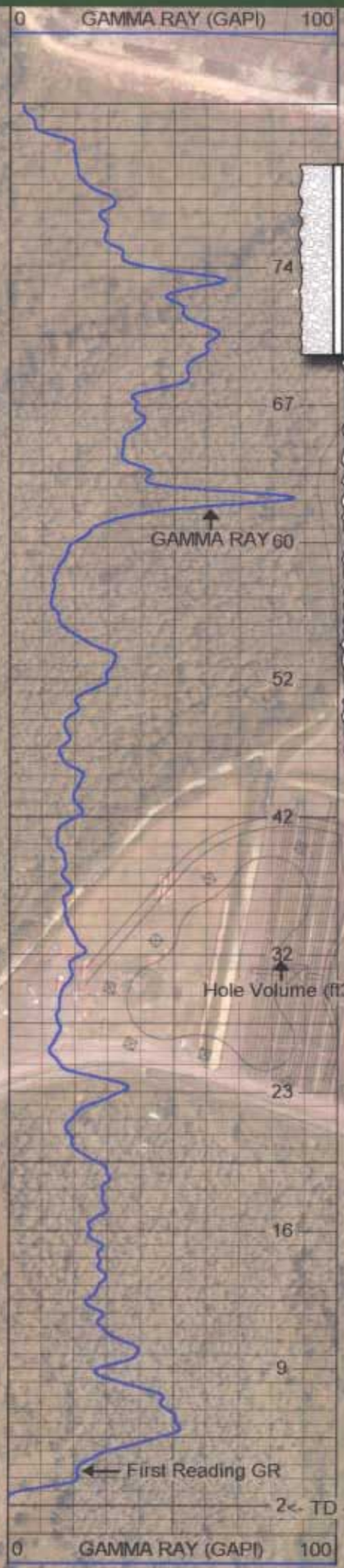

P-1

Wellfield Completion Report for the Town of Ave Maria Wells P-1 through P-3

P-2

P-3

Prepared by:

CH2MHILL

June 2005

Contents

Appendixes

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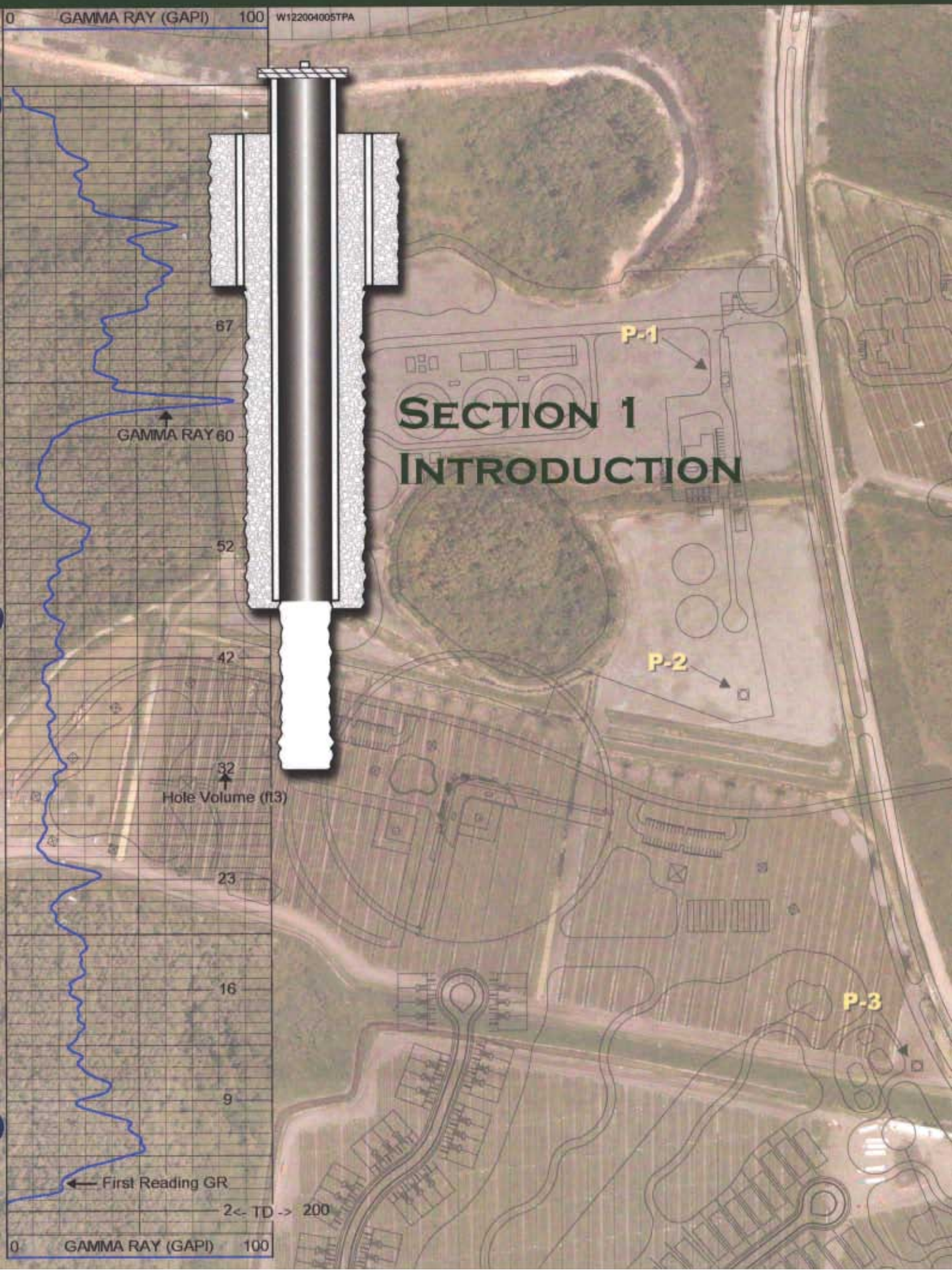
VOLUME II

Tables **Page**

Figures

Acronyms and Abbreviations

bls	Below land surface
cu ft	Cubic feet
FAC	Florida Administrative Code
ft	Feet
ft^2/d	Squared feet per day
gpd	Gallons per day
gpd/ft	Gallons per day per foot
gpm	Gallons per minute
gpm/ft	Gallons per minute per foot
ID	Inside diameter
MCL	Maximum contaminant level
µS/cm	Microseimans per centimeter
mg/L	Milligrams per liter
ND	Not detected
NPT	National Pipe Thread
NTD	New Town Development
OD	Outside diameter
pCi/L	Picocuries per liter
psi	Pounds per square inch
PVC	Polyvinyl Chloride
SDR	Standard Dimension Ratios
SFWMD	South Florida Water Management District
T	Transmissivity
TDS	Total dissolved solids
µg/L	Micrograms per liter
WUP	Water Use Permit



Section 1
Introduction

SECTION 1

Introduction

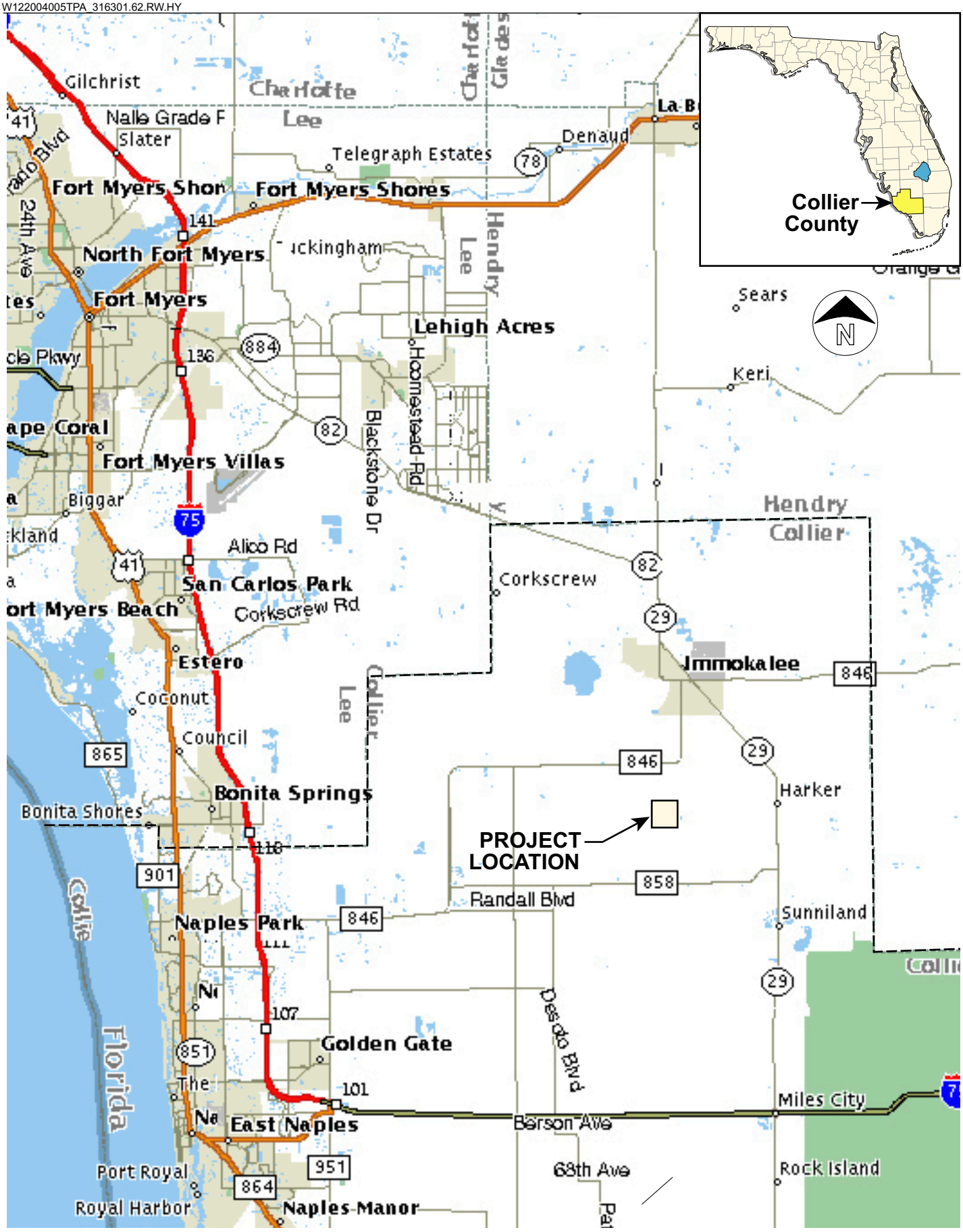
A new town, Ave Maria, and an associated university, Ave Maria University, is under development in Collier County Florida. The Ave Maria Utility Company will be providing water and wastewater infrastructure for the proposed town and university. CH2M HILL has been tasked with designing, constructing, and operating the water supply and treatment facilities, as well as the wastewater treatment and disposal facilities.

The focus of this report is to summarize the construction and testing of the production wells that will supply the raw water source for membrane treatment at the Ave Maria water treatment facility. As part of this project, three wells where constructed into the lower Tamiami aquifer. **Figure 1-1** is a location map of the wellfield. **Figure 1-2** presents a detailed site map showing the location of each well.

CH2M HILL served as the engineer of record for the design, construction, and testing of the production wells. Diversified Drilling Corporation of Fort Myers, Florida was selected as the prime contractor for construction of the production wells. MV Geophysical Surveys, Inc. was responsible for conducting geophysical logging operations during construction of the wells. Background water quality analysis was performed by Sanders Laboratory of Nokomis, Florida.

Typically, well construction permitting in southwest Florida is regulated by the South Florida Water Management District (SFWMD); however, in Collier County, the permit is issued directly from the county. At the time of the proposed drilling start date, the water use permit (WUP) for the Ave Maria University and Town was still in the review process and had not been issued. Since the proposed wells were associated with the WUP, a production well construction permit could not be obtained. To maintain the construction schedule, the wells were permitted as "test" wells. Permits were obtained by the drilling contractor prior to construction activities. Following completion of the wells, the contractor submitted well completion report forms for each well to the SFWMD. After the water use permit (WUP) for the Ave Maria University and Town was issued, the "test" wells were re-permitted as supply wells. In the WUP (No. 11-02298-W), the production wells are designated PWS-1 through PWS-3. However, in this report, the wells are designated Wells P-1 through P-3. Copies of the well construction permits and well completion reports for Wells P-1 through P-3 are provided in **Appendix A.**

The results of the construction and testing of production Wells P-1 through P-3 are outlined in the following sections of this report.



Source: 2004 MapQuest.com, Inc.

Scale in Miles
0 2 5

FIGURE 1-1
Ave Maria Project Location
Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

CH2MHILL

W122004005TPA_316301.62.RW.HY

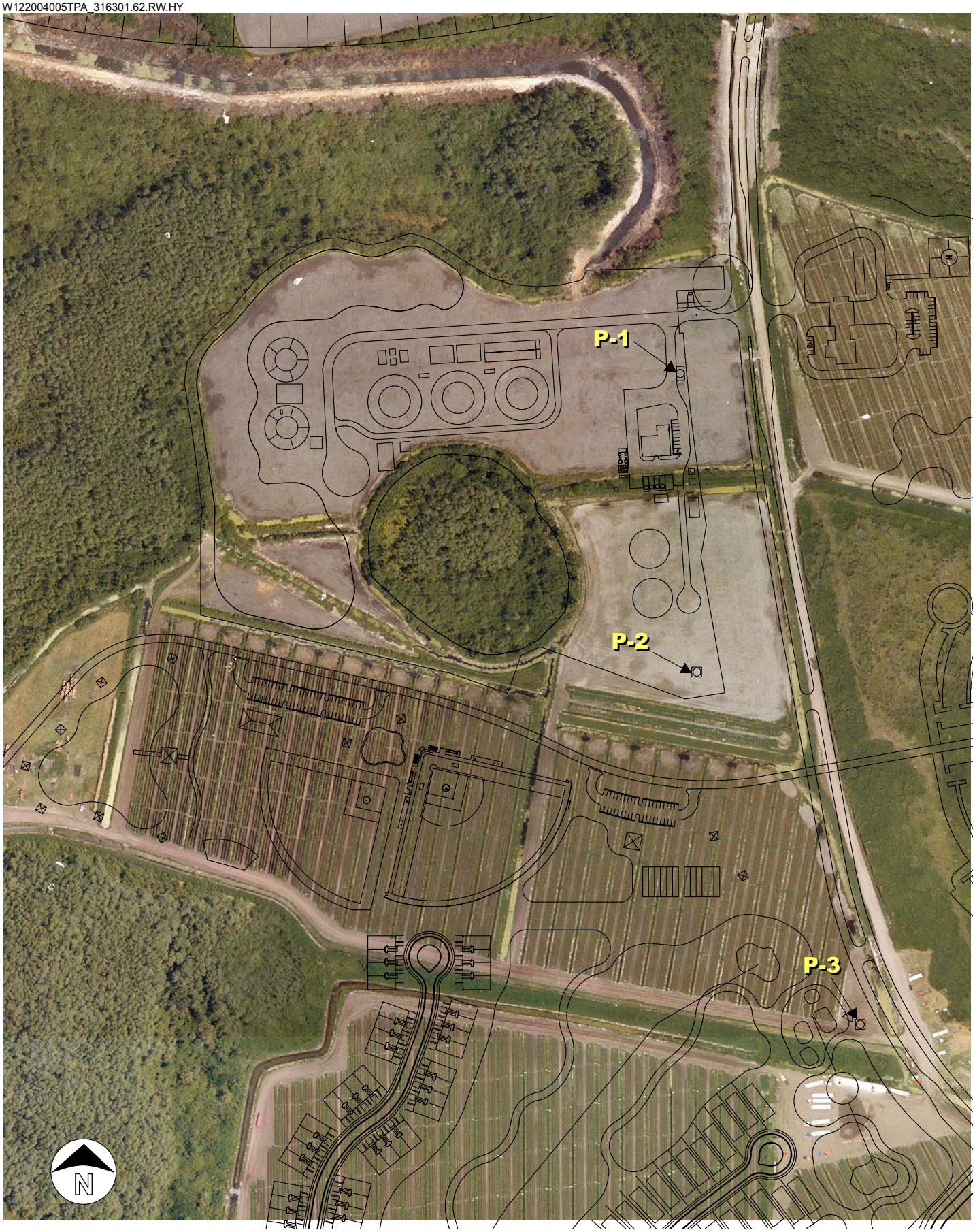


FIGURE 1-2
Production Well Locations
Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

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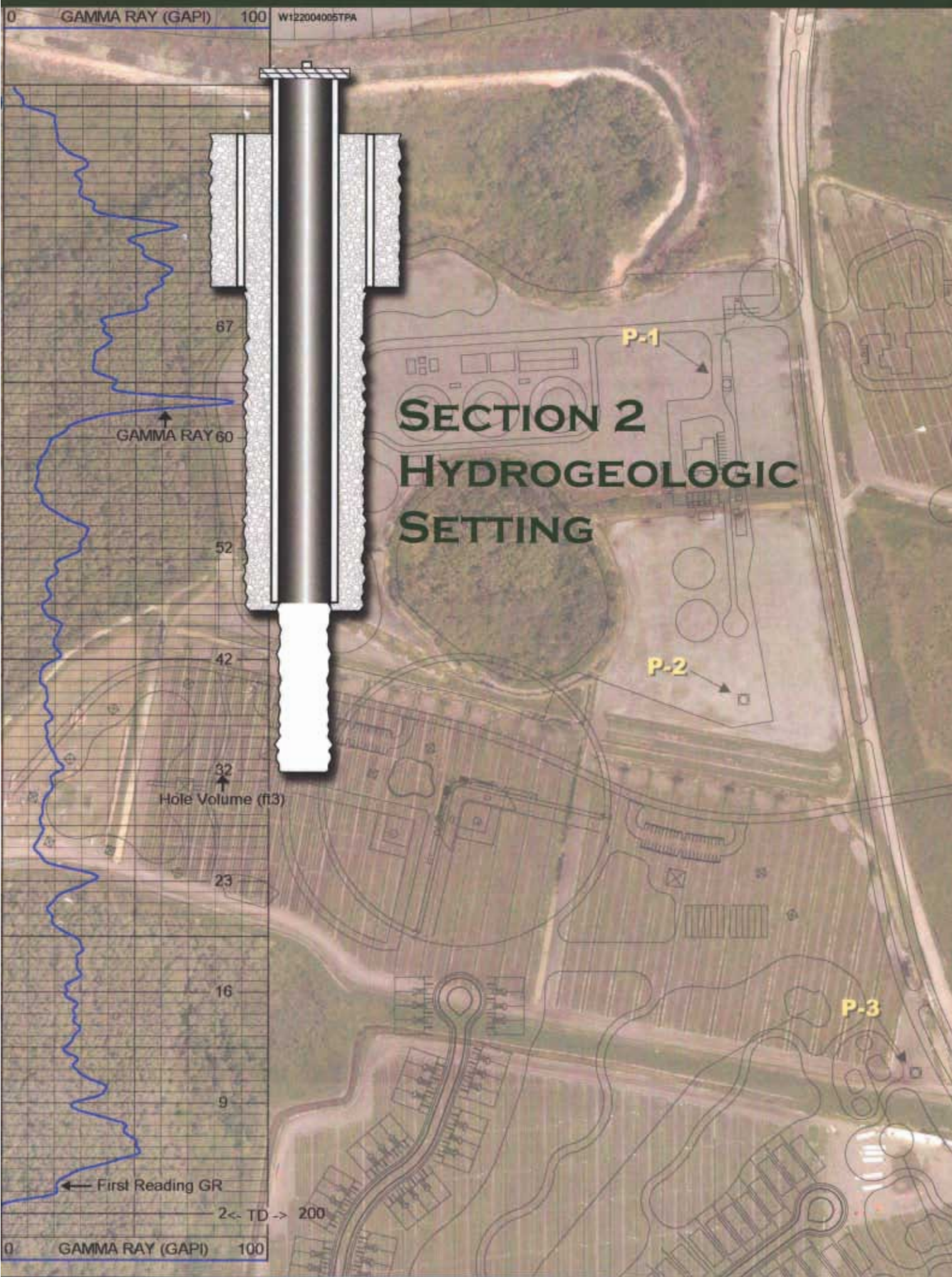


Section 2 Hydrogeologic Setting

SECTION 2

Hydrogeologic Setting

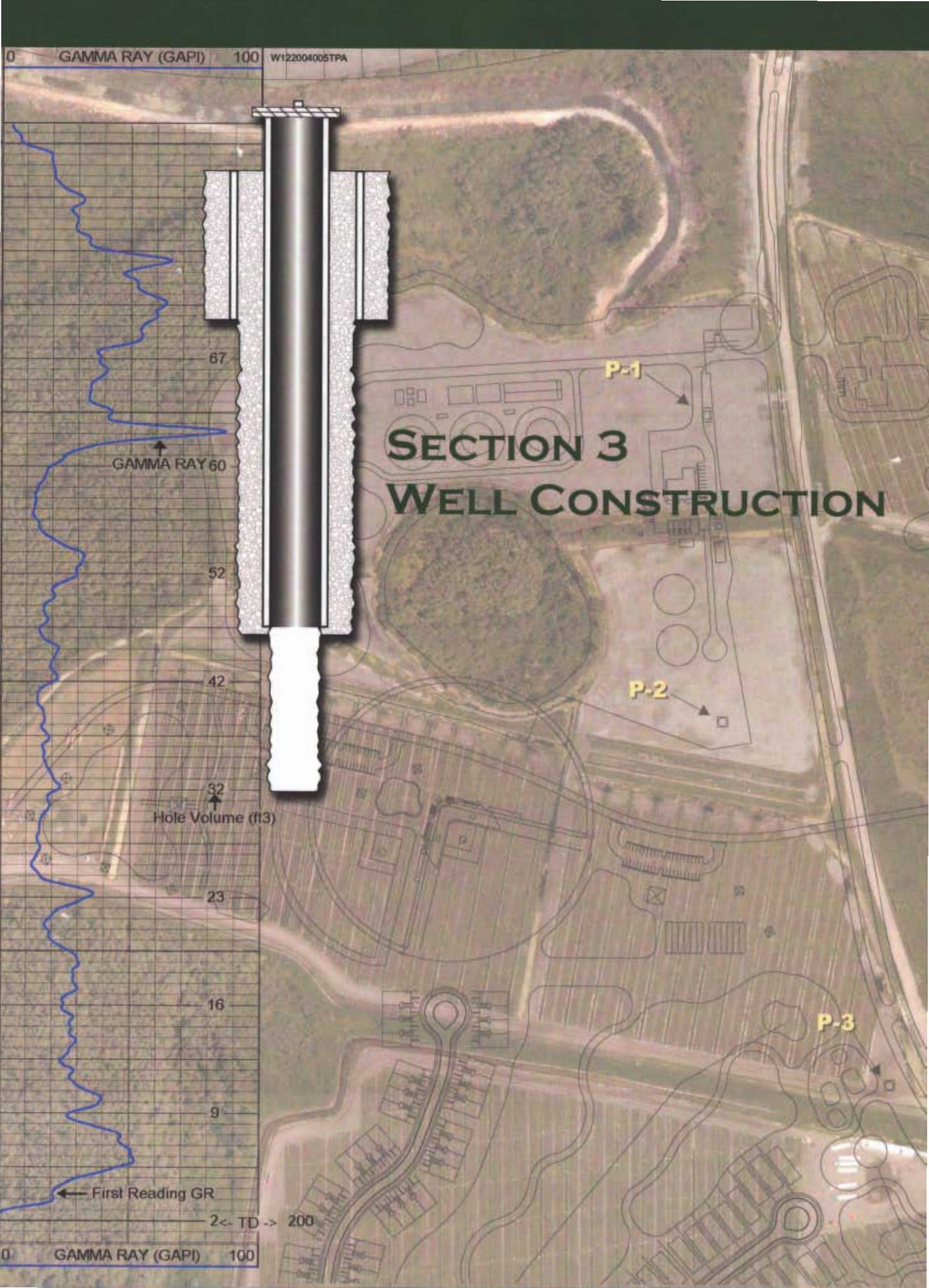
Groundwater in Collier County's aquifer systems are developed within a thick carbonate platform which overlies the Early Jurassic period (150 to 195 million years old) basement rocks. The sediments consist primarily of carbonates and Miocene-age siliciclasitics. Sediments within this carbonate platform range in age from Early Jurassic to Recent. The aquifer systems in the Ave Maria project location are contained within sediments ranging in age from late Paleocene (55 million years old) to Holocene (Recent).

2.1 Surficial Aquifer System

The Surficial Aquifer System includes the Surficial aquifer and lower Tamiami aquifer. The hydrogeologic unit of importance at the project location is the lower Tamaimi aquifer. The lower Tamiami aquifer is separated from the unconsolidated surficial deposits by a confining aquitard consisting of varying amounts of phosphatic clay. The surficial aquifer extends to approximately 30 feet below land surface (bls) near the project location. The confining unit that divides the surficial aquifer and the lower Tamiami aquifer begins at approximately 30 feet bls and is between 20 feet to 40 feet thick at the project site. The lower Tamiami aquifer underlies the confining unit described above, and has a vertical thickness of approximately 110 feet to 120 feet at the wellfield location. This aquifer yields moderate to large amounts of water. The lower Tamiami aquifer will supply the raw ground water for treatment at the Ave Maria water treatment facilities.

2.2 The Intermediate Aquifer System

The Intermediate Aquifer System separates the high quality water of the Surficial Aquifer System from the poorer water quality of the Floridan Aquifer System. Within this system is the sandstone, mid-Hawthorn and lower Hawthorn aquifers and the interbedded confining units. Only the upper Hawthorn confining unit of the Intermediate Aquifer System was penetrated at the project location. The confining unit underlays the lower Tamiami aquifer and consists of low permeability clays. At the wellfield location this unit extends from approximately 170 feet bls to beyond the penetrated depth of this investigation which terminated at 200 feet bls.



Section 3
Well Construction

SECTION 3

Well Construction

This section describes the construction of Wells P-1, P-2, and P-3. Hydrogeologic testing and water quality results are discussed in Sections 4 and 5, respectively.

For the construction each well, surface casing was set at approximately 20 feet bls to stabilize the unconsolidated subsurface supporting the rig. An exploratory pilot hole was drilled to a depth of 200 feet bls at the first well (Well P-3) and the pilot hole was geophysically logged to evaluate the geology at the site. Based on the geophysical logs, the final casing setting depth and production interval was determined. The pilot hole was then backfilled and reamed to accommodate the 12-inch-diameter PVC casing. The production interval (open hole) of the well was then completed using reverse-air open circulation methods. For the construction of the remaining wells (Wells P-1 and P-2), a pilot hole was drilled to the approximate final casing depth. Geophysical logging was then completed to verify the final casing depth and the pilot hole was reamed to accommodate the final casing. The open hole portion of the well was then completed using reverse-air open circulation methods. Tabulated summaries of construction and testing activities and copies of the daily construction reports are presented in **Appendices B and C**, respectively.

Formation samples were collected at 10-foot intervals during the drilling of the pilot holes. Data from the pilot hole formation samples (drill cuttings) and from geophysical logging were evaluated to provide geologic and hydrogeologic information (which were used to assist in the selection of the casing setting depths). Lithologic descriptions of the formation samples collected during construction of wells are presented in **Appendix D**.

The final depth of the open hole interval was determined from data collected during reverse-air specific capacity and water quality testing during drilling of the open hole. The following sections summarize the construction and testing results of the individual production wells.

3.1 Well Construction

3.1.1 Well P-1 Construction Summary

Construction of Well P-1 began on August 31, 2004 and ended on September 28, 2004, with the completion of a variable rate pumping test. Well P-1 was completed with 20-inch-diameter steel surface casing, and 12-inch-diameter SDR 17 PVC final casing. **Table 3-1** provides a summary of the casing depths and the quantities of cement used during casing installation. A completion diagram of Well P-1 is provided in **Figure 3-1.**

Construction of Well P-1 began with an 8-inch-diameter pilot hole drilled by mud-rotary to a depth of 20 feet bls. The pilot hole was reamed to a nominal 25-inch-diameter to a depth of 20 feet bls and 20 feet of 20-inch-diameter, 0.375-inch thick wall steel casing was installed to stabilize the subsurface supporting the rig. The annular space between the borehole and outside of the steel casing was grouted to land surface with neat cement.

Following installation of the steel surface casing, an 8-inch-diameter pilot hole was mud-rotary drilled to a depth of 64 feet bls. Geophysical logging was performed on the pilot hole including caliper, natural gamma radiation, dual induction, and spontaneous potential logs. The pilot hole was reamed to a nominal 19-inch-diameter to 62 feet bls. The final 12-inch-diameter PVC casing was then installed to a depth of 61 feet bls and its annular space grouted to land surface.

Following final casing installation, an 11-inch-diameter borehole was then reverse-air drilled to approximately 83 feet bls. Airlift specific capacity tests were conducted at depths of 75 feet and 83 feet bls. Pilot hole water samples were also collected at the 75 feet and 83 feet bls during the airlift specific capacity testing and measured for conductivity. On September 10, 2004, the well was air developed using a single line air pumping system and utilizing the casing/borehole as the eductor line, to remove any loose or potentially loose formation material.

A final geophysical logging event was then conducted including caliper, natural gamma radiation, spontaneous potential, dual induction, fluid temperature, fluid resistivity, and flowmeter logs. Fluid temperature, fluid resistivity, and flowmeter logs were conducted under static and dynamic (pumping at 450 gpm) conditions.

A pump was installed and a variable rate pumping test was initiated on September 21, 2004. The pumping test included the collection pumping water levels, flow rates, and recovery water level data. It also included the collection of water samples for field and laboratory analysis. During the pumping test, the well was monitored for sand production. No sand was produced from the well at pumping rates up to 1,190 gpm.

Well P-1 was completed aboveground with a 12-inch-diameter blind flange with a bolted steel plate. Four cement posts were installed around the perimeter of the well to protect it during future construction activities. A summary of construction and testing activities and a copy of the daily construction reports are presented in **Appendices B and C,** respectively.

TABLE 3-1
Well P-1 Summary of Casing Setting Depths and Cement Quantities
Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

Casing	Casing Material	Casing OD (inch)	Casing ID (inch)	Casing Thickness (inch)	Casing Depth (ft bls)	Date	Cement Stage	Type of Cement	Quantity of Cement (cu ft)
Surface	Steel	20.00	19.25	0.375	20	31 Aug 04	#1	Neat	35
					Remarks:	Tremied into annulus from 20 feet bls			
							Total cubic feet:		**35**
Final	PVC	12.75	11.25	.0750	60	8 Sep 04	#1	Neat	53
	(Certain-Teed SDR-17)				**Remarks:**	Pressure grout from bottom of casing			
						9 Sep 04	#2	Neat	6
					Remarks:	Tremied into annulus from 11 feet bls			
							Total cubic feet:		**59**
							Total cubic feet:		**94**

Target slurry volumes per sack: neat = 1.18 cu ft/ft

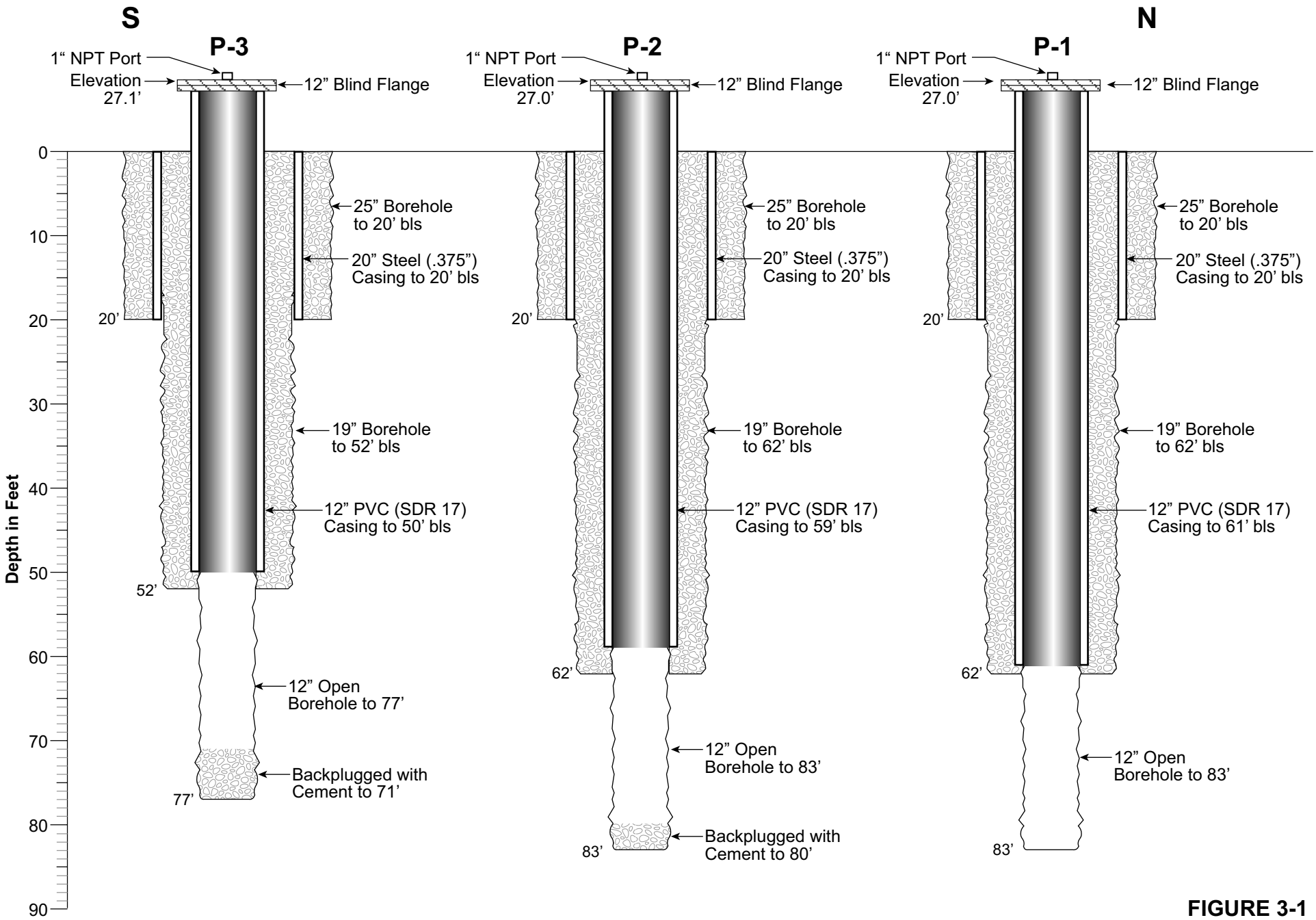


FIGURE 3-1
Well Construction Details

3.1.2 Well P-2 Construction Summary

Construction of Well P-2 began on August 19, 2004 and ended on September 28, 2004, with the completion of a variable rate pumping test. Well P-2 was completed with 20-inch-diameter steel surface casing, and 12-inch-diameter SDR 17 PVC final casing. **Table 3-2** provides a summary of the casing depths and quantities of cement used during casing installation. A completion diagram of Well P-2 is provided in **Figure 3-2.**

TABLE 3-2
Well P-2 Summary of Casing Setting Depths and Cement Quantities
Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

Casing	Casing Material	Casing OD (inch)	Casing ID (inch)	Casing Thickness (inch)	Casing Depth (ft bls)	Date	Cement Stage	Type of Cement	Quantity of Cement (cu ft)
Surface	Steel	20.00	19.25	0.375	20	20 Aug 04	#1	Neat	35
					Remarks:	Tremied into annulus from 20 feet bls			
							Total cubic feet:		**35**
Final	PVC	12.75	11.25	0.750	59	24 Aug 04	#1	Neat	65
	(Certain-Teed SDR-17)				**Remarks:**	Pressure grout from bottom of casing			
						25 Aug 04	#2	Neat	8
					Remarks:	Tremied into annulus from 10 feet bls			
							Total cubic feet:		**73**
							Total cubic feet:		**108**

Target slurry volumes per sack: neat = 1.18 cu ft/ft

Construction of Well P-2 began with an 8-inch-diameter pilot hole drilled by mud-rotary to a depth of 20 feet bls. The pilot hole was reamed to a nominal 25-inch-diameter to a depth of 20 feet bls and 20 feet of 20-inch-diameter, 0.375-inch thick wall steel casing was installed to stabilize the subsurface supporting the rig. The annular space between the borehole and outside of the steel casing was grouted to land surface with neat cement.

Following installation of the steel surface casing, an 8-inch-diameter pilot hole was mud-rotary drilled to a depth of 62 feet bls. Geophysical logging was then conducted on the pilot hole including caliper, natural gamma radiation, dual induction, and spontaneous potential logs. The pilot hole was reamed to a nominal 19-inch-diameter to 62 feet bls. The final 12-inch-diameter PVC casing was installed to a depth of 59 feet bls and its annular space grouted to land surface.

The 11-inch-diameter open borehole was then reverse-air drilled to approximately 83 feet bls. Airlift specific capacity tests were conducted at approximately 70 feet and 83 feet bls. Pilot hole water samples were also collected at the 70 feet and 83 feet bls during specific capacity testing for field conductivity measurements. At a depth of approximately 83 feet bls, a zone of unconsolidated quartz sand was encountered. On August 25, 2004, the borehole was back-plugged with neat cement to 80 feet bls to isolate the sand zone at the bottom of the borehole. The well was then air developed using a single line air pumping system and utilizing the casing/borehole as the eductor line. The purpose of development was to verify that no sand was being produced from the well and to remove any type of loose or potentially loose formation material from the borehole.

A final set of geophysical logs were completed including caliper, natural gamma radiation, spontaneous potential, dual induction, fluid temperature, fluid resistivity, and flowmeter logs. Fluid temperature, fluid resistivity, and flowmeter logs were conducted under static and dynamic (pumping at 500 gpm) conditions. After the logging event, ambient background water quality samples were collected for field and laboratory analysis.

On September 24, 2004, a pump was installed and a variable rate pumping test was conducted. The pumping test included the collection pumping water level, flow rate, and recovery water level data. During the pumping test, the well was monitored for sand production. No sand was produced from the well at pumping rates up to 1,200 gpm.

The well was finished above ground with a 12-inch-diameter blind flange with a bolted steel plate. Four cement posts were installed around the perimeter of the well to protect it during future construction activities. A summary of construction and testing activities and a copy of the daily construction reports are presented in **Appendices B and C**, respectively.

3.1.3 Well P-3 Construction Summary

Construction of Well P-3 began on August 2, 2004 and ended on September 28, 2004, with the completion of a variable rate pumping test. Well P-3 was completed with 20-inch-diameter steel surface casing, and 12-inch-diameter SDR 17 PVC final casing. **Table 3-3** provides a summary of the casing depths and the quantities of cement used during casing installation. A completion diagram of Well P-3 is provided in **Figure 3-3.**

TABLE 3-3
Well P-3 Summary of Casing Setting Depths and Cement Quantities
Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

Casing	Casing Material	Casing OD (inch)	Casing ID (inch)	Casing Thickness (inch)	Casing Depth (ft bls)	Date	Cement Stage	Type of Cement	Quantity of Cement (cu ft)
Surface	Steel	20.00	19.25	0.375	20	20 Aug 04	#1	Neat	35
					Remarks:	Tremied into annulus from 20 feet bls			
								Total cubic feet:	**35**
Final	PVC	12.75	11.25	0.750	50	11 Aug 04	#1	Neat	60
	(Certain-Teed SDR-17)				**Remarks:**	Pressure grout from bottom of casing			
								Total cubic feet:	**60**
								Total cubic feet:	**95**

Target slurry volumes per sack: neat = 1.18 cu ft/ft

Construction of Well P-3 began with an 8-inch-diameter pilot hole drilled by mud-rotary to a depth of 20 feet bls. The pilot hole was reamed to a nominal 25-inch-diameter to a depth of 20 feet bls and 20 feet of 20-inch-diameter, 0.375-inch thick wall steel casing was installed to stabilize the subsurface supporting the rig. The annular space between the borehole and outside of the steel casing was grouted to land surface with neat cement.

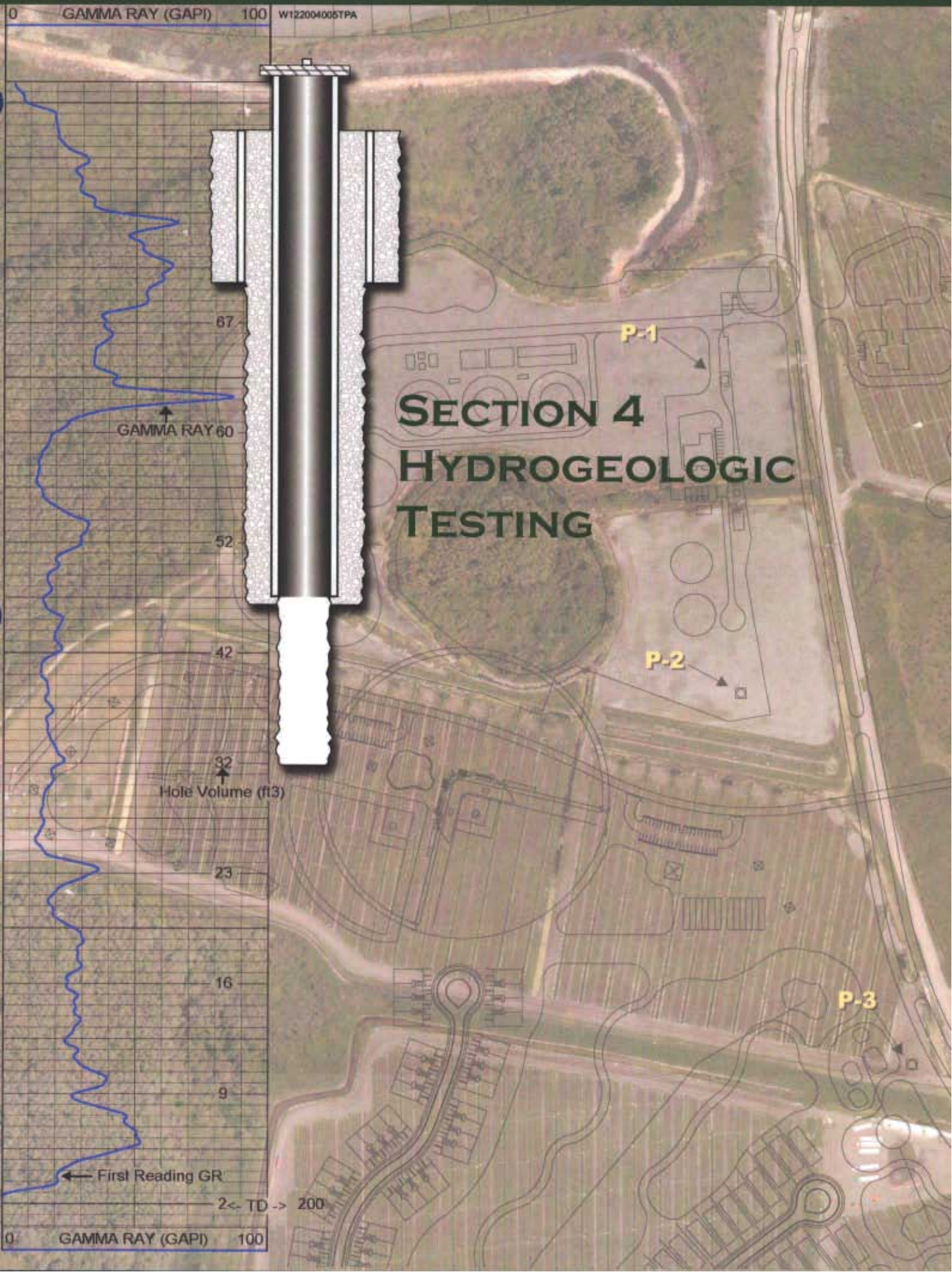
Following installation of the steel surface casing, an 8-inch-diameter pilot hole was mud-rotary drilled to a depth of 200 feet bls. Geophysical logging was performed on the pilot hole including caliper, natural gamma radiation, dual induction, and spontaneous potential logs. The pilot hole was then back-filled with approximately 60 cubic feet of gravel and capped with a 3-foot drillable cement bridge plug to a depth of 57 feet bls. The pilot hole was then reamed to a nominal 19-inch-diameter to 52 feet bls and 50 feet of 12-inch-diameter PVC casing was installed and pressure grouted into place with neat cement.

Following final casing installation, an 11-inch-diameter borehole was reverse-air drilled to approximately 77 feet bls. Airlift specific capacity tests were conducted at depths of 64 feet and 73 feet bls. Water samples were also collected during specific capacity testing for field conductivity measurements. At approximately 75 feet bls, unconsolidated quartz sand was encountered. Geophysical logging was conducted including caliper, natural gamma radiation, spontaneous potential, dual induction, fluid temperature, fluid resistivity, and flowmeter logs. Fluid temperature, fluid resistivity, and flowmeter logs were conducted under static and dynamic (pumping at 500 gpm) conditions. It was discovered that a large fracture existed at the bottom of the borehole consisting of unconsolidated sand. The borehole was then back-plugged with neat cement to a depth of 75 feet bls to seal the unconsolidated sand within the fracture.

During initial development activities, it became apparent that the well was still producing significant amounts of sand from the large fracture at the bottom of the borehole. To further isolate the sand zone, the borehole was backfilled with gravel and capped with neat cement to a final depth of 71 feet bls. The well was then air developed using a single line air pumping system and utilizing the casing/borehole as the eductor line. No sand was produced during air lift development of the well. A final video survey of the well was completed on September 14, 2004.

A pump was installed and a variable rate pumping test was initiated on September 24, 2004. The pump test included the collection of pumping water levels, flow rates, and recovery water level data. Prior to initiating the pumping test, background water quality samples were collected on September 22, 2004 for field and laboratory analysis. During the pumping test, the well was monitored for sand production. No sand was produced from the well at pumping rates up to 910 gpm.

The well was finished aboveground with a 12-inch-diameter blind flange with a bolted steel plate. Four cement posts were installed around the perimeter of the well to protect it during future construction activities. A summary of construction and testing activities and a copy of the daily construction reports are presented in **Appendices B and C**, respectively.



Section 4 Hydrogeologic Testing

SECTION 4

Hydrogeologic Testing

Hydrogeologic testing during the construction of the new production wells included the description of formation samples, reverse-air drilling specific capacity testing, water sampling, geophysical logging, and aquifer performance testing. Results of the hydrogeologic testing were used to determine the characteristics of the strata intercepted by the borehole, which, in turn, were used to determine the final designs of the wells. The results also characterized the regional hydrogeology which will be useful for planning future wellfield expansions.

4.1 Formation Sampling

Formation samples (drill cuttings) from the production wells were collected at 10-foot intervals from land surface to the total depth of the well and were characterized for rock type, color, consolidation and porosity. A summary of geologic formations and lithology encountered at each well can be found in **Table 4-1**. Detailed lithologic descriptions of the samples are provided in **Appendix D**.

4.2 Geophysical Logging

Geophysical logs were performed in the pilot hole intervals and the final open hole intervals of each well to correlate formation samples taken during drilling, to identify formation boundaries, and to obtain specific geologic and hydrogeologic data pertaining to the underground formations. These data were then used to assist in the selection of the casing setting depths. **Tables 4-2 through 4-4** provide a summary of geophysical logging conducted during well construction. Copies of the geophysical logs performed on each well are provided in **Appendix E.**

Borehole video logs were performed to the total depth of each well. These videos were performed to obtain additional physical data on the wells and to provide a visual record of the completed well. Copies of the video survey (provided as video tapes) performed on each well and the respective video survey summaries forms are provided in **Appendix F** (Volume III contains the video tapes).

The following subsections detail the geophysical logging results at each well location.

TABLE 4-1
Summary of Geologic Formations Encountered
Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

Geologic Unit	**Hydrologic Unit**	**Generalized Lithology**	**P-1**	**P-2**	**P-3**
Undifferentiated	Water Table Aquifer	Sand, Limestone, Shell fragments	0-30	0-30	0-30
Tamiami Formation	Confining Zone	Clay, pale olive	30-64	30-56	30-56
Tamiami Formation	Lower Tamiami Aquifer	Limestone, sand, sandy clay, shell	64-?	56-?	56-170
Peace River Formation	Upper Hawthorn Confining Zone	Clay, greenish gray	-	-	170-?

? – Unknown Formation Contact
All numbers reference feet bls

4.2.1 Well P-1 Geophysical Logging

The first logging event was conducted in the mudded pilot hole to 64 feet bls. The logs performed included caliper, natural gamma radiation, dual induction, and spontaneous potential. Based on the gamma radiation signature and the formation samples, the base of the Tamiami aquifer was identified at approximately 64 feet bls. The caliper log did not identify any significant cavernous regions or fracturing that would inhibit the setting of casing at 61 feet bls. **Table 4-2** summarizes the geophysical logging conducted during construction of Well P-1.

TABLE 4-2
Well P-1 Geophysical Logging Activities
Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

Logging Event	Date	Well Progress and Casing Depth	Geophysical Logs Conducted[1]	Purpose
1	September 1, 2004	8-inch Mudded Pilot Hole to 64 feet bls	C, GR, DI, SP	Determine Final Casing Setting Depth
2	September 14, 2004	12-inch Reverse-air Open Hole to 83 feet bls	C, GR, SP, DI, SFT, SFC, SF, DFT, DF, DFC, Video	Evaluate Hydrogeological Characteristics of Open Hole Interval, and Provide Visual Record of Completed Well

[1] Legend:

C – Caliper
GR - Natural Gamma Ray
SP - Spontaneous Potential
SFC – Static Fluid Conductivity
SFT - Static Fluid Temperature
SF – Static Flow
DI – Dual Induction
DFT – Dynamic Fluid Temperature
DFC – Dynamic Fluid Conductivity
DF – Dynamic Flow

The second and final logging event was conducted after the final casing was set and the 12-inch-diameter open hole was completed to 83 feet bls. The logs were conducted in the open borehole full of formation water and included caliper, natural gamma radiation, dual induction, spontaneous potential, fluid conductivity, fluid temperature, flow, and video. The purpose of the logging event was to characterize the hydrogeological conditions of the well site and to provide well performance and water quality data of open hole interval. Caliper logs indicate a generally gauged borehole with a small opening or fracture at approximately 64 feet bls. Natural gamma radiation logs suggest a lithology consistent with regional geology. The fluid conductivity log indicates water quality to be relatively fresh throughout the entire open hole interval with a conductivity recorded to be approximately 690 µS/cm. At a pumping rate of 450 gpm, the flow log suggests that the majority of the flow from the well is generated within the interval from 83 feet bls (total depth) to approximately 70 feet bls.

4.2.2 Well P-2 Geophysical Logging

The first logging event was conducted in the mudded pilot hole to 62 feet bls. The logs included caliper, natural gamma radiation, dual induction, and spontaneous potential. Based on the gamma radiation signature and the formation samples, the base of the Tamiami aquifer was identified at approximately 56 feet bls. The caliper log did not identify any significant cavernous regions or fracturing that would inhibit the setting of casing at 59

feet bls. **Table 4-3** summarizes the geophysical logging conducted during construction of Well P-2.

TABLE 4-3
Well P-2 Geophysical Logging Activities
Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

Logging Event	Date	Well Progress and Casing Depth	Geophysical Logs Conducted[1]	Purpose
1	August 23, 2004	8-inch Mudded Pilot Hole to 62 feet bls	C, GR, DI, SP	Determine Final Casing Setting Depth
2	August 27, 2004	12-inch Reverse-air Open Hole to 80 feet bls	C, GR, SP, DI, SFT, SFC, SF, DFT, DF, DFC, Video	Evaluate Hydrogeological Characteristics of Open Hole Interval, and Provide Visual Record of Completed Well

[1] Legend:

C – Caliper
GR - Natural Gamma Ray
SP - Spontaneous Potential
SFC – Static Fluid Conductivity
SFT - Static Fluid Temperature
SF – Static Flow
DI – Dual Induction
DFT – Dynamic Fluid Temperature
DFR – Dynamic Fluid Conductivity
DF – Dynamic Flow

The second and final logging event was conducted after the final casing was set and the 12-inch-diameter open hole was completed to 80 feet bls. The logs were conducted in the open borehole full of formation water and included caliper, natural gamma radiation, dual induction, spontaneous potential, fluid conductivity, fluid temperature, flow, and video. The purpose of the logging event was to characterize the hydrogeological conditions of the well site and to provide well performance and water quality data of open hole interval. Caliper logs indicate a vuggy borehole with no noticeable fractures. Natural gamma radiation logs suggest a lithology consistent with regional geology. The fluid conductivity log indicates water quality to be relatively fresh throughout the entire open hole interval with a conductivity of 670 µS/cm. At approximately 75 feet bls both the static and dynamic fluid conductivity log indicate a slight freshening of water quality as conductivity decreases from approximately 675 µS/cm to 615 µS/cm. This is supported by a shift in the temperature log at the same interval. At a pumping rate of approximately 500 gpm, the flow log suggests that the production generated from the borehole increases linearly from the bottom of the borehole to the base of the casing.

4.2.3 Well P-3 Geophysical Logging

The first logging event was conducted in the mudded pilot hole to 200 feet bls. The logs included caliper, natural gamma radiation, dual induction, and spontaneous potential. Based on the gamma radiation signature and the formation samples, the base of the Tamiami aquifer was identified at approximately 55 feet bls and extended to approximately 170 feet bls. The caliper log did not identify any significant cavernous regions or fracturing that would inhibit the setting of casing at 50 feet bls. **Table 4-4** summarizes the geophysical logging conducted during construction of Well P-3.

TABLE 4-4
Well P-3 Geophysical Logging Activities
Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

Logging Event	Date	Well Progress and Casing Depth	Geophysical Logs Conducted[1]	Purpose
1	August 5, 2004	8-inch Mudded Pilot Hole to 200 feet bls	C, GR, DI, SP	Evaluate Tamiami and Upper Peace River Formations; Determine Final Casing Setting Depth
2	August 18, 2004	12-inch Reverse-air Open Hole to 77 feet bls	C, GR, SP, DI, SFT, SFC, SF, DFT, DF, DFC	Evaluate Hydrogeological Characteristics of Open Hole Interval
3	September 14, 2004	12-inch Reverse-air Open Hole to 77 feet bls	Video	Provide Visual Record of Completed Well

[1] Legend:

C – Caliper
GR - Natural Gamma Ray
SP - Spontaneous Potential
SFR – Static Fluid Conductivity
SFT - Static Fluid Temperature
SF – Static Flow
DI – Dual Induction
DFT – Dynamic Fluid Temperature
DFR – Dynamic Fluid Conductivity
DF – Dynamic Flow

The second and final logging event was conducted after the 12-inch-diameter open hole was completed to 77 feet bls and prior to back-plugging with cement to 71 feet bls. The logs were conducted in the open borehole full of formation water and included caliper, natural gamma radiation, dual induction, spontaneous potential, fluid conductivity, fluid temperature, flow. The video log was completed September 14, 2004 after back-plugging and further development of the well. The purpose of the final logging event was to characterize the hydrogeological conditions of the well site and to provide well performance and water quality data of open hole interval. Caliper logs indicate a fracture at 75 feet bls that was producing large amounts of sand during development. Natural gamma radiation logs suggest a lithology consistent with regional geology. The fluid conductivity log indicates water quality to be relatively fresh throughout the entire open hole interval with a conductivity of approximately 720 µS/cm. At a pumping rate of approximately 1,050 gpm, the flow log suggests that the majority of the production generated from the borehole is from the fracture at 75 feet bls. The flow log, however, indicated an adequate amount of flow generated above the fracture; subsequently, the borehole was backplugged to 71 feet bls to eliminate the sand produced from the fractured interval.

4.2.4 Video Logging

Borehole video logs were performed on the production well pilot holes to the total depth of each well. These videos were performed to obtain additional physical (visual) data on the wells. Brief summaries of each of the videos surveys are provided in **Appendix F.1**.

4.3 Reverse-Air Drilling Specific Capacity Tests

The specific capacity of a well is defined as the rate of discharge per unit of drawdown. It is expressed as gallons per minute per foot of drawdown (gpm/ft).

Reverse-air specific capacity tests were conducted at two select intervals during reverse-air drilling of the open hole to evaluate the hydraulic characteristics of the well as the borehole was being advanced. Each test was conducted for approximately 15 minutes, during which time formation water was removed from the well at a known rate and a measurement of the associated drawdown was recorded to provide data for specific capacity calculations. Water was removed from the well by reverse-air method and flow was determined by volume calculations versus time. The rate of reverse-air flow ranged from 80 gpm to 120 gpm. **Tables 4-5** provides a summary of the reverse-air specific capacity data from each of the production wells.

4.3.1 Well P-1 Reverse-Air Specific Capacity Testing

Specific capacity testing at Well P-1 was conducted twice during advancement of the open hole at depths of 75 feet bls and at 83 feet bls (total depth). Specific capacity measured at 75 feet bls was 66 gpm/ft. Final specific capacity recorded at 83 feet bls was 90 gpm/ft, an increase of approximately 36 percent. A summary of the reverse-air specific capacity results can be found in **Table 4-5**.

TABLE 4-5
Reverse-Air Drilling Specific Capacity Data for Wells P-1 through P-3
Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

Well	Depth (feet bls)	Flow Rate (gpm)	Drawdown (feet)	Specific Capacity (gpm/ft)
P-1	75	86	1.30	66.15
	83	95	1.05	90.48
P-2	70	120	2.15	55.81
	83	120	1.46	82.19
P-3	64	80	2.31	34.63
	73	90	2.11	42.65

4.3.2 Well P-2 Reverse-Air Specific Capacity Testing

Testing at Well P-2 was conducted at 70 feet bls and 83 feet bls, resulting in specific capacities of 56 gpm/ft and 82 gpm/ft, respectively. The large increase in specific capacity between 70 feet bls and 83 feet bls indicates significant production from the bottom portion of the borehole. A summary of the specific capacity testing results is provided in **Table 4-5**.

4.3.3 Well P-3 Reverse-Air Specific Capacity Testing

Well P-3 was the least productive well of the three production wells. Testing was performed when the borehole reached 64 feet bls and at the bottom of the borehole at 73 feet bls with specific capacity calculated to be 35 gpm/ft and 43 gpm/ft respectively. Results of specific capacity testing at P-3 is summarized in **Table 4-5.**

4.4 Variable Rate Step Drawdown Testing

Variable Rate Step Drawdown tests were conducted on Wells P-1 through P-3 and involved pumping the wells at four distinct rates and measuring the associated drawdown. The

duration of the first step was approximately 2 hours. The final three steps varied between 1 and 2 hours in duration. The purpose of pumping tests was to calculate the specific capacity of each well, and to evaluate the hydraulic characteristics and water quality of the lower Tamiami aquifer. A summary of the specific capacity results for each well is provided in **Table 4-6**.

TABLE 4-6
Summary of Variable Rate Step Test Specific Capacity Results
Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

Well	Step	Flow rate (gpm)	Test Duration (hours)	Drawdown (feet)	Specific Capacity (gpm/ft)
P-1	1	550	1.9	11.0	50.0
	2	750	1.1	18.5	40.5
	3	1,020	1.1	27.7	36.8
	4	1,190	1.1	34.5	34.5
P-2	1	500	2.1	8.8	56.8
	2	750	1.0	16.2	46.3
	3	1,000	1.0	22.9	43.7
	4	1,220	2.1	31.3	39.0
P-3	1	500	2.1	12.9	38.8
	2	660	1.0	21.6	30.6
	3	750	1.0	25.3	29.6
	4	910	2.1	32.8	27.7

Each pumping test on Wells P-1 through P-3 included the collection of background water levels, pumping drawdown and flow data, and recovery water level data. It also includes the collection of water samples for analysis as discussed in Section 6. *In-Situ Minitroll* pressure transducer/data loggers were used in all wells during pumping and recovery periods. Well pumping rates were measured using a 6-inch by 8-inch orifice plate.

Well drawdown data from each pumping test were analyzed to determine the transmissivity (T) of the penetrated aquifer. Transmissivity is a measure of the capacity of an aquifer to transmit water and is defined as the amount of water that can flow through a vertical section of an aquifer of a certain width extending the full saturated height of the aquifer under a certain hydraulic gradient. Transmissivity is expressed in square feet per day (ft^2/day) and gallons per day per foot (gpd/ft).

Two analysis methods were used to calculate transmissivity. The Theis recovery straight line method was used to calculate aquifer transmissivity from the recovery data. The Eden and Hazel multiple step drawdown method was used to calculate transmissivity using data from each step of the variable rate pumping test. The analysis was performed using *Aquifer Win 32* software by Environmental Simulations, Inc. Only data from the pump wells were used for aquifer analysis. After review of the data from the observation wells it was determined that the distance of the observation wells from the pumped well was too great and the pumping duration too short, prohibiting the observation wells from approaching

steady state conditions adequate for aquifer analysis. A discussion of each pumping test and the methods used to analyze the data is provided below. Results from the test analyses along with the analyses plots are presented in **Appendix G.** Water level data during pumping and recovery periods for each of the pumping tests are provided in **Appendix H.**

4.4.1 Well P-1 Variable Rate Step Test

On September 21, 2004, a variable rate pumping test of Well P-1 began. The well was pumped at four distinct rates of 550 gpm, 750 gpm, 1,020 gpm, and 1,190 gpm. The static water level before pumping began was 7.6 feet bls. The pumping duration for step 1 was 1.9 hours, and the remaining steps were approximately 1.1 hours each. Final specific capacities from each step are summarized in **Table 4-6.** After pumping was terminated, the water level in the well was allowed to recover to static conditions.

Water levels were also recorded at Wells P-2 and P-3 during pumping and recovery. Well P-2 is located approximately 760 feet to the south of Well P-1 and Well P-3 is located approximately 1700 feet to the south of Well P-1. A plot of the water level data from the pumped well and each observation well during the testing period is presented in **Figure 4-1.** Tabulated data from the pumping test is presented in **Appendix H**.

Pumping and recovery data from the Well P-1 were analyzed using Eden Hazel step test and Theis recovery methods to calculate transmissivity. Using the Theis Recovery method, an aquifer transmissivity of 33,790 ft^2/day (252,749 gpd/ft) was determined. The Eden and Hazel multiple step drawdown method calculated a transmissivity of 62,920 ft^2/day (470,642 gpd/ft). The average transmissivity from the two methods is 48,355 ft^2/day or 361,695 gpd/ft.

Test analyses plots and tabulated drawdown versus time data are presented in **Appendix G and Appendix H,** respectively. A summary of test analyses results for Well P-1 is provided in **Table 4-7**.

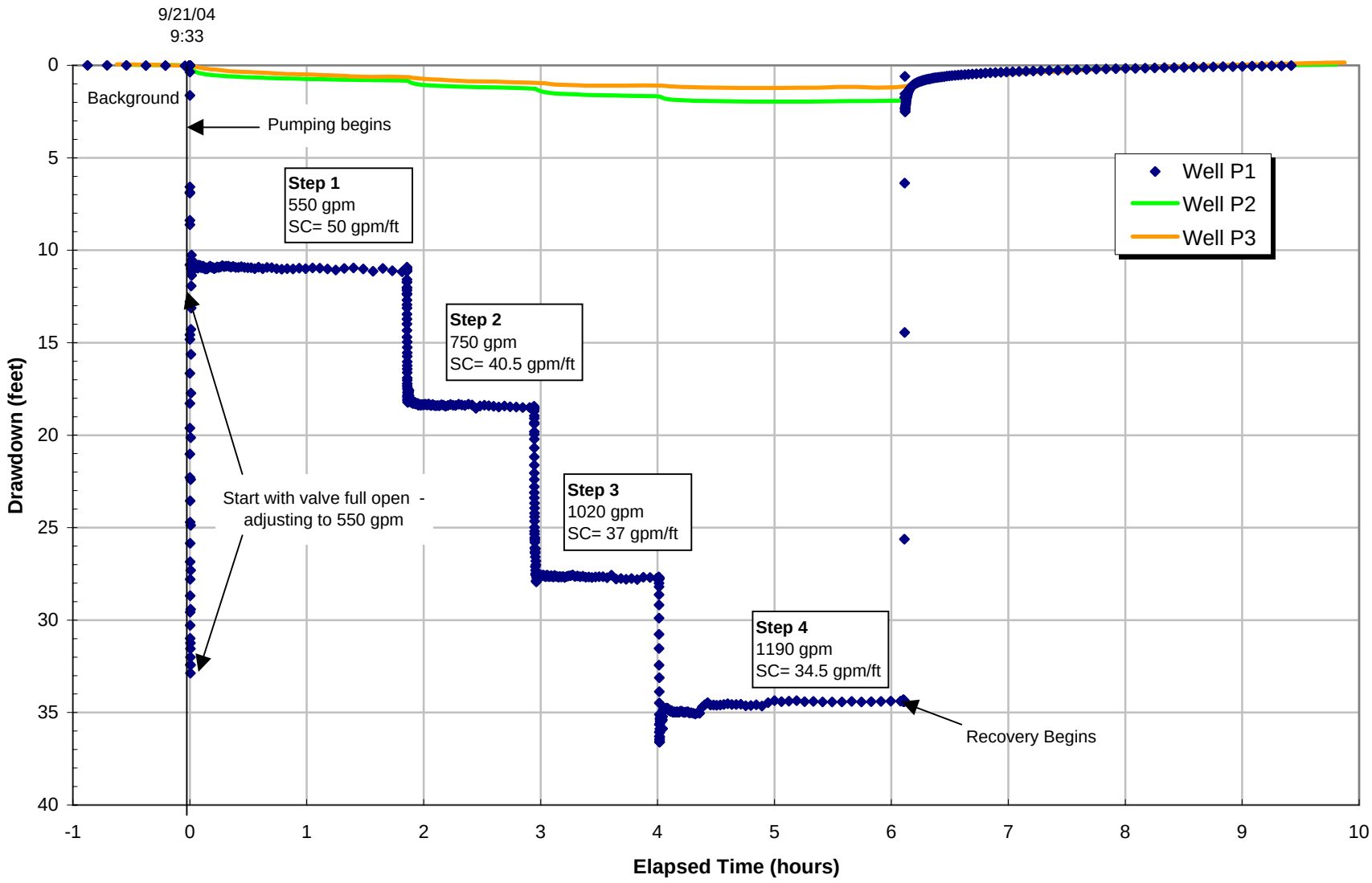


Figure 4-1

Well P-1 Variable Rate Pumping Test

Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

Table 4-7

Summary of Aquifer Analysis Results

Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

Pumping Well	Discharge (gpm)	Test Duration (hours)	Drawdown (feet)	Specific Capacity (gpm/ft)	Transmissivity (gpd/ft)	Transmissivity (ft2/d)	Analysis Method
P-1	550	1.9	11.0	50	-	-	-
	750	1.1	18.5	41	-	-	-
	1020	1.1	27.7	37	-	-	-
	1190	1.1	34.5	34	470,642	62,920	Eden Hazel
					252,749	33,790	Theis Recovery
				Avg	**361,695**	**48,355**	
P-2	500	2.1	8.8	57	-	-	-
	750	1.0	16.2	46	-	-	-
	1000	1.0	22.9	44	-	-	-
	1220	2.1	31.3	39	484,487	64,771	Eden Hazel
					303,666	40,597	Theis Recovery
				Avg	**394,076**	**52,684**	
P-3	500	2.1	12.9	39	-	-	-
	660	1.0	21.6	31	-	-	-
	750	1.0	25.3	30	-	-	-
	910	2.1	32.8	28	-	-	-
					204,585	27,351	Theis Recovery
				Avg	**204,585**	**27,351**	
				Overall Average	**343,226**	**45,886**	

Theis Recovery -Theis & Jacob straight line method

Eden and Hazel - multiple step drawdown analysis

gpm gallons per minute

ft2/d square feet per day

gpd/ft gallons per day per foot

All analysis derived from electronic data

4.4.2 Well P-2 Variable Rate Step Test

A variable rate pumping test of Well P-2 was conducted on September 24, 2004. The well was pumped in four steps at rates of 500 gpm, 750 gpm, 1,000 gpm, and 1,220 gpm. The static water level prior to the test was approximately 10.0 feet bls. The pumping duration for step 1 and step 4 was 2.1 hours, the duration of step 2 and step 3 was 1 hour. A summary of the specific capacities from the variable rate testing is shown in **Table 4-6**. After pumping was terminated, the water level in the well was recorded until near static conditions returned in Well P-2.

Water levels were also recorded at Wells P-1 and P-3 during pumping and recovery. Well P-1 is located approximately 760 feet to the north of Well P-2 and Well P-3 is located approximately 990 feet to the south of Well P-2. A plot of the water level data from the pumped well and each observation well during the testing period is presented in **Figure 4-2.** Tabulated data from the pumping test is presented in **Appendix H**.

Pumping and recovery data from the Well P-2 were analyzed using Eden Hazel step test and Theis recovery methods to calculate transmissivity. Using the Theis Recovery method, an aquifer transmissivity of 40,597 ft^2/day (303,666 gpd/ft) was determined. The Eden and Hazel multiple step drawdown method calculated a transmissivity of 64,771 ft^2/day (484,487 gpd/ft). The average transmissivity from the two methods is 52,684 ft^2/day or 394,076 gpd/ft.

A summary of test analyses results for Well P-2 is provided in **Table 4-7**. Test analyses plots and tabulated drawdown versus time data are presented in **Appendix G and Appendix H,** respectively.

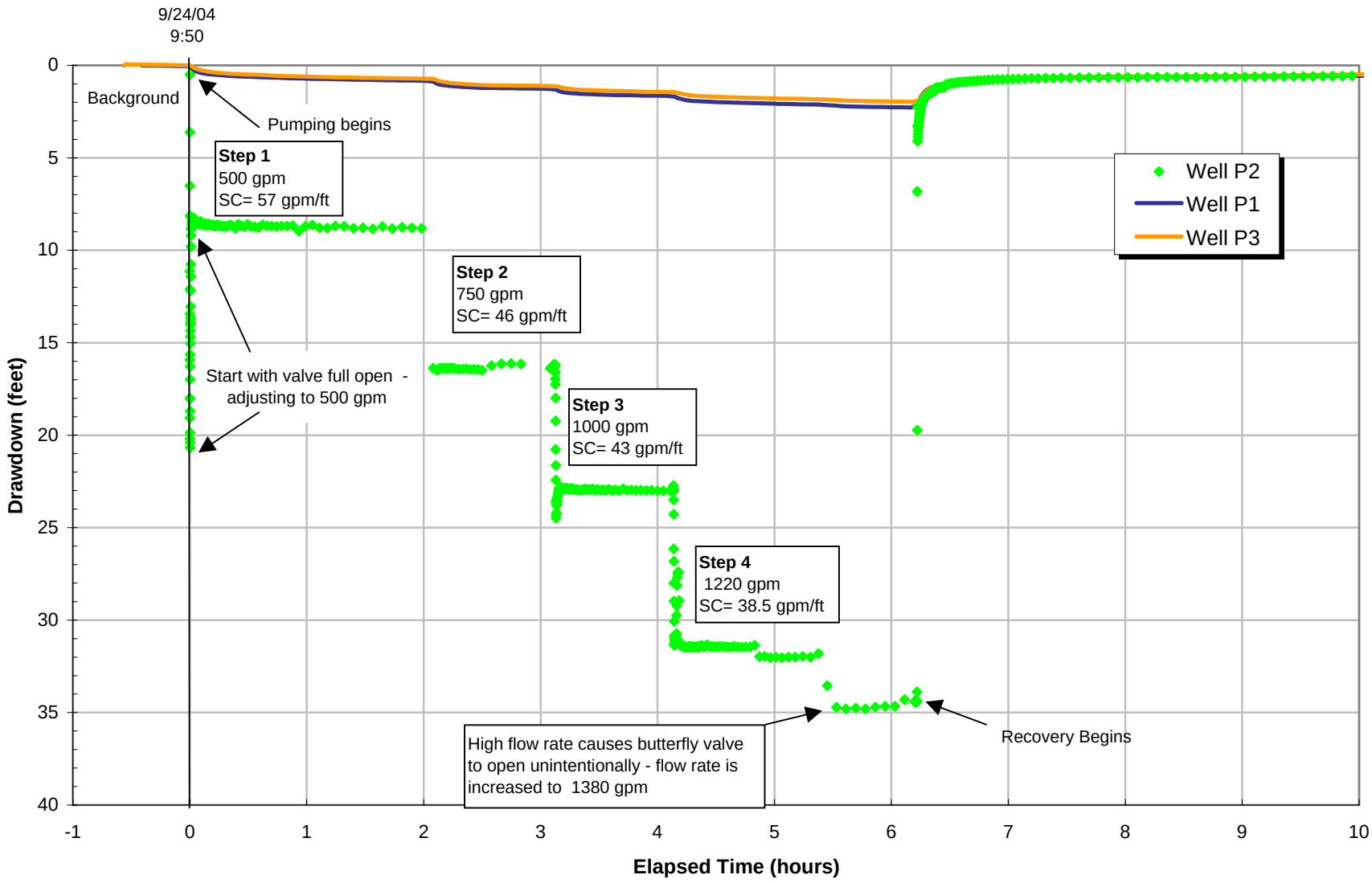


Figure 4-2

Well P-2 Variable Rate Pumping Test

Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

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4.4.3 Well P-3 Variable Rate Step Test

On September 23, 2004, a variable rate pumping test of Well P-3 was conducted. The well was pumped in four steps at rates of 500 gpm, 660 gpm, 750 gpm, and 910 gpm. The static water level before pumping began was approximately 7.1 feet bls. The pumping duration for step 1 and step 4 was approximately 2.1 hours; the duration of step 2 and step 3 was approximately 1 hour. During step 2 of the pumping test, the transducer stopped responding. The remaining data was collected manually with a tape water level meter. Prior to beginning the recovery portion of the test, however, the transducer resumed taking readings, thus, the data for the recovery period was recorded on the data logger system. Final specific capacities from each step are summarized in **Table 4-6.** After pumping was terminated, the water level in the well was allowed to recover to static conditions.

