

PT. Bakrie Pipe Industries

P.T. BAKRIE PIPE INDUSTRIES JAKARTA

Fitrijana Kusnadi
QA/QC Manager

PT. BAKRIE PIPE INDUSTRIES
JL. Raya Pejuang
Medan Satria 17131-Bekasi, Indonesia

SPMB : B.2.1599
Mill No. : 3661/QAEA/002
Date : June ,08, 2002
Page : 2 of 3

ATTACHMENT TO MILL'S INSPECTION CERTIFICATE (Product Analysis)

No	Test Number	Heat Number	Yield Strength (Psi)	Tensile Strength (Psi)			Gauge Length	Elong	Hydro	Chemical Analysis (%)													
				Long	Trans	Weld	(Inc)	(%)	(Psi)	C	Si	Mn	P	S	Cu	Cr	Ni	Mo	V	Ti	Nb	
11	421918 000027 000486	60876Q	45627	-	68824	77741	2	39.37	1180	0.130	0.239	0.943	0.011	0.004	0.066	0.024	0.041	0.009	0.005	0.003	0.003	0.
12	421918 000031 000561	60877Q	42498	-	65524	74681	2	39.95	1180	0.150 0.150	0.242 0.227	0.925 0.864	0.011 0.011	0.004 0.007	0.067 0.063	0.037 0.027	0.041 0.037	0.009 0.009	0.005 0.004	0.007 0.003	0.007 0.003	0. 0.1
13	421916 000034 000617	60871Q	46466	-	65126	74484	2	39.57	1180	0.150 0.110	0.225 0.247	0.879 0.906	0.011 0.008	0.007 0.004	0.063 0.027	0.023 0.028	0.038 0.034	0.009 0.008	0.004 0.005	0.003 0.006	0.003 0.006	0.1 0.0
14	421918 000038 000609	60866Q	45513	-	69066	75679	2	38.48	1180	0.130 0.150	0.246 0.242	0.870 0.881	0.008 0.009	0.005 0.005	0.026 0.034	0.032 0.028	0.034 0.034	0.008 0.009	0.005 0.005	0.010 0.003	0.010 0.005	0.0 0.1
15	421918 000039 000714	92752L	42782	-	64770	75836	2	41.73	1180	0.160 0.120	0.242 0.244	0.878 0.930	0.009 0.007	0.004 0.002	0.035 0.065	0.035 0.019	0.034 0.038	0.009 0.009	0.005 0.005	0.004 0.002	0.060 0.003	0.1 0.1
16	421918 000043 000764	60188Q	45427	-	69919	77343	2	40.16	1180	0.120 0.120	0.244 0.201	0.924 0.884	0.007 0.007	0.002 0.003	0.065 0.043	0.024 0.021	0.039 0.037	0.009 0.008	0.005 0.005	0.002 0.002	0.003 0.002	0.1 0.1
17	421918 000044 000796	03839L	42498	-	66321	74797	2	41.93	1180	0.130 0.130	0.203 0.187	0.881 0.975	0.008 0.015	0.003 0.003	0.043 0.029	0.023 0.026	0.037 0.034	0.009 0.009	0.005 0.005	0.002 0.002	0.002 0.002	0.1 0.1
18	421918 000045 000813	59176L	45171	-	68554	70915	2	34.25	1180	0.140 0.150	0.187 0.227	0.964 0.956	0.014 0.008	0.003 0.009	0.030 0.021	0.029 0.042	0.035 0.033	0.009 0.009	0.005 0.005	0.004 0.005	0.004 0.005	0.0 0.1
19	421918 000046 000879	93159L	43991	-	64600	73668	2	42.13	1180	0.140 0.140	0.227 0.202	0.860 0.885	0.005 0.008	0.009 0.003	0.020 0.042	0.034 0.022	0.033 0.037	0.008 0.009	0.005 0.005	0.004 0.003	0.004 0.002	0.0 0.1
20	421918 000054 001018	93164L	44631	-	63675	75537	2	37.99	1180	0.140 0.150 0.150	0.210 0.217 0.218	0.849 0.904 0.904	0.008 0.009 0.009	0.004 0.004 0.004	0.041 0.036 0.035	0.039 0.028 0.027	0.036 0.047 0.047	0.009 0.010 0.010	0.004 0.005 0.004	0.004 0.002 0.002	0.007 0.008 0.002	0.1 0.1 0.1
Standard API 5L8 2000 year edition		MAX																					
		MIN	35000	60000				28.00		0.260	-	1.200	0.030	0.030	-	-	-	-	-	-	-	-
Standard API 5LX-42 2000 year edition		MAX																					
		MIN	42000	60000				28.00		0.260	-	1.300	0.030	0.030	-	-	-	-	-	-	-	-
Standard ASTM A53B 2000 year edition		MAX																					
		MIN	35000	60000				28.00		0.300	-	1.200	0.050	0.045	0.400	0.400	0.400	0.150	0.080	-	-	1.0
Standard ASME SA53B 2000 year edition		MAX																					
		MIN	35000	60000				28.00		0.300	-	1.200	0.050	0.045	0.400	0.400	0.400	0.150	0.080	-	-	1.0

Note 1-> Cu+Cr+Ni+V = 1.000 %

The materials has been manufactured, sampled tested, and inspected in accordance with this specification (including year of issue), and has been found to meet the requirements.

P.T. BAKRIE PIPE INDUSTRIES JAKARTA

ARCADIS

City of Port St. Lucie, Westport Injection Well System
Port St. Lucie, Florida

CASING TALLY FORM

Date: 01/31/03

Monitor Well No.1

16-inch outside diameter, 0.500 inch wall thickness, steel Intermediate Casing

Section No.	Casing Length (feet)	Cumulative Length (feet)	Heat Number
1	48.69	48.69	33422
2	43.10	91.79	19047
3	42.11	133.90	F112986
4	42.14	176.04	K105617
5	42.13	218.17	K105647
6	42.12	260.29	Y105648
7	42.11	302.40	F112986
8	42.11	344.51	K105649
9	42.10	386.61	Y105648
10	42.13	428.74	K105647
11	42.14	470.88	K105649
12	42.15	513.03	K105649
13	42.16	555.19	K105647
14	42.12	597.31	K105647
15	42.08	639.39	Y105648
16	42.15	681.54	F112519
17	42.11	723.65	K105649
18	42.12	765.77	K105647
19	42.10	807.87	F112957
20	42.14	850.01	K105647
21	42.11	892.12	F112957
22	42.13	934.25	K105647
23	42.14	976.39	K105647
24	42.09	1018.48	F112519
25	42.14	1060.62	K105647
26	42.14	1102.76	F112519
27	42.11	1144.87	Y105648
28	42.13	1187.00	F112957
29	42.05	1229.05	K105649
30	42.16	1271.21	K105647
31	42.16	1313.37	F112986
32	42.15	1355.52	K105647
33	42.18	1397.70	F112197
34	42.18	1439.88	F112986
35	42.16	1482.04	F112517
36	42.14	1524.18	F112517
37	42.08	1566.26	F112517
38	42.10	1608.36	F112986
39	42.16	1650.52	K105647
40	42.15	1692.67	Y105648
41	42.13	1734.80	K105647

The bottom of Intermediate 16-inch O. D. casing was set at 1730 ft bpl (4.8 feet stick- up above pad level).
Sets of steel centralizers (4 centralizers per set) were welded onto casing at intervals specified in the Technical Specifications:
20, 48, 90, 133, 344, 544, 765, 975, 1186, and 1608 feet above bottom of the casing..
Casing installation was completed on 01/31/03
Section No. 1 consists of two (37.69 ft and 11.00 ft long) sections welded prior to casing setting.

Submittal Data

FROM

Youngquist Brothers, Inc.

15465 Pine Ridge Road
Fort Myers, Fl. 33908
(239) 489-4444 Fax (239) 489-4545

JAN 0 7 2003

Project: **Port St. Lucie**
LTC and West Port Injection Well System

I have reviewed this submittal for general conformance with the design concepts and contract documents. Generally no conflict with materials or dimensions will arise from the approval of this shop drawing submittal.

Date: 1/6/03

Number of Copies: 10

Submittal Number: WP-11365-17-A

Specification Section Number: 11365

Item Submitted: DZMW 16"x.375" Casing

New Submittal: X

Resubmittal:

Youngquist Brothers, Inc. Representative: Maryann Rios

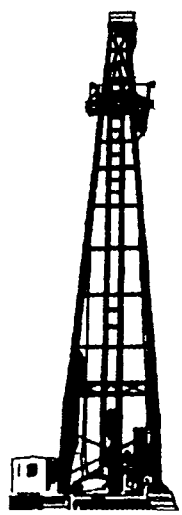
Transmittal Date:

- ☐ Approved
- ☐ Approved with Changes
- ☐ Rejected, Revise & Re-submit
- ☐ Not Reviewed

By:

Firm:

Date:



er:

Youngquist Bros.

VASS PIPE & STEEL CO., INC.

158 Third Street
Mineola, NY 11501
Phone 516 741 8398
Toll Free 800 272 8277
Fax 516 741 8210

BILL OF LADING- PACKING LIST

Ref # 27315 HT

Ref Date 12-17-02

Released by Ricky

Freight ☒ Prepaid ☐ Collect

Invoice Date

P.O. # 218025 003

To:
City of Pt St. Lucie,
Westport WWTP
851 SW Darwin Blvd.
Port St Lucie, Fl.
See Map

Date Shipped 12-17

F.O.B. Point Port St Lucie, FL.

Sales Person S

Terms 30

ISSUED FOR ACCOUNT OF VASS PIPE & STEEL AS SPECIFIED

Shipped via Ricky

Freight

Miles

Quantity	DESCRIPTION OF PIPE TO BE RELEASED				BA # MILL	Ship Name	Specific Instructions	Unit Price	Total
	Bundles	Pcs/Bundle	Length S/R or D/R	Size and Type					
295.4'	–	7	42.2'	16" BPE XH (.500") A53B ERW	H. LONGMORE	VIBORG (V-13)			

WTI Purchase

Special Instructions:

Received in good condition by _____ PRINT NAME _____ SIGNATURE _____ DATE

SIGNED BILL OF LADING MUST ACCOMPANY FREIGHT INVOICE FOR PROMPT PAYMENT

HOUSTON TUBULARS INC

HTI

10497 TOWN & COUNTRY WAY
SUITE 350
HOUSTON, TEXAS 77024
TEL: 713-465-8334
FAX: 713-465-0587

DATE: DEC 17 2002

SHIPPER NO.: B14111

RELEASE NO.: 2735

FROM: Vam

ADDRESS:

TO: Vam

ADDRESS:

SHIPPED FROM:

Viborg VB

F-25

SIZE: 16X50 WEIGHT: 82.77 GRADE: A53B COUPLING:

RANGE: 3 THREAD: PGR MAKE: TYPE:

	TIER NO.	TIER NO.	TIER NO.	TIER NO.	TIER NO.
1	42	F112577			
2					
3					
4					
5					
6					
7	42				
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
TL					

TALLIED BY

TOTAL JOINTS 7

TOTAL FOOTAGE 295.4

REMARKS:

TRUCK NO.: 2674 DRIVER: Ronnie Tolbert

HTI 001

MILL PECTION CERTIFICATE

Purchaser :

Commodity : ERW PIPE MANUFACTURED IN ACCORDANCE WITH

Specification : API 5L 42nd Ed 2000,Grd BX42PSL1, ASTM A53B,ASME SA53,

Certificate No : HL MPC112849
Date : 09/05/02
Purchase Order No : PP-17906
Certification : EN10204 3.1B
HL Job No : 305075 Item : 130

HALL LONGMORE
a division of D&H Piping Systems (Pty) Limited
Co Reg No 01/0794207
PO Box X024 WADEVILLE 1422
TEL (011) 824-1940
FAX (011) 824-2878

HALL LONGMORE

Dimensions	Quantity			Visual & Dimension	Hydro Test	0° Flat Test	90° Flat Test	Ductility	Bend Test
	Number of pieces	Total Length Feet	Mass Ton		2550 PSI				Ø through
16 inch O / D x 0.5 inch Wall x 42 Feet Long	84	3528.000	132.437	ACCEPT.	ACCEPT.	ACCEPT	ACCEPT.	GOOD	N/A

Heat No & Coil No		Chemical Analysis												N.D.E.	Tensile Test HL			HARDNESS	Remarks
		C X100	Si X100	Mn X100	P X1000	S X1000	Cu X1000	Ni X1000	Cr X1000	Mo X1000	V X1000	Al X1000	N	UT	YS PSI [k]	UTS PSI [k]	Elong'n GL 2 inch	N/A	
Spec	Min													ACCEPT.	42	60	% 27		
	Max	28		130	30	30													
Y105647		16.2	23.4	107.7	18	7						44							PLIST NO:1138
4803GR		15	19	108	12	1	20	10	50	0	0	37.1		H	TW		79.771		
F112517		15.8	21.4	113.5	14	10						43		P	TS	40.366	71.39	37.8	
4280QK		13	22	106	6	4	10	10	30	0	0	36.9		H	TW		72.954		
F112977		16.5	19.4	102.1	17	9						44		P	TS	43.801	71.939	39.3	
4202LQ		14	20	95	5	2	10	10	30	0	0	41.8		H	TW		74.985		
F112985		16.1	20.9	116.1	10	6	10	10	32	7	6	39		P	TS	46.847	68.603	38.4	
4102PF		14	20	111	12	3	10	10	30	0	0	38.1		H	TW		78.03		
F112957		16.4	18.2	110	20	6						39		P	TS	45.252	69.183	38	
4280LQ		13	18	106	21	6	10	10	30	0	0	42.5		H	TW		73.679		
F112519		16.9	20.3	113.6	18	6						37		P	TS	46.122	69.183	38.7	
4101PQ		15	21	106	8	2	10	20	30	0	0	31.4		H	TW		79.481		
Y105646		16.7	17.3	107	10	8						28		P	TS	51.779	74.404	38.6	
4880LD		15	17	106	9	5	20	10	40	0	0	21.6		H	TW		76.03		
														P	TS	44.382	69.763	38	
																	0		
																0	0		
																	0		
																0	0		
																	0		
																0	0		
																	0		
																0	0		
																	0		
																0	0		

QUALITY MANAGER

H - Heat Analysis. P - Product Analysis. Ts - Transverse Stock TW - Transverse Weld.

We hereby certify that the material here in has been made and tested in accordance with the above mentioned Specification and Purchase Order.

MILL INSPECTION CERTIFICATE

Purchaser :

Commodity : ERW PIPE MANUFACTURED IN ACCORDANCE WITH

Specification : API 5L 42nd Ed 2000,Grd BX42PSL1, ASTM A530,ASME SA53

Certificate No : HL MPCI 12742
Date : 03/02/30
Purchase Order No : PP-18139
Certification : EN10204 3.1B
HL Job No : 305675 Item : 130

HALL LONGMORE
a division of D&H Piping Systems (Pty) Limited
Co Reg No 01/0794207
PO Box X924 WADEVILLE 1422
TEL (011) 824-1940
FAX (011) 824-3870

HALL LONGMORE

Dimensions				Quantity			Visual & Dimension	Hydro Test	0° Flat Test	90° Flat Test	Ductility	Bend Test
				Number of pieces	Total Length Feet	Mass Ton						
✓ 16	inch O/Dia	0.5	inch Wall x	42	Feet Long	75	3192.000	119.824	accept.	accept.	Accept	Accept.	9000	nil

Heat No & Coil No		Chemical Analysis												N.D.E.		Tensile Test (A)			HARDNESS	Remarks
		C X100	Si X100	Mn X100	P X1000	S X1000	Cu X1000	Ni X1000	Cr X1000	Mo X1000	V X1000	Al X1000	N	UT		YS PSI (A)	UTS PSI (A)	Elong'n GL 2 inch	HB	
Spec	Min													accept.		42	60	% 27		
	Max	28		130	30	30														PLIST NO: 1124
✓ K105647		16.2	23.4	107.7	16	7						44		H	TW		79.75			
4803GR		15	19	108	12	1	20	10	90	0	8	37.1		P	TS	43.355	71.90	37.8		
✓ F112917		15.6	21.4	113.5	14	10						43		H	TW		72.935			
4280QR		13	21	106	6	4	10	10	30	0	6	36.9		P	TS	43.79	71.92	39.3		
✓ F112977		16.5	19.4	102.1	17	9						44		H	TW		74.965			
4202LQ		14	20	98	5	2	10	10	30	0	0	41.8		P	TS	46.836	68.586	38.4		
✓ F112986		16.1	20.9	110.1	10	6	10	10	31	7	6	39		H	TW		79.09			
6102PF		14	20	111	12	3	10	10	30	0	6	38.1		P	TS	45.24	69.165	38		
✓ F112957		16.4	18.2	110	20	8						39		H	TW		73.66			
4260LQ		13	18	106	21	6	10	10	30	0	0	42.5		P	TS	46.11	69.385	38.7		
✓ F112619		15.9	20.3	113.8	18	8						37		H	TW		79.46			
6181PD		15	21	108	8	7	10	20	30	0	0	31.4		P	TS	51.765	74.365	38.6		
Y105648		16.7	17.3	107	10	8						28		H	TW		78.01			
4890LD		15	17	106	9	5	20	10	40	0	8	21.6		P	TS	44.37	68.745	39		
✓ K105649		15.9	21	110	10	6						46		H	TW		78.107			
4805KT		14	21	115	9	8	10	10	30	0	9	38.1		P	TS	51.198	69.169	38.4		
																	0			
																0	0			
																	0			
																0	0			
																	0			
																0	0			
																	0			
																0	0			

QUALITY MANAGER

H - Heat Analysis P - Product Analysis. Ts - Transverse Stock TW - Transverse Weld

We hereby certify that the material as it has been made and tested in accordance with the above mentioned Specification and Purchase Order

MILL INSPECTION CERTIFICATE

Purchaser :

Commodity : ERW PIPE MANUFACTURED IN ACCORDANCE WITH

Specification : API 5L Grd B/X42/ASTM A53B,ASME SA53

Certificate No : HL MPC# 12742
Date : 03/02/30
Purchase Order No : PP-10139
Certification : EN10204 3.1B
HL Job No : 306075 Item : 130

HALL LONGMORE
a division of O&H Piping Systems (Pty) Limited
Co Reg No 01/07794207
PO Box X024 WADEVILLE 1422
TEL (011) 824-1840
FAX (011) 824-3979

HALL LONGMORE

Dimensions	Quantity: Number of pieces	Quantity: Total Length Feet	Quantity: Mass Ton	Visual & Dimension	Hydro Test 2250 PSI	0° Flat Test	90° Flat Test	Ductility	Bend Test at through
16 inch O/D x 0.5 inch Wall x 42 Feet Long	76	3192.000	119.624	ACCEPT.	ACCEPT.	ACCEPT	ACCEPT.	2000	NA

Heat No & Coil No		C x100	Si x100	Mn x100	P x1000	S x1000	Cu x1000	Ni x1000	Cr x1000	Mo x1000	V x1000	Al x1000	CE	N.D.E. VT		YS PSI (k)	UTS PSI (k)	Elong'n on 2 inch	Hardness HB	Remarks
Spec	Min													ACCEPT.		42	60	22 / 27		
	Max	26		130	30	30														PRJST NO. 1124
K108347		16.2	23.1	107.7	10	7						44		H	TW		79.75			
4803GR		15	19	104	12	4	20	10	50	0	0	37.1		P	TS	43.355	71.91	37.6		
F112517		16.8	21.4	113.5	14	10						43		H	TW		72.905			
4280OK		13	22	105	9	4	10	10	30	0	0	36.9		P	TS	40.79	71.92	30.3		
F112977		16.3	18.4	100.1	17	9						44		H	TW		74.856			
4203LQ		14	20	95	5	2	10	10	30	0	8	41.6		P	TS	46.856	64.595	30.4		
F112985		16.1	20.9	110.1	10	6	10	10	32	7	6	29		H	TW		76.01			
4102PF		14	20	111	12	3	10	10	30	0	8	38.1		P	TS	45.24	69.185	38		
F112957		16.4	16.3	110	20	8						38		H	TW		73.80			
4280LQ		13	18	108	11	6	10	10	30	0	0	42.5		P	TS	48.11	69.165	30.7		
F112519		16.0	20.3	113.6	18	8						37		H	TW		79.40			
4101PG		15	21	106	9	2	10	20	30	0	0	31.4		P	TS	51.765	74.365	30.6		
Y105648		16.7	17.3	107	10	8						29		H	TW		76.01			
4580LD		15	17	108	8	5	20	10	40	0	0	21.1		P	TS	44.37	69.745	36		
																	0			
																0	0			
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																	0			
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QUALITY MANAGER

H - Heat Analysis, P - Product Analysis, Ts - Transverse Stock, TW - Transverse Weld.

We here by certify that the material have to has been made and tested in accordance with the above mentioned Specification and Purchase Order

MILL INSPECTION CERTIFICATE

Purchaser :

Commodity : ERW PIPE MANUFACTURED IN ACCORDANCE WITH

Specification : API 5L Grd B/X42, ASTM A53B, ASME SA53

Certificate No : HL MPCI.12438
Date : 01/03/15
Purchase Order No :
Certification : EN10204 3.1B
HL Job No : 400111 Item : 10

HALL LONGMORE
a division of O&H Piping Systems (Pty) Limited
Co Reg No 01/07942/07
PO Box X024 WADEVILLE 1422
TEL (011) 824-[illegible]
FAX (011) 824-[illegible]

HALL LONGMORE

Dimensions	Quantity: Number of pieces	Quantity: Total Length Feet	Quantity: Mass Ton	Visual & Dimension	Hydro Test 2250 PSI	0° Flat Test	90° Flat Test	Ductility	Bend Test 3 through 9
✓ 16 inch O.D. x 0.5 inch Wall x 42 Feet Long	10	420 000	15.766	ACCEPT.	ACCEPT.	ACCEPT.	ACCEPT.	ACCEPT.	[illegible]

Chemical Analysis

Heat No & Coil No		C X100	Si X100	Mn X100	P X1000	S X1000	Cu X1000	Ni X1000	Cr X1000	Mo X1000	V X1000	Al X1000	CE
Spec	Min												
	Max	26		130	30	30							
F102696		17	17.6	107.2	8	3						63	
6101LA		14	16	103	10	7	10	10	20	0	0	38.8	
F0134AA		15.6	18.7	115	15	7						58	
6103DW		15	17	106	18	4	10	10	20	5	0	40.7	

Heat No & Coil No		N.D.E. UT		Tensile test: YS PSI (k)	Tensile test: UTS PSI (k)	Tensile test: Elong'n GL 2 inch	Hardness HB	Remarks
Spec	Min	ACCEPT.		42	60	% 27		
	Max							PLIST NO:1091
F102696		H	TW		77.77		158	
6101LA		P	TS	50.46	73.06	37.7		
F0134AA		H	TW		70.75		158	
6103DW		P	TS	60.445	69.165	38.2		

QUALITY MANAGER [signature]

H - Heat Analysis. P - Product Analysis. Ts - Transverse Stock. TW - Transverse Weld.

We herby certify that the material herin has been made and tested in accordance with the above mentioned Specification and Purchase Order

MILL INSPECTION CERTIFICATE

Purchaser :

Commodity : ERW PIPE MANUFACTURED IN ACCORDANCE WITH

Specification : API 5L 42nd Ed. 2000, Grd BX42PSL1, ASTM A53B, ASME SA53,

Certificate No : HL MPCL12840
Date : 09/05/02
Purchase Order No : PP-17936
Certification : EN10204 3.1B
HL Job No : 306075 Item : 139

HALL LONGMORE
a division of D&H Piping Systems (Pty) Limited
Co Reg No 0100794207
PO Box X024 WADEVILLE 1422
TEL (011) 824-1940
FAX (011) 824-2078
HALL LONGMOR

Dimensions	Number of pieces	Total Length Feet	Mass Ton	Visual & Dimension	Hydro Test 2500 PSI	0° Flat Test	90° Flat Test	Ductility	Bend Test ... through
16 inch O/D x 0.5 inch Wall x 42 Feet Long	84	3528 000	132.437	ACCEPT.	ACCEPT.	ACCEPT	ACCEPT.	GOOD	N/A

Heat No & Coil No		C X100	Si X100	Mn X100	P X1000	S X1000	Cu X1000	Ni X1000	Cr X1000	Mo X1000	V X1000	Al X1000	N	N.D.E. UT		Tensile Test HL YS PSI (K)	UTS PSI (K)	Elong'n GL 2 inch	Hardness	Remarks
	Min																		N/A	
	Max	29		130	30	30								ACCEPT.		42	60	% 27		
X105617		16.2	23.4	107.7	18	7						44		H	TW		79.771			P/UST NO:1
4803GR		15	19	108	12	1	20	10	50	0	0	37.1		P	TS	43.366	71.39	37.8		
F112517		15.8	21.4	113.5	14	10						43		H	TW		72.954			
4280OK		13	22	105	6	4	10	10	30	0	0	39.9		P	TS	43.601	71.939	39.3		
F112977		16.5	19.4	102.1	17	9						44		H	TW		74.985			
4202LQ		14	20	95	5	2	10	10	30	0	0	41.8		P	TS	46.947	68.603	38.4		
F112988		16.1	20.9	116.1	10	6	10	10	32	7	6	39		H	TW		78.03			
4102PF		14	20	111	17	3	10	10	30	0	0	38.1		P	TS	45.252	69.163	38		
F112957		16.4	18.2	110	20	6						39		H	TW		73.679			
4280LQ		13	18	106	21	6	10	10	30	0	0	42.5		P	TS	46.122	69.183	38.7		
F112197		15.9	20.3	113.6	18	8						37		H	TW		78.491			
4101PQ		15	21	106	8	2	10	20	30	0	0	31.4		P	TS	51.779	74.404	38.6		
F105648		16.7	17.3	107	10	6						28		H	TW		78.03			
4880LD		15	17	106	9	5	20	10	40	0	0	21.6		P	TS	44.332	69.763	30		
																	0			
																0	0			
																	0			
																0	0			
																	0			
																0	0			
																	0			
																0	0			
																	0			
																0	0			

QUALITY MANAGER

H - Heat Analysis. P - Product Analysis. TS - Transverse Stock. TW - Transverse Weld.

We hereby certify that the material herein has been made and tested in accordance with the above mentioned Specification and Purchase Order.

L... STAR STEEL COMPANY

P... ...OX 1000, HWY. 259 S. LONE STAR, TX 75668

MATERIAL TEST ...PORT

...001 REGISTERED QUALITY SYSTEM

Print Date: 05/04/2000

Serial #: 200005122

LSO: 0109013
Item: 2
Heat: 33422
Lot: 80

Product: 16" 82.77 X56
.500" Wall
PE-BEV RG 3(35'-44' 9") BR

Specification: API 5L X56,X52,X46,X42,GR B,ASTM A53-99 GR B & ASME SA53 GR B. ERW. MANUFACTURED IN THE USA.

Customer Order: TBR4831
Customer Resource:
Customer Specification:

Sold to

Ship to

MTR Copies
Sold To: 1.
Ship To: 0

CHEMICAL ANALYSIS, %

	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Al	V	B	Cb	Ti	Ca	N	O	CEQ	DI	PCM
Heat	.17	1.14	.014	.003	.24	.01	.01	.012	.002	.001	.045	.070	.0000	.035	.004	.0021	.0048				
Check	.16	1.11	.010	.004	.22	.02	.01	.008	.004	.002	.037	.069	.0001	.032	.003	.0026					
Check	.16	1.10	.010	.004	.21	.02	.01	.008	.004	.002	.037	.069	.0001	.031	.003	.0029					

MECHANICAL PROPERTIES

Test	Dir	Loc	Notch	Yield KSI	Tensile KSI	Elong % in 2"	Area Red	Fracture Location	Y/T Ratio
1	T	B	N	56.5	77.5	40.0			.729
2	T	W	N	.0	78.7	.0		IW	.000
3									
4									

Grain size		RR-1
Martensite %		
Collapse, PSI		RR-2
Hydrotest, PSI	2980	
Flattening	P	RR-3

Impact Tests

Test	Dir	Loc	Size	Temp	Energy	%Shear	Lat Exp
1							
2							
3							
4							

Hardness

Scale	O.D.	M.W.	I.D.	Var	Body	Weld	HAZ	Surf

Remarks

Inspections Performed

VISUAL
ULTRASONIC WELDLINE

Tests are performed in accordance with one or more of the following tests methods: E1, E8, E10, E18, E43, E92, E413, E348, E381, E384, E401, E415, E1019, E1071, A333, A370

From the Office of:

A. F. Hanson, Jr.

Director of Quality

This is to certify that the product described herein was manufactured, sampled, tested, and/or inspected in accordance with the specification/order, and fulfills the requirements in such respects

8-29-03; 9:23AM
Aug-29-03 10:50A
JUL. 1. 2002 4:54PM
VASS. PIPE
NO. 2425 P. 7/8
P.06

Submittal Data

FROM

Youngquist Brothers, Inc.

15465 Pine Ridge Road
Fort Myers, Fl. 33908
(239) 489-4444 Fax (239) 489-4545

Project: **City of Port St.Lucie**
LTC aqnd WP Injection Well System

I have reviewed this submittal for general conformance with the design concepts and contract documents. Generally no conflict with materials or dimensions will arise from the approval of this shop drawing submittal.

Date: 03/24/03 Number of Copies: 9

Submittal Number: WP-11365-08-A

Specification Section Number: 11365

Item Submitted: 50" Mill Certifications

New Submittal: X Resubmittal:

Youngquist Brothers, Inc. Representative: Margaret Rios

Transmittal Date:

☐ Approved
☐ Approved with Changes
☐ Rejected, Revise & Re-submit
☐ Not Reviewed

RMA
Reese, Macon & Associates, Inc.

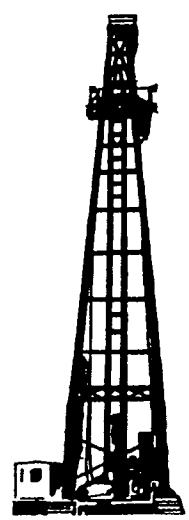
Review of Shop Drawings or Samples is only for conformance with the design concept of the project and does not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Document nor from responsibility for errors or omissions in the Shop Drawings or Samples. Contractor shall determine and verify all field measurements, field construction criteria, quantities, materials, catalog numbers and similar data, check and coordinate each Shop Drawing and Sample with the requirements of the work and of the Contract Documents.

By: Firm:

Date:

☒ approved ☐ revise and resubmit
☐ approved as noted ☐ not approved

By Date 3/31/03



TELEPHONE: (416) 259-1113
FAX: (416) 259-4551

CANADIAN PHOENIX STEEL PRODUCTS

DIVISION OF 1645791 ONTARIO LIMITED
259 HORNER AVENUE
ETOBICOKE, ONTARIO,
CANADA
M8Z 4Y4

LABORATORY REPORT AND MILL TEST CERTIFICATE

DATE May 27/02 CUSTOMER

SPECIFICATION A139B CUSTOMER'S P.O 6871

DIA. & WALL 50" O.D. X .375 WT PHOENIX REF.# 02-3796

HYDROTEST 420 PSI FOR 10 Sec.

PHYSICAL PROPERTIES

HEAT NO.	PIPE NO.	LONGITUDINAL TEST YIELD	TENSILE	% ELONGATION	TRANSVERSE WELD TENSILE	BREAK LOCATION
T013312	1	53300	71800	29.0	75300	PM
T013012	3	49600	74500	29.0	77800	PM
T013638	4	54200	71500	28.0	74800	PM
T023020	6	48300	70300	30.0	73900	PM
T013275	8	48400	71000	27.0	74600	PM

LADLE ANALYSIS CHEMICAL COMPOSITION

HEAT NO	C	MN	S	P	SI	CR	NI	CU	MO	AL
T013312	.17	.72	.022	.024	.18					
T013012	.17	.77	.026	.025	.21					
T013638	.17	.71	.029	.020	.20					
T023020	.19	.63	.030	.015	.24					
T013275	.17	.71	.026	.014	.19					

The material listed on this report has been tested in accordance with the specification shown above.

Authorized Approval

YOUNGQUIST BROTHERS, INC.
Has Reviewed This Shop Drawing/Submittal
YBI Section No. # WP 11365-08A
Transmittal No. Date: 3/24/03
Signature

TELEPHONE: (416) 259-1113
FAX: (416) 259-6951

CANADIAN PHOENIX STEEL PRODUCTS

DIVISION OF 1045781 ONTARIO LIMITED
289 HORNER AVENUE
ETOBICOKE, ONTARIO,
CANADA
M8Z 4Y4

LABORATORY REPORT AND MILL TEST CERTIFICATE

DATE May 15/01

CUSTOMER

SPECIFICATION A139B

CUSTOMER'S P.O 6631

DIA. & WALL 50" O D X .375 WT

PHOENIX REF.# 01-3646

HYDROTEST 420 PSI FOR 1 Min.

PHYSICAL PROPERTIES

HEAT NO.	PIPE NO.	LONGITUDINAL TEST YIELD	TENSILE	% ELONGATION	TRANSVERSE WELD TENSILE	BREAK LOCATION
2843T	4	51300	75600	37.5	78700	PM
2840T	2	50600	74300	37.5	77500	PM

LADLE ANALYSIS **CHEMICAL COMPOSITION**

HEAT NO	C	MN	S	P	SI	CR	NI	CU	MO	AL
2843T	.17	.88	.005	.007	.24	.03	.01	.02	.01	.036
2840T	.18	.80	.003	.007	.21	.01	.01	.01	.01	.033

The material listed on this report has been tested in accordance with the specification shown above.

Authorized Approval

CASING TALLY FORM

Injection Well No.1
42-inch Outside Diameter, Steel Surface Casing

Section No.	Casing Length (feet)	Cumulative Length (feet)	Heat Number
1*	50.04	50.04	1697P
2*	50.06	100.10	1697P
3*	50.08	150.18	1697P
4	50.12	200.30	20204
5	50.11	250.41	20204
6	50.14	300.55	20204
7*	50.05	350.60	20204
8	50.11	400.71	20204
9	50.15	450.86	20204
10	50.03	500.89	1697P
11*	50.09	550.98	127202
12	50.05	601.03	127202
13	50.10	651.13	1004709
14	50.11	701.24	1004709
15*	55.12	756.36	127202

The bottom of Surface 42-inch O. D. casing was set at 749 ft bpl (7.3 feet stick- up above pad level).
Sets of steel centralizers (3 centralizers per set) were welded onto casing at intervals specified in the Technical Specifications.
Casing set and cemented on March 5, 2003
Surface Casing has a 0.375-inch wall thickness

TELEPHONE: (416) 259-1113
FAX: (416) 259-8851

CANADIAN PHOENIX STEEL PRODUCTS

DIVISION OF 1046791 ONTARIO LIMITED
259 HORNER AVENUE
ETOBICOKE, ONTARIO,
CANADA
M8Z 4Y4

LABORATORY REPORT AND MILL TEST CERTIFICATE

DATE Nov-14/02 CUSTOMER

SPECIFICATION A139B CUSTOMER'S P.O

DIA. & WALL 42" O.D x .375 PHOENIX REF.# 02-3825 D

HYDROTEST 500 PSI FOR 10 Sec.

PHYSICAL PROPERTIES

HEAT NO.	PIPE NO.	LONGITUDINAL TEST YIELD	TENSILE	% ELONGATION	TRANSVERSE WELD TENSILE	BREAK LOCATION
C21941	1	72400	89600	25.4	91900	PM
1697P	3	60800	80800	26.4	84100	PM
742886	5	70400	89600	25.1	87800	PM
127202	8	52400	69700	26.6	73100	PM
1004709	10	54700	70200	26.3	73200	PM
20204	12	57400	71000	26.5	74300	PM

LADLE ANALYSIS CHEMICAL COMPOSITION

HEAT NO	C	MN	S	P	SI	CR	NI	CU	MO	AL
21941	21	92	.005	.022	.23					.03
1697P	12	.74	.006	.009	.20					.027
742886	.22	1.05	007	.008	.17					.024
127202	.21	925	.001	.011	.041					.016
1004709	.21	1.05	033	.011	.16					023
20204	.212	814	.002	.007	.02					.044

The material listed on this report has been tested in accordance with the specification shown above.

Authorized Approval

...UNGQUIST BROTHERS, INC.
...ed This Shop Drawing ...
...n No. # WP-11365-09-A
...l No. Date: 5/15/03
Signature

TELEPHONE: (416) 259-1113
FAX: (416) 259-6951

CANADIAN PHOENIX STEEL PRODUCTS

DIVISION OF 1045781 ONTARIO LIMITED
288 HORNER AVENUE
ETOBICOKE, ONTARIO,
CANADA
M8Z 4Y4

LABORATORY REPORT AND MILL TEST CERTIFICATE

DATE Nov 24/03 CUSTOMER

SPECIFICATION API 5L B CUSTOMER'S P.O

DIA. & WALL 42.00 X .375 PHOENIX REF. 02-3825 D

HYDROTEST 500 PSI FOR

PHYSICAL PROPERTIES

HEAT NO.	PIPE NO.	LONGITUDINAL TEST YIELD	TENSILE	% ELONGATION	TRANSVERSE WELD TENSILE	BREAK LOCATION
A76345	23	54300	76200	27.4	79800	PM
2732P	20	51300	69800	27.5	73700	PM

LADLE ANALYSIS **CHEMICAL COMPOSITION**

HEAT NO	C	MN	S	P	SI	CR	NI	CU	MO	AL
A76345	.19	.64	.006	.011	.03					.046
2732P	.16	.84	.009	.010	.22					.030

The material listed on this report has been tested in accordance with the specification shown above.

Authorized Approval

ARCADIS

City of Port St. Lucie Westport Injection Well System
Port St. Lucie, Florida

CASING TALLY FORM

Date: 03/30/03

Injection Well No.1

34- inch outside diameter, 0.375- inch wall thickness steel intermediate casing

Section No.	Casing Length (feet)	Cumulative Length (feet)	Heat Number
1	30.38	30.38	2300710
2	50.10	80.48	2300716
3	50.11	130.59	2300712
4	50.09	180.68	1300715
5	50.09	230.77	1300715
6	50.08	280.85	2300712
7	50.11	330.96	2300712
8	50.10	381.06	2300712
9	50.09	431.15	2300714
10	50.10	481.25	2300712
11	50.12	531.37	2300712
12	50.10	581.47	2300716
13	50.11	631.58	1300715
14	50.10	681.68	2300714
15	50.05	731.73	1300715
16	50.11	781.84	2300712
17	50.11	831.95	2300712
18	50.09	882.04	2300712
19	50.11	932.15	1300715
20	50.06	982.21	2300714
21	50.02	1032.23	2300714
22	50.09	1082.32	2300714
23	50.10	1132.42	2300714
24	50.10	1182.52	2300714
25	50.11	1232.63	2300712
26	50.07	1282.70	2300712
27	50.10	1332.80	2300627
28	50.11	1382.91	2300714
29	50.10	1433.01	2300627
30	50.09	1483.10	2300627
31	50.10	1533.20	2300716
32	50.11	1583.31	1300715
33	50.11	1633.42	2300627
34	50.10	1683.52	2300627
35	50.05	1733.57	2300716
36	49.98	1783.55	2300716
37	52.45	1836.00	2300716

The bottom of Intermediate 34-inch O. D. casing was set at 1830.0 ft bpl (6.0 feet stick- up above pad level).

Sets of steel centralizers (4 centralizers per set) were welded onto casing at intervals specified in the Technical Specifications at 20, 75, 125, 175, 335, 530, 736, 978, 1179, 1379, 1532 and 1733 feet above the bottom of the casing.

Submittal Data

IW1 Intermediate.

FROM

Youngquist Brothers, Inc.

15465 Pine Ridge Road
Fort Myers, Fl. 33908
(239) 489-4444 Fax (239) 489-4545

Project: **City of Port St.Lucie**
LTC aqnd WP Injection Well System

I have reviewed this submittal for general conformance with the design concepts and contract documents. Generally no conflict with materials or dimensions will arise from the approval of this shop drawing submittal.

Date: 03/24/03 Number of Copies: 9

Submittal Number: WP-11365-10-A

Specification Section Number: 11365

Item Submitted: 34" Mill Certifications

New Submittal: X Resubmittal:

Youngquist Brothers, Inc. Representative: Margaret Rios

Transmittal Date:

☐ Approved
☐ Approved with Changes
☐ Rejected, Revise & Re-submit
☐ Not Reviewed

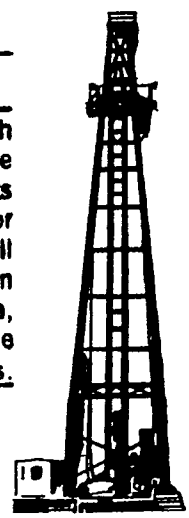
RMA
Reese, Macon & Associates, Inc.

Review of Shop Drawings or Samples is only for conformance with the design concept of the project and does not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Document nor from responsibility for errors or omissions in the Shop Drawings or Samples. Contractor shall determine and verify all field measurements, field construction criteria, quantities, materials, catalog numbers and similar data, check and coordinate each Shop Drawing and Sample with the requirements of the work and of the Contract Documents.

By:
Firm:
Date:

☒ approved ☐ revise and resubmit
☐ approved as noted ☐ not approved

By [signature] Date 3/31/03



TELEPHONE: (416) 259-1113
FAX: (416) 259-6931

CANADIAN PHOENIX STEEL PRODUCTS

DIVISION OF 1046791 ONTARIO LIMITED
269 HORNER AVENUE
ETOBICOKE, ONTARIO,
CANADA
M8Z 4Y4

LABORATORY REPORT AND MILL TEST CERTIFICATE

DATE March 13/03

CUSTOMER

SPECIFICATION A139B

CUSTOMER'S P.O 6871

DIA. & WALL 34" O.D. X .375 WT

PHOENIX REF.# 02-3796C

HYDROTEST 620 PSI FOR 10 Sec.

PHYSICAL PROPERTIES

HEAT NO.	PIPE NO.	LONGITUDINAL TEST YIELD	TENSILE	% ELONGATION	TRANSVERSE WELD TENSILE	BREAK LOCATION
2300712	124	53000	72000	27.4	75400	PM
1300715	135	54100	73100	26.3	76300	PM
2300627	140	53800	72800	26.0	76400	PM
2300714	145	53400	72300	28.0	75900	PM
2300716	152	54100	72800	28.3	76400	PM

LADLE ANALYSIS **CHEMICAL COMPOSITION**

HEAT NO	C	MN	S	P	SI	CR	NI	CU	MO	AL
2300712	.21	.80	.005	.010	.02					.031
1300715	.21	.83	.002	.013	.02					.025
2300627	.21	.84	.002	.008	.03					.034
2300714	.21	.81	.001	.010	.02					.019
2300716	.21	.82	.002	.011	.02					.029

The material listed on this report has been tested in accordance with the specification shown above.

Authorized Approval

YOUNGQUIST BROTHERS, INC.
Has Reviewed This Shop Drawing/Submittal
YBI Section No. # WP-11365-10-A
Transmittal No. # Date 3/21/03
Signature

ARCADIS

City of Port St. Lucie Westport Injection Well System
Port St. Lucie, Florida

CASING TALLY FORM

Date: 07/18/03

Injection Well IW1

24-inch Outside Diameter, 0.500-inch Wall Thickness Steel Injection Casing

Section No.	Casing Length (feet)	Cumulative Length (feet)	Heat Number	Section No.	Casing Length (feet)	Cumulative Length (feet)	Heat Number
Reducer.+ plug	8.88	8.88		37	41.17	1521.22	A46076
1	35.70	44.58	B45662	38	40.65	1561.87	A46076
2	42.79	87.37	A46076	39	39.54	1601.41	A45276
3	42.03	129.40	A46076	40	39.86	1641.27	A45276
4	42.16	171.56	A46076	41	38.33	1679.60	B45661
5	42.00	213.56	A46076	42	41.52	1721.12	A45276
6	42.00	255.56	A46076	43	40.35	1761.47	A46076
7	36.94	292.50	A46076	44	42.00	1803.47	A46076
8	41.16	333.66	A46076	45	41.60	1845.07	A46076
9	40.90	374.56	A43196	46	41.27	1886.34	A46076
10	42.51	417.07	A43195	47	41.94	1928.28	A46076
11	43.13	460.20	B45662	48	40.46	1968.74	A46076
12	39.13	499.33	A43196	49	41.55	2010.29	A46076
13	41.53	540.86	B45662	50	43.30	2053.59	A46076
14	41.10	581.96	A43196	51	42.61	2096.20	A46076
15	42.15	624.11	A43195	52	43.10	2139.30	A46076
16	40.26	664.37	A43196	53	40.98	2180.28	A46076
17	43.10	707.47	A43196	54	42.22	2222.50	A46076
18	40.32	747.79	A43196	55	42.30	2264.80	A46076
19	43.32	791.11	A43196	56	42.14	2306.94	A46076
20	39.68	830.79	B45660	57	42.22	2349.16	A46076
21	42.60	873.39	B45660	58	41.55	2390.71	A41440
22	36.72	910.11	B45660	59	37.00	2427.71	A42358
23	41.46	951.57	B45660	60	41.58	2469.29	A46076
24	41.05	992.62	A43198	61	42.35	2511.64	A46076
25	40.94	1033.56	A43195	62	41.40	2553.04	A24375
26	39.43	1072.99	A43195	63	35.02	2588.06	A43198
27	41.79	1114.78	A43195	64	42.60	2630.66	A46076
28	41.52	1156.30	A43195	65	37.55	2668.21	NA
29	42.95	1199.25	A43195	66	41.30	2709.51	A46076
30	38.43	1237.68	A43195	67	42.95	2752.46	A43196
31	37.85	1275.53	B45662	68	41.44	2793.90	A43196
32	39.27	1314.80	A46076	69	42.90	2836.80	A43196
33	38.56	1353.36	A43196	70	41.73	2878.53	A43195
34	42.41	1395.77	A46076	71	41.82	2920.35	A43195
35	41.82	1437.59	A46076		11.00	2909.35	-11.00' stickup
36	42.46	1480.05	A46076				

Sets of steel centralizers (4 centralizers per set) were welded onto casing at intervals specified in the Technical Specifications at: 20, 38, 80, 123, 322, 570, 779, 980, 1187, 1383, 1389, 1791, 1998, 2210, 2415, 2618, and 2825 feet above the bottom of the casing.
Casing installation was completed on 6/08/2003. (11.07 feet of stickup were left above grade)
Total casing below grade is 2908.3 feet to base of plug extension. Plug seated near 2,906 feet bpl.
Funnel Plug assembly is 7.8 feet long, mandrel in Section #1 is 1.08 feet long. Lengths have been added together to get 8.88 feet.