Water levels were also recorded at Wells P-1 and P-2 during pumping and recovery periods. Well P-1 is located approximately 1,700 feet to the north of Well P-3 and Well P-2 is located approximately 990 feet to the north of Well P-3. A plot of the water level data from the pumped well and each observation well during the testing period is presented in **Figure 4-3.** Tabulated drawdown data is presented in **Appendix H**.

Pumping and recovery data from the Well P-3 were analyzed by the Theis recovery method to calculate transmissivity. An aquifer transmissivity of 27,351 ft^2/day (204,585 gpd/ft) was determined using this method. The Eden and Hazel multiple step drawdown method was not used because of the limited data collected during step 2 through step 4, as discussed previously.

A summary of test analyses results for Well P-3 is provided in **Table 4-7**. Test analyses plots and tabulated drawdown versus time data are presented in **Appendix G and Appendix H,** respectively.

4.5 Summary of Calculated Aquifer Characteristics

Because of limitations in analyzing variable rate pumping tests, the data from the observation wells was not used to calculate transmissivity of the aquifer. Analysis of the pumping and recovery data from the pumped wells was analyzed using Theis recovery and Eden Hazel multiple step drawdown method. The average transmissivity of the aquifer, based on the pumping test analysis, is 45,886 ft^2/day (343,226 gpd/ft). A summary of the calculated hydraulic transmissivities from the individual pumping tests are provided in **Table 4-7.** Test analyses plots and tabulated drawdown versus time data are presented in **Appendix G and Appendix H,** respectively.

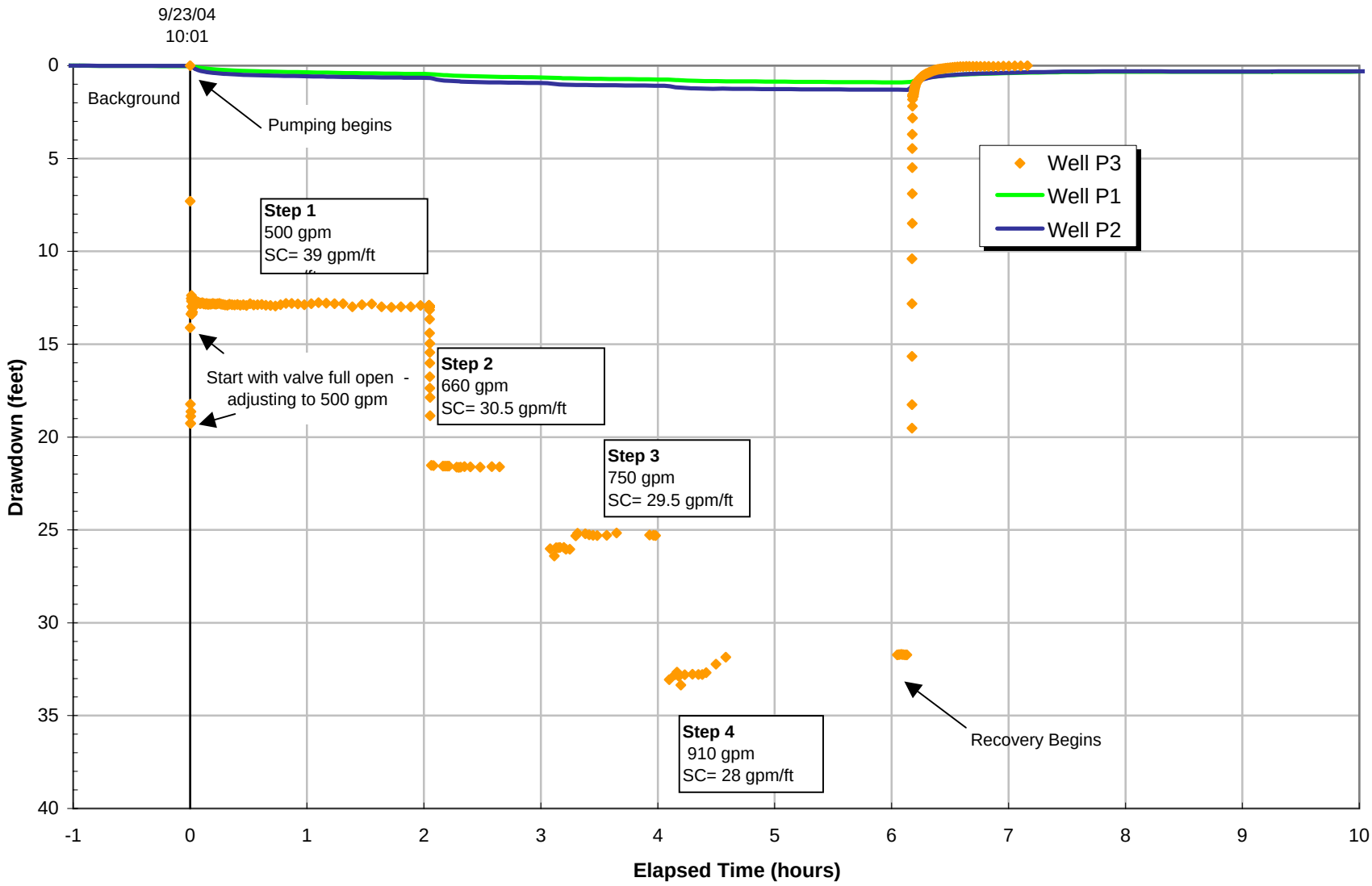

Figure 4-3

Well P-3 Variable Rate Pumping Test

Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

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Section 5 Water Quality Testing

SECTION 5

Water Quality Testing

Water samples were collected during advancement of the open hole interval to provide data pertinent to decisions regarding the final subsurface design of the wells. Water samples were collected during reverse-air specific capacity testing to provide a generalized profile of water quality of the open hole interval with respect to depth. The samples were field analyzed for specific conductance. Open circulation reverse-air drilling techniques were used during the pilot hole drilling below the base of the 12-inch casing to the total depth of each well. Therefore, pilot hole water quality from each interval reflects a mixture of formation water from the open hole interval from the base of final casing to the depth at which drilling had reached during the time of sample collection. This provided relative water quality changes as the borehole was advanced. Water samples were collected at the end of specific capacity testing prior to each drill stem connection. **Table 5-1** summarizes field measured specific conductance water quality data from each production well.

TABLE 5-1
Summary of Reverse-Air Drilling Water Quality Sampling - Specific Conductance Results
Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

Well	Depth (feet bls)	Specific Conductance (mg/L)
P-1	75	705
	83	703
P-2	70	751
	83	741
P-3	64	632
	73	630

Following completion of each well, water quality samples were collected and analyzed for primary and secondary drinking water standards. Water samples were collected and analyzed by Sanders Laboratories. Sampling was conducted after the wells were fully developed. At Well P-1, samples were collected during the variable rate pumping test. At Well P-2, sampling was completed after the final set of dynamic logs were completed. Water quality sampling at Well P-3 was conducted prior to the variable rate pumping test. A summary of the water quality results is presented in **Table 5-2** and is discussed in the sections below. The laboratory reports are found in **Appendix I.**

TABLE 5-2
Background Water Quality Results Summary
Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

	Well:	**P-1**	**P-2**	**P-3**
	Sample Date:	09/21/2004	08/30/2004	09/22/2004
State Primary Drinking Water Standards: Inorganic				
Analyte	**MCL[A] (mg/L)**	**P-1**	**P-2**	**P-3**
Antimony	0.006	<0.003	<0.003	<0.003
Arsenic	0.01	0.001	0.001	<0.001
Barium	2	0.012	0.008	0.016
Beryllium	0.004	<0.0001	<0.0001	<0.0001
Cadmium	0.005	<0.001	<0.001	<0.001
Chromium	0.1	<0.001	<0.001	<0.001
Cyanide	0.2	<0.005	<0.005	<0.005
Fluoride	4	0.20	0.21	0.20
Lead	0.015	<0.001	<0.001	<0.001
Mercury	0.002	<0.001	<0.001	<0.001
Nickel	0.1	0.002	<0.002	<0.002
Nitrate (as N)	10	<0.01	<0.01	<0.01
Nitrite (as N)	1	<0.01	<0.01	<0.01
Selenium	0.05	<0.001	0.001[C]	<0.001
Sodium	160	28.3	28.3	24.0
Thallium	0.002	<0.002	<0.002	<0.002
State Primary Drinking Water Standards: Volatile Organics				
Analyte	**MCL (µg/L)**	**P-1**	**P-2**	**P-3**
1,1-Dichloroethene	7	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	200	<0.3	<0.3	<0.3
1,1,2-Trichloroethane	5	<0.3	<0.3	<0.3
1,2-Dichloroethane	3	<0.2	<0.2	<0.2
1,2-Dichloropropane	5	<0.3	<0.3	<0.3
1,2,4-Trichlorobenzene	70	<0.5	<0.5	<0.5
Benzene	1	<0.5	<0.5	<0.5
Carbon Tetrachloride	3	<0.3	<0.3	<0.3
Cis-1,2-Dichloroethylene	70	<0.2	<0.2	<0.2
Dichloromethane (Methylene Chloride)	5	<0.5	<0.5	<0.5
Ethylbenzene	700	<0.5	<0.5	<0.5
Monochlorobenzene (Chlorobenzene)	100	<0.5	<0.5	<0.5
o-Dichlorobenzene (1,2-Dichlorobenzene)	600	<0.5	<0.5	<0.5
p-Dichlorobenzene (1,4-Dichlorobenzene)	75	<0.5	<0.5	<0.5
Styrene	100	<0.5	<0.5	<0.5
Tetrachloroethylene	3	<0.2	<0.2	<0.2
Toluene	1,000	<0.5	<0.5	<0.5
Trans-1,2-Dichloroethylene	100	<0.5	<0.5	<0.5
Trichloroethylene	3	<0.2	<0.2	<0.2
Vinyl Chloride	1	<0.5	<0.5	<0.5
Xylenes (Total)	10,000	<0.5	<0.5	<0.5
State Primary Drinking Water Standards: Pesticides and PCB's				
Analyte	**MCL (µg/L)**	**P-1**	**P-2**	**P-3**
2,4,5-TP (Silvex)	50	<0.25	<0.25	<0.25
2,4-D	70	<1	<1	<1
Alachlor	2	<0.2	<0.2	<0.2
Atrazine	3	<0.06	<0.06	<0.06
Benzo(a)pyrene	0.2	<0.1	<0.1	<0.1

TABLE 5-2
Background Water Quality Results Summary
Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

Carbofuran	40	<0.5	<0.5	<0.5
Chlordane	2	<0.05	<0.05	<0.05
Dalapon	200	<1	<1	<1
Di(2-ethylhexyl)adipate	400	<0.3	<0.3	<0.3
Di(2-ethylhexyl)phthalate (bis(2-ethylhexyl)phthalate)	6	<1.0	<1.0	<1.0
Dibromochloropropane	0.2	<0.005	<0.005	<0.005
Dinoseb	7	<0.5	<0.5	<0.5
Diquat	20	<1	<1	<1
Endothall	100	<20	<20	<20
Endrin	2	<0.1	<0.1	<0.1
1,2-Dibromoethane (Ethylene Dibromide – EDB)	0.02	<0.005	<0.005	<0.005
Glyphosate (Roundup)	700	<10	<10	<10
Heptachlor	0.4	<0.08	<0.08	<0.08
Heptachlor Epoxide	0.2	<0.1	<0.1	<0.1
Hexachlorobenzene	1	<0.05	<0.05	<0.05
Hexachlorocyclopentadiene	50	<0.2	<0.2	<0.2
Lindane (G-BHC)	0.2	<0.06	<0.06	<0.06
Methyoxychlor	40	<0.05	<0.05	<0.05
Oxamyl (Vydate)	200	<0.5	<0.5	<0.5
Pentachlorophenol	1	<0.1	<0.1	<0.1
Picloram	500	<0.75	<0.75	<0.75
Polychlorinated Biphenyl (PCB)	0.5	<0.2	<0.2	<0.2
Simazine	4	<0.07	<0.07	<0.07
Toxaphene	3	<0.5	<0.5	<0.5
State Primary Drinking Water Standards: Radionuclides				
Analyte	**MCL (mg/L)**	**P-1**	**P-2**	**P-3**
Radium 226	5 pCi/L [B]	2.6 +/- 0.1	0.7 +/- 0.3	0.5 +/- 0.07
Radium 228		1.2 +/- 0.2	<0.9 +/- 0.6	2.8 +/- 0.2
Gross Alpha	15 pCi/L	2.3 +/- 0.7	<1.7 +/- 1.0	3.7 +/- 0.6
State Secondary Drinking Water Standards				
Analyte	**MCL (mg/L)**	**P-1**	**P-2**	**P-3**
Aluminum	0.2	0.016	0.008	0.022
Chloride	250	45	28	35
Copper	1	0.001[C,D]	0.001[C]	0.001[C]
Fluoride	2	0.20	0.21	0.20
Iron	0.3	0.259	<0.006	0.726
Manganese	0.05	0.009	0.003	0.008
Silver	0.1	<0.001[D]	<0.001	<0.001[D]
Sulfate	250	18	9	9
Zinc	5	0.005	<0.002	0.012
Color	15 PCU	75	32	90
Odor	3 TON	1	3	1
PH	6.5-8.5	6.58	7.28	6.07
Total Dissolved Solids (TDS)	500	432	352	392
Foaming Agents (MBAS)	0.5	0.053	<0.05	<0.05
Additional Membrane Specific Analytes				
Analyte	**MCL (mg/L)**	**P-1**	**P-2**	**P-3**
Calcium	--	88.6	89.9[D]	84.3[D]
Magnesium	--	17.8[D]	12.8	10.5[D]
Potassium	--	7.69[D]	4.83[D]	7.85[D]

TABLE 5-2

Background Water Quality Results Summary

Wellfield Completion Report for the Town of Ave Maria - Wells P-1 through P-3

Ammonia	--	1.06	0.91	1.31
Strontium	--	0.23	0.24	0.21
Silica	--	21.8	15.6	26.5
Iron (dissolved) - field filtered	--	0.234	0.006	0.66
Iron (total)	--	0.259	0.006	0.726
Manganese (dissolved) - field filtered	--	0.009	0.003	0.008
Manganese (total)	--	0.009	0.003	0.008
Boron	--	0.065	0.068	0.064
Hydrogen Sulfide (field measured)	--	ND	ND	ND
Hydrogen Sulfide (lab measured)	--	<0.10	0.20	0.20
Total Organic Carbon	--	15	11	16
Total Phosphorous	--	0.09	0.072	0.067
Phosphate	--	0.07	0.048	0.052
Alkalinity	--	288	300	272
Specific Conductance µS/cm (field)	--	704	616	662
Water Temperature ^{0}C	--	25.0	27.0	25.6

Notes:

A. Maximum Contaminant Level (MCL) per Rules 62-550.310, FAC.

B. The MCL for Radium 226 and Radium 228 combined is 5 pCi/L

C. The analyte was detected in both the sample and the associated blank method

D. The reported value failed to meet established quality control criteria

Concentrations expressed in milligrams/liter (mg/L) or micrograms/liter (µg/L) unless otherwise indicated.

Total Trihalomethanes equal the sum of:

Trichloromethane (chloroform)

Dibromochloromethane

Bromodichloromethane

Tribromomethane (bromoform)

Abbreviations:

pCi/L: Picacurries/liter
MDL: Minimum Detection Limit
MFL: Million Fibers/Liter > 10 um.
µg/L: Micrograms/Liter
TON: Threshold Odor Number
PCU: Color Units
CFU: Colony Forming Units/100 mL
ND: Non Detect

5.1 Well P-1 Water Quality

Specific conductance was measured twice during the advancement of the open hole, at 75 feet bls and 83 feet bls. Water quality remained constant as specific conductance was measured to be 705 μS/cm and 703 μS/cm at 75 feet and 83 feet bls, respectively. **Table 5-1** presents a summary of the reverse-air water sample results for P-1.

The native water from P-1 is fresh as anticipated from the lower Tamiami aquifer. The total dissolved solids (TDS) recorded at Well P-1 was 432 mg/L. No primary and secondary drinking water standards maximum contaminant limit (MCL) were exceeded with the exception of the secondary analyte color. A summary of the ambient background water quality results from Well P-1 is shown in **Table 5-2**.

5.2 Well P-2 Water Quality

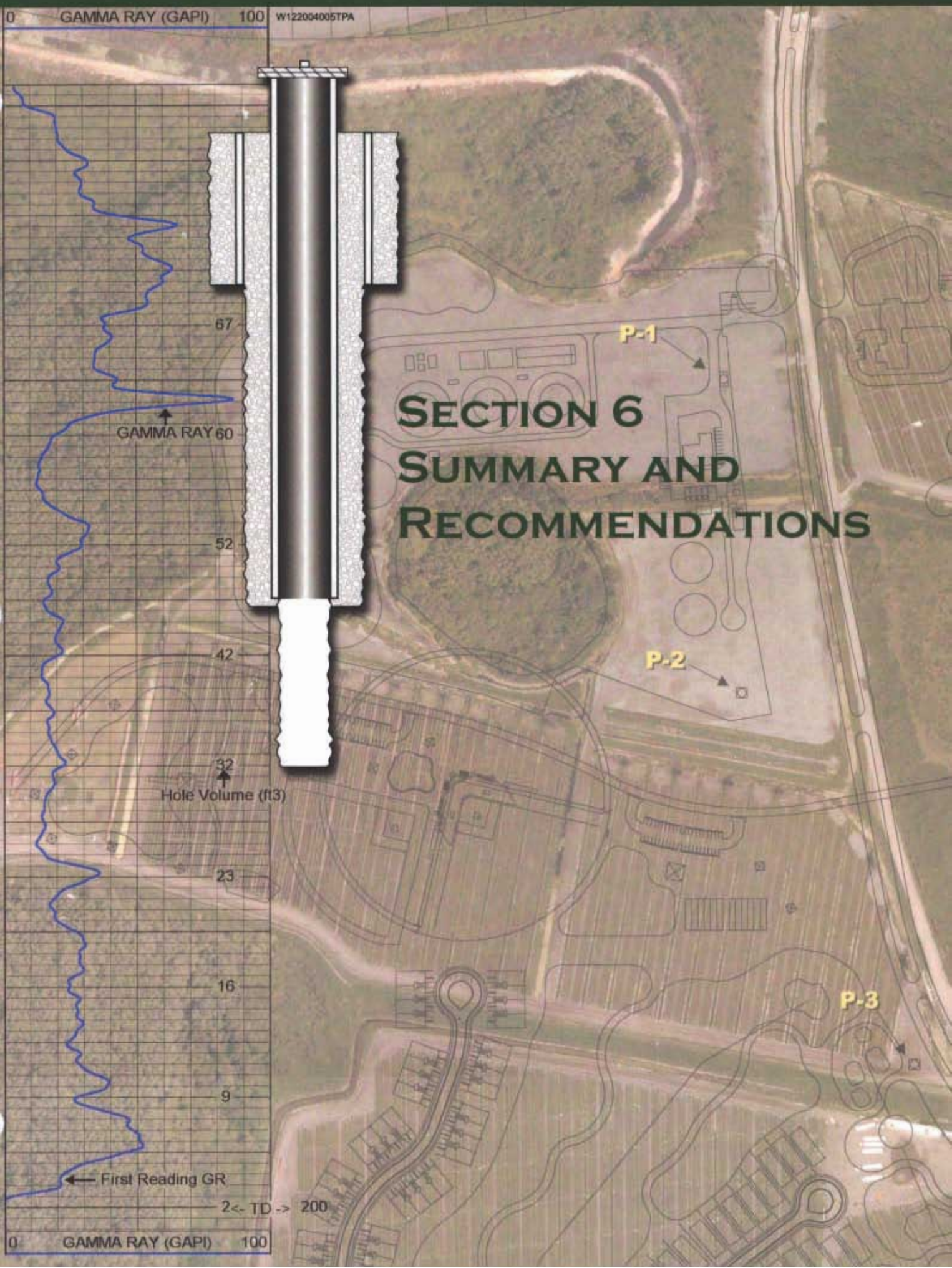
Water quality remained relatively constant during drilling of the pilot hole. Specific conductance measured at 70 feet and 83 feet bls was 751 and 741 μS/cm, respectively. **Table 5-1** presents a summary of pilot hole water sample results for P-2.

Water from Well P-2 is relatively fresh with a TDS value of 352 mg/L. No primary analyte exceeded the MCL standard. The only secondary analyte over the MCL standard was color. A summary of the ambient background water quality results from Well P-2 is shown in **Table 5-2**.

5.3 Well P-3 Water Quality

Specific conductance was measured during the advancement of the open hole at 64 feet bls and 73 feet bls. Water quality remained constant as specific conductance was measured to be 632 μS/cm and 630 μS/cm at 64 feet and 73 feet bls, respectively. **Table 5-1** presents a summary of the reverse-air water sample results for Well P-3.

Water generated from Well P-3 is of good quality. The salinity of the well in terms of TDS was 392 mg/L. No primary analyte exceeded the MCL standard. Two secondary analytes exceeded their respective MCL standard, pH and color. The field measured value for pH was 6.07, which is 0.43 below the MCL range (this low value is likely a result of sample error or equipment calibration error).



Section 6
Summary and Recommendations

SECTION 6

Summary and Recommendations

6.1 Summary

This report has been prepared to document the drilling and testing of the Ave Maria Tamiami production wells, as well as to provide additional hydrogeological information of the region for potential future expansion of the wellfield.

Construction of each production well included two concentric casings, a 20-inch-diameter steel surface casing set at approximately 20 feet bls and a final 12-inch-diameter PVC casing set to depths ranging from 50 feet to 61 feet bls. The final completion depths ranged from 77 feet bls in Well P-3 to 83 feet bls in Well P-1.

The production zone of all the wells is completed into the lower Tamiami aquifer of the Surficial Aquifer System, and are confined from the water table aquifer (surficial aquifer) by a low permeability unit of clay.

Extensive hydrogeologic testing was conducted during construction of these wells. This testing included lithologic sampling, pilot hole water quality sampling, geophysical logging, air-lift specific capacity testing, pumping tests, and ambient background water quality testing. The hydrogeologic testing focused on identifying the productive interval of the lower Tamiami aquifer and determining if the water quality was compatible with membrane treatment technology.

Specific capacities of Wells P-1, P-2, and P-3 at a flow rate of 750 gpm are 41 gm/ft, 46 gm/ft, and 30 gm/ft, respectively. Aquifer transmissivity of the region is approximately 45,886 ft^2/day (343,226 gpd/ft).

Well P-3 was tested at pumping rates up to 900 gpm, and Wells P-1 and P-2 were tested at rates up to 1,200 gpm. All of the wells produce water free of turbidity and sand and are capable of supplying water at their individual rated capacity of 700 gpm.

Water quality of the wellfield is suitable for the designed membrane treatment as TDS values range from 352 mg/L at Well P-2 to 432 mg/L at Well P-1. If the wells are operated simultaneously at their designed rate, the blended water from the wellfield received at the plant would have a TDS of approximately 390 mg/L, not taking into account up-coning of saltier water that may occur over time as a result of sustained pumping activities.

6.2 Recommendations

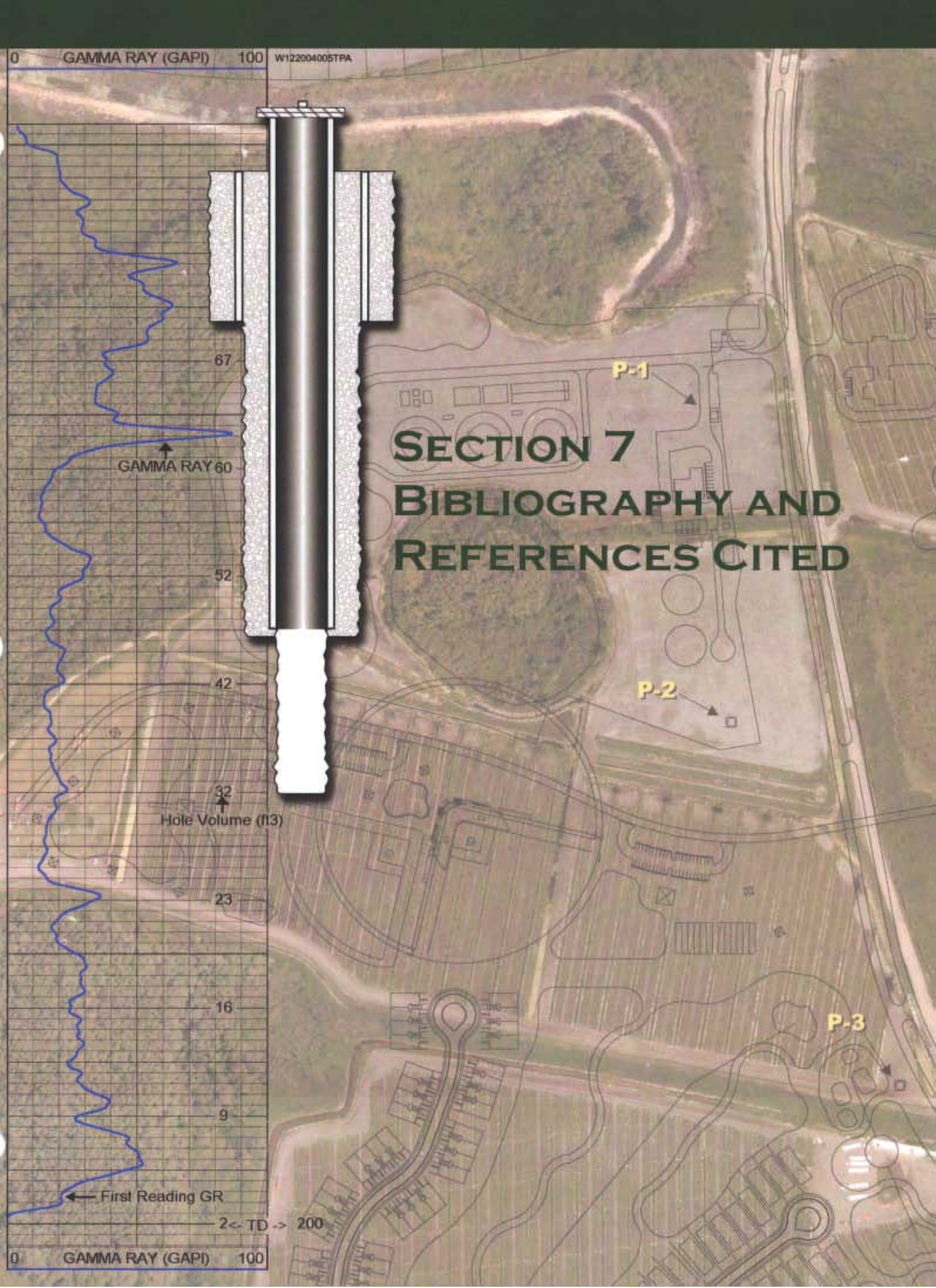
Data obtained during the construction and testing of Wells P-1 through Well P-3 confirm that the intercepted lower Tamiami aquifer of the Surficial Aquifer System provides suitable water quality and productivity for Ave Maria's proposed water treatment facility.

Water levels in the wells should be monitored during pumping and static periods and changes in specific capacity of the wells noted. Periodic acidization of the wells may be required to reduce depositions near the well bore and to reduce turbidity. Significant declines (greater than 30 percent) in specific capacity may indicate that acidization is required.

Wells P-1 and P-2 are the most productive and can operate at higher flow rates with less drawdown impacts, therefore, should be used preferentially whenever higher production rates are necessary.

Water quality from each well should be monitored on a weekly basis during the first 6 months of wellfield start up. This sampling may be reduced following a review of the data. Parameters should include at a minimum chloride and specific conductivity.

Wellfield optimization modeling should be considered following start up of the wellfield. This modeling will aid in optimizing well pumpage rotation and flow rates of the new wellfield to minimize any possible adverse impacts. Further calibrations can also be made to the model to simulate the current wellfield operation which can be used to model additional wellfield expansions in the future.



Section 7
Bibliography and References Cited

SECTION 7

Bibliography and References Cited

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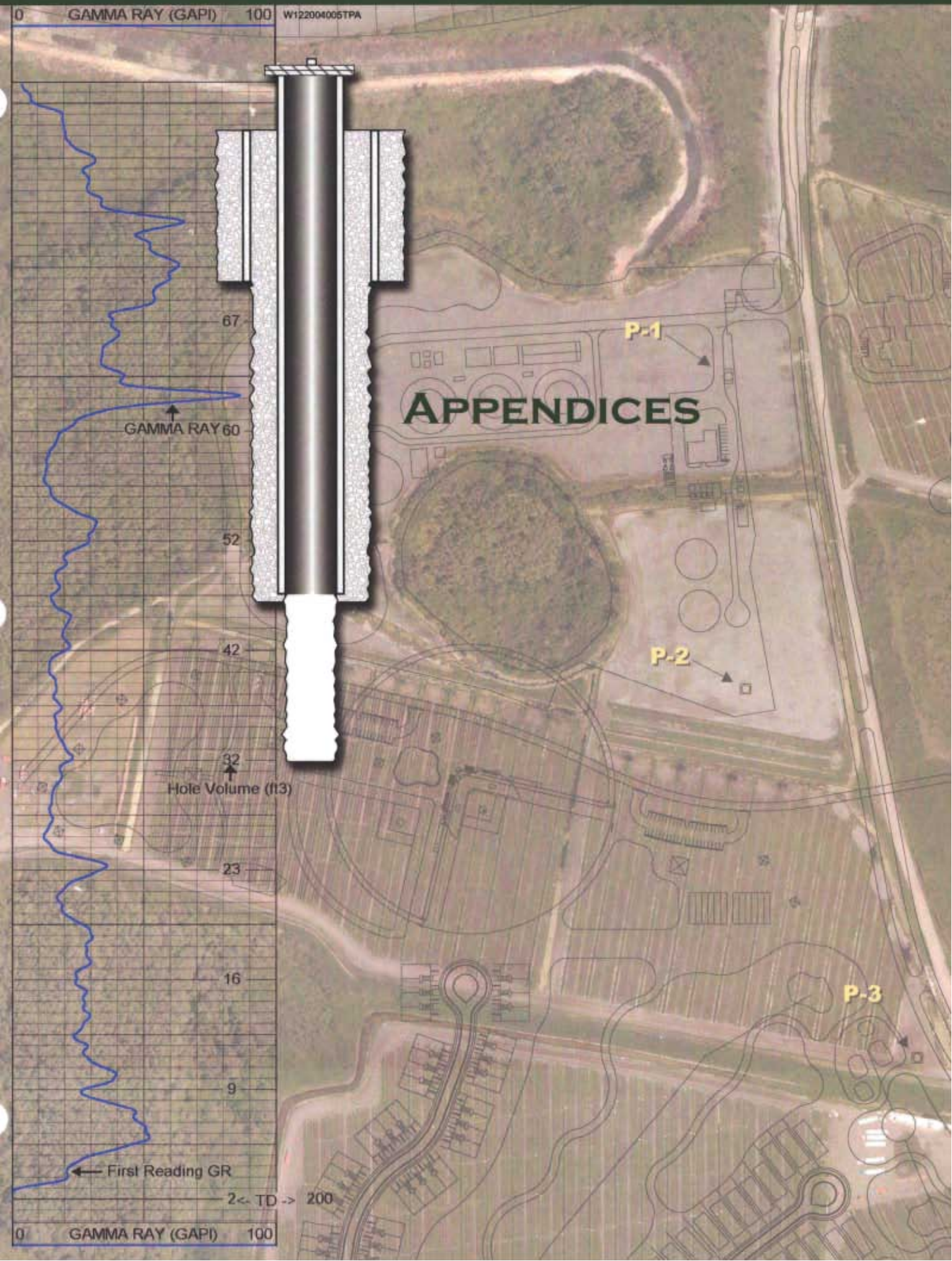
0 GAMMA RAY (GAPI) 100
W122004005TPA
67
GAMMA RAY 60
52
42
32
Hole Volume (ft3)
23
16
9
First Reading GR
2<- TD -> 200
0 GAMMA RAY (GAPI) 100
P-1
P-2
P-3

APPENDICES

APPENDIX A

Regulatory Permits and Well Completion Reports

COLLIER COUNTY
BOARD OF COUNTY COMMISSIONERS

PERMIT

PERMIT #: 2004072706 | PERMIT TYPE: WELL | **VALID #:** 706
ISSUED: 07-27-04 | APPLIED DATE: 07-27-04 | APPROVAL DATE: 07-27-04
MASTER #: 2004072706 COA #: N/A

JOB ADDRESS: 5000 CAMP KEAIS RD
JOB DESCRIPTION: CC07274L TEST WELL #1 JOB PHONE:

SUBDIVISION #: 100 - acreage BLOCK: 001 LOT: .000
FLOOD MAP: 0300 ZONE: D ELEVATION:
FOLIO #: 0000000226280002 SECTION-TOWNSHIP-RANGE 29 48 5

OWNER INFORMATION:
BARRON COLLIER PARTNERSHIP
2600 GOLDEN GATE PKWY STE 200

NAPLES, FLC095 341053227

CONTRACTOR INFORMATION:
DIVERSIFIED DRILLLING CORP.
P.O. BOX 290699

TAMPA,FL 33687-

CERTIFICATE #: 23271 PHONE: (239)368-6404

FCC CODE: 800 - WELLS
CONSTRUCTION CODE: 10 / OTHER
JOB VALUE: TOTAL SQFT:

SETBACKS FRONT: REAR: LEFT: RIGHT:
SEWER: SEPTIC WATER: WELL
CONTACT NAME: BILL
CONTACT PHONE: (239)368-6404

Per Collier County Ordinance No. 2002-01, as it may be amended, all work must comply with all applicable laws, codes, ordinances, and any additional stipulations or conditions of this permit. This permit expires if work authorized by the permit is not commenced within six (6) months from the date of issuance of the permit. Additional fees for failing to obtain permits prior to the commencement of construction may be imposed. Permittee(s) further understands that any contractor that may be employed must be a licensed contractor and that the structure must not be used or occupied until a Certificate of Occupancy is issued.

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In addition to the conditions of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this county, and there may be additional permits required from other governmental entities such as water management districts, state agencies, or federal agencies.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

CDPR2020

COLLIER COUNTY
BOARD OF COUNTY COMMISSIONERS

PERMIT

PERMIT #: 2004072711 PERMIT TYPE: WELL VALID #: 711
ISSUED: 07-27-04 APPLIED DATE: 07-27-04 APPROVAL DATE: 07-27-04
MASTER #: COA #: N/A

JOB ADDRESS: 5000 CAMP KEAIS RD
JOB DESCRIPTION: CC07274-M TEST WELL #2 JOB PHONE:

SUBDIVISION #: 100 - acreage BLOCK: 001 LOT: .000
FLOOD MAP: 0300 ZONE: D ELEVATION:
FOLIO #: 0000000226280002 SECTION-TOWNSHIP-RANGE 29 48 5

OWNER INFORMATION:
BARRON COLLIER PARTNERSHIP
2600 GOLDEN GATE PKWY STE 200

NAPLES, FLC095 341053227

CONTRACTOR INFORMATION:
DIVERSIFIED DRILLLING CORP.
P.O. BOX 290699

TAMPA,FL 33687-

CERTIFICATE #: 23271 PHONE: (239)368-6404

FCC CODE: 800 - WELLS
CONSTRUCTION CODE: 10 / OTHER
JOB VALUE: TOTAL SQFT:

SETBACKS FRONT: REAR: LEFT: RIGHT:
SEWER: SEPTIC WATER: WELL
CONTACT NAME: BILL
CONTACT PHONE: (239)368-6404

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CDPR2020

COLLIER COUNTY
BOARD OF COUNTY COMMISSIONERS

PERMIT

PERMIT #: 2004072713 PERMIT TYPE: WELL **VALID #:** 713
ISSUED: 07-27-04 APPLIED DATE: 07-27-04 APPROVAL DATE: 07-27-04
MASTER #: COA #: N/A

JOB ADDRESS: 5000 CAMP KEAIS RD
JOB DESCRIPTION: CC07274-N TEST WELL #3 JOB PHONE:

SUBDIVISION #: 100 - acreage BLOCK: 001 LOT: .000
FLOOD MAP: 0300 ZONE: D ELEVATION:
FOLIO #: 0000000226280002 SECTION-TOWNSHIP-RANGE 29 48 5

OWNER INFORMATION:
BARRON COLLIER PARTNERSHIP
2600 GOLDEN GATE PKWY STE 200

NAPLES, FLC095 341053227

CONTRACTOR INFORMATION:
DIVERSIFIED DRILLLING CORP.
P.O. BOX 290699

TAMPA,FL 33687-

CERTIFICATE #: 23271 PHONE: (239)368-6404

FCC CODE: 800 - WELLS
CONSTRUCTION CODE: 10 / OTHER
JOB VALUE: TOTAL SQFT:

SETBACKS FRONT: REAR: LEFT: RIGHT:
SEWER: SEPTIC WATER: WELL
CONTACT NAME: BILL
CONTACT PHONE: (239)368-6404

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CDPR2020

Form #0631
Rev. 11-91

Well Completion Report

CONSTRUCTION PERMIT NO. 20040727.06

Ave Maria Utility Co. 2600 Golden Gate Pky Naples FL 34105
Owner | Address | City | State | Zip

Contractor's Signature | License No. | Completion Date | Casing Depth | Total Depth | Well #
Ross Aanerud | 23271 | 9/6/04 | 61' | 82.5' | PW1
Driller's Name | Registration No.

TYPE OF WORK: Construct (✓) Repair ( ) Abandon ( )
WELL USE: Private Well ( ) Public ( ) Monitor ( ) Test (✓)
Irrigation ( ) Fire Well ( ) Other_____
METHOD: Rotary with MUD (✓) or Air ( ), Cable Tool ( ), Jet ( )
Casing Driven ( ), Other_____
STATIC WATER LEVEL 7.4 Ft. below top of casing
PUMPING WATER LEVEL 14.9 Ft. after 1 Hrs. at 450 GPM
PUMP SIZE 4" H.P. CAPACITY 450 GPM
PUMP TYPE Centrisigal INTAKE DEPTH 20'

LOCATION
Located Near 5000 Camp Keais Rd
County Collier
1/4 | 1/4 | Section 29 | Township 48 | Range 5
Unit | Block | Lot | Subdivision
Cuttings sent to District? ( ) Yes (✓) No

From top of ground

N

LOCATE IN SECTION

No cuttings sent "COLLECT" will be accepted

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout Thickness & Depth	Casing & Screen Diameter & Depth	Depth (ft) From	Depth (ft) To	Dril Cuttings Log: Examine cuttings every 20 ft or at formation changes. Give color, grain size, and type of material. Note cavities, depth to producing zones.
2"	20"	20'		Steel Casing
2"	12"	61'		PVC
		0	10'	Sand - Shell
		10'	20'	Limestone
		20'	30'	Limestone
		30'	40'	Clay
		40'	50'	Clay
		50	62'	Clay - rock
		62'	64'	Limestone
		64'	75'	Tan, gry limestone
Number of bags		75	81'	Tan. Limestone
80		81'	82.5'	phosphate, clay

Casing: Black Steel (✓) Galv. ( ) PVC (✓) Fiberglass ( )
Screen: Type_____ Slot size_____
Screened from_____(ft.) to_____(ft.)
Type of grout with % additives neat
Water: Clear ( ) Colored ( ) Sulphur ( ) Salty ( ) Iron (✓)
Conductivity_____ Chlorides_____ mg/l

Well Completion Report

rm #0637
v. 11/91

CONSTRUCTION PERMIT NO 20040727.11 COLLIER COUNTY
SECT-GR...ER

Ave Maria Utility 2600 Golden Gate Blvd Naples, FL 34105
Owner Address City State Zip

23271 8-25-04 58' 80' PW2
License No. Completion Date Casing Depth Total Depth Well #

Contractor's Signature

ROUS AANESEN
Driller's Name Registration No

TYPE OF WORK: Construct (X) Repair ( ) Abandon ( )
WELL USE: Private Well ( ) Public ( ) Monitor ( ) Test (X)
Irrigation ( ) Fire Well ( ) Other_____
METHOD: Rotary with MUD (X) or Air ( ) Cable Tool ( ) Jet ( )
Casing Driven ( ) Other_____
STATIC WATER LEVEL 6.92 Ft. below top of casing
PUMPING WATER LEVEL 14.1 Ft. after 1 Hrs. at 450 GPM
PUMP SIZE 4" H P CAPACITY 45.0 GPM
PUMP TYPE Centrifugal INTAKE DEPTH 20'
From top of ground

LOCATION
Located near 5000 Camp Keais Rd
County Collier
24 48 5
1/4 1/4 Section Township Range
Unit Block Lot Subdivision
Cuttings sent to District? ( ) Yes (X) No

N

LOCATE IN SECTION

No cuttings sent "COLLECT" will be accepted

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout Thickness & Depth	Casing & Screen Diameter & Depth		Depth (ft.) From	To	DRILL CUTTINGS LOG Examine cuttings every 30 ft or at formation changes Give color, grain size, and type of material Note cavities, depth to producing zones
2"	20'	20'	Steel Casing		
2"	12"	58'	PVC Casing		
			0'	9'	Sand
			9'	10'	Shell, Sandy clay
			10'	20'	Limestone
			20'	30'	Limestone Shelly Hard
			30'	40'	Green clay
			50'	58'	Green Clay
			58'	62'	Limestone
			62'	70'	Limestone Tan+Grey
			70'	80'	Limestone Tan
Number of bags 87					

Casing: Black Steel (X) Galv. ( ) PVC (X) Fiberglass ( )
Screen: Type_____ Slot size_____
Screened from_____(ft.) to_____(ft.)
Type of grout with % additives Neat
Water: Clear ( ) Colored ( ) Sulphur ( ) Salty ( ) Iron (X)
Conductivity_____ Chlorides_____mg/l

Well Completion Report

CONSTRUCTION PERMIT NO 2004012713 Collier County

Owner: Hue Maria Utility Address: 2600 Golden Gate Blvd City: Naples State: FL Zip: 34105

Contractor's Signature: E.W. Wirt License No.: 23271 Completion Date: 8-15-04 Casing Depth: 50' Total Depth: 73' Well #: PW3

Driller's Name: Ross Aarenud Registration No.:

TYPE OF WORK: Construct (X) Repair ( ) Abandon ( )

WELL USE: Private Well ( ) Public ( ) Monitor ( ) Test (X)
Irrigation ( ) Fire Well ( ) Other

METHOD: Rotary with MUD (X) or Air ( ). Cable Tool ( ). Jet ( )
Casing Driven ( ). Other

STATIC WATER LEVEL 6.86 Ft. below top of casing

PUMPING WATER LEVEL 13.8 Ft. after 1 Hrs. at 450 GPM

PUMP SIZE 4" H.P. CAPACITY 450 GPM

PUMP TYPE Centrifigal INTAKE DEPTH 20'

LOCATION

Located Near: 5000 Camp Keais Rd

County: Collier

29 48 5
1/4 1/4 Section Township Range

Unit Block Lot Subdivision

Cuttings sent to District? ( ) Yes (X) No

From top of ground

N

LOCATE IN SECTION

No cuttings sent "COLLECT" will be accepted

Note: PWS Wells attach a site map if well location is different from site location on permit application.

Grout: Thickness & Depth	Casing & Screen: Diameter & Depth	Depth (ft.): From	To	DRILL CUTTINGS LOG: Examine cuttings every 20 ft or at formation changes. Give color, grain size, and type of material. Note cavities, depth to producing zones.
21'	20"	20'		Steel Casing
21'	12"	50'		PVC Casing
		0	10'	Sand
		10'	20'	Limestone
		20'	30'	Tan mixed sandy clay
		30'	40'	Green Clay
		40'	50'	Green Clay
		50'	60'	Grey Limestone
		60'	73'	Limestone, Shelly rock
Number of bags: 90				

Casing: Black Steel (X) Galv. ( ) PVC (X) Fiberglass ( )

Screen: Type Slot size

Screened from (ft.) to (ft.)

Type of grout with % additives Neat

Water: Clear ( ) Colored ( ) Sulphur ( ) Salty ( ) Iron (X)

Conductivity Chlorides mg/l

COLLIER COUNTY
BOARD OF COUNTY COMMISSIONERS

PERMIT

PERMIT #: **2005021665** PERMIT TYPE: WELL **VALID #:** **665**
ISSUED: 02-16-05 APPLIED DATE: 02-16-05 APPROVAL DATE: 02-16-05
MASTER #: COA #: N/A

JOB ADDRESS: 5000 CAMP KEAIS RD
JOB DESCRIPTION: CC02165J TEST WELL #1/MODIF. PUBLIC WATE JOB PHONE:

SUBDIVISION #: 100 - acreage BLOCK: 001 LOT: .000
FLOOD MAP: 0300 ZONE: D ELEVATION:
FOLIO #: 0000000226280002 SECTION-TOWNSHIP-RANGE 29 48 5

OWNER INFORMATION:
BARRON COLLIER PARTNERSHIP
2600 GOLDEN GATE PKWY STE 200

NAPLES, FLC095 341053227

CONTRACTOR INFORMATION:
DIVERSIFIED DRILLLING CORP.
P.O. BOX 290699

TAMPA,FL 33687-

CERTIFICATE #: 23271 PHONE: (239)368-6404

FCC CODE: 800 - WELLS
CONSTRUCTION CODE: 10 / OTHER
JOB VALUE: TOTAL SQFT:

SETBACKS FRONT: REAR: LEFT: RIGHT:
SEWER: SEPTIC WATER: WELL
CONTACT NAME: BILL
CONTACT PHONE: (239)368-6404

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COLLIER COUNTY
BOARD OF COUNTY COMMISSIONERS

PERMIT

PERMIT #: 2005021667 PERMIT TYPE: WELL **VALID #:** 667
ISSUED: 02-16-05 APPLIED DATE: 02-16-05 APPROVAL DATE: 02-16-05
MASTER #: COA #: N/A

JOB ADDRESS: 5000 CAMP KEAIS RD
JOB DESCRIPTION: CC02165-K TEST WELL #2 MODIF TO PUBLIC W JOB PHONE:

SUBDIVISION #: 100 - acreage BLOCK: 001 LOT: .000
FLOOD MAP: 0300 ZONE: D ELEVATION:
FOLIO #: 0000000226280002 SECTION-TOWNSHIP-RANGE 29 48 5

OWNER INFORMATION:
BARRON COLLIER PARTNERSHIP
2600 GOLDEN GATE PKWY STE 200

NAPLES, FLC095 341053227

CONTRACTOR INFORMATION:
DIVERSIFIED DRILLLING CORP.
P.O. BOX 290699

TAMPA,FL 33687-

CERTIFICATE #: 23271 PHONE: (239)368-6404

FCC CODE: 800 - WELLS
CONSTRUCTION CODE: 10 / OTHER
JOB VALUE: TOTAL SQFT:

SETBACKS FRONT: REAR: LEFT: RIGHT:
SEWER: SEPTIC WATER: WELL
CONTACT NAME: BILL
CONTACT PHONE: (239)368-6404

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COLLIER COUNTY
BOARD OF COUNTY COMMISSIONERS

PERMIT

PERMIT #: 2005021669 PERMIT TYPE: WELL **VALID #:** 669
ISSUED: 02-16-05 APPLIED DATE: 02-16-05 APPROVAL DATE: 02-16-05
MASTER #: COA #: N/A

JOB ADDRESS: 5000 CAMP KEAIS RD
JOB DESCRIPTION: CC02165-L TEST WELL #3 MODIF TO PUBLIC W JOB PHONE:

SUBDIVISION #: 100 - acreage BLOCK: 001 LOT: .000
FLOOD MAP: 0300 ZONE: D ELEVATION:
FOLIO #: 0000000226280002 SECTION-TOWNSHIP-RANGE 29 48 5

OWNER INFORMATION:
BARRON COLLIER PARTNERSHIP
2600 GOLDEN GATE PKWY STE 200

NAPLES, FLC095 341053227

CONTRACTOR INFORMATION:
DIVERSIFIED DRILLLING CORP.
P.O. BOX 290699

TAMPA,FL 33687-

CERTIFICATE #: 23271 PHONE: (239)368-6404

FCC CODE: 800 - WELLS
CONSTRUCTION CODE: 10 / OTHER
JOB VALUE: TOTAL SQFT:

SETBACKS FRONT: REAR: LEFT: RIGHT:
SEWER: SEPTIC WATER: WELL
CONTACT NAME: BILL
CONTACT PHONE: (239)368-6404

Per Collier County Ordinance No. 2002-01, as it may be amended, all work must comply with all applicable laws, codes, ordinances, and any additional stipulations or conditions of this permit. This permit expires if work authorized by the permit is not commenced within six (6) months from the date of issuance of the permit. Additional fees for failing to obtain permits prior to the commencement of construction may be imposed. Permittee(s) further understands that any contractor that may be employed must be a licensed contractor and that the structure must not be used or occupied until a Certificate of Occupancy is issued.

NOTICE: PRIOR TO THE REMOVAL OF ASBESTOS PRODUCTS OR THE DEMOLITION OF A STRUCTURE, FEDERAL AND STATE LAWS REQUIRE THE PERMITTEE (EITHER THE OWNER OR CONTRACTOR) TO SUBMIT A NOTICE OF THE INTENDED WORK TO THE STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP). FOR MORE INFORMATION, CONTACT DEP AT (239) 332-6975.

In addition to the conditions of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this county, and there may be additional permits required from other governmental entities such as water management districts, state agencies, or federal agencies.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

APPENDIX B

Summary of Construction Activities

Production Well - 1 Construction Activities

Date	Activity
August 31, 2004	Mobilize to site, begin drilling activities, set 20 feet of 20-inch diameter steel surface casing.
September 1, 2004	Resume drilling 8-inch nominal pilot hole utilizing mud rotary drilling methods, conduct first geophysical logging event, and ream 8-inch pilot hole to 19-inch diameter hole using mud rotary drilling.
September 2, 2004	Complete reaming of 8-inch pilot hole to 19-inch diameter hole to approximately 62 feet bls. Secure site in preparation for Hurricane Frances.
September 3-7, 2004	No Activity - Hurricane Frances.
September 8, 2004	Set and cement 61 feet of 12-inch SDR-17 PVC Casing
September 9, 2004	Drill nominal 12-inch open hole to approximately 82 feet bls using reverse-air drilling methods.
September 10, 2004	Initiated and completed airlift development activities. Secured site in preparation for Hurricane Ivan.
September 14, 2004	Conduct Final Geophysical Logging Event #2.
September 21, 2004	Conduct variable rate pump test. Background water quality samples collected.
September 29, 2004	Install protective barriers around wellhead.
October 6, 2004	Final Inspection Activities.

Production Well - 2 Construction Activities

Date	Activity
August 19, 2004	Mobilization and site preparation/prepare for drilling operations
August 20, 2004	Begin drilling, Set 20 feet of 20-inch steel surface casing.
August 23, 2004	Continue drilling 8-inch pilot hole to 62 feet bls using mud rotary drilling method. Conduct first geophysical logging event. Begin reaming 8-inch pilot hole to 19-inch diameter.
August 24, 2004	Continue reaming 8-inch pilot hole to 19-inch diameter. Set 59 feet of 12-inch casing.
August 25, 2004	Drill open hole to approximately 82.5 feet bls. Back-plug from 82.5 feet bls to approximately 80 feet bls with neat cement.
August 26, 2004	Initiated and completed airlift development activities.
August 27, 2004	Conduct final geophysical logging event #2.
August 30, 2004	Collect background water samples.
September 24, 2004	Conduct variable rate pump test.
September 29, 2004	Install protective barriers around wellhead.
October 6, 2004	Final Inspection Activities.

Production Well - 3 Construction Activities

Date	Activity
July 30, 2004	Begin Mobilization to P-3.
August 3, 2004	Begin drilling, Set and cement 20-feet of 20-inch diameter steel surface casing. 30 bags of neat cement used.
August 4, 2004	Resume drilling 8-inch nominal pilot hole utilizing mud rotary drilling methods. Complete pilot hole to a total depth 200 feet bls.
August 5, 2004	Conduct geophysical logging event # 1.
August 6, 2004	Set Drillable Bridge Plug.
August 11, 2004	Ream 8-inch pilot hole to 19-inch diameter hole using mud rotary drilling. Set and cement 50 feet of 12-inch casing.
August 12-16, 2004	Limited Activities – Hurricane Charley
August 17, 2004	SDS tagged cement depth inside 12-inch PVC casing. Tagged depth = 47 feet bls. SDS employ mud rotary techniques to drill from ~47 – 50 feet bls and then switch to reverse air. Reverse air (RA) drilling initiated. SDS stop at 77 feet bls.
August 18, 2004	Conduct final geophysical logging event #2.
August 19, 2004	Begin back-plugging well.
August 25, 2004	Back-plug well to approximately 75 feet bls, total cement used = 7 sacks
August 26, 2004	Airlift development preparation.
August 27, 2004	Airlift development activities produces sand. Well back-plugged further using 5 bags of gravel and 1 bag of neat cement.
August 30, 2004	Tagged backplugged depth at 71 feet bls. Successfully resume and complete airlift development activities.
September 14, 2004	Conduct Final Video Log.
September 22, 2004	Collect background water sample.
September 23, 2004	Conduct variable rate pump test .
September 29, 2004	Protective barriers installed around wellhead.
October 6, 2004	Final Inspection Activities.

APPENDIX C

Daily Construction Reports

CH2M HILL Daily Summary

Day/Date:	**Friday, July 30, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp. (DDC)**
Client:	**Ave Maria Town & University**	**Well No:**	**P-3**

P-3

Activity:	Site preparation, install shallow make-up well

0730- DDC prepare site and rig maintenance in preparation for drilling activities. Drill 25 foot bore hole and installed 4-inch diameter shallow water supply well. Casing installed to 15 feet bls.

1645 End of Day. DDC offsite. DDC will continue rigging up for drilling operations on Tuesday August 3. CH2M HILL site coverage provided via phone.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Monday, August 2, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corporation (DDC)**
Client:	**Ave Maria Town & University**	**Well No:**	**P-3**

P-3	
Activity:	Continued site preparation/prepare for drilling operations
Starting Depth:	NA
Ending Depth:	NA
Materials used:	NA

0730- DDC prepare site and rig maintenance in preparation for drilling activities. Develop 4-inch diameter shallow water supply well using airlift development techniques.

1645 End of Day. DDC offsite. DDC will continue rigging up for drilling operations on 3 Aug 04. CH2M HILL site coverage provided via phone.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Tuesday, August 3, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-3**

P-3

Activity:	Mud Rotary Drilling and Surface Casing Installation Activities
Starting Depth:	Land Surface
Ending Depth:	20 feet Below Land Surface (bls)
Materials used:	20 feet of 20-inch Steel Surface Casing

0705	C. Ivery enroute. Call From Ross/ DDC. ~ 1 hour prep time before drilling
0830	C. Ivery onsite. Review day's activities with Ross & Daniel/DDC.
0845	C. Ivery contact Mike Weatherby to review procedures and day's activities. DDC start mud rotary drilling. DDC's goal is to drill 200 feet bls and log entire length. Today's activities will be limited to setting 20 feet of 20-inch steel surface casing.
1025	Samples collected and logged from 0-20 feet bls. DDC currently prepping 20′ of 20″ steel surface casing (adding centralizers)
1040	Casing installed. Prep for cementing.
1045	Heavy down pour of rain. Work paused. Waiting arrival of cement.
1055	DDC drop off 30 bags of neat cement
1109	Contact M. Weatherby with update.
1114	Start mixing cement and treming into annulus.
1127	Stop treming cement – 30 bags of portland cement used. Minimum cement return noted at surface
1130	Pumping chase
1200	End of Day. DDC to police area, C. Ivery enroute to Ft. Myers for supplies.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Wednesday, August 4, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-3**

P-3

Activity:	Resume drilling 8-inch nominal pilot hole utilizing mud rotary drilling methods.
Starting Depth:	20 feet bls
Ending Depth:	200 feet bls

0700 C. Ivery enroute to Ave Maria. Call Ross/DDC. Informed of H&S inspection.

0800 C. Ivery onsite. DDC prep for drilling activities.

0837 Start drilling 1st sample to be collected from 20-30 feet bls

0850 1st sample collected from 20-30 feet bls.

0925 Ralph/DDC foreman onsite to inspect drilling operations.

1005 Ralph offsite. Andrew Ozolnieks/CCI/BSU & Alan Cyrier/CCI/ATL onsite to conduct H&S inspection.

1040 Andrew & Alan offsite. Review H&S concerns with Ross/DDC. DDC currently working on 110-120′ depth.

1140 DDC currently at 160-170′. Slower drilling due to clays. Good water producing zone at ~ 55-75 feet bls noted by Ross/DDC lead driller.

1245 On 170-180 foot zone nearing 176 feet bls. Slow going due to stiff clays according to Ross/DDC

1545 End of day. Last sample collected from 190-200 feet bls. DDC pulled rods and policed area. Steve Miller to log bore tomorrow at 0830. DDC will run clean swipe before logging. All personnel offsite.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Thursday, August 5, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-3**

P-3

Activity:	First Geophysical Logging Event. Prep to ream 8-inch pilot to 25-inch diameter hole using mud rotary drilling.
Starting Depth:	Surface
Ending Depth:	200 feet bls

0730 DDC prep to circulate mud to clean out pilot hole in preparation for first geophysical logging event. Run clean wipe at 200′ bore hole prior to logging

0820 Call M. Weatherby to review lithology logs and to discuss procedures after logging.

0855 Steve Miller/MV geophysical onsite to conduct gamma/caliper and dual induction/SP logs.

0919 Start logging

1030 Logging completed and bore hole secured. DDC enroute to field yard for supplies. Will await call from M. Weatherby or P. Larkin before continuing activities at P-3. Steve preparing hard copy and electronic logs.

1105 Obtained logs from Steve Miller. Steve Miller offsite. C. Ivery enroute to hotel to emails logs and lithology description to P. Larkin and M. Weatherby.

1235 Gamma/caliper and dual induction/SP electronic logs emailed to P. Larkin and M. Weatherby.

1432 Received email from P. Larkin following procedures will be incorporated Friday, 6 Aug 04:

- DDC will backfill pilot hole with clean gravel to approx. 55' bls.
- Set cement bridge-plug 55' to at least 50'
- Ream to approx 51' bls (51' to the reamer bit).
- Set casing approx 50' bls.
- Drill open hole through production interval and beyond to approximately 95'
- Cement cap from 95' feet to 75-80'

1445 Contacted Ross/DDC to discuss procedures for tomorrow, 6 Aug 04.

1500 End of Day.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Friday, August 6, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-3**

P-3

Activity:	Set Drillable Bridge Plug and Cement Cap.
Starting Depth:	200 feet bls
Ending Depth:	57 feet bls
Materials used:	30 Bags of Gravel & 4 Bags of Neat Cement.

0800	C. Ivery onsite. Waiting arrival of DDC. DDC to backplug and ream well according to Aug. 5, 2004 email from Pete Larkin to DDC & C. Ivery.
0840	DDC onsite with load of gravel to back plug bore hole. ¼"- ½" White River Gravel by Florida Stone. Each bag ½ ft^3 (14L). Approximate coverage 2-3 ft^2 by 2" deep according to bag. 2 pallets at 60 bags/pallet total 120 bags of ¼"- ½" White River Gravel onsite.
0938	4" drill pipe set at ~58' bls. DDC to pour gravel down drill pipe.
0946	Start pouring gravel
1005	Heavy down pour. Back plugging paused.
1105	Tagged gravel plug depth ~ 57' bls. DDC to mix four bags of neat cement and pour/tremie on top of gravel plug.
1115	C. Ivery contact P. Larkin with summary of activities.
1200	End of Day. DDC police and secure area. DDC & C. Ivery offsite. Reaming activities to be begin 9 Aug 04.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Monday, August 9, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-3**

P-3

Activity:	Limited Activities. DDC Service Drilling Equipment.

0710 Received call from Ross/DDC stating mechanical problems. DDC would not make it to site until late this afternoon. Agreed no activity for today. Will resume tomorrow with reaming activities.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Tuesday, August 10, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-3**

P-3

Activity:	Limited Activities. DDC Service Drilling Equipment.

0700 Same as yesterday. No activity for today. DDC perform repairs to drill rig.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Wednesday, August 11, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-3**

P-3	
Activity:	Ream 8-inch pilot hole to 19-inch diameter hole using mud rotary drilling. Set 50 feet of 12-inch casing.
Starting Depth:	Surface
Ending Depth:	51 feet bls
Materials used:	51 feet 12-inch SDR-17 PVC Casing & 51 Bags Neat Cement

0700 DDC onsite prep for reaming after making final adjustments to mud system pump.

0815 C. Ivery onsite. DDC currently reaming with 19 inch bit. Currently at 33 feet bls.

0830 Obtain cement plan from DDC. DDC continue reaming.

0940 Reaming activities completed. DDC currently circulating mud to clean out bore hole.

1028 Lowering 1st section of PVC pipe (11 ft)

1030 Connecting 1st and 2nd sections. 2nd section 30 ft.

1033 Lowering 1 and 2. 41 ft. of casing lowered

1036 Connecting 2 and 3. 3rd section = 20′ length.

1039 Lowering 2 and 3. 51 ft. of casing lowered.

1043 Approximately 1.5-2 feet above grade riser – to top of coupling

1046 DDC prep for cement casing

1129 Setup for cementing complete. Tremie pipe set at ~ 45 feet bls (~ 5 above bottom of casing)

1133 Start mixing portland cement

1135 Start pumping. Wt = 14.9 lbs/gal

1139 Wt = 15.1 lbs/gal, no pressure reading

1142 Wt = 15.3 lbs/gal, no pressure reading

1145 Sample collected. End of 1st Pallet.

1151 Pumping chase. Good cement return noted at surface. Pressure = 10 psi.

1158 Pumping chase completed, tremie pulled/raised approximately 5 feet.

1240 DDC police and secured area. Request permission to return to site and pull tremie pipe at 1630. C. Ivery to call P. Larkin or M. Weatherby for approval. All personnel offsite.

1315 Contact Ross/DDC, DDC to pull tremie pipe and secure site tomorrow in preparation for Hurricane Charley. DDC crew take remainder of day off to prep homes for hurricane.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Thursday, August 12, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-3**

P-3

Activity:	Limited Activities – Hurricane Charley preparation

0800-1030	DDC secure site in preparation for Hurricane Charley. Tremie line pulled and drilling mast lowered.
1035	Site secure. All personnel offsite.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Friday, August 13, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-3**

P-3

Activity:	Hurricane Charley – No Activities

0700-1700 No activity due to Hurricane Charley.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Monday, August 16, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-3**

P-3

Activity:	Service equipment & prep for reverse air drilling on Tuesday 17 Aug 04.

0730-1500 Limited activity. DDC pump out/clean out cutting tank, in preparation for RA drilling on Tuesday, August 17, 2004.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Tuesday, August 17, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-3**

P-3

Activity:	Mud Rotary/Reverse Air Drilling Activities
Starting Depth:	47 feet bls
Ending Depth:	77 feet bls

0800	DDC onsite prep for RA drilling. DDC to use "light" mud to drill through concrete plug and 2-3 feet into gravel plug.
0900	Tagged inner casing cement depth ~ 47 feet bls. DDC removing mud at ~ 50 feet bls. Prep to switch RA drilling.
1029	Start RA drilling.
1125	DDC currently at 64' BLS. Spec. capacity test PWL = 6.71 feet BTOC, Q = 120 Gal/1.5 mins = 80 gpm. Water sample collected. Spec. Cond. = 632 µs/cm^{0}C at 33.2 ^{0}C and Cond = 734 µs/cm^{0}C at 33.2 ^{0}C
1135	SWL = 4.40 feet BTOC.
1155	DDC encountered "sand plug" near 77 feet bls. Pulled up to 75 feet bls to clean line. DDC to continue drilling.
1208	Call Pete Larkin to discuss sand issue.
1211	DDC to stop RA drilling and perform limited pump test. May drill beyond sand plug.
1221	Rods and drill bit pulled from well – DDC prep for pump test.
1225	SWL = 4.47 feet BTOC
1230	Q= 120 Gal/1.33 mins = 90 gpm; PWL = 6.58 feet BTOC.
1257	Based on conversation with Pete Larkin and Mike Weatherby, DDC to drill down to 80 feet bls. DDC to RA develop well at ~72-73 feet bls.
1341	Call Pete with update. Currently at 77' still producing a lot of sand. DDC prefer to stop. Little progress and filling up sand separator and line.
1345	Stop RA drilling. DDC pull up to 73' BLS. Water sample collected. Spec. Cond. = 630 µs/cm^{0}C at 29.4 ^{0}C and Cond = 683 µs/cm^{0}C at 29.4 ^{0}C.
1350	RA development initiated.
1530	End RA development. Well still producing large quantity of sand.
1550	End of Day. All personnel offsite.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Wednesday, August 18, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-3**

P-3

Activity:	Conduct final geophysical logging event #2

0950	C. Ivery onsite. Waiting arrival of DDC and Steve Miller.
1005	DDC and Steve Miller onsite. Prep for Static and Dynamic logs.
1020	Static WL = 4.05 feet below top of coupling
1030	Start static logs (caliper/gamma & fluid conductivity temperature/fluid resistivity temperature)
1140	Static logs (caliper/gamma & FCT/FRT) successfully completed.
1155	Start dynamic logs (flow meter & video). Q = 1050 gpm
1212	Pumping WL = 13.00 feet below top of coupling
1227	Pumping WL = 12.50 feet below top of coupling
1545	All logs finally completed. Obtained hard copies, CD, and video tape from Steve Miller. All personnel offsite. CI enroute to email logs and FedEx video tape

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Thursday, August 19, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-2 & P-3**

P-3

Activity:	Backplugging
Starting Depth:	76 feet bls
Ending Depth:	73 feet bls
Materials used:	3 bags of neat cement.

0810 DDC prep to backplug P-3 from ~76-73 feet bls using tremie technique and 3 bags of neat cement.

0910 Backplugging activities at P-3 completed. DDC will tagged backplug depth tomorrow, 20 Aug 04. DDC prep to mob to P-2.

P-2

Activity:	Site Mobilization & Preparation.

0940 At P-2, DDC prepare site and rig maintenance in preparation for drilling activities.

1445 End of Day. DDC offsite. DDC will continue rigging up for drilling operations on 20 Aug 04.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Friday, August 20, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-2 & P-3**

P-3

Activity:	Continued Backplugging Activities
Tag Depth:	75 feet bls
Materials used:	1 bag of neat cement.

0805 DDC onsite at P-3. Prep to tag backplug depth.

0840 DDC tagged depth at ~75 feet bls. DDC to mix and add (using tremie method) an additional bag (1) of neat cement.

0910 Additional bag of neat cement mixture added to P-3. DDC to continue mobilization and preparation activities at P-2.

P-2

Activity:	Continued Site Preparation, Mud Rotary Drilling, and Surface Casing Installation Activities
Starting Depth:	Surface
Ending Depth:	20 feet bls
Materials used:	20 feet of 20-inch Steel Surface Casing

1000 DDC continue mobilization and site preparation activities at P-2. Today's activities will be limited to setting 20 feet of 20-inch steel surface casing.

1115 Start mud rotary drilling activities at P-2.

1225 DDC currently near 20 feet bls.

1245 Samples collected and logged from 0-20 feet bls. DDC currently prepping 20′ of 20″ steel surface casing (adding centralizers) and circulating mud to clean out bore hole.

1330 Lead bit pulled from bore hole

1335 Casing installed. Prep for cementing

1350 Start mixing cement and treming into annulus.

1405 Stop treming cement – 30 bags of portland cement used. Minimum cement return noted at surface

1409 Pumping chase

1440 C. Ivery offsite. DDC to police area.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Monday, August 23, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-2 & P-3**

P-3

Activity:	Backplugging Activities.
Starting Depth:	~75 feet bls
Materials used:	1 bag of neat cement.

0730 DDC tags P-3 cement backplug depth at ~75 feet bls. Plug came up only ~ 3-4 inches after 1 bag of neat cement was added on Friday, August 20, 2004.

1420 Additional bag of neat cement mixture added to P-3.

1430 C. Ivery offsite.

P-2

Activity:	Continued Mud Rotary Drilling Activities. Conduct First Geophysical Logging Event. Ream 8-inch Pilot Hole to 25-inch Diameter Hole
Starting Depth:	20 feet bls
Ending Depth:	62 feet bls

0715 DDC onsite at P-2. Prep to continue mud rotary drilling activities.

0745 C. Ivery onsite. DDC cutting steel casing at P-2. Prep to drill to ~60 feet bls, log bore hole and ream bore hole.

0820 DDC start drilling 20-30' Interval

0940 Final sample collected from 58-62' BLS. DDC prep for logging. Currently circulating mud to clean out bore hole.

1000 Steve Miller/MV geophysical onsite to conduct gamma/caliper and dual induction/SP logs.

1020 Start Logging.

1125 Logging activities completed. Steve to print hand copy.

1210 Logs obtained from Steve Miller. Steve offsite.

1220 DDC prep to ream bore hole.

1240 DDC start reaming.

1350 DDC reamed to ~34' BLS. DDC prep to mix and add (using tremie method) an additional bag of neat cement to P-3. Afterwards DDC to prep PVC casing for installation tomorrow at P-2.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Tuesday, August 24, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-2**

P-2

Activity:	Ream 8-inch pilot hole to 19-inch diameter hole using mud rotary drilling. Set 59 feet of 12-inch casing.
Starting Depth:	34 feet bls
Ending Depth:	62 feet bls
Materials used:	59 feet of 12-inch SDR 17 PVC casing, 55 bags of neat cement;

0900 DDC onsite. Prep for continued reaming and PVC casing installation. Andrew onsite to conduct his inspection.

0925 C. Ivery onsite. H&S inspection completed - Andrew offsite. DDC continue preparation activities.

0950 DDC tagged P-3 depth at 75 feet bls.

0955 Contact Pete Larkin with tag results. Pete approved adding of two bags of neat. DDC continued preparation activities at P-2.

1010 Back at P-2. Continue preparation of casing and reaming activities.

1100 DDC reaming currently at 45 feet bls

1130 DDC on bottom ~ 62 feet bls. Prep to install casing to 59 feet bls. Note 4 DDC personnel onsite.

1145 Circulating mud to clean hole. Adding coupling with black spins.

1155 DDC pulling rods

1206 Adding centralizers to 1st section of 12" SDR 17 PVC casing.

1210 1st section lowered (20')

1212 Connecting sections 1 and 2 (20')

1215 Lowering 1 and 2 – total 40 feet lowered

1217 Adding centralizer to section 3 and connecting section 3 (20') with 1 and 2

1221 Lowering section 3

1225 Adding cement header to well and prep pressure drop tube. Tube set at 50 feet bls.

1253 Start pumping neat.

1300 Wt – 15.2 lbs/gal, pressure = 0 psi

1302 Pressure = 8 psi

1304 Pressure = 11 psi

1306 Pressure = 16 psi

1307 55 bags of neat used. Pressure = 20 psi

1309 No return noted at surface. Pressure= 21 psi.

1340 Pumping chase. Did not work line plugged. Pack up – heavy lightening in area.

1400 All personnel offsite.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Wednesday, August 25, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-2 & P-3**

P-3

Activity:	Continued Backplugging Activities
Starting Depth:	Approximately 75 feet bls
Ending Depth:	Unknown
Materials used:	2 bags of neat cement

1545 Onsite at P-3. DDC prep to mix and add (using tremie method) two additional bags of neat cement.

1610 Additional 2 bags of neat cement mixture added to P-3. DDC police area. All personnel offsite.

P-2

Activity:	Mud Rotary/Reverse Air Drilling Activities, Backplugging Activities
Starting Depth:	40 feet bls
Ending Depth:	82.5 feet bls
Materials used:	12 Bags of Neat Cement

0830 Onsite at P-2. DDC prep to pull rods plugged with cement from well.

0850 Rods pulled. No problems encountered. Tagged annular cement depth = ~ 10 feet bls.

0855 DDC prep to drill out cement plug and switch to RA drilling. Tagged inner cement depth ~40 feet bls.

1030 DDC at 64 feet bls. Circulating mud and prep to switch to RA drilling.

1120 RA drilling initiated. Based on conversation with Pete Larkin, DDC to drill to ~ 80 feet bls.

1216 At 70 feet bls: SWL = 6.92 feet BTOC.

1221 At 70 feet bls: PWL – 9.07 feet BTOC; Q~120 gpm

1230 At 70 feet bls: Spec. Capacity ~ 55.8 gal/ft. Spec. Cond. = 751 μs/cm^{0}C at 27.9^{0}C; Cond. = 793 μs/cm at 27.9^{0}C.

1300 At 80 feet bls water sample collected pH = 7.92 at 27.3^{0}C; Spec. Cond. = 741 µs/cm^{0}C at 26.5^{0}C; Cond. = 761 µs/cm at 26.5^{0}C.

1315 Stop RA drilling. Sand encountered at ~ 82.5 – 83 feet bls. DDC prep for Spec. Capacity Test.

1320 At ~82.5 feet bls: SWL = 6.93 feet BTOC

1332 At ~82.5 feet bls: PWL = 8.38; Q~120 gpm

1335 At ~82.5 feet bls: Spec. Capacity ~ 82.8 gal/ft.

1340 Heavy rain and lightening. Activities paused.

1430 Prep to backplug open hole 2-3 feet to ~ 80 feet bls and fill annulus between PVC and steel casings with neat cement (using tremie method).

1505 DDC mixing ~ 12 bags of neat cement to fill the annulus and to place 2-3 foot cement cap on the bottom of P-2.

1510 Start filling/pumping neat mixture into annulus.

1515 Filling annulus between PVC and steel casings completed. DDC switch to backplugging/capping bottom of borehole.

1520 Backplugging/capping bottom of bore hole completed. DDC flushing lines and tremie pipe.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Wednesday, August 26, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-2 & P-3**

P-3

Activity:	Tag Cement back-plug

0815 DDC Onsite. Prep for airlift development activities

0830 Tag P-3 at 75 feet bls (slightly higher ~2-3 inches)

0900 Contact Pete Larkin regarding P-3. Discuss DDC's request to add gravel to 74 feet bls and cap off gravel plug with additional bag(s) of neat. DDC enroute to pickup and/or purchase misc., bolts to secure development header.