UNITED STATES STEEL

DATE: 11/25/02
TIME: 09:02:47

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	VEHICLE ID.	
DI05807 01				

SOLD TO ADDRESS	MAIL TO ADDRESS	VENDOR
		USS TUBULAR PRODUCTS 2199 EAST 28TH ST. LORAIN, OH 44055

SPECIFICATION AND GRADE

PIPE CARBON SMLS STD PIPE API 5L-*42ND EDITION DATED 1/00 PSL-2 GRADE B AND GRADE X42 ASTM A53-*99B ASTM A106-*99 GRADE B QUAD STENCIL ASME SA53-*2001 EDITION ASME SA106-*2001 EDITION GRADE B BLK REG MILL COAT PE BEV 30 DEG MEETING ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD MR-01-75 *2000

MATERIAL COND: AS ROLLED ✓ | O.D.: 24.000(609.600) in (mm) | WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	TENSILE TEST TYPE/ ORIENTATION	TEST COND.	GAUGE WIDTH	YIELD PSI	EXT % .50	TENSILE PSI	Y/T	ELONG % (IN 2")	HARDNESS SCALE: HRB	MIN HYDRO PSI	DWELL (SEC)
			IN	MIN: 42000 MAX: 65000		MIN: 70000 MAX: 110000	MAX:	MIN: 30.0	MIN: MAX: 99.0	1580	5
845661 2L3050	STRIP/T/B	AR	1.500	45800	.50	75500	0.60	41.0	B 82.7	1580	5
		**	END OF DATA THIS		SHEET	**					

LEGEND: L - LONGITUDINAL, U - UPSET; T - TRANSVERSE, N - NORMALIZED; QT - QUENCHED & TEMPERED, SR - STRESS RELIEVED; AR - AS ROLLED; B - BODY; W - WELD

PRODUCT IDENTIFICATION	TYPE		C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO				C.E.*
																						MAX .43
845661	HEAT		.19	1.06	.010	.009	.24	.01	.04	.07	.02	.038		.001			.001					.38
845661 2L3050	PROD		.20	1.10	.008	.011	.22	.01	.04	.07	.02	.036		.001			.001					.40
845661 2L3050	PROD		.20	1.11	.009	.012	.22	.01	.04	.07	.02	.039		.001			.001					.41
			**	END OF DATA THIS			SHEET	**														

*C.E. IS BASED ON THE FOLLOWING EQUATION(S): CE=C+(MN/6)+(CR+MO+V)/5+ (NI+CU)/15

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.

UNITED STATES STEEL

DATE: 11/25/02
TIME: 09:02:47

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	
DI05807 01			

MATERIAL COND: AS ROLLED

O.D.: 24.000(609.600) in (mm) | WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	FLAT	BEND	GRAIN SIZE	MIN COLLAPSE	CHARPY V-NOTCH IMPACT TESTING											
					DIR	TEST LOC.	TEMP	SIZE	TEST COND.	FT-LBS 1	FT-LBS 2	FT-LBS 3	FT-LBS AVG	% SHEAR 1	% SHEAR 2	% SHEAR 3	% SHEAR AVG
							DEG F										
B45661 2L3050	OK		** END OF DATA THIS SHEET **		T	B	+ 32	FULL	AR	87	91	89	89	40	60	60	53

LEGEND: L - LONGITUDINAL T - TRANSVERSE B - BODY W - WELD HAZ - HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS / COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	OD X OD/ID ____ L X L/T ____ 10.0% NOTCH
FULL LENGTH MPI		
FULL LENGTH UT		OD ____ OD/ID ____ L ____ L/T ____
END AREA INSPECTION (PLAIN END)		MPI ____ UT ____
SPECIAL END AREA (SEA) INSP		MPI ____ UT ____
FULL LENGTH DRIFT		DRIFT MANDREL SIZE:

ADDITIONAL NOTES/COMMENTS

MELTED AND MANUFACTURED IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.
PIPE ALSO MEET THE REQUIREMENTS OF ASTM A106 GRADE C & ASME SA106 GRADE C

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS

PREPARED BY THE OFFICE OF: S. ANADELL - MANAGER, Q.A.

DATE 11/25/02

DATE: 11/21/02
TIME: 13:11:21

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

MILL ORDER/ITEM NO	SHIPPERS NO.	P.O. NUMBER	VEHICLE I.D.
DI05807 01			

SOLD TO ADDRESS	MAIL TO ADDRESS	VENDOR
		USS TUBULAR PRODUCTS 2199 EAST 28TH ST. LORAIN, OH 44055

SPECIFICATION AND GRADE

PIPE CARBON SMLS STD PIPE API 5L-*42ND EDITION DATED 1/00 PSL-2 GRADE B AND GRADE X42 ASTM A53-*99B ASTM A106-*99 GRADE B QUAD STENCIL ASME SA53-*2001 EDITION ASME SA106-*2001 EDITION GRADE B BLK REG MILL COAT PE BEV 30 DEG MEETING ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD MR-01-75 *2000

MATERIAL COND: AS ROLLED ✓ | O.D.: 24.000(609.600) in (mm) | WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	TENSILE TEST TYPE/ ORIENTATION	TEST COND.	GAUGE WIDTH	YIELD PSI	EXT % .50	TENSILE PSI	Y/T	ELONG % on 2"	HARDNESS SCALE: HRB	MIN HYDRO PSI	DWELL (SEC)
			IN	MIN: 42000 MAX: 65000		MIN: 70000 MAX: 110000	MAX:	MIN: 30.0	MIN: MAX: 99.0	1500	5
B45660 2L3048	STRIP/T/B	AR	1.500	44700	.50	76500	0.58	46.0	B 83.3	1580	5
		**	END OF DATA THIS SHEET **								

LEGEND: L - LONGITUDINAL, U - UPSET, T - TRANSVERSE, N - NORMALIZED, QT - QUENCHED & TEMPERED, SR - STRESS RELIEVED, AR - AS ROLLED, B - BODY, W - WELD

PRODUCT IDENTIFICATION	TYPE		C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO				C.E.*
																						MAX .43
B45660	HEAT		.19	1.05	.007	.005	.24	.01	.02	.06	.01	.030		.001			.001					.38
B45660 2L3048	PROD		.20	1.09	.006	.008	.22	.02	.02	.06	.01	.030		.001			.001					.40
B45660 2L3048	PROD		.20	1.10	.006	.008	.22	.01	.02	.06	.01	.030		.001			.001					.40
			** END OF DATA THIS SHEET **																			

*C.E. IS BASED ON THE FOLLOWING EQUATION(S): CE=C+(MN/6)+(CR+MO+V)/5+ (NI+CU)/15

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.

DATE: 11/21/02
TIME: 13:11:21

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
[TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049]

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	
DI05807 01			

MATERIAL COND: AS ROLLED

O.D.: 24.000(609.600) In (mm)

WALL: 0.500 (12.700) In (mm)

PRODUCT IDENTIFICATION	FLAT	BEND	GRAIN SIZE	MIN COLLAPSE	CHARPY V-NOTCH IMPACT TESTING												
					DIR	TEST LOC.	TEMP	SIZE	TEST COND.	FT-LBS				% SHEAR			
										1	2	3	AVG	1	2	3	AVG
							DEG F										
B45660 2L304B	OK				T	B	+ 32	FULL	AR	94	97	92	94	50	50	50	50
			** END OF DATA THIS SHEET **														

LEGEND: L - LONGITUDINAL T - TRANSVERSE B - BODY W - WELD HAZ - HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS / COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	OD X OD/ID ____ L X L/T ____ 10.0% NOTCH
FULL LENGTH MPI		
FULL LENGTH UT		OD ____ OD/ID ____ L ____ L/T ____
END AREA INSPECTION (PLAIN END)		MPI ____ UT ____
SPECIAL END AREA (SEA) INSP.		MPI ____ UT ____
FULL LENGTH DRIFT		DRIFT MANDREL SIZE:

ADDITIONAL NOTES/COMMENTS

MELTED AND MANUFACTURED IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.
PIPE ALSO MEET THE REQUIREMENTS OF ASTM A106 GRADE C & ASME SA106 GRADE C

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS

PREPARED BY THE OFFICE OF: S. ANADELL - MANAGER, Q.A.

DATE 11/21/02

UNITED STATES STEEL

DATE: 07/25/02
TIME: 11:00:03

TUBULAR PRODUCTS
CERTIFIED TEST REPORT

(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	VEHICLE I.D.	
DI05781 01				

SOLD TO ADDRESS	MAIL TO ADDRESS	VENDOR
		USS TUBULAR PRODUCTS 2199 EAST 28TH ST. LORAIN, OH 44055

SPECIFICATION AND GRADE

PIPE CARBON SMLS STD PIPE API 5L-*42ND EDITION DATED 1/00 PSL-2 GRADE B AND GRADE X42 ASTM A53-*99B ASTM A106-*99 GRADE B QUAD STENCIL ASME SA53-*2001 EDITION ASME SA106-*2001 EDITION GRADE B BLK REG MILL COAT PE BEV 30 DEG MEETING ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD MR-01-75 *2000

MATERIAL COND: AS ROLLED | O.D.: 24.000(609.600) in (mm) | WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	TENSILE TEST TYPE/ ORIENTATION	TEST COND.	GAUGE WIDTH	YIELD PSI	EXT % .50	TENSILE PSI	Y/T	ELONG % (IN 2")	HARDNESS SCALE: HRB	MIN HYDRO PSI	DWELL (SEC)
			IN	MIN: 42000		MIN: 70000	MAX:	MIN: 30.0	MIN:	1580	5
				MAX: 65000		MAX: 110000			MAX: 100.0		
A43198 2G3068	STRIP/T/B	AR	1.500	51000	.50	76000	0.67	40.0	B 83.1	1580	5
		**	END OF DATA THIS	SHEET	**						

LEGEND: L - LONGITUDINAL, T - TRANSVERSE, U - UPSET, N - NORMALIZED, QT - QUENCHED & TEMPERED, SR - STRESS RELIEVED, AR - AS ROLLED, B - BODY, W - WELD

PRODUCT IDENTIFICATION	TYPE		C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO				C.E.*
																						MAX
A43198	HEAT		.18	1.05	.008	.006	.24	.01	.03	.06	.02	.034		.001			.001					.43
A43198 2G3068	PROD		.18	1.05	.006	.010	.23	.01	.03	.06	.02	.032		.001			.001					.38
A43198 2G3068	PROD		.18	1.06	.007	.008	.23	.01	.03	.06	.02	.031		.001			.001					.38
			**	END OF DATA THIS SHEET																		.38

*C.E. IS BASED ON THE FOLLOWING EQUATION(S): CE=C+(MN/6)+(CR+MO+V)/5+ (NI+CU)/15

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT

(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

DATE: 07/25/02
TIME: 11:00:03

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	
DI05781 01			

MATERIAL COND: AS ROLLED

O.D.: 24.000(609.600) In (mm)

WALL: 0.500 (12.700) In (mm)

PRODUCT IDENTIFICATION	FLAT	BEND	GRAIN SIZE	MIN COLLAPSE	CHARPY V-NOTCH IMPACT TESTING												
					DIR	TEST LOC.	TEMP	SIZE	TEST COND.	FT-LBS				% SHEAR			
										1	2	3	AVG	1	2	3	AVG
							DEG F										
A43198 2G3068	OK		** END OF DATA		T	B	+ 32	FULL	AR	82	89	88	86	50	50	50	50
					THIS SHEET **												

LEGEND: L - LONGITUDINAL T - TRANSVERSE B - BODY W - WELD HAZ - HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS / COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	OD X OD/ID ____ L X L/T ____ 10.0% NOTCH
FULL LENGTH MPI		
FULL LENGTH UT		OD ____ OD/ID ____ L ____ L/T ____
END AREA INSPECTION (PLAIN END)		MPI ____ UT ____
SPECIAL END AREA (SEA) INSP.		MPI ____ UT ____
FULL LENGTH DRIFT		DRIFT MANDREL SIZE:

ADDITIONAL NOTES/COMMENTS

MELTED AND MANUFACTURED IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.
PIPE ALSO MEET THE REQUIREMENTS OF ASTM A106 GRADE C & ASME SA106 GRADE C

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS

PREPARED BY THE OFFICE OF: S. ANADELL - MANAGER, Q.A.

DATE 07/25/02

UNITED STATES STEEL

DATE: 07/24/02
TIME: 12:19:44

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	VEHICLE I.D.
DI05781 01			

SOLD TO ADDRESS

MAIL TO ADDRESS

VENDOR
USS TUBULAR PRODUCTS
2199 EAST 28TH ST.
LORAIN, OH 44055

SPECIFICATION AND GRADE

PIPE CARBON SMLS STD PIPE API 5L-X42ND EDITION DATED 1/00 PSL-2 GRADE B AND GRADE X42 ASTM A53-X99B ASTM A106-X99 GRADE B QUAD STENCIL ASME SA53-X2001 EDITION ASME SA106-X2001 EDITION GRADE B BLK REG MILL COAT PE BEV 30 DEG MEETING ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD MR-01-75 X2000

MATERIAL COND: AS ROLLED | OD: 24.000(609.600) in (mm) | WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	TENSILE TEST TYPE/ ORIENTATION	TEST COND.	GAUGE WIDTH IN	YIELD PSI	EXT % .50	TENSILE PSI	Y/T	ELONG % (IN 2")	HARDNESS SCALE: HRB	MIN HYDRO PSI	DWELL (SEC)
				MIN: 42000		MIN: 70000	MAX:	MIN:	MIN:		
				MAX: 65000		MAX: 110000		30.0	MAX: 100.0	1580	5
A43196 2G3066	STRIP/T/B	AR	1.500	44700	.50	76000	0.59	43.0	B 83.7	1580	5
		**	END OF DATA THIS	SHEET	**						

LEGEND: L - LONGITUDINAL, U - UPSET; T - TRANSVERSE, N - NORMALIZED; QT - QUENCHED & TEMPERED, SR - STRESS RELIEVED; AR - AS ROLLED; B - BODY; W - WELD

PRODUCT IDENTIFICATION	TYPE		C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO				CE*
A43196	HEAT		.19	1.06	.009	.003	.24	.02	.02	.04	.01	.027		.001			.001					MAX .43
A43196 2G3066	PROD		.18	1.07	.007	.005	.23	.02	.02	.04	.01	.025		.001			.001					.38
A43196 2G3066	PROD		.19	1.05	.007	.005	.22	.02	.02	.04	.01	.026		.001			.001					.38
			**	END OF DATA	THIS	SHEET	**															.38

*C.E. IS BASED ON THE FOLLOWING EQUATION(S): CE=C+(MN/6)+(CR+MO+V)/5+ (NI+CU)/15

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

DATE: 07/24/02
TIME: 12:19:44

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	
DI05781 01			

MATERIAL COND: AS ROLLED

O.D: 24.000(609.600) in (mm) | WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	FLAT	DENO	GRAIN SIZE	MIN COLLAPSE	CHARPY V-NOTCH IMPACT TESTING											
					DIR	TEST LOC.	TEMP	SIZE	TEST COND	FT-LBS 1	FT-LBS 2	FT-LBS 3	FT-LBS AVG	% SHEAR 1	% SHEAR 2	% SHEAR 3	% SHEAR AVG
							DEG F										
A43196 2G3066	OK		** END OF DATA THIS SHEET **		T	B	+ 32	FULL	AR	99	89	96	94	60	50	60	56

LEGEND: L - LONGITUDINAL T - TRANSVERSE B - BODY W - WELD HAZ - HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS / COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	OD X OD/ID ____ L X L/T ____ 10.0% NOTCH
FULL LENGTH MPI		
FULL LENGTH UT		OD ____ OD/ID ____ L ____ L/T ____
END AREA INSPECTION (PLAIN END)		MPI ____ UT ____
SPECIAL END AREA (SEA) INSP.		MPI ____ UT ____
FULL LENGTH DRIFT		DRIFT MANDREL SIZE:

ADDITIONAL NOTES/COMMENTS

MELTED AND MANUFACTURED IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.
PIPE ALSO MEET THE REQUIREMENTS OF ASTM A106 GRADE C & ASME SA106 GRADE C

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS

PREPARED BY THE OFFICE OF: S. ANADELL - MANAGER, Q.A.

DATE 07/24/02

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/D0550849)

DATE: 11/21/02
TIME: 13:11:34

MILL ORDER/ITEM NO.	SHIPPERS NO	P.O. NUMBER	VEHICLE I.D.	
0I05807 01				
SOLD TO ADDRESS		MAIL TO ADDRESS		VENDOR
				USS TUBULAR PRODUCTS 2199 EAST 28TH ST. LORAIN, OH 44055

SPECIFICATION AND GRADE

PIPE CARBON SMLS STD PIPE API 5L-*42ND EDITION DATED 1/00 PSL-2 GRADE B AND GRADE X42 ASTM A53-*99B ASTM A106-*99 GRADE B QUAD STENCIL ASME SA53-*2001 EDITION ASME SA106-*2001 EDITION GRADE B BLK REG MILL COAT PE BEV 30 DEG MEETING ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD MR-01-75 *2000

MATERIAL COND: AS ROLLED — O.D.: 24.000(609.600) in (mm) — WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	TENSILE TEST TYPE/ ORIENTATION	TEST COND.	GAUGE WIDTH	YIELD PSI	EXT %	TENSILE PSI	Y/T	ELONG %	HARDNESS SCALE: HRB	MIN HYDRO PSI	DWELL (SEC)
			IN	MIN: 42000 MAX: 65000		MIN: 70000 MAX: 110000	MAX:	MIN: (IN 2") 30.0	MIN: MAX: 99.0	1580	5
B45662 2L3047	STRIP/T/B	AR	1.500	47600	.50	77500	0.61	42.0	B 83.0	1580	5
		**	END OF DATA THIS	SHEET	**						

LEGEND: L - LONGITUDINAL, U - UPSET; T - TRANSVERSE, N - NORMALIZED; QT - QUENCHED & TEMPERED, SR - STRESS RELIEVED; AR - AS ROLLED; B - BODY; W - WELD

PRODUCT IDENTIFICATION	TYPE		C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO				C.E.*
B45662	HEAT		.19	1.04	.009	.009	.22	.01	.03	.07	.02	.031		.001			.001					MAX .43
B45662 2L3047	PROD		.17	1.07	.007	.008	.21	.01	.03	.07	.02	.029		.001			.001					.39
B45662 2L3047	PROD		.20	1.00	.006	.006	.21	.02	.03	.09	.03	.029		.001			.001					.37
				** END OF DATA THIS SHEET **													.001					.39

*C.E. IS BASED ON THE FOLLOWING EQUATION(S): CE=C+(MN/6)+(CR+MO+V)/5+ (NI+CU)/15

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT

(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

DATE: 11/21/02
TIME: 13:11:34

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	
DI05807 01			

MATERIAL COND: AS ROLLED

O.D.: 24.000(609.600) in (mm) | WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	FLAT	BEND	GRAIN SIZE	MIN COLLAPSE	CHARPY V-NOTCH IMPACT TESTING											
					DIR	TEST LOC.	TEMP	SIZE	TEST COND.	FT-LBS				% SHEAR			
							DEG F			1	2	3	AVG	1	2	3	AVG
845662 2L3047	OK			** END OF DATA	T	B	+ 32	FULL	AR	73	75	70	72	30	30	30	30
					THIS SHEET **												

LEGEND: L - LONGITUDINAL T - TRANSVERSE B - BODY W - WELD HAZ - HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS / COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	
FULL LENGTH MPI		OD X OD/ID ____ L X L/T ____ 10.0% NOTCH
FULL LENGTH UT		
END AREA INSPECTION (PLAIN END)		OD ____ OD/ID ____ L ____ L/T ____
SPECIAL END AREA (SEA) INSP		MPI ____ UT ____
FULL LENGTH DRIFT		MPI ____ UT ____
		DRIFT MANDREL SIZE:

ADDITIONAL NOTES/COMMENTS

MELTED AND MANUFACTURED IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.
PIPE ALSO MEET THE REQUIREMENTS OF ASTM A106 GRADE C & ASME SA106 GRADE C

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS.

PREPARED BY THE OFFICE OF: S. ANADELL - MANAGER, Q.A.

DATE 11/21/02

UNITED STATES STEEL

DATE: 07/27/02
TIME: 07:06:06

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	VEHICLE ID.	
DI05781 01				
SOLD TO ADDRESS		**MAIL TO ADDRESS**		**VENDOR**
				USS TUBULAR PRODUCTS 2199 EAST 28TH ST. LORAIN, OH 44055

SPECIFICATION AND GRADE

PIPE CARBON SMLS STD PIPE API 5L-*42ND EDITION DATED 1/00 PSL-2 GRADE B AND GRADE X42 ASTM A53-*99B ASTM A106-*99 GRADE B QUAD STENCIL ASME SA53-*2001 EDITION ASME SA106-*2001 EDITION GRADE B BLK REG MILL COAT PE BEV 30 DEG MEETING ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD MR-01-75 *2000

MATERIAL COND: AS ROLLED | O.D.: 24.000(609.600) in (mm) | WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	TEST TYPE/ ORIENTATION	TEST COND.	GAUGE WIDTH	YIELD PSI	EXT % .50	TENSILE PSI	Y/T	ELONG % (IN 2")	HARDNESS SCALE: HRB	MIN HYDRO PSI	DWELL (SEC)
			IN	MIN: 42000 MAX: 65000		MIN: 70000 MAX: 110000	MAX:	MIN:	MIN: MAX:		
A43195 2G3069	STRIP/T/B	AR	1.500	45600	.50	74500	0.61	30.0 44.0	100.0 B 83.5	1580 1580	5 5
		**	END OF DATA THIS	SHEET	**						

LEGEND: L - LONGITUDINAL, U - UPSET; T - TRANSVERSE, N - NORMALIZED; QT - QUENCHED & TEMPERED, SR - STRESS RELIEVED; AR - AS ROLLED; B - BODY; W - WELD

PRODUCT IDENTIFICATION	TYPE		C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO				C.E.*
A43195	HEAT		.19	1.09	.005	.003	.24	.02	.02	.04	.01	.032		.002			.001					MAX .43
A43195 2G3069	PROD		.19	1.04	.004	.003	.22	.02	.02	.04	.01	.031		.001			.001					.39
A43195 2G3069	PROD		.20	1.04	.004	.003	.23	.02	.02	.04	.01	.031		.001			.001					.38
			**	END OF DATA THIS	SHEET	**																.39

*C.E. IS BASED ON THE FOLLOWING EQUATION(S): CE=C+(MN/6)+(CR+MO+V)/5+ (NI+CU)/15

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.

UNITED STATES STEEL

DATE: 07/27/02
TIME: 07:06:08

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	
DI05781 01			

MATERIAL COND: AS ROLLED

O.D.: 24.000(609.600) in (mm) WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	FLAT	BEND	GRAIN SIZE	MIN COLLAPSE	CHARPY V-NOTCH IMPACT TESTING											
					DIR	TEST LOC.	TEMP	SIZE	TEST COND.	FT-LBS 1	FT-LBS 2	FT-LBS 3	FT-LBS AVG	% SHEAR 1	% SHEAR 2	% SHEAR 3	% SHEAR AVG
							DEG F										
A43195 2G3069	OK				T	B	+ 32	FULL	AR	113	92	102	102	80	40	50	57
			** END OF DATA THIS SHEET **														

LEGEND: L - LONGITUDINAL T - TRANSVERSE B - BODY W - WELD HAZ - HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS / COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	OD X OD/ID ____ L X L/T ____ 10.0% NOTCH
FULL LENGTH MPI		
FULL LENGTH UT		OD ____ OD/ID ____ L ____ L/T ____
END AREA INSPECTION (PLAIN END)		MPI ____ UT ____
SPECIAL END AREA (SEA) INSP.		MPI ____ UT ____
FULL LENGTH DRIFT		DRIFT MANDREL SIZE:

ADDITIONAL NOTES/COMMENTS

MELTED AND MANUFACTURED IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.
PIPE ALSO MEET THE REQUIREMENTS OF ASTM A106 GRADE C & ASME SA106 GRADE C

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS

PREPARED BY THE OFFICE OF: S. ANADELL - MANAGER, Q.A.

DATE 07/27/02

UNITED STATES STEEL

DATE: 07/24/02
TIME: 12:19:54

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	VEHICLE ID.	
DI05781 01				

SOLD TO ADDRESS	MAIL TO ADDRESS	VENDOR
		USS TUBULAR PRODUCTS 2199 EAST 28TH ST. LORAIN, OH 44055

SPECIFICATION AND GRADE

PIPE CARBON SMLS STD PIPE API 5L-*42ND EDITION DATED 1/00 PSL-2 GRADE B AND GRADE X42 ASTM A53-*99B
ASTM A106-*99 GRADE B QUAD STENCIL ASME SA53-*2001 EDITION ASME SA106-*2001 EDITION GRADE B BLK REG
MILL COAT PE BEV 30 DEG MEETING ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD MR-01-75 *2000

MATERIAL COND: AS ROLLED | O.D.: 24.000(609.600) in (mm) | WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	TEST TYPE/ ORIENTATION	TEST COND.	GAUGE WIDTH	YIELD PSI	EXT %	TENSILE PSI	Y/T	ELONG % (IN 2")	HARDNESS SCALE: HRB	MIN HYDRO PSI	DWELL (SEC)
	TENSILE		IN	MIN: 42000 MAX: 65000		MIN: 70000 MAX: 110000	MAX:	MIN: 30.0	MIN: MAX: 100.0	1580	5
A42358 2G3067	STRIP/T/B	AR	1.500	45400	.50	72500	0.63	44.0	B 85.2	1580	5
		**	END OF DATA THIS	SHEET	**						

LEGEND: L - LONGITUDINAL, T - TRANSVERSE, U - UPSET, N - NORMALIZED, QT - QUENCHED & TEMPERED, SR - STRESS RELIEVED, AR - AS ROLLED, B - BODY, W - WELD

PRODUCT IDENTIFICATION	TYPE	C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO	CE.*
																		MAX
A42358	HEAT	.18	1.07	.008	.008	.24	.03	.02	.04	.01	.040		.001			.001		.43
A42358 2G3067	PROD	.18	1.05	.007	.009	.23	.03	.02	.04	.01	.034		.001			.001		.38
A42358 2G3067	PROD	.18	1.06	.007	.010	.24	.03	.02	.05	.01	.032		.001			.001		.37
		**	END OF DATA THIS SHEET **															.38

*C.E. IS BASED ON THE FOLLOWING EQUATION(S): CE=C+(MN/6)+(CR+MO+V)/5+ (NI+CU)/15

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

DATE: 07/24/02
TIME: 12:19:54

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	
DI05781 01			

MATERIAL COND: AS ROLLED

O.D.: 24.000(609.600) in (mm) WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	FLAT	BEND	GRAIN SIZE	MIN COLLAPSE	CHARPY V-NOTCH IMPACT TESTING											
					DIR	TEST LOC.	TEMP	SIZE	TEST COND.	FT-LBS 1	FT-LBS 2	FT-LBS 3	FT-LBS AVG	% SHEAR 1	% SHEAR 2	% SHEAR 3	% SHEAR AVG
							DEG F										
A42358 2G3067	OK				T	B	+ 32	FULL	AR	97	96	100	97	60	60	60	60
			** END OF DATA THIS SHEET **														

LEGEND: L - LONGITUDINAL T - TRANSVERSE B - BODY W - WELD HAZ - HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS / COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	OD X OD/ID ____ L X L/T ____ 10.0% NOTCH
FULL LENGTH MPI		
FULL LENGTH UT		OD ____ OD/ID ____ L ____ L/T ____
END AREA INSPECTION (PLAIN END)		MPI ____ UT ____
SPECIAL END AREA (SEA) INSP.		MPI ____ UT ____
FULL LENGTH DRIFT		DRIFT MANDREL SIZE:

ADDITIONAL NOTES/COMMENTS

MELTED AND MANUFACTURED IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.
PIPE ALSO MEET THE REQUIREMENTS OF ASTM A106 GRADE C & ASME SA106 GRADE C

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS

PREPARED BY THE OFFICE OF: S. ANADELL - MANAGER, Q.A.

DATE 07/24/02

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT

(TYPE B - IN ACCORDANCE WITH ISO 10474/EN 10204/DIN 50049)

TIME: 14:10:59

MILL ORDER/ITEM NO	SHIPPERS NO	P.O. NUMBER	VEHICLE ID.
010580701			

SOLD TO ADDRESS	MAIL TO ADDRESS	VENDOR
		USS TUBULAR PRODUCTS 2199 EAST 28TH ST. LORAIN, OH 44055

SPECIFICATION AND GRADE

PIPE CARBON SMLS STD PIPE API 5L-X42ND EDITION DATED 1/00 PSL-2 GRADE B AND GRADE X42 ASTM A53-X99B ASTM A106-X99 GRADE B QUAD STENCIL ASME SA53-X2001 EDITION ASME SA106-X2001 EDITION GRADE B BLK REG MILL COAT PE BEV 30 DEG MEETING ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD MR-01-75 X2000

MATERIAL COND: AS ROLLED ✓ | OD: 24.000(609.600) in (mm) | WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	TENSILE TEST TYPE/ ORIENTATION	TEST COND	GAUGE WIDTH	YIELD PSI	EXT % .50	TENSILE PSI	Y/T	ELONG % IN 2"	HARDNESS SCALE HRB	MIN HYDRO PSI	CHARPY (SEE)
			IN	MIN 42000		MIN 70000	MAX	MIN	MIN		
				MAX 65000		MAX 110000			MAX 99.0	1500	5
A24375 2L3052	STRIP/T/B	AR	1.500	45100	.50	75000	0.60	43.0	@ 82.0	1500	5
			** END OF DATA THIS SHEET **								

LEGEND: L - LONGITUDINAL, T - TRANSVERSE, U - UPSET, N - NORMALIZED, QT - QUENCHED & TEMPERED, SR - STRESS RELIEVED, AR - AS ROLLED, B - BODY, W - WELD

PRODUCT IDENTIFICATION	TYPE		C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO				CE*
																						MAX
A24375	HEAT		18	105	009	007	23	04	02	05	01	035		004			001					.43
A24375 2L3052	PROD		19	107	006	009	21	04	02	06	01	035		001			001					.38
A24375 2L3052	PROD		19	109	007	010	22	04	02	06	01	037		001			001					.38
				** END OF DATA THIS SHEET **																		.39

*C.E. IS BASED ON THE FOLLOWING EQUATION(S): CE=C+(MN/6)+(CR+MO+V)/5+(NI+CU)/15 ----

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT

TIME: 14:10:59

[TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/BS4848]

MILL ORDER/ITEM NO.	SHIPPER'S NO	PO NUMBER	
0I05807 01			

MATERIAL COND: AS ROLLED

O.D. 24.000(609.600) in (mm) | WALL 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	FLAT	BEND	GRAIN SIZE	MIN COLLAPSE	CHARPY V-NOTCH IMPACT TESTING											
					DIR	TEST LOC	TEMP	SIZE	TEST COND	FT-LBS				% SHEAR			
							DEG F			1	2	3	AVG	1	2	3	AVG
AZ4375 2L3852	OK				T	B	+ 32	FULL	AR	83	94	87	88	50	60	50	53
			XX END OF DATA THIS SHEET XX														

LEGEND: L-LONGITUDINAL T-TRANSVERSE B-BODY W-WELD HAZ-HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS / COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	OD X OD/ID ____ L X U/T ____ 10.0% NOTCH
FULL LENGTH MPI		
FULL LENGTH UT		OD ____ OD/ID ____ L ____ U/T ____
END AREA INSPECTION (PLAIN END)		MPI ____ UT ____
SPECIAL END AREA (SEA) INSP.		MPI ____ UT ____
FULL LENGTH DRIFT		DRIFT MANDREL SIZE

ADDITIONAL NOTES/COMMENTS

MELTED AND MANUFACTURED IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.
PIPE ALSO MEET THE REQUIREMENTS OF ASTM A106 GRADE C & ASME SA106 GRADE C

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS

PREPARED BY THE OFFICE OF S. ANADELL - MANAGER, Q.A.

DATE 11/22/02

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT

(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

TIME: 14:10:59

MILL ORDER/ITEM NO.	SHIPPER/BOL NO.	P.O. NUMBER	VEHICLE ID
0I05807 01			

SOLD TO ADDRESS	MAIL TO ADDRESS	VENDOR
		USS TUBULAR PRODUCTS 2199 EAST 28TH ST. LORAIN, OH 44055

SPECIFICATION AND GRADE

PIPE CARBON SMLS STD PIPE API 5L-X42ND EDITION DATED 1/00 PSL-2 GRADE B AND GRADE X42 ASTM A53-X99B ASTM A106-X99 GRADE B.QUAD STENCIL ASME SA53-X2001 EDITION ASME SA106-X2001 EDITION GRADE B BLK REG MILL COAT PE BEV 30 DEG MEETING ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD MR-01-75 X2000

MATERIAL COND: AS ROLLED ✓ OD: 24.000(609.600) in (mm) WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	TENSILE TEST TYPE/ ORIENTATION	TEST COND	GAUGE WIDTH	YIELD PSI	EXT %	TENSILE PSI	Y/T	ELONG %	HARDNESS SCALE HRB	MIN HYDRO PSI	DWELL(SEC)
			IN	MIN 42000		MIN 70000					
				MAX: 65000		MAX 110000	MAX-	MIN	MIN		
A41440 2L30SI	STRIP/T/B	AR	1.500	44400	.50	74000	0.60	30.0	MAX 99.0	1580	5
		XX	END OF DATA THIS	SHEET XX				45.0	@ 83.7	1580	5

LEGEND: L - LONGITUDINAL, U - UPSET, T - TRANSVERSE, N - NORMALIZED, QT - QUENCHED & TEMPERED, SR - STRESS RELIEVED, AR - AS ROLLED, B - BODY, W - WELD

PRODUCT IDENTIFICATION	TYPE		C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO				CE*
A41440	HEAT		.18	1.06	.008	.007	.23	.01	.03	.05	.01	.032		.001								MAX
A41440 2L30SI	PROD		.21	1.09	.007	.012	.22	.01	.02	.05	.02	.031		.001			.001					.13
A41440 2L30SI	PROD		.21	1.08	.007	.011	.21	.01	.02	.05	.02	.030		.001			.001					.38
			XX	END OF DATA THIS			SHEET	XX									.001					.41
																						.40

*CE IS BASED ON THE FOLLOWING EQUATION(S): CE=C+(MN/6)+(CR+MO+V)/5+ (NI+CU)/15

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT

(TYPE B - IN ACCORDANCE WITH ISO 10474/EN 10204/DIN 50049)

TIME: 14:10:59

MILL ORDER/ITEM NO.	SHIPPERS NO.	PO NUMBER	
DI05807 01			

MATERIAL COND: AS ROLLED

O.D.: 24.000(609.600) in (mm)

WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	FLAT	BEND	GRAIN SIZE	NON COLLAPSE	CHARPY V-NOTCH IMPACT TESTING											
					DIR	TEST LOC.	TEMP	SIZE	TEST COND	FT-LBS 1	FT-LBS 2	FT-LBS 3	FT-LBS AVG	% SHEAR 1	% SHEAR 2	% SHEAR 3	% SHEAR AVG
							DEG F										
A41440 2L3051	OK		>>< END OF DATA		T	B	+ 32	FULL	AR	100	95	96	97	60	50	50	53
					THIS SHEET >><												

LEGEND: L - LONGITUDINAL; T - TRANSVERSE; B - BODY; W - WELD; HAZ - HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS / COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	OD X OD/ID ___ L X UT ___ 10.0% NOTCH
FULL LENGTH MPI		
FULL LENGTH UT		OD ___ OD/ID ___ L ___ UT ___
END AREA INSPECTION (PLAIN END)		MPI ___ UT ___
SPECIAL END AREA (SEA) INSP		MPI ___ UT ___
FULL LENGTH DRIFT		DRIFT MANDREL SIZE:

ADDITIONAL NOTES/COMMENTS

MELTED AND MANUFACTURED IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.

PIPE ALSO MEET THE REQUIREMENTS OF ASTM A106 GRADE C & ASME SA106 GRADE C

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS

PREPARED BY THE OFFICE OF S. ANADELL - MANAGER, Q.A.

DATE 11/22/02

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
[TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049]

TIME: 09:02:42

MILL ORDER/ITEM NO	SHIPPERS NO	PO NUMBER	VEHICLE ID
DI05807 01			

SOLD TO ADDRESS	MAIL TO ADDRESS	VENDOR
		USS TUBULAR PRODUCTS 2199 EAST 28TH ST. LORAIN, OH 44055

SPECIFICATION AND GRADE

PIPE CARBON SMLS STD PIPE API 5L-X42ND EDITION DATED 1/00 PSL-2 GRADE B AND GRADE X42 ASTM A53-X99B ASTM A106-X99 GRADE B QUAD STENCIL ASME SA53-X2001 EDITION ASME SA106-X2001 EDITION GRADE B BLK REG MILL COAT PE BEV 30 DEG MEETING ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD MR-01-75 X2000

MATERIAL COND: AS ROLLED

OD: 24.000(609.600) in (mm) | WALL: 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION	TENSILE TEST TYPE/ ORIENTATION	TEST COND	GAUGE WIDTH	YIELD PSI	EXT %	TENSILE PSI	Y/T	ELONG % IN 2"	HARDNESS SCALE HRB	MIN HYDRO PSI	CHARPY (SIZE)
			IN	MIN 42000		MIN 70000					
				MAX 65000		MAX 110000	MAX	MIN	MIN		
A45276 2L3049	STRIP/T/8	AR	1.500	48900	.50	78500	0.62	30.0	MAX 99.0	1500	5
				END OF DATA THIS SHEET				42.0	B 82.0	1500	5

LEGEND: L - LONGITUDINAL, T - TRANSVERSE, U - UPSET, N - NORMALIZED, QT - QUENCHED & TEMPERED, SR - STRESS RELIEVED, AR - AS ROLLED, B - BODY, W - WELD

PRODUCT IDENTIFICATION	TYPE	C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO				CE*
A45276	HEAT	.19	1.08	.010	.006	.23	.02	.05	.09	.02	.033		.001								MAX
A45276 2L3049	PROD	.19	1.01	.009	.016	.22	.02	.05	.09	.02	.034		.002			.001					.43
A45276 2L3049	PROD	.20	1.02	.009	.008	.22	.02	.05	.09	.02	.031		.002			.001					.39
			END OF DATA THIS SHEET													.001					.41
																					.41

*CE IS BASED ON THE FOLLOWING EQUATION(S) CE=C+(MN/6)+(CR+MO+V)/5+(NI+CU)/15

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.

UNITED STATES STEEL

TUBULAR PRODUCTS

CERTIFIED TEST REPORT

(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

TIME: 09:02:42

MILL ORDER/ITEM NO	SHIPPERS NO	PO NUMBER	
DI05807 01			

MATERIAL COND: AS ROLLED

O.D. 24.000(609.600) in [mm]

WALL 0.500 (12.700) in [mm]

PRODUCT IDENTIFICATION	FLAT	BEND	GRAIN SIZE	MIN COLLAPSE	CHARPY V-NOTCH IMPACT TESTING											
					ORI	TEST LOC	TEMP	SIZE	TEST COND	FT-LBS				% SHEAR			
							DEG F			1	2	3	AVG	1	2	3	AVG
A45276 2L3049	OK			*** END OF DATA THIS SHEET ***	T	B	+ 32	FULL	AR	106	116	113	111	60	70	70	66

LEGEND L - LONGITUDINAL T - TRANSVERSE B - BODY W - WELD HAZ - HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS / COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	OD X OD/ID ___ L X T/T ___ 10.0% NOTCH
FULL LENGTH MPI		
FULL LENGTH UT		
END AREA INSPECTION (PLAIN END)		OD ___ OD/ID ___ L ___ T/T ___
SPECIAL END AREA (SEA) INSP		MPI ___ UT ___
FULL LENGTH DRIFT		MPI ___ UT ___
		DRIFT MANDREL SIZE ___

ADDITIONAL NOTES/COMMENTS

MELTED AND MANUFACTURED IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.

PIPE ALSO MEET THE REQUIREMENTS OF ASTM A106 GRADE C & ASME SA106 GRADE C

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS

PREPARED BY THE OFFICE OF S. AMADELL - MANAGER, Q.A.

DATE 11/25/02

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT

(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/3.1.B)

TIME: 08:19:19

MILL ORDER/ITEM NO.	SHIPPERS NO	P.O. NUMBER	VEHICLE ID
01050824 01			

SOLD TO ADDRESS	MAIL TO ADDRESS	VENDOR
		USS TUBULAR PRODUCTS 2199 EAST 28TH ST. LORAIN, OH 44055

SPECIFICATION AND GRADE

PIPE CARBON SMLS STD PIPE API SL-*42ND EDITION DATED 1/00 PSL-2 GRADE B AND GRADE X42 ASTM A53-*99B ASTM A106-*99 GRADE B QUAD STENCIL ASME SA53-*2001 EDITION ASME SA106-*2001 EDITION GRADE B BLK REG MILL COAT PE BEV 30 DEG MEETING ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD MR-01-75 *2002

MATERIAL COND: AS ROLLED ✓ OD 24.000(609.600) in (mm) WALL 0.500 (12.700) in (mm)

PRODUCT IDENTIFICATION ✓ ✓	TENSILE TEST TYPE/ ORIENTATION	TEST COND	GAUGE WIDTH	YIELD PSI	EXT %	TENSILE PSI	Y/T	ELONG % IN 2"	HARDNESS SCALE HRB	MIN HYDRO PSI	CHARPY SIZE/SEC
			IN	MIN 42000		MIN 70000					
				MAX. 65000		MAX 110000	MAX	MIN	MIN		
A46076 A271AA	STRIP/T-B	AR	1.500	45200	.50	75000	0.60	30.0	MAX 99.0	1500	5
		** END OF DATA THIS SHEET **						45.0	B 84.0	1500	5

LEGEND L - LONGITUDINAL T - TRANSVERSE QT - QUENCHED & TEMPERED AR - AS ROLLED B - BODY
U - UPSET N - NORMALIZED SR - STRESS RELIEVED W - WELD

PRODUCT IDENTIFICATION	TYPE		C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO				CE *
A46076	HEAT		.18	1.07	.011	.005	.24	.02	.03	.05	.01	.03+		.001			.001					MAX
A46076 A271AA	PROD		.18	1.04	.009	.006	.21	.02	.03	.06	.01	.03+		.002			.001					.43
A46076 A271AA	PROD		.18	1.04	.009	.006	.21	.02	.03	.06	.01	.03+		.002			.001					.37
		** END OF DATA THIS SHEET **																				.37
																						.37

*C.E IS BASED ON THE FOLLOWING EQUATION(S) CE=C+(MN/6)+(CR+MO+V)/5+ (NI+CU)/15

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT

(TYPE B - IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049)

TIME: 08:19:19

MILL ORDER/ITEM NO.	SHIPPERS NO	PO NUMBER
0105824 01		

MATERIAL COND: AS ROLLED

PRODUCT IDENTIFICATION	PLAT	BEND	GRAIN SIZE	DNV COLLAPSE	O.D.	WALL
					24.000(609.600) in (mm)	0.500 (12.700) in (mm)

CHARPY V-NOTCH IMPACT TESTING

ORI	TEST LOC	TEMP	SIZE	TEST COND	FT-LBS 1	FT-LBS 2	FT-LBS 3	FT-LBS AVG	% SHEAR 1	% SHEAR 2	% SHEAR 3	% SHEAR AVG
		DEG F										
T	B	+ 32	FULL	AR	89	96	82	89	60	70	60	63

A46076 A271AA OK

~~XX~~ END OF DATA THIS SHEET ~~XX~~

LEGEND L - LONGITUDINAL T - TRANSVERSE B - BODY W - WELD HAZ - HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS - COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	OD X OD/ID ___ L X UT ___ 10.0% NOTCH
FULL LENGTH MPI		
FULL LENGTH UT		
END AREA INSPECTION (PLAIN END)		OD ___ OD/ID ___ L ___ UT ___
SPECIAL END AREA (SEA) INSP.		MPI ___ UT ___
FULL LENGTH DRIFT		MPI ___ UT ___
		DRIFT MANDREL SIZE

ADDITIONAL NOTES/COMMENTS

MELTED AND MANUFACTURED IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.
PIPE ALSO MEET THE REQUIREMENTS OF ASTM A106 GRADE C & ASME SA106 GRADE C

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS

PREPARED BY THE OFFICE OF S. ANADELL - MANAGER, Q.A.

DATE 03/20/03

ARCADIS

City of Port St. Lucie Westport Injection Well System
Port St. Lucie, Florida

TUBING TALLY FORM

Date: 07/07/03

Injection Well No. 1

20-inch Outside Diameter, 0.438-inch Wall Thickness, Steel Injection Tubing

Section No.	Tag No.	Section Length (ft)	Cumulative Length (ft)	Heat Number
stainless shoe		1.69	1.69	YBI Mandrel
1	2A	36.92	38.61	A 41974
2	1E	35.61	74.22	A41977
3	6B	40.62	114.84	A41977
4	1D	39.75	154.59	A41977
5	4B	40.35	194.94	A 41974
6	4C	37.41	232.35	A 41974
7	3C	40.06	272.41	A 41974
8	5B	36.17	308.58	A41977
9	12A	35.98	344.56	A41974
10	13A	39.50	384.06	A41974
11	7B	39.57	423.63	A41974
12	8B	35.12	458.75	A41977
13	15	42.45	501.20	A41975
14	28	40.65	541.85	A41975
15	21	41.78	583.63	A41975
16	27	38.89	622.52	A41975
17	16	36.58	659.10	A41975
18	9	40.88	699.98	A41975
19	22	40.17	740.15	A41975
20	20	43.08	783.23	A41975
21	10	42.19	825.42	A41975
22	33	40.98	866.40	A41975
23	25	41.06	907.46	A41975
24	13	39.63	947.09	A41975
25	11	39.18	986.27	A41975
26	26	41.71	1027.98	A41975
27	32	40.85	1068.83	A41975
28	19	42.68	1111.51	A41975
29	6	42.10	1153.61	A41975
30	17	39.29	1192.90	A41975
31	5	41.70	1234.60	A41975
32	31	43.50	1278.10	A41975
33	18	40.40	1318.50	A41975
34	1	42.73	1361.23	A41975
35	29	42.23	1403.46	A41975
36	30	38.25	1441.71	A41975
37	15A	41.29	1483.00	A41975
38	1B	41.10	1524.10	A41975
39	11	36.83	1560.93	A 41974
40	23A	35.14	1596.07	A41975
41	1A	39.98	1636.05	A21637
42	31A	40.60	1676.65	A21637

ARCADIS

City of Port St. Lucie Westport Injection Well System
Port St. Lucie, Florida

TUBING TALLY FORM

Date: 07/07/03

Injection Well No. 1

20-inch Outside Diameter, 0.438-inch Wall Thickness, Steel Injection Tubing

43	3	42.45	1719.10	A41975
44	23	42.10	1761.20	A41975
45	8	42.20	1803.40	A41975
46	7	39.14	1842.54	A41975
47	4	35.08	1877.62	A41975
48	24	39.96	1917.58	A41975
49	17	41.79	1959.37	A41975
50	5A	40.08	1999.45	A41975
51	3B	40.08	2039.53	A41975
52	4	36.03	2075.56	A 41974
53	21A	36.57	2112.13	A41977
54	14	41.66	2153.79	A41975
55	28	39.55	2193.34	A 41974
56	6	40.81	2234.15	A 41974
57	26	38.86	2273.01	A 41974
58	32	36.49	2309.50	A 41974
59	29	38.34	2347.84	A 41974
60	20	37.15	2384.99	A 41974
61	11	40.78	2425.77	A 41974
62	22A	39.66	2465.43	A 41974
63	16A	42.60	2508.03	A41975
64	12	38.29	2546.32	A 41974
65	8	42.42	2588.74	A 41974
66	13	39.56	2628.30	A 41974
67	24A	40.11	2668.41	A 41974
68	18A	42.41	2710.82	A41975
69	19	38.23	2749.05	A 41974
70	2	39.37	2788.42	A 41974
71	9A	40.52	2828.94	A 41974
72	7A	37.41	2866.35	A 41974
73	9B	19.26	2885.61	A 41974

The bottom of 20-inch O. D. tubing was set at 2,881 ft bpl (with 5.75 feet of tubing stickup above pad level).
Two-foot long section of PVC were used as centralizers (SDR-35, 20.78-inch inside diameter) and were attached to the tubing across each coupling.
Tubing installation was completed on July 8, 2003.