P-2

Activity:	Airlift Development

0815 DDC Onsite. Prep for airlift development activities

0850 Tag P-2 at 80 feet bls. Prep to develop P-2.

1120 DDC to set airline between 48-50 feet bls.

1218 Airlift development activities initiated

1428 Airlift development activities completed. DDC prep to move airlift development equipment (header, air compressor, etc.,) to P-3 and setup for airlift development activities

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Friday, August 27, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-2 & P-3**

P-3

Activity:	Airlift Development & Backplugging Activities
Materials used:	5 Bags of Gravel and 1 Bag of Neat Cement.

1400 Airlift development activities initiated at P-3

1445 Airlift development activities at P-3 stopped. Well consistently producing 30+ ml of sand/1000 ml water. DDC prep to backplug the open hole with 4-5 bags of gravel followed by 1-2 bags of neat cement. Call Pete Larkin to discuss results.

1600 Backplugging of P-3 completed. 5 bags of gravel and one bag of neat used. DDC to tag backplug depth on Monday, 30 Aug 04. DDC policed area and secured wells. All personnel offsite

P-2

Activity:	Conduct Final Geophysical Logging Event #2;

08:30 C. Ivery onsite. DDC prep for Static and Dynamic logging event. Static WL = 7.10 feet below top of coupling

1005 Steve Miller onsite. Prep for Static and Dynamic logs.

1030 Start static logs (caliper/gamma, dual induction & fluid conductivity temperature/fluid resistivity temperature)

1135 Static logs (caliper/gamma & FCT/FRT) successfully completed.

1145 Start dynamic logs (flow meter & video). Q = 500 gpm

1200 Pumping WL = 16.05 feet below top of coupling

1350 All logs finally completed. Obtained hard copies, CD, and video tape from Steve Miller. All personnel offsite. CI enroute to email logs and FedEx video tape

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Monday, August 30, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-2 & P-3**

P-3

Activity:	Airlift Development Activities

08:45 C. Peters arrives onsite. DDC onsite. DDC tagged P-3 depth at 71 feet bls.

10:54 DDC prep to start airlift development of P-3. Air hose set at 45 feet bls.

11:02 Start airlift development of P-3. C. Peter to surge well every 15 minutes.

12:10 Begin surging more rapidly.

12:20 Resume airlift, collect sand sample every 1 minute for 5 mins. No sand (only 1 or 2 particles)

12:30 DDC offsite, well resume tomorrow at 08:30. C. Peters offsite.

P-2

Activity:	Primary and Secondary Drinking Water Standards - Sample Collection Activities

07:30 C. Peters enroute to project site. Discuss today's activities with Carlton Ivery. DDC to setup centrifugal pump at P-2, add sample tap to discharge hose, and pump P-2 a minimum of 30 minutes prior to lab collection of samples.

08:45 C. Peters arrives onsite. DDC onsite. Waiting for lab arrival.

09:00 DDC start pumping P-2 with centrifugal pump.

09:43 DDC move drill rig to P-1 location. Still waiting on lab to arrival to collect samples. Sample tap installed discharge line. DDC to head back to their yard to pickup steel surface casing for P-1. DDC to drill and set surface casing tomorrow. Today sample P-2 and airlift develop P-3.

10:08 Sanders lab onsite to collect water samples from P-2.

10:54 Sanders lab offsite, samples collected.

12:30 DDC offsite, well resume tomorrow at 08:30. C. Peters offsite.

Recorded By: Chris Peters/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Tuesday, August 31, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corporation (DDC)**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1**

P-1

Activity:	Site Preparation, Mud Rotary Drilling, Surface Casing Installation Activities
Starting Depth:	Surface
Ending Depth:	20 feet bls.
Materials used:	Drilling Mud & 30 Bags of Neat Cement

09:20 C. Peters arrives onsite at P-1. DDC onsite. Prep to mix/hydrate drilling mud.

11:00 DDC starts mixing/hydrating drilling mud.

11:25 DDC start drilling activities

12:40 DDC at 20 feet bls. Circulate hole to remove cuttings. Prep surface casing.

13:25 Surface casing hanging over bore hole.

13:28 Surface casing lowered in bore hole.

14:05 DDC start mixing grout. Tremie pipe set at 18 feet bls.

14:07 DDC start pumping grout.

14:12 Cement returns note at surface. Total of 30 bags pumped.

14:30 DDC and C. Peters offsite.

Recorded By: Chris Peters/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Wednesday, September 1, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1**

P-1

Activity:	Resume drilling 8-inch nominal pilot hole utilizing mud rotary drilling methods, conduct first geophysical logging event, and ream 8-inch pilot hole to 19-inch diameter hole using mud rotary drilling.
Starting Depth:	20 feet bls
Ending Depth:	~64 feet bls

07:35	C. Ivery enroute to Ave Maria. Call Ross/DDC. Informed of H&S inspection. DDC to resume drilling activities.
09:40	C. Ivery onsite. Andrew Ozolnieks/CCI/BSU & Alan Cyrier/CCI/ATL onsite to conduct H&S inspection.
10:00	DDC currently at 64 feet bls. DDC prep for Geophysical Logging Event.
10:20	Steve Miller/MV geophysical onsite to conduct gamma/caliper and dual induction/SP logs.
1035	Andrew and Alan offsite. Start gamma/caliper logs.
1110	End gamma/caliper logs and start dual induction/SP logs.
1230	Obtained logs from Steve Miller.
1240	Steve Miller offsite. DDC prep for reaming bore hole and setting of casing tomorrow.
1400	DDC reamed 8-inch pilot hole to 19-inch diameter hole using mud rotary drilling from ~ 20 feet bls to ~32 feet bls. C. Ivery to complete lithology description from surface to ~64 feet bls and then emails logs and lithology description to P. Larkin and M. Weatherby.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Thursday, September 2, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1**

P-1

Activity:	Ream 8-inch pilot hole to 19-inch diameter hole using mud rotary drilling from 32 feet bls to ~62 feet bls. Secure site in preparation for Hurricane Frances
Starting Depth:	32 feet bls
Ending Depth:	62 feet bls

0700 DDC onsite prep for reaming after making final adjustments to drill rig.

0730 C. Ivery onsite.

0745 DDC resume reaming activities.

0927 Reaming activities completed. DDC currently circulating mud to clean out bore hole.

1030 All activities completed. Drill mast lowered and site secured in preparation for Hurricane Frances. All personnel offsite.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Friday, September 3, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1**

P-1

Activity:	Hurricane Charley – No Activities

0700-1700 No activity due to Hurricane Charley.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Monday, September 6, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corporation (DDC)**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1**

P-1

Activity:	Holiday & Hurricane Charley – No Activities

0700-1700 No activity due to Hurricane Charley.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Tuesday, September 7, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corporation (DDC)**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1**

P-1

Activity:	Hurricane Charley – No Activities

0700-1700 No activity due to Hurricane Charley.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Wednesday, September 8, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1**

P-1	
Activity:	Set 61 feet of 12-inch SDR-17 PVC Casing.
Starting Depth:	surface
Ending Depth:	61
Materials used:	61 feet of 12-inch SDR-17 PVC Casing and 45 bags of neat cement.

0715 DDC onsite. Prep casing and perform clean swipe of bore hole.

0910 C. Ivery onsite. DDC continue preparation to set casing (61')

0930 Lead drill bit and rods pulled

0945 1st section (20') lowered. Centered on near bottom.

0951 Connecting sections 1 and 2

0957 Lowering sections 1 and 2

1000 Connecting sections 2 and 3

1003 Lowering sections 2 and 3

1010 Cement header connected

1012 Prep for cementing casing.

1020 Cement line set at 64' BLS

1043 Mixing cement

1045 Start pumping neat cement

1047 Wt = 15.2 lbs/gal; press. = 0

1051 Wt = 15.1 lbs/gal. Sample collected. Pressure = 5 psi

1056 Wt. = 15 lbs/gal. Pressure = 10 psi

1100 Pressure = 14 psi

1105 45 Bags of neat cement used. Current pressure = 17 psi.

1107 DDC pumping chase. No return noted at surface. DDC to top off tomorrow.

1115 Valve at header won't close. Pressure = 15 psi. DDC to leave line connected to air pump to maintain pressure.

1120 DDC placed plug at end pump hose. Disconnected from air pump.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Thursday, September 9, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1**

P-1

Activity:	Mud Rotary/Reverse Air Drilling Activities and Casing Cementing Activities
Starting Depth:	59′ BLS
Ending Depth:	82.5′ BLS
Materials used:	5 Bags of Neat Cement.

0830	DDC onsite. Prep to tag cement and switch to RA drilling.
0930	DDC tagged annulus cement depth at ~11′ BLS. Prep to tag inner casing cement depth and mud drill to ~64′ BLS before switching over to RA.
0955	Tagged inner cement depth at 59′ BLS. DDC start mud rotary drilling. Will drill to ~ 65′ BLS then switch to RA drilling.
1045	DDC at bottom (~65′). Switched to RA drilling.
1120	DDC near 70′ BLS with RA drilling
1135	DDC at 75′ BLS. Cutting sample collected 64-75′. Prep to perform Spec. capacity test.
1152	SWL at 75′ BLS = 7.40
1202	PWL = 8.7 BLS; Q=86 gpm; Spec. Capacity = 65.38
1205	Resume RA drilling
1207	At 75′BLS: Cond. = 731 µm/cm @ 26.7ºC and Spec. Cond = 705 µm/cmºC @ 26.7ºC; pH = 8.07
1230	At 82.5′ BLS limestone and clayey sand. Contact Mike Weatherby. Will perform Spec. capacity test and stop well here.
1242	At 82.5′ BLS: SWL = 7.40 @ 82.5′ BLS
1255	At 82.5′ BLS: PWL = 8.45; Q = 95 gpm; Spec. Capacity = 90. Spec. Cond = 703 µm/cmºC @ 26.0ºC; Cond = 716µm/cm @ 26.0ºC; pH = 7.79 @ 26.6ºC
1307	DDC prep for cementing annulus. Currently developing well/bore hole using RA.
1415	RA development stops. Prep to fill annulus ~ 2′ BLS.
1417	Start mixing 5 bags of cement
1430	Pumping cement complete.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Friday, September 10, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**DDC**
Client:	**New Town Development**	**Well No:**	**P-1**

P-1

Activity:	Airlift Development and Hurricane Ivan Preparation Activities.

0915	Onsite at P-1. DDC tag annulus. Cement depth ~ 2'BLS. DDC prep for airlift. Development of P-1. Also pick up and clean area/Drill sites in preparation for Hurricane Ivan.
1035	DDC conduct misc. setup and repair activities in preparation airlift development.
1200	Airlift development activities initiated. DDC proceed to "stub up" P-2 & P-3 casing above permit required elevation.
1440	Airlift development activities completed. DDC prep to move airlift development equipment (header, air compressor, etc.,) to P-3 and setup for airlift development activities
1525	Drill sites (P-1, P-2, & P-3) policed and secured. Drill mast lowered. All in preparation for Hurricane Ivan. All personnel offsite.

Recorded By: Carlton Ivery/CH2M HILL

Exhibit 1

P-1 Sand Quantity Results

Ave Maria Town & University, Immoklee Florida

Surge Time	Sand Quantity (mL) per 1 L of Water						Calculated Flowrate				Specific Conductance (ms/cmC^0)	Temperature (C^0)
	1 min Prior to Surging	1 min After Surging	2 min After Surging	3 min After Surging	4 min After Surging	5 mins After Surging	A1 (Inches)	A2 (Feet)	Q1 (Gal/Mins)[1]	Q2 (Gal/Mins)[2]		
10-Sep-2004												
12:05 - 12:20	-----	1	2	0.5	0.6	0.2	7	0.58	752	752	714	25.2
12:30 - 12:40	0.9	0.7	1	0.5	0.3	0.2	7	0.58	752	752	710	25.6
12:47 - 12:58	0.1	0.1	0.05 - Light Film/Few Grains On Bottom	0.1	<0.05 - Almost Non Detect	<0.05 - Almost Non Detect	6.5	0.54	900	900	707	25.7
13:10 - 13:27	0.1	0.05 - Light Film/Few Grains On Bottom	0.1	0.05 - Light Film/Few Grains On Bottom	0.05 - Light Film/Few Grains On Bottom	<0.05 - Almost Non Detect	7	0.58	752	752	705	25.6
13:40 -13:55	<0.05 - Almost Non Detect	<0.05 - Almost Non Detect	<0.05 - Almost Non Detect	Not Detected	<0.05 - Almost Non Detect	Not Detected	7	0.58	752	752	700	26
13:52 - 14:05	0.05 - Light Film/Few Grains On Bottom	<0.05 - Almost Non Detect	0.05 - Light Film/Few Grains On Bottom	0.05 - Light Film/Few Grains On Bottom	<0.05 - Almost Non Detect	Not Detected	7	0.58	752	752	703	25.8
14:20 - 14:30	Not Detected	<0.05 - Almost Non Detect	Not Detected	<0.05 - Almost Non Detect	Not Detected	Not Detected	7.5	0.63	617	617	705	25.9

--- No Data Collected

Missouri Water Well Manual[1]

Q (gpm) = $8.22(D-A)^{1.88} \times D^{0.6}$: Where Q = Q1, A = A1, and D = 12 inches

Note: A = A1 = 0 For Full Pipe

Circular Wier[2]

Q (ft^3/s) = $8.69(1 - A/D)^{1.88} \times D^{2.48}$:Where A = A2, and D = 1 foot

Q2 (gpm) = 449 x Q

CH2M HILL Daily Summary

Day/Date:	**Tuesday, September 14, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1 & P-3**

P-3

Activity: Conduct Final Video Log.

1400	All personnel mob to P-3 to conduct video log.
1425	At P-3, prep to video well.
1553	Video of P-3 complete, awaiting printout of P-1 logs and videos for P-1 and P-3. DDC prep to secure area at P-1.
1605	DDC offsite
1630	Logs obtained from Steve Miller
1640	C. Ivery and S. Miller offsite

P-1

Activity: Conduct Final Geophysical Logging Event #2

0730	C. Ivery onsite. DDC prep for Static and Dynamic logging event.
0750	Steve Miller onsite. Prep for Static and Dynamic logs. SWL = 7.42 feet BTOC
0815	Start static logs (caliper/gamma, dual induction, & fluid conductivity temperature/fluid resistivity temperature)
1000	Static logs (caliper/gamma, DI, & FCT/FRT) successfully completed. Prep to conduct dynamic logs (flow meter & video), however, centrifugal pump failure.
1020	Contact P. Larkin to discuss DDC request to use total of three trash pumps to pump well, since they could not repair the onsite centrifugal pump or find another pump.
1150	DDC personnel with two 2-inch trash pumps.
1205	Pumping using three (two 2-inch and one 3-inch) trash pumps. Combine flowrate ~ 450 gpm.
1208	PWL ~ 14.9 feet BTOC.
1310	Start dynamic logs.
1400	Dynamic logs successfully completed.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Wednesday, September 15, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1, P-2 & P-3,**

P-1, P-2 & P-3,

Activity:	Limited Misc. Demobilization and Pump Test Setup Activities

0730-1600 DDC begin misc. demobilization and pump test setup activities. Cleaned out cuttings tank cleaned drill sites and moved all heavy equipment to P-3 area. Limited CH2M HILL site coverage provided by Andrew O. and C. Ivery (via phone).

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Thursday, September 16, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1, P-2 & P-3,**

P-1, P-2 & P-3,

Activity:	Limited Misc. Demobilization and Pump Test Setup Activities

0730-1600 DDC continued misc. demobilization and pump test setup activities. Worked in shop preparing pump and other misc., equipment for pump test and removed cutting tank from Ave Maria site. No CH2M HILL Coverage.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Thursday, September 16, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1**

P-1

Activity:	Continued Pump Test Setup Activities

0730-1600 DDC continued pump test setup activities. Set submersible pump ~ 50 feet bls. Set up discharge line for pump test Limited CH2M HILL site coverage provided by C. Ivery (via phone).

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Monday, September 20, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1**

P-1

Activity:	Continued Pump Test Setup Activities

0730-1600 DDC continued pump test setup activities. DDC connect up orifice tube to discharge line to measure flowrate. Installed mini trolls in P-1, P-2, & P-3. Marked flowrate settings for pump test tomorrow, 21 Sep 04.

Recorded By: Pete Larkin/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Tuesday, September 21, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corporation (DDC)**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1**

P-1

Activity:	Variable Rate Pump Test

0830	Pete Larkin onsite.
0900	Prepare for pump test. Static Water level = 10.93 bmp (6.63 feet bls). Flow will be measured using 12'' pipe orifice. Check dimensions and set up of pipe orifice.
0930	Begin step 1. 550 gpm
0940	Test for sand with Imhoff Cone = non detect (ND)
1120	Specific capacity = 50 gpm/ft at 550 gpm.
1125	Begin Step 2. 750 gpm.
1130	No sand detected.
1230	Specific capacity = 40 gpm/ft at 750gpm.
1230	Start step 3. 1020 gpm.
1310	No sand detected. Sander Laboratory onsite to collect background sample.
1325	Specific capacity = 37 gpm/ft at 1020 gpm.
1335	Begin step 4. 1190 gpm.
1341	Trace sand detected (few grains)
1345	Specific capacity = 34 gpm/ft at 1190 gpm.
1430	C. Ivery onsite. Pump test at P-1 in progress and monitoring tests at P-2 & P-3. Meet w/Pete Larkin to review testing procedures and to discuss/review status of current test.
1500	P. Larkin offsite
1539	Stop Step 4 Test and begin Recovery Test.
1610	Area and well secured. All personnel offsite. C. Ivery to meet w/Pete Larkin to return laptop, load Win-situ Program on C. Ivery's laptop, and transfer edata.

Recorded By: Pete Larkin/CH2M HILL & Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Wednesday, September 22, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1 & P-3**

P-1, & P-3

Activity:	**P-1:** Conclude Long Term Pump Test**; P-3:** Setup to Conduct Long Term Pump Test and Groundwater Sampling Event.

0730	C. Ivery onsite. DDC prep to pull pump and transducer probe from P-1. Will reset probe back in P-1 and move pump to P-3.
0800	Contact P. Larkin, experiencing problems with laptop computer connecting to P-1 probe.
0835	C. Ivery offsite. Enroute to purchase additional equipment to connect laptop to probes. DDC to pull pump and set in P-3 due to Sander Lab's eta of 1100 am.
1000	C. Ivery still searching for proper communication adapter. Received called from Sanders Lab, eta of 13:00.
1115	C. Ivery onsite. DDC completed pump test preparation at P-3.
1130	Due to remaining time (front gate locked at 1700) decision made to postpone pump test until tomorrow, 23 Sep 04. Not enough time to conduct full 6-hour pump test
1150	DDC set submersible pump at intake at 43 feet BTOC and probe set at 40 feet BTOC. Well currently pumping at 662 gpm.
1245	Sanders Lab onsite, prep to collect groundwater samples from P-3.
1315	Sanders Lab complete sampling activities
1322	Pump off and Monitoring Event #1 Test stopped. DDC prep to pull transducer. C. Ivery to take transducer and meet with Pete Larkin to review data and test purchased communication devise adapter.
1400	All personnel offsite.

Recorded By: Pete Larkin/CH2M HILL & Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Thursday, September 23, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1, P-2 & P-3**

P-1, P-2 & P-3

Activity:	Conduct Long-term Pump Test at P-3 and Monitoring Event Tests at P-1 & P-2.

0835 C. Ivery onsite at P-3. DDC policing area and working on support truck.

0840 C. Ivery enroute to stop Recovery Test at P-1 and stop Event Test at P-2. Will start Event #2 Test at P-1 and P-2.

0846 *P-1*: Event #1 Monitoring Test stopped and Event # 2 Monitoring Test started.

0854 *P-2*: Event #1 Monitoring Test stopped and Event # 2 Monitoring Test started.

0920 *P-3*: SWL = 7.59 feet BTOC.

1000 *P-3*: Start Step 1 Test. Probe currently logging.

1001 Pump on currently pumping 500 gpm (10″). Submersible pump intake set at 43 feet BTOC while transducer probe set at 40′ BTOC.

1609 DDC shutdown pump and generator. Recovery test initiated.

1620 DDC offsite. CI off site to prep and submit field recorded pump test data.

.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Friday, September 24, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1, P-2 & P-3**

P-1, P-2 & P-3

Activity:	Conduct Long-term Pump Test at P-2 and Monitoring Event Tests at P-1 & P-3.

0700 DDC onsite. Prep to pull pump from P-3 and set pump in P-2. DDC to reset transducer probe in P-3. Probe pulled during removal of pump.

0900 C. Ivery onsite at P-2. DDC continue preparation. Pump intake set at ~ 53 feet BTOF and probe set at ~ 50 feet BTOF.

0912 - 0915 *P-3:* Recovery Test stopped and Event # 2 Monitoring Test started.

0922 - 0925 *P-1*: Event # 2 Monitoring Test stopped and Event # 3 Monitoring Test started.

0936 *P-2*: Morning SWL = 13.53 feet Was Measured From Top of 3/4-inch Riser Pipe = 11.53 Feet Top of Flange

0950 *P-2*: Start Step 1 Test. Probe currently logging.

0951 Pump on currently pumping 500 gpm (10″). Submersible pump intake set at 43 feet BTOC while transducer probe set at 40′ BTOC.

1603 DDC shutdown pump and generator. Recovery test initiated.

1625 DDC offsite. CI off site to prep and submit field recorded pump test data.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Monday, September 27, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1, P-2 & P-3,**

P-1, P-2 & P-3,

Activity:	Limited Misc. Demobilization Activities

0730-1600 DDC begin misc. sitewide demobilization activities. Removed submersible pump from P-2. Picked and demob drill rig from site.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Tuesday, September 28, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1, P-2 & P-3**

P-1, P-2, & P-3

Activity:	Competed Pump Test Activities and Continued Site Demobilization Activities.

0925 C. Ivery enroute to Ave Maria Project Site.

1145 C. Ivery onsite. DDC to arrive within the next 1-2 hours. C. Ivery prep to stop all tests at P-1, P-2, and P-3.

1205 *P-1*: Event # 3 Monitoring Test stopped.

1214 *P-2*: Recovery Log Test stopped.

1225 *P-3*: Event # 2 Monitoring Test stopped.

1243 *P-3:* Pulled and packed probe for shipment to Tampa and Gainesville Offices

1302 *P-2:* Pulled and packed probe for shipment to Tampa and Gainesville Offices

1315 *P-1:* Pulled and packed probe for shipment to Tampa and Gainesville Offices. Waiting arrival of DDC.

1320 DDC onsite. Unload misc. supplies to support barricades around each well and continue demob activities.

1400 DDC load submersible pump and continue demob activities. C. Ivery offsite.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Wednesday, September 29, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1, P-2 & P-3**

P-1, P-2, & P-3

Activity:	Well Security and Protection Activities

0800 - 1500 DDC onsite to place protective barricades around each well. Four 4-inch diameter PVC casing/post to be placed around each well. Each casing/post to be filled with concrete. Orange plastic fencing to be wrapped around the posts. No CH2M HILL site coverage.

Recorded By: Carlton Ivery/CH2M HILL

CH2M HILL Daily Summary

Day/Date:	**Wednesday, October 6, 2004**	**Project:**	**Ave Maria**
Project No.:	**316301**	**Contractor:**	**Diversified Drilling Corp.**
Client:	**Ave Maria Town & University**	**Well No:**	**P-1, P-2 & P-3**

P-1, P-2, & P-3

Activity: Final Inspection Activities.

0840 C. Ivery enroute to drop off drill cuttings (chip trays) for Pete Larkin at Ft. Myers field office.

1400 C. Ivery onsite. Prep for final inspection and check security of well.

1500 C. Ivery offsite. DDC water and mud trucks remain onsite. Area cleaned and secured.

Recorded By: Carlton Ivery/CH2M HILL

Photo 1
Standing East of P-1 Along Entrance Road and Facing West.

Photo 2
Standing East of P-2 and Facing West.

Photo 3
Side View -Standing West of P-3 and Facing East Toward Roadway.

APPENDIX D

Lithologic Description of Formation Samples

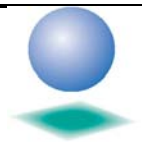
Well Name:	P-1
Location:	Ave Maria
Contractor:	Diversified Drilling Contractors
Drilling Method	Mud-Rotary / Reverse-air
Bit-Size:	7.875-inch to 62 ft bls 11.25-inch to 82 ft bls
Total Depth:	82 feet bls
Casing Depth:	61 feet bls
Resident Observer:	Carlton Ivery/CH2M HILL

CH2MHILL

From:	To:	Production Well P-1 Lithologic Description
0	10	SAND pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), very fine grained, well consolidated, high porosity, minor shell fragements near 10 feet.
10	20	LIMESTONE yellowish gray (5Y 7/2), med fine to coarse grained, moderate to high consolidation and porosity.
20	30	LIMESTONE As Above with minor shell fragements.
30	40	CLAY, pale olive (10Y 6/2), marly, pasty, low to moderate plasticity and consolidation.
40	50	CLAY grayish olive (10Y 4/2), pasty, moderate to high plasticity and consolidation, pasty.
50	60	CLAY (80%) grayish olive (10Y 4/2), pasty, low to moderate plasticity and consolidation; LIMESTONE (20%), greenish gray (5GY 6/1), med fine to coarse grained, low consolidation and porosity.
60	64	LIMESTONE, greenish gray (5GY 6/1), med fine to coarse grained, moderate to high consolidation and porosity.
64	75	LIMESTONE yellowish gray (5Y 7/2), med fine to coarse grained, moderate to high consolidation and porosity.
75	82	LIMESTONE, As above.

Note: Depths are referenced to existing land surface

Well Name:	P-2
Location:	Ave Maria
Contractor:	Diversified Drilling Contractors
Drilling Method	Mud-Rotary / Reverse-air
Bit-Size:	7.875-inch to 62 ft bls 11.25-inch to 83 ft bls
Total Depth:	83 feet bls
Casing Depth:	59 feet bls
Resident Observer:	Carlton Ivery/CH2M HILL



CH2MHILL

From:	To:	Production Well P-2 Lithologic Description
0	10	SAND pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), very fine grained, well consolidated, high porosity, minor shell fragements near 10 feet.
10	20	LIMESTONE yellowish gray (5Y 7/2), med fine to coarse grained, moderate to high consolidation and porosity.
20	30	LIMESTONE As Above with minor shell fragements.
30	40	CLAY pale olive (10Y 6/2), pasty, low to moderate plasticity and consolidation; LIMESTONE (5%), yellowish gray (5Y 7/2), med to coarse grained, low consolidation and porosity.
40	50	CLAY pale olive (10Y 6/2), pasty, low to moderate plasticity and consolidation, with minor limestone fragments.
50	58	CLAY As Above
58	62	LIMESTONE yellowish gray (5Y 7/2), med fine to coarse grained, moderate to high consolidation and porosity.
62	70	LIMESTONE yellowish gray (5Y 7/2) to med gray (N5), very fine to med grained, high consolidation and porosity.
70	80	LIMESTONE yellowish gray (5Y 7/2) to very light gray (N8), very fine to med grained, high consolidation and porosity, trace shell fragemnts.
80	83	LIMESTONE (50%) yellowish gray (5Y 7/2) to very light gray (N8), very fine to med grained, high consolidation and porosity from 80-81 ft bls; SAND (45%) very light gray (N8) to med gray (N5), very fine grained, well consolidated, mod to high porosity from 81 ft bls.

Note: Depths are referenced to existing land surface

Well Name:	P-3
Location:	Ave Maria
Contractor:	Diversified Drilling Contractors
Drilling Method	Mud-Rotary
Bit-Size:	7.875-inch
Total Depth:	200 feet bls
Resident Observer:	Carlton Ivery/CH2M HILL

CH2MHILL

From:	To:	Production Well P-3 Lithologic Description
0	10	SAND pale yellowish brown (10YR 6/2), fine grained, well consolidated, high porosity.
10	20	LIMESTONE (95%) very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), med to coarse grained, low to moderate consolidation and porosity. Sand (5%), As Above.
20	30	CLAY (95%), marly, pale olive (10Y 6/2), pasty, low plasticity, low to moderate consolidation; LIMESTONE (5%), yellowish gray (5Y 7/2), fine to med grained, low consolidation and porosity.
30	40	CLAY (95%), marly, pale olive (10Y 6/2), pasty, low to moderate plasticity and consolidation; LIMESTONE (5%), yellowish gray (5Y 7/2), fine to med grained, low consolidation and porosity.
40	50	CLAY grayish olive (10Y 4/2), moderate to high plasticity, slightly pasty, moderate consolidation, dark greenish gray lenses, trace phosphates.
50	60	LIMESTONE (80%) yellowish gray (5Y 7/2), med to coarse grained, low to moderate consolidation and porosity; CLAY(20%) grayish olive (10Y 4/2), moderate to high plasticity, slightly pasty, moderate consolidation, dark greenish gray lenses, trace phosphates.
60	70	LIMESTONE (95%) yellowish gray (5Y 7/2), med to coarse grained, low to moderate consolidation and porosity, trace shell fragments; CLAY(5%) grayish olive (10Y 4/2), moderate to high plasticity, slightly pasty, moderate consolidation, dark greenish gray lenses, trace phosphates.
70	80	LIMESTONE yellowish gray (5Y 7/2), med to coarse grained, low to moderate consolidation and porosity, trace shell fragments and phosphates.
80	90	SANDY CLAY (85%) olive gray (5Y 4/1) to dark greenish gray (5GY 4/1), low to moderate plasticity, slightly pasty, fine to medium quartz sand; LIMESTONE (15%) yellowish gray (5Y 7/2), med to coarse grained, low to moderate consolidation and porosity, trace shell fragments and phosphates.
90	100	SANDY CLAY pale olive gray (10Y 6/2) to greenish gray (5GY 6/1), low plasticity, slightly pasty, very fine sand grained, moderate to high consolidation, low porosity.
100	110	SANDY CLAY, As Above.
110	120	SANDY CLAY (95%) dusky yellow green (5GY 5/2) with greenish gray (5G 6/1) lenses, low to moderate plasticity, slightly pasty, very fine grained sand, moderate to high consolidation; LIMESTONE (<5%) yellowish gray (5Y 7/2), fine to med grained, low consolidation and porosity.
120	130	SANDY CLAY (95%) dusky yellow green (5GY 5/2) with greenish gray (5G 6/1) lenses, low to moderate plasticity, slightly pasty, very fine grained sand, moderate to high consolidation; LIMESTONE (<5%) yellowish gray (5Y 7/2), med fine to coarse grained, low consolidation and porosity.
130	140	CLAY (70%), marly, pale olive (10Y 6/2) to greenish gray (5GY 6/1), pasty, low plasticity, low to moderate consolidation; LIMESTONE (25%) and SHELL (5%), yellowish gray (5Y 7/2), fine to med grained, low consolidation and porosity.
140	150	SHELL (40%) and LIMESTONE (35%), pale greenish yellow (10Y 8/2) to yellowish gray (5Y 7/2), fine to med grained, low consolidation and porosity; CLAY (25%), marly, pale olive (10Y 6/2) to greenish gray (5GY 6/1), pasty, low plasticity.
150	160	SANDY CLAY pale olive (10Y 6/2) to greenish gray (5GY 6/1), pasty, moderate to high plasticity, moderate consolidation, minor limestone and shell fragments.
160	170	SANDY CLAY, As Above.
170	180	CLAY As Above with color change greenish gray (5GY 6/1) to yellowish gray (5Y 7/2)
180	190	CLAY As Above with color change greenish gray (5GY 6/1), stiff, trace phosphates.
190	200	CLAY As Above with color change pale olive (10Y 6/2), stiff with fine to medium sand grained lenses, trace phosphates.

Note: Depths are referenced to existing land surface

APPENDIX E

Geophysical Logs

Well P-1

MV Geophysical

DUAL INDUCTION LL3 / SP LOG

Company: Diversified Drilling Corp.
Well: Ave Maria P-1
Field: Ave Maria University
County: Collier
State/Prv: Florida

Company: Diversified Drilling Corporation
Well: Ave Maria P-1
Field: Ave Maria University
County: Collier
State/Prv: Florida
Location: Ave Maria WWTP & WTP, CH2M Hill, Inc.
Other Services: XY/GR

Permanent Datum: G.L. — Elevation
Log Measured From: G.L.
Drilling Measured From: G.L.
Elevation: K.B. / D.F. / G.L.

- Date: 1-SEP-2004
- Run Number: ONE
- Depth Driller: 64'
- Depth Logger: 64'
- Bottom Logged Interval: 62'
- Top Log Interval: 20'
- Open Hole Size: 7.875"
- Type Fluid: MUD
- Density / Viscosity: NA/NA
- Max. Recorded Temp.: na
- Estimated Cement Top: NA
- Time Well Ready: 10:30 9/1/04
- Time Logger on Bottom: 11:15 9/1/04
- Equipment Number: MVGS-1
- Location: Ft. Myers
- Recorded By: S.Miller
- Witnessed By: C.Ivery (CH2M) — Rossco (DDC)

Borehole Record				Tubing Record		
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	20'	64'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String				
Production String				
Liner				

Invoice No. 2004130 | P.O. #: | Job No.: | * FIELD PRINT *

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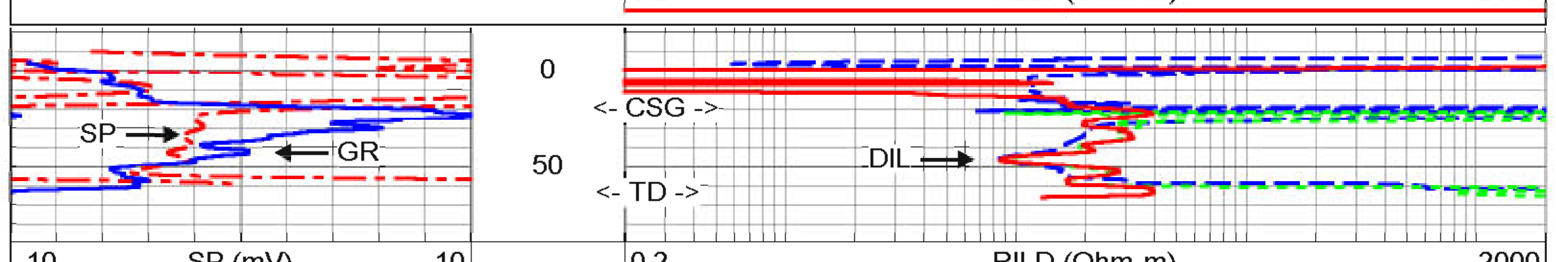
Comments

Rm=9.651 ohm-m @ 81.8 degF

MV Geophysical — MAIN PASS

Database File: avemp-1.db
Dataset Pathname: MAIN
Presentation Format: DIL-1
Dataset Creation: Wed Sep 01 11:35:13 2004
Charted by: Depth in Feet scaled 1:1200

-10 SP (mV) 10 | 0 GR (GAPI) 100 | 0.2 RILD (Ohm-m) 2000 | 0.2 RILM (Ohm-m) 2000 | 0.2 RLL3 (Ohm-m) 2000



-10 SP (mV) 10 | 0 GR (GAPI) 100 | 0.2 RILD (Ohm-m) 2000 | 0.2 RILM (Ohm-m) 2000 | 0.2 RLL3 (Ohm-m) 2000

MV Geophysical — MAIN PASS

Database File: avemp-1.db
Dataset Pathname: MAIN
Presentation Format: DIL
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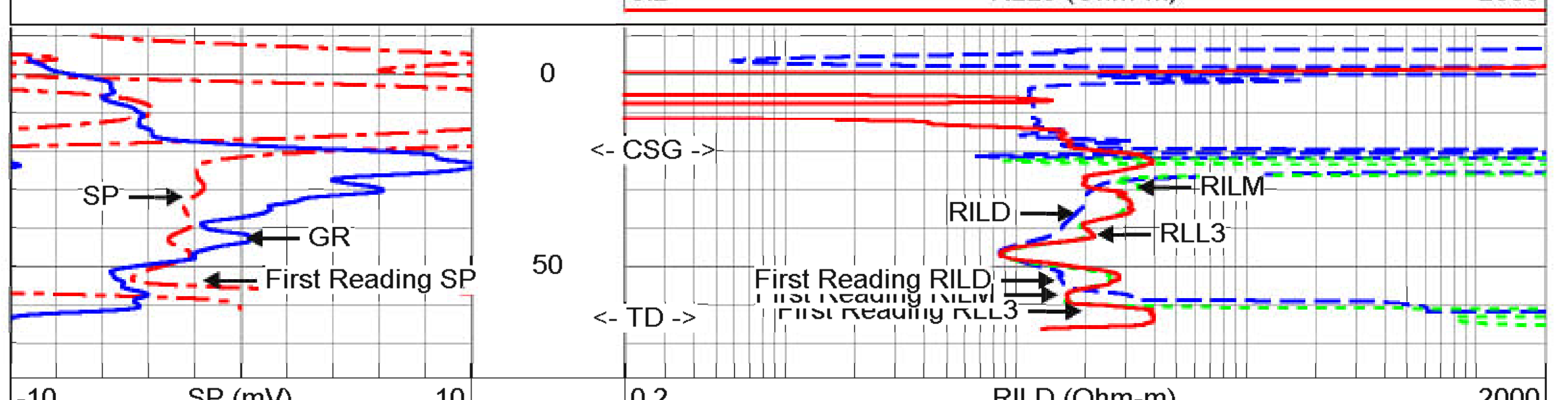

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MV Geophysical — MAIN PASS

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Presentation Format: DIL
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Charted by: Depth in Feet scaled 1:240

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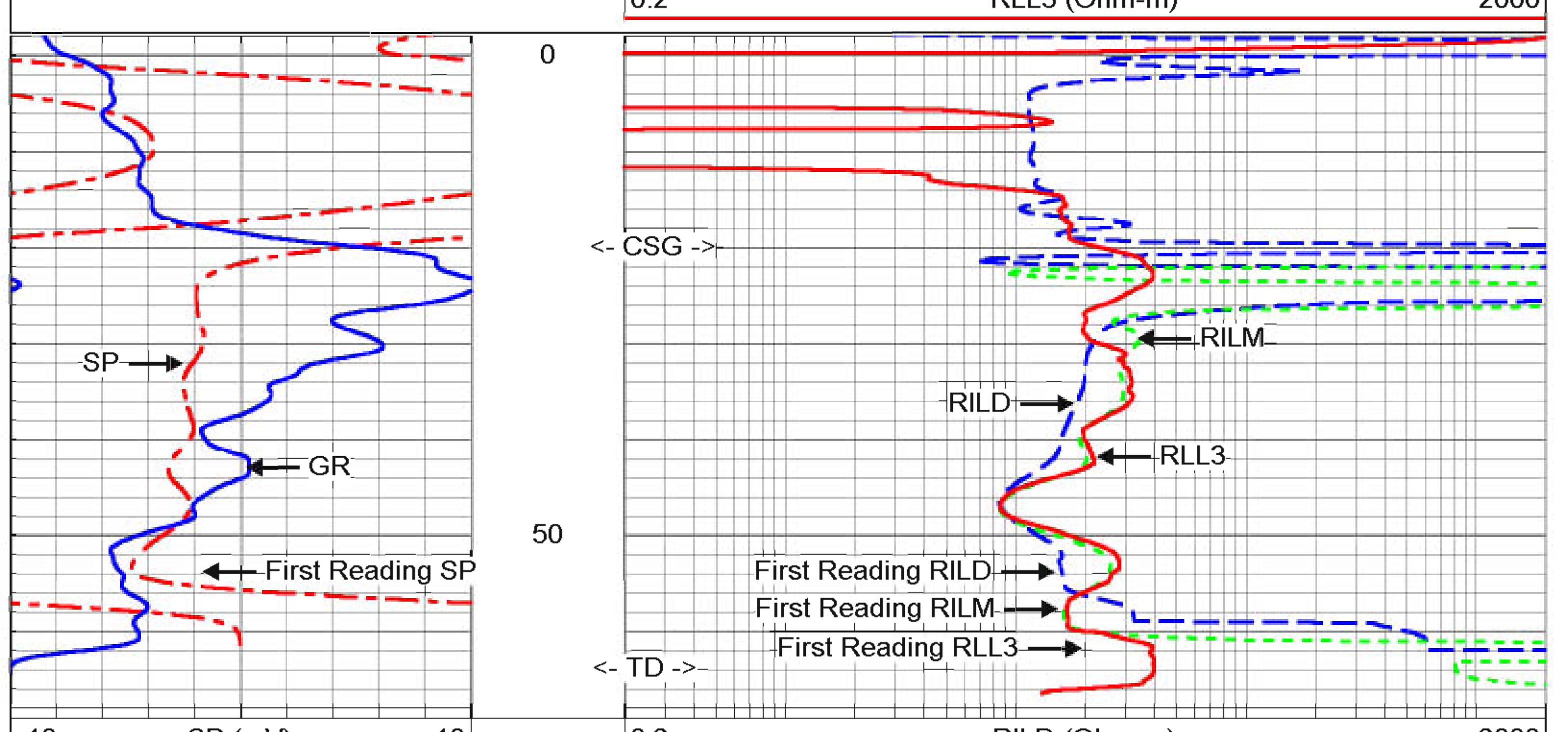

-10 SP (mV) 10 | 0 GR (GAPI) 100 | 0.2 RILD (Ohm-m) 2000 | 0.2 RILM (Ohm-m) 2000 | 0.2 RLL3 (Ohm-m) 2000

MV Geophysical — MAIN PASS

Database File: avemp-1.db
Dataset Pathname: MAIN
Presentation Format: DIL
Dataset Creation: Wed Sep 01 11:35:13 2004
Charted by: Depth in Feet scaled 1:120

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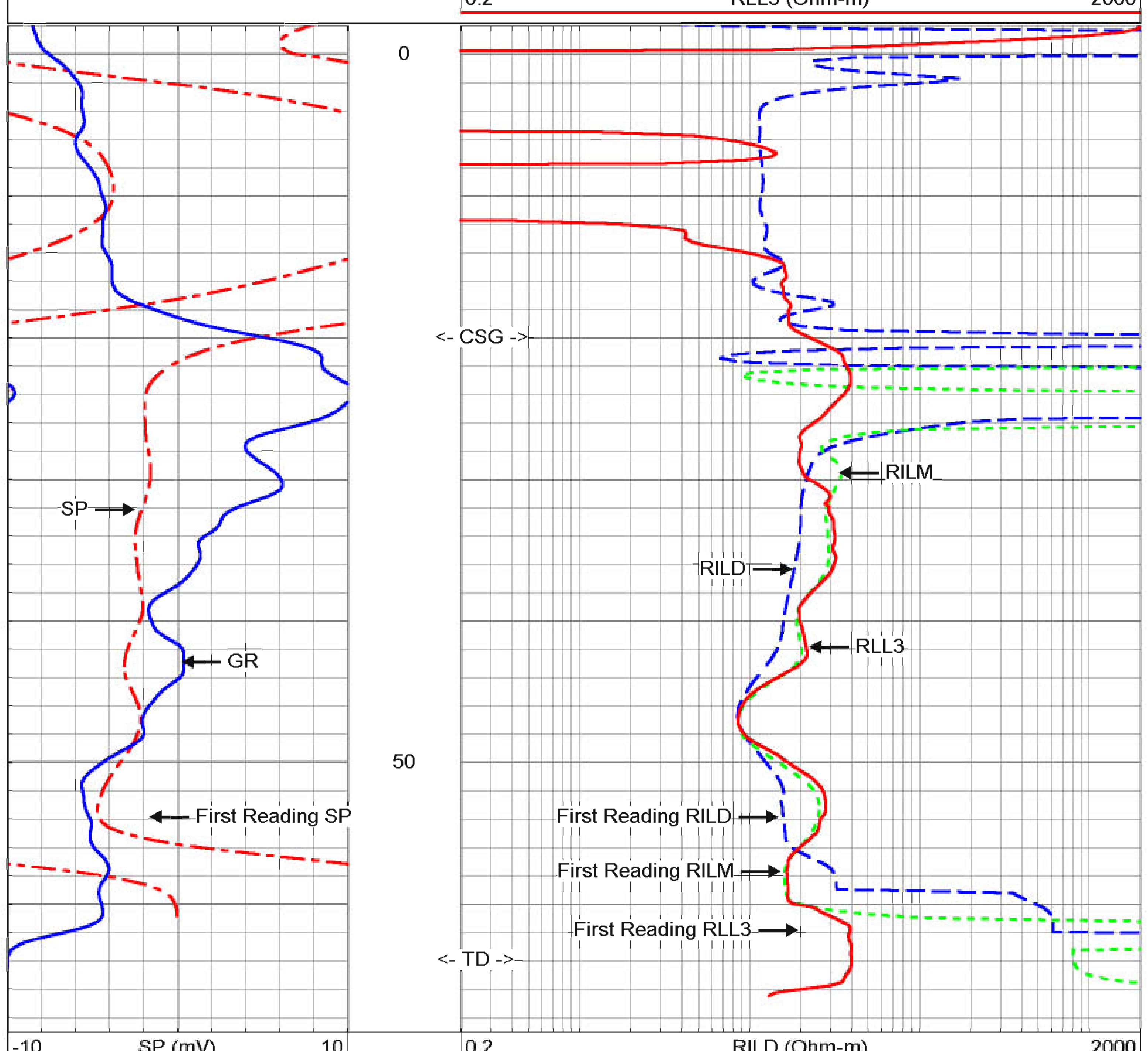

-10 SP (mV) 10 | 0 GR (GAPI) 100 | 0.2 RILD (Ohm-m) 2000 | 0.2 RILM (Ohm-m) 2000 | 0.2 RLL3 (Ohm-m) 2000

MV Geophysical — REPEAT SECTION

Database File: avemp-1.db
Dataset Pathname: REPEAT
Presentation Format: DIL
Dataset Creation: Wed Sep 01 10:58:27 2004
Charted by: Depth in Feet scaled 1:120

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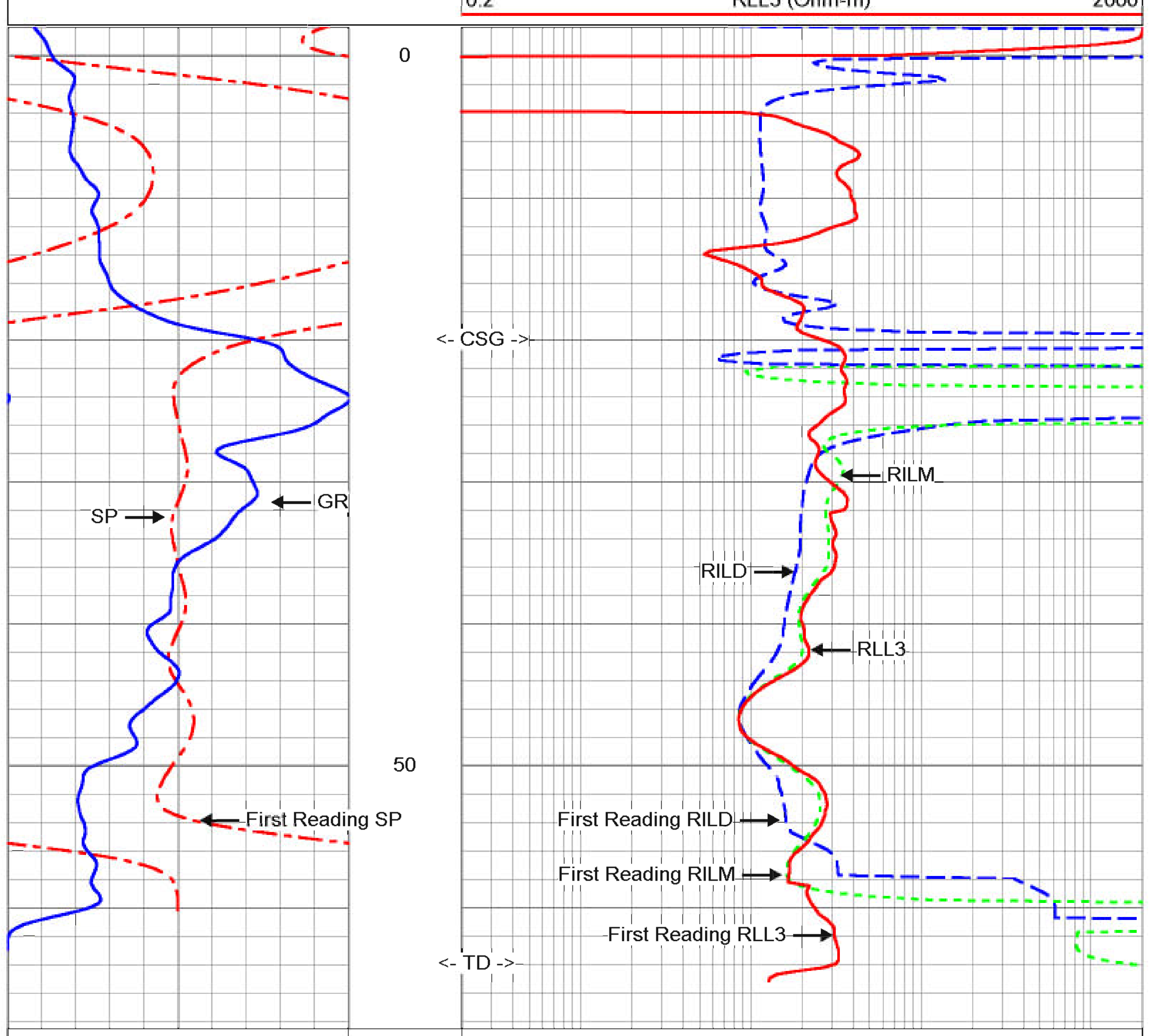


-10 SP (mV) 10 | 0 GR (GAPI) 100 | 0.2 RILD (Ohm-m) 2000 | 0.2 RILM (Ohm-m) 2000 | 0.2 RLL3 (Ohm-m) 2000

Dual Induction Calibration Report

Serial-Model: 5390-R
Surface Cal Performed: Mon Feb 24 16:52:46 2003
Downhole Cal Performed: Wed Sep 01 11:14:39 2004
After Survey Verification Performed: Wed Sep 01 11:26:33 2004

Surface Calibration

Loop:	Readings Air	Readings Loop		References Air	References Loop		Results m	Results b
Deep	0.041	0.637	V	0.000	400.000	mmho-m	670.900	-27.223
Medium	-0.006	0.700	V	0.000	464.000	mmho-m	656.366	4.251

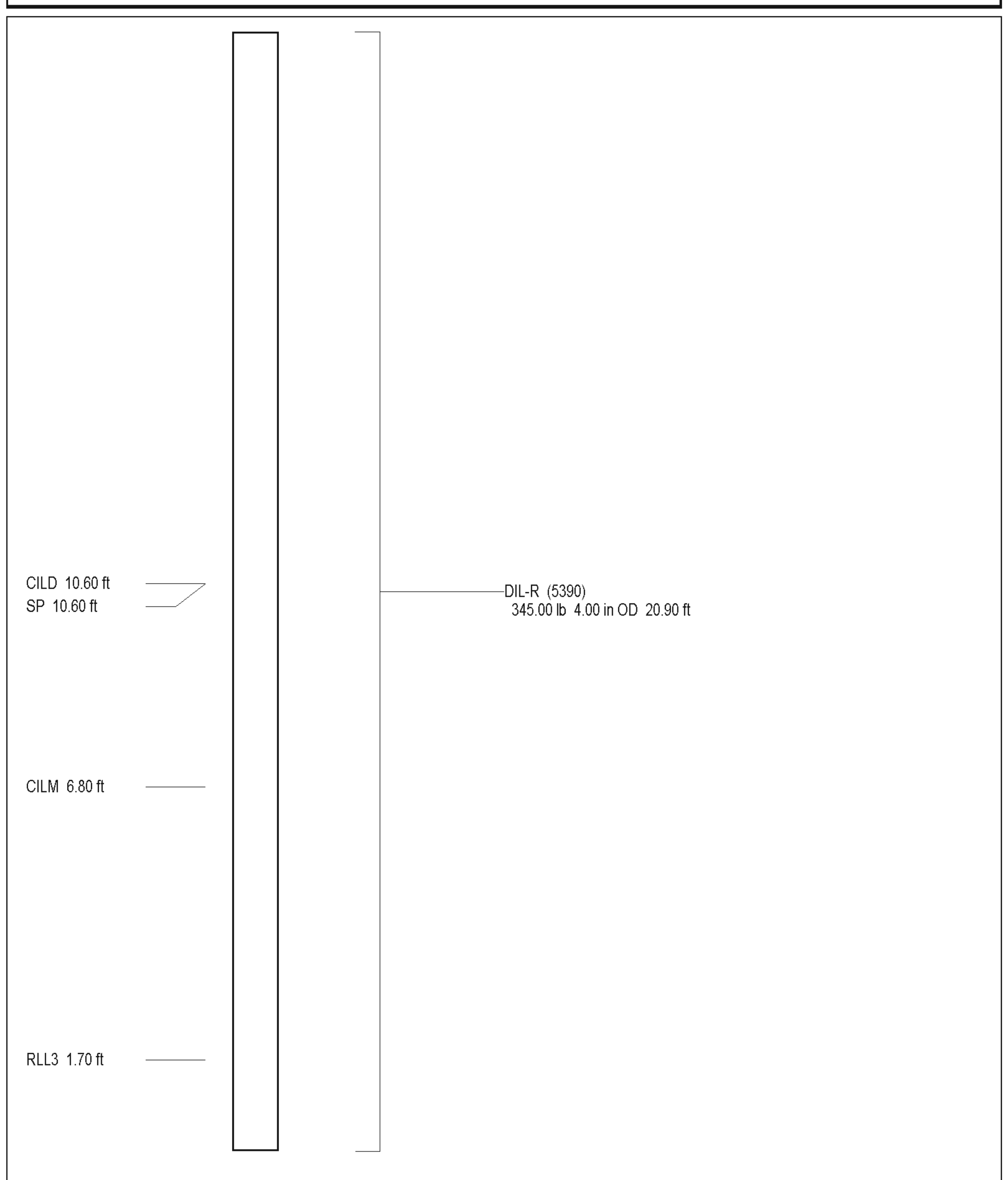
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.647	V	0.000	400.000	mmho-m	628.552	-6.783
Medium	-0.011	0.749	V	0.000	464.000	mmho-m	610.612	6.720

Downhole Calibration

Internal:	Readings Zero	Readings Cal		References Zero	References Cal		Results m	Results b
Deep	-36.342	416.319	mmho-m	-19.983	406.966	mmho-m	0.943	14.295
Medium	12.908	490.444	mmho-m	-2.972	495.796	mmho-m	1.044	-16.454
Shallow	2.499	0.025	V	494.500	2.000	Ohm-m	199.082	-2.911

After Survey Verification

Internal:	Readings Zero	Readings Cal		Targets Zero	Targets Cal		Results m'	Results b'
Deep	-29.721	407.847	mmho-m	-36.342	416.319	mmho-m	0.943	14.295
Medium	12.335	488.738	mmho-m	12.908	490.444	mmho-m	1.044	-16.454
Shallow	494.698	1.684	Ohm-m	494.500	2.000	Ohm-m	0.999	0.318



Dataset: run1/pass6
Total Length: 20.90 ft
Total Weight: 345.00 lb
O.D. 4.00 in

MV Geophysical

X-Y CALIPER GAMMA RAY LOG

Company Diversified Drilling Corp.
Well Ave Maria P-1
Field Ave Maria University
County Collier
State/Prv Florida

Company	Diversified Drilling Corporation
Well	Ave Maria P-1
Field	Ave Maria University
County	Collier
State/Prv	Florida
Location	Ave Maria WWTP & WTP CH2M Hill, Inc.
Other Services	DIL/SP
Permanent Datum	G.L.
Log Measured From	G.L.
Drilling Measured From	G.L.
Elevation	K.B. / D.F. / G.L.

Date	1-SEP-2004
Run Number	ONE
Depth Driller	64'
Depth Logger	64'
Bottom Logged Interval	64'
Top Log Interval	SURFACE
Open Hole Size	7.875"
Type Fluid	MUD
Density / Viscosity	NA/NA
Max. Recorded Temp.	na
Estimated Cement Top	NA
Time Well Ready	10:30 9/1/04
Time Logger on Bottom	10:30 9/1/04
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller
Witnessed By	C.Ivery (CH2M) / Rossco (DDC)

Borehole Record

Run Number	Bit	From	To
ONE	7.875"	20'	64'

Tubing Record

Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String				
Production String				
Liner				

Invoice No. 2004130 P.O. #: Job No.: * FIELD PRINT *

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Comments

X-Y Caliper Arm Extensions: 33"

MV Geophysical — MAIN PASS

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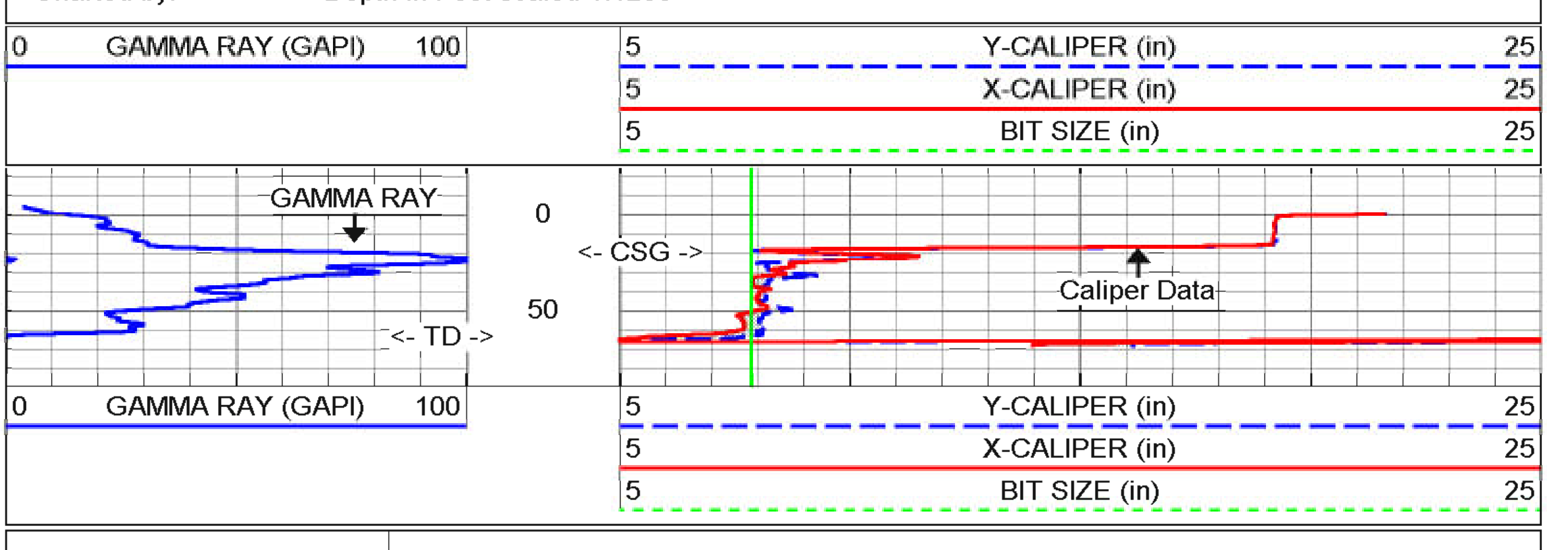
Dataset Pathname: MAIN
Presentation Format: XY525-1
Dataset Creation: Wed Sep 01 11:35:13 2004
Charted by: Depth in Feet scaled 1:1200



MV Geophysical — MAIN PASS

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Presentation Format: XY525-5
Dataset Creation: Wed Sep 01 11:35:13 2004
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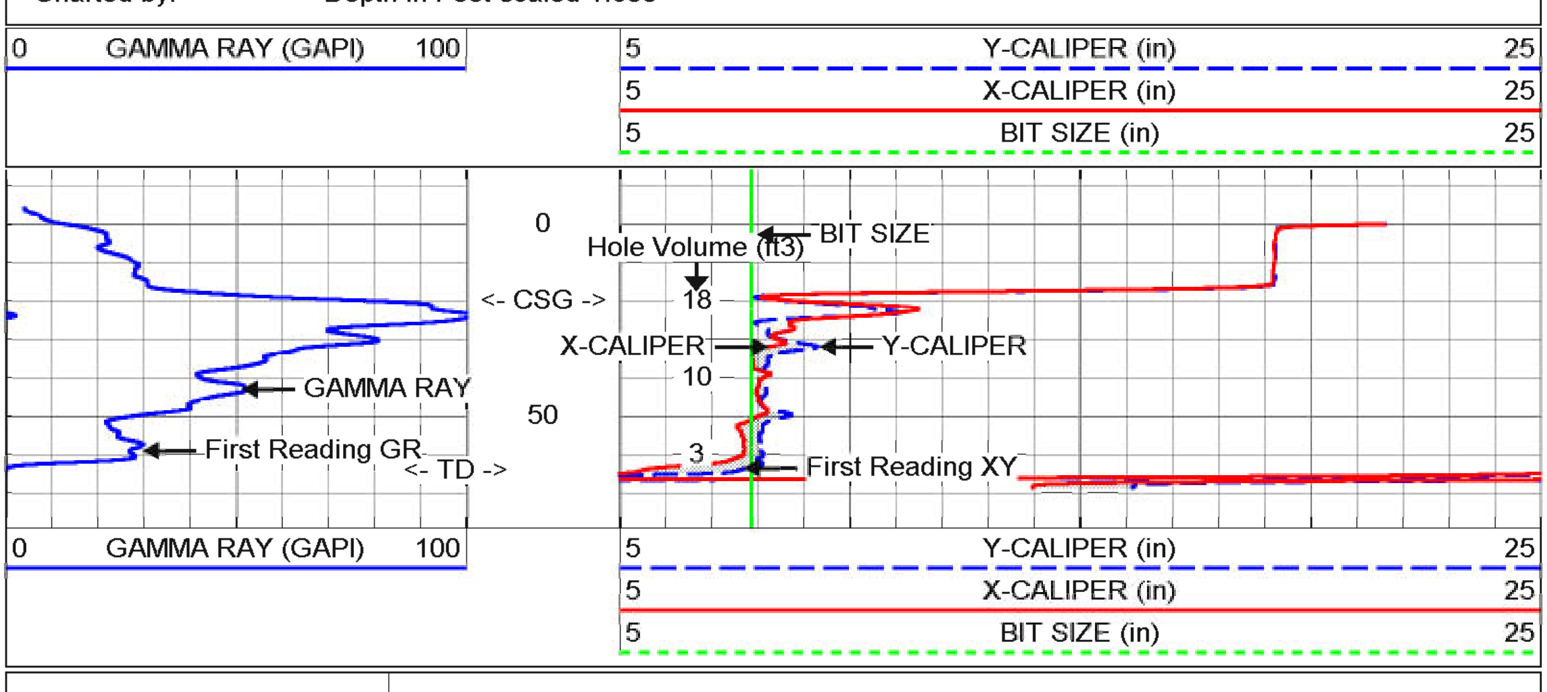

MV Geophysical — MAIN PASS

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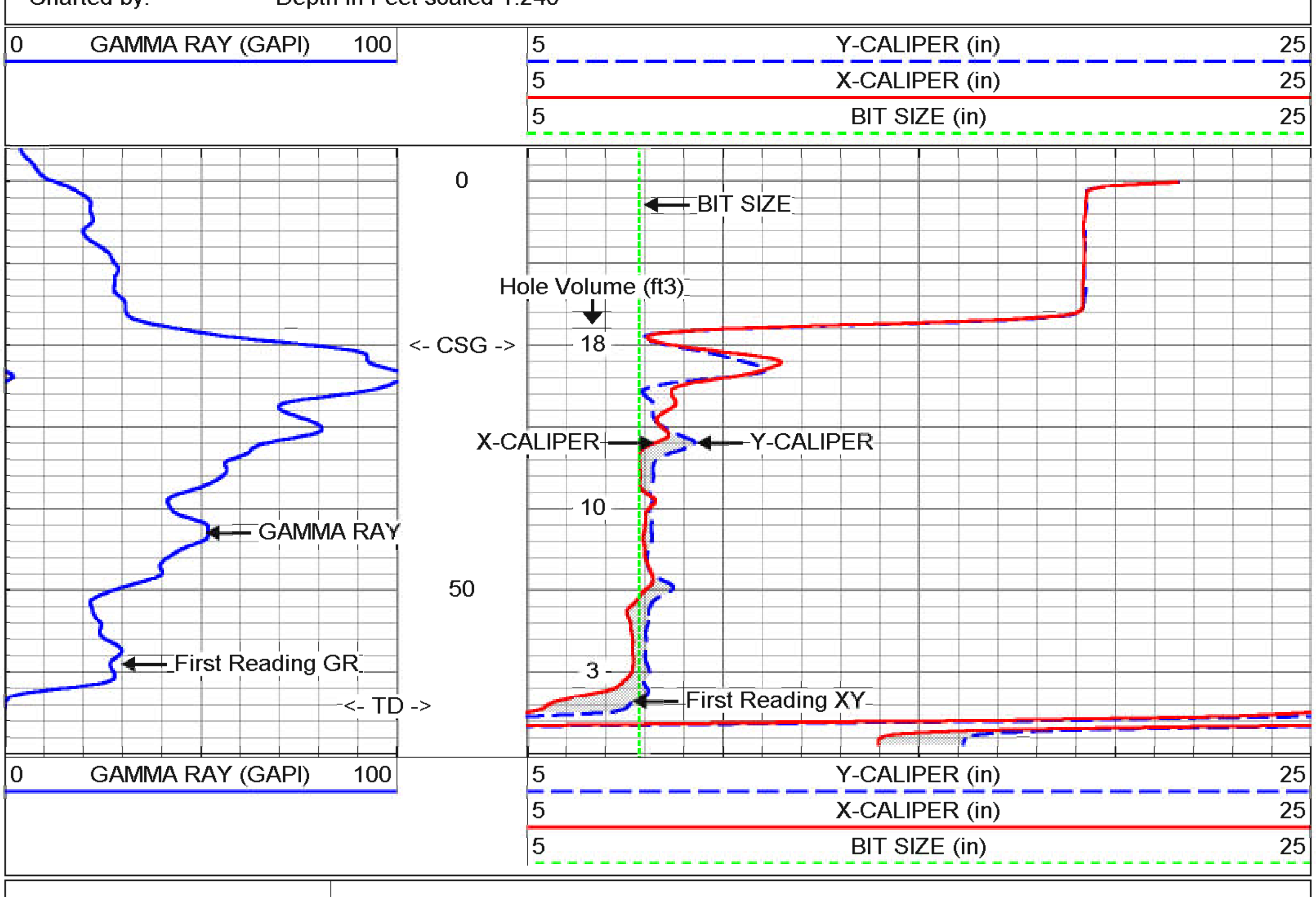
Dataset Pathname: MAIN
Presentation Format: XY525-5
Dataset Creation: Wed Sep 01 11:35:13 2004
Charted by: Depth in Feet scaled 1:240



MV Geophysical — MAIN PASS

Database File: avemp-1.db
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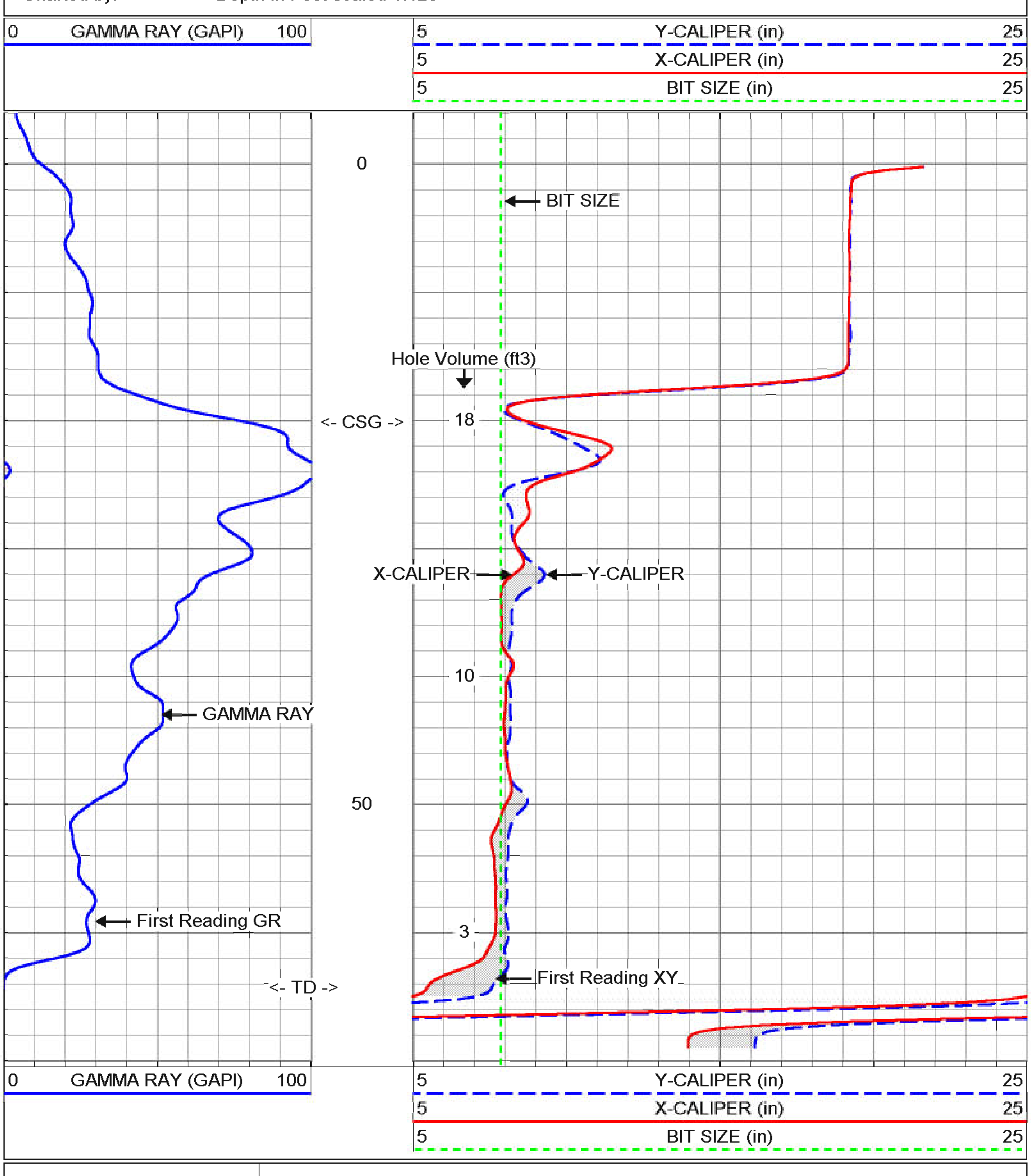
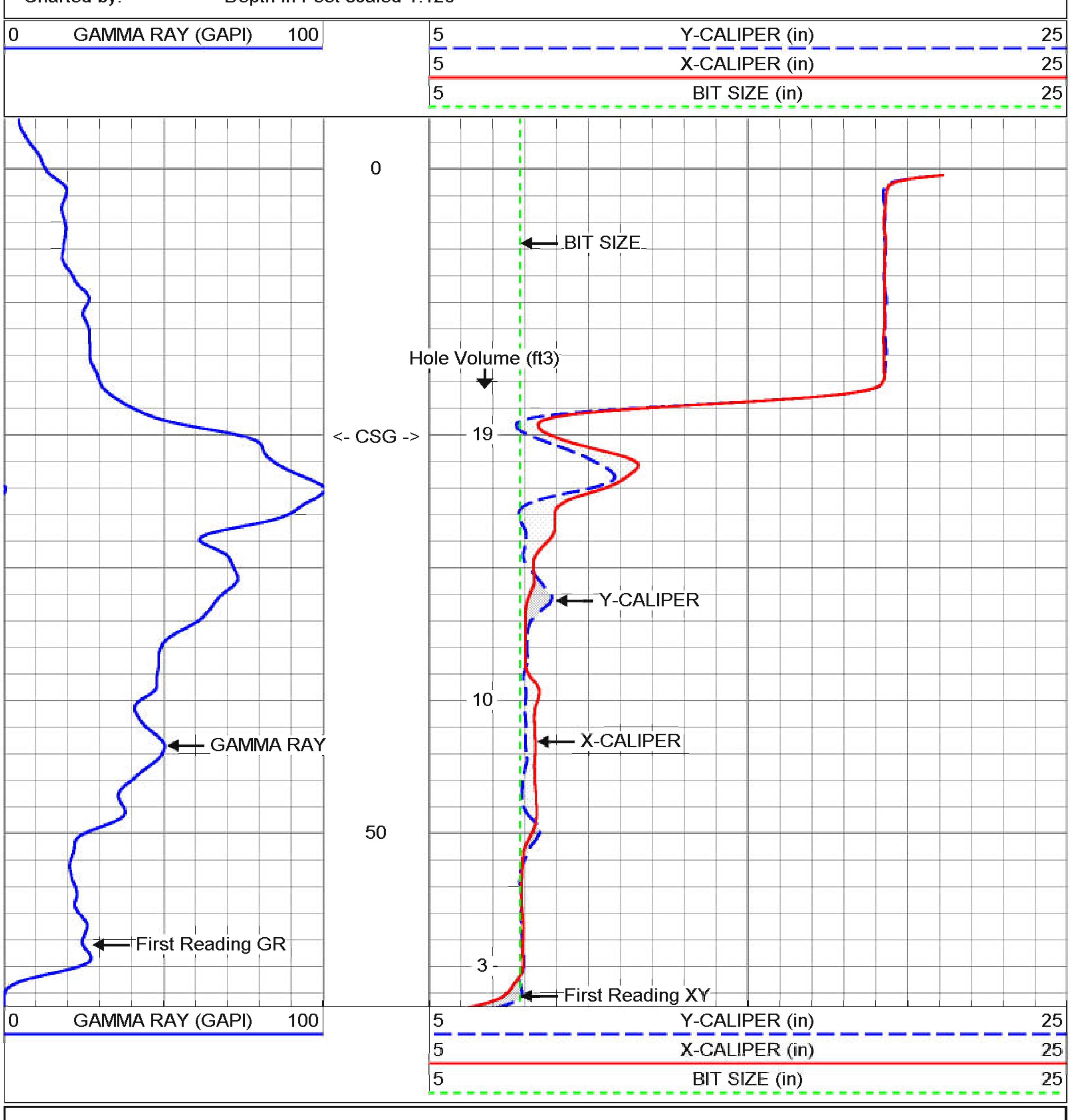
Presentation Format: XY525-5
Dataset Creation: Wed Sep 01 11:35:13 2004
Charted by: Depth in Feet scaled 1:120



MV Geophysical — REPEAT SECTION

Database File: avemp-1.db
Dataset Pathname: REPEAT
Presentation Format: XY525-5
Dataset Creation: Wed Sep 01 10:58:27 2004
Charted by: Depth in Feet scaled 1:120

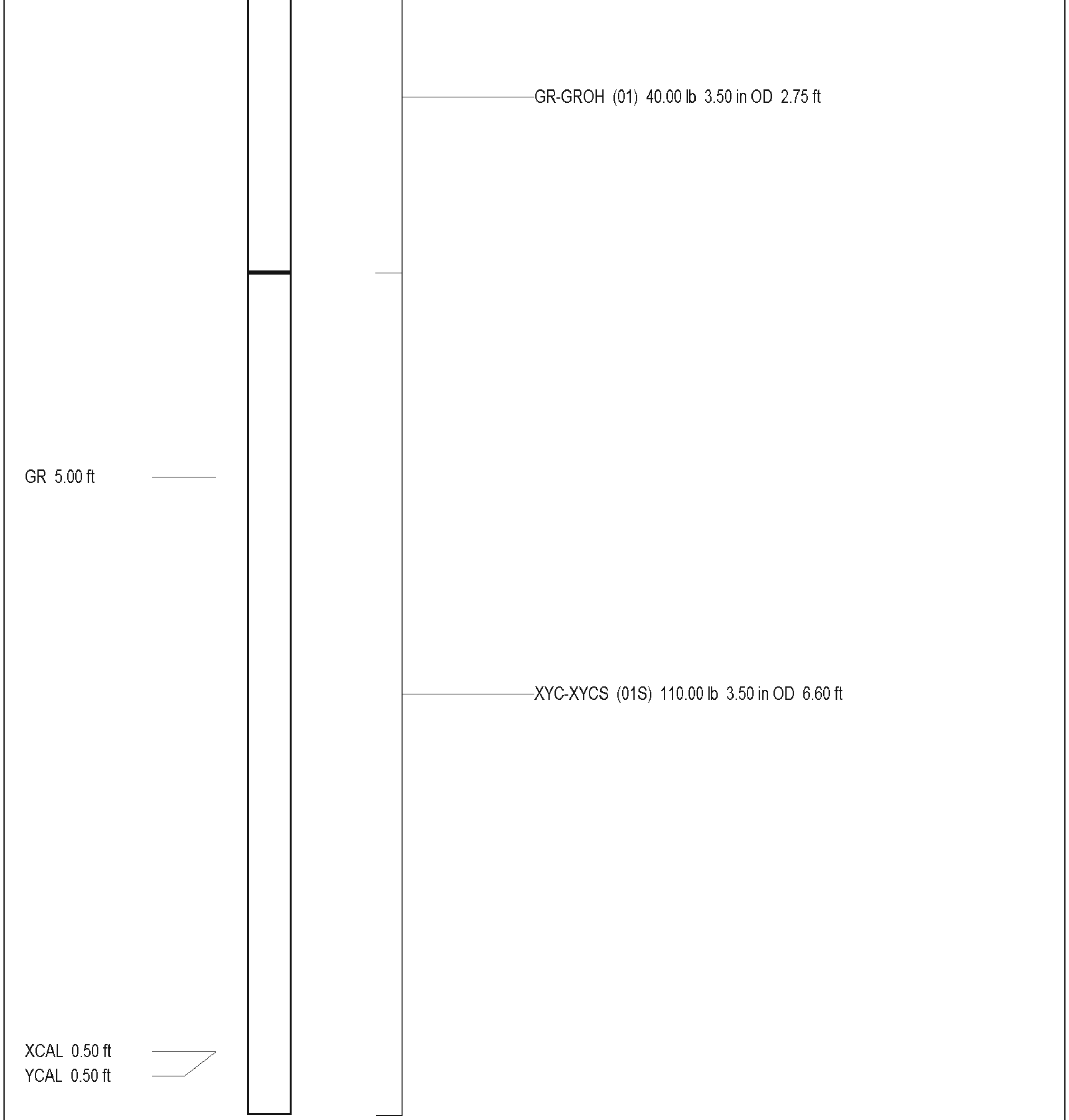


XY Caliper Calibration Report

Serial Number:	01S		
Tool Model:	XYCS		
Performed:	Wed Sep 01 11:02:38 2004		
Small Ring:	8	in	
Large Ring:	19.25	in	
	X Caliper	Y Caliper	
Reading with Small Ring:	524.805	515.38	cps
Reading with Large Ring:	694.2	697.311	cps
Gain:	0.0664128	0.0618366	
Offset:	-26.8538	-23.8694	

Gamma Ray Calibration Report

Serial Number:	01	
Tool Model:	GROH	
Performed:	Wed Sep 01 10:51:56 2004	
Calibrator Value:	120	GAPI
Background Reading:	5.631	cps
Calibrator Reading:	124.61	cps
Sensitivity:	1.00858	GAPI/cps



Dataset: run1/pass3
Total Length: 9.35 ft
Total Weight: 150.00 lb

DUAL INDUCTION LL3 / SP LOG

MV Geophysical

Company	Diversified Drilling Corp.
Well	Ave Maria P-1
Field	Ave Maria University
County	Collier
State/Prv	Florida

Company	Diversified Drilling Corporation
Well	Ave Maria P-1
Field	Ave Maria University
County	Collier
State/Prv	Florida
Location	Ave Maria WWTP & WTP, CH2M Hill, Inc.
Other Services	XY/GR, FRT,FLOW, VIDEO

		Elevation
Permanent Datum	G.L.	K.B.
Log Measured From	G.L.	D.F.
Drilling Measured From	G.L.	G.L.