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474 / EN10204 / DIN50049)

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	VEHICLE I.D.	
DR14736 01	R47450		LT8234	

SOLD TO ADDRESS	MAIL TO ADDRESS	VENDOR
		USS TUBULAR PRODUCTS 2199 EAST 28TH ST. LORAIN, OH 44055

SPECIFICATION AND GRADE:

PIPE CARBON SMLS CASING API 5CT-*6TH EDITION DATED OCTOBER 1998 GRADE K-55 EXCEPT END FINISH UF FE SC

MATERIAL COND: AS ROLLED | O.D: 20.000(508.000) In (mm) | WALL: 0.430 (11.125) In (mm)

PRODUCT IDENTIFICATION	TENSILE TEST TYPE / ORIENTATION	TEST COND.	GAUGE WIDTH IN	YIELD PSI MIN: 56000 MAX 80000	EXT % .50	TENSILE PSI MIN: 95000 MAX	Y/T MAX:	ELONG % (IN 2") MIN: 19.0	HARDNESS SCALE: MIN: MAX	MIN HYDRO PSI MIN: 1900	DWELL (SEC)
A21636	STRIP/L/B	AR	1.500	64500	.50	105000	0.62	29.0		1900	5
A21637	STRIP/L/B	AR	1.500	66500	.50	104000	0.64	31.0		1900	5
		**	END OF DATA THIS	SHEET	**						

LEGEND: L - LONGITUDINAL, U - UPSET | T - TRANSVERSE, N - NORMALIZED | QT - QUENCHED & TEMPERED, SR - STRESS RELIEVED | AR - AS ROLLED, AQ - AS QUENCHED | B - BODY | W - WELD

PRODUCT IDENTIFICATION	TYPE		C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO				C.E.*
A21636	HEAT		.35	.93	.010	.010	.24	.03	.05	.07	.08	.027										
A21636	PROD		.32	.93	.009	.011	.22	.03	.05	.08	.08	.029										
A21636	PROD		.33	.96	.009	.012	.23	.03	.05	.08	.08	.020										
A21637	HEAT		.34	.91	.011	.007	.23	.04	.04	.09	.08	.028										
A21637	PROD		.35	.96	.010	.010	.22	.04	.04	.10	.08	.031										
A21637	PROD		.34	.95	.010	.009	.22	.04	.04	.10	.08	.029										
			**	END	OF	DATA	THIS	SHEET	**													

*C.E. IS BASED ON THE FOLLOWING EQUATION(S):

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL [illegible] PAGE [illegible]

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474 / EN10204 / DIN50049)

TIME: 05:56

MILL ORDER/ITEM NO	SHIPPERS NO	PO NUMBER
DR14736 01	R47456	0021175

MATERIAL COND: AS ROLLED

O.D.: 20.000(508.000) In (mm) | WALL: 0.438 (11.125) In (mm)

PRODUCT IDENTIFICATION	FLAT	BEND	GRAIN SIZE	MIN COLLAPSE	CHARPY V-NOTCH IMPACT TESTING											
					DIR	TEST LOC.	TEMP	SIZE	TEST COND.	FT-LBS				% SHEAR			
							DEG			1	2	3	AVG	1	2	3	AVG

LEGEND: L - LONGITUDINAL T - TRANSVERSE B - BODY W - WELD HAZ - HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS / COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	OD X OD/ID _____ L X L/T _____ 10.0% NOTCH
FULL LENGTH MPI		
FULL LENGTH UT		OD _____ OD/ID _____ L _____ L/T _____
END AREA INSPECTION (PLAIN END)		MPI _____ UT _____
SPECIAL END AREA (SEA) INSP.		MPI _____ UT _____
FULL LENGTH DRIFT	X	DRIFT MANDREL SIZE: LENGTH: 12 DIAMETER: 18.9365

ADDITIONAL NOTES/COMMENTS

ALL MELTING AND MANUFACTURING TOOK PLACE IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS.

PREPARED BY THE OFFICE OF: J. HASSIMIND MGR. MET. & Q.A. USS TUBULAR PRODUCTS

DATE 08/20/01

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474 / EN10204 / DIN50049)

TIME: 05:06:05

MILL ORDER/ITEM NO	SHIPPERS NO.	P.O NUMBER	VEHICLE ID	
DR17374 01	R51375		LT8030	

SOLD TO ADDRESS	MAIL TO ADDRESS	VENDOR
		USS TUBULAR PRODUCTS 2199 EAST 28TH ST. LORAIN, OH 44055

SPECIFICATION AND GRADE

PIPE CARBON SMLS CASING API 5CT-*6TH EDITION DATED OCTOBER 1998 GRADE K-55 EXCEPT END FINISH OF PE SC

MATERIAL COND: AS ROLLED ✓ OD: 20.000(508.000) in (mm) WALL: 0.438 (11.125) in (mm)

PRODUCT IDENTIFICATION	TENSILE TEST TYPE / ORIENTATION	TEST COND.	GAUGE WIDTH IN	YIELD PSI MIN: / MAX	EXT % .50	TENSILE PSI MIN: / MAX	Y/T MAX:	ELONG % (IN 2") MIN:	HARDNESS SCALE: MIN: / MAX	MIN HYDRO PSI	DWELL (SEC)
A41974	STRIP/L/B	AR	1.500	67500	.50	106000	0.64	31.0		1900	5
A41975	STRIP/L/B	AR	1.500	63500	.50	104000	0.61	30.0		1900	5
		**	END OF DATA THIS SHEET			**					

LEGEND: L - LONGITUDINAL, U - UPSET, T - TRANSVERSE, N - NORMALIZED, OT - QUENCHED & TEMPERED, SR - STRESS RELIEVED, AR - AS ROLLED, AQ - AS QUENCHED, B - BODY, W - WELD

PRODUCT IDENTIFICATION	TYPE		C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO				C.E.*
A41974 ✓	HEAT		.35	.94	.009	.008	.22	.02	.02	.08	.10	.027										
A41974	PROD		.33	.89	.008	.010	.20	.02	.02	.08	.10	.024										
A41974	PROD		.34	.90	.008	.014	.20	.02	.02	.08	.10	.023										
A41975	HEAT		.34	.94	.008	.008	.23	.04	.03	.07	.09	.025										
A41975	PROD		.31	.84	.008	.009	.21	.04	.03	.08	.08	.022										
A41975	PROD		.32	.84	.008	.009	.21	.04	.03	.08	.08	.022										
				** END OF DATA THIS SHEET **																		

*C.E IS BASED ON THE FOLLOWING EQUATION(S):

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474 / EN10204 / DIN50049)

TIME: 05:06:05

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	
DR17374 01	R51375		0014856

MATERIAL COND: AS ROLLED ✓ O.D: 20.000(508.000) in (mm) WALL: 0.430 (11.125) in (mm)

PRODUCT IDENTIFICATION	FLAT	BEND	GRAIN SIZE	MIN COLLAPSE	CHARPY V-NOTCH IMPACT TESTING											
					DIR	TEST LOC.	TEMP	SIZE	TEST COND.	FT-LBS 1	FT-LBS 2	FT-LBS 3	FT-LBS AVG	% SHEAR 1	% SHEAR 2	% SHEAR 3	% SHEAR AVG
							DEG										

LEGEND: L - LONGITUDINAL T - TRANSVERSE B - BODY W - WELD HAZ - HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS / COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	OD X OD/ID ____ L X L/T ____ 10.0% NOTCH
FULL LENGTH MPI		
FULL LENGTH UT		OD ____ OD/ID ____ L ____ L/T ____
END AREA INSPECTION (PLAIN END)		MPI ____ UT ____
SPECIAL END AREA (SEA) INSP.		MPI ____ UT ____
FULL LENGTH DRIFT	X	DRIFT MANDREL SIZE: LENGTH: 12 DIAMETER: 18.9365

ADDITIONAL NOTES/COMMENTS

MANUFACTURED IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS.

PREPARED BY THE OFFICE OF: S. ANADELL - MANAGER, Q.A.

DATE 06/20/02

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT

(TYPE B - IN ACCORDANCE WITH ISO 10474 / EN10204 / DIN50049)

TIME: 05:05:08

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	VEHICLE ID
DR17374 01	R51181		LTB307

SOLD TO ADDRESS

MAIL TO ADDRESS

VENDOR
USS TUBULAR PRODUCTS
2199 EAST 28TH ST.
LORAIN, OH 44055

SPECIFICATION AND GRADE

PIPE CARBON SMLS CASING API 5CT-A6TH EDITION DATED OCTOBER 1998 GRADE K-55 EXCEPT END FINISH UF PE SC

MATERIAL COND: AS ROLLED ✓ OD: 20.000(508.000) in (mm) WALL: 0.438 (11.125) in (mm)

PRODUCT IDENTIFICATION	TEST TYPE / ORIENTATION	TEST COND.	GAUGE WIDTH	YIELD PSI	EXT %	TENSILE PSI	Y/T	ELONG % (IN 2")	HARDNESS SCALE:	MIN HYDRO PSI	DWELL (SEC)
	TENSILE		IN	MIN: 56000 MAX 80000	.50	MIN: 95000 MAX	MAX:	MIN: 19.0	MIN: MAX	1900	5
A41975	STRIP/L/B	AR **	1.500	63500	.50	104000 **	0.61	30.0		1900	5
		END OF DATA THIS SHEET									

LEGEND: L - LONGITUDINAL, U - UPSET; T - TRANSVERSE, N - NORMALIZED; QT - QUENCHED & TEMPERED, SR - STRESS RELIEVED; AR - AS ROLLED, AQ - AS QUENCHED; B - BODY; W - WELD

PRODUCT IDENTIFICATION	TYPE		C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO				C.E.*
A41975	HEAT		.34	1.34	.008	.008	.23	.04	.03	.07	.09	.025										
A41975	PROD		.31	1.34	.008	.009	.21	.04	.03	.08	.08	.022										
A41975	PROD		.32	1.34	.008	.009	.21	.04	.03	.08	.08	.022										
			** END OF DATA THIS SHEET **																			

*C.E. IS BASED ON THE FOLLOWING EQUATION(S):

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474 / EN10204 / DIN50049)

TIME: 05:05:08

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	
DR17374 01	R51181		0014421

MATERIAL COND: AS ROLLED

OD: 20.000(508.000) In (mm) | WALL: 0.438 (11.125) In (mm)

PRODUCT IDENTIFICATION	FLAT	BEND	GRAIN SIZE	MIN COLLAPSE	CHARPY V-NOTCH IMPACT TESTING												
					DIR	TEST LOC.	TEMP DEG	SIZE	TEST COND.	FT-LBS 1	FT-LBS 2	FT-LBS 3	FT-LBS AVG	% SHEAR 1	% SHEAR 2	% SHEAR 3	% SHEAR AVG

LEGEND: L - LONGITUDINAL T - TRANSVERSE B - BODY W - WELD HAZ - HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS / COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	OD X OD/ID L X L/T 10.0% NOTCH
FULL LENGTH MPI		
FULL LENGTH UT		
END AREA INSPECTION (PLAIN END)		OD OD/ID L L/T
SPECIAL END AREA (SEA) INSP.		MPI UT
FULL LENGTH DRIFT	X	MPI UT
		DRIFT MANDREL SIZE: LENGTH: 12 DIAMETER: 18.9365

ADDITIONAL NOTES/COMMENTS

MANUFACTURED IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS.

PREPARED BY THE OFFICE OF: S. ANADELL - MANAGER, Q.A.

DATE 06/14/02

USS UNITED STATES STEEL

CERTIFIED TEST REPORT

(TYPE B - IN ACCORDANCE WITH ISO 10474 / EN10204 / DIN50049)

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O NUMBER	VEHICLE I.D.	
DR17374 01	R51375		LT0030	

SOLD TO ADDRESS

MAIL TO ADDRESS

VENDOR

USS TUBULAR PRODUCTS
2199 EAST 28TH ST.
LORAIN, OH 44055

SPECIFICATION AND GRADE

PIPE CARBON SMLS CASING API 5CT-*6TH EDITION DATED OCTOBER 1998 GRADE K-55 EXCEPT END FINISH UF PE SC

MATERIAL COND: AS ROLLED ✓ OD: 20.000(508.000) in (mm) WALL: 0.438 (11.125) in (mm)

PRODUCT IDENTIFICATION	TENSILE TEST TYPE / ORIENTATION	TEST COND.	GAUGE WIDTH	YIELD PSI	EXT %	TENSILE PSI	Y/T	ELONG % (IN 2")	HARDNESS SCALE:	MIN HYDRO PSI	DWELL (SEC)
			IN	MIN: 56000		MIN: 95000	MAX:	MIN:	MIN:		
				MAX 80000		MAX			MAX	1900	5
41977	STRIP/L/B	AR	1.500	68500	.50	107000	0.64	31.0			
		**	END OF DATA THIS		SHEET	**				1900	5

LEGEND: L - LONGITUDINAL, T - TRANSVERSE, U - UPSET, N - NORMALIZED, QT - QUENCHED & TEMPERED, SR - STRESS RELIEVED, AR - AS ROLLED, AQ - AS QUENCHED, B - BODY, W - WELD

PRODUCT IDENTIFICATION	TYPE		C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO				C.E.*
41977	HEAT		34	130	010	006	25	01	01	06	09	028										
41977	PROD		32	137	009	008	23	01	01	07	09	024										
41977	PROD		31	135	009	009	22	01	01	08	09	022										
				**	END	OF	DATA	THIS	SHEET	**												

*C.E. IS BASED ON THE FOLLOWING EQUATION(S)

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.

UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(TYPE B - IN ACCORDANCE WITH ISO 10474 / EN10204 / DIN50049)

TIME: 05:06:05

MILL ORDER/ITEM NO.	SHIPPERS NO.	P.O. NUMBER	
DR17374 01	851375		0014856

MATERIAL COND: AS ROLLED ✓ OD: 20.000(508.000) in (mm) WALL: 0.438 (11.125) in (mm)

PRODUCT IDENTIFICATION	FLAT	BEND	GRAIN SIZE	MIN COLLAPSE	CHARPY V-NOTCH IMPACT TESTING											
					DIR	TEST LOC.	TEMP	SIZE	TEST COND.	FT-LBS 1	FT-LBS 2	FT-LBS 3	FT-LBS AVG	% SHEAR 1	% SHEAR 2	% SHEAR 3	% SHEAR AVG
							DEG										

LEGEND: L - LONGITUDINAL T - TRANSVERSE B - BODY W - WELD HAZ - HEAT AFFECTED ZONE

TESTING / INSPECTION INFORMATION

TEST / INSPECTION	YES	RESULTS / COMMENTS
FULL LENGTH VISUAL	X	
FULL LENGTH EMI	X	OD X OD/ID ____ L X L/T ____ 10.0% NOTCH
FULL LENGTH MPI		
FULL LENGTH UT		OD ____ OD/ID ____ L ____ L/T ____
END AREA INSPECTION (PLAIN END)		MPI ____ UT ____
SPECIAL END AREA (SEA) INSP.		MPI ____ UT ____
FULL LENGTH DRIFT	X	DRIFT MANDREL SIZE: LENGTH: 12 DIAMETER: 18.9365

ADDITIONAL NOTES/COMMENTS

MANUFACTURED IN THE USA. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT.

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS.

PREPARED BY THE OFFICE OF S. ANADELL - MANAGER, Q.A.

DATE 06/28/02

No. of Components:	Two
Bond Strength:	
Sandblasted Steel:	2000 psi (Elcometer test)
Concrete:	Stronger than concrete
Mixing Ratio:	4 to 1 by volume
pH Tolerance:	2 to 13
Pot Life:	3 hrs at 77°F when reduced to spray, 1 hr when not reduced. (Shorter at higher temperatures)
Application Temperature:	20-140°F dry; 35-120°F wet
Dry Time:	
To Touch:	2 hrs @ 77°F
To Recoat:	2 hrs minimum - 6 months maximum
Full Cure:	7 days @ 77°F
For Immersion:	5 days @ 77°F
Service Temperature:	300°F dry; 208°F submerged (see "Chemical Resistance" chart for elevated temperature immersion service.)
Reducer & Clean-Up:	#76 Reducer
Packaging:	5-gallon kits
Shelf Life:	12 months in unopened containers. **DO NOT STORE ABOVE 90°F**

SURFACE PREPARATION:

STEEL:

Non-Immersion: Solvent clean per SSPC-SP1 to remove all oil, grease, and loosely-adhering deposits. Abrasive blast per SSPC-SP6 to remove all rust, mill scale, dust, and other surface contaminants per SSPC-VIS 1-89.

Immersion: Solvent clean per SSPC-SP1 to remove all oil, grease, and loosely-adhering deposits. Abrasive blast per SSPC-SP10 near-white conditions per SSPC-VIS 1-89.

Primer: None required. PCS-9043 TYPE II PIPE COATING has excellent adhesion to steel.

CONCRETE PIPE: Brush blast to remove surface contaminants and roughen surface. Bug holes opened in the blasting process should be filled before coating.

Primer: None required.

DUCTILE IRON: Abrasive blast to remove all loosely-adherent oxides and foreign materials which would adversely affect the coating adhesion. Since some oxides present after the manufacture of ductile iron pipe are so tightly adhered to the surface that they actually become an integral part of the pipe; the extent of abrasive blasting should be sufficient to remove the loosely-adherent oxides but not those that are tightly adhered. The intent is to determine that the entire surface to be coated is struck by the blast media.

Primer: None required.

MIXING: At temperatures higher than 80°F, refer to above paragraph on pot life to determine quantity to be mixed. DO NOT MIX MORE THAN CAN BE USED IN 3 HOURS FOR SPRAY APPLICATION, OR IN 1 HOUR FOR BRUSH APPLICATION.

Mix 4 gallons of BASE with 1 quart of REDUCER #76 until uniform with power mixer, then add in 1 gallon of HARDENER. Continue mixing for 3 minutes minimum, scraping sides of mixing container occasionally to ensure that all of the BASE component is thoroughly mixed in.

APPLICATION: Brush, roller, spray. Do not use nylon or plastic equipment.

Spray Equipment:

Conventional Spray	Airless Spray
Pump-Graco Mogul (8:1) or equal	Pump-Graco Bulldog (30:1) or equal
Pressures-Material—30 to 55 psi	Line Pressure—70 to 90 psi
Atomization - 50 to 90 psi	Tip - 23 to 31 mil, reversible
Fluid Tip - 1/8" to 1/4"	Tip filter - none
Atomizing tip - 3/16" (external wing)	Manifold filter - none or 30 mesh
Hose - 1/2" i.d. to 50 ft.	Hose-3/8" i.d., high pressure, for 50'
3/4" i.d. for over 50 ft.	or less length
Maximum working pressure	1/2" i.d., high pressure, for over 50'
750 psi	with 3/8"H.P.
Minimum burst pressure	whip end hose.
3000 psi	

HOLIDAY DETECTION: Holiday detection is recommended. Use a wet sponge detector such as a Tinker and Rasor M-1 or AP/W .9 to 3.4 KV Dry Detector.

CATHODIC PROTECTION: PCS-9043 TYPE II PIPE COATING is compatible with conventional cathodic protection.

CHEMICAL RESISTANCE: PCS-9043 TYPE II PIPE COATING is hydrophobic and this accounts for the ability of the coating to displace moisture from the surface being coated. Most ambient temperature curing agents for epoxy coatings are either partially soluble in water or are easily emulsified so that effective cure in the presence of water is not possible. Except for a minor reduction in rate of cure, PCS-9043 TYPE II PIPE COATING is unaffected under the same circumstances.

The most common cause of coating failure is not lack of chemical resistance. Usually failures can be traced to inadequate surface preparation or to application under less than ideal conditions. PCS-9043 TYPE II PIPE COATING has been designed to minimize the importance of surface preparation and ideal application conditions for all types of service, except immersion. The stresses of immersion service are so great that the best surface preparation possible must be specified; however, even with less than ideal preparation, the excellent wetting properties and inertness to water of PCS-9043 TYPE II PIPE COATING will result in better performance than is possible with other coatings.

PCS-9043 TYPE II PIPE COATING is suitable for immersion service at 77°F in the following:

Acetic Acid, 5%	Hydrogen Peroxide, 5%
Aliphatic Hydrocarbons	Phosphoric Acid, 10%
Calcium Chloride	Potassium Alum
Citric Acid, 20%	Sodium Carbonate
Distilled Water	Sour Crude Oil
Gasoline	Sulfuric Acid, 50%

Immersion service at elevated temperatures:

Black Liquor	160°F	Sea Water	180°F
Deionized Water	160°F	50% Sodium Hydroxide	120°F
Distilled Water	180°F	Tap Water	208°F
Green Liquor	160°F	White Liquor	160°F
Hydraulic Fluid	110°F		

Spillage conditions at room temperature:

Ammonium Hydroxide, 20%	Hydrochloric Acid, 20%
Butyl Alcohol	Nitric Acid, 20%
Calcium Hypochlorite, 10%	Phosphoric Acid, 30%
Carbon Tetrachloride	Sodium Hypochlorite, 10%
Citric Acid, 25%	Sulfuric Acid, 85%
Ethyl Acetate	Toluene
Ethyl Alcohol	Xylene

WARRANTY: **Permite** warrants that the BASE and HARDENER for PCS-9043 TYPE II PIPE COATING will be identical in chemical and physical properties from batch to batch within the specification limits of the raw materials used in their manufacture.

CAUTIONS: PCS-9043 TYPE II PIPE COATING **hardener** is corrosive. Components of this product, when combined, may be skin irritants and/or skin sensitizers.

Rubber gloves should be worn to minimize skin contact. Practice caution and good personal cleanliness to avoid skin and eye contact. Avoid breathing vapors of heated material.

See material safety data sheet for full precautions prior to use.

If swallowed, do not induce vomiting. Call a physician immediately. For eye contact, flush with water. In case of skin contact, wash thoroughly with soap and water.

PCS-9043 TYPE II PIPE COATING is intended for INDUSTRIAL USE ONLY.

Chembuild® SERIES 135

PRODUCT PROFILE

GENERIC DESCRIPTION	Modified Polyamidoamine Epoxy
COMMON USAGE	High-build, flexible coating for marginally prepared rusty steel and tightly adhering old coatings. Excellent abrasion-, chemical- and corrosion-resistance. Perfect foundation for aliphatic-polyurethanes. NOT FOR IMMERSION SERVICE.
COLORS	DC74 Off-White, 1243 Metallic Aluminum and more: refer to Tnemec Color Guide. **Note:** Epoxies chalk with extended exposure to sunlight. Lack of ventilation, incomplete mixing, miscatalyzation or the use of heaters that emit carbon dioxide and carbon monoxide during application and initial stages of curing may cause yellowing to occur.
FINISH	Semi-gloss
PERFORMANCE CRITERIA	Extensive test data available. Contact your Tnemec representative for specific test results.

TNEMEC®

COATING SYSTEM

PRIMERS	**Steel:** Self-priming **Galvanized Steel and Non-Ferrous Metal:** Self-priming
TOPCOATS	Series 28, 29, 30, 66, N69, 73, 84, 104, 135, 161, 175, 1074, 1075. **Note:** When topcoating with Endura-Shield polyurethane finish, exterior exposed Series 135 has the following maximum time to recoat: Series 73, 175, 1074 or 1075, 60 days. If this time is exceeded, an epoxy intermediate coat or scarification is required before topcoating. Refer to appropriate topcoat data sheet for additional information.

SURFACE PREPARATION

STEEL	Abrasive blast cleaning generally produces the best coating performance. If conditions won't permit this, Series 135 may be applied to SSPC-SP2 or SP3 Hand or Power Tool Cleaned surfaces.
GALVANIZED STEEL & NON-FERROUS METAL	Surface preparation recommendations will vary depending on substrate and exposure conditions. Contact your Tnemec representative or Tnemec Technical Services.
PAINTED SURFACES	Test patch is recommended. **Note:** Contact Tnemec Technical Services if application is over Series 4, 10 or chlorinated rubber coatings.
ALL SURFACES	Must be clean, dry and free of oil, grease and other contaminants.

TECHNICAL DATA

VOLUME SOLIDS* — 84.0 ± 2.0% (mixed)

RECOMMENDED DFT — **Conventional Build:** 4.0 to 6.0 mils (100 to 150 microns) per coat.
Hi-Build: 7.0 to 9.0 mils (180 to 230 microns) per coat.
Note: Number of coats and thickness requirements will vary with substrate, application method and exposure. Contact your Tnemec representative.

CURING TIME

Temperature	To Touch	To Handle	To Recoat
75°F (24°C)	6 hours at 5.0 mils DFT (125 microns)	18 hours	24 hours

Curing time varies with surface temperature, air movement, humidity and film thickness.

VOLATILE ORGANIC COMPOUNDS*

Unthinned	Thinned 15% (No. 19 Thinner)	Thinned 15% (No. 18 Thinner)
1.16 lbs/gallon (139 grams/litre)	1.92 lbs/gallon (230 grams/litre)	2.06 lbs/gallon (247 grams/litre)

THEORETICAL COVERAGE* — 1,347 mil sq ft/gal (33.1 m²/L at 25 microns). See APPLICATION for coverage rates.

NUMBER OF COMPONENTS — Two — Part A and Part B

PACKAGING — Five-Gallon Kit: Consists of four gallons of Part A in a five-gallon pail and one gallon of Part B in a one-gallon can. When mixed, yields five gallons (18.9 L).
One-Gallon Kit: Consists of a partially filled one-gallon can of Part A and a partially filled one-quart can of Part B. When mixed, yields one gallon (3.79 L).

NET WEIGHT PER GALLON* — Series 135: 12.30 ± 0.25 lbs (5.58 ± .11 kg) (mixed)
135-1243: 11.52 ± 0.25 lbs (5.23 ± .11 kg) (mixed)

STORAGE TEMPERATURE — Minimum [illegible] Maximum [illegible]

TEMPERATURE RESISTANCE — (Dry) Continuous 250°F (121°C) Intermittent 275°F (135°C)

SHELF LIFE — 24 months at recommended storage temperature.

SERIES 135 Chembuild®

TECHNICAL DATA continued

FLASH POINT - SETA: Part A: 75°F (25°C) Part B: 201°F (94°C)

HEALTH & SAFETY: Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product. **Keep out of the reach of children.**

APPLICATION

COVERAGE RATES*

	Conventional Build (Spray, Brush or Roller)			Hi-Build (Spray Only)		
	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m^2/Gal)	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m^2/Gal)
Suggested	5.0 (125)	6.0 (150)	269 (25.0)	8.0 (205)	9.5 (240)	168 (15.6)
Minimum	4.0 (100)	5.0 (125)	337 (31.3)	7.0 (180)	8.5 (215)	192 (17.8)
Maximum	6.0 (150)	7.0 (180)	224 (20.8)	9.0 (230)	11.0 (280)	150 (13.9)

Note: Can be spray applied at 7.0 to 9.0 mils (180 to 230 microns) DFT per coat when extra protection or the elimination of a coat is desired. Can be sprayed at 4.0 to 6.0 mils (100 to 150 microns) DFT per coat for use in systems requiring a conventional build. Brush or roller will normally achieve the 4.0 mil (100 microns) minimum for conventional build application. However, under certain conditions some colors may require two coats to achieve suggested film thickness. Allow for overspray and surface irregularities. Film thickness is rounded to the nearest 0.5 mil or 5 microns. Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance.

MIXING: Power mix contents of each container, making sure no pigment remains on the bottom. Add the contents of the can marked Part B to Part A while under agitation. Continue agitation until the two components are thoroughly mixed. Do not use mixed material beyond pot life limits. **Note:** Both components must be above 50°F (10°C) prior to mixing. For application to surfaces between 50°F to 60°F (10°C to 16°C), allow mixed material to stand thirty (30) minutes and restir before using. For optimum application properties, blended components should be above 60°F (16°C).

POT LIFE: 8 hours at 50°F (10°C) 4 hours at 77°F (25°C) 2 hours at 100°F (38°C)

THINNING: For air or airless spray, thin 10% to 15% or ½ pint to 1¼ pints (380 to 570 mL) per gallon with No. 19 Thinner. For brush or roller, thin 10% to 15% or ½ pint to 1¼ pints (380 to 570 mL) per gallon with No. 18 Thinner.

SURFACE TEMPERATURE: Minimum 50°F (10°C) Maximum 135°F (57°C) The surface should be dry and at least 5°F (3°C) above the dew point. **Note:** Amine blush may develop during cure if the surface temperature drops below the minimum, particularly under high humidity. Blush must be removed prior to topcoating; contact your Tnemec representative.

APPLICATION EQUIPMENT

Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss MBC or JGA	E	765 or 78	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	70-90 psi (4.8-6.2 bar)	20-30 psi (1.4-2.1 bar)

Low temperatures or longer hoses require higher pot pressure.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.015"-0.021" (380-535 microns)	2800-4200 psi (193-290 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	60 mesh (250 microns)

Use appropriate tip atomizing pressure for equipment, applicator technique and weather conditions.
Note: Series 135-1213 must be applied by brush or roller to achieve aluminum appearance. For spray application, contact your Tnemec representative.
Roller: Use 3/8" or 1/2" (9.5 mm or 12.7 mm) synthetic nap covers.
Brush: Use high-quality natural or synthetic bristle brushes.

CLEAN-UP: Flush and clean all equipment immediately after use with the recommended thinners or MEK.

*Values may vary with color.

Hi-Build Epoxoline SERIES 66

PRODUCT PROFILE

GENERIC DESCRIPTION	Polyamide Epoxy
COMMON USAGE	Industry standard for epoxy coatings for over 30 years. Known for its forgiving application characteristics in adverse and varied conditions, and for benchmark performance.
COLORS	Refer to Tnemec Color Guide. **Note:** Epoxies chalk with extended exposure to sunlight and may yellow on aging. Lack of ventilation, incomplete mixing, miscatalyzation or the use of heaters that emit carbon dioxide and carbon monoxide during application and initial stages of curing may accelerate any potential yellowing.
FINISH	Satin
SPECIAL QUALIFICATIONS	Meets the performance requirements of **AWWA C 210** (not for potable water contact). Contact your Tnemec representative for system recommendations.
PERFORMANCE CRITERIA	Extensive test data available. Contact your Tnemec representative for specific test results.

COATING SYSTEM

PRIMERS	**Steel:** Self-priming or Series 20, 37H, N69, 90, 91-H$_2$0, 161, 530 **Galvanized Steel and Non-Ferrous Metal:** Self-priming **Concrete:** Self-priming, 54-660, 201, 216, 218 **CMU:** 54-562, 54-660, 130, 216, 218 **Drywall:** 51-792 for dry interior environments
TOPCOATS	46H-413, 66, N69, 73, 84, 104, 113, 114, 161, 175, 262, 265, 291, 1074, 1075 Refer to COLORS on applicable topcoat data sheets for additional information.

SURFACE PREPARATION

STEEL	**Immersion Service:** SSPC-SP10 Near-White Blast Cleaning **Non-Immersion Service:** SSPC-SP6 Commercial Blast Cleaning
PRIMED STEEL	**Immersion Service:** Scarify the Series 66 prime coat surface by abrasive-blasting with a fine abrasive before topcoating if: (a) the 66 prime coat has been in exterior exposure for 60 days or longer and 66, 46H-413, N69 or 161 is the specified topcoat; (b) the 66 prime coat has been in exterior exposure for 14 days or longer and Series 104 is the specified topcoat; (c) the 66 prime coat has been in exterior exposure for 7 days or longer and Series 262 or 265 is the specified topcoat.
GALVANIZED STEEL & NON-FERROUS METAL	Surface preparation recommendations will vary depending on substrate and exposure conditions. Contact your Tnemec representative or Tnemec Technical Services.
CAST/DUCTILE IRON	Contact your Tnemec representative or Tnemec Technical Services.
CONCRETE	Allow new concrete to cure 28 days. Abrasive blast referencing SSPC-SP13 NACE 6 Surface Preparation of Concrete and Tnemec's Surface Preparation and Application Guide.
CMU	Allow mortar to cure for 28 days. Level protrusions and mortar spatter.
PAINTED SURFACES	**Non-Immersion Service:** Ask your Tnemec representative for specific recommendations
ALL SURFACES	Must be clean, dry and free of oil, grease and other contaminants.

TECHNICAL DATA

VOLUME SOLIDS*	56.0 ± 2.0% (mixed)
RECOMMENDED DFT	2.0 to 6.0 mils (50 to 150 microns) per coat. **Note: Number of coats and thickness requirements will vary with substrate, application method and exposure. Contact your Tnemec representative.**

CURING TIME

Temperature	To Touch	To Handle	To Recoat	Immersion
75°F (24°C)	2 hours	10 hours	12 hours	7 days

Curing time varies with surface temperature, air movement, humidity and film thickness.

VOLATILE ORGANIC COMPOUNDS*	Unthinned	Thinned 5%	Thinned 10%
	3.66 lbs/gallon (436 grams/litre)	3.22 lbs/gallon (385 grams/litre)	3.39 lbs/gallon (406 grams/litre)

THEORETICAL COVERAGE [illegible]

NUMBER OF COMPONENTS	Two: Part A and Part B
PACKAGING	5 gallon (18.9L) pails and 1 gallon (3.79L) cans — Order in multiples of 2
NET WEIGHT PER GALLON*	12.5 lbs ± 0.25 lbs (5.67 ± 11.3kg) mixed
STORAGE TEMPERATURE	Minimum 20°F (-7°C) Maximum 110°F (43°C)

* [illegible]

SERIES 66 Hi-Build Epoxoline

TECHNICAL DATA continued

TEMPERATURE RESISTANCE (Dry) Continuous 250°F (121°C) Intermittent 275°F (135°C)

SHELF LIFE Part A: 24 months; Part B: 12 months at recommended storage temperature.

FLASH POINT - SETA Part A: 82°F (28°C) Part B: 64°F (18°C)

HEALTH & SAFETY Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product. **Keep out of the reach of children.**

APPLICATION

COVERAGE RATES*

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m^2/Gal)
Suggested	4.0 (100)	7.0 (180)	225 (20.9)
Minimum	2.0 (50)	3.5 (90)	450 (41.8)
Maximum	6.0 (150)	10.5 (265)	150 (13.9)

Note: The above reflects the total range to which Series 66 can be applied for specific applications. To insure the proper thickness and number of coats is specified for certain substrates and exposures, consult the Tnemec Guide Specifications and/or contact your Tnemec representative. **Note:** Roller or brush application may require two or more coats to obtain recommended film thickness. Allow for overspray and surface irregularities. Film thickness is rounded to the nearest 0.5 mil or 5 microns. Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance.

MIXING Power mix contents of each container, making sure no pigment remains on the bottom. Pour a measured amount of Part B into a clean container large enough to hold both components. Add an equal volume of Part A to Part B while under agitation. Continue agitation until the two components are thoroughly mixed. Do not use mixed material beyond pot life limits. **Note:** Both components should be above 50°F (10°C) prior to mixing. For application to surfaces between 50°F to 60°F (10°C to 16°C), allow mixed material to stand thirty (30) minutes and restir before using. For optimum application properties, blended components should be above 60°F (16°C). Mixing ratio is one to one by volume.

POT LIFE 20 hours at 50°F (10°C) 10 hours at ~~°F (25°C) 4 hours at 100°F (38°C)

THINNING Use No. 4 Thinner. For air spray, thin up to 10% or ¾ pint (380 mL) per gallon. For airless spray, roller or brush, thin up to 5% or ½ pint (190 mL) per gallon.

SURFACE TEMPERATURE Minimum 50°F (10°C) Maximum 135°F (5~°C) The surface should be dry and at least 5°F (3°C) above the dew point. Coating won't cure below minimum surface temperature.

APPLICATION EQUIPMENT

Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss MBC or JGA	E	~65 or ~78	5 16" or 3 8" (7.9 or 9.5 mm)	3 8" or 1 2" (9.5 or 12.7 mm)	~5-100 psi (5.2-6.9 bar)	10-20 psi (0.7-1.4 bar)

Low temperatures or longer hoses require higher pot pressure.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.015"-0.019" (380-485 microns)	1800-3000 psi (124-207 bar)	1 4" or 3 8" (6.4 or 9.5 mm)	60 mesh (250 microns)

Use appropriate tip atomizing pressure for equipment, applicator technique and weather conditions. **Note:** Application over inorganic zinc-rich primers: Apply a wet mist coat and allow tiny bubbles to form. When bubbles disappear in 1 to 2 minutes, apply a full wet coat at specified mil thickness. **Roller:** Roller application optional when environmental restrictions do not allow spraying. Use 3 8" or 1 2" (9.5 mm or 12.7 mm) synthetic nap covers.

Brush: Recommended for small areas only. Use high quality natural or synthetic bristle brushes.

CLEANUP Flush and clean all equipment immediately after use with the recommended thinner or MEK.

*Values may vary with color.

Endura-Shield® SERIES 73

TNEMEC®

PRODUCT PROFILE

GENERIC DESCRIPTION Aliphatic Acrylic Polyurethane

COMMON USAGE A coating highly resistant to abrasion, wet conditions, corrosive fumes, chemical contact and exterior weathering. High build quality combines with project specific primers for two-coat, labor saving systems. NOT FOR IMMERSION SERVICE.

COLORS Refer to Tnemec Color Guide. **Note:** Certain colors may require multiple coats depending on method of application and finish coat color. When feasible, the preceding coat should be in the same color family (blue, gray, etc.), but noticeably different.

FINISH Semi-gloss

SPECIAL QUALIFICATIONS Series 73 meets the requirements of SSPC-36 Paint Standard.

PERFORMANCE CRITERIA Extensive test data available. Contact your Tnemec representative for specific test results.

COATING SYSTEM

PRIMERS
Steel: Series 20, 37H, 66, N69, 90-97, 91-H_20, 104, 135, N140, 161
Galvanized Steel and Non-Ferrous Metal: Series 66, N69
Concrete: 54-660, 66, N69, 104
CMU: 54-660
Note: Series 104 or 135 exterior exposed more than two months, or Series N69 or N140 exterior exposed more than three months must first be scarified or reprimed with themselves. Brush blasting with fine abrasive is the preferred method of scarification.

TOPCOAT Series 76, optional when extended weatherability is desired.

SURFACE PREPARATION

ALL SURFACES Must be clean, dry and free of oil, grease and other contaminants.

TECHNICAL DATA

VOLUME SOLIDS* 58.0 ± 2.0% (mixed)

RECOMMENDED DFT 2.0 to 5.0 mils (50 to 125 microns) per coat. **Note: Number of coats and thickness requirements will vary with substrate, application method and exposure. Contact your Tnemec representative.**

CURING TIME

Temperature	To Touch	To Handle	To Recoat
75°F (24°C)	1 hour	5-8 hours	12 hours

Curing time varies with surface temperature, air movement, humidity and film thickness. **Note:** For faster curing and low-temperature applications, add No. 44-710 Urethane Accelerator; see separate product data sheet.

VOLATILE ORGANIC COMPOUNDS*

Unthinned	Thinned 10% (No. 39 Thinner)	Thinned 10% (No. 42 Thinner)
3.16 lbs/gallon (378 grams/litre)	3.44 lbs/gallon (412 grams/litre)	3.48 lbs/gallon (417 grams/litre)

THEORETICAL COVERAGE* 930 mil sq ft/gal (22.8 m²/L at 25 microns).

NUMBER OF COMPONENTS Two: Part A and Part B

PACKAGING Five-Gallon Kit: Consists of four gallons of Part A in a five gallon pail and one gallon of Part B in a separate container. When mixed, yields five gallons (18.9L).
One-Gallon Kit: Consists of a partially-filled one gallon can labeled Part A and a partially filled quart can labeled Part B. When mixed, yields one gallon (3.79L).

NET WEIGHT PER GALLON* 11.82 ± 0.25 lbs (5.36 ± .11 kg)

STORAGE TEMPERATURE Minimum 20°F (-7°C) Maximum 110°F (43°C)

TEMPERATURE RESISTANCE (Dry) Continuous 250°F (121°C) Intermittent 275°F (135°C)

SHELF LIFE Part A: 24 months at recommended storage temperature.
Part B: 12 months at recommended storage temperature.

FLASH POINT - SETA Part A: 55°F (13°C) Part B: 104°F (40°C)

HEALTH & SAFETY Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product. Keep out of the reach of children.

Endura-Shield® SERIES 73

TNEMEC®

PRODUCT PROFILE

GENERIC DESCRIPTION	Aliphatic Acrylic Polyurethane
COMMON USAGE	A coating highly resistant to abrasion, wet conditions, corrosive fumes, chemical contact and exterior weathering. High build quality combines with project specific primers for two-coat, labor saving systems. NOT FOR IMMERSION SERVICE.
COLORS	Refer to Tnemec Color Guide. **Note:** Certain colors may require multiple coats depending on method of application and finish coat color. When feasible, the preceding coat should be in the same color family (blue, gray, etc.), but noticeably different.
FINISH	Semi-gloss
SPECIAL QUALIFICATIONS	Series 73 meets the requirements of SSPC-36 Paint Standard.
PERFORMANCE CRITERIA	Extensive test data available. Contact your Tnemec representative for specific test results.

COATING SYSTEM

PRIMERS	**Steel:** Series 20, 37H, 66, N69, 90-97, 91-H_2O, 104, 135, N140, 161 **Galvanized Steel and Non-Ferrous Metal:** Series 66, N69 **Concrete:** 54-660, 66, N69, 104 **CMU:** 54-660 **Note:** Series 104 or 135 exterior exposed more than two months, or Series N69 or N140 exterior exposed more than three months must first be scarified or reprimed with themselves. Brush blasting with fine abrasive is the preferred method of scarification.
TOPCOAT	Series 76, optional when extended weatherability is desired.

SURFACE PREPARATION

ALL SURFACES	Must be clean, dry and free of oil, grease and other contaminants.

TECHNICAL DATA

VOLUME SOLIDS*	58.0 ± 2.0% (mixed)
RECOMMENDED DFT	2.0 to 5.0 mils (50 to 125 microns) per coat. **Note: Number of coats and thickness requirements will vary with substrate, application method and exposure. Contact your Tnemec representative.**

CURING TIME

Temperature	To Touch	To Handle	To Recoat
75°F (24°C)	1 hour	5-8 hours	12 hours

Curing time varies with surface temperature, air movement, humidity and film thickness. Note: For faster curing and low-temperature applications, add No. 44-710 Urethane Accelerator; see separate product data sheet.

VOLATILE ORGANIC COMPOUNDS*

Unthinned	Thinned 10% (No. 39 Thinner)	Thinned 10% (No. 42 Thinner)
3.16 lbs/gallon (378 grams/litre)	3.44 lbs/gallon (412 grams/litre)	3.48 lbs/gallon (417 grams/litre)

THEORETICAL COVERAGE*	930 mil sq ft/gal (22.8 m^2/L at 25 microns).
NUMBER OF COMPONENTS	Two: Part A and Part B
PACKAGING	Five-Gallon Kit: Consists of four gallons of Part A in a five gallon pail and one gallon of Part B in a separate container. When mixed, yields five gallons (18.9L). One-Gallon Kit: Consists of a partially-filled one gallon can labeled Part A and a partially filled quart can labeled Part B. When mixed, yields one gallon (3.79L).
NET WEIGHT PER GALLON*	11.82 ± 0.25 lbs (5.36 ± .11 kg)
STORAGE TEMPERATURE	Minimum 20°F (-7°C) Maximum 110°F (43°C)
TEMPERATURE RESISTANCE	(Dry) Continuous 250°F (121°C) Intermittent 275°F (135°C)
SHELF LIFE	Part A: 24 months at recommended storage temperature. Part B: 12 months at recommended storage temperature.
FLASH POINT - SETA	Part A: 55°F (13°C) Part B: 104°F (40°C)
HEALTH & SAFETY	Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product. Keep out of the reach of children.

TUBULAR FIBERGLASS CORPORATION
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ISO 9001 CERTIFIED FIRM

15HR 0006 Q1

September 2002

RED BOX 2250

FIBERGLASS TUBING, CASING, AND LINERS
AROMATIC AMINE CURED EPOXY RESIN

DIMENSIONAL SPECIFICATIONS

Nominal Size (inches)	Nominal I.D. (inches)	Minimum Drift Dia (inches)	Nominal O.D. (inches)	Nominal Wall (inches)	Pin Upset O.D. (inches)	Max Box OD(inches) IJ Conn.*	Max Box OD(inches) TC Conn.*	Nominal Weight (lbs/ft)	Nominal Weight (lbs/jt)	Connection Type API 5B, Table 14*, 7**, 6*** Fourteenth Edition August 96
2-3/8	2.00	1.91	2.38	0.19	2.69	3.28	2.99	1.2	35	2-3/8" 8Rd EUE Long*IJ/TC
2-7/8	2.47	2.37	2.93	0.23	3.19	3.79	3.50	1.7	52	2-7/8" 8Rd EUE Long*IJ/TC
3-1/2	3.00	2.90	3.58	0.29	3.85	4.67	4.31	2.6	79	3-1/2" 8Rd EUE Long*IJ/TC
4-1/2	3.98	3.89	4.74	0.38	4.85	5.74	5.62	4.5	135	4-1/2" 8Rd EUE Long*IJ/TC
5-1/2	4.42	4.33	5.28	0.43	5.60	6.54	6.34	5.8	173	5-1/2" 8Rd Csg Long**IJ/TC
6-5/8	5.43	5.33	6.46	0.52	6.73	8.17	7.89	8.5	256	6-5/8" 8Rd Csg Long**IJ/TC
7-5/8	6.21	6.11	7.39	0.59	7.73	9.08	9.10	11.2	335	7-5/8" 8Rd Csg Long**IJ/TC
9-5/8	7.84	7.75	9.32	0.74	9.73	11.95	11.48	17.7	531	9-5/8" 8Rd Csg Short***IJ/TC
10-3/4	8.85	8.76	10.52	0.83	10.85		13.10	22.7	682	10-3/4" 8Rd Csg Short***TC

*Depending on the application, smaller maximum box diameters are available.