Date	14-SEP-2004	
Run Number	TWO	
Depth Driller	82.5'	
Depth Logger	82.5'	
Bottom Logged Interval	81'	
Top Log Interval	61'	
Open Hole Size	11"	
Type Fluid	WATER	
Density / Viscosity	NA/NA	
Max. Recorded Temp.	na	
Estimated Cement Top	NA	
Time Well Ready	08:00 9/14/04	
Time Logger on Bottom	09:00 9/14/04	
Equipment Number	MVGS-1	
Location	Ft. Myers	
Recorded By	S.Miller	
Witnessed By	C.Ivery (CH2M)	Rossco (DDC)

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	20'	64'				
TWO	11"	61'	82.5'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String	12" SDR 17	11.125" ID	SURFACE	61'
Production String				
Liner				

Invoice No. 2004132	P.O. #:	Job No.:	* FIELD PRINT *

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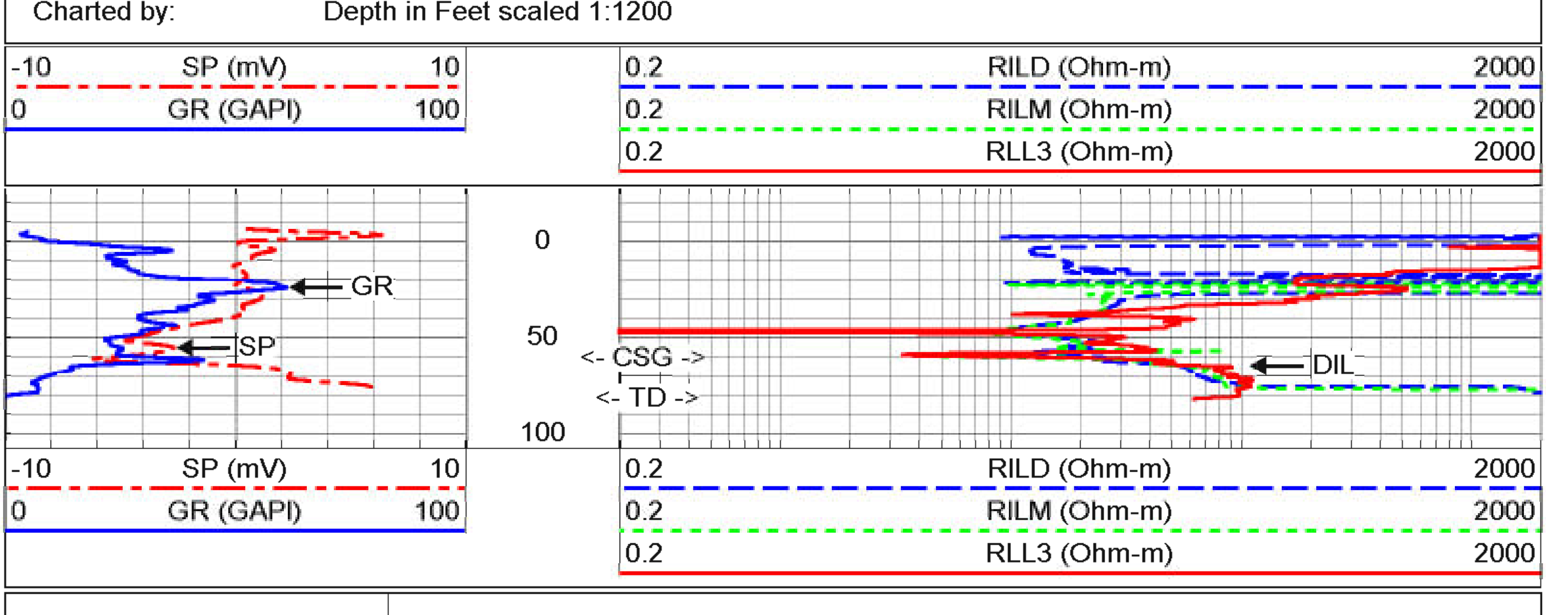
Comments

Rw=14.002 ohm-m @ 79.0 degF

MV Geophysical

MAIN PASS

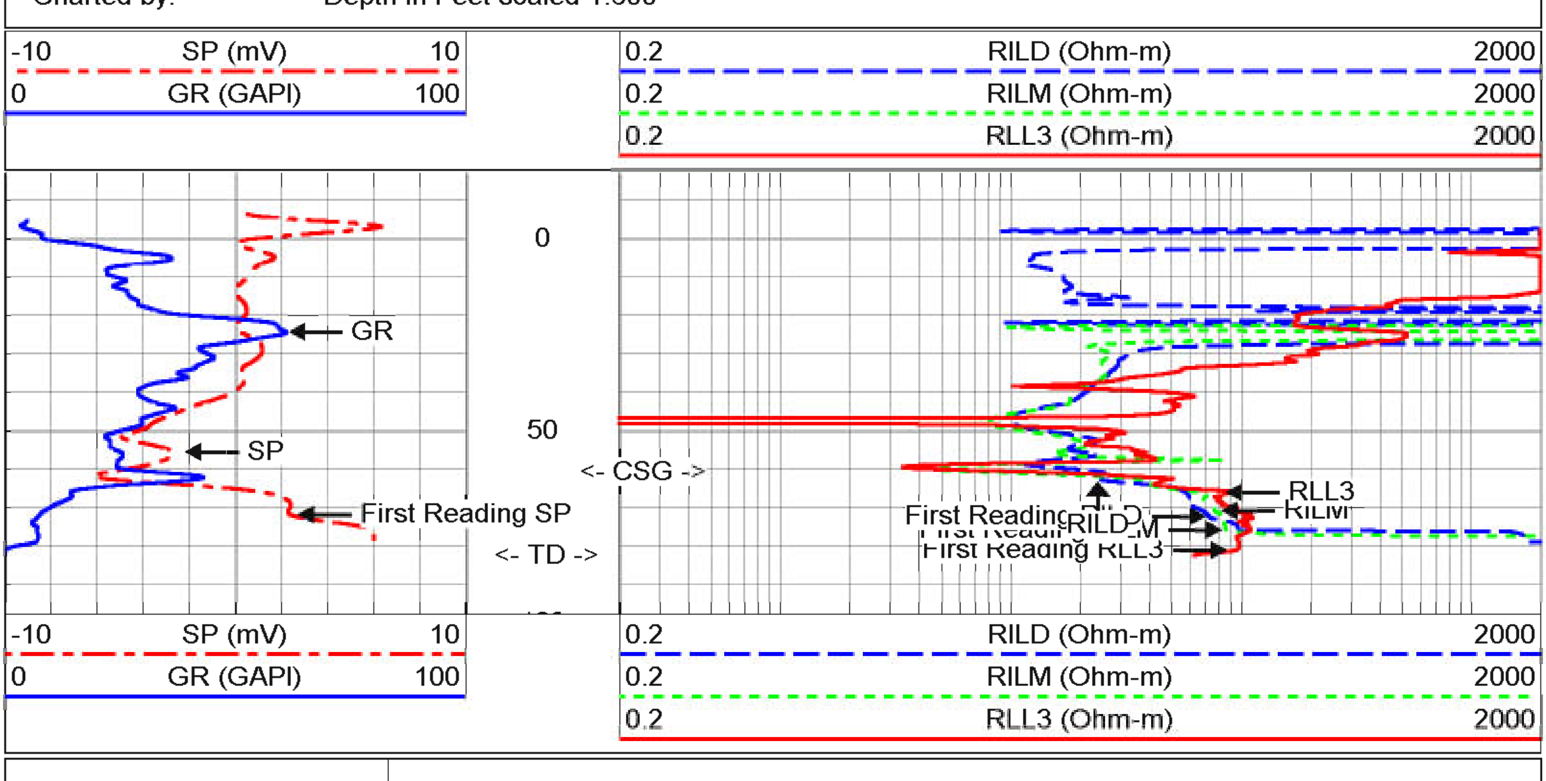
Database File:	avemp-1.db
Dataset Pathname:	run2/MAIN
Presentation Format:	DIL-1
Dataset Creation:	Tue Sep 14 09:23:10 2004
Charted by:	Depth in Feet scaled 1:1200



MV Geophysical

MAIN PASS

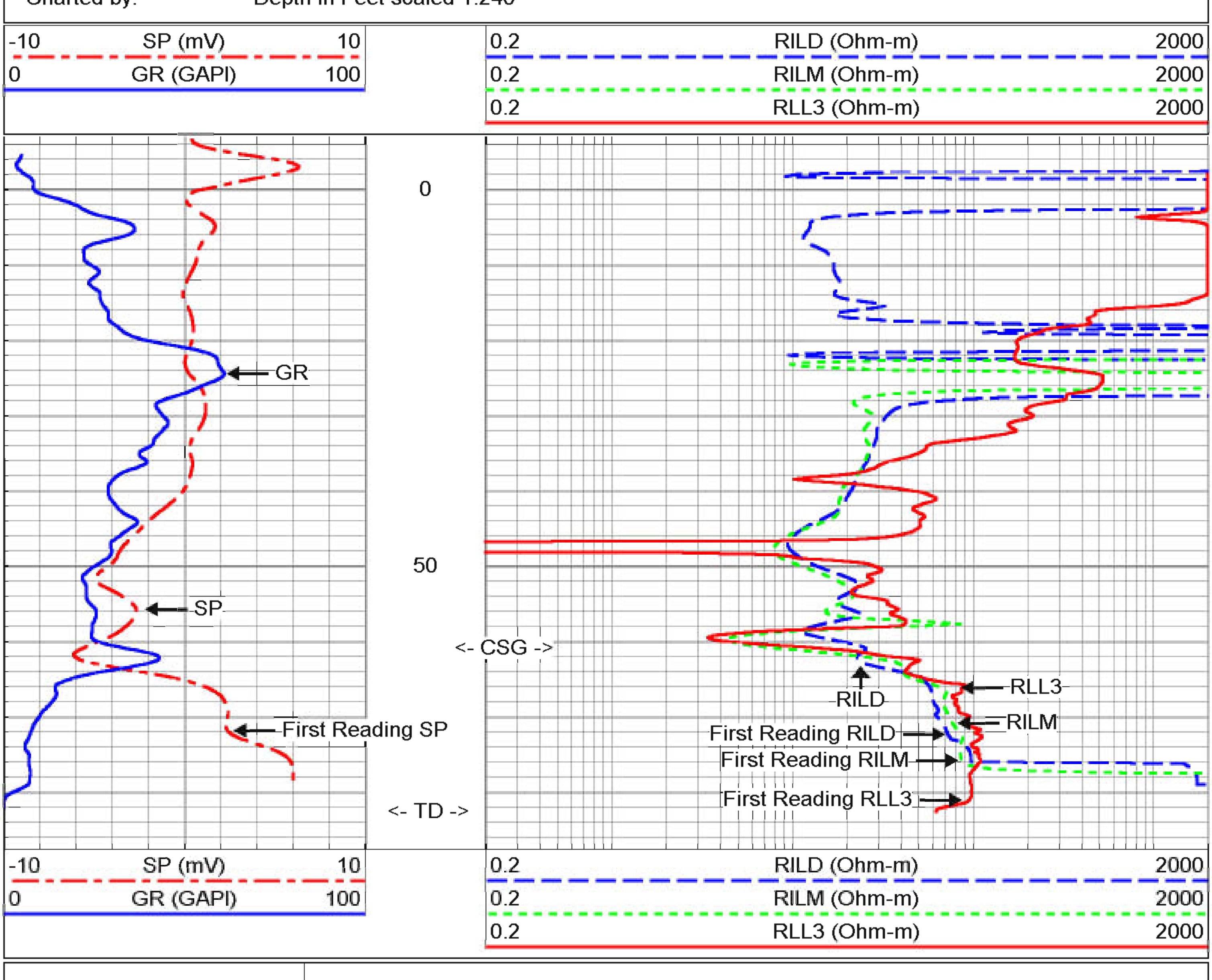
Database File:	avemp-1.db
Dataset Pathname:	run2/MAIN
Presentation Format:	DIL
Dataset Creation:	Tue Sep 14 09:23:10 2004
Charted by:	Depth in Feet scaled 1:600



MV Geophysical

MAIN PASS

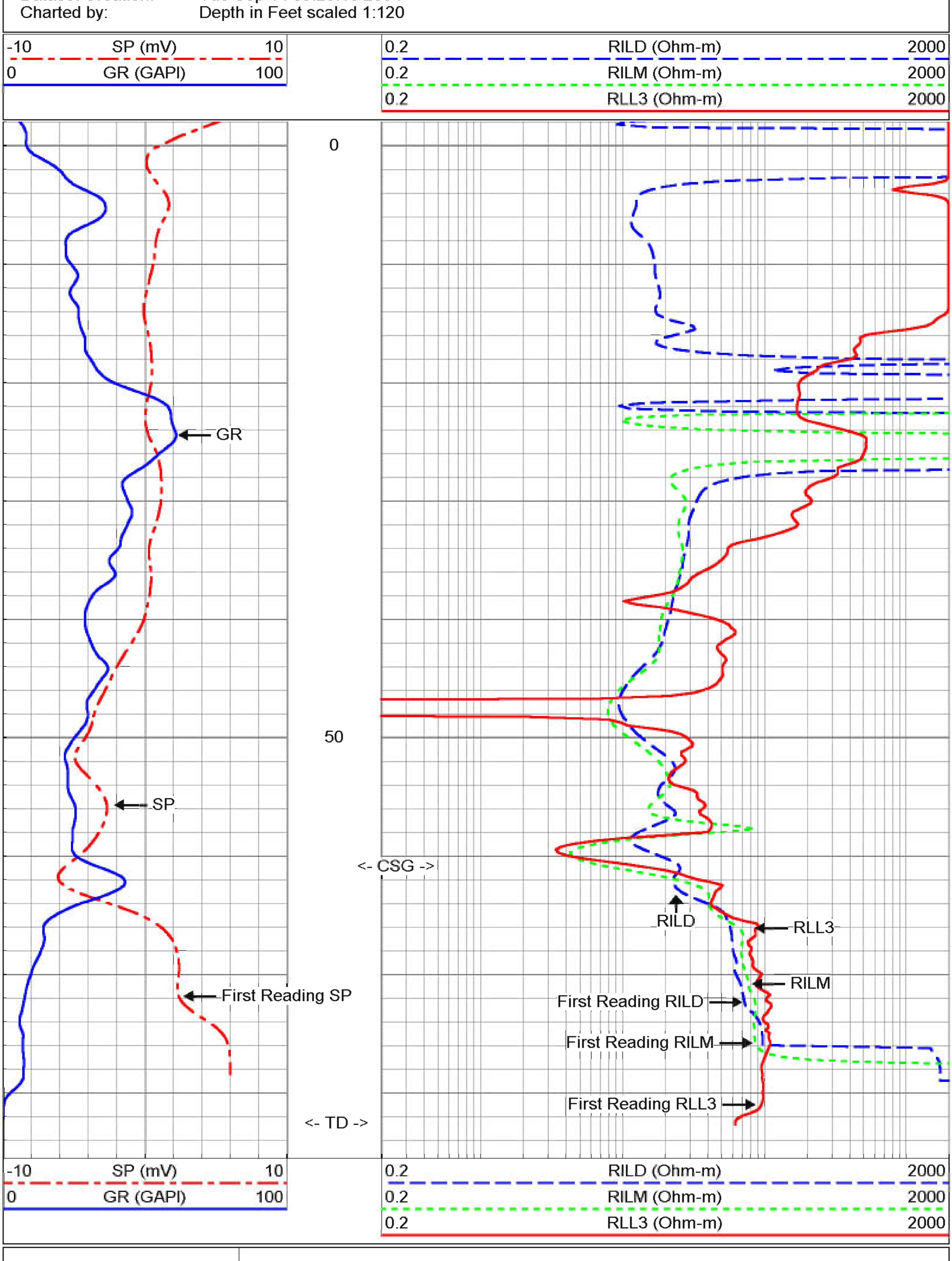
Database File:	avemp-1.db
Dataset Pathname:	run2/MAIN
Presentation Format:	DIL
Dataset Creation:	Tue Sep 14 09:23:10 2004
Charted by:	Depth in Feet scaled 1:240



MV Geophysical

MAIN PASS

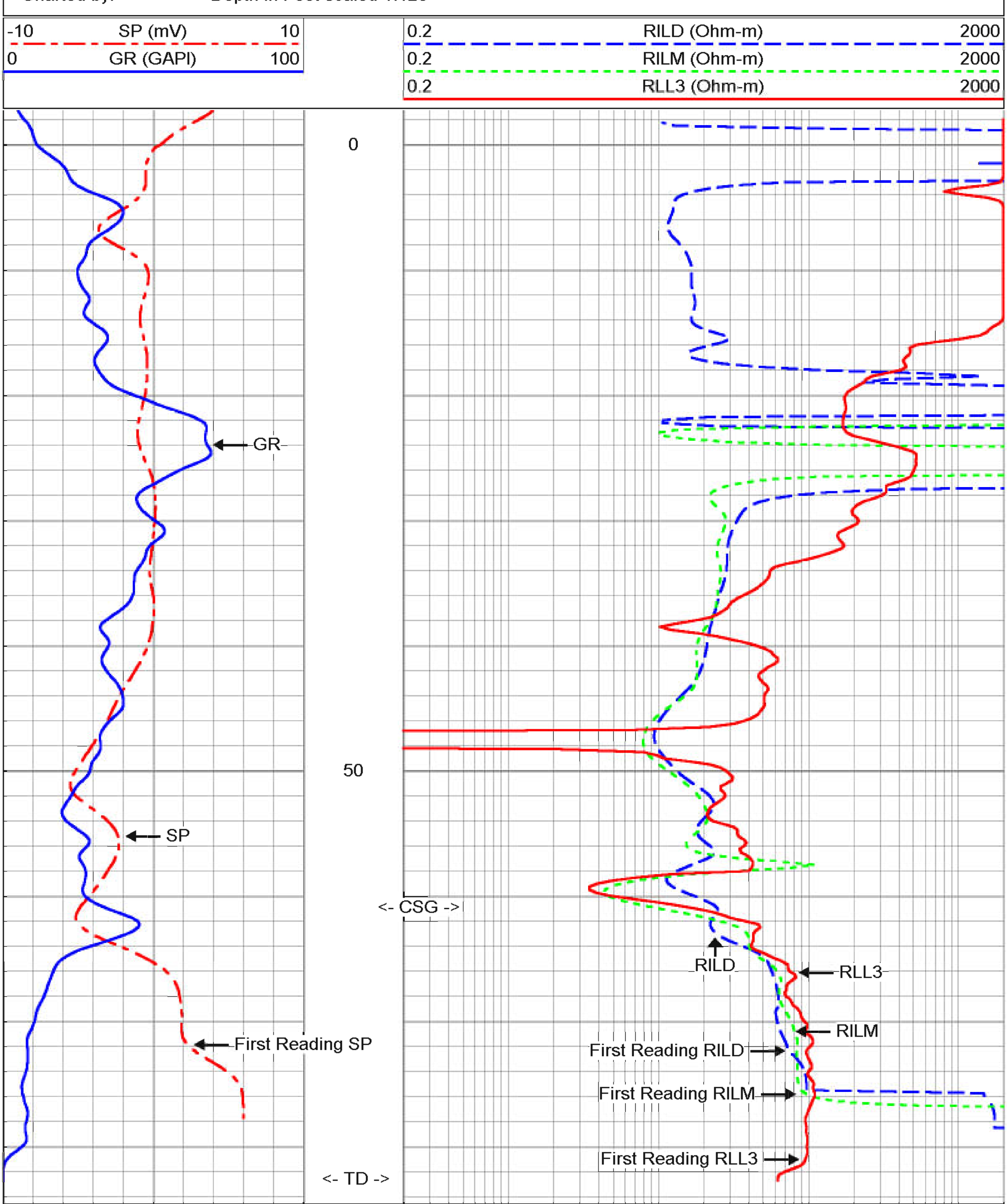
Database File:	avemp-1.db
Dataset Pathname:	run2/MAIN
Presentation Format:	DIL
Dataset Creation:	Tue Sep 14 09:23:10 2004
Charted by:	Depth in Feet scaled 1:120



MV Geophysical

REPEAT SECTION

Database File:	avemp-1.db
Dataset Pathname:	run2/REPEAT
Presentation Format:	DIL
Dataset Creation:	Tue Sep 14 08:38:50 2004
Charted by:	Depth in Feet scaled 1:120



Dual Induction Calibration Report

Serial-Model:	5390-R
Surface Cal Performed:	Mon Feb 24 16:52:46 2003
Downhole Cal Performed:	Tue Sep 14 08:53:38 2004
After Survey Verification Performed:	Tue Sep 14 09:07:25 2004

Surface Calibration

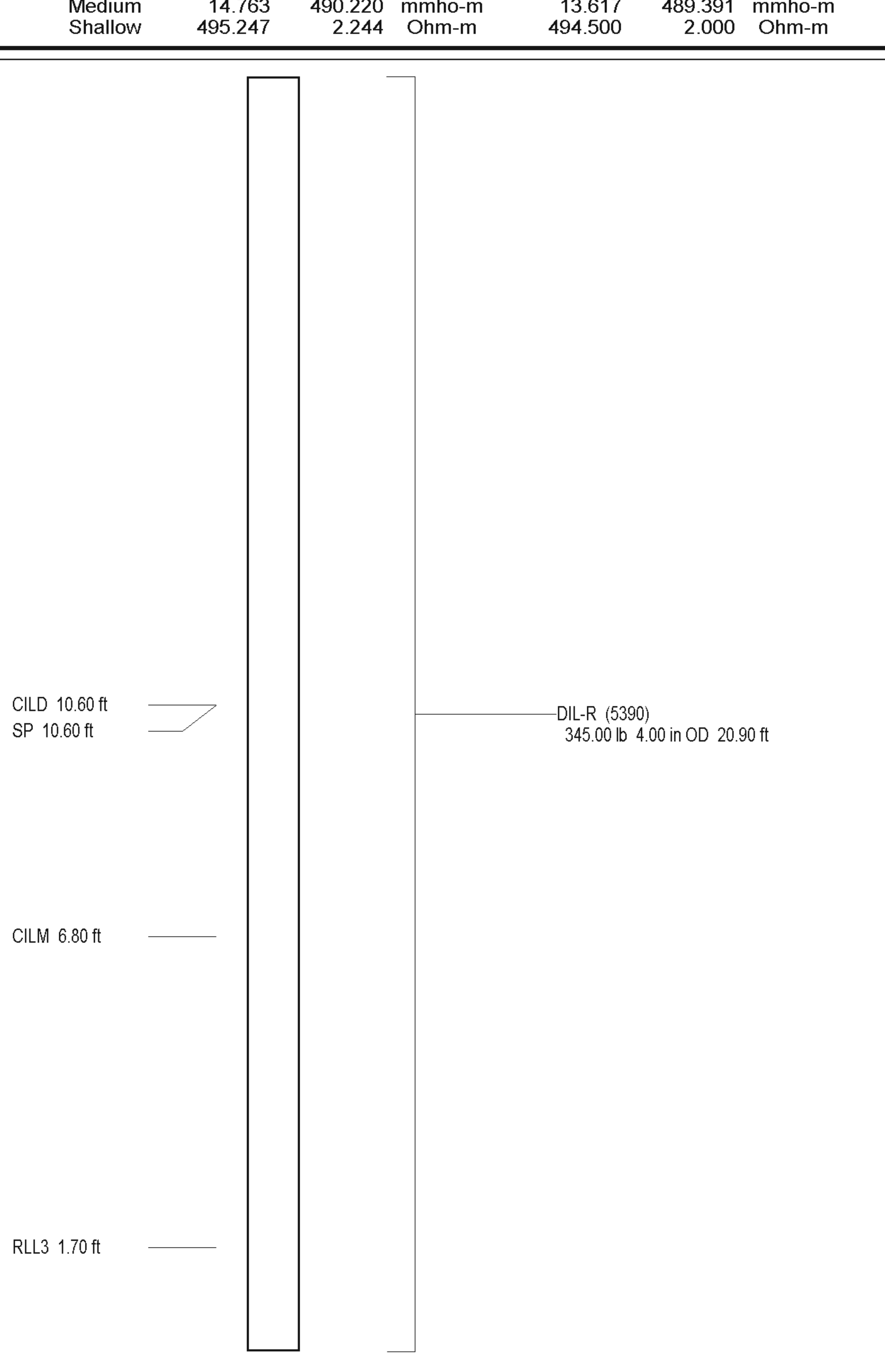
	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.041	0.637	V	0.000	400.000	mmho-m	670.900	-27.223
Medium	-0.006	0.700	V	0.000	464.000	mmho-m	656.366	4.251
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.647	V	0.000	400.000	mmho-m	628.552	-6.783
Medium	-0.011	0.749	V	0.000	464.000	mmho-m	610.612	6.720

Downhole Calibration

	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-18.877	398.830	mmho-m	-19.983	406.966	mmho-m	1.022	-0.688
Medium	13.617	489.391	mmho-m	-2.972	495.796	mmho-m	1.048	-17.248
Shallow	2.501	0.023	V	494.500	2.000	Ohm-m	198.777	-2.622

After Survey Verification

	Readings			Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	-17.809	399.526	mmho-m	-18.878	398.830	mmho-m	1.022	-0.688
Medium	14.763	490.220	mmho-m	13.617	489.391	mmho-m	1.048	-17.248
Shallow	495.247	2.244	Ohm-m	494.500	2.000	Ohm-m	0.999	-0.242



Dataset:	run2/pass6
Total Length:	20.90 ft
Total Weight:	345.00 lb
O.D.	4.00 in

MV Geophysical

FLUID CONDUCTIVITY TEMPERATURE LOG

Company Diversified Drilling Corp.
Well Ave Maria P-1
Field Ave Maria University
County Collier
State/Prv Florida

Company	Diversified Drilling Corporation
Well	Ave Maria P-1
Field	Ave Maria University
County	Collier State/Prv Florida
Location	Ave Maria WWTP & WTP CH2M Hill, Inc.

Permanent Datum	G.L.	Elevation
Log Measured From	G.L.	
Drilling Measured From	G.L.	

Other Services: XY/GR, DIL/SP, FLO,VIDEO

Elevation: K.B., D.F., G.L.

Date	14-SEP-2004								
Run Number	TWO								
Depth Driller	82.5'								
Depth Logger	82.5'								
Bottom Logged Interval	81'								
Top Log Interval	61'								
Open Hole Size	11"								
Type Fluid	WATER								
Density / Viscosity	NA/NA								
Max. Recorded Temp.	na								
Estimated Cement Top	NA								
Time Well Ready	08:00 9/14/04								
Time Logger on Bottom	09:30 9/14/04								
Equipment Number	MVGS-1								
Location	Ft. Myers								
Recorded By	S.Miller								
Witnessed By	C.Ivery (CH2M)						Rossco (DDC)		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	20'	64'				
TWO	11"	61'	82.5'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String	12" SDR 17	11.125" ID	SURFACE	61'
Production String				
Liner				

Invoice No. 2004132 | P.O. #: | Job No.: | * FIELD PRINT *

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Comments

STATIC and DYNAMIC DOWN passes were performed.
Cw=714.2 uS/cm @ 79.0 degF (Dynamic Sample). Q =~450 gpm.
FLUID RESISTIVITY CALIBRATION REPORT (Performed: 16-AUG-04 13:00)

OHM-M	CPS
335.0	4565.33
820.1	4400.12
1525.1	3890.11

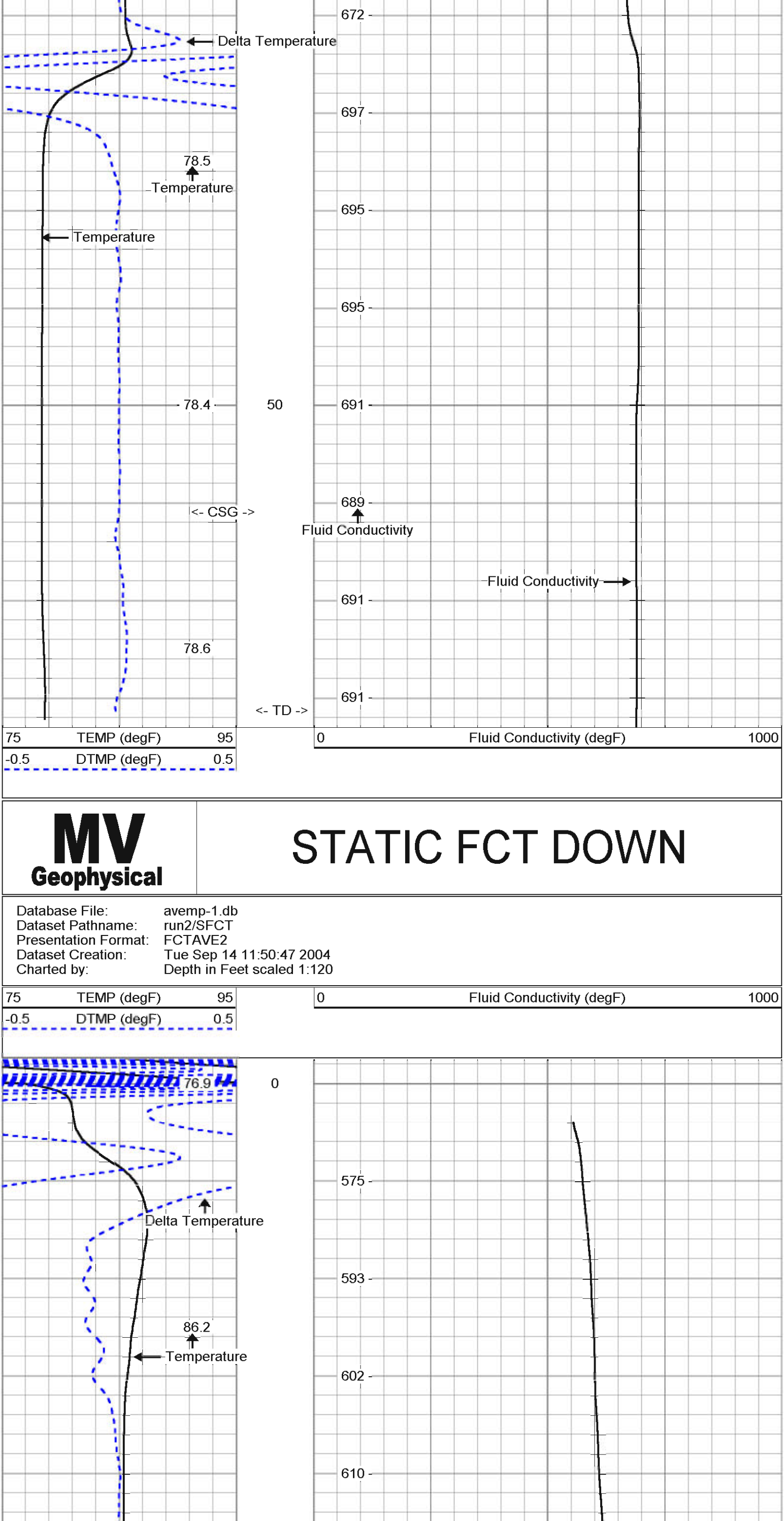
TEMPERATURE CALIBRATION REPORT (Performed: 16-AUG-04 13:45)

DEG-F	CPS
34.6	2346.14
144.6	6955.44

MV Geophysical

DYNAMIC FCT DOWN

Database File: avemp-1.db
Dataset Pathname: run2/DFCT
Presentation Format: FCTAVE2
Dataset Creation: Tue Sep 14 15:04:46 2004
Charted by: Depth in Feet scaled 1:120



MV Geophysical

STATIC FCT DOWN

Database File: avemp-1.db
Dataset Pathname: run2/SFCT
Presentation Format: FCTAVE2
Dataset Creation: Tue Sep 14 11:50:47 2004
Charted by: Depth in Feet scaled 1:120

MV Geophysical

FLOWMETER LOG

Company	Diversified Drilling Corp.
Well	Ave Maria P-1
Field	Ave Maria University
County	Collier
State/Prv	Florida

Company	Diversified Drilling Corporation
Well	Ave Maria P-1
Field	Ave Maria University
County	Collier
State/Prv	Florida
Location	Ave Maria WWTP & WTP CH2M Hill, Inc.
Other Services	XY/GR DIL/SP FCT,VIDEO
Permanent Datum	G.L.
Log Measured From	G.L.
Drilling Measured From	G.L.
Elevation	
Elevation K.B. / D.F. / G.L.	

Date	14-SEP-2004	
Run Number	TWO	
Depth Driller	82.5'	
Depth Logger	82.5'	
Bottom Logged Interval	81'	
Top Log Interval	41'	
Open Hole Size	11"	
Type Fluid	WATER	
Density / Viscosity	NA/NA	
Max. Recorded Temp.	na	
Estimated Cement Top	NA	
Time Well Ready	08:00 9/14/04	
Time Logger on Bottom	13:30 9/14/04	
Equipment Number	MVGS-1	
Location	Ft. Myers	
Recorded By	S.Miller	
Witnessed By	C.Ivery (CH2M)	Rossco (DDC)

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	20'	64'				
TWO	11"	61'	82.5'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String	12" SDR 17	11.125" ID	SURFACE	61'
Production String				
Liner				

Invoice No.	P.O. #:	Job No.:	
2004132			* FIELD PRINT *

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Comments

STATIC and DYNAMIC DOWN passes were performed.
Cw=714.2 uS/cm @ 79.0 degF (Dynamic Sample). Q =~450 gpm.
FLUID RESISTIVITY CALIBRATION REPORT (Performed: 16-AUG-04 13:00)

OHM-M	CPS
335.0	4565.33
820.1	4400.12
1525.1	3890.11

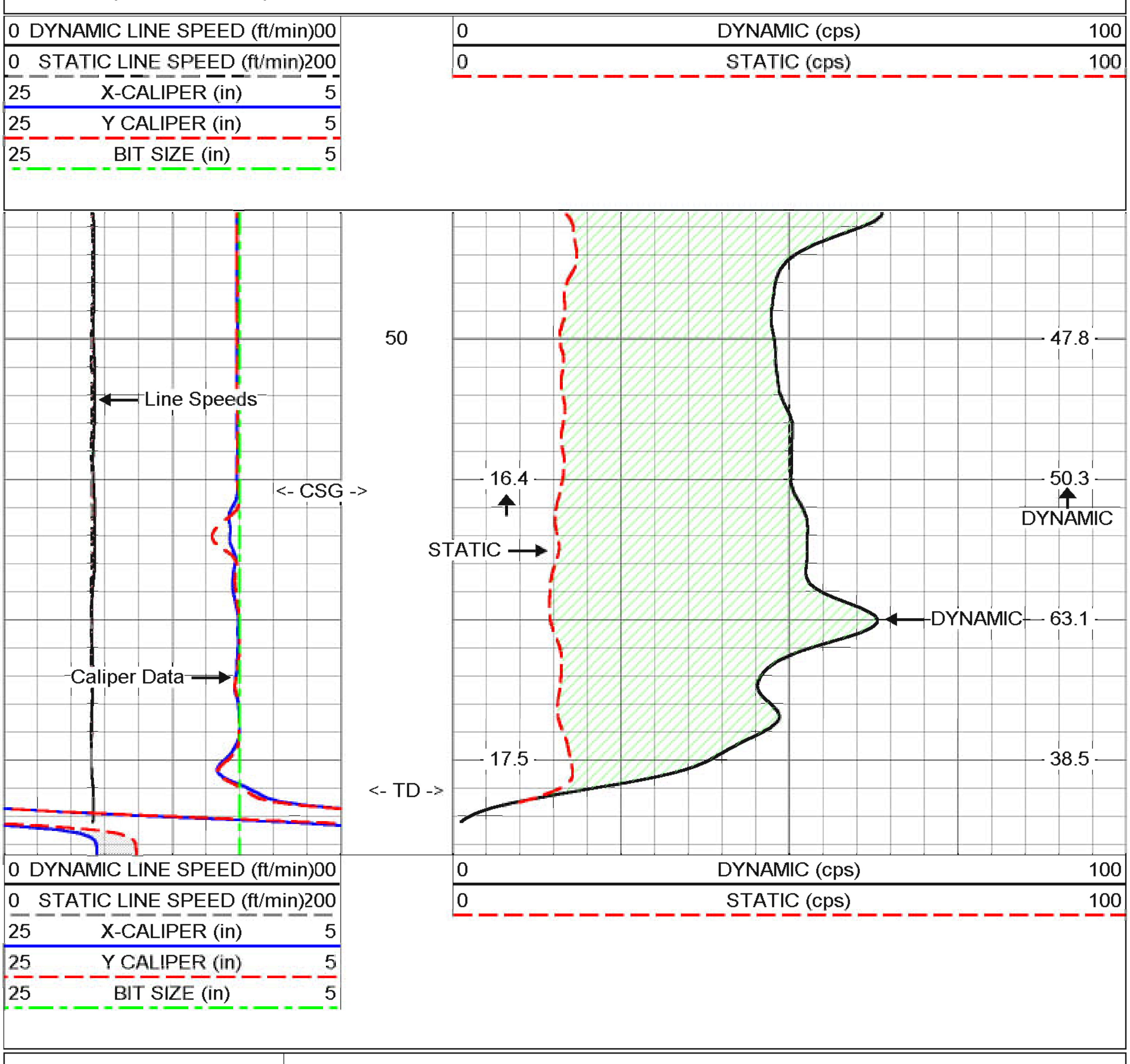
TEMPERATURE CALIBRATION REPORT (Performed: 16-AUG-04 13:45)

DEG-F	CPS
34.6	2346.14
144.6	6955.44

MV Geophysical

S/D DOWN @ 50 fpm

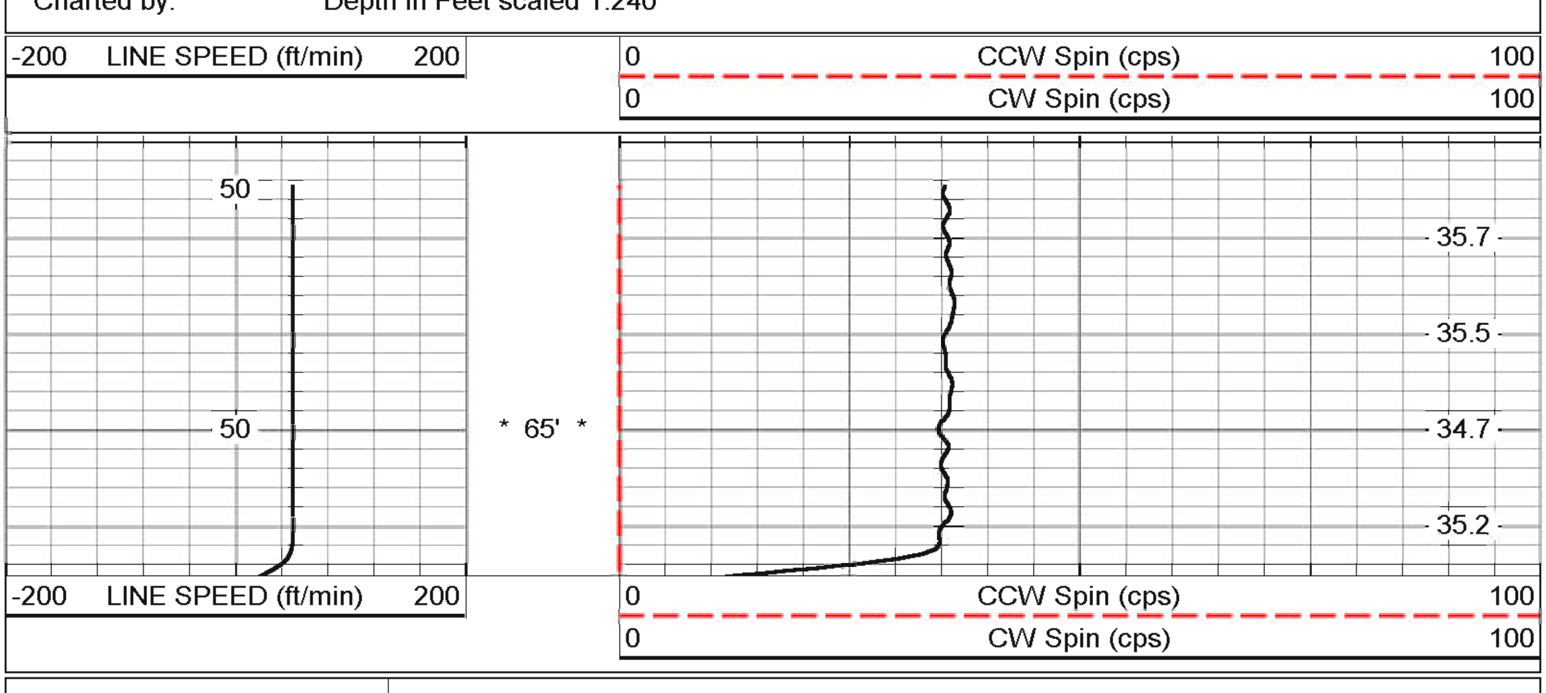
Database File: avemp-1.db
Dataset Pathname: run2/sd50
Presentation Format: QGG2
Dataset Creation: Tue Sep 14 15:31:56 2004
Charted by: Depth in Feet scaled 1:120



MV Geophysical

Station #4: 65'

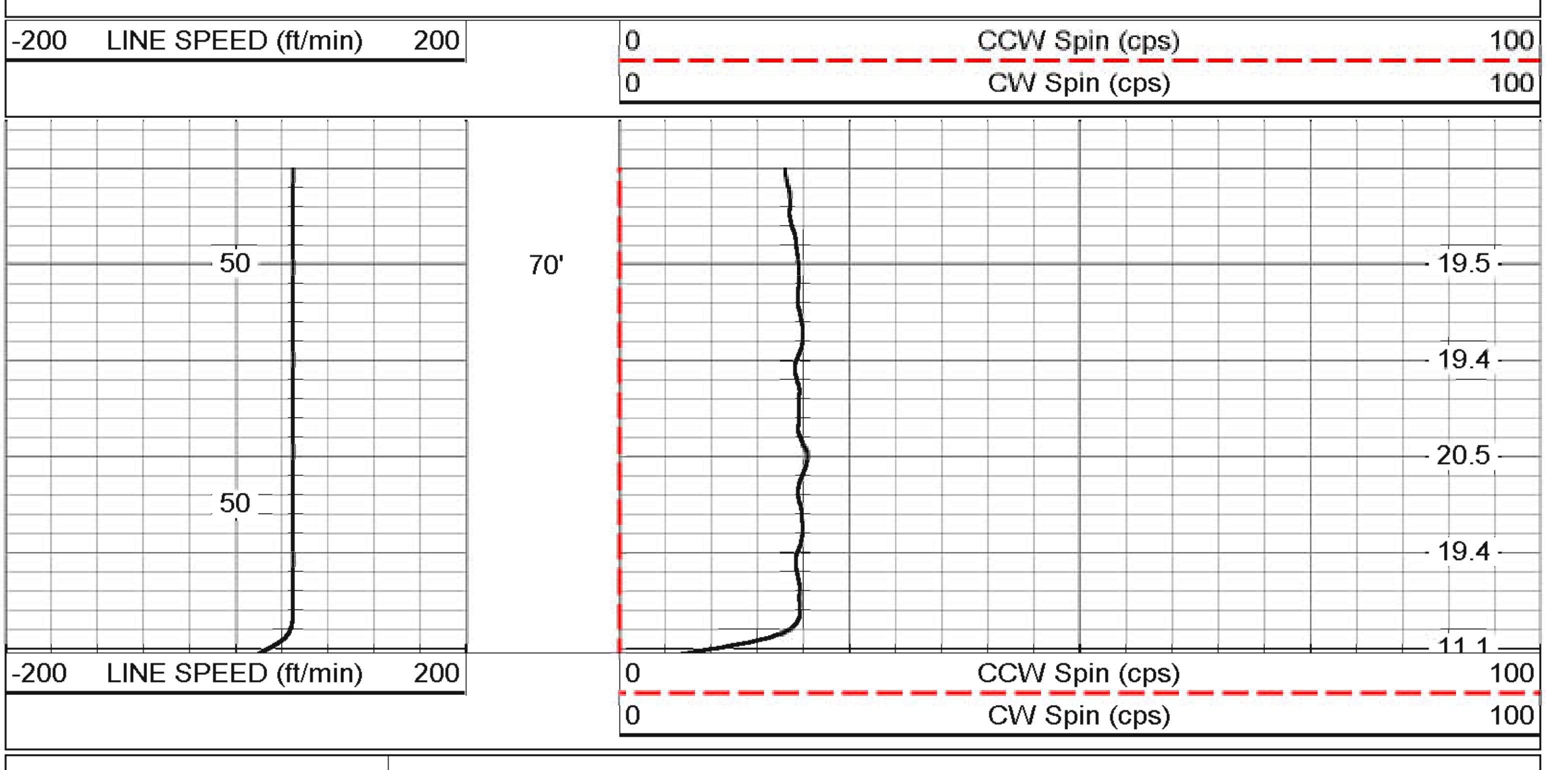
Database File: avemp-1.db
Dataset Pathname: run2/pass19
Presentation Format: FLOW
Dataset Creation: Tue Sep 14 12:42:13 2004 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240



MV Geophysical

Station #3: 70'

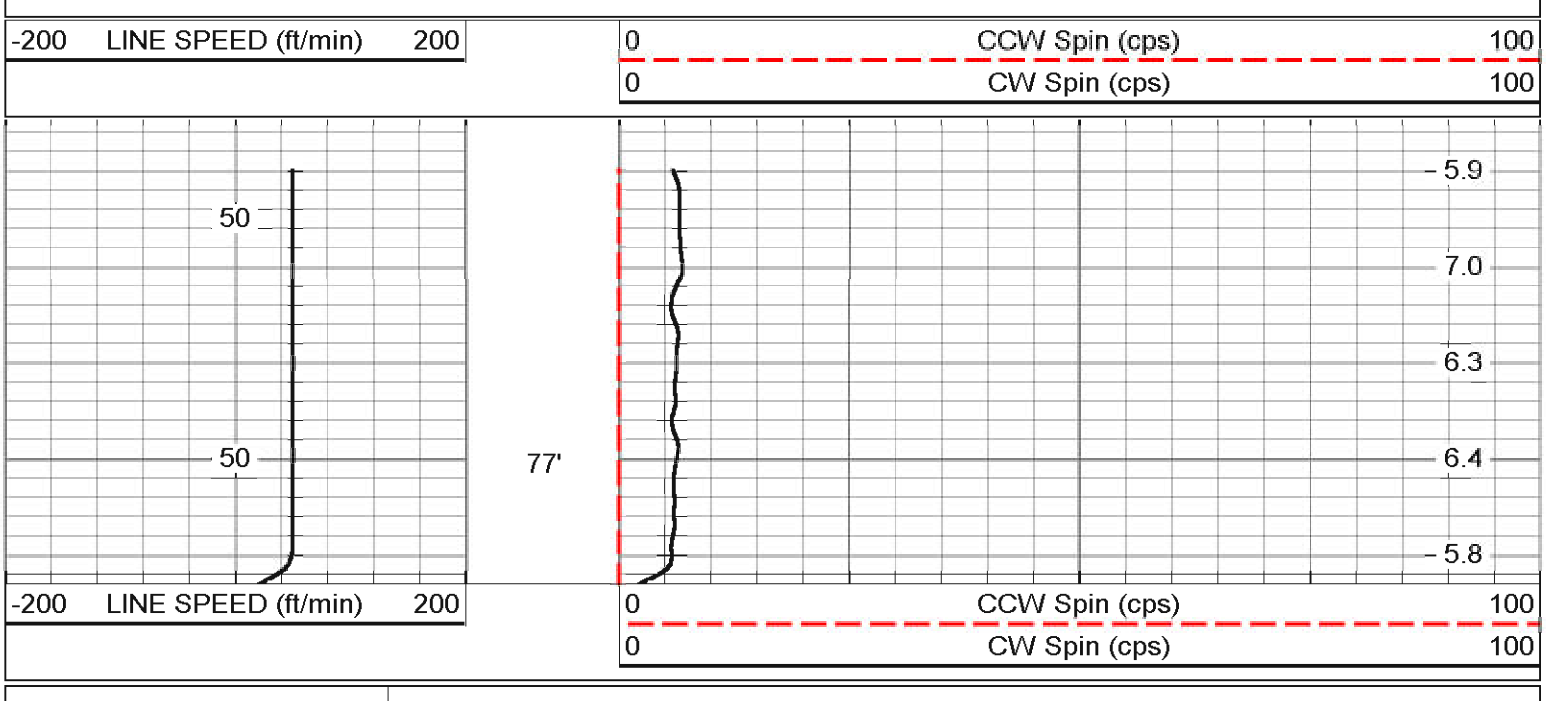
Database File: avemp-1.db
Dataset Pathname: run2/pass18
Presentation Format: FLOW
Dataset Creation: Tue Sep 14 12:40:42 2004 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240



MV Geophysical

Station #2: 77'

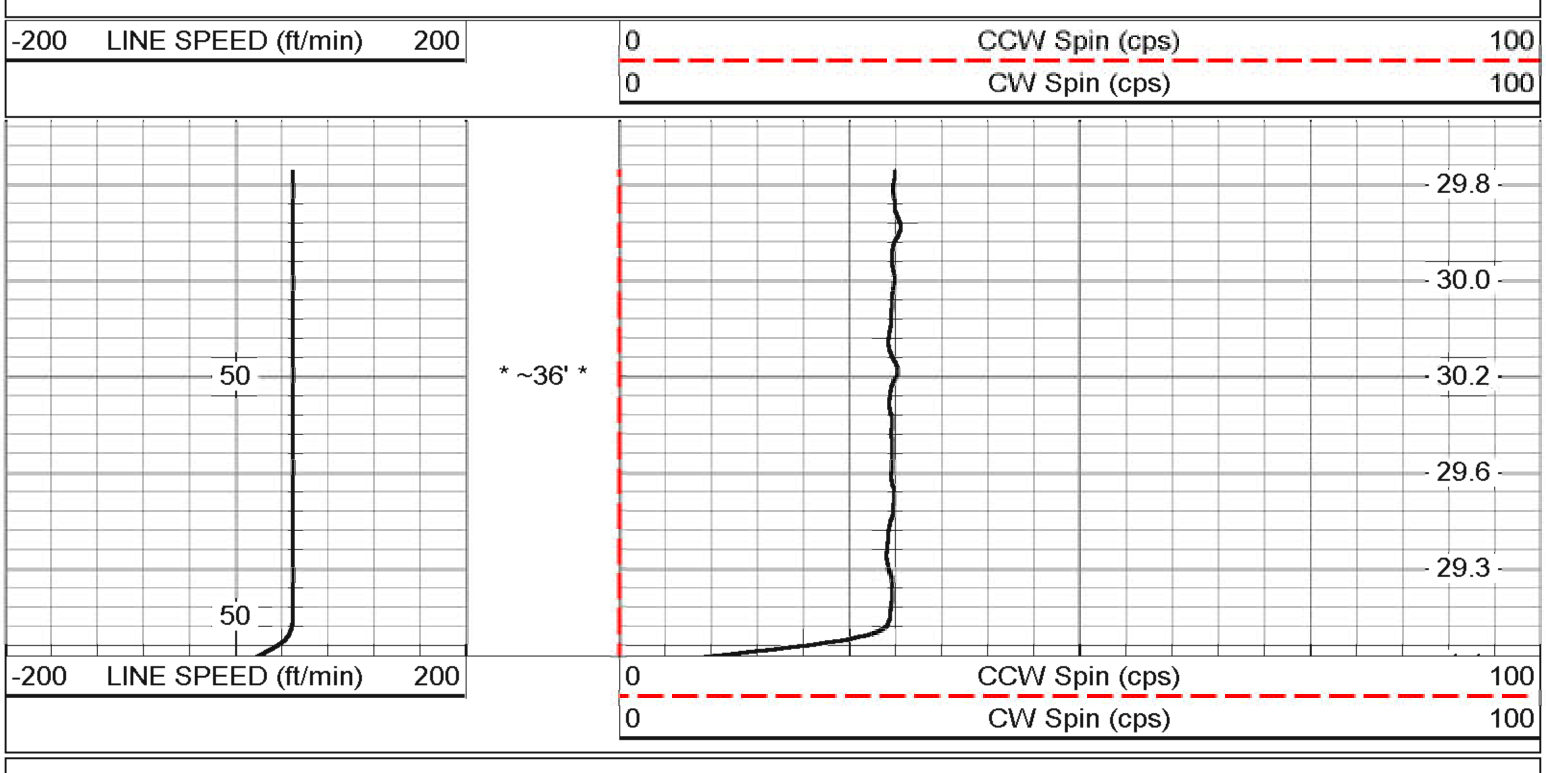
Database File: avemp-1.db
Dataset Pathname: run2/pass17
Presentation Format: FLOW
Dataset Creation: Tue Sep 14 12:39:14 2004 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240

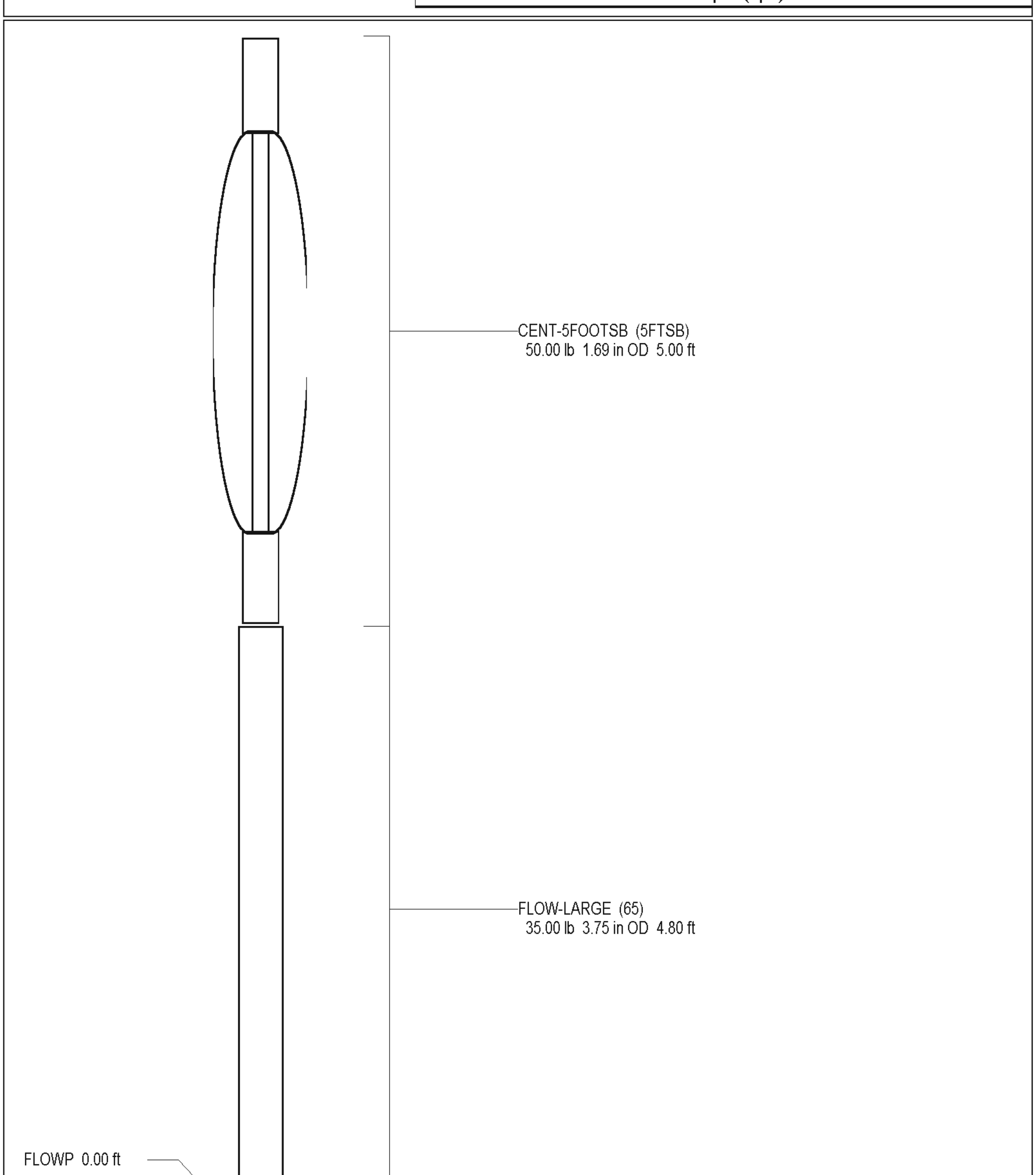


MV Geophysical

Station #1: 36.3'

Database File: avemp-1.db
Dataset Pathname: run2/pass13
Presentation Format: FLOW
Dataset Creation: Tue Sep 14 12:32:56 2004 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240





Dataset: run2/pass19
Total Length: 9.80 ft
Total Weight: 85.00 lb
O.D.: 3.75 in

MV Geophysical

X-Y CALIPER GAMMA RAY LOG

Company	Diversified Drilling Corp.
Well	Ave Maria P-1
Field	Ave Maria University
County	Collier
State/Prv	Florida

Company: Diversified Drilling Corporation
Well: Ave Maria P-1
Field: Ave Maria University
County: Collier
State/Prv: Florida
Location: Ave Maria WWTP & WTP CH2M Hill, Inc.

Other Services: DIL/SP FRT,FLOW VIDEO

Permanent Datum	G.L.	Elevation	K.B.
Log Measured From	G.L.		D.F.
Drilling Measured From	G.L.		G.L.