30 ft Standard Joint Length

PERFORMANCE AND RATINGS (-60 deg F to +210 deg F)

Nominal Size	Internal Pressure Rating (psi)	Mill Test Pressure (psi)	Collapse Rating (psi)	Axial Tension Rating (lbs)	Stretch vs. Tension-Over-Pipe-Wt Stretch (ft) = Coeff. x P x L
2-3/8	2,250	2,600	2,600	18,500	0.255
2-7/8	2,250	2,600	2,600	25,500	0.170
3-1/2	2,250	2,600	2,700	34,500	0.110
4-1/2	2,250	2,600	2,600	50,000	0.064
5-1/2	2,250	2,600	2,700	55,000	0.050
6-5/8	2,250	2,600	2,600	75,000	0.034
7-5/8	2,250	2,600	2,600	92,500	0.026
9-5/8	2,250	2,600	2,600	130,000	0.017
10-3/4	2,250	2,600	2,600	160,000	0.013

Where: P = Tensile Load (1,000 lbs)
L = String Length (1,000 ft)

MECHANICAL AND PHYSICAL PROPERTIES

TUBING/CASING BODY PROPERTIES	UNIT	VALUE 2-3/8 - 10-3/4	VALUE 11-3/4 - 13-3/8	TEST METHOD
Tensile Strength, Hoop	psi	31,300	31,300	ASTM D1599
Tensile Strength, Axial	psi	30,000	20,000	ASTM D2105
Modulus of Elasticity, Axial	10E+06 psi	3.0	2.0	ASTM D2105
Long Term Hydrostatic Strength at 20 Years	psi	16,875	19,109	ASTM D2992 (B)
Specific Gravity	---	1.9	1.9	ASTM D792
Density	lbs/in^3	0.07	0.07	ASTM D792
Thermal Conductivity	$Btu/hr/ft^2/in/degF$	2.4	2.4	ASTM C177
Thermal Expansion Coefficient (Linear)	10E-05in/in/degF	1.1	1.2	ASTM D696
Flow Factor	---	150	150	Hazen Williams

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ISO 9001 CERTIFIED FIRM

15HR 0006 Q1

USES AND APPLICATIONS

RED BOX fiberglass reinforced aromatic amine cured epoxy resin casing and tubing is designed for downhole services of medium to high pumping pressure at depths as great as 13,000 feet.

RED BOX is available in 1000, 1250, 1500, 1750, 2000, 2250, 2500, 2750, 3000 and 3250 psi operating pressure ratings.

RED BOX offers a high-strength, non-corroding casing and tubing system in 2-3/8 through 13-3/8 inch sizes that has a proven low installed cost and long lifespan.

RED BOX casing and tubing system is recommended for use in:

- production wells (oil, gas, thermal)
- disposal wells (salt water, chemical effluent, and waste)
- injection wells (salt water, CO2, polymer)
- liners for the repair of corroded steel casing
- municipal and commercial water wells.

COMPOSITION AND CLASSIFICATION

RED BOX casing and tubing is of a machine-made composite material, produced by the filament-winding method, combining high strength glass fiber filaments and corrosion resistant epoxy resin specially formulated to result in a structurally and chemically optimum product. The epoxy resin is an aromatic amine cured system that has the highest mechanical strength, thermal resistance and best corrosion resistance of all commercially available resin systems used in the fabrication of fiberglass tubulars.

RED BOX casing and tubing will be authorized to use the API monogram by conforming to API Specification 15TR (when issued). The Tubular Fiberglass Corporation Quality Management System is certified to be in compliance with ISO-9001 and ANSI-RAB.

RED BOX pipe conforms to ASTM Specification D2996 (Designation RTRP-11AT-1334) and ASTM Classification D2310 (Designation RTRP-11AT).

JOINING SYSTEM AND FITTINGS

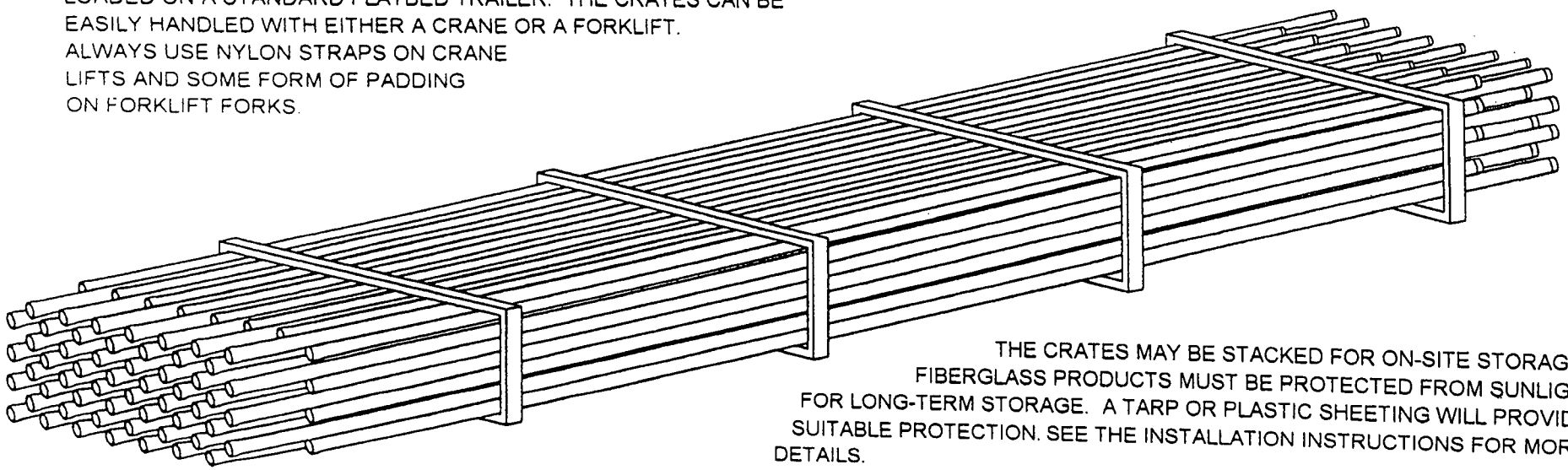
RED BOX casing and tubing products are connected with the reliable, time proven integral joint API 8 round external upset end (EUE) long threaded connections, or casing long threaded connections. Pin ends are lathe cut while box ends are filament-wound as integral part of the tubing body.

RED BOX casing and tubing system is offered with a complete line of accessories including guide shoes, float collars, centralizers, polished bore receptacle stingers, and slotted screens.

SHIPPING PROCEDURES

PIPE, TUBING, AND CASING UP TO 6 INCH SIZE IN PIPE, (6-5/8 INCH IN CASING), IS PACKAGED IN OPEN-SIDE STEEL BAND REINFORCED WOODEN CRATE FRAMES PER THE DIAGRAM BELOW. DEPENDENT ON THE WALL THICKNESS OF THE PIPE SHIPPED, INDIVIDUAL CRATES WEIGH FROM 3,500 TO 5,000 LBS. THE CRATE OUTSIDE DIMENSIONS ARE 48 INCHES WIDE BY 21 INCHES TALL BY APPROXIMATELY 32 FEET LONG. TYPICALLY TEN CRATES CAN BE LOADED ON A STANDARD FLATBED TRAILER. THE CRATES CAN BE EASILY HANDLED WITH EITHER A CRANE OR A FORKLIFT. ALWAYS USE NYLON STRAPS ON CRANE LIFTS AND SOME FORM OF PADDING ON FORKLIFT FORKS.

TRUCK AND CONTAINER LOAD QUANTITIES ARE DETAILED ON THE FOLLOWING PAGES



THE CRATES MAY BE STACKED FOR ON-SITE STORAGE. FIBERGLASS PRODUCTS MUST BE PROTECTED FROM SUNLIGHT FOR LONG-TERM STORAGE. A TARP OR PLASTIC SHEETING WILL PROVIDE SUITABLE PROTECTION. SEE THE INSTALLATION INSTRUCTIONS FOR MORE DETAILS.

CRATE FRAME QUANTITIES

SIZE	JTS/CRATE	FEET/CRATE
2" / 2-3/8"	110	3,300
2-1/2" / 2-7/8"	83	2,490
3" / 3-1/2"	54	1,620
4" / 4-1/2"	34	1,020
5" / 5-1/2"	23	690
6" / 6-5/8"	17	510

PARTIAL HEIGHT CRATES ARE AVAILABLE FOR SPECIFIC LOAD QUANTITIES. AN OPEN TOP CONTAINER WILL HOLD 7-1/2 CRATES.

TUBULAR FIBERGLASS CORPORATION
HOUSTON, TEXAS (281) 847-2987

CRATE FRAME

CATALOGUE INSERT

DRWG NO:	DATE:	SCALE:	FILE NAME:	FONT:	APP:
12580	8/15/01	NONE	"CRATING"		

TRUCKLOAD AND CONTAINER LOAD QUANTITIES
RED BOX FIBERGLASS DOWNHOLE TUBING AND CASING

Joints/Feet per Truckload

PIPE SIZE	PRESSURE RATING - RED BOX TUBING & CASING										
	1000	1250	1500	1750	2000	2250	2500	2750	3000	3250	3500
2-3/8"	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,046	941	866	787
	33,000	33,000	33,000	33,000	33,000	33,000	33,000	31,366	28,216	25,976	23,624
2-7/8"	830	830	830	830	830	830	769.44	700.41	632.16	575.13	476.37
	24,900	24,900	24,900	24,900	24,900	24,900	23,083	21,012	18,965	17,254	14,291
3-1/2"	540	540	540	540	540	540	518.53	467.68	422.53	386.4	
	16,200	16,200	16,200	16,200	16,200	16,200	15,556	14,030	12,676	11,592	
4-1/2"	340	340	340	340	340	334.31	299.94	250.05	228.75		
	10,200	10,200	10,200	10,200	10,200	10,029	8,998	7,502	6,863		
5-1/2"	230	230	230	230	230	230	230	211.58	191.12		
	6,900	6,900	6,900	6,900	6,900	6,900	6,900	6,347	5,734		
6-5/8"	170	170	170	170	170	170	156.05	140.73			
	5,100	5,100	5,100	5,100	5,100	5,100	4,681	4,222			
*7"	125	125	125	125							
	3,750	3,750	3,750	3,750							
*7-5/8"	100	100	100	100	100	100	100	100			
	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000			
*9-5/8"	64	64	64	64	64	64	64	64			
	1,920	1,920	1,920	1,920	1,920	1,920	1,920	1,920			
*10-3/4"	56	56	56	56	56	56	56				
	1,680	1,680	1,680	1,680	1,680	1,680	1,680				
*11-3/4"	49	49	49	49	49						
	1,470	1,470	1,470	1,470	1,470						
*13-3/8"	36	36	36								
	1,080	1,080	1,080								

Joints/Feet per Container

PIPE SIZE	PRESSURE RATING - RED BOX TUBING & CASING										
	1000	1250	1500	1750	2000	2250	2500	2750	3000	3250	3500
2-3/8"	825	825	825	825	825	825	825	784	705	649	591
	24,750	24,750	24,750	24,750	24,750	24,750	24,750	23,520	21,150	19,470	17,730
2-7/8"	623	623	623	623	623	623	577	525	474	431	357
	18,690	18,690	18,690	18,690	18,690	18,690	17,310	15,750	14,220	12,930	10,710
3-1/2"	405	405	405	405	405	405	389	351	317	290	
	12,150	12,150	12,150	12,150	12,150	12,150	11,670	10,530	9,510	8,700	
4-1/2"	255	255	255	255	255	251	225	188	172		
	7,650	7,650	7,650	7,650	7,650	7,530	6,750	5,640	5,160		
5-1/2"	173	173	173	173	173	173	173	159	143		
	5,190	5,190	5,190	5,190	5,190	5,190	5,190	4,770	4,290		
6-5/8"	128	128	128	128	128	128	117	106			
	3,840	3,840	3,840	3,840	3,840	3,840	3,510	3,180			
*7"	107	107	107	107							
	3,210	3,210	3,210	3,210							
*7-5/8"	89	89	89	89	89	89	89				
	2,670	2,670	2,670	2,670	2,670	2,670	2,670				
*9-5/8"	56	56	56	56	56	56	56				
	1,680	1,680	1,680	1,680	1,680	1,680	1,680				
*10-3/4"	42	42	42	42	42	42					
	1,260	1,260	1,260	1,260	1,260	1,260					
*11-3/4"	41	41	41	41	41						
	1,230	1,230	1,230	1,230	1,230						
*13-3/8"	30	30	30								
	900	900	900								

* THESE LARGER SIZES ARE UNSUITABLE FOR CRATE FRAMES AND ARE LOADED IN ROWS AND COLUMNS ON FLATBED TRAILERS WITH WOOD DUNNAGE BETWEEN ROWS AND SIDE FRAMES AT EACH DUNNAGE CROSS SLAT.

Appendix E

Technical Memorandum with
Mechanical Integrity Testing Results

Demonstration of Mechanical Integrity

Hydrostatic-Pressure Test of the IW1, 24-inch Outside Diameter Casing

Youngquist Brothers, Inc. (Contractor) performed a hydrostatic-pressure test on the 24-inch outside-diameter final casing of IW1 on June 8, 2003. Using $2^{7}/_{8}$-inch diameter, steel (tremie) tubing, the Contractor installed an inflatable packer assembly inside the 24-inch diameter casing and lowered the packer to a depth of 2,886 feet below pad level (bpl), measured from pad level to the inflation element centerline. The Contractor inflated the packer element. A temporary wellhead flange and stripper-head assembly was installed and the Contractor hydrostatically pressurized the casing with potable water (from the City of Port St. Lucie supply).

On June 8, 2003, the Contractor conducted a one-hour hydrostatic-pressure test of the 24-inch outside-diameter casing at an initial pressure of 154.2 pounds per square inch (psi). Pressure inside the casing remained relatively stable throughout the one-hour monitoring period; the casing pressure at the end of the one-hour test was 154.1 psi. The pressure change (0.1psi) is less than the 5 percent change (of the initial test pressure) allowed for during a one-hour pressure test per Florida Administrative Code Chapter 62-528. These results demonstrate that the final casing has internal mechanical integrity.

The Contractor slowly released the internal hydrostatic pressure on the 24-inch diameter casing and drained water from the casing into a 5-gallon bucket. The driller drained a total of approximately 47 gallons of water from the 24-inch diameter casing (this procedure provides assurance that the water column in the casing is open to the packed-off depth).

The test was witnessed by Lech Kwapinski, P. G., of ARCADIS and Jay Swartzentruber of Youngquist Brothers, Inc. The Florida Department of Environmental Protection (FDEP) Southeast District Office was informed of the pressure test, but did not attend to witness the test.

Annular Hydrostatic-Pressure Test of the IW1, 20-inch Outside-Diameter Tubing

On July 10, 2003, following the installation of the injection tubing assembly and annular fluid mixture, the Contractor successfully pressure tested the IW1 steel injection tubing, injection casing and YBI Positive Seal Packer™ by performing a hydrostatic-pressure test. The pressure test involved hydrostatically pressurizing the annulus between the 20-inch outside-diameter injection tubing (installed using a YBI Positive Seal-Packer™) and the 24-inch outside-diameter final casing. The Contractor conducted a one-hour annular-pressure test at an initial hydrostatic pressure of 150.3 psi. Pressure inside the annulus decreased 1.1 psi during the one-hour monitoring period. The annular pressure at the end of the one-hour test was 149.2 psi. The pressure change (1.1 psi) is less than the 5 percent change (of the initial test pressure) allowed during a one-hour pressure test per Florida Administrative Code Chapter 62-528. These results demonstrate internal mechanical integrity of the 20-inch injection tubing, 24-inch final casing and YBI Positive Seal-Packer™. The test was witnessed by Lech Kwapinski, P.G., of ARCADIS and Heidi Vandor of the Southeast District Office of the FDEP.

The Contractor then slowly released the internal hydrostatic pressure on the annular space and drained water from the annulus into a 5-gallon bucket. The driller drained a total of approximately 29 gallons of water from the annulus.

Deep Monitor Well MW1, Hydrostatic Pressure Test of Final Tubing

On June 25, 2003, using $2^{7}/_{8}$-inch diameter, steel tremie tubing, the Contractor installed an inflatable packer assembly into the 5.43-inch inside-diameter, fiberglass reinforced plastic (FRP), lower monitor-zone final tubing to a depth of 1,902 feet bpl (measured from pad level to the center of the packer's inflation element) and pressurized the packer's inflation element to 200 psi.

On June 26, 2003, the tubing was "topped off" with potable water and hydrostatically pressurized to 80 psi. The Contractor performed a one-hour hydrostatic pressure test on the MW1 lower monitor-zone FRP final tubing. The test began at 9:10 a. m. An ARCADIS representative witnessed the pressure test. During the test, a net pressure increase of 0.1 psi was observed after the one-hour monitoring period (likely caused by rising ambient air temperature) and the test was terminated at 10:10 a. m. The Contractor then released the hydrostatic pressure on the tubing (at the temporary tubing header) and drained approximately 1 gallon of water from the tubing.

Television Survey of IW1 Injection Casing

On June 16, 2003, the Contractor pumped fresh water into IW1 from the City of Port St. Lucie potable supply, at a rate of 125 gallons per minute (gpm), in order to improve picture clarity prior to a television (TV) survey of the 23-inch inside-diameter injection casing. Within an hour of the start of pumping, the Contractor began a television survey of the 24-inch outside-diameter injection casing. Due to turbid water from the City supply line (the Contractor was tied into the water line near the end of a dead-end leg), the television survey was postponed while the Contractor continued to pump fresh potable water into the injection casing overnight. On June 17, 2003, the Contractor increased the pumping rate to approximately 250 gpm (for 2 hours) before the survey resumed. The TV survey then was completed to a depth of 2,897 feet bpl.

The TV survey extended below the base of the inner mandrel of the YBI Positive-Seal Packer™ which was shown at 2,883 feet bpl on the video tape counter. However, the depths recorded by the video tape are corrected from the calibrated depth-counter readings and typically are greater than actual depths. For this reason, the depths shown on the television survey are likely 2 to 4 feet deeper than the actual depth. The survey tape counter indicates that the survey was stopped at a depth of approximately 2,907 feet bpl (which is likely at an actual depth of between 2,903 and 2,905 feet bpl).

The Contractor did not lower the camera tool to the base of the casing below the rubber funnel plug assembly during the survey due to a concern that the wireline might damage the polished, stainless steel surface of the inner mandrel of the YBI Positive-Seal Packer™.

Television Survey of IW1 Injection Tubing

A TV survey of the IW1 injection tubing, the base of the IW1 injection casing and the accessible portion of the open-hole was performed on July 10, 2003. The Contractor pumped potable water into the IW1 tubing until the well had been flushed with a total of approximately 45,000 gallons of water. The Contractor attached rubber pipe protectors to the wireline at 700-foot intervals during the survey. Water clarity was good and the condition of the injection tubing, tubing packer seat, injection casing seat and a portion of an open hole below the base of injection casing were clearly visible. The injection-tubing's internal (high-build glass-flake epoxy) coating was observed to be in good condition. The TV survey does not show features that may adversely impact the performance of the well. The 20-inch outside-diameter steel injection tubing coating appears to be in excellent condition. The TV survey was terminated at a depth of 3,030 feet bpl in the open-hole section of the well because of very poor water clarity.

High-Resolution Temperature Logging Results

On July 17, 2003, the Contractor mobilized a geophysical-logging truck and crew to the project site and performed "background" high-resolution temperature and gamma-ray logging of the injection well. The Contractor placed the combination Radioactive Tracer Survey (RTS)/Temperature tool in a standpipe assembly in order to access the well through a gate valve installed near the top of the IW1 wellhead. The testing began when the Contractor conducted a high-resolution temperature log from pad level to a depth of approximately 3,150 feet bpl under "static" conditions. The Contractor attached rubberized centralizers to the wireline at (approximately) 500-foot intervals in order to protect the tubing coating. Because the pack-off valve was opened to allow the installation of the wireline centralizers, the well was not completely shut in, or "static" during the temperature log. The temperature log plot is included as Attachment B. A differential-temperature log plot also is presented on the temperature log.

The logging tool could not be lowered below 3,150 feet bpl, which preventing logging of the remainder of the borehole (total drilled depth of the borehole was 3,350 feet bpl). It is considered likely that the nominal 22-inch borehole below 3,150 feet bpl was not accessible to the RTS tool because of the tool's length (25.5 feet) and the highly fractured and cavernous nature of the borehole between 3,040 feet and 3,190 feet bpl.

Logging downhole, the temperature log indicates a temperature above 81 degrees Fahrenheit (F) from pad level to approximately 90 feet bpl. The water column previously was suppressed with a salt slurry in order to perform installation of the 20-inch diameter injection tubing (the water level at the time of temperature and background gamma logging was approximately 25 feet bpl.). Below 90 feet bpl, the water column temperature very slowly increases with depth from 80.3 degrees F at 90 feet at an average rate of one degree F for every 900 feet of depth to approximately 1,850 feet bpl. Below 1,850 feet, the temperature in the well increased steadily and reached a peak of 83.5 degrees F at approximately 2,460 feet bpl. Minor and anomalous temperature variations noted on the log plot between 2,140 feet and 2,180 feet bpl, and between 2,590 feet and 2,720 feet bpl, are believed to be caused by binding and slippage either of the wireline at the pack-off valve (installed on the wellhead) or of the rubberized centralizers (installed on the wireline) on the surface of the tubing. Based on the log plot, the water-column temperature remains steady between approximately 2,460 feet bpl and approximately 2,505 feet bpl, and then begins a gradual decrease to approximately 81.9 degrees F at approximately 2,903 feet bpl. That depth closely corresponds to the top of the Townley™ Funnel Plug attached to the base of the 24-inch casing. The temperature of the water column remains relatively steady between approximately 2,903 feet and 2,910 feet bpl, decreasing only very slightly in that interval. The temperature inside the injection tubing and injection casing is a function of a combination of factors, including the water temperature of the formation, the number, diameter and wall thickness of casings that "cover" the formation, the density and quality of the cement slurry used during casing cementing and the presence of a coating on the inside of the injection tubing. The coating and annular fluid both will tend to "smooth" the temperature differences present outside the tubing and casings.

Below 2,910 feet bpl (approximately corresponding to the top of the open hole, and just below the base of the 22-inch steel casing extension to the funnel plug), water-column temperature rapidly decreases to 79.0 degrees F at 2,935 feet. The water temperature then gradually decreased to 78.8 degrees F from 2,935 feet to 3,020 feet bpl. At 3,020 feet bpl, the water column temperature increases 0.6 degrees F to approximately 79.4 degrees F within a 2- to 3-foot interval. The temperature reading decreases slowly below this depth to approximately 79.2 degrees F at approximately 3,065 feet bpl.

The temperature readings below 3,065 feet indicate that water temperature generally decreases to 3,130 feet bpl, with the exception of unusually erratic readings at 3,090 feet bpl and from 3,125 feet to 3,130 feet bpl suggesting that highly permeable fractures exist at those depths.

Except for the erratic readings between 3,138 feet and 3,141 feet bpl, the temperature increased from approximately 78.0 degrees F to 78.3 degrees F between 3,130 feet and 3,150 feet bpl. The logging tool could not be lowered below 3,150 feet bpl, which preventing temperature logging of the remainder of the borehole.

Radioactive Tracer Survey Results

On July 17, 2003, the Contractor placed the RTS tool into a standpipe assembly which then was raised and attached to the IW1 wellhead for the "background" gamma-ray logging. The Contractor attached the standpipe assembly to a valve connected to the top of the wellhead. Lech Kwapinski, P.G., of ARCADIS was on the site to observe the start of the background gamma-ray log. A schematic diagram of the RTS combination logging tool is presented on the RTS log.