Date	14-SEP-2004	
Run Number	TWO	
Depth Driller	82.5'	
Depth Logger	82.5'	
Bottom Logged Interval	82'	
Top Log Interval	SURFACE	
Open Hole Size	11"	
Type Fluid	WATER	
Density / Viscosity	NA/NA	
Max. Recorded Temp.	na	
Estimated Cement Top	NA	
Time Well Ready	08:00 9/14/04	
Time Logger on Bottom	08:30 9/14/04	
Equipment Number	MVGS-1	
Location	Ft. Myers	
Recorded By	S.Miller	
Witnessed By	C.Ivery (CH2M)	Rossco (DDC)

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	20'	64'				
TWO	11"	61'	82.5'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String	12" SDR 17	11.125" ID	SURFACE	61'
Production String				
Liner				

Invoice No. 2004132 P.O. #: Job No.: * FIELD PRINT *

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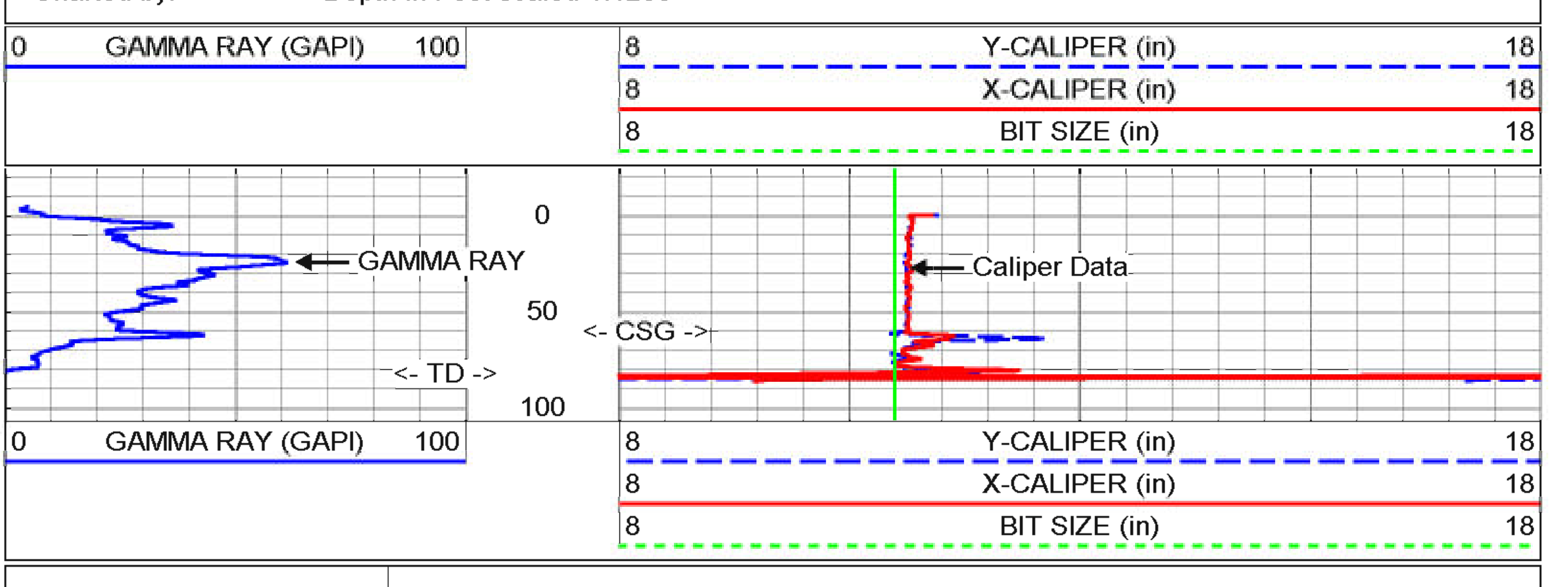
Comments

X-Y Caliper Arm Extensions: 33"

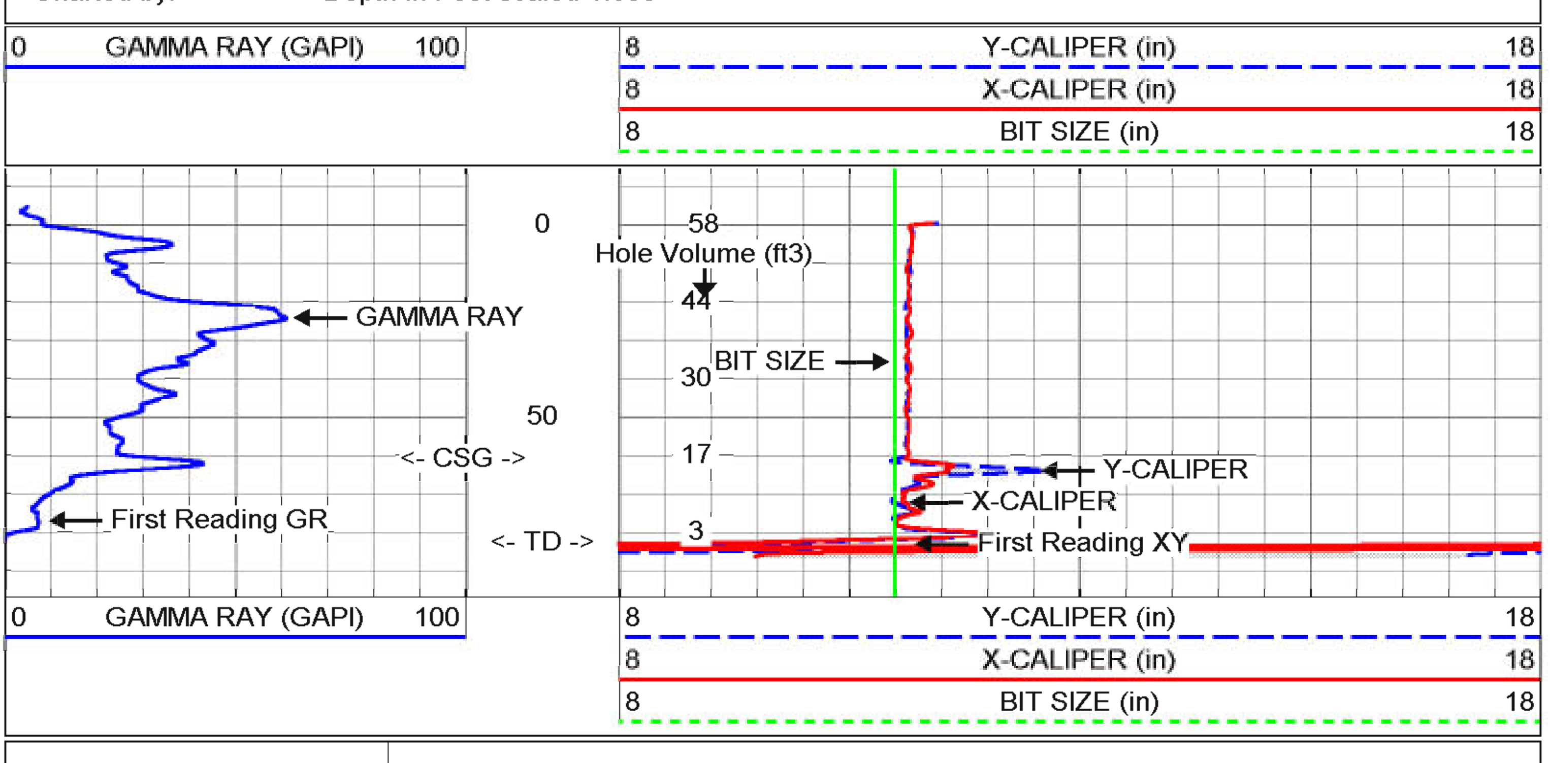
MV Geophysical — MAIN PASS

Database File: avemp-1.db
Dataset Pathname: run2/MAIN
Presentation Format: XY818-1
Dataset Creation: Tue Sep 14 09:23:10 2004
Charted by: Depth in Feet scaled 1:1200



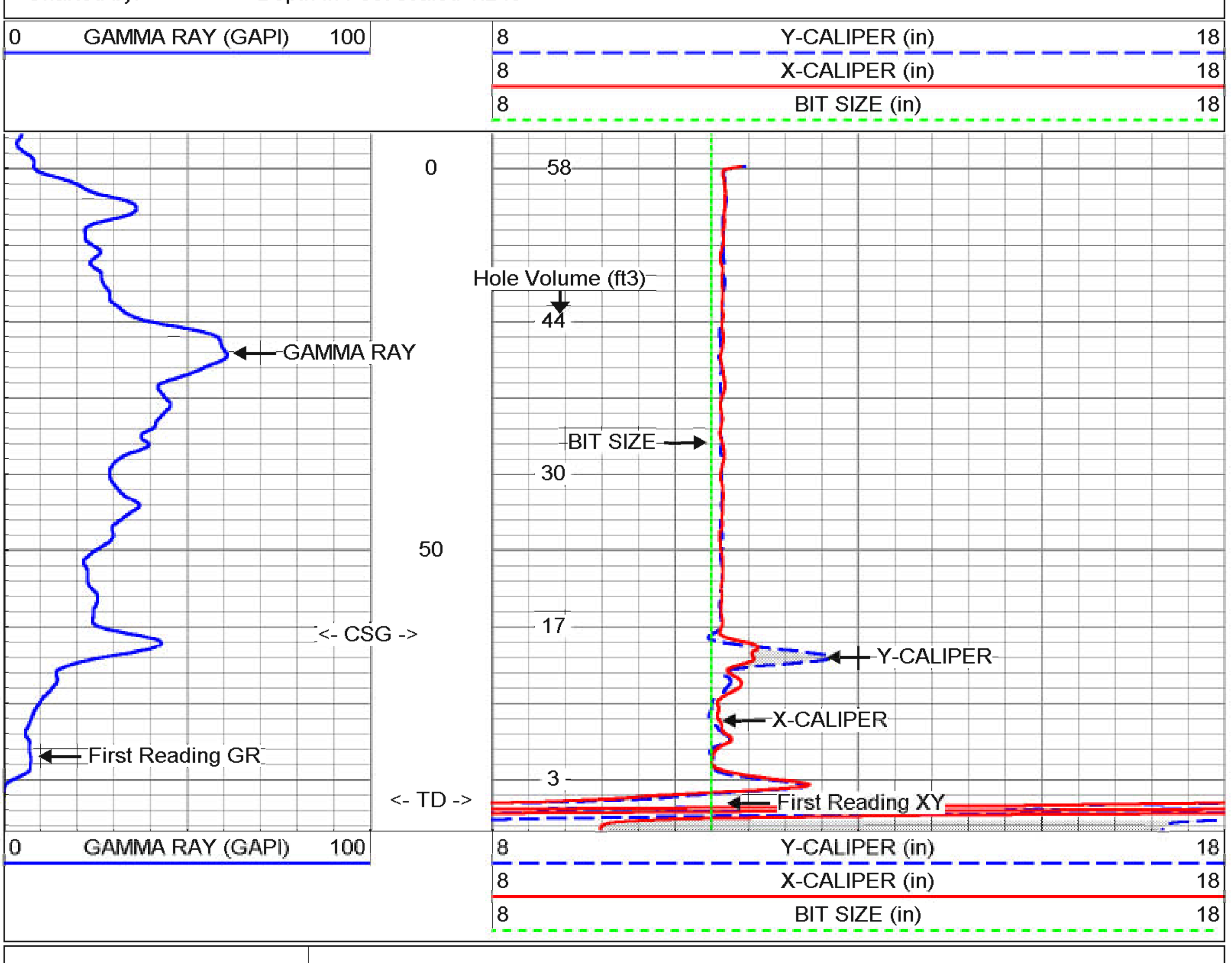
MV Geophysical — MAIN PASS

Database File: avemp-1.db
Dataset Pathname: run2/MAIN
Presentation Format: XY818-5
Dataset Creation: Tue Sep 14 09:23:10 2004
Charted by: Depth in Feet scaled 1:600



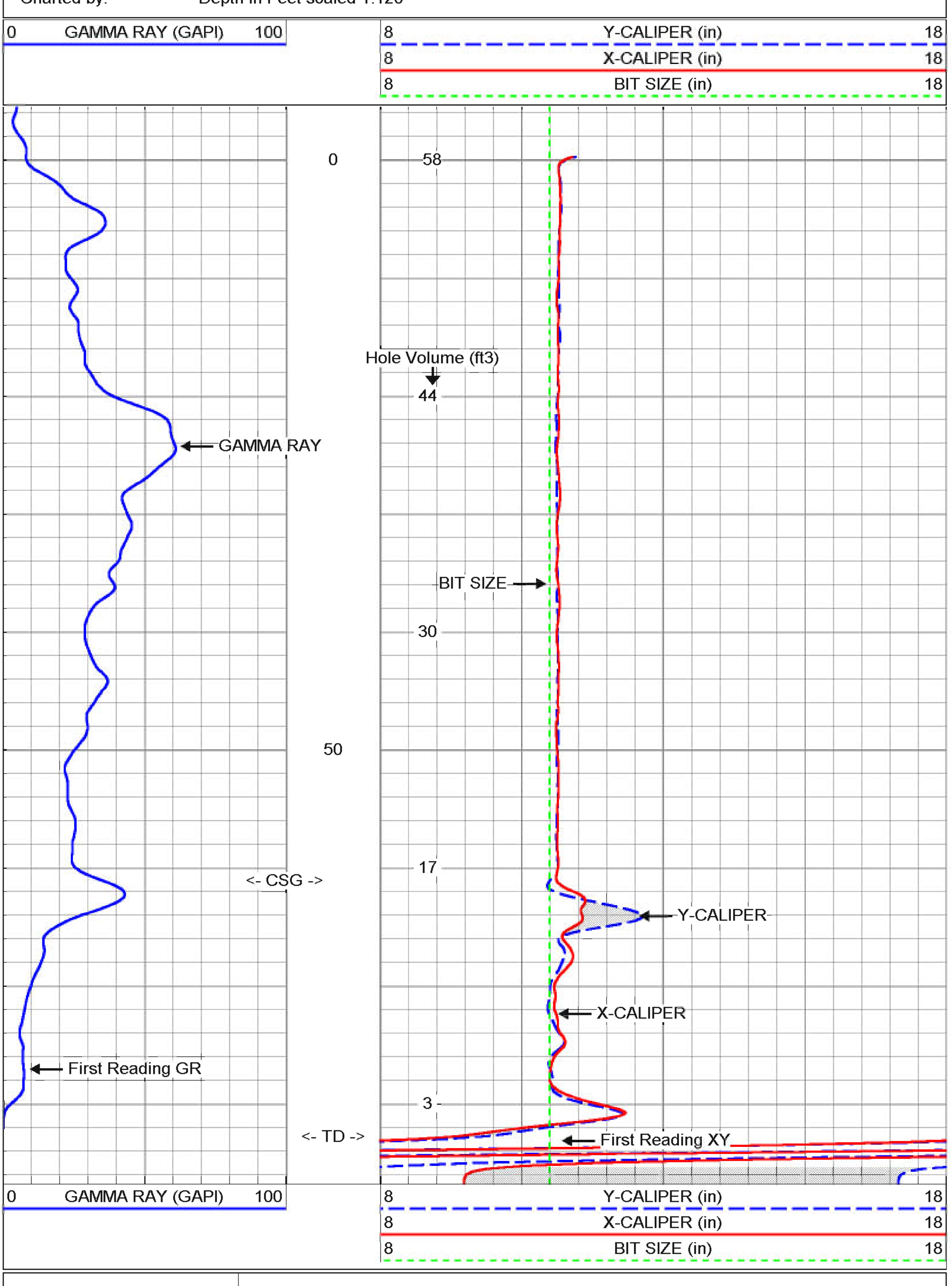
MV Geophysical — MAIN PASS

Database File: avemp-1.db
Dataset Pathname: run2/MAIN
Presentation Format: XY818-5
Dataset Creation: Tue Sep 14 09:23:10 2004
Charted by: Depth in Feet scaled 1:240



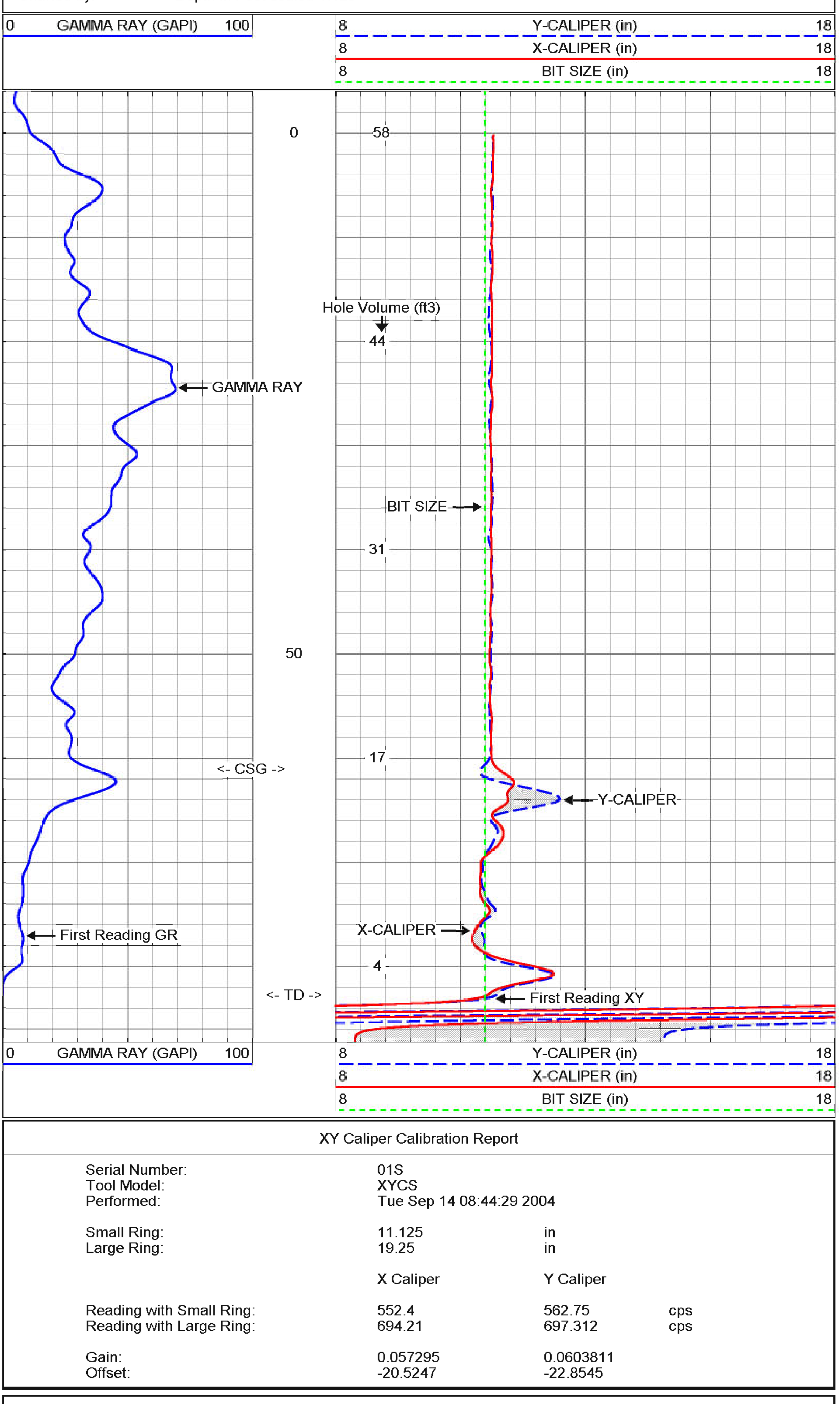
MV Geophysical — MAIN PASS

Database File: avemp-1.db
Dataset Pathname: run2/MAIN
Presentation Format: XY818-5
Dataset Creation: Tue Sep 14 09:23:10 2004
Charted by: Depth in Feet scaled 1:120



MV Geophysical — REPEAT SECTION

Database File: avemp-1.db
Dataset Pathname: run2/REPEAT
Presentation Format: XY818-5
Dataset Creation: Tue Sep 14 08:38:50 2004
Charted by: Depth in Feet scaled 1:120

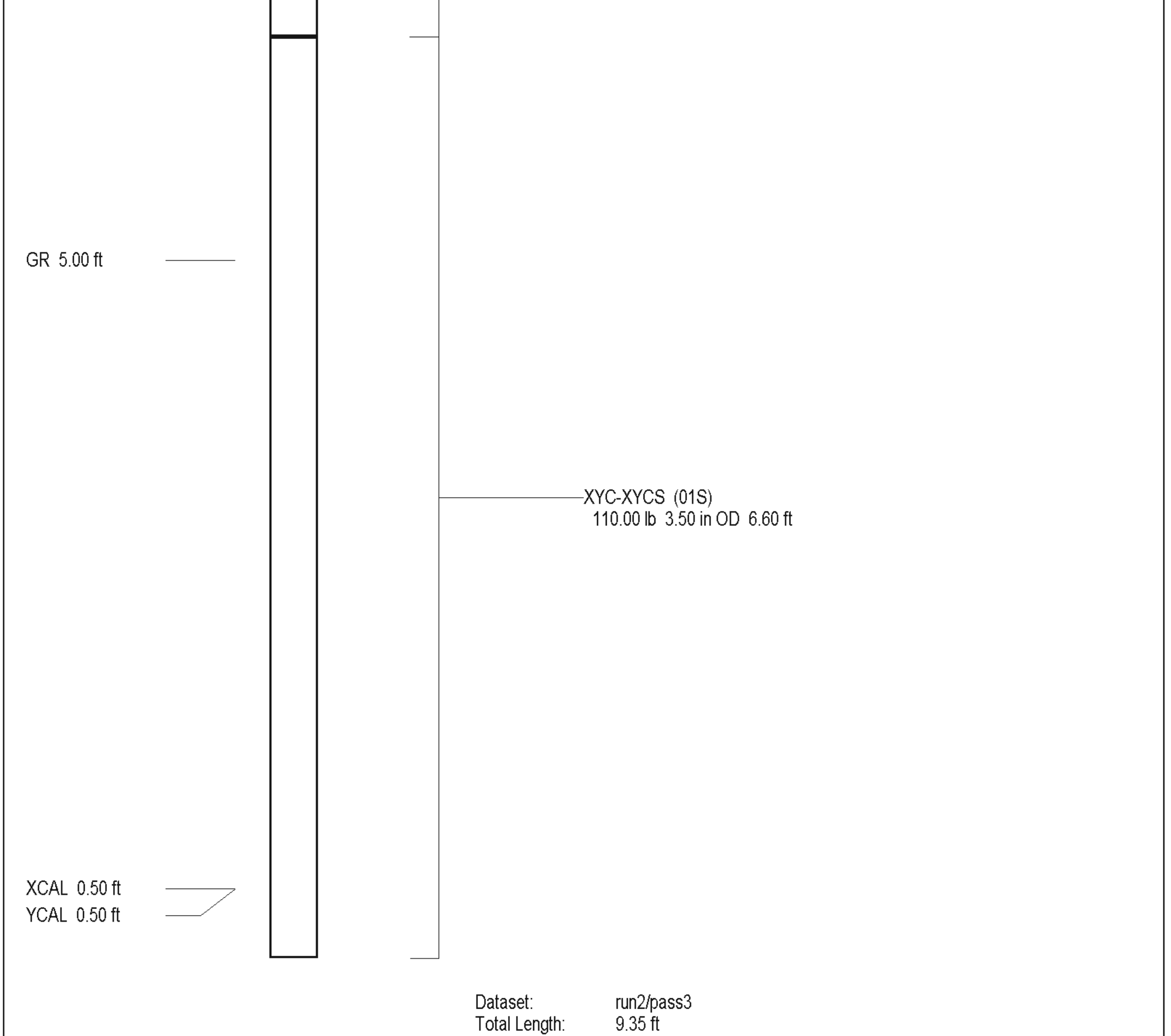


XY Caliper Calibration Report

Serial Number:	01S		
Tool Model:	XYCS		
Performed:	Tue Sep 14 08:44:29 2004		
Small Ring:	11.125	in	
Large Ring:	19.25	in	
	X Caliper	Y Caliper	
Reading with Small Ring:	552.4	562.75	cps
Reading with Large Ring:	694.21	697.312	cps
Gain:	0.057295	0.0603811	
Offset:	-20.5247	-22.8545	

Gamma Ray Calibration Report

Serial Number:	01	
Tool Model:	GROH	
Performed:	Tue Sep 14 08:31:57 2004	
Calibrator Value:	120	GAPI
Background Reading:	5.631	cps
Calibrator Reading:	124.621	cps
Sensitivity:	1.00849	GAPI/cps



Dataset: run2/pass3
Total Length: 9.35 ft
Total Weight: 150.00 lb
O.D. 3.50 in

Company	Diversified Drilling Corp.
Well	Ave Maria P-2
Field	Ave Maria University
County	Collier
State/Prv	Florida

MV Geophysical

DUAL INDUCTION LL3 / SP LOG

Company	Diversified Drilling Corporation
Well	Ave Maria P-2
Field	Ave Maria University
County	Collier
State/Prv	Florida
Location	Ave Maria WWTP & WTP, CH2M Hill, Inc.
Other Services	XY/GR
Permanent Datum	G.L.
Log Measured From	G.L.
Drilling Measured From	G.L.
Elevation	K.B. / D.F. / G.L.

Date	23-AUG-2004
Run Number	ONE
Depth Driller	62'
Depth Logger	62'
Bottom Logged Interval	60'
Top Log Interval	20'
Open Hole Size	7.875"
Type Fluid	MUD
Density / Viscosity	NA/NA
Max. Recorded Temp.	na
Estimated Cement Top	NA
Time Well Ready	10:30 8/23/04
Time Logger on Bottom	11:15 8/23/04
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller
Witnessed By	C.Ivery (CH2M) / Rossco (DDC)

Borehole Record / Tubing Record

Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	20'	62'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String				
Production String				
Liner				

Invoice No. 2004120 | P.O. #: | Job No.: | * FIELD PRINT *

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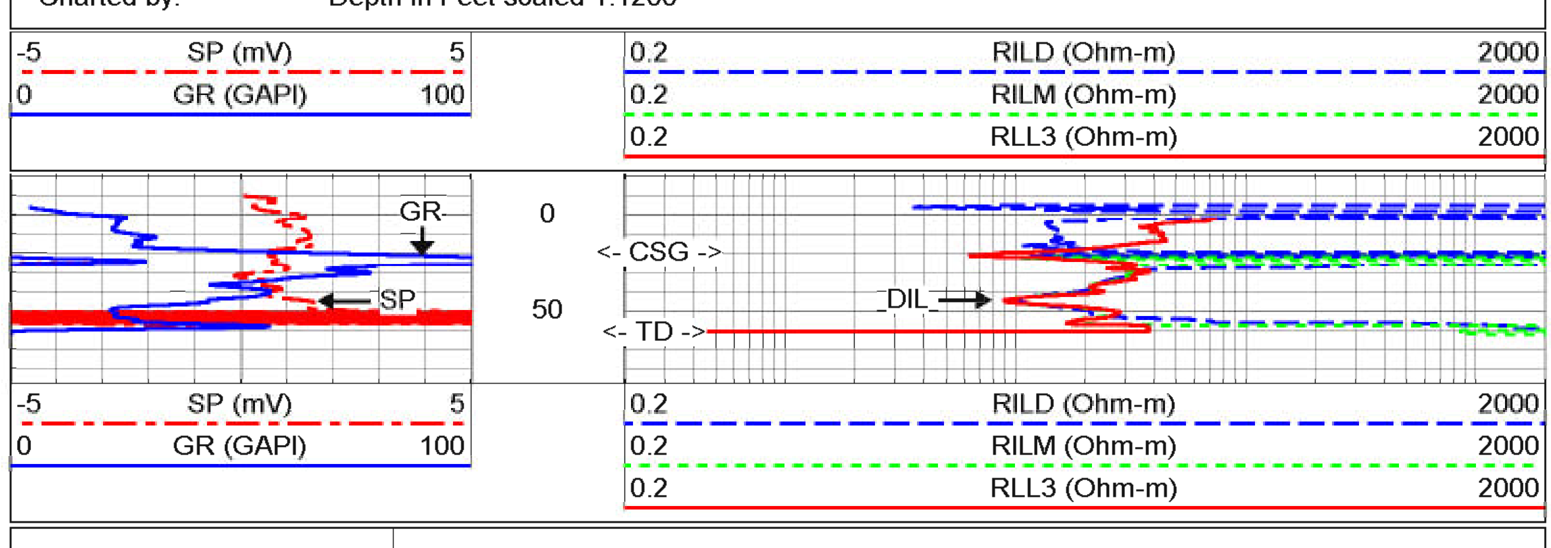
Comments

Rm=9.991 ohm-m @ 81.3 degF

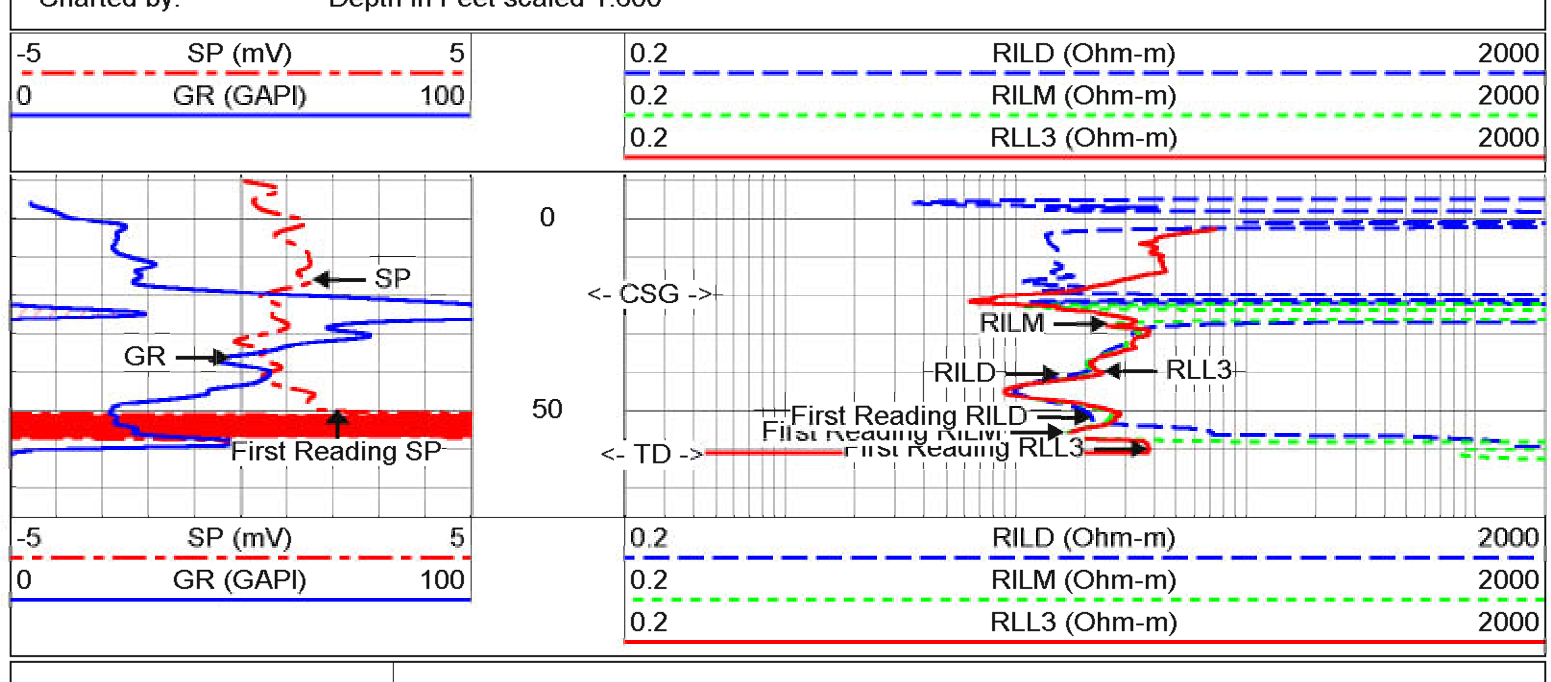
MV Geophysical — MAIN PASS

Database File: avemp-2.db
Dataset Pathname: MAIN
Presentation Format: DIL-1
Dataset Creation: Mon Aug 23 11:24:54 2004
Charted by: Depth in Feet scaled 1:1200



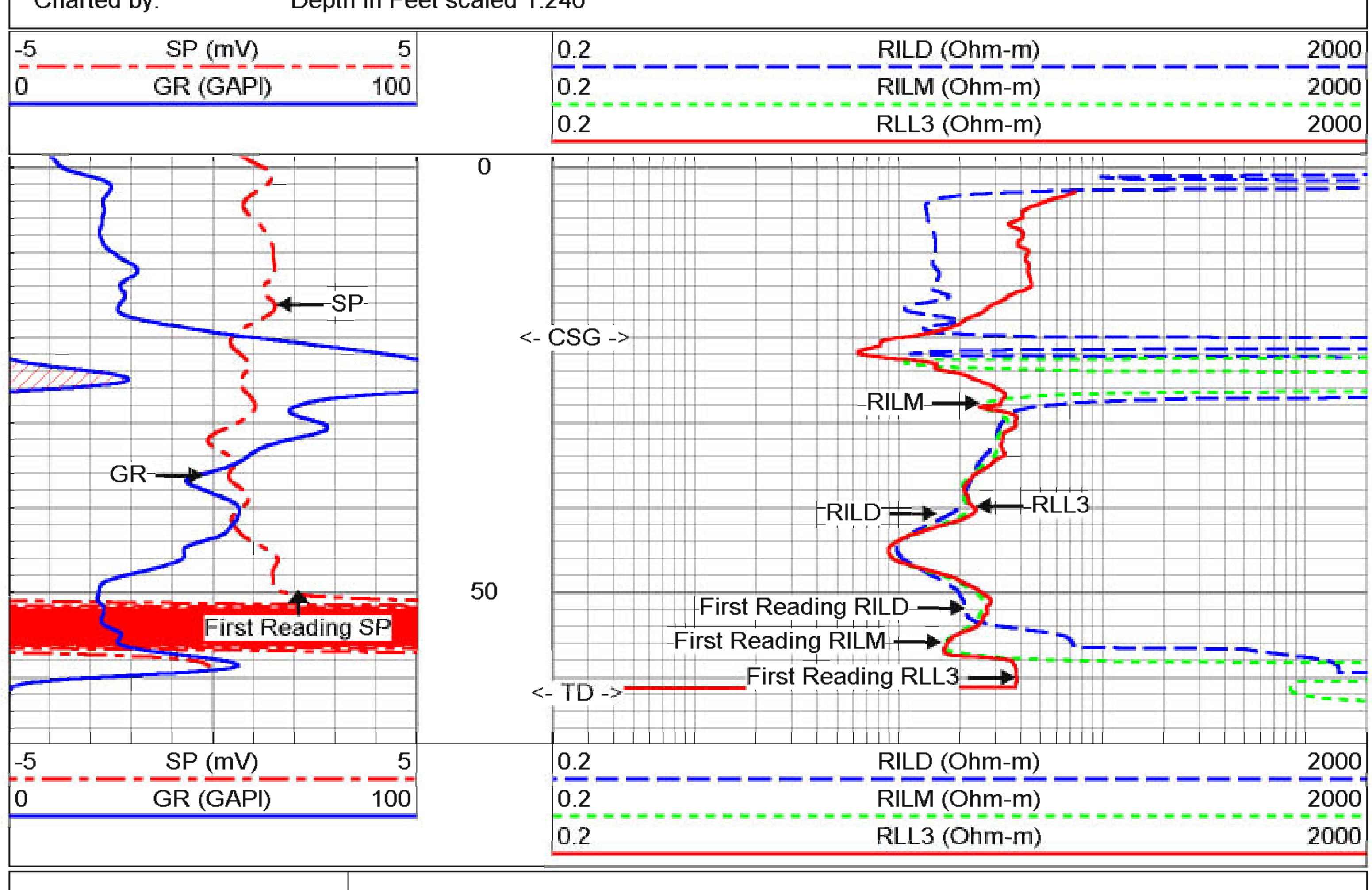
MV Geophysical — MAIN PASS

Database File: avemp-2.db
Dataset Pathname: MAIN
Presentation Format: DIL
Dataset Creation: Mon Aug 23 11:24:54 2004
Charted by: Depth in Feet scaled 1:600



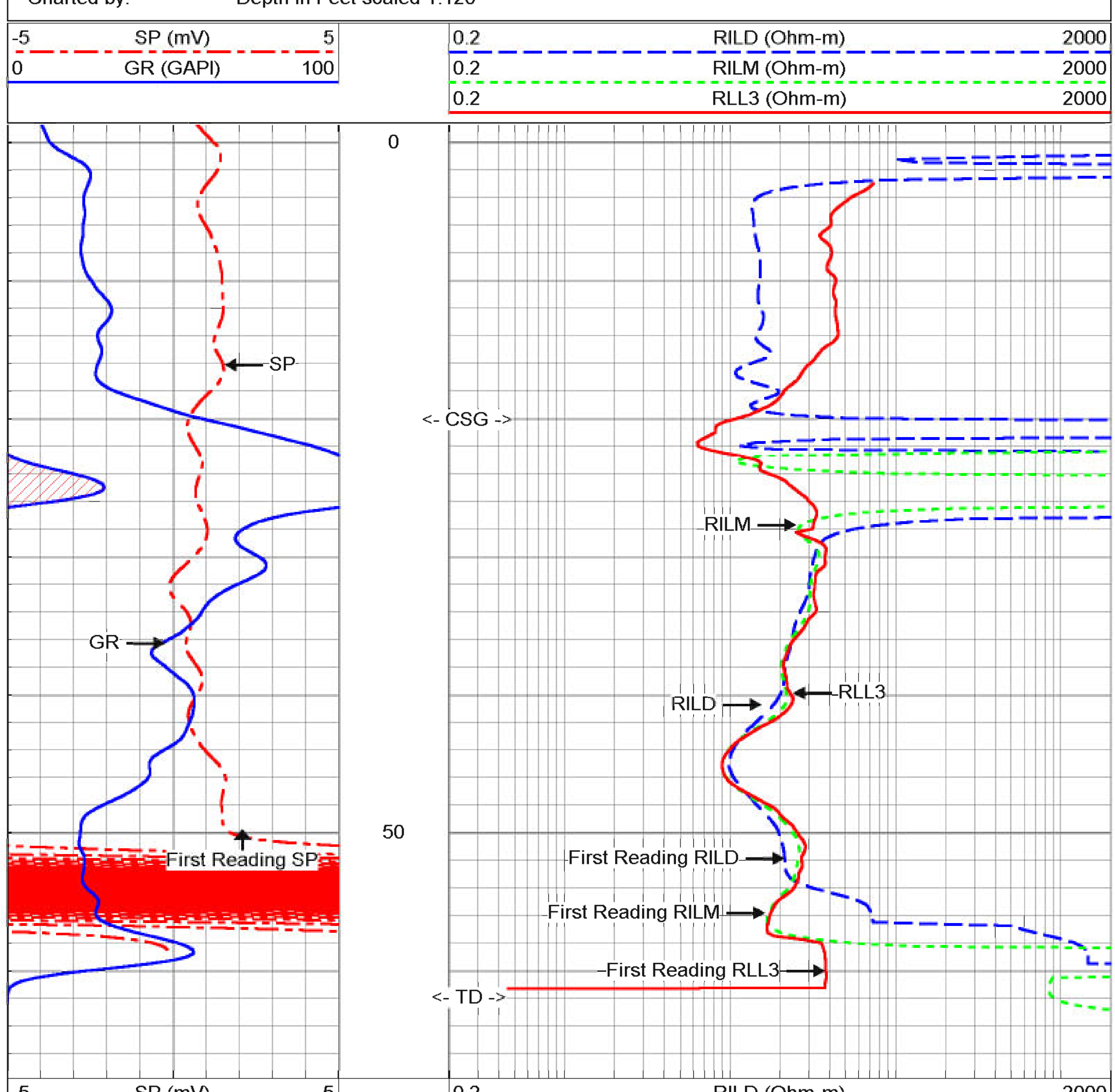
MV Geophysical — MAIN PASS

Database File: avemp-2.db
Dataset Pathname: MAIN
Presentation Format: DIL
Dataset Creation: Mon Aug 23 11:24:54 2004
Charted by: Depth in Feet scaled 1:240



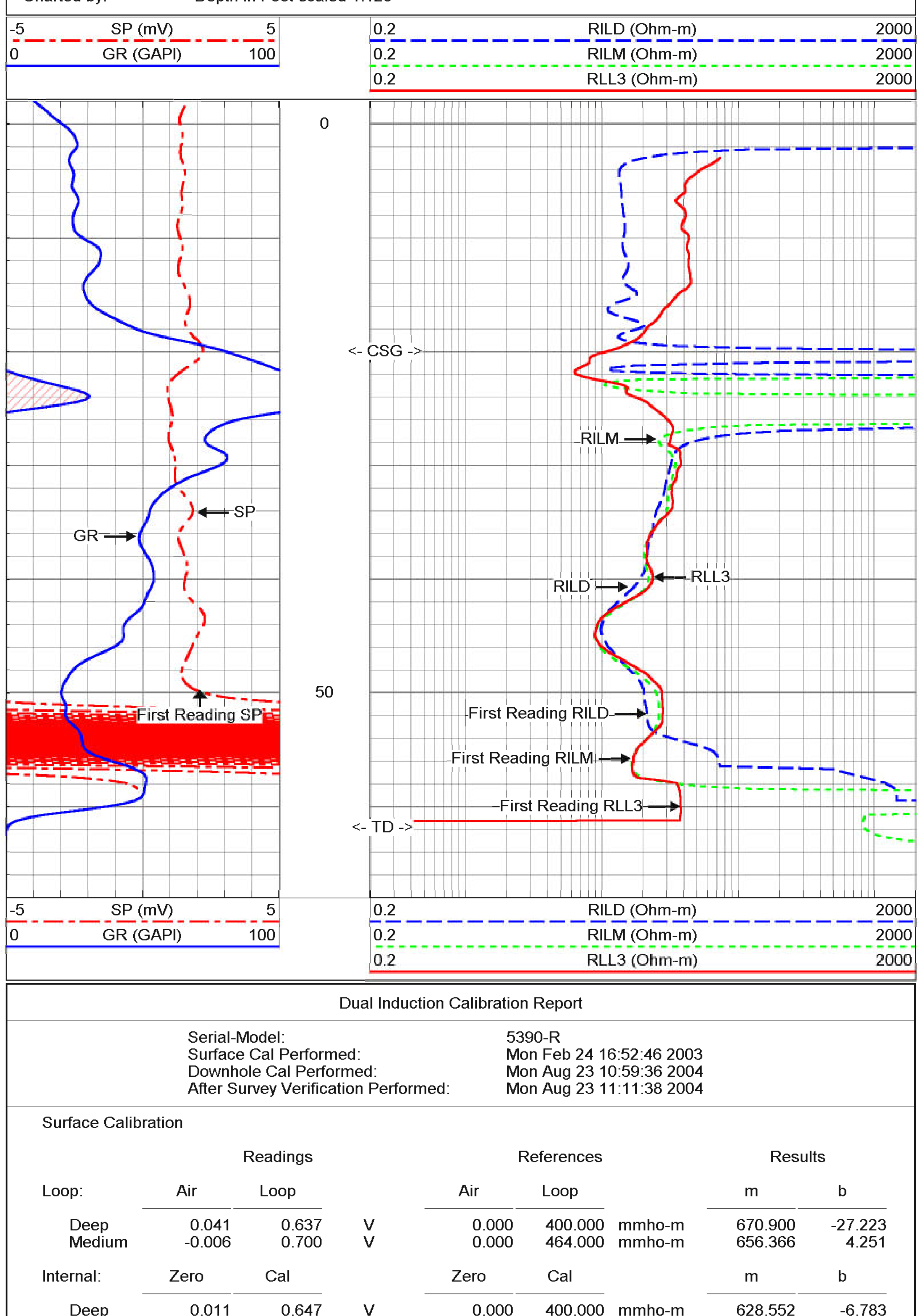
MV Geophysical — MAIN PASS

Database File: avemp-2.db
Dataset Pathname: MAIN
Presentation Format: DIL
Dataset Creation: Mon Aug 23 11:24:54 2004
Charted by: Depth in Feet scaled 1:120



MV Geophysical — REPEAT SECTION

Database File: avemp-2.db
Dataset Pathname: REPEAT
Presentation Format: DIL
Dataset Creation: Mon Aug 23 10:45:54 2004
Charted by: Depth in Feet scaled 1:120



Dual Induction Calibration Report

Serial-Model: 5390-R
Surface Cal Performed: Mon Feb 24 16:52:46 2003
Downhole Cal Performed: Mon Aug 23 10:59:36 2004
After Survey Verification Performed: Mon Aug 23 11:11:38 2004

Surface Calibration

Loop:	Readings Air	Readings Loop		References Air	References Loop		Results m	Results b
Deep	0.041	0.637	V	0.000	400.000	mmho-m	670.900	-27.223
Medium	-0.006	0.700	V	0.000	464.000	mmho-m	656.366	4.251

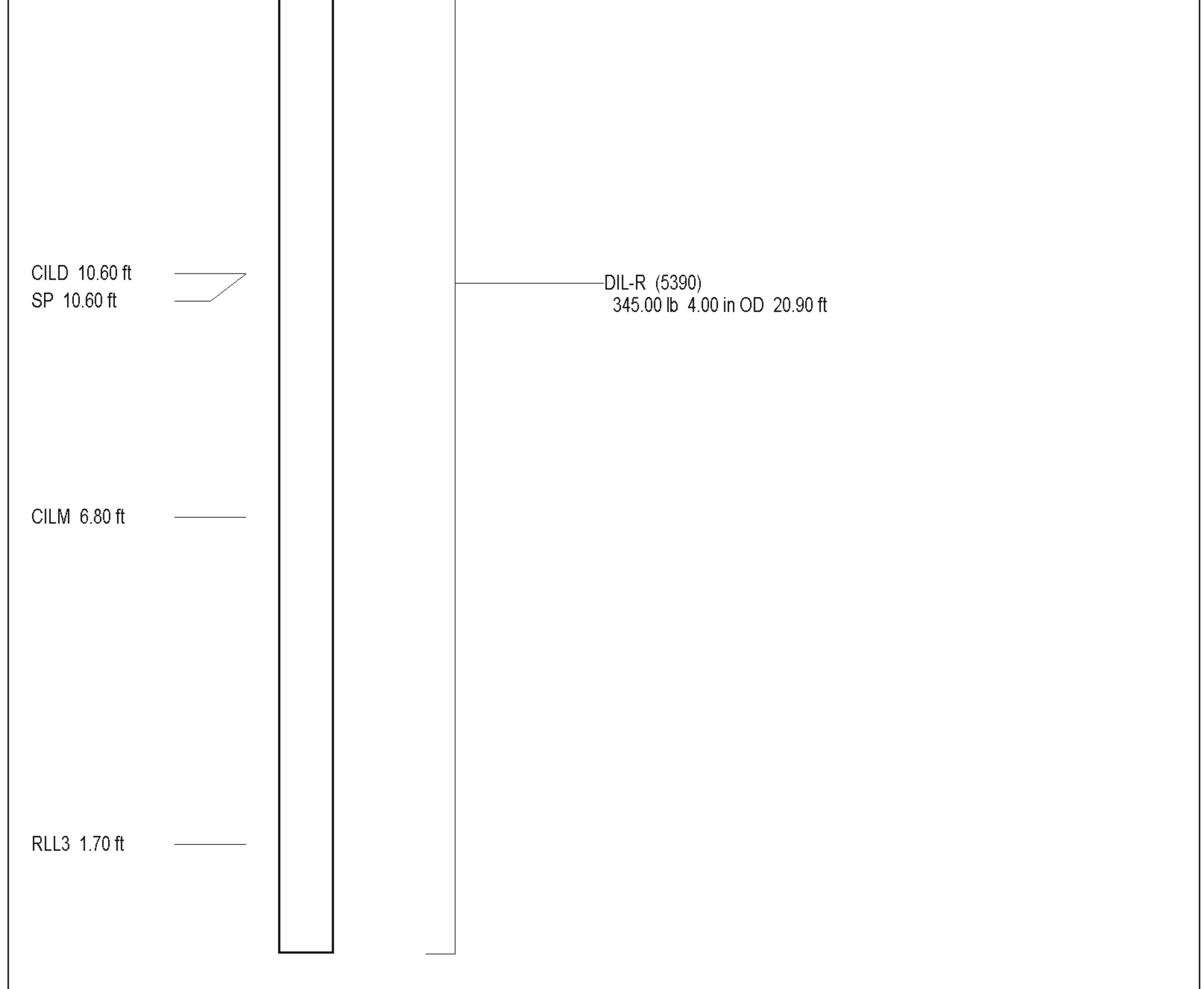
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.647	V	0.000	400.000	mmho-m	628.552	-6.783
Medium	-0.011	0.749	V	0.000	464.000	mmho-m	610.612	6.720

Downhole Calibration

Internal:	Readings Zero	Readings Cal		References Zero	References Cal		Results m	Results b
Deep	-18.628	400.124	mmho-m	-19.983	406.966	mmho-m	1.020	-0.991
Medium	13.690	490.548	mmho-m	-2.972	495.796	mmho-m	1.046	-17.290
Shallow	2.503	0.026	V	494.500	2.000	Ohm-m	198.794	-3.094

After Survey Verification

Internal:	Readings Zero	Readings Cal		Targets Zero	Targets Cal		Results m'	Results b'
Deep	-18.484	400.017	mmho-m	-18.628	400.124	mmho-m	1.020	-0.991
Medium	13.525	489.960	mmho-m	13.689	490.548	mmho-m	1.046	-17.290
Shallow	494.374	1.922	Ohm-m	494.500	2.000	Ohm-m	1.000	0.077



Dataset: run1/pass5
Total Length: 20.90 ft
Total Weight: 345.00 lb
O.D. 4.00 in

MV Geophysical

X-Y CALIPER GAMMA RAY LOG

Company	Diversified Drilling Corp.
Well	Ave Maria P-2
Field	Ave Maria University
County	Collier
State/Prv	Florida

Company	Diversified Drilling Corporation
Well	Ave Maria P-2
Field	Ave Maria University
County	Collier
State/Prv	Florida
Location	Ave Maria WWTP & WTP CH2M Hill, Inc.
Other Services	DIL/SP

			Elevation
Permanent Datum	G.L.	Elevation	K.B.
Log Measured From	G.L.		D.F.
Drilling Measured From	G.L.		G.L.

Date	23-AUG-2004
Run Number	ONE
Depth Driller	62'
Depth Logger	62'
Bottom Logged Interval	62'
Top Log Interval	SURFACE
Open Hole Size	7.875"
Type Fluid	MUD
Density / Viscosity	NA/NA
Max. Recorded Temp.	na
Estimated Cement Top	NA
Time Well Ready	10:30 8/23/04
Time Logger on Bottom	10:30 8/23/04
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller
Witnessed By	C.Ivery (CH2M) Rossco (DDC)

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	20'	62'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String				
Production String				
Liner				

Invoice No. 2004120 | P.O. #: | Job No.: | * FIELD PRINT *

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Comments

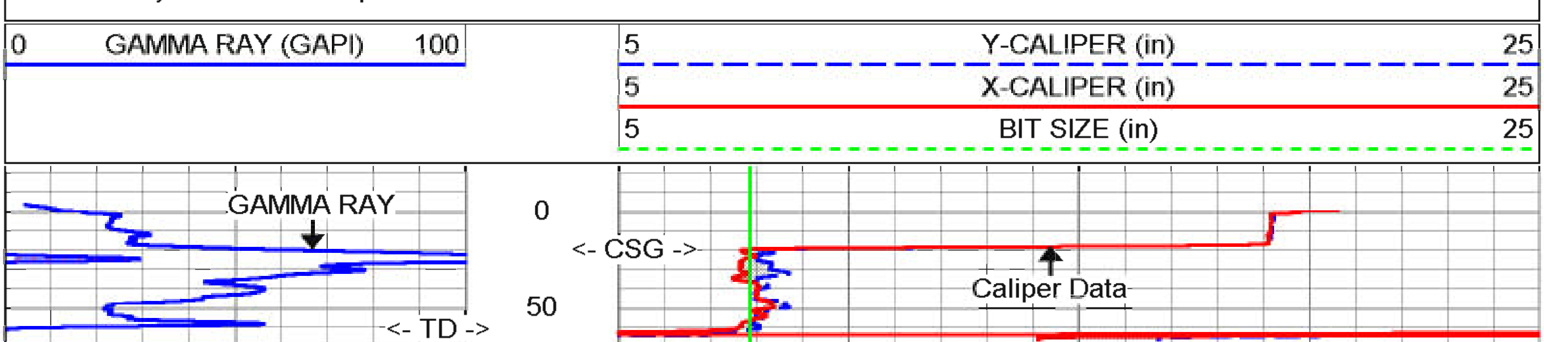
X-Y Caliper Arm Extensions: 33"

MV Geophysical

MAIN PASS

Database File: avemp-2.db
Dataset Pathname: MAIN
Presentation Format: XY525-1
Dataset Creation: Mon Aug 23 11:24:54 2004
Charted by: Depth in Feet scaled 1:1200

0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25



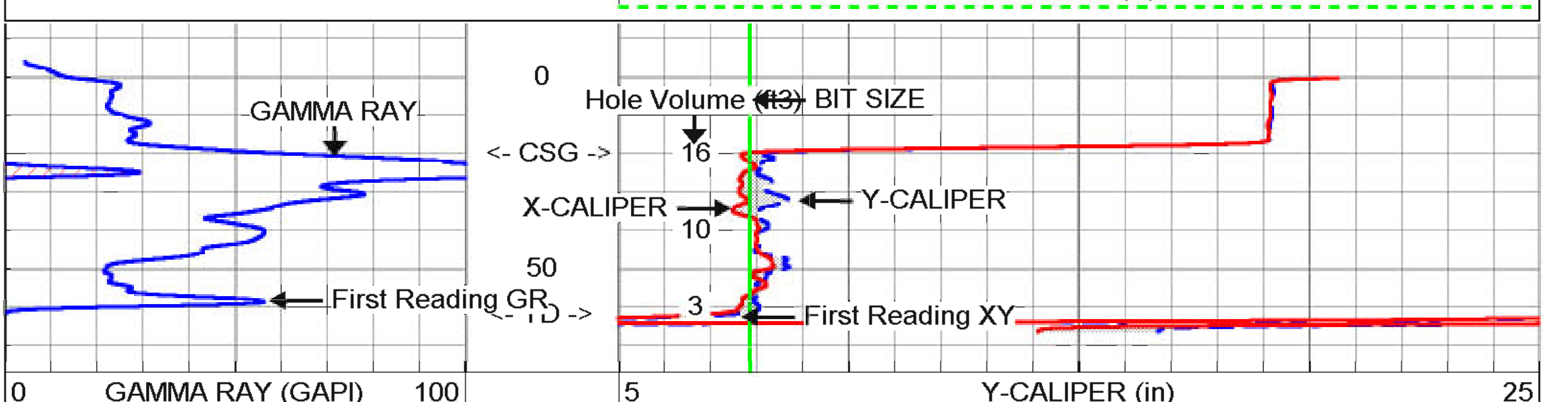
0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25

MV Geophysical

MAIN PASS

Database File: avemp-2.db
Dataset Pathname: MAIN
Presentation Format: XY525-5
Dataset Creation: Mon Aug 23 11:24:54 2004
Charted by: Depth in Feet scaled 1:600

0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25



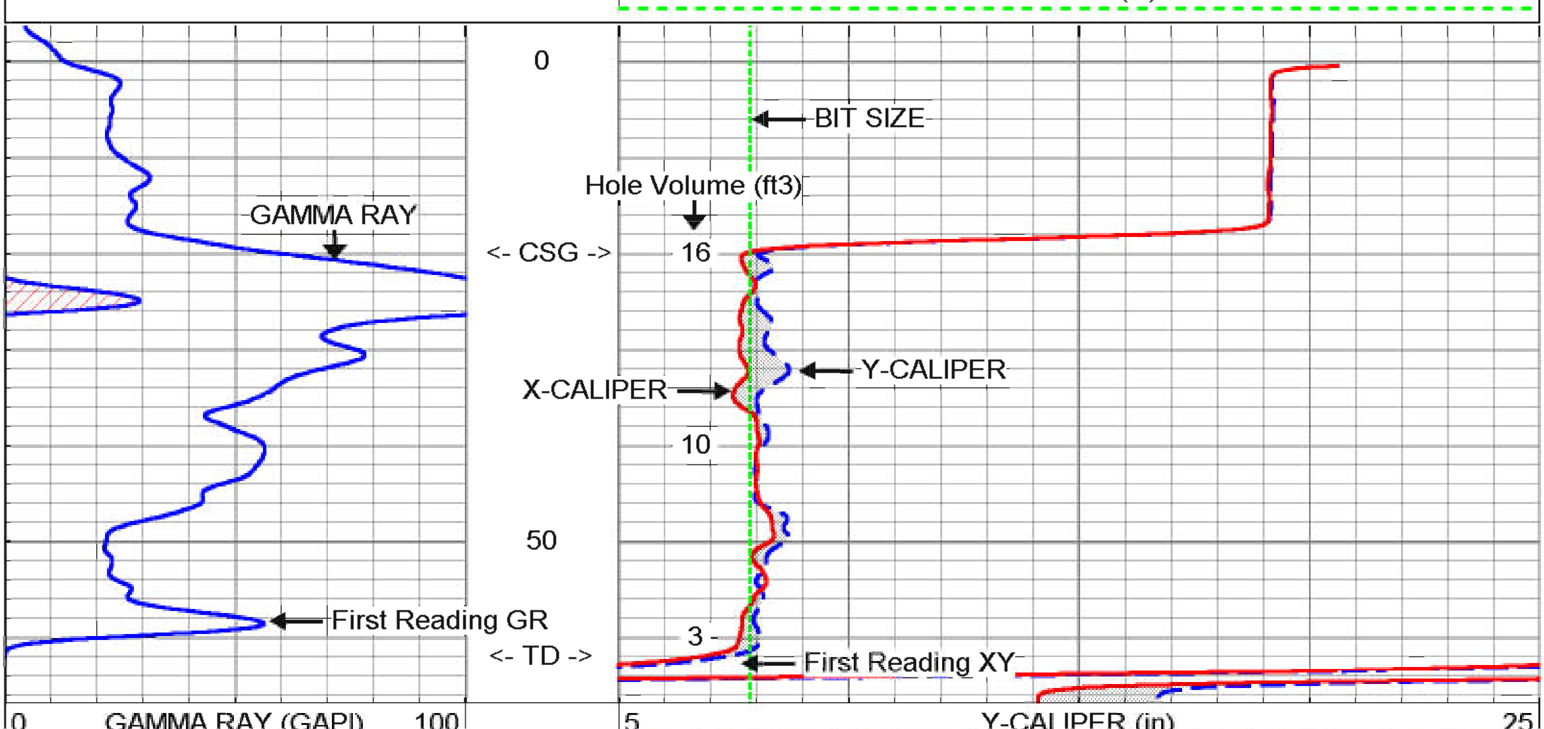
0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25

MV Geophysical

MAIN PASS

Database File: avemp-2.db
Dataset Pathname: MAIN
Presentation Format: XY525-5
Dataset Creation: Mon Aug 23 11:24:54 2004
Charted by: Depth in Feet scaled 1:240

0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25



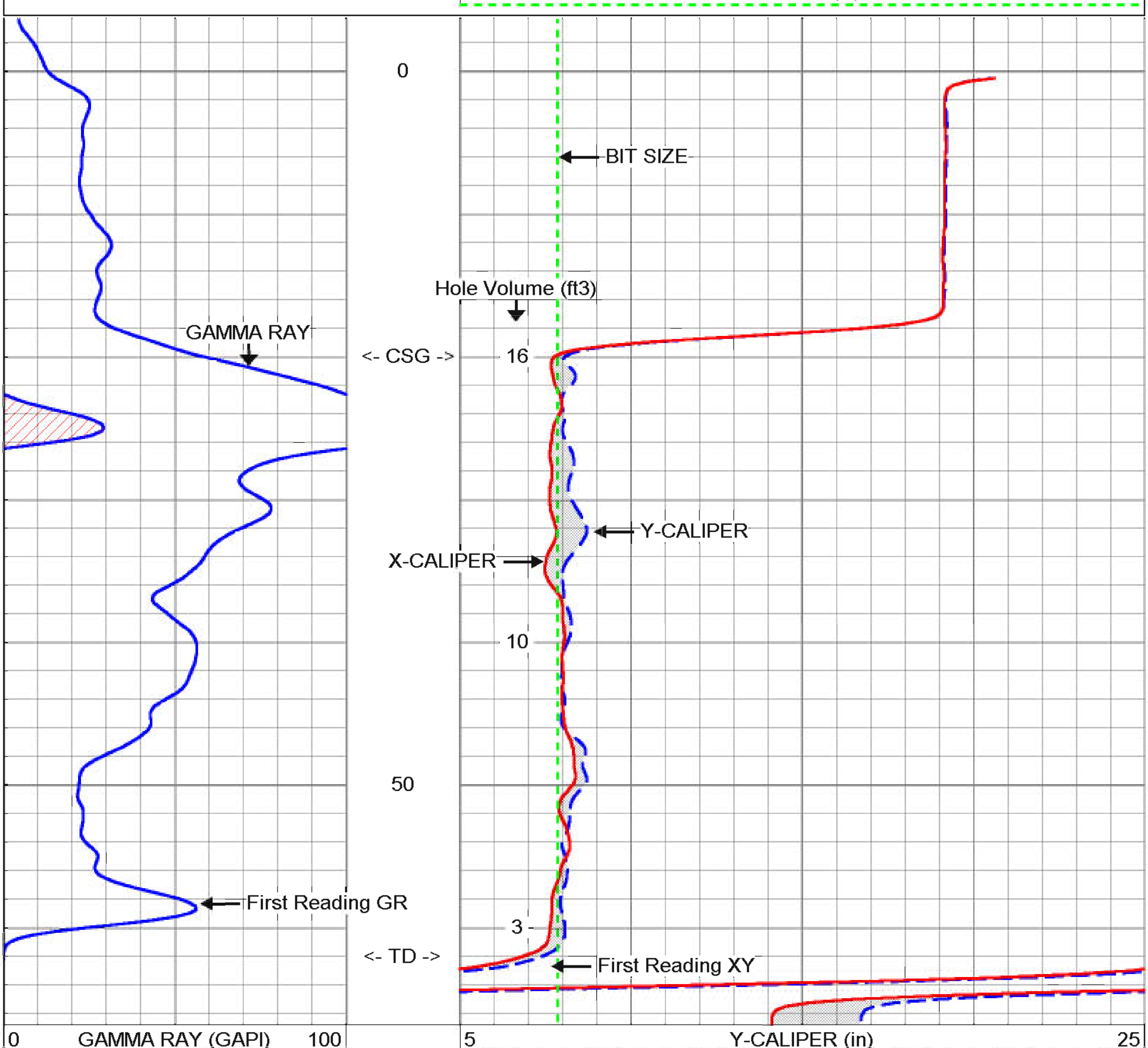
0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25

MV Geophysical

MAIN PASS

Database File: avemp-2.db
Dataset Pathname: MAIN
Presentation Format: XY525-5
Dataset Creation: Mon Aug 23 11:24:54 2004
Charted by: Depth in Feet scaled 1:120

0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25



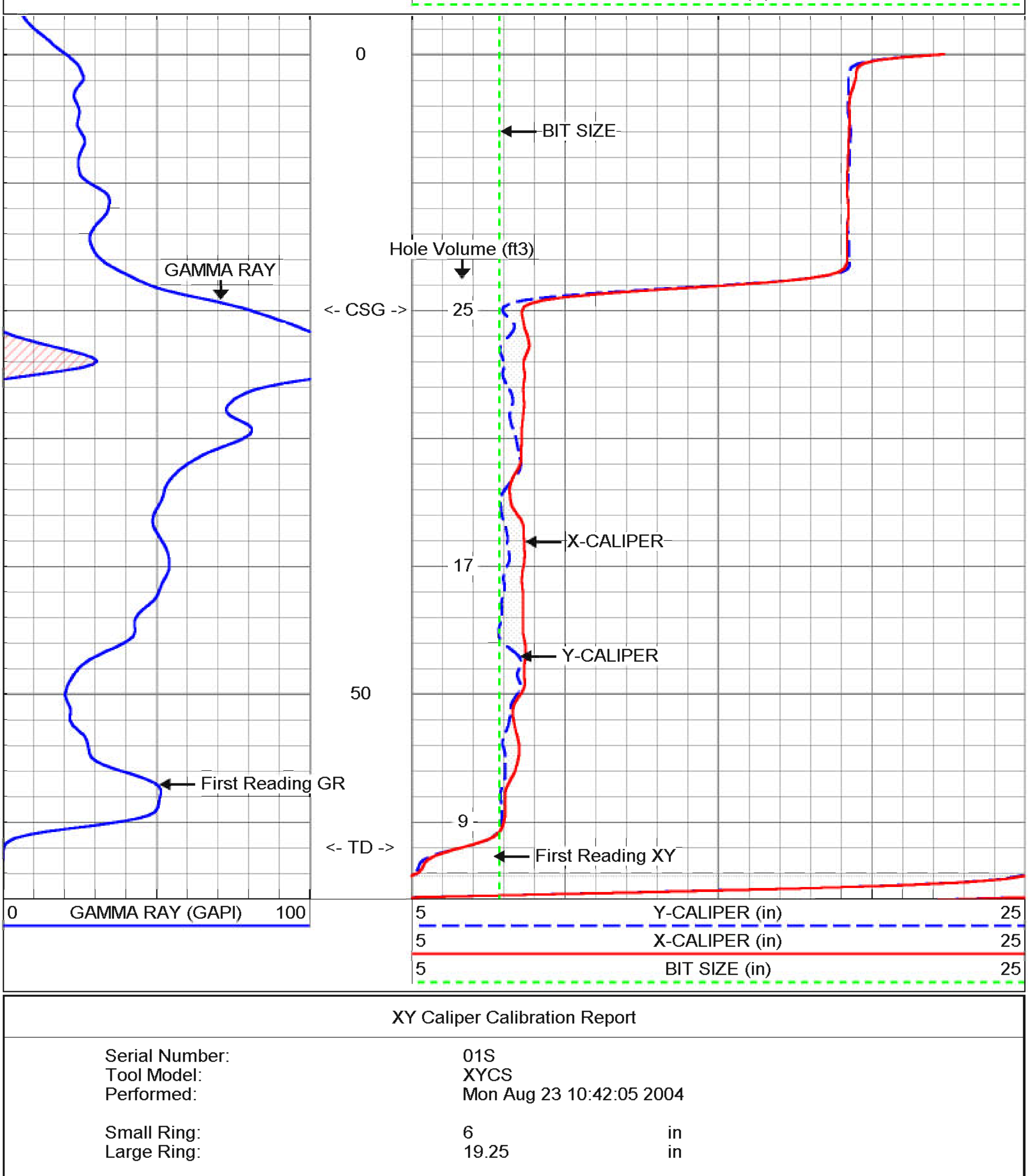
0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25

MV Geophysical

REPEAT SECTION

Database File: avemp-2.db
Dataset Pathname: REPEAT
Presentation Format: XY525-5
Dataset Creation: Mon Aug 23 10:45:54 2004
Charted by: Depth in Feet scaled 1:120

0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25



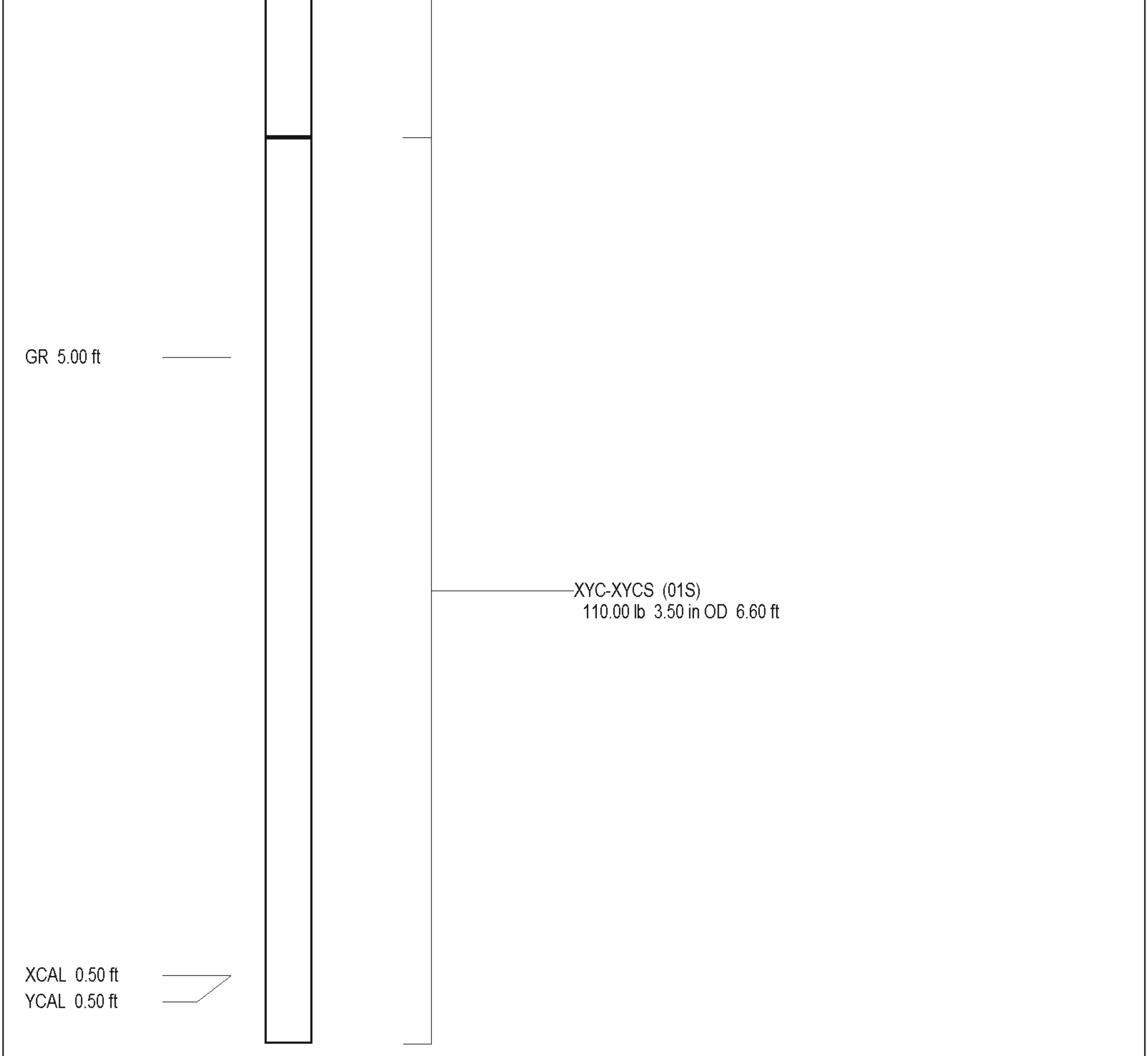
0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25

XY Caliper Calibration Report

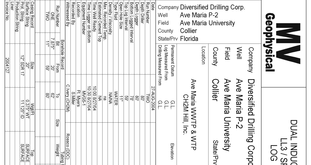
Serial Number:	01S		
Tool Model:	XYCS		
Performed:	Mon Aug 23 10:42:05 2004		
Small Ring:	6	in	
Large Ring:	19.25	in	
	X Caliper	Y Caliper	
Reading with Small Ring:	503.53	493.91	cps
Reading with Large Ring:	712.7	717.31	cps
Gain:	0.0633456	0.0593107	
Offset:	-25.8964	-23.2941	

Gamma Ray Calibration Report

Serial Number:	01	
Tool Model:	GROH	
Performed:	Mon Aug 23 10:31:27 2004	
Calibrator Value:	120	GAPI
Background Reading:	5.635	cps
Calibrator Reading:	124.632	cps
Sensitivity:	1.00843	GAPI/cps

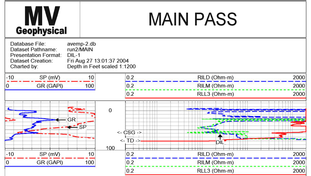


Dataset:	run1/pass2
Total Length:	9.35 ft
Total Weight:	150.00 lb
O.D.	3.50 in

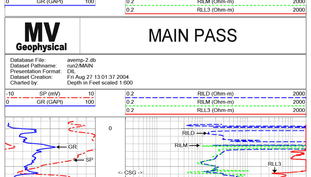


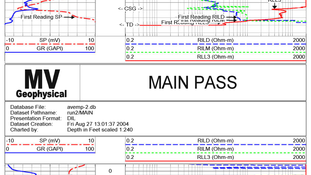
Comments

Rm=14.881 ohm-m @ 77.3 degF

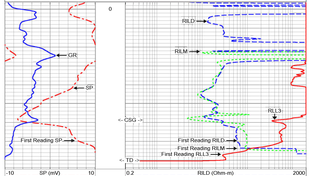


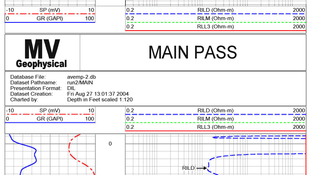
Database File: avemp-2.db
Dataset Pathname: run2/MAIN
Presentation Format: DIL
Dataset Creation: Fri Aug 27 13:01:37 2004
Charted by: Depth in Feet scaled 1:1200



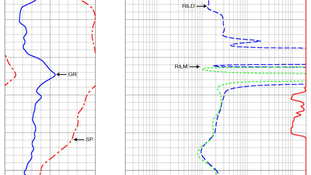


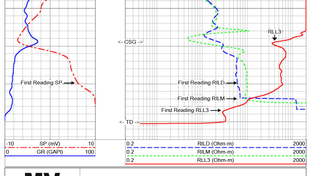
Database File: avemp-2.db
Dataset Pathname: run2/MAIN
Presentation Format: DIL
Dataset Creation: Fri Aug 27 13:01:37 2004
Charted by: Depth in Feet scaled 1:500



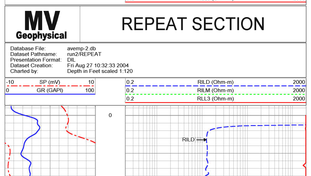


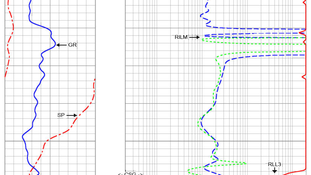
Database File: avemp-2.db
Dataset Pathname: run2/MAIN
Presentation Format: DIL
Dataset Creation: Fri Aug 27 13:01:37 2004
Charted by: Depth in Feet scaled 1:240



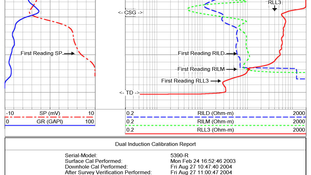


Database File: avemp-2.db
Dataset Pathname: run2/MAIN
Presentation Format: DIL
Dataset Creation: Fri Aug 27 13:01:37 2004
Charted by: Depth in Feet scaled 1:120





Database File: avemp-2.db
Dataset Pathname: run2/REPEAT
Presentation Format: DIL
Dataset Creation: Fri Aug 27 10:32:33 2004
Charted by: Depth in Feet scaled 1:120



Dual Induction Calibration Report

Serial-Model: 5390-R
Surface Cal Performed: Mon Feb 24 16:52:46 2003
Downhole Cal Performed: Fri Aug 27 10:47:40 2004
After Survey Verification Performed: Fri Aug 27 11:00:47 2004

Surface Calibration

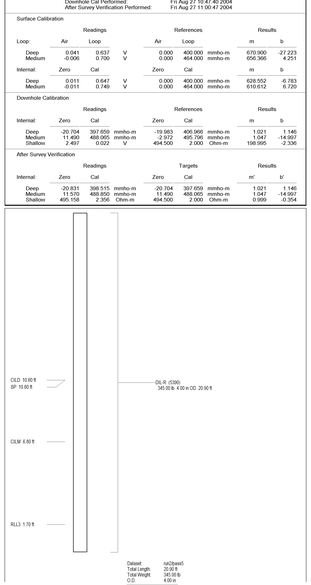
	Readings			References		Results	
Loop	Air	Loop		Air	Loop	m	b
Deep	0.041	0.637	V	0.000	400.000 mmho-m	670.900	-27.223
Medium	-0.006	0.700	V	0.000	464.000 mmho-m	656.366	4.251
Internal:	Zero	Cal		Zero	Cal	m	b
Deep	0.011	0.647	V	0.000	400.000 mmho-m	628.552	-6.783
Medium	-0.011	0.749	V	0.000	464.000 mmho-m	610.612	6.720

Downhole Calibration

	Readings			References		Results	
Internal:	Zero	Cal		Zero	Cal	m	b
Deep	-20.704	397.659	mmho-m	-19.983	406.966 mmho-m	1.021	1.146
Medium	11.490	488.055	mmho-m	-2.972	495.796 mmho-m	1.047	-14.997
Shallow	2.497	0.022	V	404.500	2.000 Ohm-m	198.995	-2.336

After Survey Verification

	Readings			Targets			
Internal:	Zero	Cal		Zero	Cal	m'	b'
Deep	-20.831	396.515	mmho-m	-20.704	397.659 mmho-m	1.021	1.146
Medium	11.519	488.850	mmho-m	11.490	488.055 mmho-m	1.047	-14.997
Shallow	495.158	2.356	Ohm-m	404.500	2.000 Ohm-m	0.999	-0.354



MV Geophysical

FLUID CONDUCTIVITY TEMPERATURE LOG

Company Diversified Drilling Corp.
Well Ave Maria P-2
Field Ave Maria University
County Collier
State/Prv Florida

Company	Diversified Drilling Corporation
Well	Ave Maria P-2
Field	Ave Maria University
County	Collier
State/Prv	Florida
Location	Ave Maria WWTP & WTP CH2M Hill, Inc.

Other Services: XY/GR, DIL/SP, FLO,VIDEO

		Elevation
Permanent Datum	G.L.	K.B.
Log Measured From	G.L.	D.F.
Drilling Measured From	G.L.	G.L.

Date	27-AUG-2004					
Run Number	TWO					
Depth Driller	80'					
Depth Logger	80'					
Bottom Logged Interval	78'					
Top Log Interval	59'					
Open Hole Size	11"					
Type Fluid	WATER					
Density / Viscosity	NA/NA					
Max. Recorded Temp.	na					
Estimated Cement Top	NA					
Time Well Ready	10:00 8/27/04					
Time Logger on Bottom	11:30 8/27/04					
Equipment Number	MVGS-1					
Location	Ft. Myers					
Recorded By	S.Miller					
Witnessed By	C.Ivery (CH2M)			Rossco (DDC)		

Borehole Record

Run Number	Bit	From	To
ONE	7.875"	20'	62'
TWO	11"	59'	80'

Tubing Record

Size	Wgt/Ft	Top	Bottom
20"	0.375" WT	SURFACE	20'
12" SDR 17	11.125" ID	SURFACE	59'

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String	12" SDR 17	11.125" ID	SURFACE	59'
Production String				
Liner				

Invoice No. 2004127

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Comments

STATIC and DYNAMIC DOWN passes were performed.
Cw=672.2 uS/cm @ 77.3 degF (Dynamic Sample). Q =~500-550 gpm.
FLUID RESISTIVITY CALIBRATION REPORT (Performed: 16-AUG-04 13:00)

OHM-M	CPS
335.0	4565.33
820.1	4400.12
1525.1	3890.11

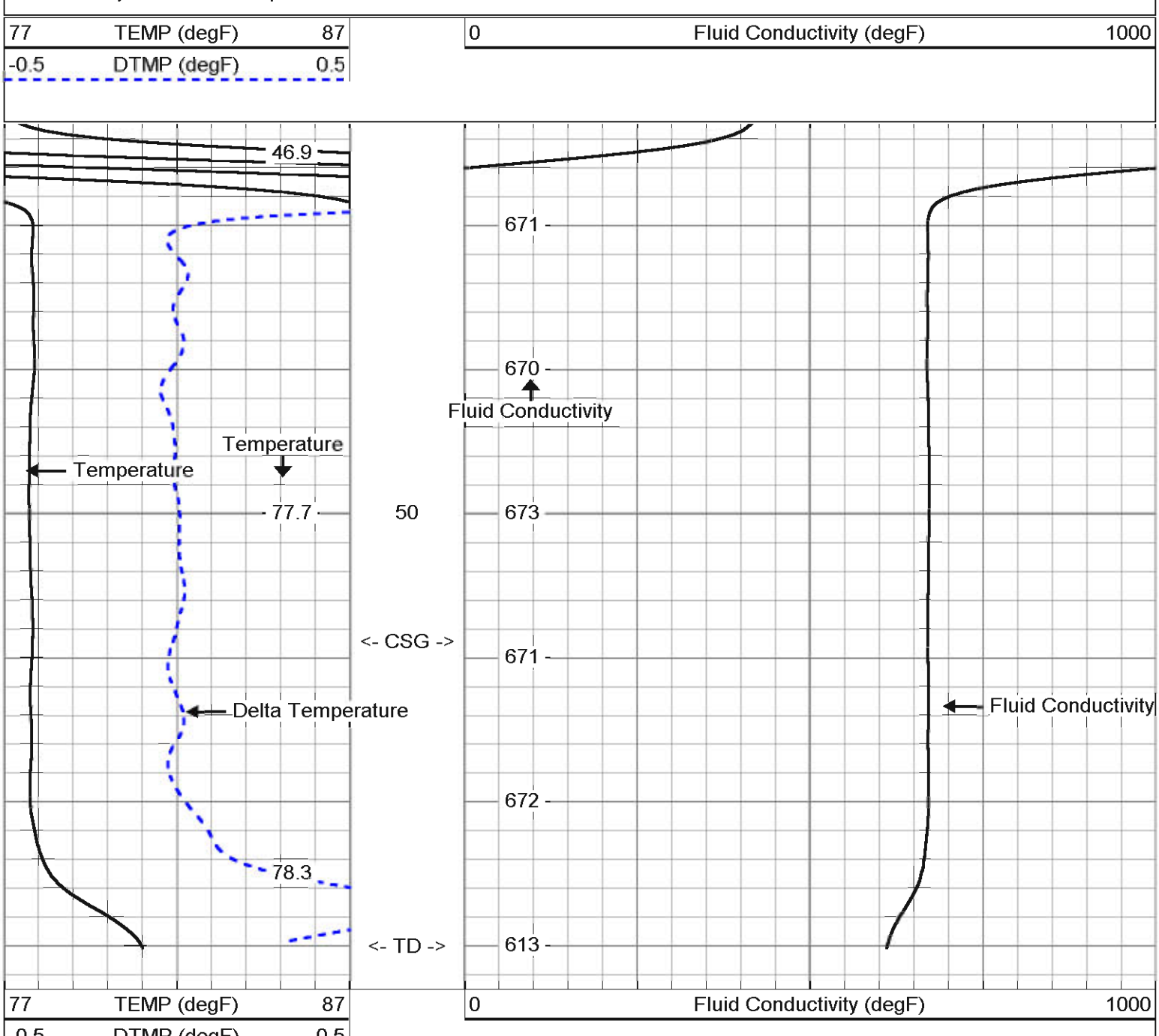
TEMPERATURE CALIBRATION REPORT (Performed: 16-AUG-04 13:45)

DEG-F	CPS
34.6	2346.14
144.6	6955.44

MV Geophysical

DYNAMIC FCT DOWN

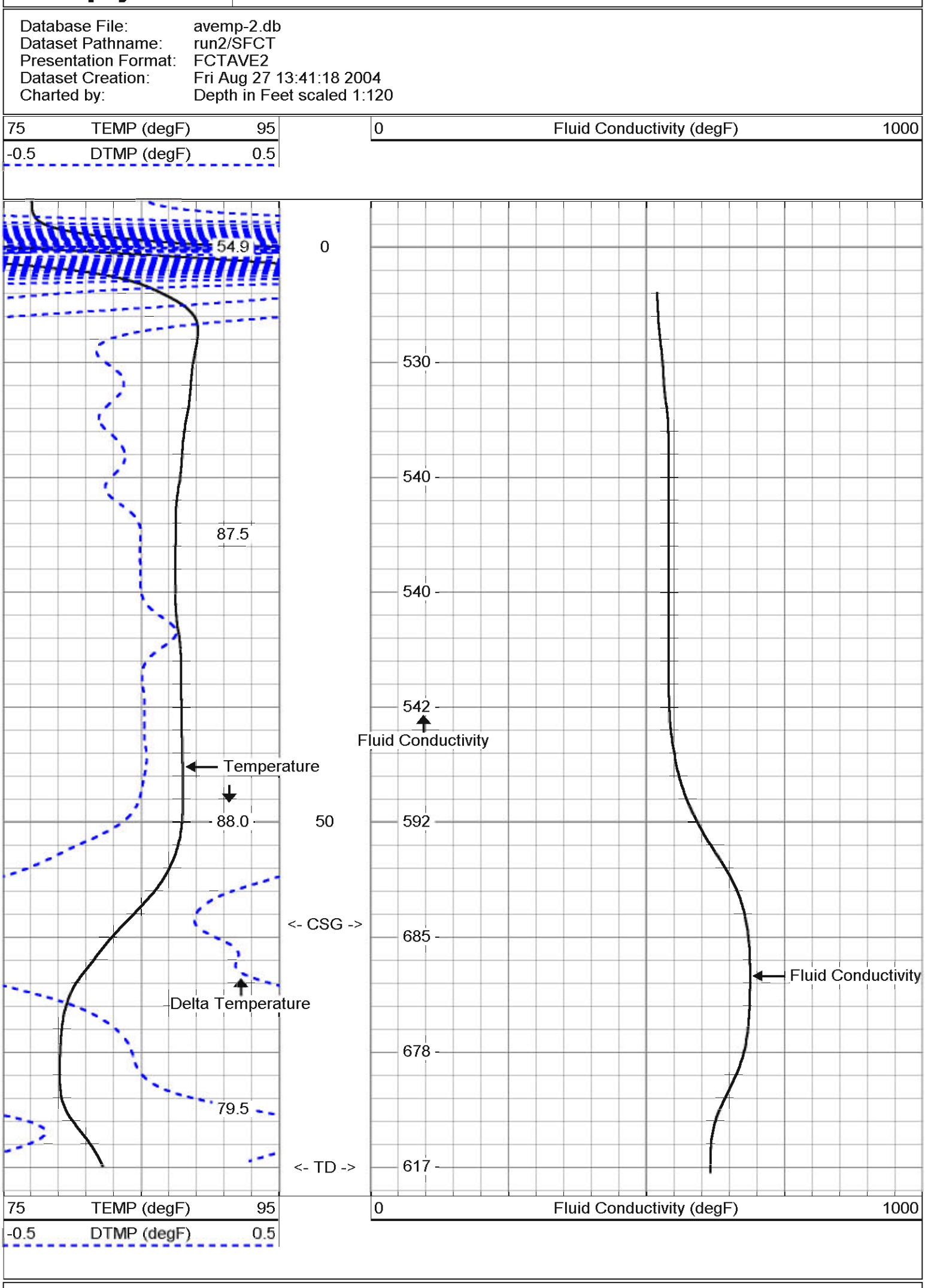
Database File: avemp-2.db
Dataset Pathname: run2/DFCT
Presentation Format: FCTAVE
Dataset Creation: Fri Aug 27 14:01:18 2004
Charted by: Depth in Feet scaled 1:120

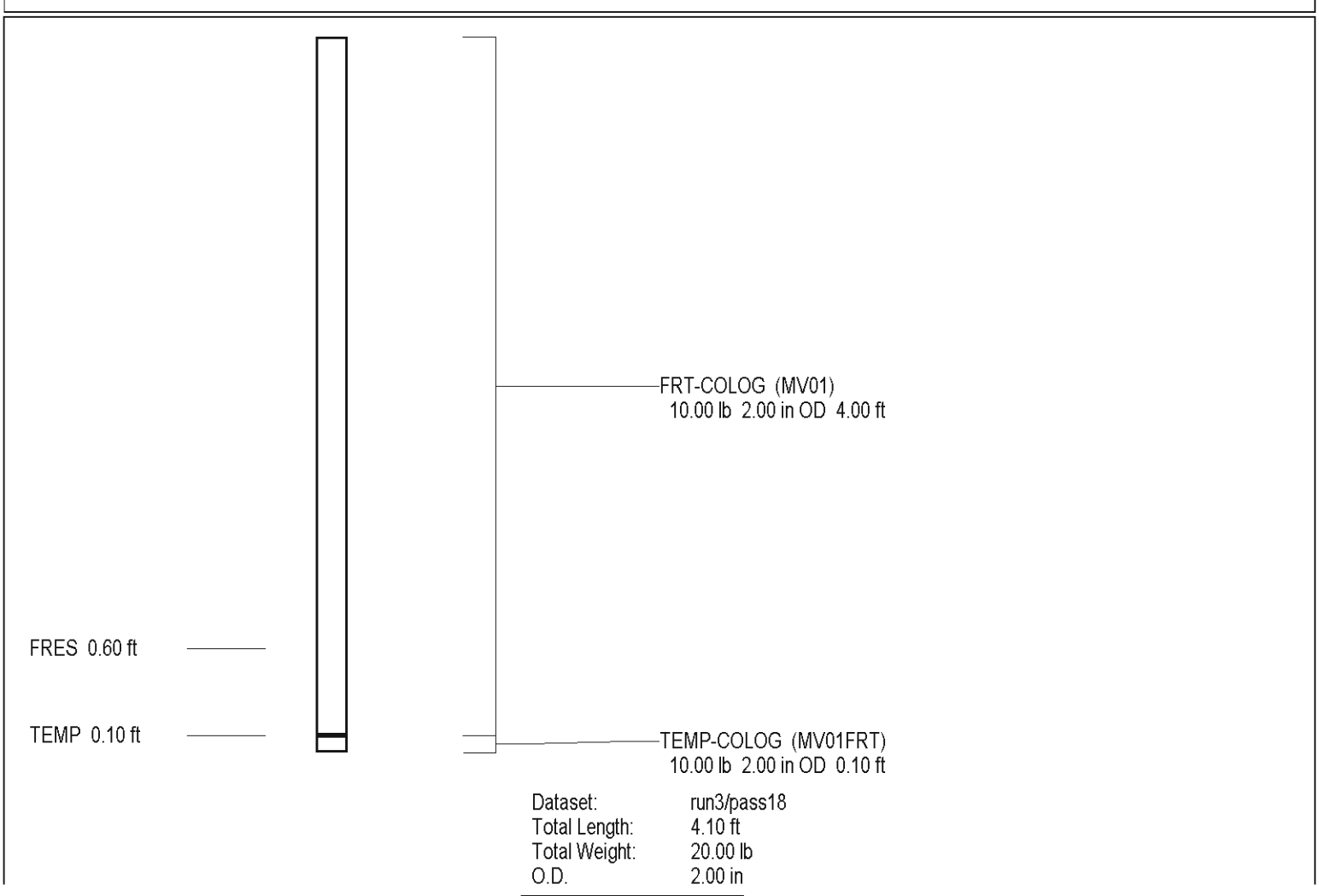


MV Geophysical

STATIC FCT DOWN

Database File: avemp-2.db
Dataset Pathname: run2/SFCT
Presentation Format: FCTAVE2
Dataset Creation: Fri Aug 27 13:41:18 2004
Charted by: Depth in Feet scaled 1:120





MV Geophysical

FLOWMETER LOG

Company	Diversified Drilling Corp.
Well	Ave Maria P-2
Field	Ave Maria University
County	Collier
State/Prv	Florida

Company	Diversified Drilling Corporation
Well	Ave Maria P-2
Field	Ave Maria University
County	Collier
State/Prv	Florida
Location	Ave Maria WWTP & WTP CH2M Hill, Inc.
Other Services	XY/GR DIL/SP FRT,VIDEO

			Elevation
Permanent Datum	G.L.		K.B.
Log Measured From	G.L.		D.F.
Drilling Measured From	G.L.		G.L.

Date	27-AUG-2004
Run Number	TWO
Depth Driller	80'
Depth Logger	80'
Bottom Logged Interval	78'
Top Log Interval	59'
Open Hole Size	11"
Type Fluid	WATER
Density / Viscosity	NA/NA
Max. Recorded Temp.	na
Estimated Cement Top	NA
Time Well Ready	10:00 8/27/04
Time Logger on Bottom	12:00 8/27/04
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller
Witnessed By	C.Ivery (CH2M) Rossco (DDC)

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	20'	62'				
TWO	11"	59'	80'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String	12" SDR 17	11.125" ID	SURFACE	59'
Production String				
Liner				
Invoice No.	2004127			* FINAL PRINT *

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Comments

STATIC and DYNAMIC down passes were made at 50 fpm.

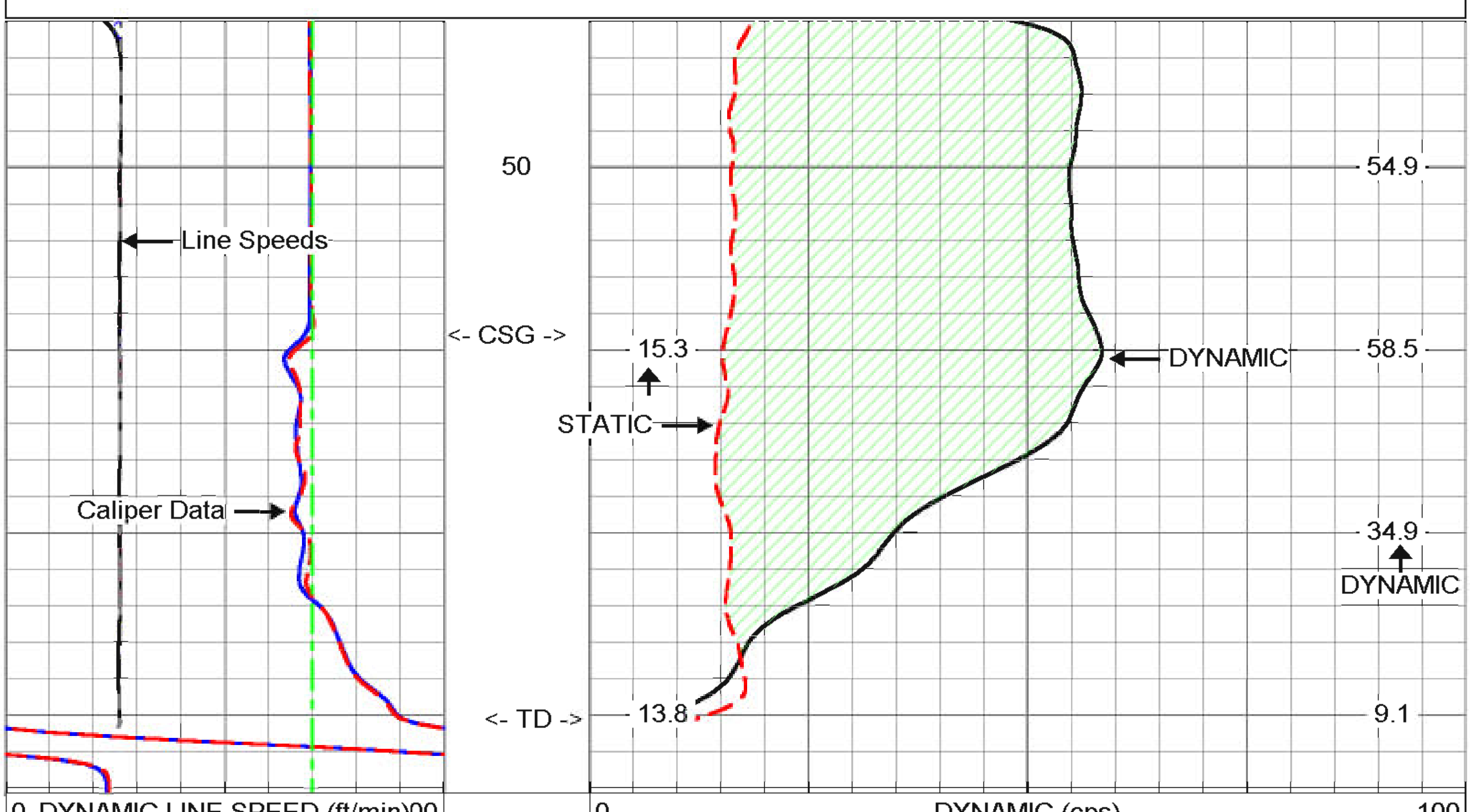
4 Stations were performed.

Q =~500-550 gpm

MV Geophysical — S/D DOWN @ 50 fpm

Database File: avemp-2.db
Dataset Pathname: run2/SD50
Presentation Format: QGG2
Dataset Creation: Fri Aug 27 13:31:28 2004
Charted by: Depth in Feet scaled 1:120

0 DYNAMIC LINE SPEED (ft/min) 100 | 0 DYNAMIC (cps) 100
0 STATIC LINE SPEED (ft/min) 200 | 0 STATIC (cps) 100
25 X-CALIPER (in) 5
25 Y CALIPER (in) 5
25 BIT SIZE (in) 5

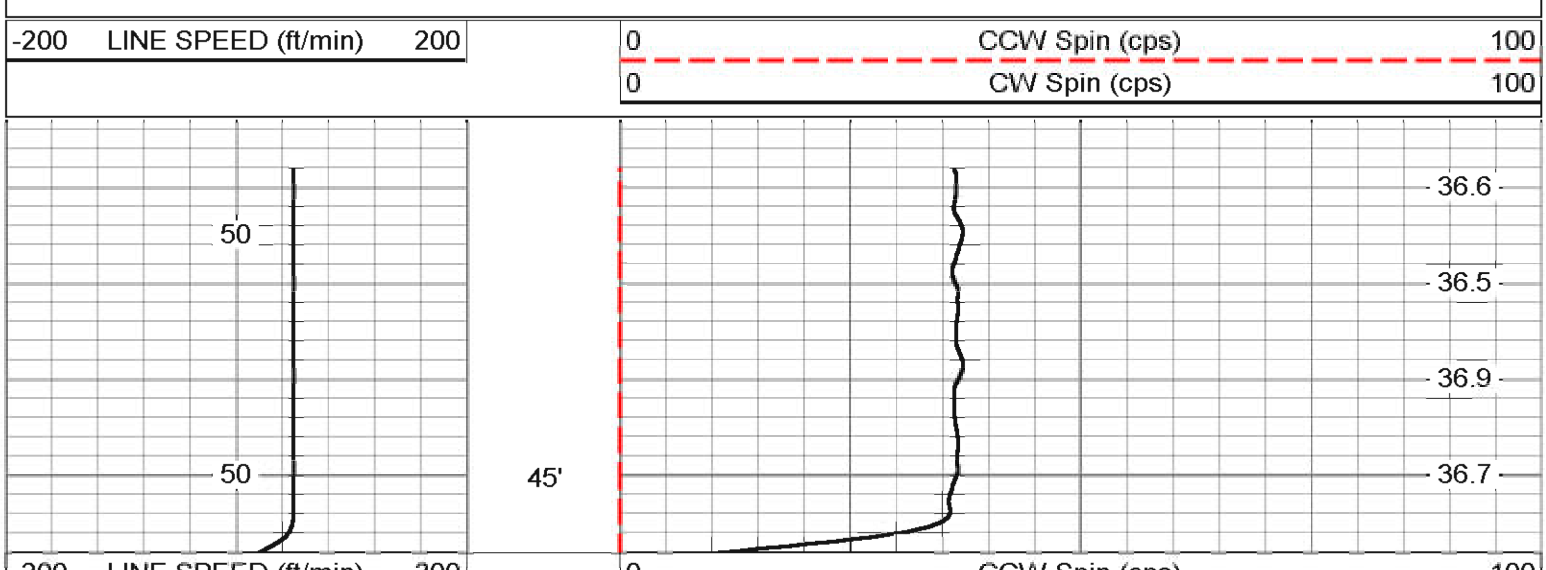


0 DYNAMIC LINE SPEED (ft/min) 100 | 0 DYNAMIC (cps) 100
0 STATIC LINE SPEED (ft/min) 200 | 0 STATIC (cps) 100
25 X-CALIPER (in) 5
25 Y CALIPER (in) 5
25 BIT SIZE (in) 5

MV Geophysical — Station #4: 45'

Database File: avemp-2.db
Dataset Pathname: run2/pass14
Presentation Format: FLOW
Dataset Creation: Fri Aug 27 11:56:56 2004 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240

-200 LINE SPEED (ft/min) 200 | 0 CCW Spin (cps) 100
0 CW Spin (cps) 100

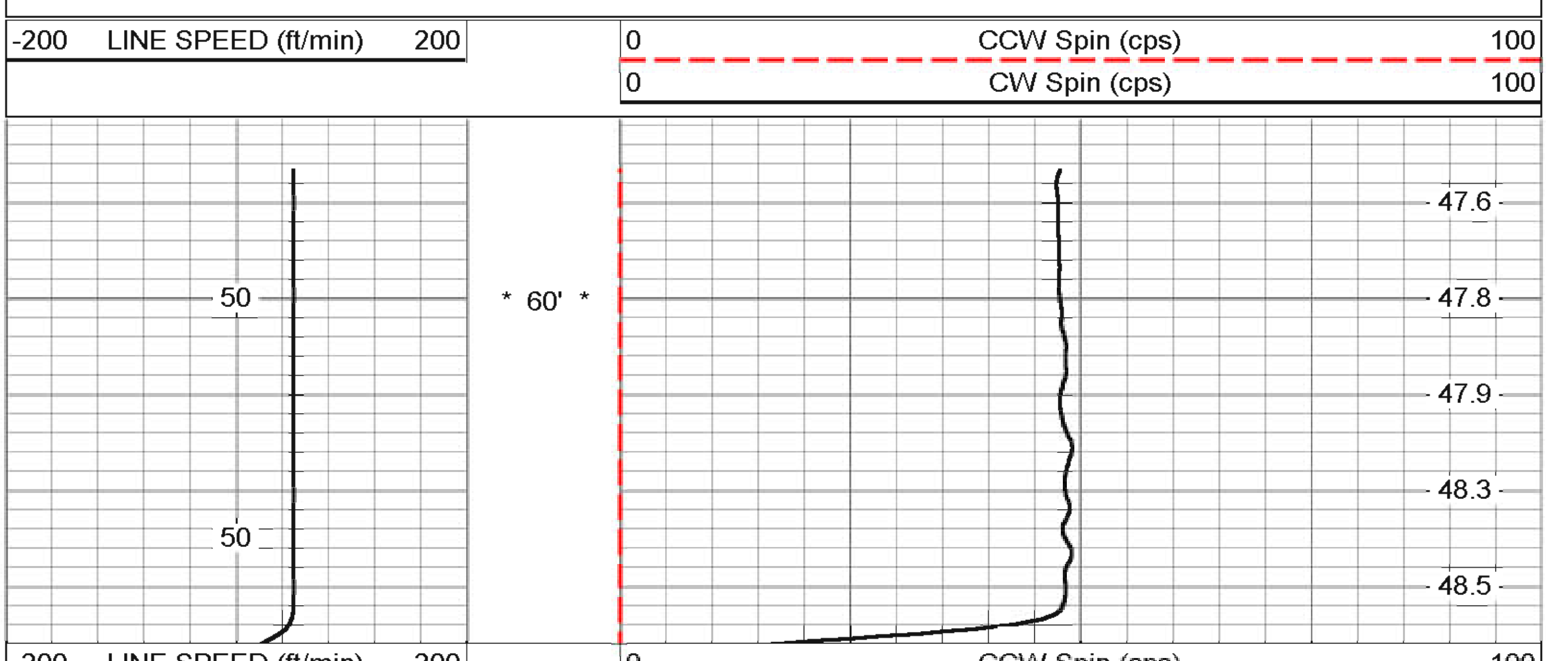


-200 LINE SPEED (ft/min) 200 | 0 CCW Spin (cps) 100
0 CW Spin (cps) 100

MV Geophysical — Station #3: 60'

Database File: avemp-2.db
Dataset Pathname: run2/pass13
Presentation Format: FLOW
Dataset Creation: Fri Aug 27 11:55:21 2004 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240

-200 LINE SPEED (ft/min) 200 | 0 CCW Spin (cps) 100
0 CW Spin (cps) 100

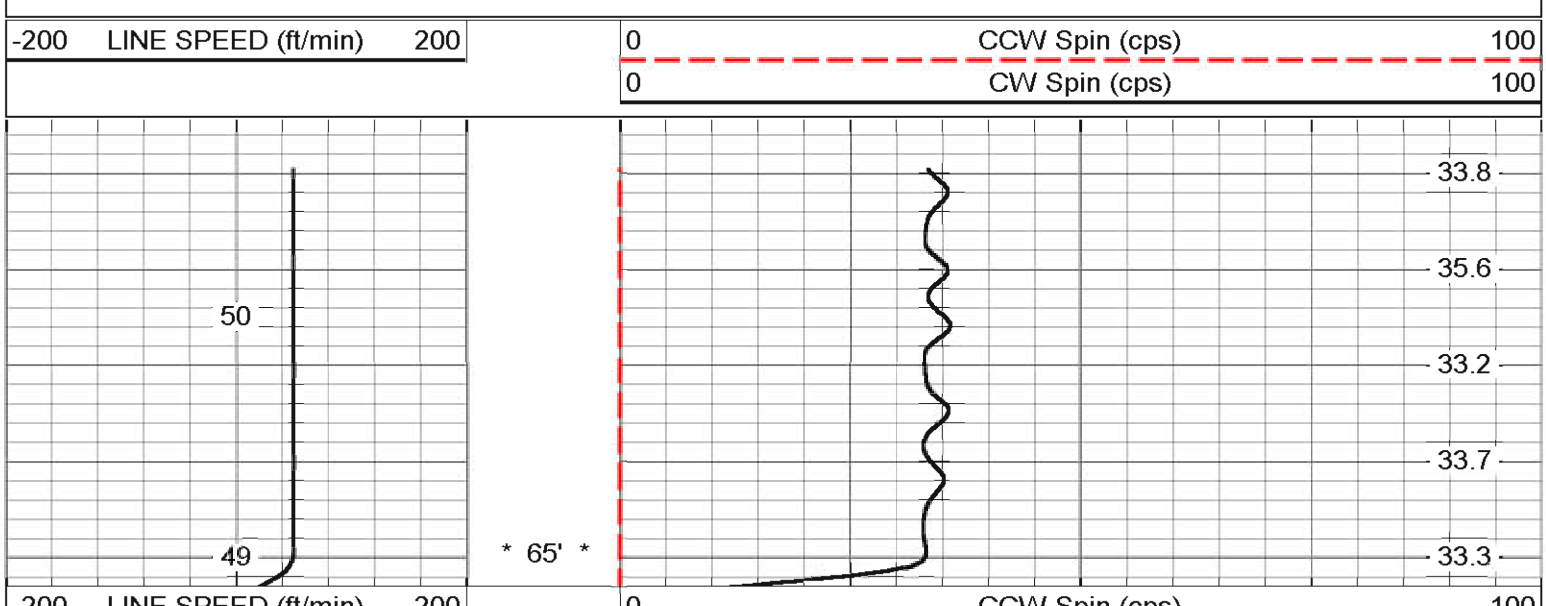


-200 LINE SPEED (ft/min) 200 | 0 CCW Spin (cps) 100
0 CW Spin (cps) 100

MV Geophysical — Station #2: 65'

Database File: avemp-2.db
Dataset Pathname: run2/pass12
Presentation Format: FLOW
Dataset Creation: Fri Aug 27 11:54:00 2004 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240

-200 LINE SPEED (ft/min) 200 | 0 CCW Spin (cps) 100
0 CW Spin (cps) 100

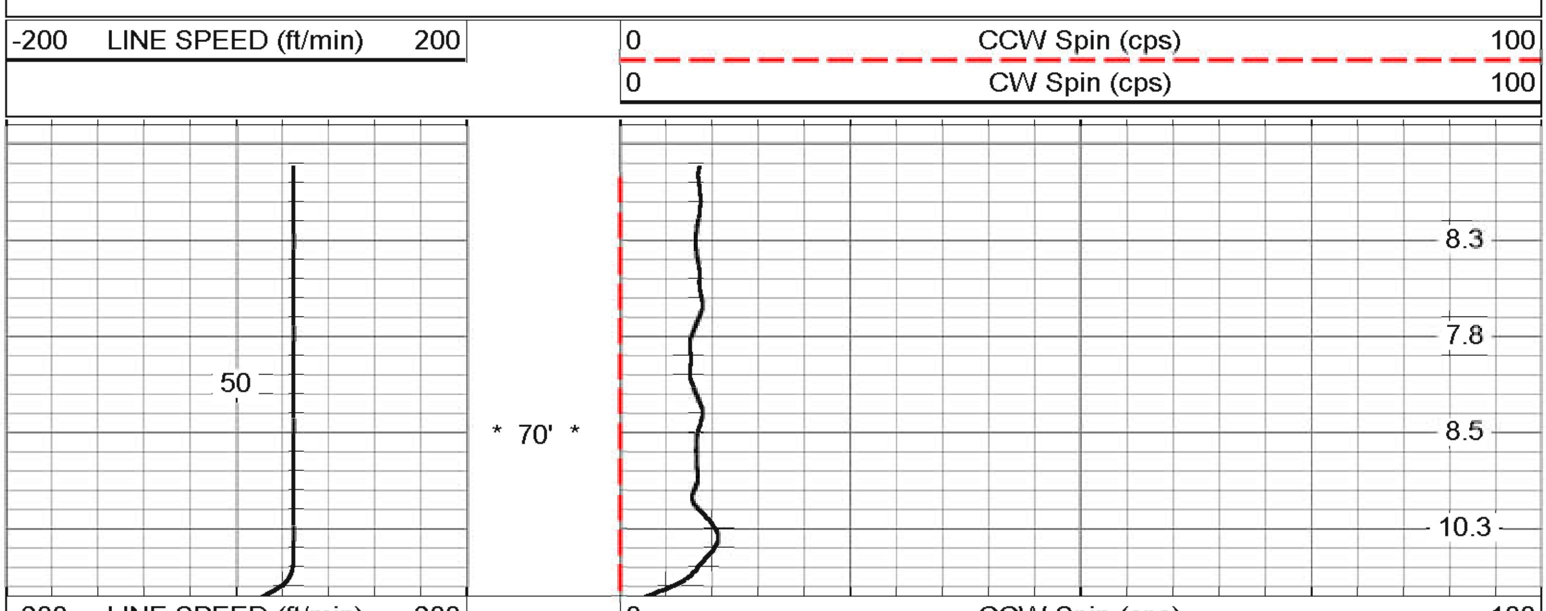


-200 LINE SPEED (ft/min) 200 | 0 CCW Spin (cps) 100
0 CW Spin (cps) 100

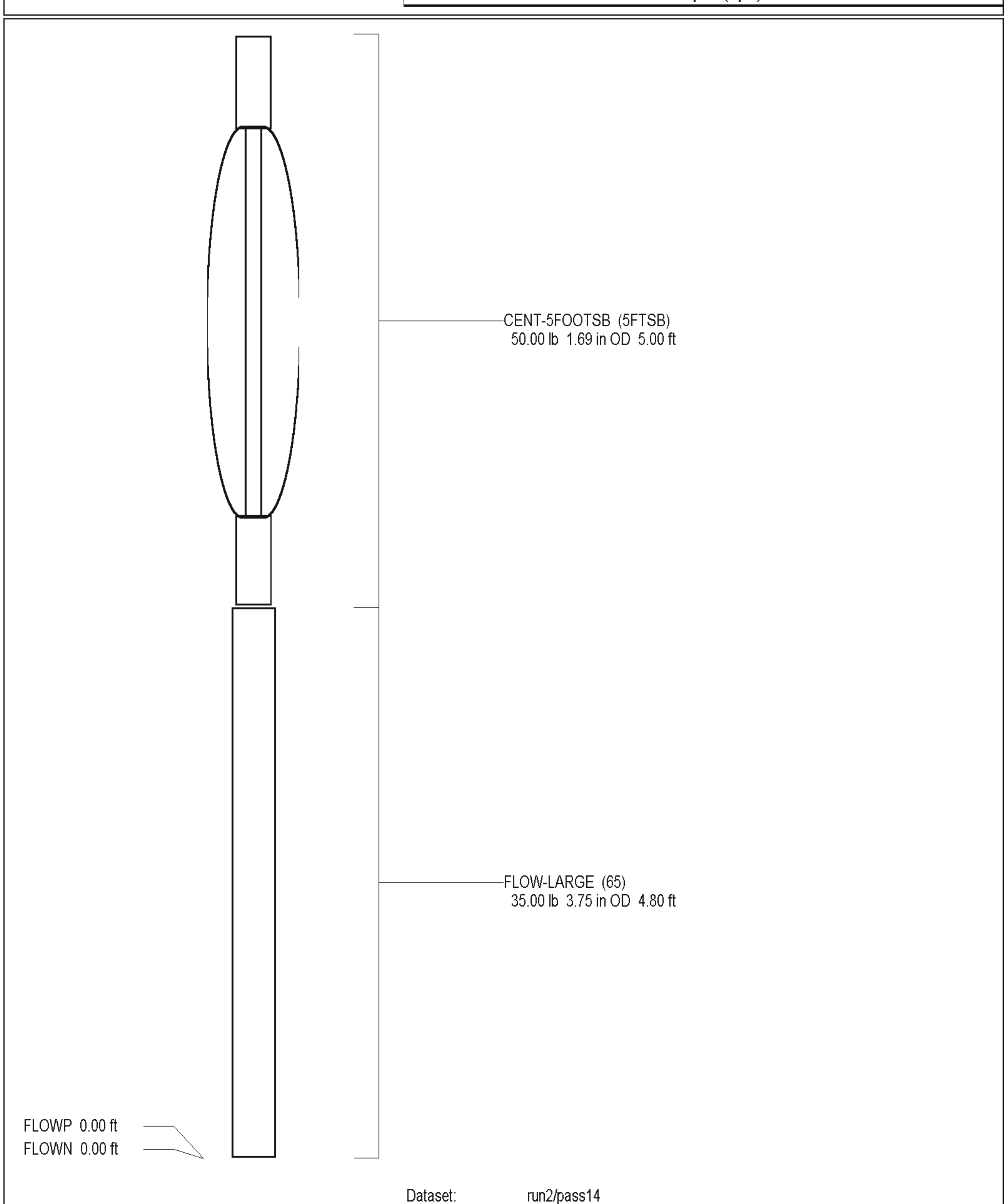
MV Geophysical — Station #1: 70'

Database File: avemp-2.db
Dataset Pathname: run2/pass11
Presentation Format: FLOW
Dataset Creation: Fri Aug 27 11:52:06 2004 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240

-200 LINE SPEED (ft/min) 200 | 0 CCW Spin (cps) 100
0 CW Spin (cps) 100



-200 LINE SPEED (ft/min) 200 | 0 CCW Spin (cps) 100
0 CW Spin (cps) 100



Dataset: run2\pass14
Total Length: 9.80 ft
Total Weight: 85.00 lb
O.D.: 3.75 in

MV Geophysical

X-Y CALIPER GAMMA RAY LOG

Company	Diversified Drilling Corporation
Well	Ave Maria P-2
Field	Ave Maria University
County	Collier
State/Prv	Florida
Location	Ave Maria WWTP & WTP CH2M Hill, Inc.
Other Services	DIL/SP FRT,FLOW VIDEO
Permanent Datum	G.L.
Log Measured From	G.L.
Drilling Measured From	G.L.
Elevation	K.B. D.F. G.L.

Company	Diversified Drilling Corp.
Well	Ave Maria P-2
Field	Ave Maria University
County	Collier
State/Prv	Florida

Date	27-AUG-2004
Run Number	TWO
Depth Driller	80'
Depth Logger	80'
Bottom Logged Interval	80'
Top Log Interval	SURFACE
Open Hole Size	11"
Type Fluid	WATER
Density / Viscosity	NA/NA
Max. Recorded Temp.	na
Estimated Cement Top	NA
Time Well Ready	10:00 8/27/04
Time Logger on Bottom	10:30 8/27/04
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller
Witnessed By	C.Ivery (CH2M) Rossco (DDC)

Borehole Record / Tubing Record

Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	20'	62'				
TWO	11"	59'	80'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String	12" SDR 17	11.125" ID	SURFACE	59'
Production String				
Liner				

Invoice No. 2004127

* FINAL PRINT *

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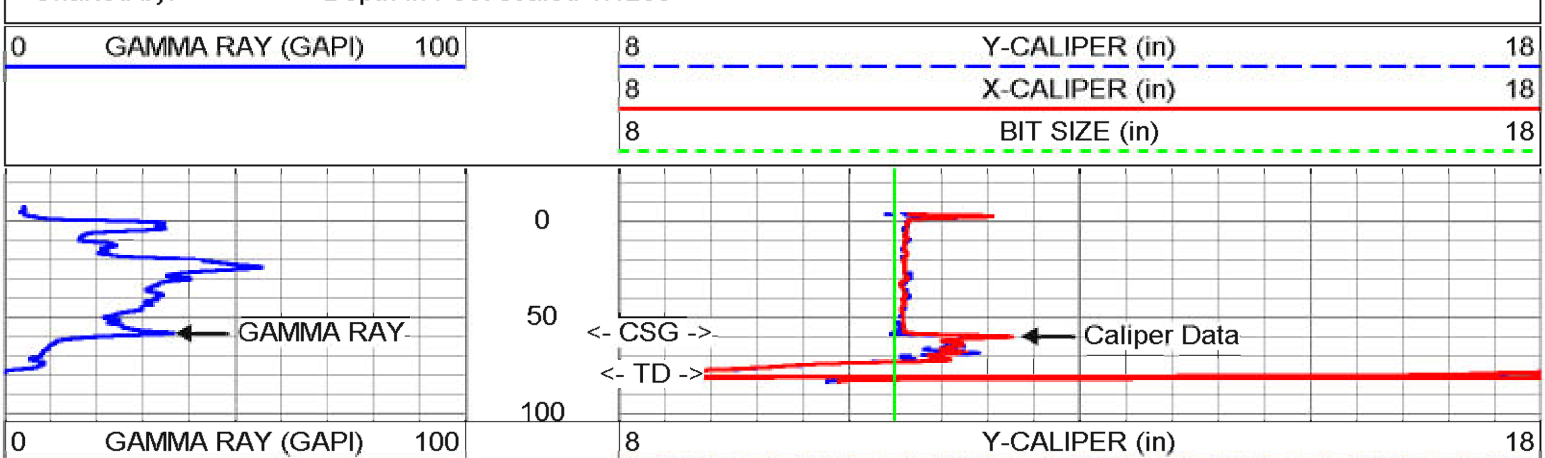
Comments

X-Y Caliper Arm Extensions: 33"

MV Geophysical — MAIN PASS

Database File: avemp-2.db
Dataset Pathname: run2/MAIN
Presentation Format: XY818-1
Dataset Creation: Fri Aug 27 13:01:37 2004
Charted by: Depth in Feet scaled 1:1200

0 GAMMA RAY (GAPI) 100 | 8 Y-CALIPER (in) 18 | 8 X-CALIPER (in) 18 | 8 BIT SIZE (in) 18

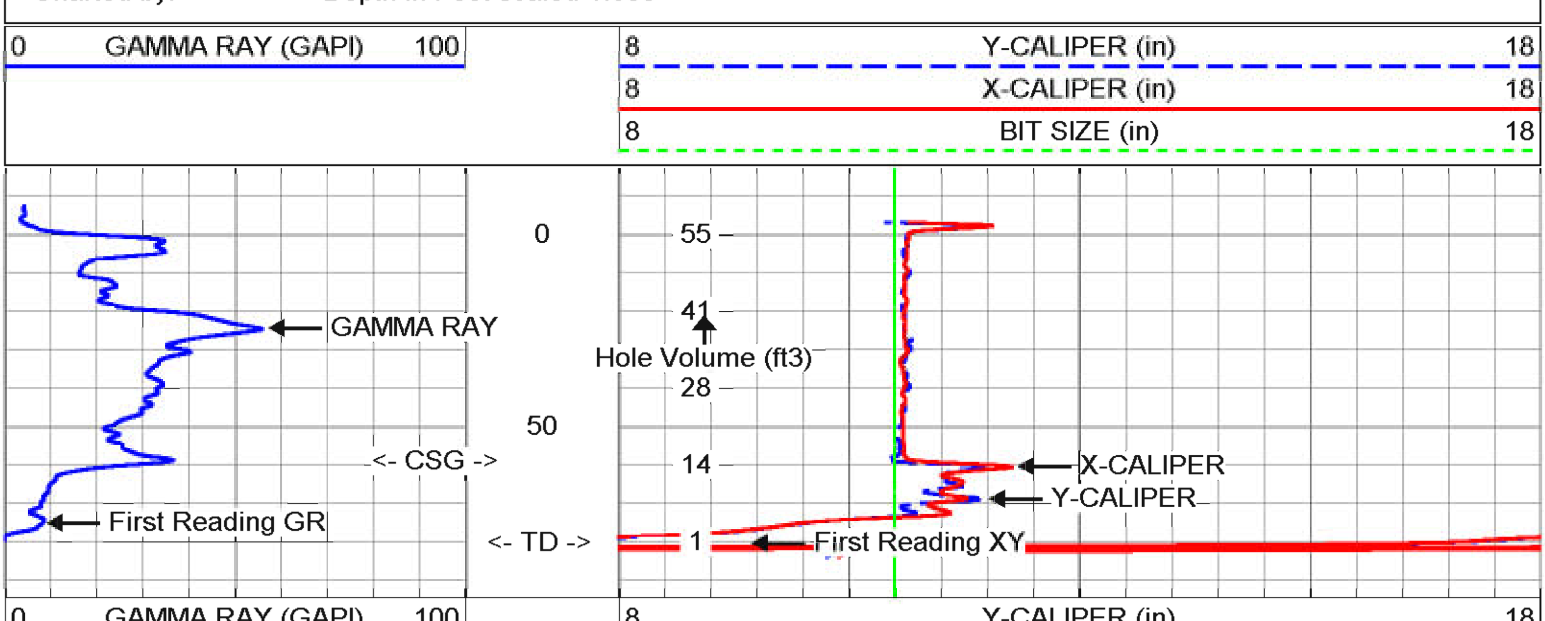


0 GAMMA RAY (GAPI) 100 | 8 Y-CALIPER (in) 18 | 8 X-CALIPER (in) 18 | 8 BIT SIZE (in) 18

MV Geophysical — MAIN PASS

Database File: avemp-2.db
Dataset Pathname: run2/MAIN
Presentation Format: XY818-5
Dataset Creation: Fri Aug 27 13:01:37 2004
Charted by: Depth in Feet scaled 1:600

0 GAMMA RAY (GAPI) 100 | 8 Y-CALIPER (in) 18 | 8 X-CALIPER (in) 18 | 8 BIT SIZE (in) 18

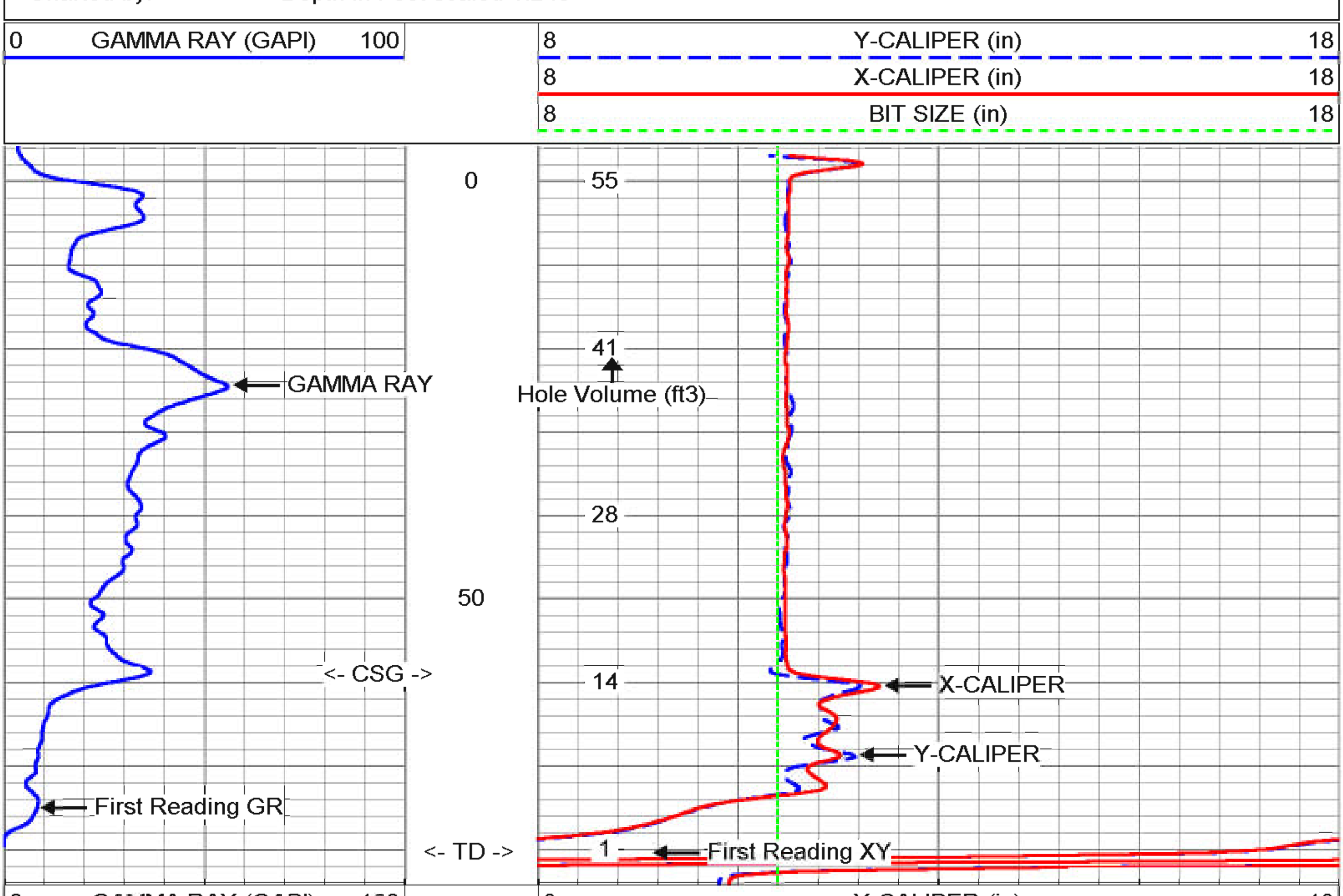


0 GAMMA RAY (GAPI) 100 | 8 Y-CALIPER (in) 18 | 8 X-CALIPER (in) 18 | 8 BIT SIZE (in) 18

MV Geophysical — MAIN PASS

Database File: avemp-2.db
Dataset Pathname: run2/MAIN
Presentation Format: XY818-5
Dataset Creation: Fri Aug 27 13:01:37 2004
Charted by: Depth in Feet scaled 1:240

0 GAMMA RAY (GAPI) 100 | 8 Y-CALIPER (in) 18 | 8 X-CALIPER (in) 18 | 8 BIT SIZE (in) 18

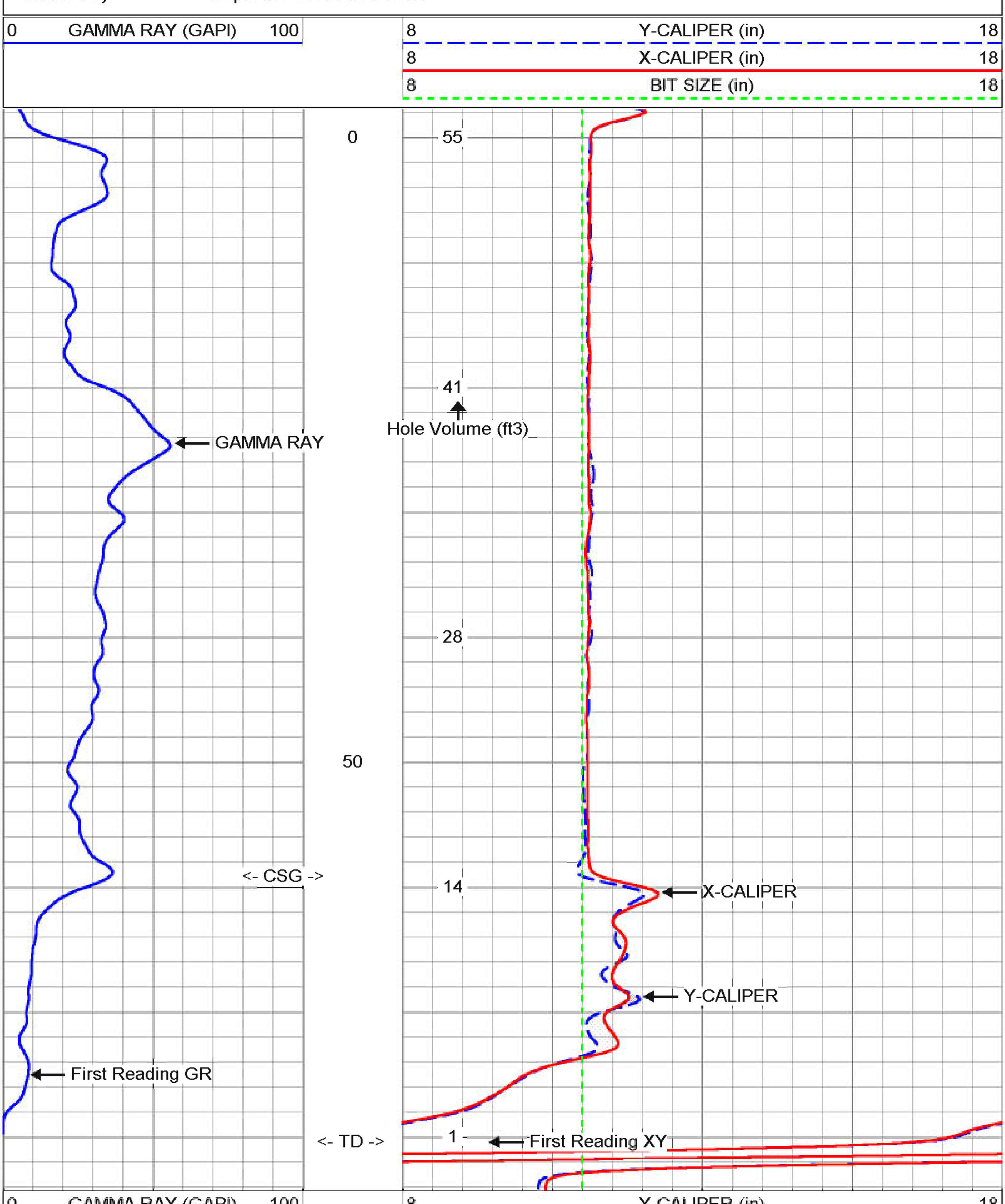


0 GAMMA RAY (GAPI) 100 | 8 Y-CALIPER (in) 18 | 8 X-CALIPER (in) 18 | 8 BIT SIZE (in) 18

MV Geophysical — MAIN PASS

Database File: avemp-2.db
Dataset Pathname: run2/MAIN
Presentation Format: XY818-5
Dataset Creation: Fri Aug 27 13:01:37 2004
Charted by: Depth in Feet scaled 1:120

0 GAMMA RAY (GAPI) 100 | 8 Y-CALIPER (in) 18 | 8 X-CALIPER (in) 18 | 8 BIT SIZE (in) 18

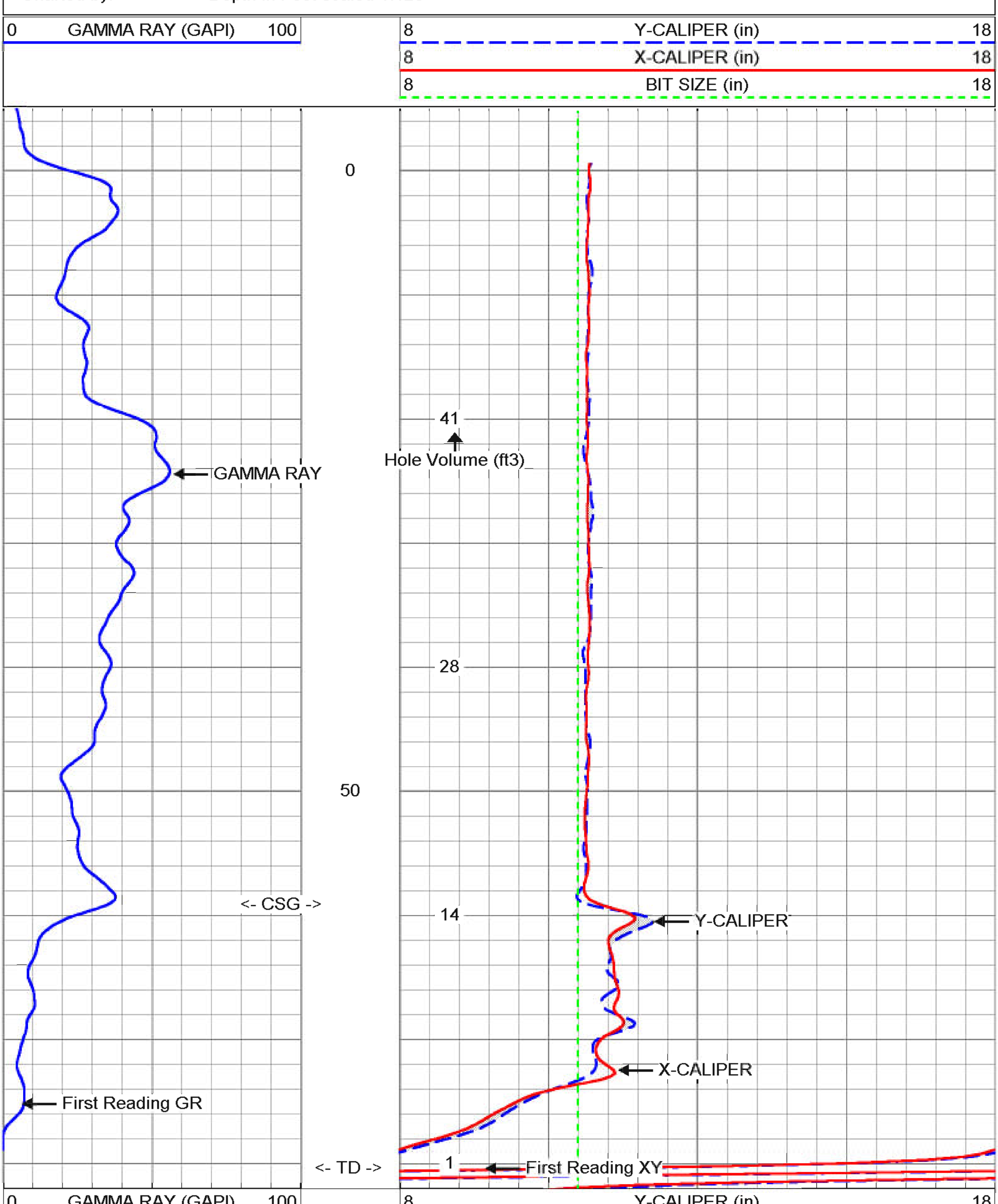


0 GAMMA RAY (GAPI) 100 | 8 Y-CALIPER (in) 18 | 8 X-CALIPER (in) 18 | 8 BIT SIZE (in) 18

MV Geophysical — REPEAT SECTION

Database File: avemp-2.db
Dataset Pathname: run2/REPEAT
Presentation Format: XY818-5
Dataset Creation: Fri Aug 27 10:32:33 2004
Charted by: Depth in Feet scaled 1:120

0 GAMMA RAY (GAPI) 100 | 8 Y-CALIPER (in) 18 | 8 X-CALIPER (in) 18 | 8 BIT SIZE (in) 18



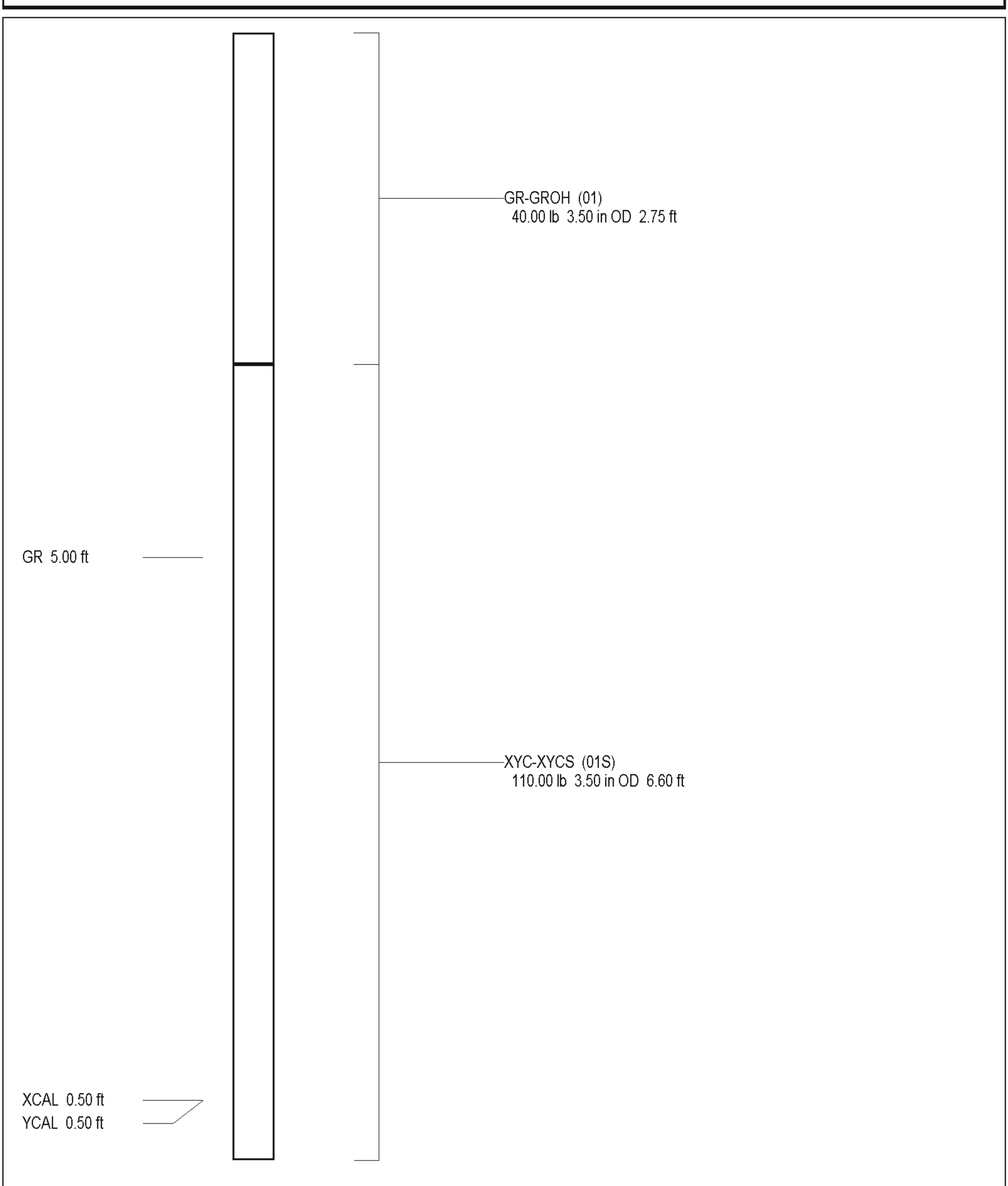
0 GAMMA RAY (GAPI) 100 | 8 Y-CALIPER (in) 18 | 8 X-CALIPER (in) 18 | 8 BIT SIZE (in) 18

XY Caliper Calibration Report

Serial Number:	01S		
Tool Model:	XYCS		
Performed:	Fri Aug 27 10:36:40 2004		
Small Ring:	11.125	in	
Large Ring:	25.25	in	
	X Caliper	Y Caliper	
Reading with Small Ring:	554.1	576.5	cps
Reading with Large Ring:	808.7	840.31	cps
Gain:	0.0554792	0.0535423	
Offset:	-19.616	-19.7421	

Gamma Ray Calibration Report

Serial Number:	01	
Tool Model:	GROH	
Performed:	Fri Aug 27 10:24:17 2004	
Calibrator Value:	120	GAPI
Background Reading:	5.635	cps
Calibrator Reading:	124.631	cps
Sensitivity:	1.00844	GAPI/cps



Dataset: run2/pass2
Total Length: 9.35 ft
Total Weight: 150.00 lb
O.D. 3.50 in

Well P-3

Company	Diversified Drilling Corp.
Well	Ave Maria P-3
Field	Ave Maria University
County	Collier
State/Prv	Florida

MV Geophysical

DUAL INDUCTION LL3 / SP LOG

Company	Diversified Drilling Corporation
Well	Ave Maria P-3
Field	Ave Maria University
County	Collier
State/Prv	Florida
Location	Ave Maria WWTP & WTP CH2M Hill, Inc.
Other Services	XY/GR
Permanent Datum	G.L.
Log Measured From	G.L.
Drilling Measured From	G.L.
Elevation	K.B. / D.F. / G.L.

Date	5-AUG-2004
Run Number	ONE
Depth Driller	200'
Depth Logger	200'
Bottom Logged Interval	198'
Top Log Interval	20'
Open Hole Size	7.875"
Type Fluid	MUD
Density / Viscosity	NA/NA
Max. Recorded Temp.	na
Estimated Cement Top	NA
Time Well Ready	09:00 8/5/04
Time Logger on Bottom	10:00 8/5/04
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller / C.Miller
Witnessed By	C.Ivery (CH2M) / Rossco (DDC)

Borehole Record

Run Number	Bit	From	To
ONE	7.875"	20'	200'

Tubing Record

Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String				
Production String				
Liner				

Invoice No.	P.O. #:	Job No.:	* FIELD PRINT *
2004115			

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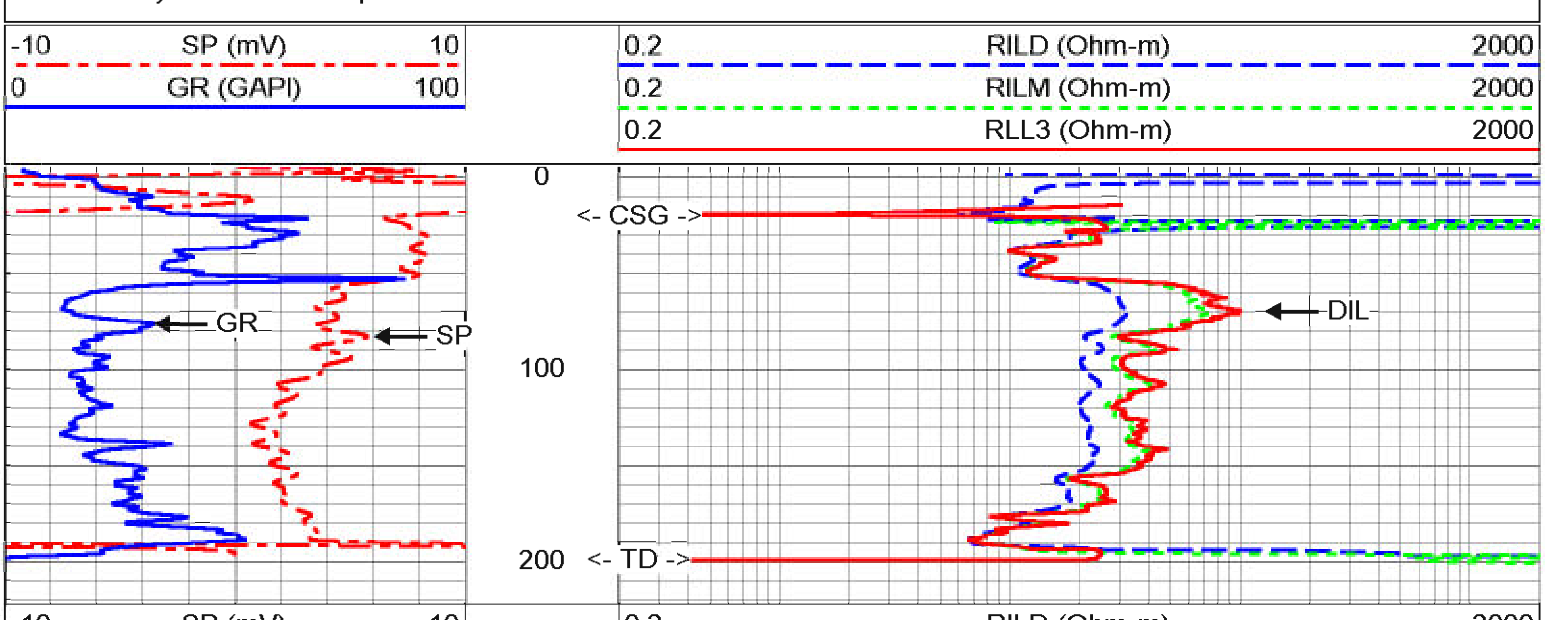
Comments

Rm=9.871 ohm-m @ 81.1 degF

MV Geophysical — MAIN PASS

Database File: avemp-3.db
Dataset Pathname: MAIN
Presentation Format: DIL-1
Dataset Creation: Thu Aug 05 09:46:29 2004
Charted by: Depth in Feet scaled 1:1200

-10 SP (mV) 10 | 0 GR (GAPI) 100 | 0.2 RILD (Ohm-m) 2000 | 0.2 RILM (Ohm-m) 2000 | 0.2 RLL3 (Ohm-m) 2000

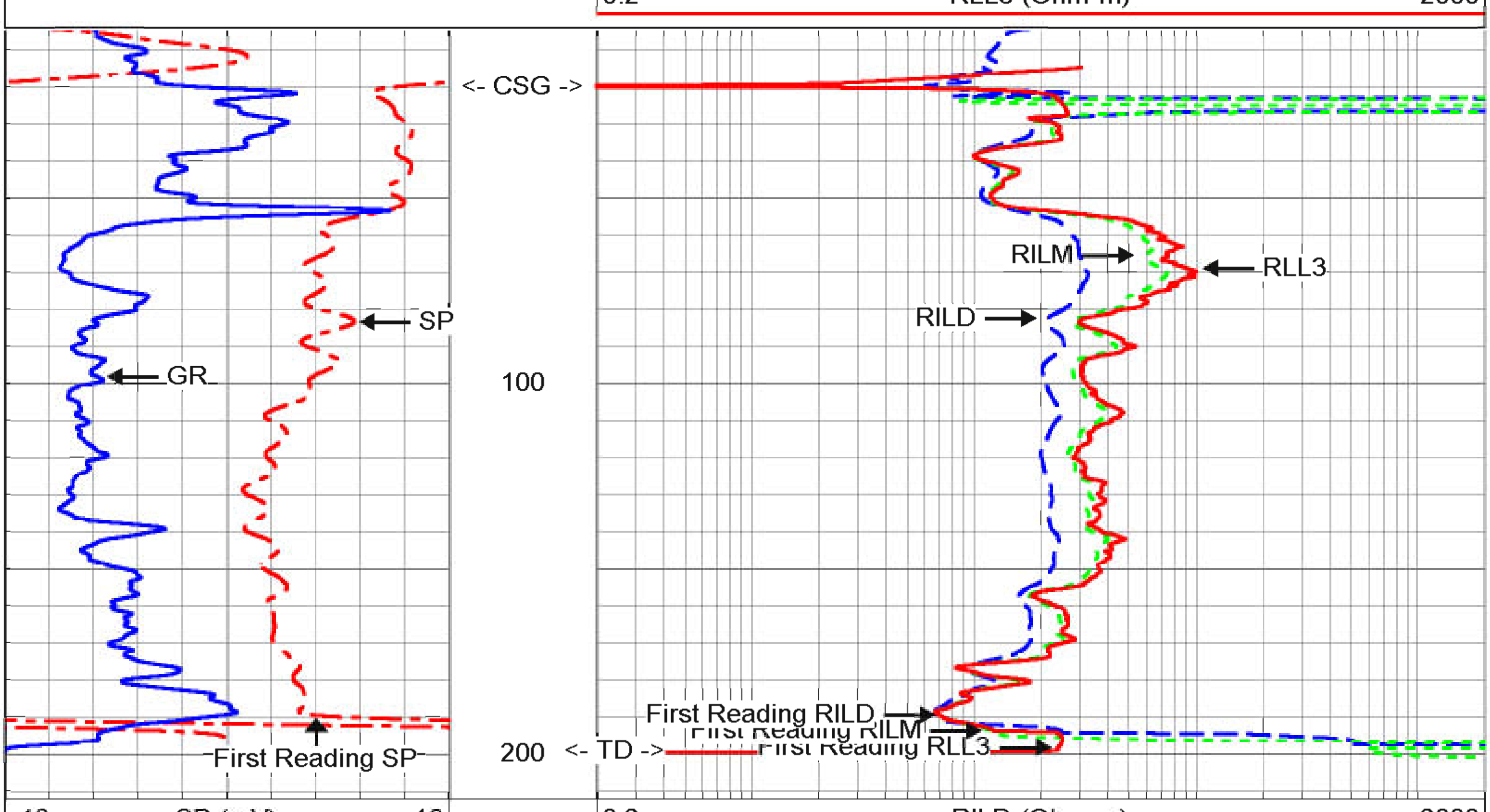


-10 SP (mV) 10 | 0 GR (GAPI) 100 | 0.2 RILD (Ohm-m) 2000 | 0.2 RILM (Ohm-m) 2000 | 0.2 RLL3 (Ohm-m) 2000

MV Geophysical — MAIN PASS

Database File: avemp-3.db
Dataset Pathname: MAIN
Presentation Format: DIL
Dataset Creation: Thu Aug 05 09:46:29 2004
Charted by: Depth in Feet scaled 1:600

-10 SP (mV) 10 | 0 GR (GAPI) 100 | 0.2 RILD (Ohm-m) 2000 | 0.2 RILM (Ohm-m) 2000 | 0.2 RLL3 (Ohm-m) 2000

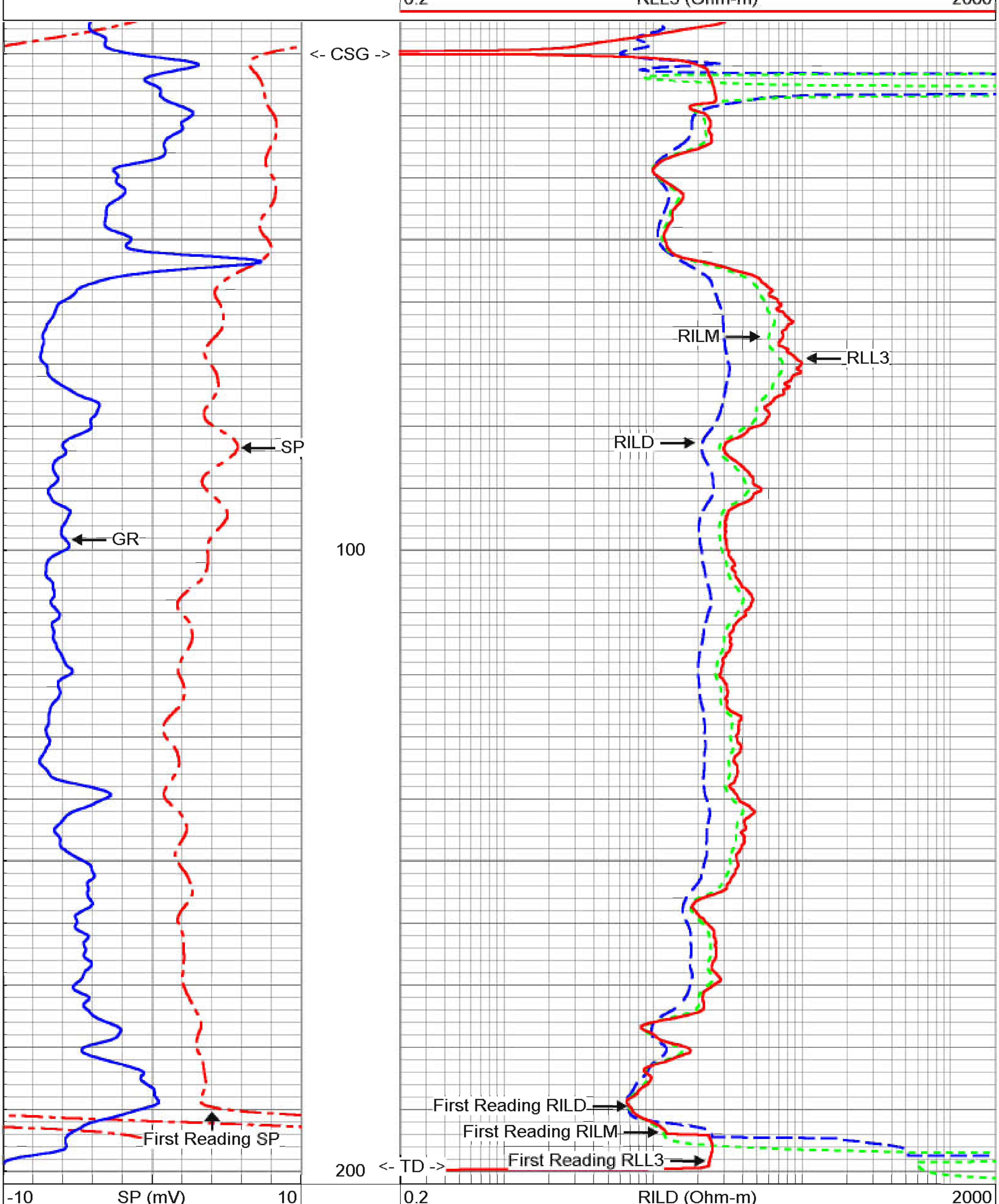


-10 SP (mV) 10 | 0 GR (GAPI) 100 | 0.2 RILD (Ohm-m) 2000 | 0.2 RILM (Ohm-m) 2000 | 0.2 RLL3 (Ohm-m) 2000

MV Geophysical — MAIN PASS

Database File: avemp-3.db
Dataset Pathname: MAIN
Presentation Format: DIL
Dataset Creation: Thu Aug 05 09:46:29 2004
Charted by: Depth in Feet scaled 1:240

-10 SP (mV) 10 | 0 GR (GAPI) 100 | 0.2 RILD (Ohm-m) 2000 | 0.2 RILM (Ohm-m) 2000 | 0.2 RLL3 (Ohm-m) 2000

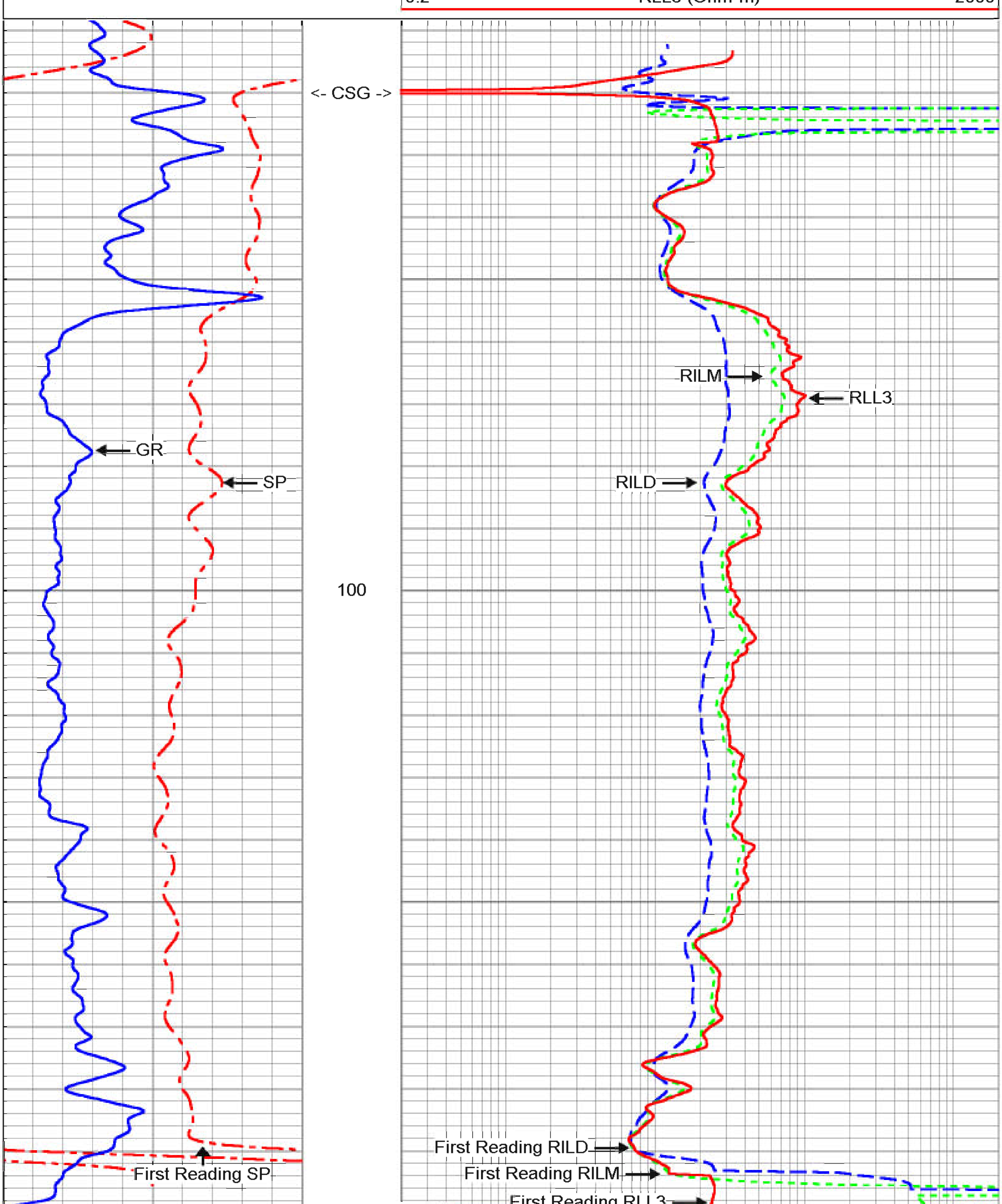


-10 SP (mV) 10 | 0 GR (GAPI) 100 | 0.2 RILD (Ohm-m) 2000 | 0.2 RILM (Ohm-m) 2000 | 0.2 RLL3 (Ohm-m) 2000

MV Geophysical — REPEAT SECTION

Database File: avemp-3.db
Dataset Pathname: REPEAT
Presentation Format: DIL
Dataset Creation: Thu Aug 05 09:33:37 2004
Charted by: Depth in Feet scaled 1:240

-10 SP (mV) 10 | 0 GR (GAPI) 100 | 0.2 RILD (Ohm-m) 2000 | 0.2 RILM (Ohm-m) 2000 | 0.2 RLL3 (Ohm-m) 2000



-10 SP (mV) 10 | 0 GR (GAPI) 100 | 0.2 RILD (Ohm-m) 2000 | 0.2 RILM (Ohm-m) 2000 | 0.2 RLL3 (Ohm-m) 2000

Dual Induction Calibration Report

Serial-Model: 5390-R
Surface Cal Performed: Mon Feb 24 16:52:46 2003
Downhole Cal Performed: Thu Aug 05 09:52:13 2004
After Survey Verification Performed: Thu Aug 05 10:19:45 2004

Surface Calibration

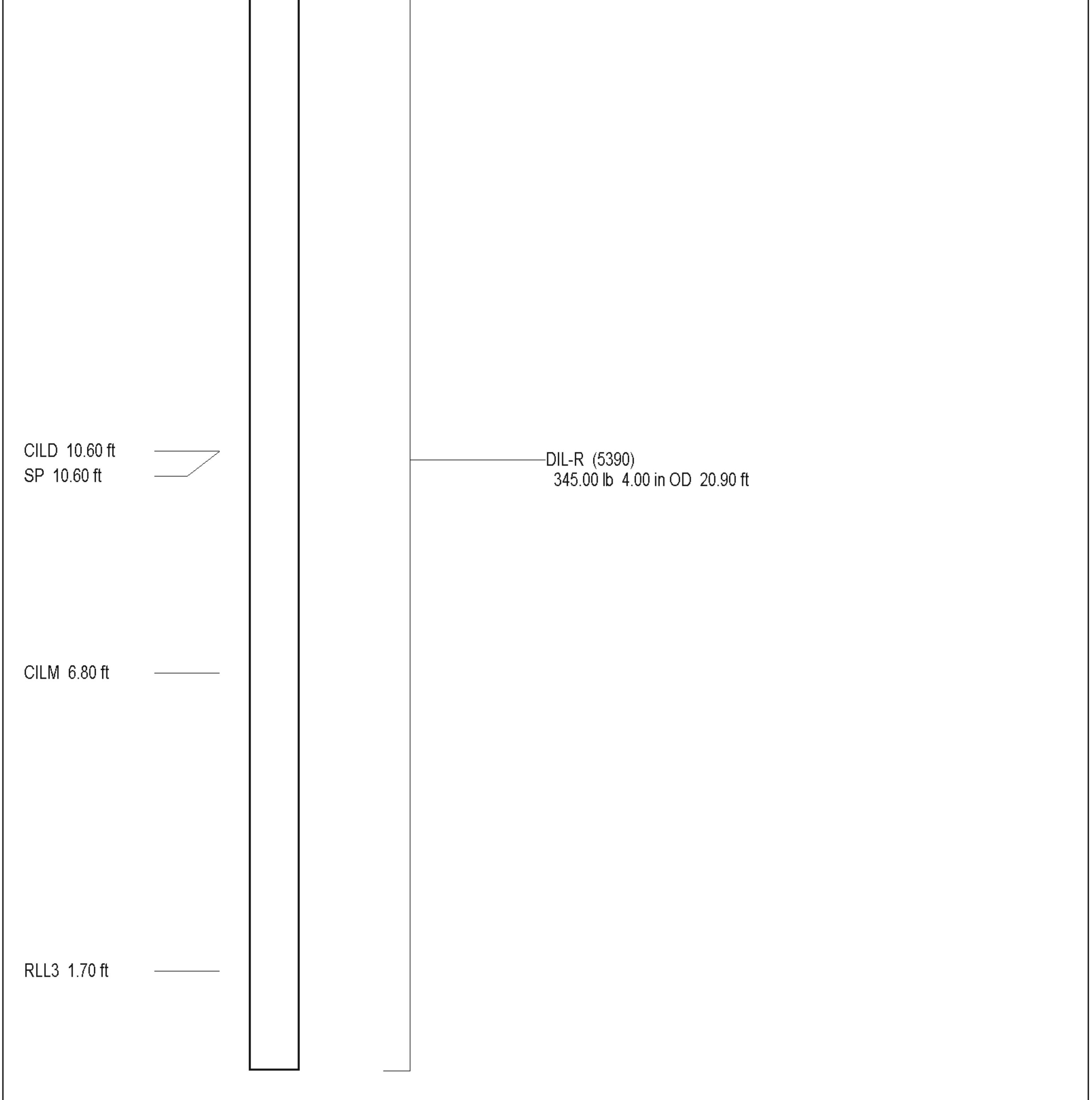
	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.041	0.637	V	0.000	400.000	mmho-m	670.900	-27.223
Medium	-0.006	0.700	V	0.000	464.000	mmho-m	656.366	4.251
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.647	V	0.000	400.000	mmho-m	628.552	-6.783
Medium	-0.011	0.749	V	0.000	464.000	mmho-m	610.612	6.720

Downhole Calibration

	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-51.497	427.821	mmho-m	-19.983	406.966	mmho-m	0.891	25.888
Medium	7.532	487.668	mmho-m	-2.972	495.796	mmho-m	1.039	-10.796
Shallow	2.489	0.022	V	494.500	2.000	Ohm-m	199.596	-2.347

After Survey Verification

	Readings			Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	-48.336	423.944	mmho-m	-51.497	427.821	mmho-m	0.891	25.888
Medium	8.361	487.147	mmho-m	7.532	487.668	mmho-m	1.039	-10.796
Shallow	494.870	1.798	Ohm-m	494.500	2.000	Ohm-m	0.999	0.204



Dataset: run1/pass5
Total Length: 20.90 ft
Total Weight: 345.00 lb
O.D. 4.00 in

MV Geophysical

X-Y CALIPER GAMMA RAY LOG

Company	Diversified Drilling Corp.
Well	Ave Maria P-3
Field	Ave Maria University
County	Collier
State/Prv	Florida

Company	Diversified Drilling Corporation
Well	Ave Maria P-3
Field	Ave Maria University
County	Collier
State/Prv	Florida
Location	Ave Maria WWTP & WTP, CH2M Hill, Inc.
Other Services	DIL/SP

		Elevation	
Permanent Datum	G.L.	K.B.	
Log Measured From	G.L.	D.F.	
Drilling Measured From	G.L.	G.L.	