First Gamma-Ray Log

On July 17, 2003, the first Gamma-Ray Log (GRL), an out-of-position "background" GRL, was conducted from approximately 3,140 feet bpl up to pad level at a rate of approximately 47 feet per minute.

The logging tool consists of 3 gamma-ray detectors, one near the top (GRT), middle (GRM) and bottom (GRB) of the tool. An ejector (to discharge Iodine 131) is located between the GRT and the GRM. The "background" GRL is shown on the last section of the RTS log. The background GRL was "memorized" and subsequently reprinted (merged) on each subsequent "out-of-position" logging pass to serve as a means of comparison. Starting from the back section of the log, the various surveys are discussed in the same sequence as they were performed. A magnetic casing-collar locator (CCL) attached to the RTS tool indicated the base of the outer (injection) casing at a depth of approximately 2,909 feet bpl. The base of injection tubing (and the YBI packer mandrels) was located at a depth of approximately 2,879 feet bpl.

After background gamma-ray logging was complete to pad level, the logging tool and standpipe were removed from the well and the RTS tool's ejector chamber was loaded with 10 Millicuries (mCi) of liquid Sodium Iodide (Iodine 131). The logging tool was placed inside the stand pipe (which was raised and attached to the wellhead assembly) and lowered down the injection tubing.

Based on a telephone conversation between Joe May, P. G. (Southeast District FDEP office UIC Section Program Manager) and Mike Waldron, P. G. of ARCADIS the on site lake water was acceptable for the high-rate RTS test and the pending short-term injection test. A sample from the lake was collected on April 4, 2003 and analyzed for Primary and Secondary Drinking Water Standard and "municipal wastewater minimum criteria" parameters. The Contractor began injecting fresh water from the lake located on the site in order to create a fresh water "bubble" for the RTS logging; approximately 210,000 gallons were pumped into IW1 at pumping rates varying from 2,000 gallons per minute (gpm) to 9,000 gpm. After pumping approximately 210,000 gallons, the Contractor stopped pumping lake water into IW1 and the IW1 wellhead pressure stabilized at approximately 28 psi.

Dynamic (Low Flow) Monitoring "Test #1" [DYNAMIC TEST #1 (74 gpm)]

On July 17, 2002 at 11:45 a.m., the logging tool was positioned at 2,911.5 feet bpl (referenced to the bottom of the tool) with the ejector located (at approximately 2,898 feet bpl) 5 feet above the top of the outer-casing funnel plug assembly at approximately 2,903 feet bpl.

Time-drive monitoring for a low flow-rate "dynamic" test (DYNAMIC TEST #1) is shown in the next log segment. For this test, an injection flow rate of approximately 74 gallons per minute (gpm) of fresh water (potable water from the City of Port St. Lucie supply) was established into the injection tubing. The mark, arrow and text across the left and center track of the log indicates the time at which the tracer ("slug") was ejected. Each standard division represents 20 seconds on the "time-drive monitoring" log plots. The elapsed seconds since monitoring began are shown on the left track and the averaged number of API units are displayed on the center of each track (Note: "API" units refers to standard American Petroleum Institute units; 16.5 API units are equivalent to 1 microgram ra-eq/ton). A 1.5-mCi slug of Iodine 131 was ejected at 11:52:00 a. m. and monitored for 60 minutes after release. The slug first was detected by the GRM (middle) detector within approximately 15 seconds after release. Readings at the middle detector (GRM) increased from background values of approximately 20 API units to nearly 1800 API units within the next 20 seconds. The GRM reading spiked within about 1 minute, then began to decrease. After 2 minutes and 40 seconds, the GRM detector (located at 2,901 feet bpl) shows a minor increase for about one minute, likely from the slug moving upward outside the top of the funnel plug assembly (located at approximately 2,903 feet). Readings at the middle detector then generally decreased for the remainder of the monitoring period.

Within 1 minute and 40 seconds of ejection, the slug encountered the GRB (bottom) detector, which was reading approximately 20 API units prior to the detection. The readings spiked quickly (within about 30 seconds), then decreased and increased again within 1 minute and 20 seconds. The readings remained steady for another minute and then generally decreased for the remainder of the monitoring period.

Readings from the GRT (at a depth of approximately 2,888.5 feet bpl) show a slight detection indicating "saturation" of the GRB detector at 1 minute and 40 seconds after ejection. The GRT also detected the slug outside the outer casing about 3 minutes and 45 seconds after ejection, increasing from "background" readings of less than 20 API units to approximately 41 API units at 5 minutes after ejection (again, indicating a portion of the original slug moving upward outside the top of the funnel plug assembly). Readings decreased to background levels during the next 4 minutes and remained below 20 API units for the remainder of the one-hour monitoring period.

Second Gamma-Ray Log [Log Out of Position (LOP #1)]

The second GRL, an "out-of-position" log plot of the gamma-ray levels while the RTS tool is moved up the well, is presented in the next section (as the first Log Out of Position, or "LOP #1"). This GRL was conducted from 2,911 feet to 2,694 feet bpl.

The GRT log results closely resemble the original background data. Little evidence of tool staining was observed. The injection of potable water continued during the LOP; the Contractor maintained injection of potable water at a rate of approximately 69 gpm.

Dynamic (Low Flow) Monitoring Test #2 [DYNAMIC TEST #2 (69 gpm)]

The logging tool was positioned (at approximately 2,911 feet bpl) with the ejector located at approximately 2,898 feet bpl, 5 feet above the top of the outer casing funnel plug assembly (at approximately 2,903 feet bpl). An injection flow rate of approximately 69 gpm was maintained

into the injection tubing. Time-drive monitoring began and a 2-mCi slug of Iodine 131 was ejected at a depth of 2,898 feet. Time-drive monitoring for the second low flow-rate "dynamic" test is shown in the next log segment.

The slug reached the middle detector within the first 20 seconds of monitoring. Readings from the GRM, after increasing rapidly, stabilized for nearly one minute then started to decrease. After 3 minutes and 40 seconds, the GRM detector (located at 2,901 feet bpl) shows a minor increase for about one minute, likely from the slug moving upward outside the funnel plug assembly (located at approximately 2,903 feet bpl).

The slug reached the lower detector (GRB) within approximately 1 minute and 20 seconds of ejection and the GRB readings stabilized for nearly 1 minute and 30 seconds before gradually decreasing for the remainder of the one-hour monitoring period. Readings from the GRT (at a depth of approximately 2,888.5 feet bpl) detected the saturation of the GRB detector at 1 minute and 35 seconds after ejection. The GRT also detected the slug outside the outer casing about 4 minutes after ejection, increasing slightly from "background" readings of less than 20 API units to approximately 34 API units at 4 minutes and 20 seconds after ejection. Readings decreased to background levels during the next 3 minutes and remained near 20 API units for the remainder of the one-hour monitoring period.

Third Gamma-Ray Log (Log Out of Position)

Following the time-drive monitoring data, the third GRL (another "out-of-position" pass) results are presented (LOP #2). This LOP was conducted from 2,911 feet bpl to approximately 2,685 feet bpl. The injection of potable water continued during this LOP; the Contractor maintained injection of potable water at a flow rate of approximately 69 gpm into the injection tubing.

The GRT log results closely resemble the "background" GRL. Minor tool staining is apparent, based on slightly elevated GRM and GRB detector readings below 2,860 feet bpl. As the RTS tool was raised above 2,860 feet bpl, the minor tool staining was no longer noticeable.

Fourth Gamma-Ray Log (LAF #2)

The fourth GRL, a "log after flush" (or LAF #2), is presented in the next section. This "out-of-position" log was conducted from 2,911 feet to 2,698 feet bpl. The Contractor maintained injection of potable water at a flow rate of approximately 69 gpm into the injection tubing. In order to minimize the use of the lake water, lake water was not used to flush the RTS tool prior to this LAF pass. Both the GRT and GRB logs very closely resemble the original background data (first GRL). The GRB log plot "tracks" the background GRL above 2,902 feet bpl.

Dynamic (High Rate) Monitoring Test #3 [Test #3 (5,200 gpm)]

Next, the logging tool again was positioned with the ejector located at a depth (2,898 feet bpl), about 5 feet above the casing seat. Utilizing diesel-powered pumps and water from the onsite lake, an injection flow rate of approximately 5,200 gpm was established into the injection tubing. Time-drive monitoring began and a 3.5-mCi slug of Iodine 131 was ejected. Time-drive monitoring results for the third (high-rate) dynamic test are shown in the next log segment (Test #3 [5,200 gpm]).

The slug appears to reach the middle (GRM) and bottom (GRB) detectors almost immediately. The slug was displaced below the GRM and GRB over the next 1 minute and 40 seconds. Although both detectors were slightly stained, the GRM and GRB readings remained relatively steady for the remainder of the 30-minute monitoring period.

Readings from the GRT (upper detector) remained steady between 16 and 23 API units through the entire 30-minute monitoring period.

Fifth Gamma-Ray Log (LOP #3)

Following the time-drive monitoring data, the fifth GRL (another "out-of-position" pass) results are presented. This LOP (LOP #3) was conducted from 2,911 feet to 2,711 feet bpl.

The GRT log results closely resemble the "background" GRL results and the results of the previous GRT LAF #2 plot. No evidence of staining was apparent during this log. In general, both the GRT and GRB results correlate very well with the results of the first GRL.

Sixth Gamma-Ray Log (Final Gamma Ray)

The RTS tool was lowered to 3,346 feet bpl. The sixth and final GRL (an out-of-position log) was performed from 3,150 feet bpl to pad level. Between 3,150 feet and 3,050 feet bpl, this log (FINAL GRL) was conducted with the remaining 3 MCI of Iodine 131 in the RTS tool. Between 3,050 feet and 3,030 feet bpl, the log recorded high gamma-ray levels as the remaining 3 mCi of Iodine (in the ejector chamber) was discharged from the RTS tool ("dumped"). Above 3,030 feet bpl, the GRT and GRB results closely track the respective background log plots from this interval. Except for near the outer casing seat, the final background readings from the GRT, GRB and GRM closely resemble the original background data. A "braided" pattern exists (above 2,890 feet bpl) between the final GRL log results and the "memorized" background GRL, providing evidence of casing and cement integrity. Following the completion of the survey, the Contractor removed the RTS tool and returned the wellhead to its original configuration.

Interpretation

The GRL results indicate that the cement sheath around the outer (24-inch outside-diameter) injection casing is intact and a good bond is present between the cement and the formation, as well as between the casing and the cement, above a depth of approximately 2,900 feet bpl. Based on the RTS and temperature log results described above, the injection zone is located at approximately 2,900 feet bpl in the immediate vicinity of IW1. The RTS logging results suggest that an adequate degree of confinement is provided by the formation (exists) above that depth.

ARCADIS

HYDROSTATIC PRESSURE TEST DATA
DEEP MONITOR WELL MW1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM
PORT ST. LUCIE, FLORIDA

Hydrostatic-Pressure Test of the Lower Monitoring Zone, $6^{5}/_{8}$-inch Diameter (5.43-inch Inside-Diameter), Fiberglass Reinforced Plastic Tubing

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Date: June 26, 2003

Project: City of Port St. Lucie - Westport Injection Well System

ARCADIS
Project No. PF001153.0003

Time (hours)	Delta Time (min.)	Pressure (psi)
0910	0	80.1
0915	5	80.1
0920	10	80.2
0925	15	80.2
0930	20	80.2
0935	25	80.1
0940	30	80.1
0945	35	80.1
0950	40	80.1
0955	45	80.1
1000	50	80.2
1005	55	80.2
1010	60	80.2

Note: "McDaniel" test gauge calibrated May 8, 2003, Serial # 8064187.

I, Michael J. Waldron, certify that the above data is true and accurate.

7-21-03

Michael J. Waldron, PG

Kimball Electronic Laboratory, Inc.

Precision Measurement Equipment Specialists

Certificate of Calibration # 120793

YOUNGQUIST BROTHERS, INC.
15465 PINE RIDGE ROAD
FORT MYERS, FL 33908

Customer P.O.# N/A
Manufacturer: MCDANIEL
Model Number: 160 PSI
Nomenclature: PRESSURE GAUGE
SN/ID/Asset # 8064187
Bar Code # N/A
Specifications: +/-0.25% FS
Cal. Procedure: MP16/C1-NAV
KELI Control # YOU-55274

The accuracy and calibration of this instrument is traceable to the National Institute of Standards and Technology through certified standards maintained in the laboratories of KELI Labs., Inc. or derived by the ratio of self-calibration techniques and is guaranteed to meet published specifications. The metrology procedures utilized satisfy the requirements set forth in ANSI/NCSL 540-1.

In Tolerance When Received? Y Cal. Tech:098 Relative Humidity: 50% Temperature: 72 Deg. F

In-House [Y] Cal. Cycle: 12 Mos. Calibration Date: 05/08/2003 Calibration Due: 05/08/2004

Remarks: PERFORMED ROUTINE CALIBRATION/CERTIFICATION

Standards Used

I.D. #		Cal. Date	Cal. Due
391	EATON UPS 3000BAA PRESSURE INDICATOR	12/06/2001	12/06/2003

Kimball Electronic Laboratory, Inc.

Precision Measurement Equipment Specialists

Certificate of Test # 120793

Customer: YOUNGQUIST BROTHERS, INC.
15465 PINE RIDGE ROAD
FORT MYERS, FL 33908

Manufacturer/Model: MCDANIEL 160 PSI
Nomenclature: PRESSURE GAUGE
S.N./I.D. 8064187 KELI # YOU-55274
W.O. # 267537 Customer P.O.# N/A

Range	Nominal	Pre-Cal	Post-Cal	Low Limit	High Limit
160 PSI	30	30.0	30.0	29.6	30.4
	60	60.0	60.0	59.6	60.4
	90	89.9	89.9	89.6	90.4
	120	119.8	119.8	119.6	120.4
	160	159.7	159.7	159.6	160.4

The accuracy and calibration of this instrument is traceable to the National Institute of Standards and Technology through certified standards maintained in the laboratories of KELI Labs., Inc. or derived by the ratio of self-calibration techniques and is guaranteed to meet published specifications. The metrology procedures utilized satisfy the requirements set forth in ANSI/NCSL 540-1.

Cal. Procedure: MP16/C1-NAV Revd. in tol. Y Tech: 098 Temp. (F): 72 R.H.% 50
Specifications: +/-0.25% FS In-House: Y Cal. Date: 05/08/2003 Cal. Due: 05/08/2004
Remarks: PERFORMED ROUTINE CALIBRATION/CERTIFICATION

I.D. #	Standards Used	Cal. Date	Cal. Due
[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

ARCADIS

HYDROSTATIC PRESSURE TEST DATA
INJECTION WELL NO. 1
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM
PORT ST. LUCIE, FLORIDA

Hydrostatic Pressure Test on the 24-inch Outside Diameter, 0.500-inch Wall Thickness Steel Injection Casing

Packer Setting Depth: 2,886 Feet Below Pad Level

Date: June 8, 2003

Project: City of Port St. Lucie – Westport Injection Well System, Injection Well No.1

ARCADIS Project No. PF001153.0003

Time (hours)	Delta Time (min.)	Pressure (psi)
2210	0	154.2
2215	5	154.2
2220	10	154.3
2225	15	154.4
2230	20	154.3
2235	25	154.2
2240	30	154.2
2245	35	154.2
2250	40	154.2
2255	45	154.2
2300	50	154.1
2305	55	154.1
2310	60	154.1

Note: "McDaniel" test gauge calibrated February 3, 2003, Serial # IC118.

I, Michael J. Waldron, certify that the above data is true and accurate.

7-21-03

Michael J. Waldron, PG

Kimball Electronic Laboratory, Inc.

Precision Measurement Equipment Specialists

Certificate of Calibration # 116053

YOUNGQUIST BROTHERS, INC.
15465 PINE RIDGE ROAD
FORT MYERS, FL 33908

Customer P.O.# N/A
Manufacturer: MCDANIEL
Model Number: 300 PSI
Nomenclature: PRESSURE GAUGE
SN/ID/Asset # IC118
Bar Code # N/A
Specifications: +/-.25%
Cal. Procedure: MP16/G2
KELI Control # YOU-94864

The accuracy and calibration of this instrument is traceable to the National Institute of Standards and Technology through certified standards maintained in the laboratories of KELI Labs., Inc. or derived by the ratio of self-calibration techniques and is guaranteed to meet published specifications. The metrology procedures utilized satisfy the requirements set forth in ANSI/NCSL 540-1.

In Tolerance When Received? Y Cal. Tech:098 Relative Humidity: 50% Temperature: 72 Deg. F

In-House [Y] Cal. Cycle: 12 Mos. Calibration Date: 02/03/2003 Calibration Due: 02/03/2004

Remarks: PERFORMED ROUTINE CALIBRATION/CERTIFICATION

Standards Used

I.D. #		Cal. Date	Cal. Due
609	DRESSER PTE-1 PRESSURE CALIBRATOR	07/13/2002	07/13/2003
610	DRESSER HSQ-2 PRESSURE TRANSDUCER	07/13/2002	07/13/2003

Quality Assurance

Kimball Electronic Laboratory, Inc.

Precision Measurement Equipment Specialists

Certificate of Test # 116053

Customer: YOUNGQUIST BROTHERS, INC.
15465 PINE RIDGE ROAD
FORT MYERS, FL 33908

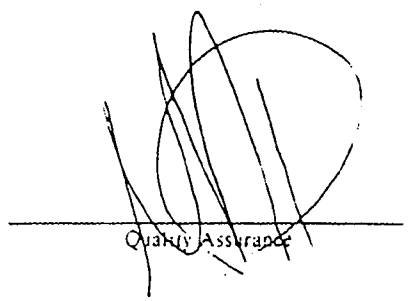
Manufacturer/Model: MCDANIEL 300 PSI
Nomenclature: PRESSURE GAUGE
S.N./I.D. IC118 KELI # YOU-94864
W.O. # 260381 Customer P.O.# N/A

Range	Nominal	Pre-Cal	Post-Cal	Low Limit	High Limit
300 PSI	50	49.44	49.44	49.25	50.75
	100	99.46	99.46	99.25	100.75
	150	149.46	149.46	149.25	150.75
	200	199.62	199.62	199.25	200.75
	300	299.70	299.70	299.25	300.75

The accuracy and calibration of this instrument is traceable to the National Institute of Standards and Technology through certified standards maintained in the laboratories of KELI Labs., Inc. or derived by the ratio of self-calibration techniques and is guaranteed to meet published specifications. The metrology procedures utilized satisfy the requirements set forth in ANSI/NCSL 540-1.

Cal. Procedure: MP16/G2 Rcvd. in tol. Y Tech: 098 Temp. (F): 72 R.H.% 50
Specifications: +/-.25% In-House: Y Cal. Date: 02/03/2003 Cal. Due: 02/03/2004
Remarks: PERFORMED ROUTINE CALIBRATION/CERTIFICATION

I.D. #	Standards Used	Cal. Date	Cal. Due
609	DRESSER PTE-1 PRESSURE CALIBRATOR	07/13/2002	07/13/2003
611	DRESSER HSQ-2 PRESSURE TRANSDUCER	07/13/2002	07/13/2003



5681 West 21st Lane, Hialeah, FL 33016 ● Ph (305) 822-5792 Fax (305) 362-3125

ARCADIS

HYDROSTATIC PRESSURE TEST DATA
INJECTION WELL NO. 1 (IW1)
CITY OF PORT ST. LUCIE WESTPORT INJECTION WELL SYSTEM
PORT ST. LUCIE, FLORIDA

Annular Hydrostatic-Pressure Test of the 20-inch Outside-Diameter, 0.438-inch Wall Thickness Internally-Coated Steel Injection Tubing

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Date: July 10, 2003

Project: City of Port St. Lucie – Westport Injection Well System, Injection Well IW1

ARCADIS Project No. RF001121.0001.PF001

Time (hours)	Delta Time (min.)	Pressure (psi)
1055	0	150.3
1100	5	150.2
1105	10	150.1
1110	15	150.0
1115	20	150.0
1120	25	149.9
1125	30	149.8
1130	35	149.7
1135	40	149.6
1140	45	149.5
1145	50	149.4
1150	55	149.3
1155	60	149.2

Note: "McDaniel" test gauge calibrated February 3, 2003, Serial # IC118.

I, Michael J. Waldron, certify that the above data is true and accurate.

7-21-03

Michael J. Waldron, P.G.

Kimball Electronic Laboratory, Inc.
Precision Measurement Equipment Specialists

Certificate of Calibration # 116053

YOUNGQUIST BROTHERS, INC.
15465 PINE RIDGE ROAD
FORT MYERS, FL 33908

Customer P.O.# N/A
Manufacturer: MCDANIEL
Model Number: 300 PSI
Nomenclature: PRESSURE GAUGE
SN/ID/Asset # IC118
Bar Code # N/A
Specifications: +/-.25%
Cal. Procedure: MP16/G2
KELI Control # YOU-94864

The accuracy and calibration of this instrument is traceable to the National Institute of Standards and Technology through certified standards maintained in the laboratories of KELI Labs., Inc. or derived by the ratio of self-calibration techniques and is guaranteed to meet published specifications. The metrology procedures utilized satisfy the requirements set forth in ANSI/NCSL 540-1.

In Tolerance When Received? Y Cal. Tech:098 Relative Humidity: 50% Temperature: 72 Deg. F

In-House [Y] Cal. Cycle: 12 Mos. Calibration Date: 02/03/2003 Calibration Due: 02/03/2004

Remarks: PERFORMED ROUTINE CALIBRATION/CERTIFICATION

Standards Used

I.D. #		Cal. Date	Cal. Due
609	DRESSER PTE-1 PRESSURE CALIBRATOR	07/13/2002	07/13/2003
610	DRESSER HSQ-2 PRESSURE TRANSDUCER	07/13/2002	07/13/2003

Quality Assurance

Kimball Electronic Laboratory, Inc.

Precision Measurement Equipment Specialists

Certificate of Test # 116053

Customer: YOUNGQUIST BROTHERS, INC.
15465 PINE RIDGE ROAD
FORT MYERS, FL 33908

Manufacturer/Model: MCDANIEL 300 PSI
Nomenclature: PRESSURE GAUGE
S.N./I.D. IC118 KELI # YOU-94864
W.O. # 260381 Customer P.O.# N/A

Range	Nominal	Pre-Cal	Post-Cal	Low Limit	High Limit
300 PSI	50	49.44	49.44	49.25	50.75
	100	99.46	99.46	99.25	100.75
	150	149.46	149.46	149.25	150.75
	200	199.62	199.62	199.25	200.75
	300	299.70	299.70	299.25	300.75

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Cal. Procedure: MP16/G2 Rcvd. in tol. Y Tech: 098 Temp. (F): 72 R.H.% 50
Specifications: +/-.25% In-House: Y Cal. Date: 02/03/2003 Cal. Due: 02/03/2004
Remarks: PERFORMED ROUTINE CALIBRATION/CERTIFICATION

I.D. #	Standards Used	Cal. Date	Cal. Due
609	DRESSER PTE-1 PRESSURE CALIBRATOR	07/13/2002	07/13/2003
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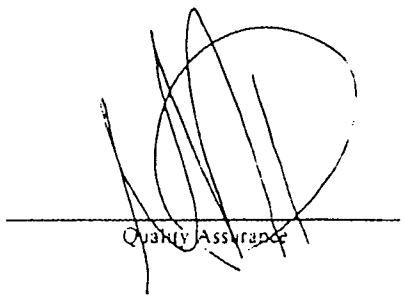

Quality Assurance

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