Date	5-AUG-2004		
Run Number	ONE		
Depth Driller	200'		
Depth Logger	200'		
Bottom Logged Interval	200'		
Top Log Interval	SURFACE		
Open Hole Size	7.875"		
Type Fluid	MUD		
Density / Viscosity	NA/NA		
Max. Recorded Temp.	na		
Estimated Cement Top	NA		
Time Well Ready	09:00 8/5/04		
Time Logger on Bottom	09:00 8/5/04		
Equipment Number	MVGS-1		
Location	Ft. Myers		
Recorded By	S.Miller	C.Miller	
Witnessed By	C.Ivery (CH2M)	Rossco (DDC)	

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	88'	200'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String				
Production String				
Liner				

Invoice No. 2004115 | P.O. #: | Job No.: | * FIELD PRINT *

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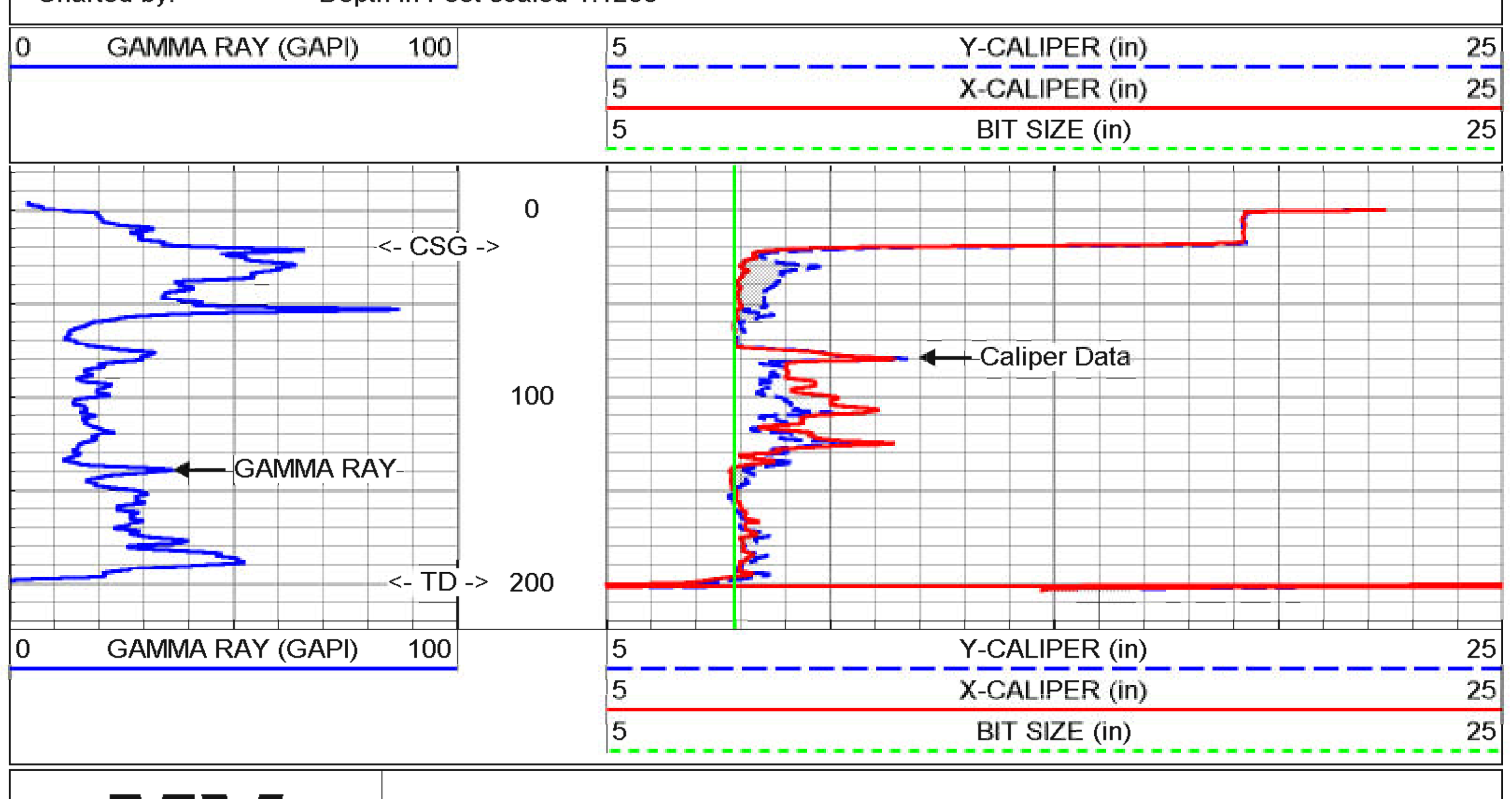
Comments

X-Y Caliper Arm Extensions: 33"

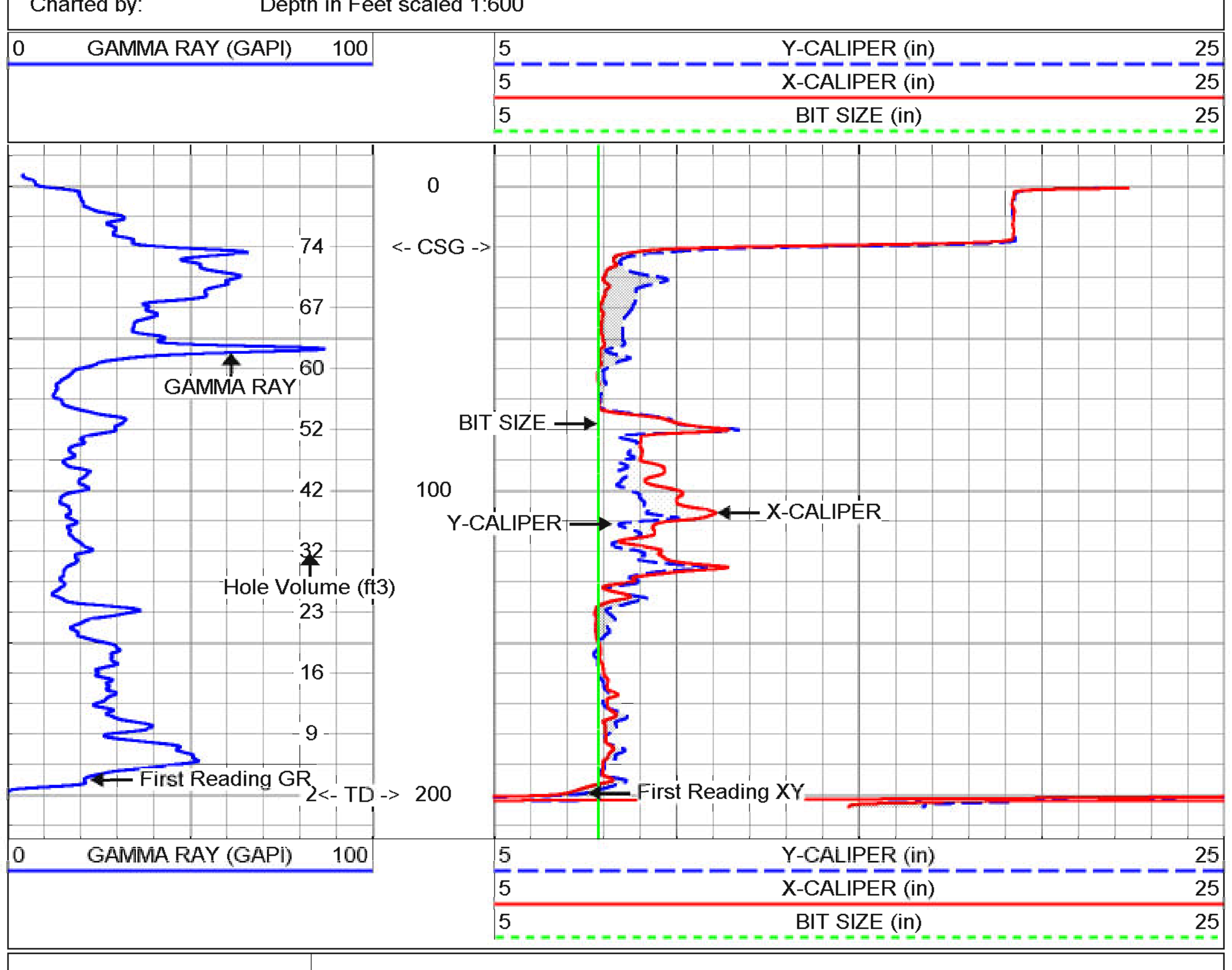
MV Geophysical — MAIN PASS

Database File:	avemp-3.db
Dataset Pathname:	MAIN
Presentation Format:	XY525-1
Dataset Creation:	Thu Aug 05 09:46:29 2004
Charted by:	Depth in Feet scaled 1:1200



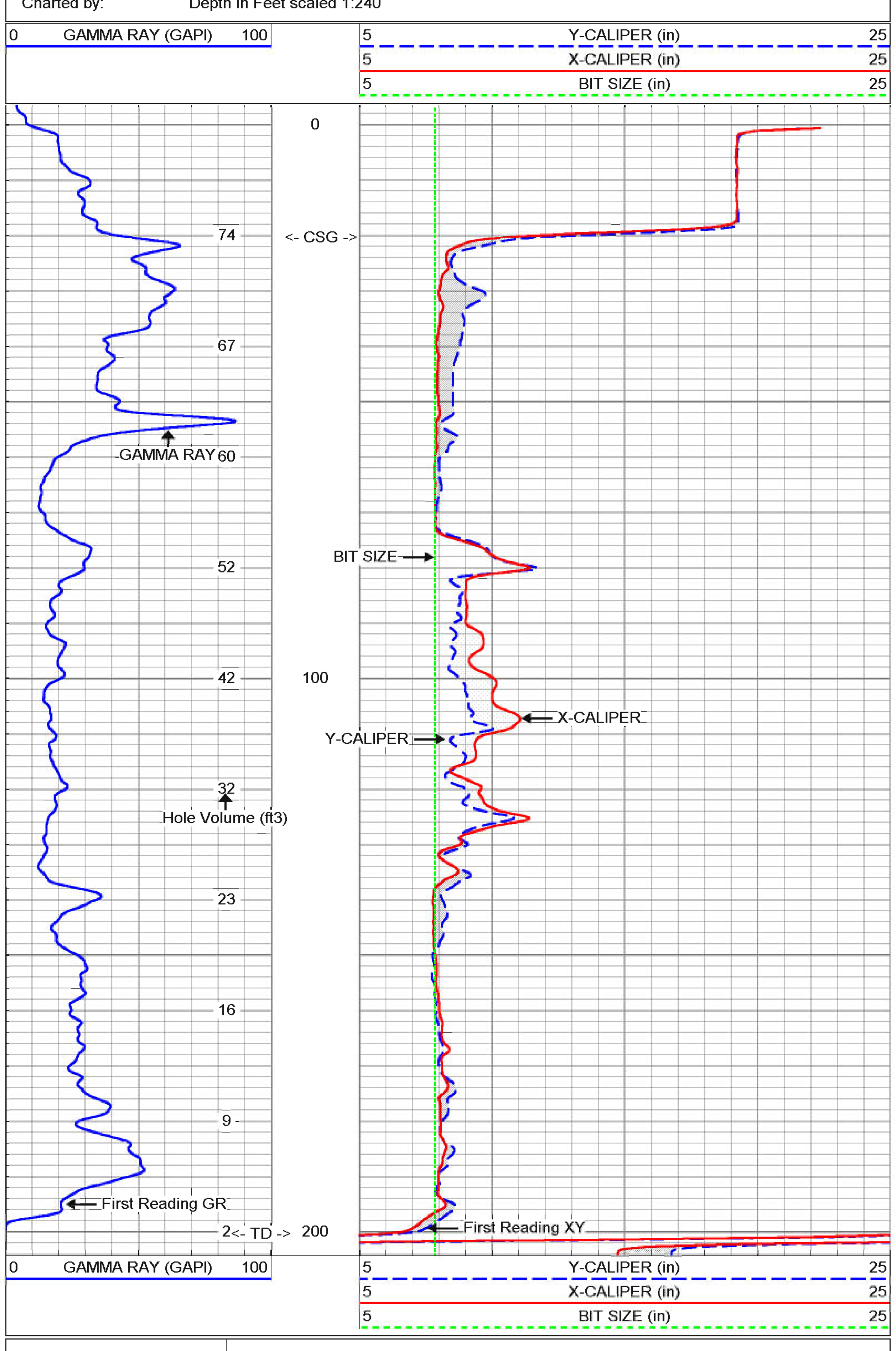
MV Geophysical — MAIN PASS

Database File:	avemp-3.db
Dataset Pathname:	MAIN
Presentation Format:	XY525-5
Dataset Creation:	Thu Aug 05 09:46:29 2004
Charted by:	Depth in Feet scaled 1:600



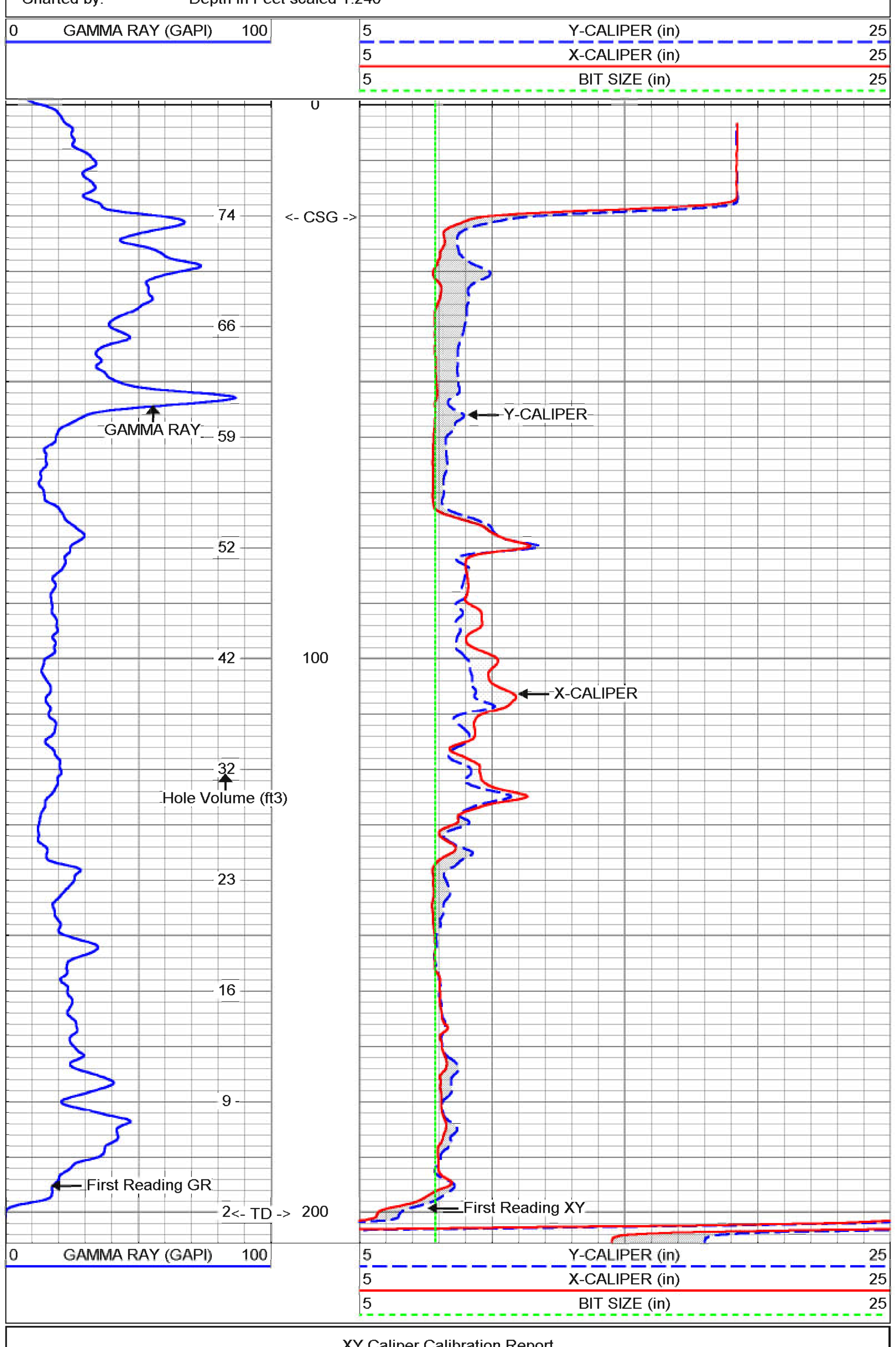
MV Geophysical — MAIN PASS

Database File:	avemp-3.db
Dataset Pathname:	MAIN
Presentation Format:	XY525-5
Dataset Creation:	Thu Aug 05 09:46:29 2004
Charted by:	Depth in Feet scaled 1:240



MV Geophysical — REPEAT SECTION

Database File:	avemp-3.db
Dataset Pathname:	REPEAT
Presentation Format:	XY525-5
Dataset Creation:	Thu Aug 05 09:33:37 2004
Charted by:	Depth in Feet scaled 1:240

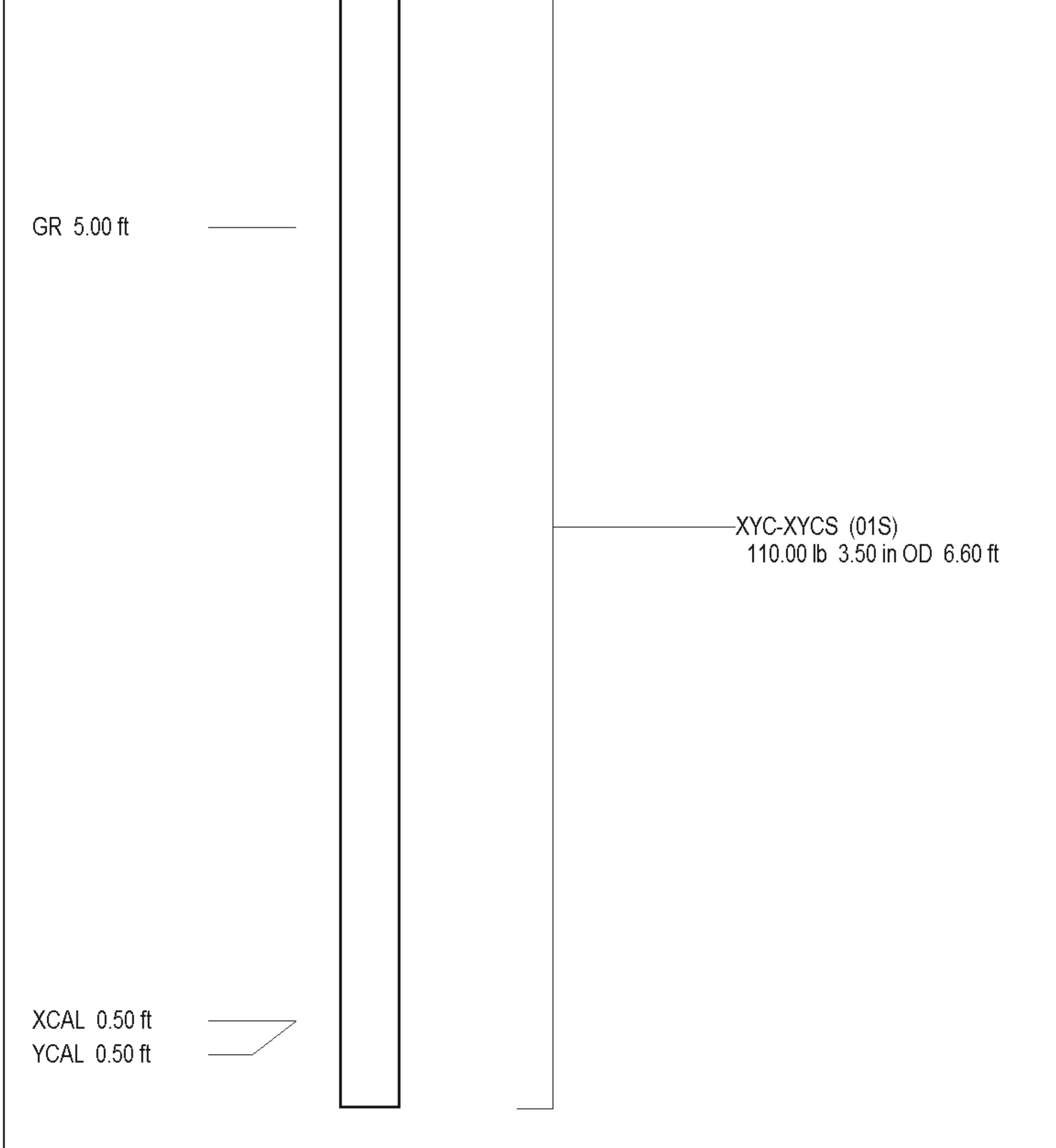


XY Caliper Calibration Report

Serial Number:	01S		
Tool Model:	XYCS		
Performed:	Thu Aug 05 09:27:22 2004		
Small Ring:	8	in	
Large Ring:	19.25	in	
	X Caliper	Y Caliper	
Reading with Small Ring:	508.87	516.9	cps
Reading with Large Ring:	679.8	710.8	cps
Gain:	0.0658164	0.0580196	
Offset:	-25.492	-21.9903	

Gamma Ray Calibration Report

Serial Number:	01	
Tool Model:	GROH	
Performed:	Thu Aug 05 09:19:43 2004	
Calibrator Value:	120	GAPI
Background Reading:	5.636	cps
Calibrator Reading:	124.635	cps
Sensitivity:	1.00841	GAPI/cps



Dataset:	run1/pass1
Total Length:	9.35 ft
Total Weight:	150.00 lb
O.D.	3.50 in

MV Geophysical

DUAL INDUCTION LL3 / SP LOG

Company	Diversified Drilling Corp.
Well	Ave Maria P-3
Field	Ave Maria University
County	Collier
State/Prv	Florida

Company	Diversified Drilling Corporation		
Well	Ave Maria P-3		
Field	Ave Maria University		
County	Collier	State/Prv	Florida
Location	Ave Maria WWTP & WTP CH2M Hill, Inc.	Other Services	XY/GR FRT,FLOW VIDEO
Permanent Datum	G.L.	Elevation	Elevation K.B. D.F. G.L.
Log Measured From	G.L.		
Drilling Measured From	G.L.		

Date	18-AUG-2004	
Run Number	TWO	
Depth Driller	78'	
Depth Logger	77'	
Bottom Logged Interval	75'	
Top Log Interval	50'	
Open Hole Size	11.25"	
Type Fluid	WATER	
Density / Viscosity	NA/NA	
Max. Recorded Temp.	na	
Estimated Cement Top	NA	
Time Well Ready	10:00 8/18/04	
Time Logger on Bottom	10:45 8/18/04	
Equipment Number	MVGS-1	
Location	Ft. Myers	
Recorded By	S.Miller	C.Miller
Witnessed By	C.Ivery (CH2M)	Ralph (DDC)

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	20'	200'				
TWO	11.25"	50'	78'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String	12" PVC	12" ID	SURFACE	50'
Production String				
Liner				

Invoice No. 2004119	P.O. #:	Job No.:	* FIELD PRINT *

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Comments

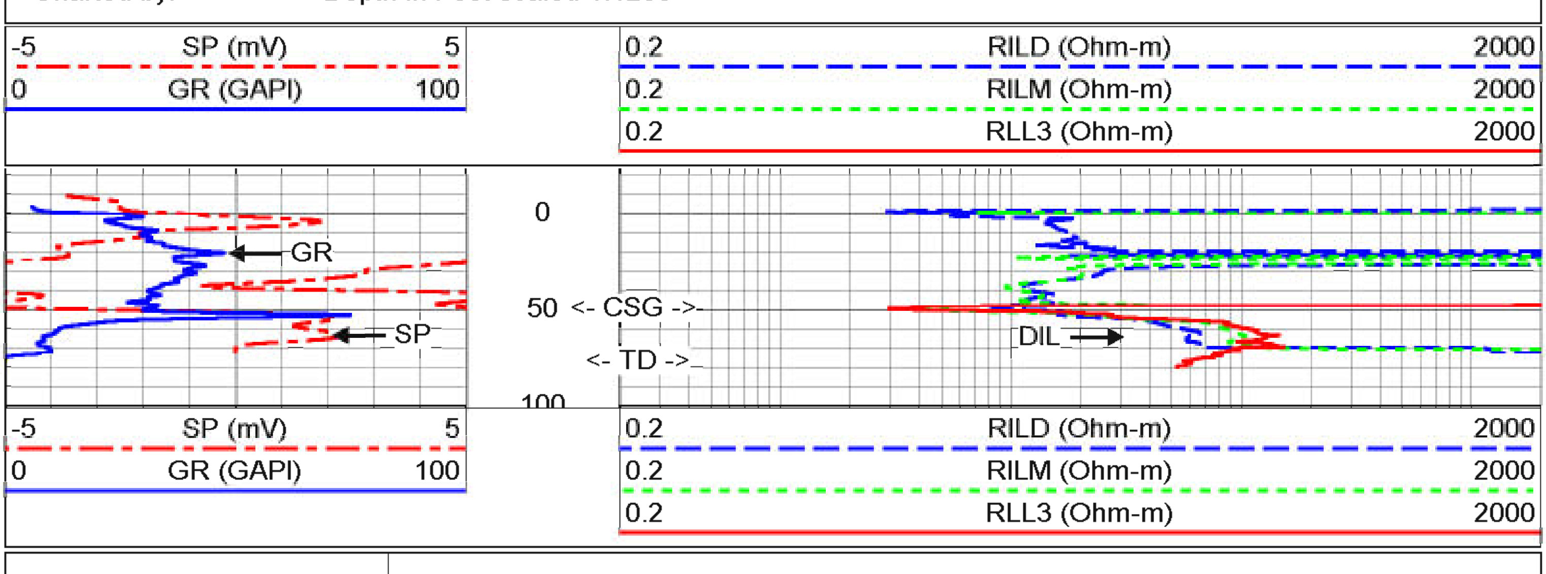
Rw=14.041 ohm-m @ 78.1 degF

MV Geophysical

MAIN PASS

Database File:	avemp-3.db
Dataset Pathname:	run2/MAIN
Presentation Format:	DIL-1
Dataset Creation:	Wed Aug 18 11:50:00 2004
Charted by:	Depth in Feet scaled 1:1200

-5	SP (mV)	5	0.2	RILD (Ohm-m)	2000
0	GR (GAPI)	100	0.2	RILM (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000



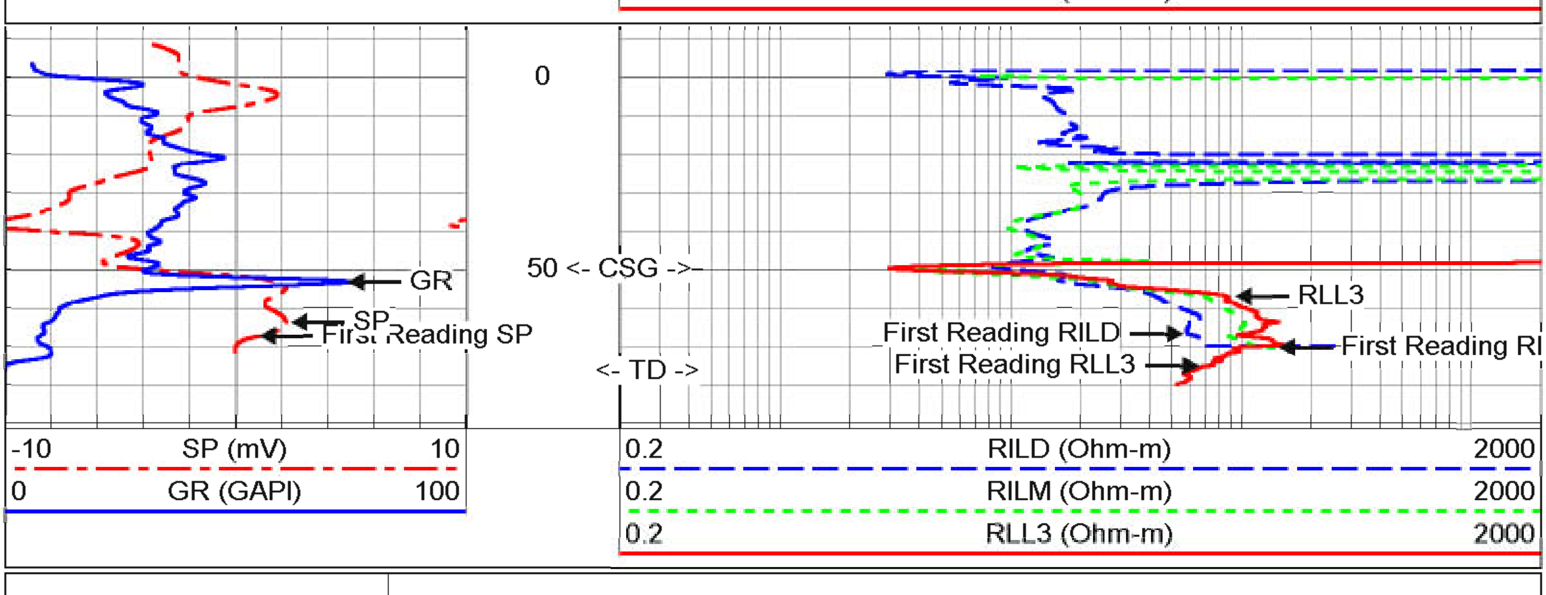
-5	SP (mV)	5	0.2	RILD (Ohm-m)	2000
0	GR (GAPI)	100	0.2	RILM (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000

MV Geophysical

MAIN PASS

Database File:	avemp-3.db
Dataset Pathname:	run2/MAIN
Presentation Format:	DIL
Dataset Creation:	Wed Aug 18 11:50:00 2004
Charted by:	Depth in Feet scaled 1:600

-10	SP (mV)	10	0.2	RILD (Ohm-m)	2000
0	GR (GAPI)	100	0.2	RILM (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000



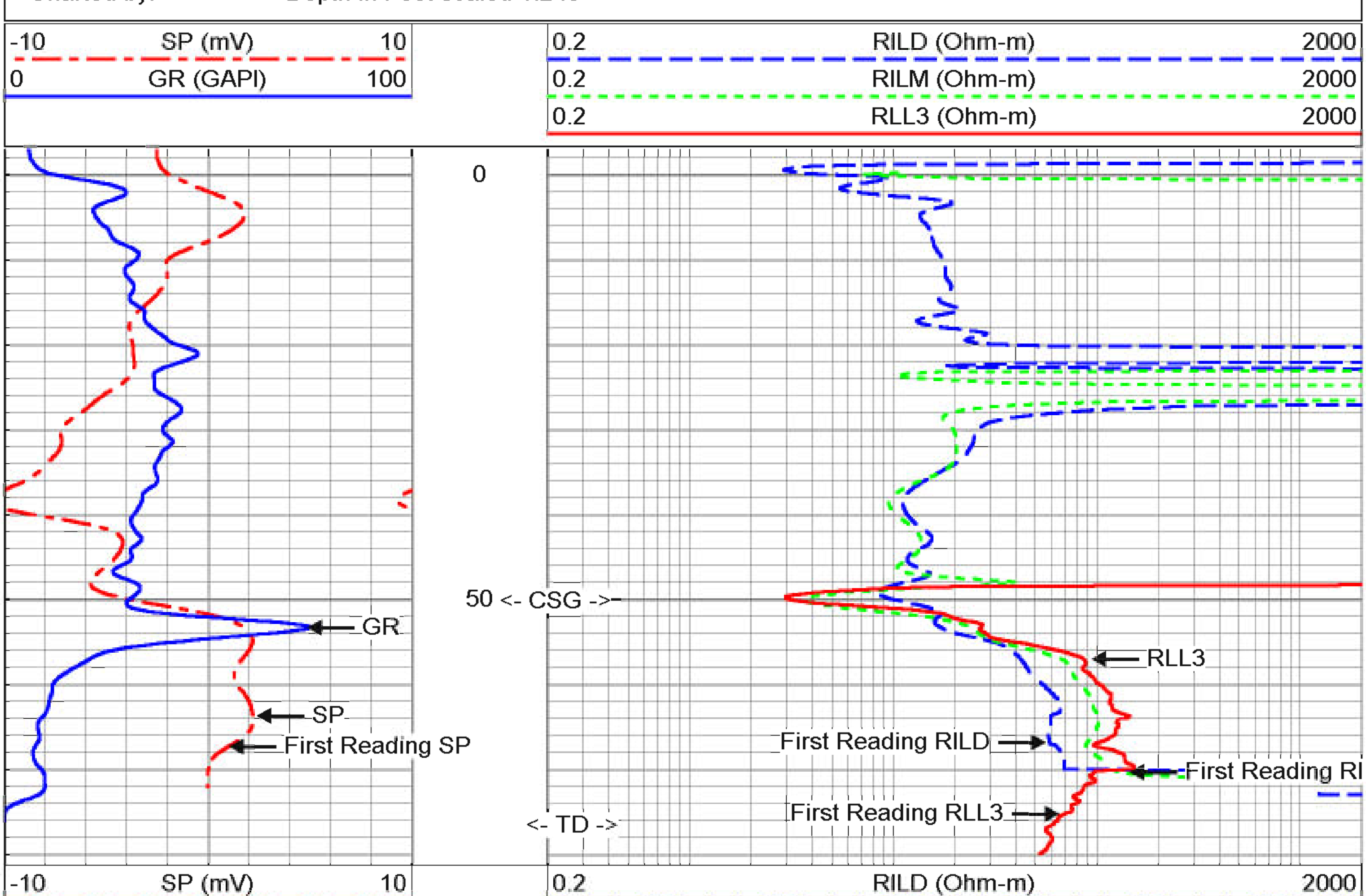
-10	SP (mV)	10	0.2	RILD (Ohm-m)	2000
0	GR (GAPI)	100	0.2	RILM (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000

MV Geophysical

MAIN PASS

Database File:	avemp-3.db
Dataset Pathname:	run2/MAIN
Presentation Format:	DIL
Dataset Creation:	Wed Aug 18 11:50:00 2004
Charted by:	Depth in Feet scaled 1:240

-10	SP (mV)	10	0.2	RILD (Ohm-m)	2000
0	GR (GAPI)	100	0.2	RILM (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000



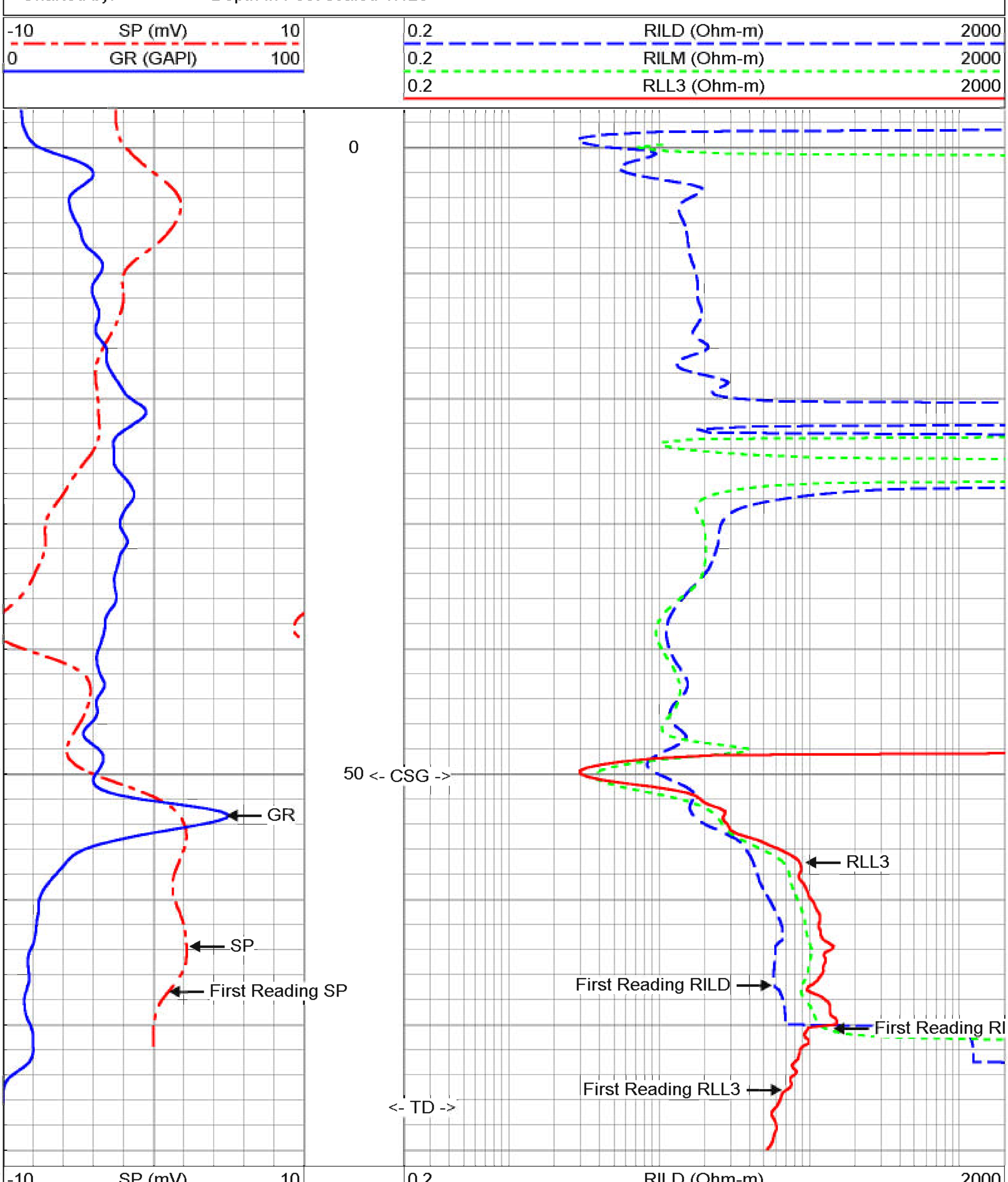
-10	SP (mV)	10	0.2	RILD (Ohm-m)	2000
0	GR (GAPI)	100	0.2	RILM (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000

MV Geophysical

MAIN PASS

Database File:	avemp-3.db
Dataset Pathname:	run2/MAIN
Presentation Format:	DIL
Dataset Creation:	Wed Aug 18 11:50:00 2004
Charted by:	Depth in Feet scaled 1:120

-10	SP (mV)	10	0.2	RILD (Ohm-m)	2000
0	GR (GAPI)	100	0.2	RILM (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000



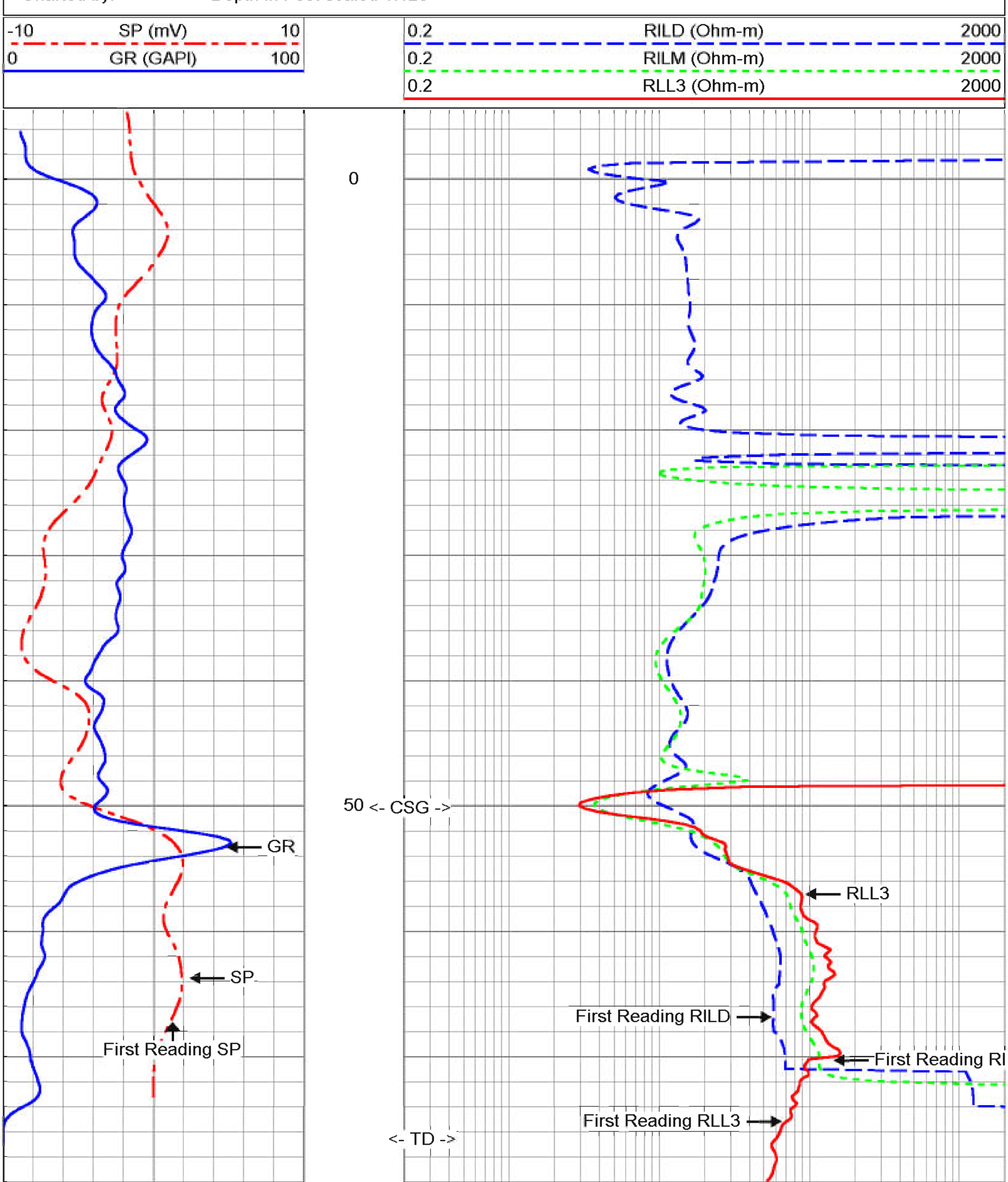
-10	SP (mV)	10	0.2	RILD (Ohm-m)	2000
0	GR (GAPI)	100	0.2	RILM (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000

MV Geophysical

REPEAT SECTION

Database File:	avemp-3.db
Dataset Pathname:	run2/REPEAT
Presentation Format:	DIL
Dataset Creation:	Wed Aug 18 14:01:43 2004
Charted by:	Depth in Feet scaled 1:120

-10	SP (mV)	10	0.2	RILD (Ohm-m)	2000
0	GR (GAPI)	100	0.2	RILM (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000



-10	SP (mV)	10	0.2	RILD (Ohm-m)	2000
0	GR (GAPI)	100	0.2	RILM (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000

Dual Induction Calibration Report

Serial-Model:	5390-R
Surface Cal Performed:	Mon Feb 24 16:52:46 2003
Downhole Cal Performed:	Wed Aug 18 11:03:07 2004
After Survey Verification Performed:	Wed Aug 18 11:15:35 2004

Surface Calibration

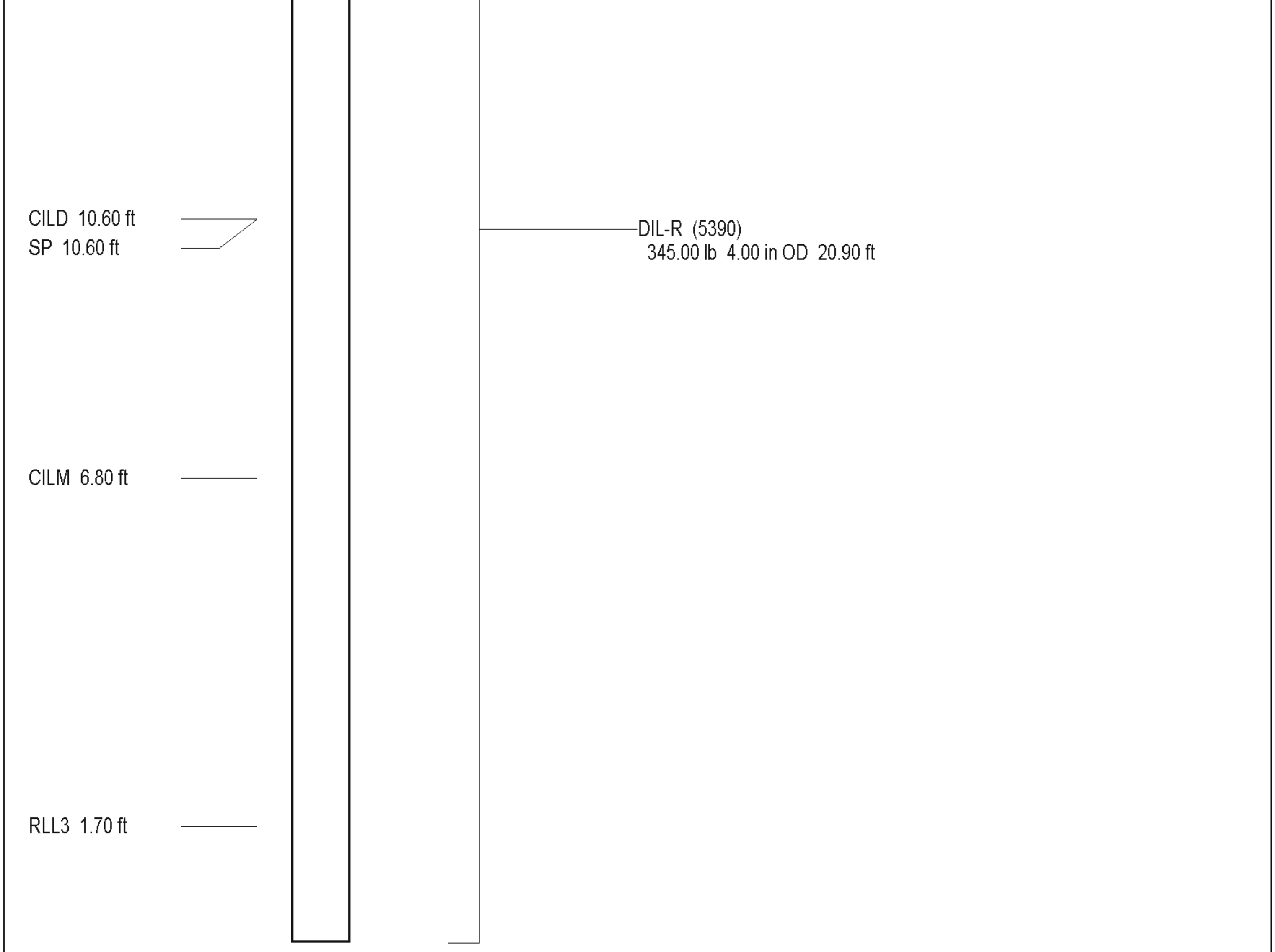
	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.041	0.637	V	0.000	400.000	mmho-m	670.900	-27.223
Medium	-0.006	0.700	V	0.000	464.000	mmho-m	656.366	4.251
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.647	V	0.000	400.000	mmho-m	628.552	-6.783
Medium	-0.011	0.749	V	0.000	464.000	mmho-m	610.612	6.720

Downhole Calibration

	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-20.659	397.495	mmho-m	-19.983	406.966	mmho-m	1.021	1.110
Medium	11.823	488.245	mmho-m	-2.972	495.796	mmho-m	1.047	-15.349
Shallow	2.497	0.022	V	494.500	2.000	Ohm-m	198.956	-2.306

After Survey Verification

	Readings			Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	-19.303	399.317	mmho-m	-20.659	397.495	mmho-m	1.021	1.110
Medium	13.129	489.863	mmho-m	11.823	488.245	mmho-m	1.047	-15.349
Shallow	495.176	2.437	Ohm-m	494.500	2.000	Ohm-m	1.000	-0.436



Dataset:	run2/pass6
Total Length:	20.90 ft
Total Weight:	345.00 lb
O.D.	4.00 in

MV Geophysical

FLOWMETER LOG

Company Diversified Drilling Corp.
Well Ave Maria P-3
Field Ave Maria University
County Collier
State/Prv Florida

Company Diversified Drilling Corporation
Well Ave Maria P-3
Field Ave Maria University
County Collier State/Prv Florida
Location Ave Maria WWTP & WTP
CH2M Hill, Inc.

Other Services XY/GR, DIL,FCT, VIDEO

Permanent Datum	G.L.	Elevation
Log Measured From	G.L.	
Drilling Measured From	G.L.	

Elevation: K.B. / D.F. / G.L.

Date	18-AUG-2004
Run Number	TWO
Depth Driller	78'
Depth Logger	77'
Bottom Logged Interval	77'
Top Log Interval	30'
Open Hole Size	11.25"
Type Fluid	WATER
Density / Viscosity	NA/NA
Max. Recorded Temp.	na
Estimated Cement Top	NA
Time Well Ready	10:00 8/18/04
Time Logger on Bottom	12:00 8/18/04
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller C.Miller
Witnessed By	C.Ivery (CH2M) Ralph (DDC)

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	20'	200'				
TWO	11.25"	50'	78'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String	12" PVC	12" ID	SURFACE	50'
Production String				
Liner				

Invoice No. 2004119 P.O. #: Job No.: * FIELD PRINT *

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

STATIC and DYNAMIC down passes were made at 50 fpm.

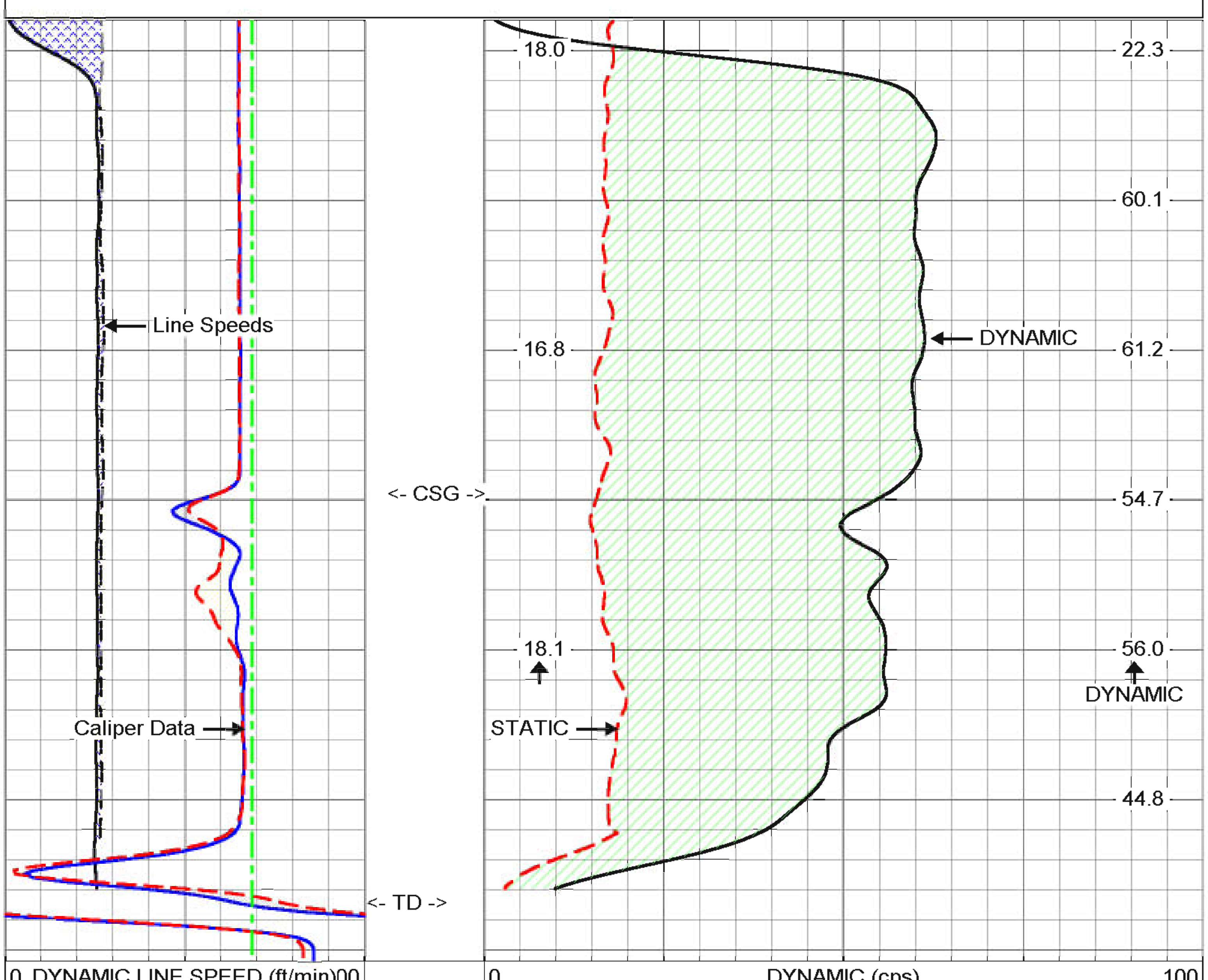
3 Stations were performed.

Q =~1,050 gpm

MV Geophysical — S/D DOWN @ 50 fpm

Database File: avemp-3.db
Dataset Pathname: run2/SD50
Presentation Format: QGG2
Dataset Creation: Wed Aug 18 14:59:32 2004
Charted by: Depth in Feet scaled 1:120

0 DYNAMIC LINE SPEED (ft/min)00 | 0 DYNAMIC (cps) 100
0 STATIC LINE SPEED (ft/min)200 | 0 STATIC (cps) 100
25 X-CALIPER (in) 5
25 Y CALIPER (in) 5
25 BIT SIZE (in) 5

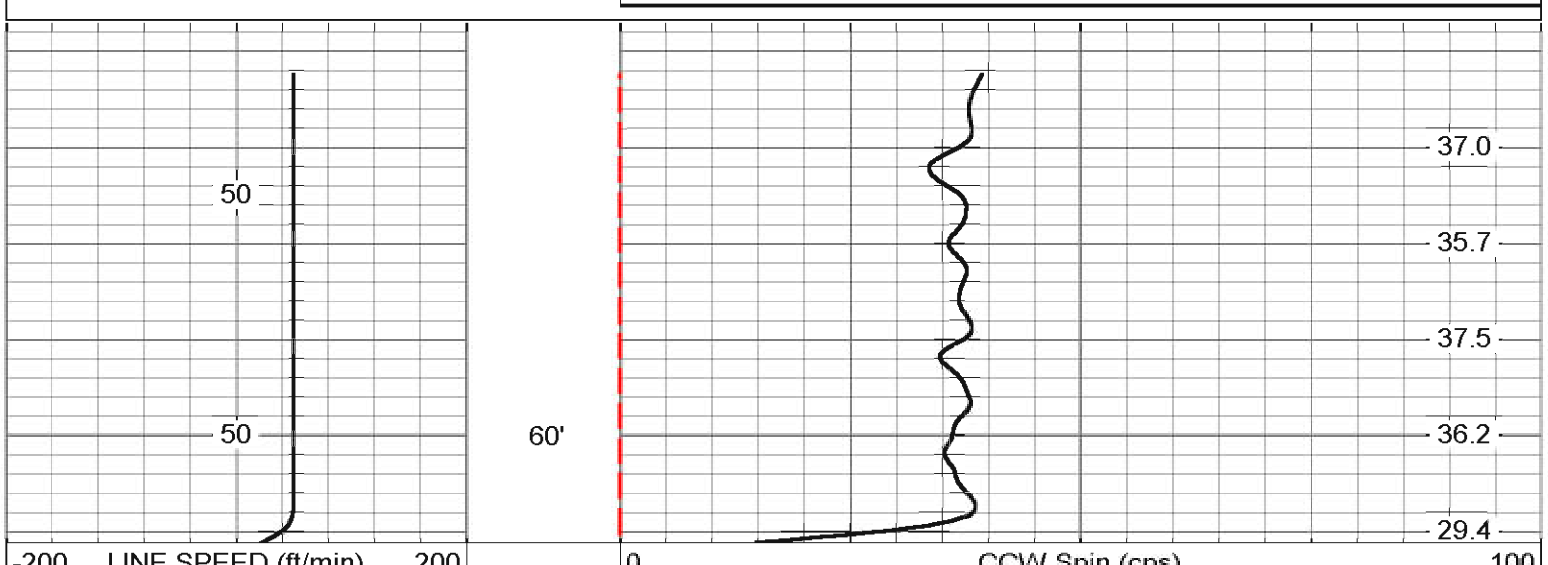


0 DYNAMIC LINE SPEED (ft/min)00 | 0 DYNAMIC (cps) 100
0 STATIC LINE SPEED (ft/min)200 | 0 STATIC (cps) 100
25 X-CALIPER (in) 5
25 Y CALIPER (in) 5
25 BIT SIZE (in) 5

MV Geophysical — Station #3: 60'

Database File: avemp-3.db
Dataset Pathname: run2/pass23
Presentation Format: FLOW
Dataset Creation: Wed Aug 18 13:06:25 2004 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240

-200 LINE SPEED (ft/min) 200 | 0 CCW Spin (cps) 100
0 CW Spin (cps) 100

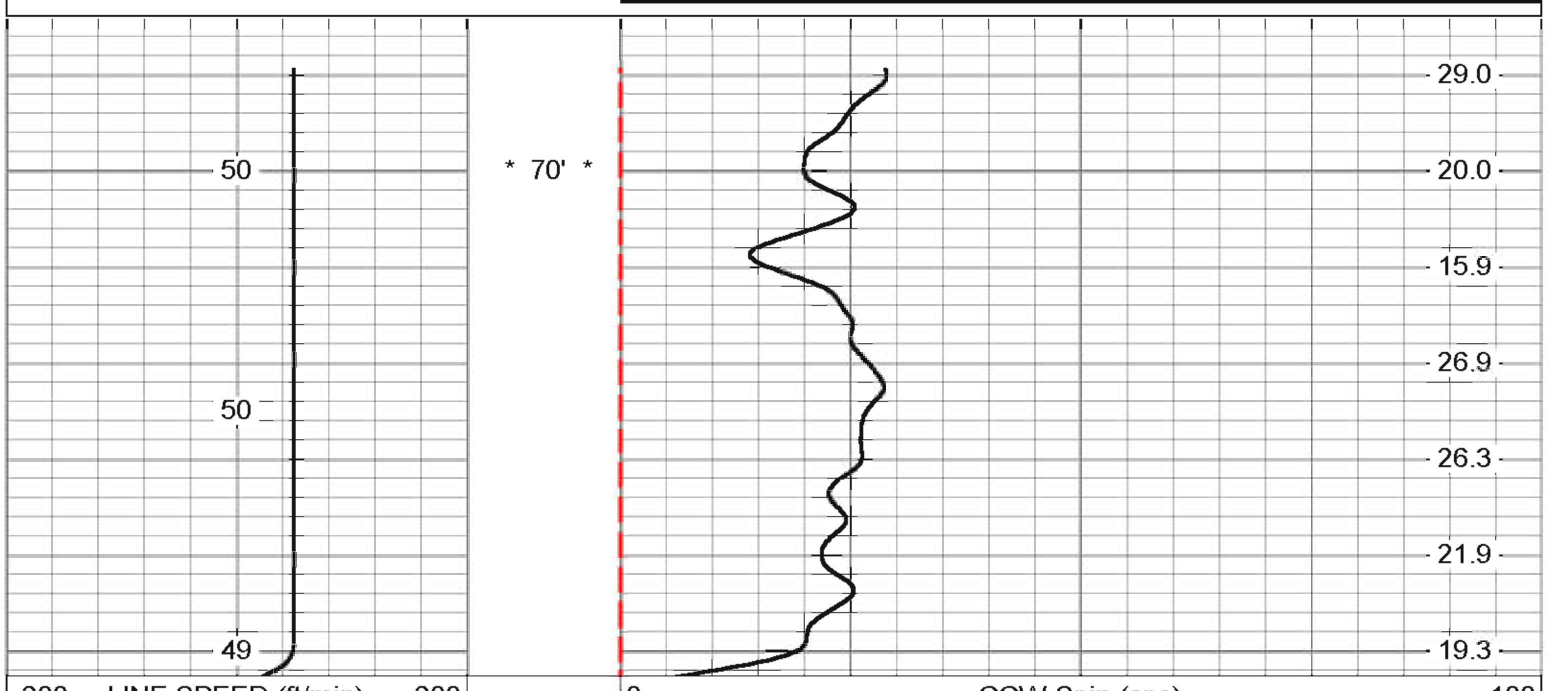


-200 LINE SPEED (ft/min) 200 | 0 CCW Spin (cps) 100
0 CW Spin (cps) 100

MV Geophysical — Station #2: 70'

Database File: avemp-3.db
Dataset Pathname: run2/pass22
Presentation Format: FLOW
Dataset Creation: Wed Aug 18 13:04:34 2004 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240

-200 LINE SPEED (ft/min) 200 | 0 CCW Spin (cps) 100
0 CW Spin (cps) 100

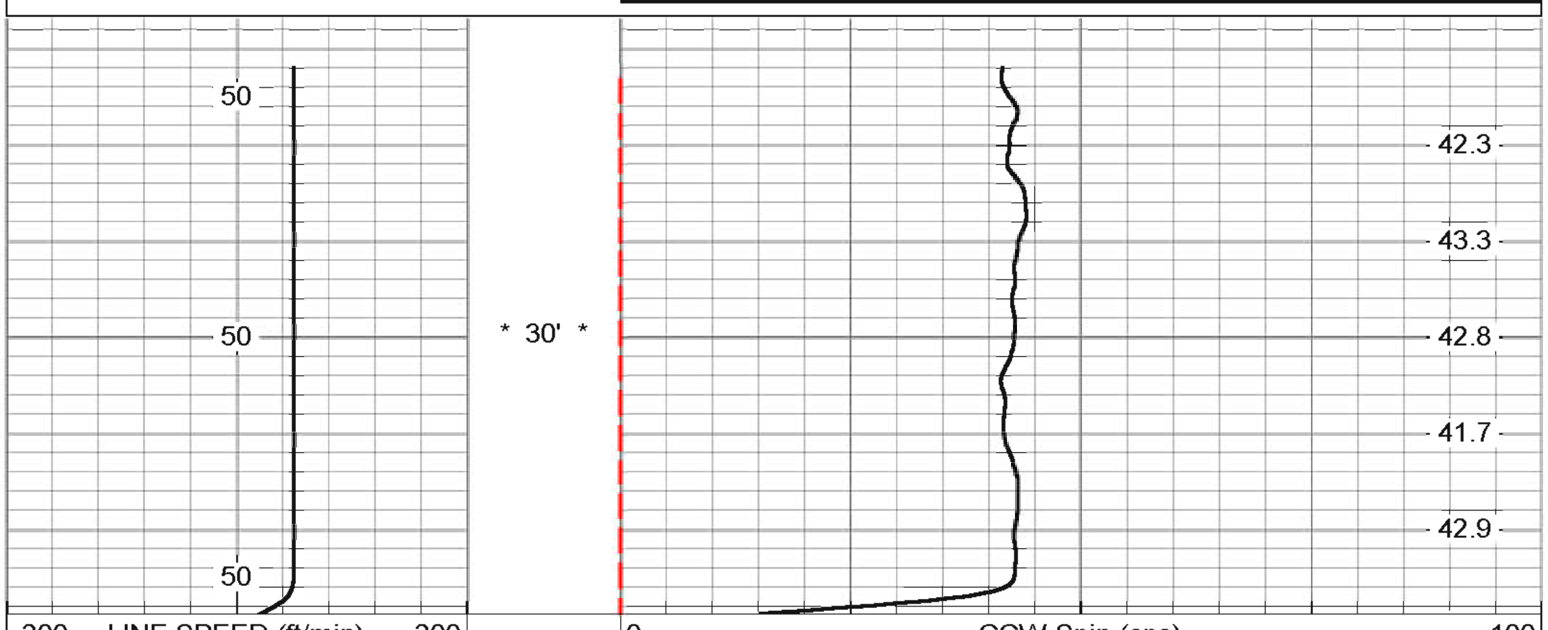


-200 LINE SPEED (ft/min) 200 | 0 CCW Spin (cps) 100
0 CW Spin (cps) 100

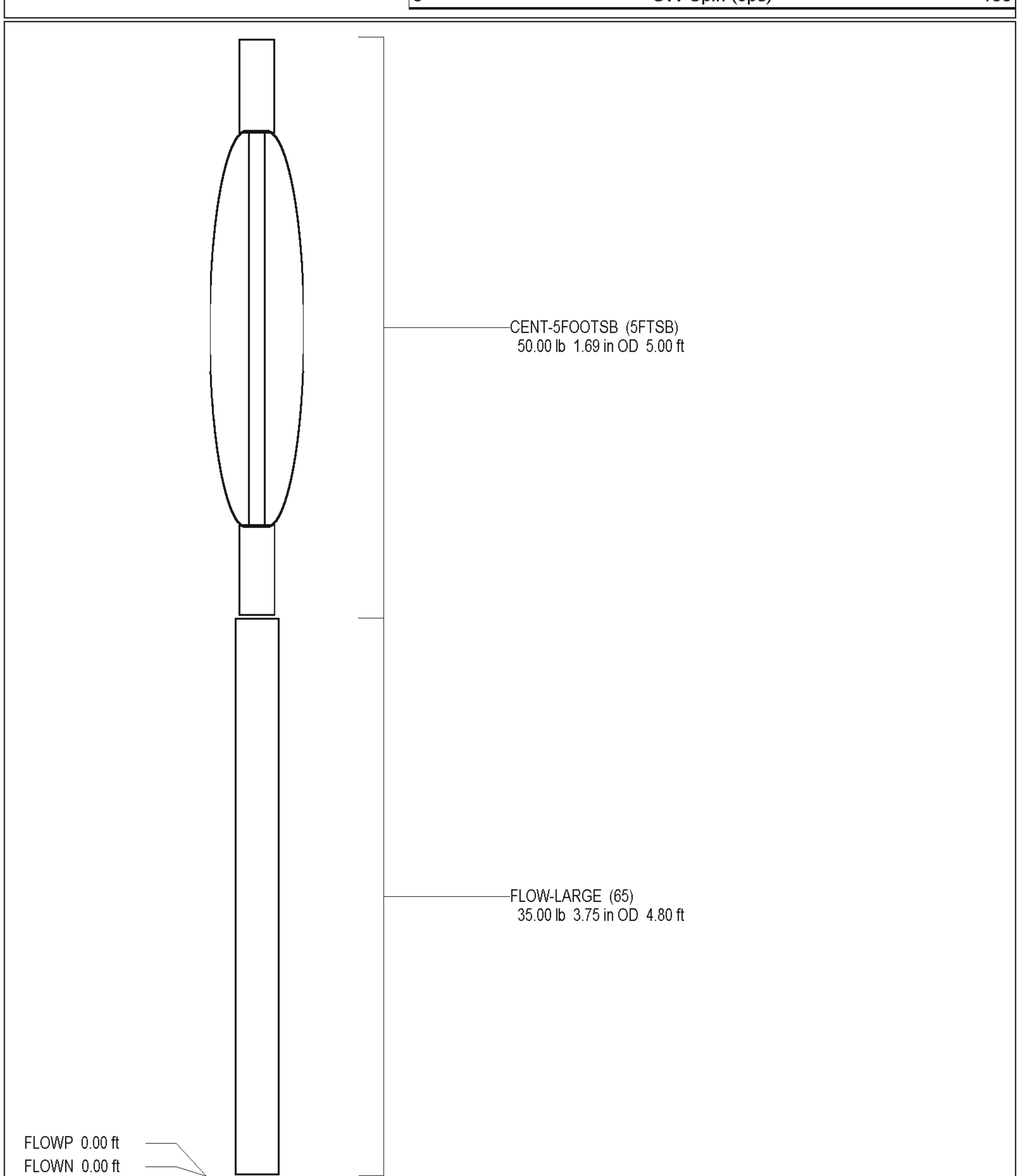
MV Geophysical — Station #1: 30'

Database File: avemp-3.db
Dataset Pathname: run2/pass17
Presentation Format: FLOW
Dataset Creation: Wed Aug 18 12:58:12 2004 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240

-200 LINE SPEED (ft/min) 200 | 0 CCW Spin (cps) 100
0 CW Spin (cps) 100



-200 LINE SPEED (ft/min) 200 | 0 CCW Spin (cps) 100
0 CW Spin (cps) 100



Dataset: run2/pass23
Total Length: 9.80 ft
Total Weight: 85.00 lb
O.D. 3.75 in

MV Geophysical

FLUID CONDUCTIVITY TEMPERATURE LOG

Company Diversified Drilling Corp.
Well Ave Maria P-3
Field Ave Maria University
County Collier
State/Prv Florida

Company	Diversified Drilling Corporation
Well	Ave Maria P-3
Field	Ave Maria University
County	Collier State/Prv Florida
Location	Ave Maria WWTP & WTP CH2M Hill, Inc.

Other Services: XY/GR, DIL,FLOW, VIDEO

		Elevation
Permanent Datum	G.L.	K.B.
Log Measured From	G.L.	D.F.
Drilling Measured From	G.L.	G.L.

Date	18-AUG-2004
Run Number	TWO
Depth Driller	78'
Depth Logger	77'
Bottom Logged Interval	77'
Top Log Interval	50'
Open Hole Size	11.25"
Type Fluid	WATER
Density / Viscosity	NA/NA
Max. Recorded Temp.	na
Estimated Cement Top	NA
Time Well Ready	10:00 8/18/04
Time Logger on Bottom	11:15 8/18/04
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller
Witnessed By	C.Ivery (CH2M)

Borehole Record

Run Number	Bit	From	To
ONE	7.875"	20'	200'
TWO	11.25"	50'	78'

Tubing Record

Size	Weight	From	To

Casing Record

	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String	12" PVC	12" ID	SURFACE	50'
Production String				
Liner				

Ralph (DDC)

Invoice No.	2004120
P.O. #:	
Job No.:	* FIELD PRINT *

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Comments

STATIC and DYNAMIC DOWN passes were performed.
Cw=712.2 uS/cm @ 78.1 degF (Dynamic Sample). Q =~1,050 gpm.
FLUID RESISTIVITY CALIBRATION REPORT (Performed: 16-AUG-04 13:00)

OHM-M	CPS
335.0	4565.33
820.1	4400.12
1525.1	3890.11

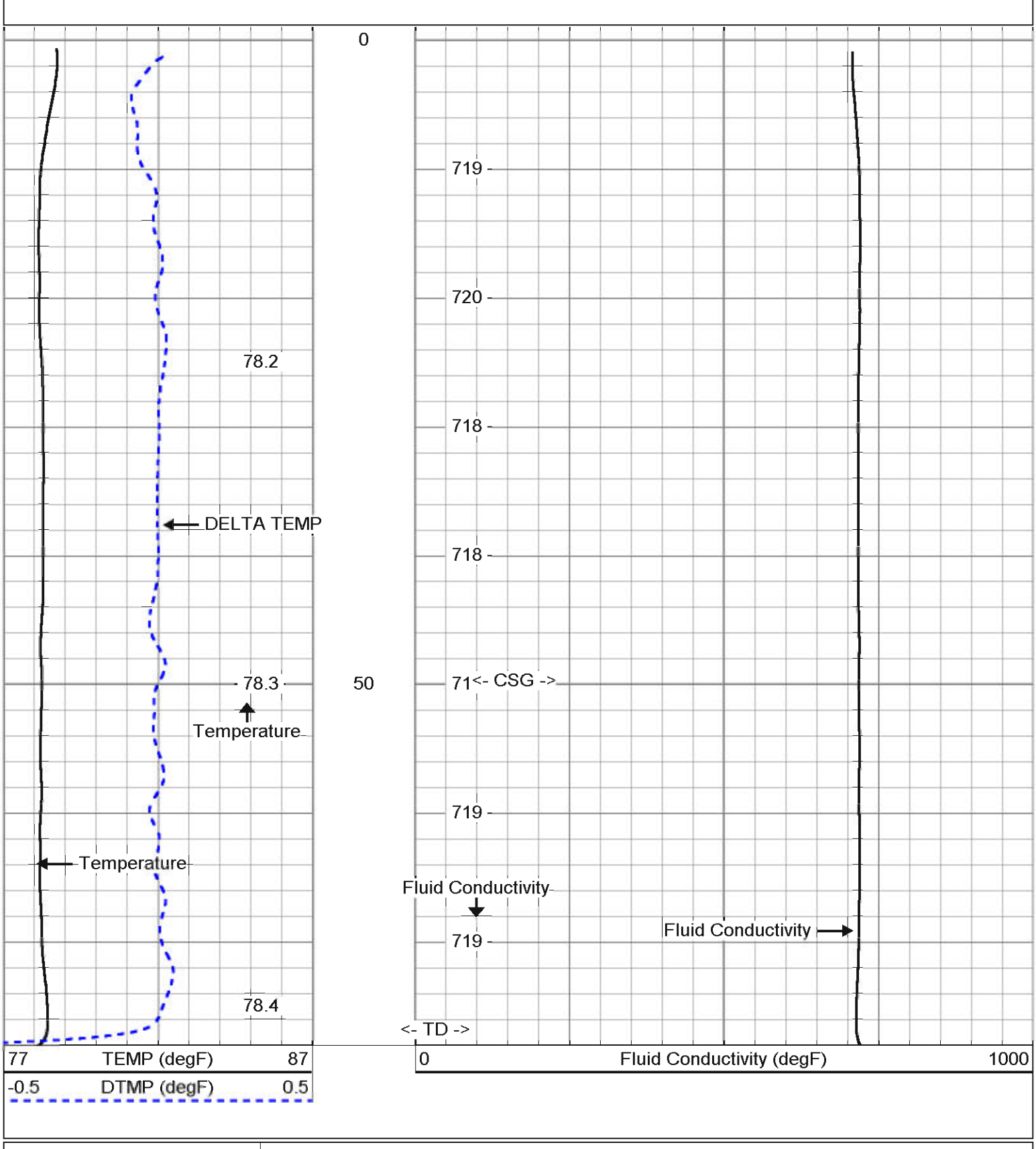
TEMPERATURE CALIBRATION REPORT (Performed: 16-AUG-04 13:45)

DEG-F	CPS
34.6	2346.14
144.6	6955.44

MV Geophysical

DYNAMIC FCT DOWN

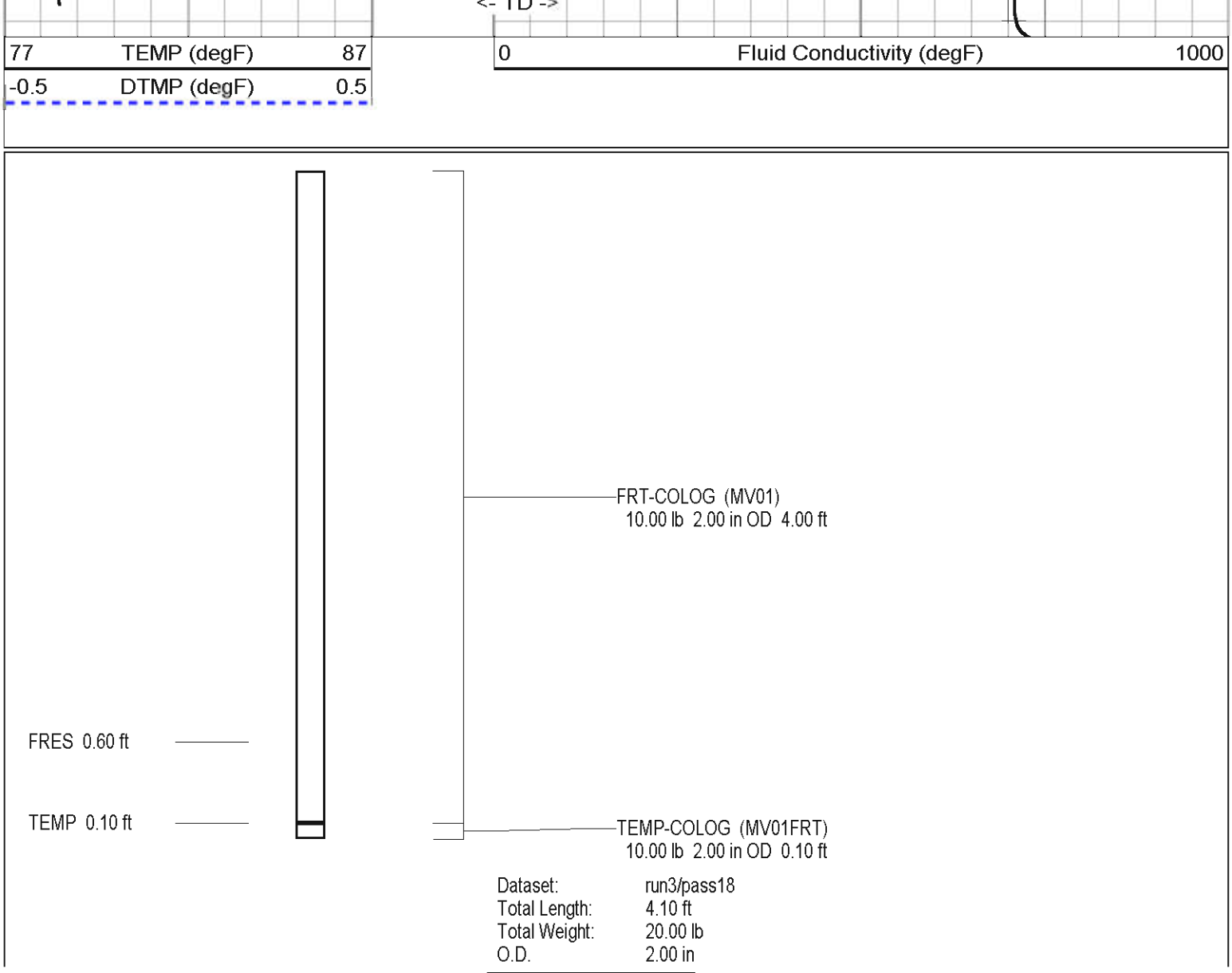
Database File: avemp-3.db
Dataset Pathname: run2/DFCT
Presentation Format: FCTAVE
Dataset Creation: Wed Aug 18 14:30:55 2004
Charted by: Depth in Feet scaled 1:120



MV Geophysical

STATIC FCT DOWN

Database File: avemp-3.db
Dataset Pathname: run2/SFCT
Presentation Format: FCTAVE
Dataset Creation: Wed Aug 18 14:19:09 2004
Charted by: Depth in Feet scaled 1:120



MV Geophysical

X-Y CALIPER GAMMA RAY LOG

Company	Diversified Drilling Corporation
Well	Ave Maria P-3
Field	Ave Maria University
County	Collier
State/Prv	Florida
Location	Ave Maria WWTP & WTP CH2M Hill, Inc.
Other Services	DIL/SP FRT,FLOW VIDEO

Permanent Datum	G.L.	Elevation
Log Measured From	G.L.	
Drilling Measured From	G.L.	

Elevation: K.B. / D.F. / G.L.

Company	Diversified Drilling Corp.
Well	Ave Maria P-3
Field	Ave Maria University
County	Collier
State/Prv	Florida

Date	18-AUG-2004	
Run Number	TWO	
Depth Driller	78'	
Depth Logger	77'	
Bottom Logged Interval	77'	
Top Log Interval	SURFACE	
Open Hole Size	11.25"	
Type Fluid	WATER	
Density / Viscosity	NANA	
Max. Recorded Temp.	na	
Estimated Cement Top	NA	
Time Well Ready	10:00 8/18/04	
Time Logger on Bottom	10:00 8/18/04	
Equipment Number	MVGS-1	
Location	Ft. Myers	
Recorded By	S.Miller	C.Miller
Witnessed By	C.Ivery (CH2M)	Ralph (DDC)

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	20'	200'				
TWO	11.25"	50'	78'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	20"	0.375" WT	SURFACE	20'
Prot. String	12" PVC	12" ID	SURFACE	50'
Production String				
Liner				

Invoice No.	2004119	P.O. #:	Job No.:	* FIELD PRINT *

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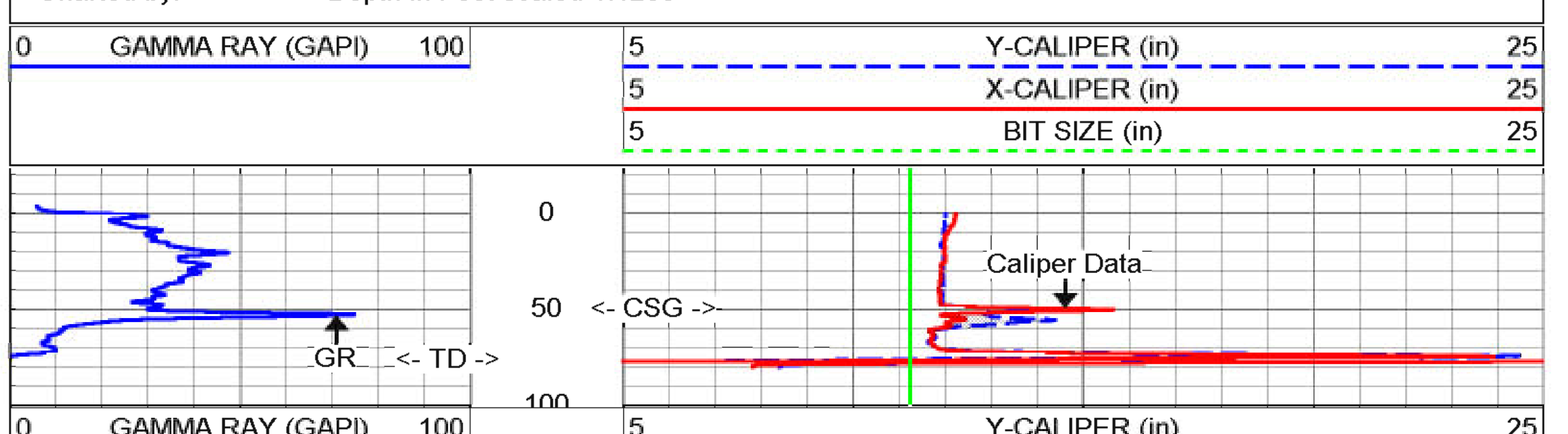
Comments

X-Y Caliper Arm Extensions: 33"

MV Geophysical — MAIN PASS

Database File: avemp-3.db
Dataset Pathname: run2/MAIN
Presentation Format: XY525-1
Dataset Creation: Wed Aug 18 11:50:00 2004
Charted by: Depth in Feet scaled 1:1200

0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25

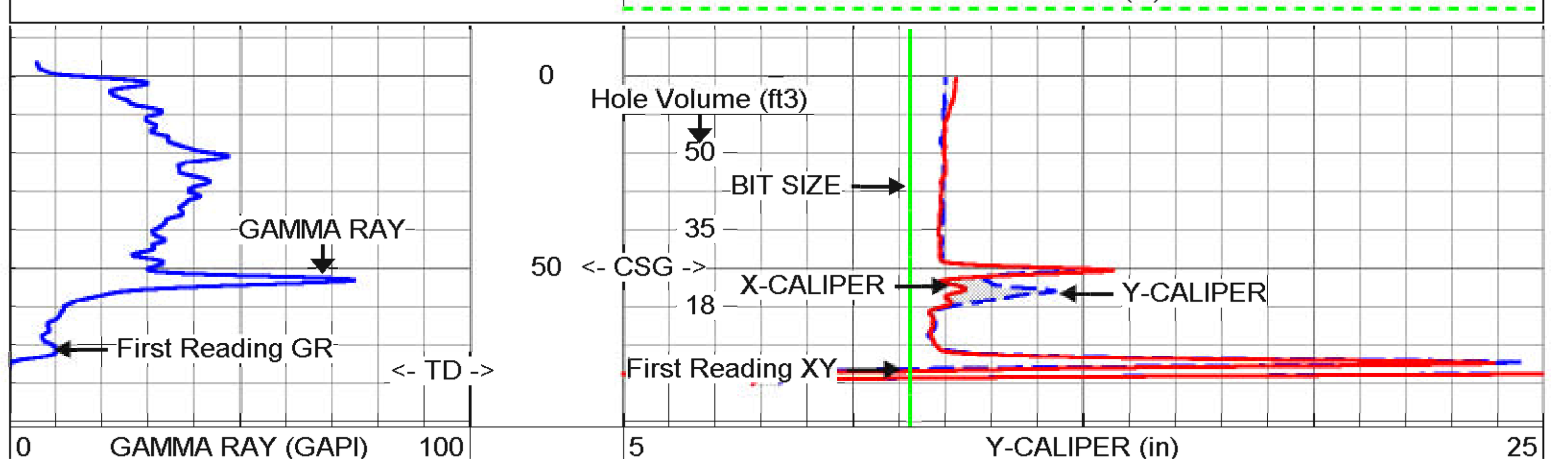


0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25

MV Geophysical — MAIN PASS

Database File: avemp-3.db
Dataset Pathname: run2/MAIN
Presentation Format: XY525-5
Dataset Creation: Wed Aug 18 11:50:00 2004
Charted by: Depth in Feet scaled 1:600

0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25

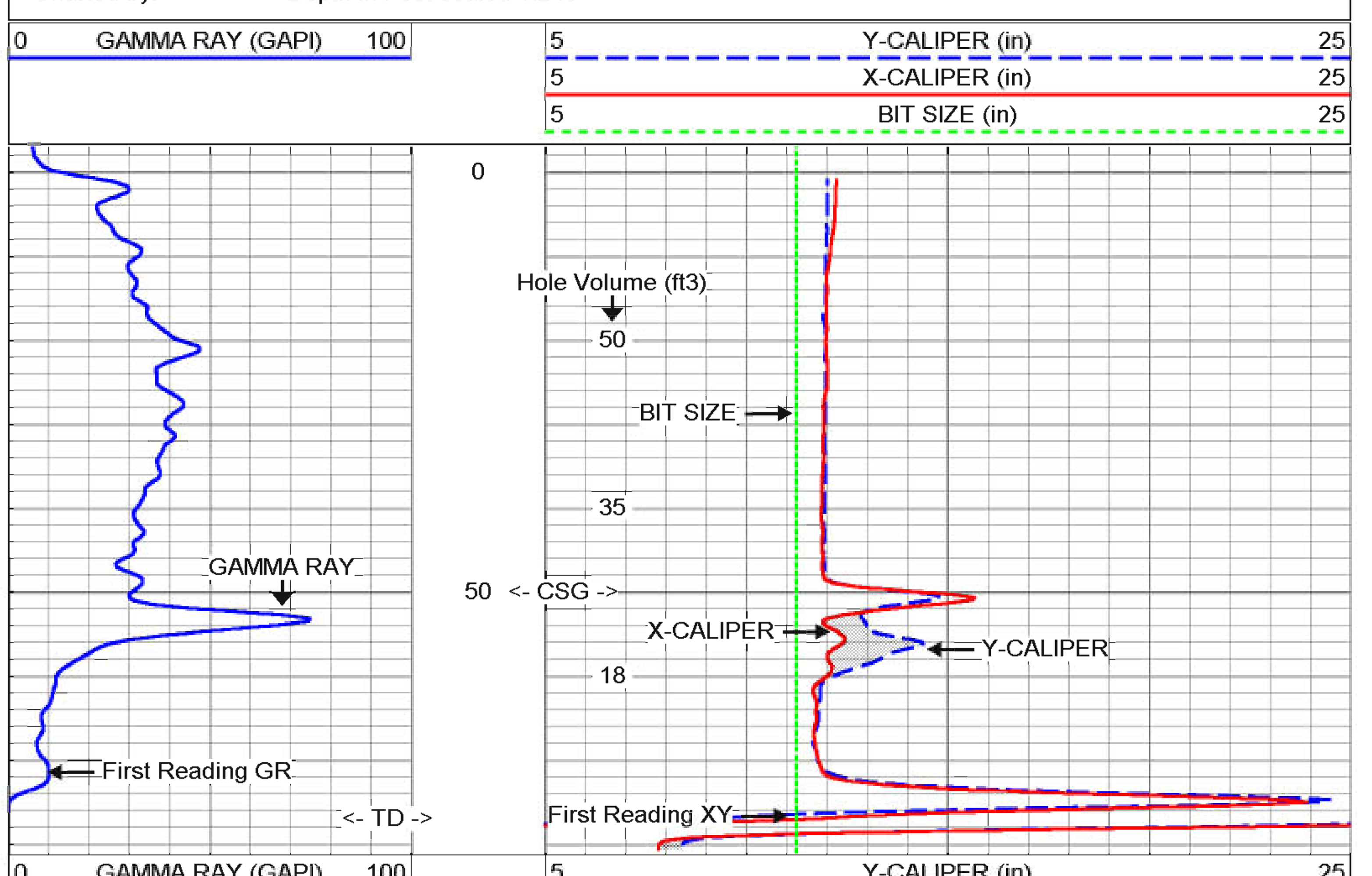


0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25

MV Geophysical — MAIN PASS

Database File: avemp-3.db
Dataset Pathname: run2/MAIN
Presentation Format: XY525-5
Dataset Creation: Wed Aug 18 11:50:00 2004
Charted by: Depth in Feet scaled 1:240

0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25

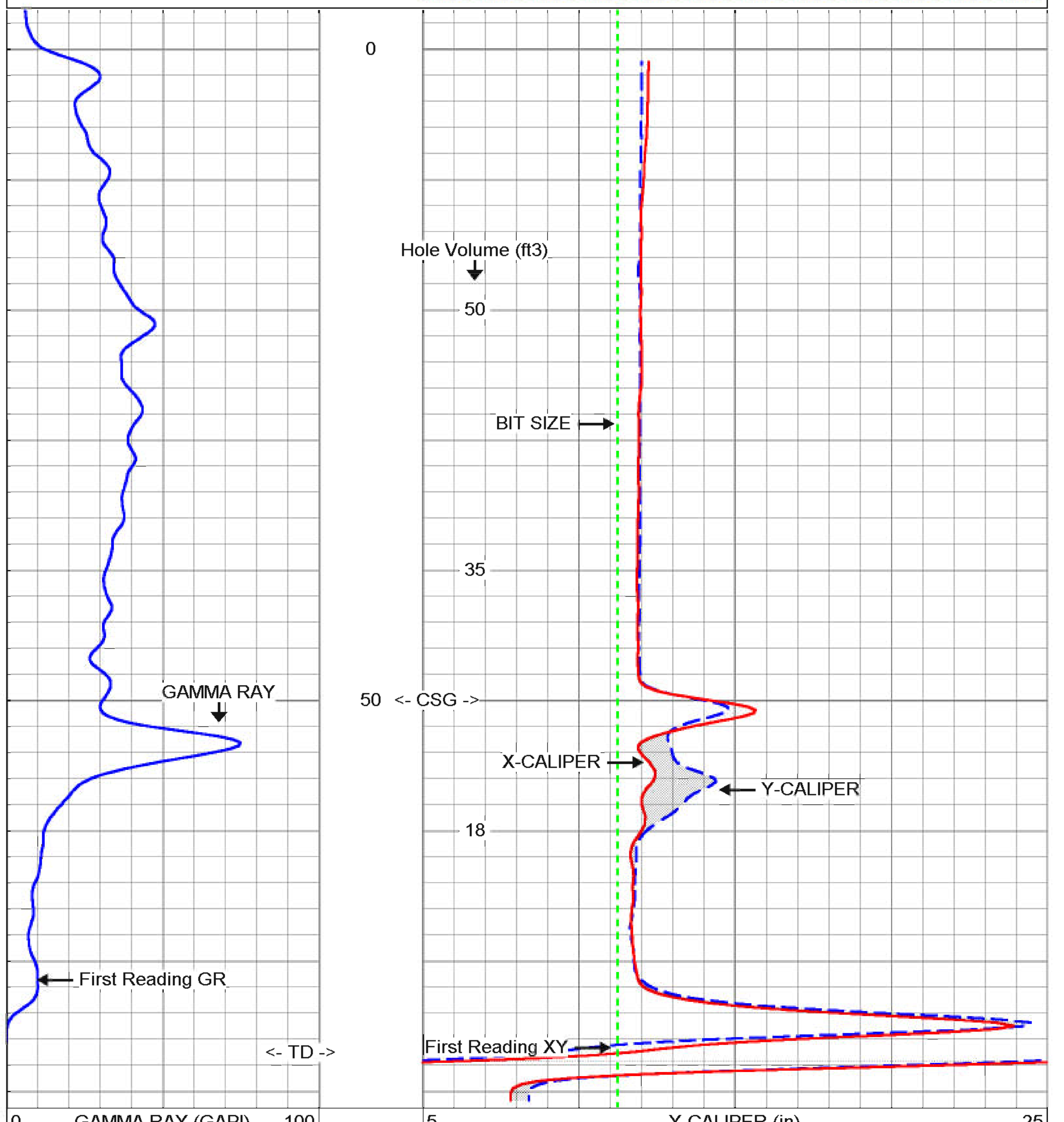


0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25

MV Geophysical — MAIN PASS

Database File: avemp-3.db
Dataset Pathname: run2/MAIN
Presentation Format: XY525-5
Dataset Creation: Wed Aug 18 11:50:00 2004
Charted by: Depth in Feet scaled 1:120

0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25

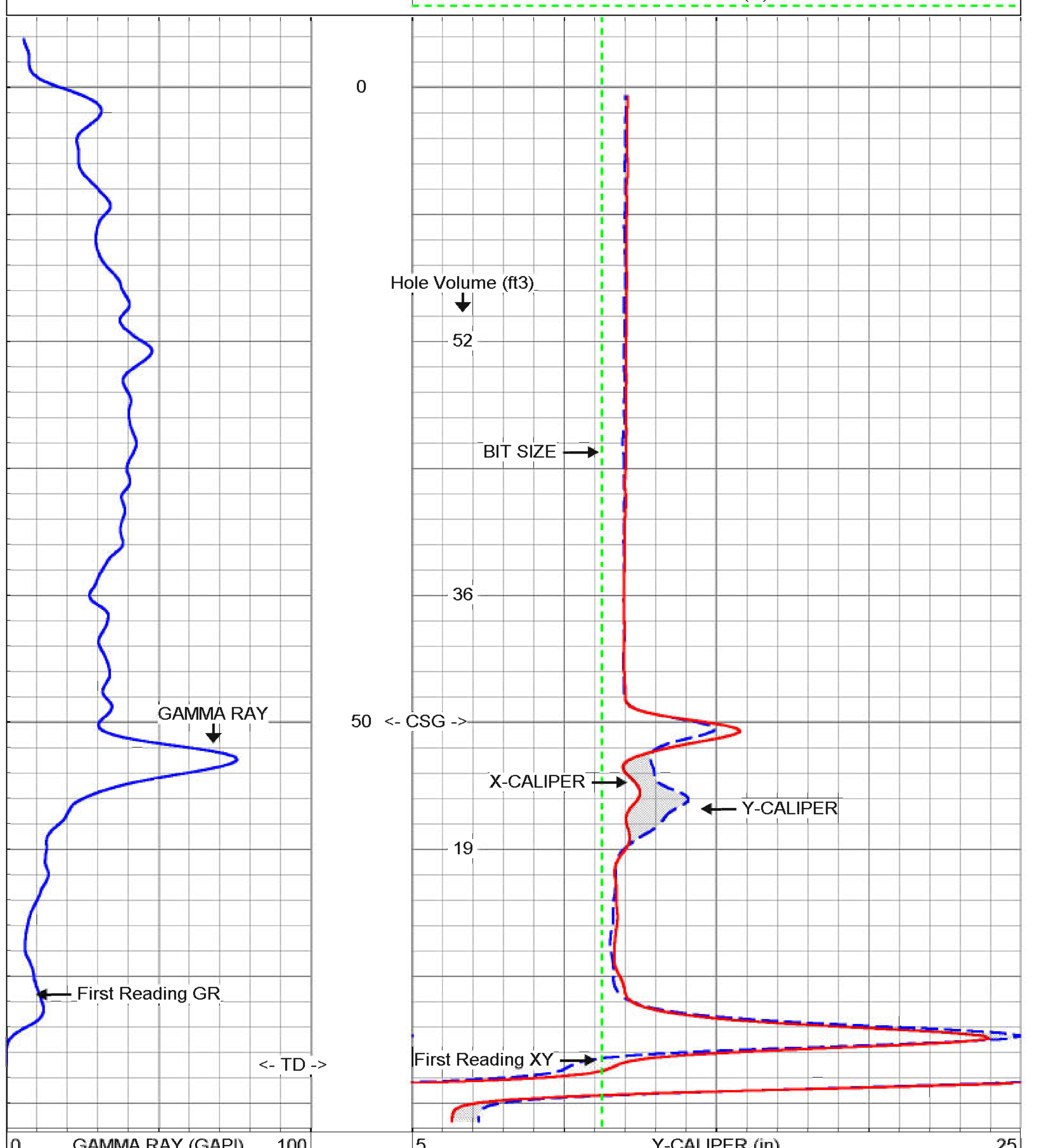


0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25

MV Geophysical — REPEAT SECTION

Database File: avemp-3.db
Dataset Pathname: run2/REPEAT
Presentation Format: XY525-5
Dataset Creation: Wed Aug 18 14:01:43 2004
Charted by: Depth in Feet scaled 1:120

0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25



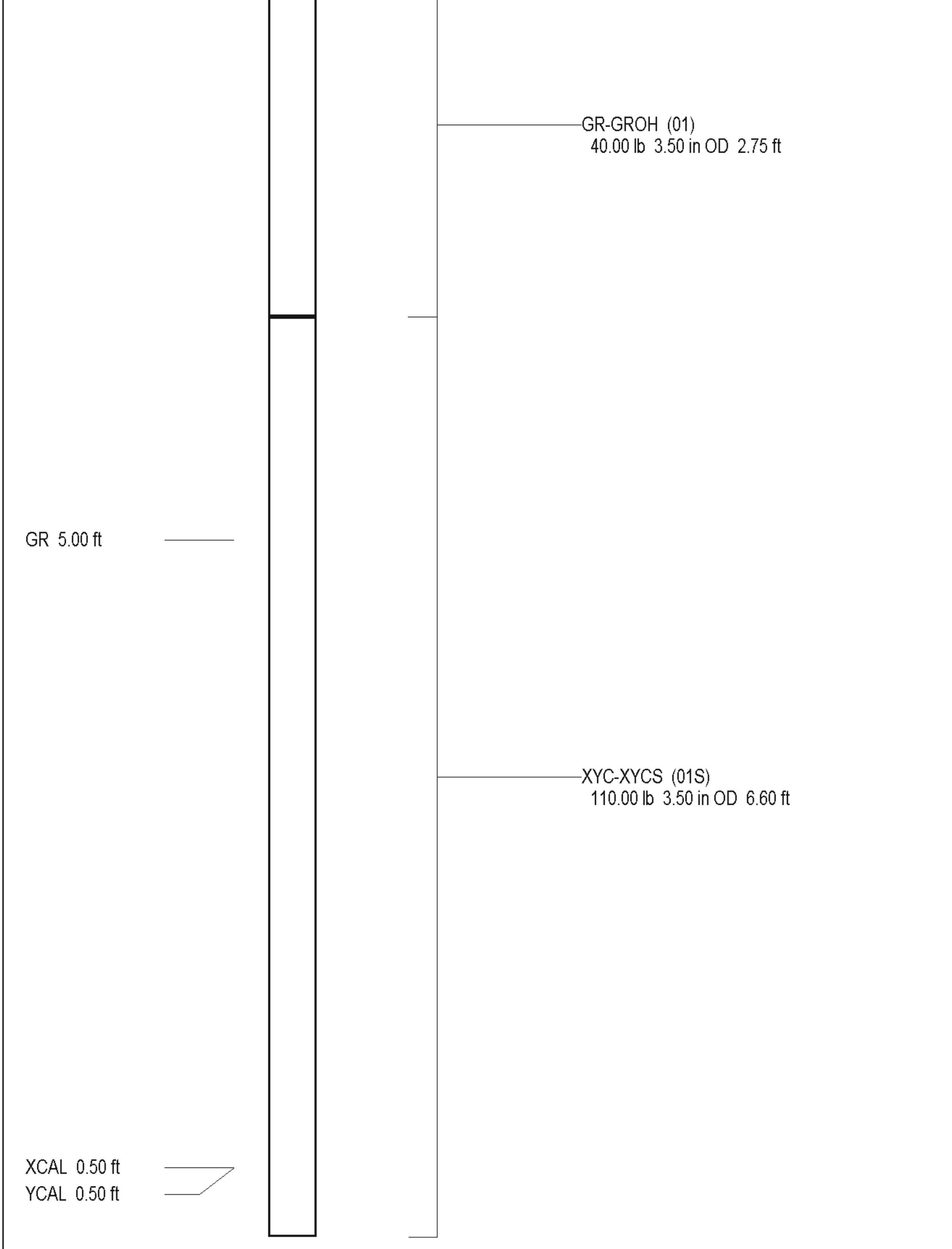
0 GAMMA RAY (GAPI) 100 | 5 Y-CALIPER (in) 25 | 5 X-CALIPER (in) 25 | 5 BIT SIZE (in) 25

XY Caliper Calibration Report

Serial Number:	01S		
Tool Model:	XYCS		
Performed:	Wed Aug 18 10:54:50 2004		
Small Ring:	12	in	
Large Ring:	33	in	
	X Caliper	Y Caliper	
Reading with Small Ring:	557.1	555.91	cps
Reading with Large Ring:	1040.51	1050.31	cps
Gain:	0.0434414	0.0424757	
Offset:	-12.2012	-11.6127	

Gamma Ray Calibration Report

Serial Number:	01	
Tool Model:	GROH	
Performed:	Wed Aug 18 10:44:02 2004	
Calibrator Value:	120	GAPI
Background Reading:	5.635	cps
Calibrator Reading:	124.632	cps
Sensitivity:	1.00843	GAPI/cps



Dataset: run2/pass2
Total Length: 9.35 ft
Total Weight: 150.00 lb
O.D. 3.50 in

APPENDIX F

Video Surveys

Record of Underwater TV Survey

Project: Ave Maria
Well: Well P-1
Survey By: MV Geophysical Surveys, Inc.

Survey Date: 09/14/2004
Witnessed By: Carlton Ivery/CH2MHILL
Reviewed By: Pete Larkin/CH2MHILL
Remarks: All depths referenced to land surface

Well Depth: 83 feet bls
Survey Interval: 61-83 feet bls
Casing: 12-inch SDR-17 PVC to 61 feet bls
Borehole: 12-inch to 83 feet bls

Depth in Feet/Inches From	To	Observations
0	6' 8"	Inside casing.
6' 8"	6' 8"	Enter water.
6' 8"	22	Casing wall no problems noted, note pump suction hose.
22	22	End of pump intake.
22	42	Casing wall, no problems noted.
42	42	Casing joint, no problems noted.
42	61	Casing wall, no problems noted.
61	61	End of casing, cement plug noted around base of casing.
61	63	Enter borehole, note cement sleeve on one side of borehole wall.
63	79	Gauged borehole, limestone formation, vuggy.
79	80	Decreased visibility.
80	81	No visibility.
81	81	Total depth of borehole.

End of Video

Record of Underwater TV Survey

Project: Ave Maria
Well: Well P-2
Survey By: MV Geophysical Surveys, Inc.

Survey Date: 08/27/2004
Witnessed By: Carlton Ivery/CH2MHILL
Well Depth: 83 feet bls
Survey Interval: 0-83 feet bls

Reviewed By: Pete Larkin/CH2MHILL
Remarks: All depths referenced to land surface
Casing: 12-inch PVC SDR-17 to 59 feet bls
Borehole: 12-inch to 83 feet bls

Depth in Feet From	To	Observations
0	5' 6"	Inside casing.
5' 6"	5' 6"	Enter water.
5' 6"	18' 8"	Casing wall, no problems noted, note pump intake hose.
18' 8"	18' 8"	Casing joint, no problems noted.
18' 8"	19	Casing wall, no problems noted.
19	19	End of pump intake.
19	39	Casing wall, no problems noted.
39	39	Casing joint, no problems noted
39	59	Casing wall, no problems noted.
59	59	End of casing. Cement plug noted around base of casing.
59	74	Enter borehole, gauged, vuggy, limestone formation.
74	76	Decreased visibility.
76	80	No visibility.
80	80	Total depth of borehole.

End of Video

Record of Underwater TV Survey

Project: Ave Maria
Well: P-3
Survey By: MV Geophysical Surveys, Inc.

Survey Date: 09/14/2004
Witnessed By: Carlton Ivery/CH2MHILL

Well Depth: 70 feet bls
Survey Interval: 0-70 feet bls

Reviewed By: Pete Larkin/CH2MHILL
Remarks: All depths referenced to land surface
Borehole viewed after back-plugging

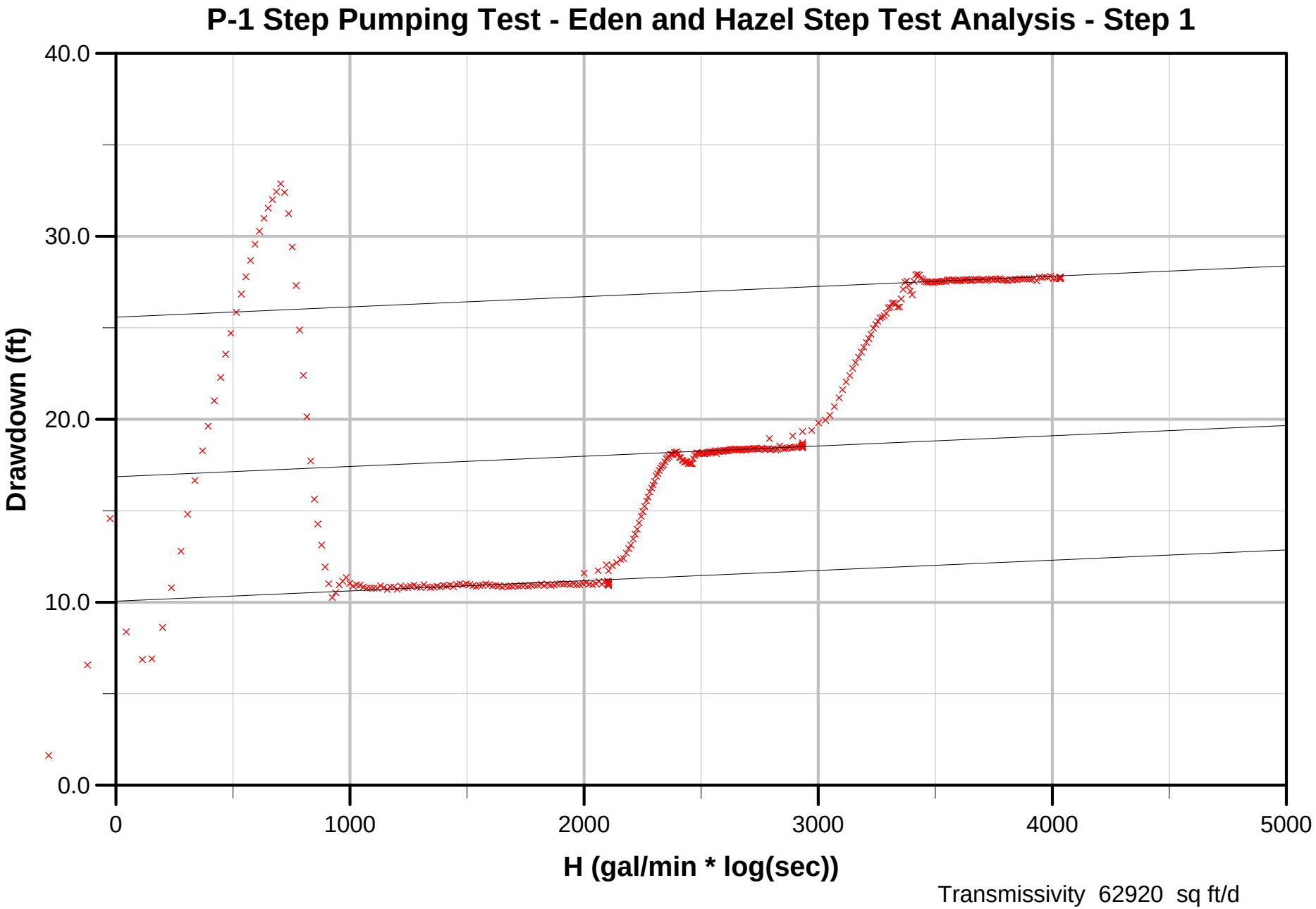
Casing: 12-inch SDR-17 PVC to 50 feet bls
Borehole: 12-inch to 70 feet bls

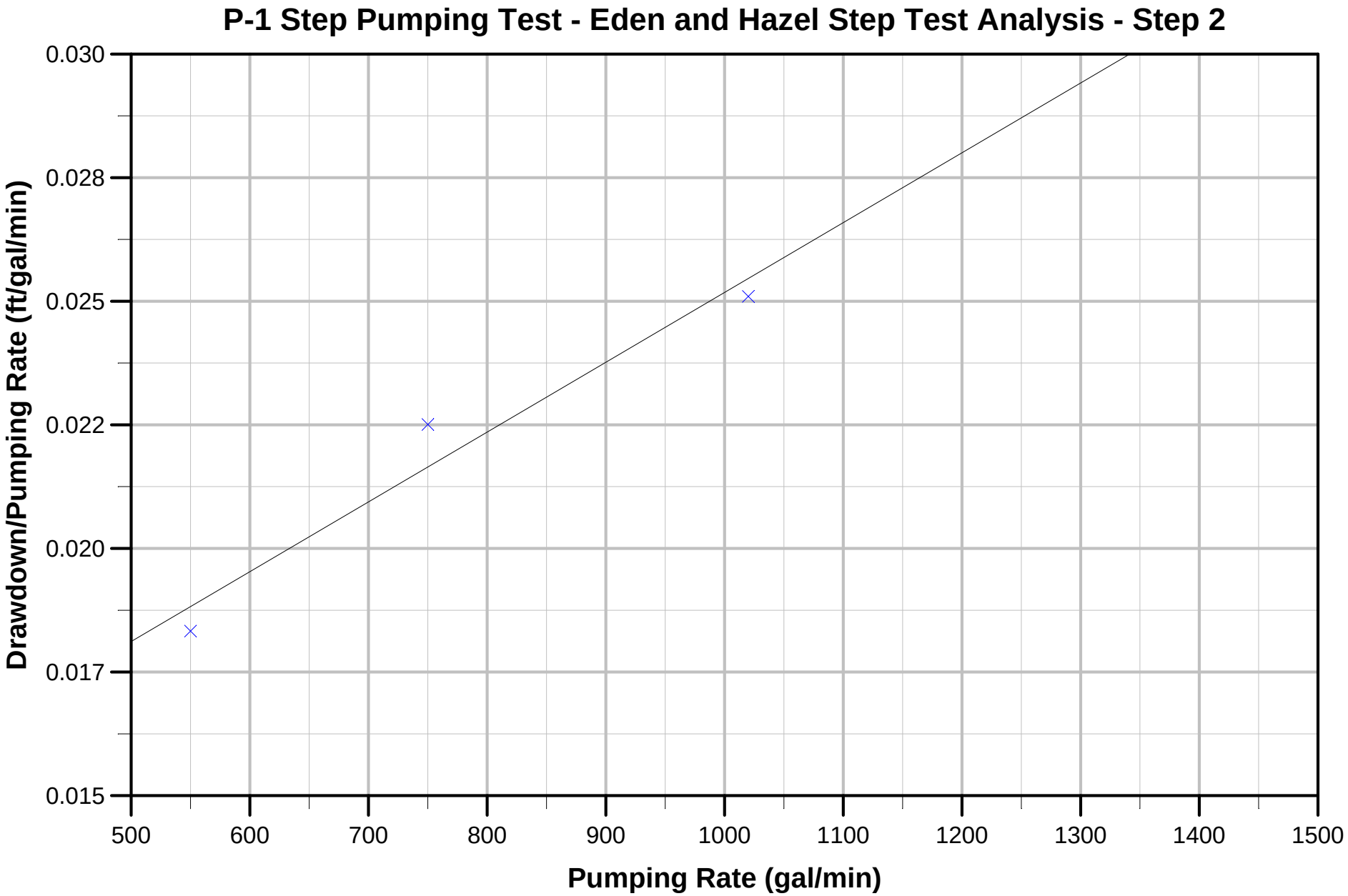
Depth in Feet/Inches From	To	Observations
0	3' 9"	Inside casing.
3' 9"	3' 9"	Enter water.
3' 9"	18' 8"	Low visibility, Inside casing note pump hose.
18' 8"	18' 8"	Casing joint, no problems noted.
18' 8"	38' 8"	Casing wall, no problems noted, visibility improving.
38' 8"	38' 8"	Casing joint, no problems noted.
38' 8"	50	Casing wall, no problems noted.
50	50	End of casing.
50	61	Enter borehole, most of cement plug broken away from base of casing,
		borehle slightly over-gauged, limestone formation, vuggy.
61	70	Gauged borehole, less vuggy.
70	70	Total Depth of borehole, note visiblity remained good at TD.

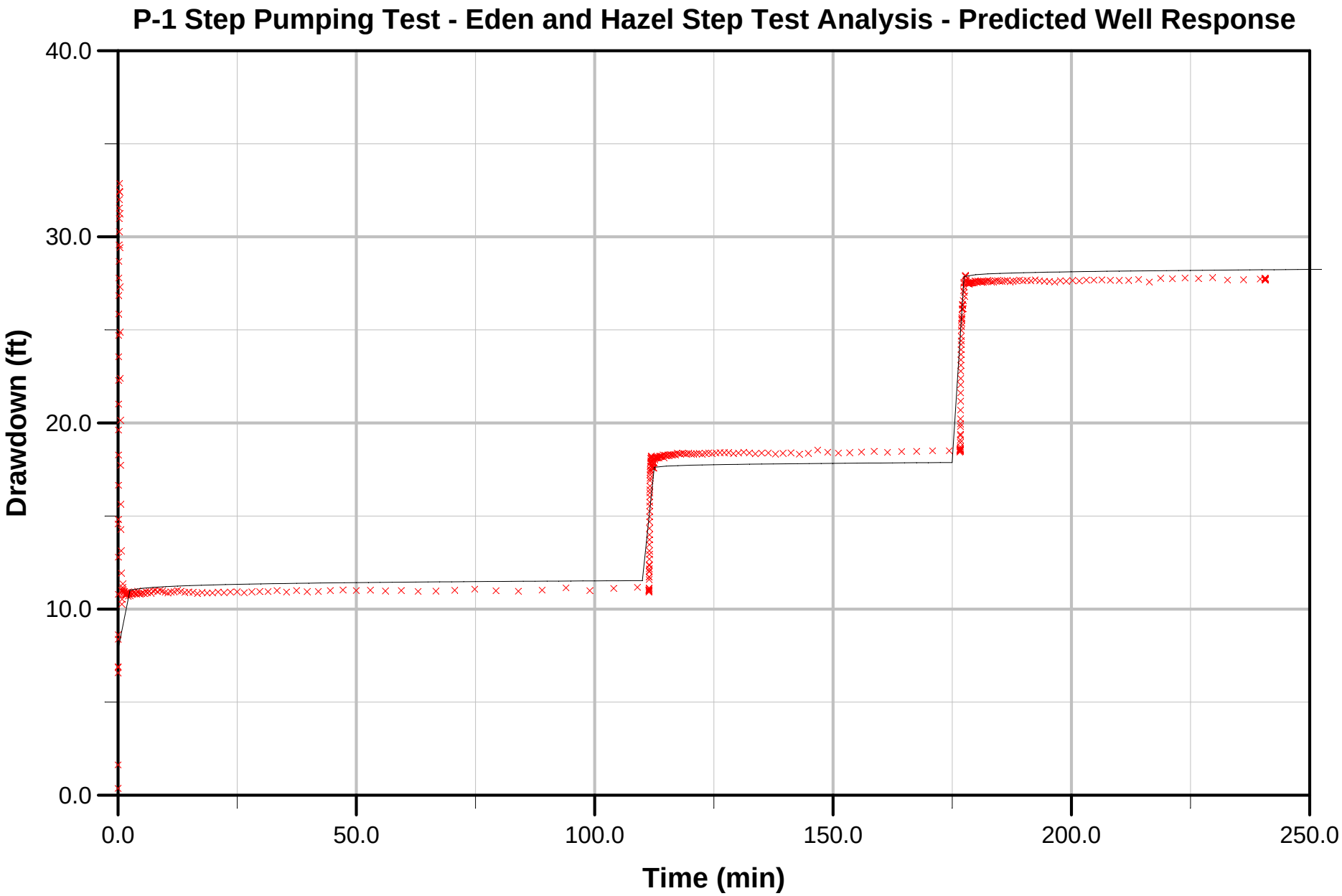
End of video

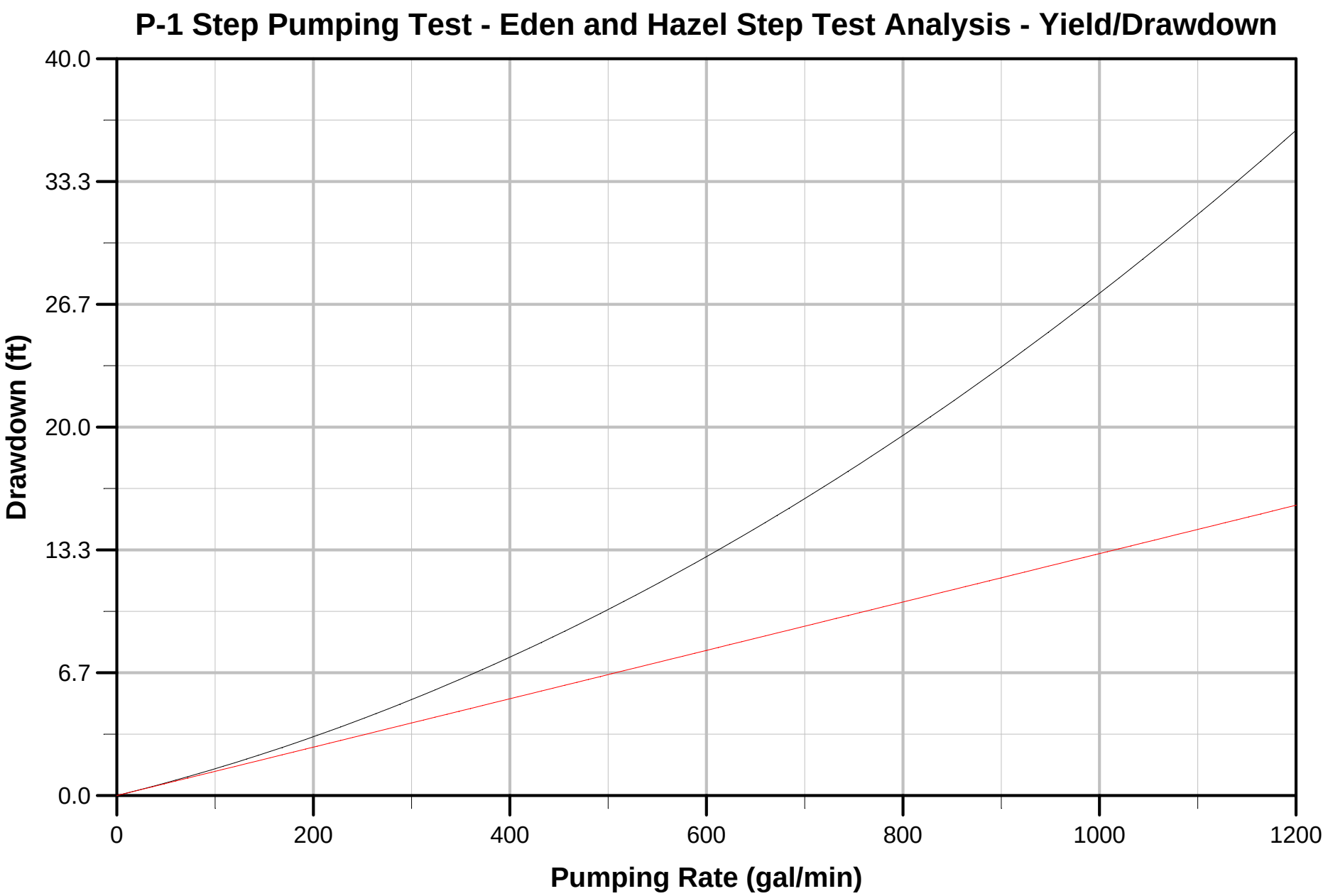
APPENDIX G

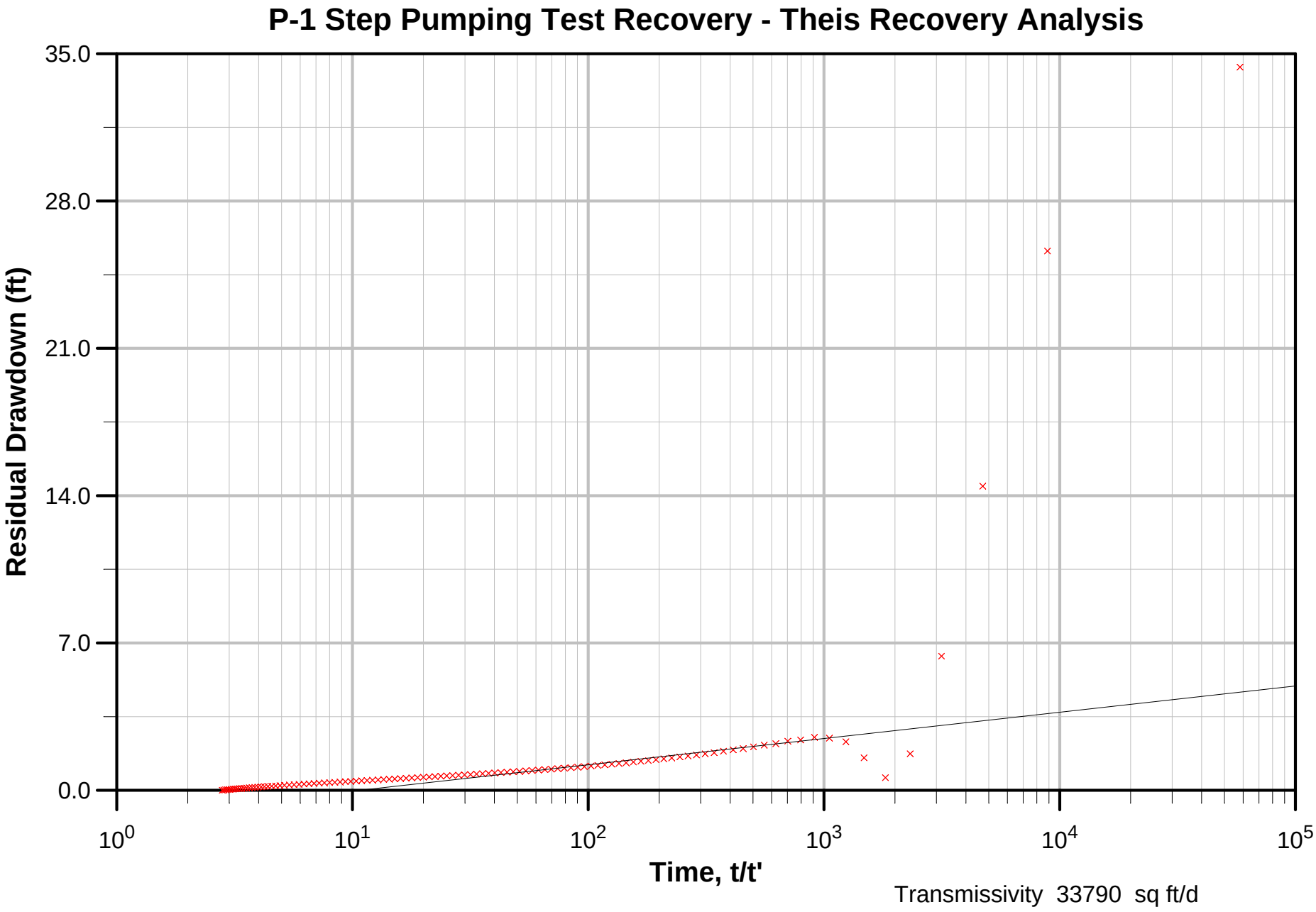
Pumping Test Analyses Plots

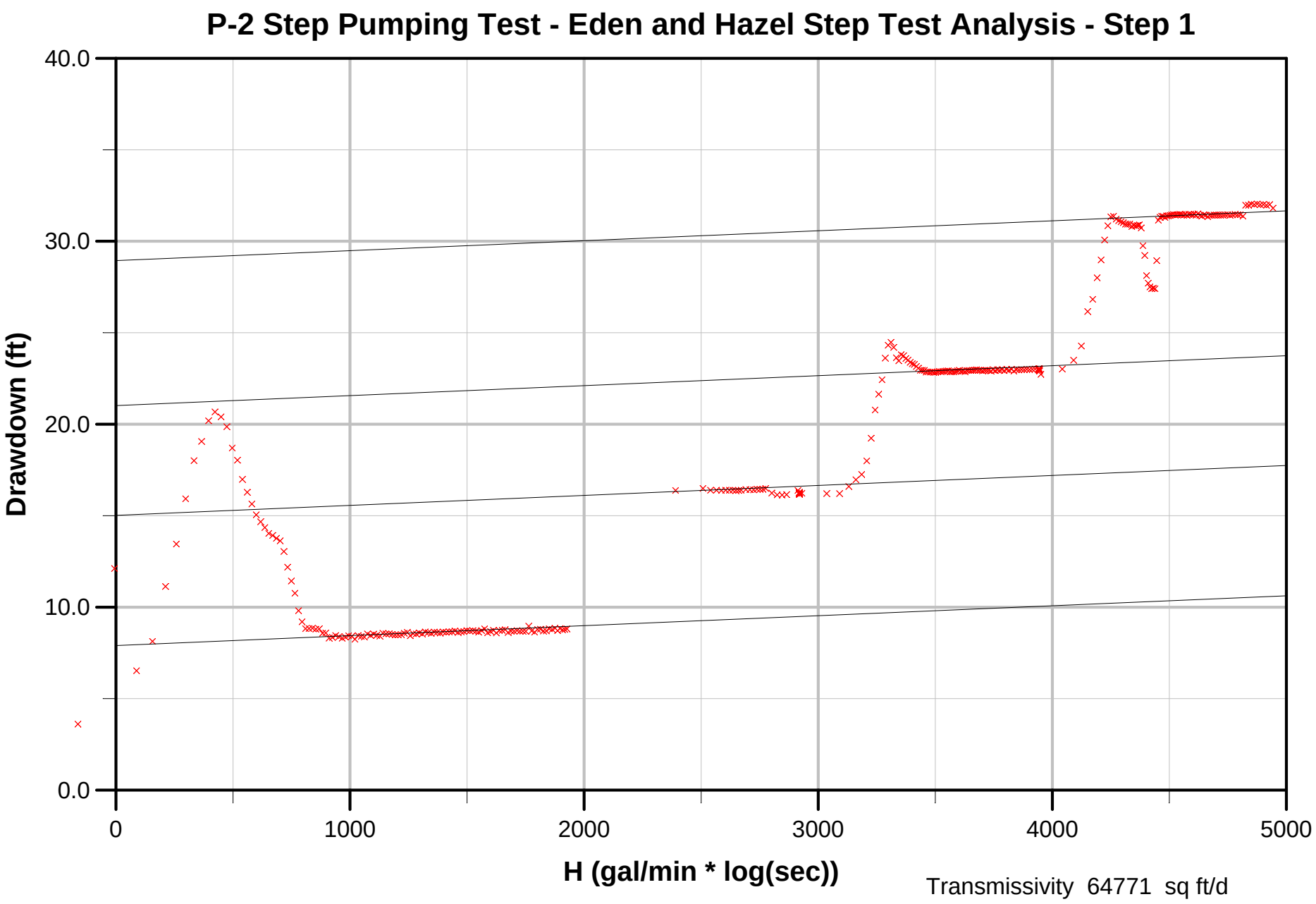

P-1 Step Pumping Test - Eden and Hazel Step Test Analysis - Step 1
Drawdown (ft)
40.0
30.0
20.0
10.0
0.0
0
1000
2000
3000
4000
5000
H (gal/min * log(sec))
Transmissivity 62920 sq ft/d

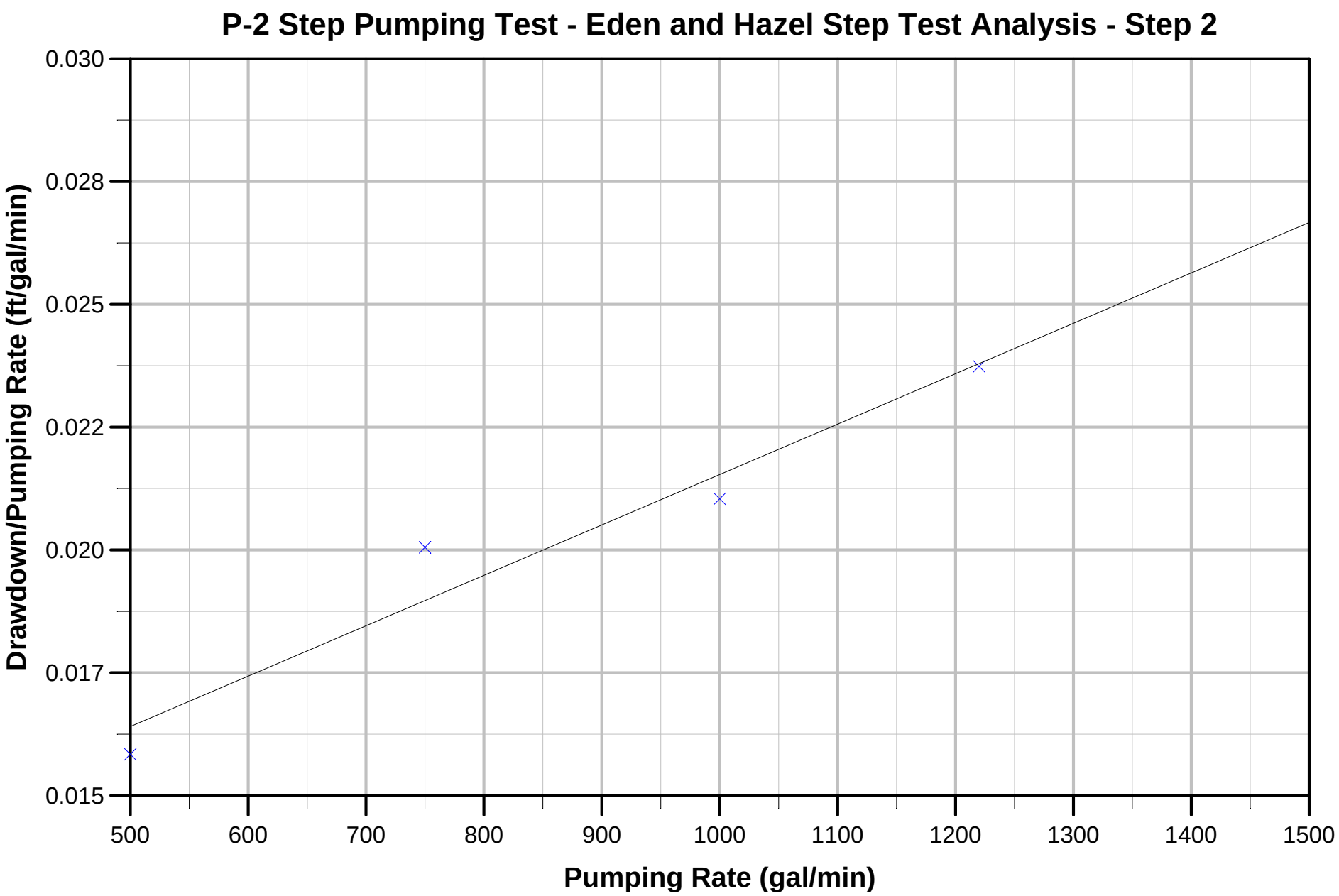

P-1 Step Pumping Test - Eden and Hazel Step Test Analysis - Step 2
Drawdown/Pumping Rate (ft/gal/min)
0.030
0.028
0.025
0.022
0.020
0.017
0.015
500
600
700
800
900
1000
1100
1200
1300
1400
1500
Pumping Rate (gal/min)

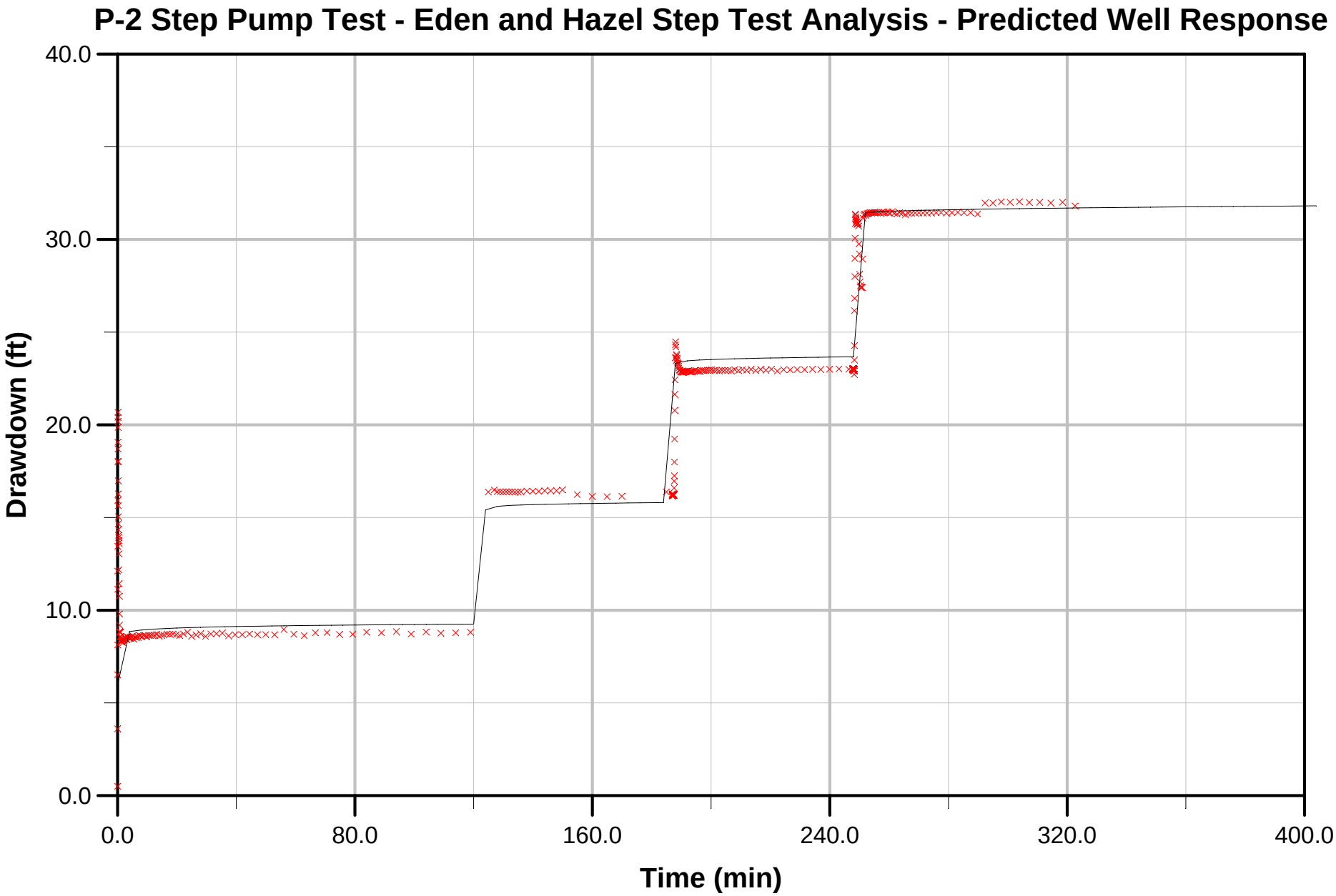

P-1 Step Pumping Test - Eden and Hazel Step Test Analysis - Predicted Well Response
Drawdown (ft)
40.0
30.0
20.0
10.0
0.0
0.0
50.0
100.0
150.0
200.0
250.0
Time (min)

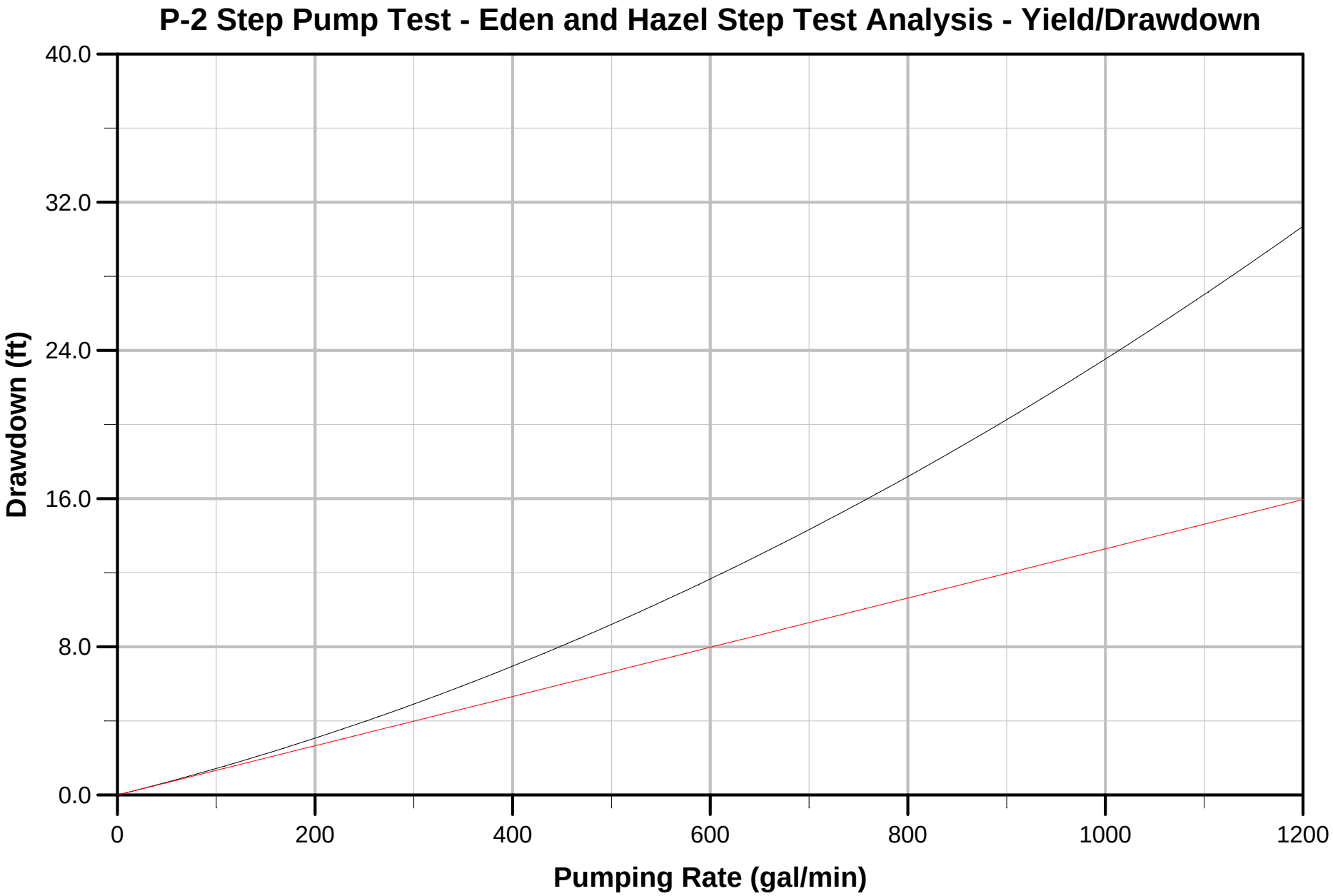

P-1 Step Pumping Test - Eden and Hazel Step Test Analysis - Yield/Drawdown
Drawdown (ft)
40.0
33.3
26.7
20.0
13.3
6.7
0.0
0
200
400
600
800
1000
1200
Pumping Rate (gal/min)

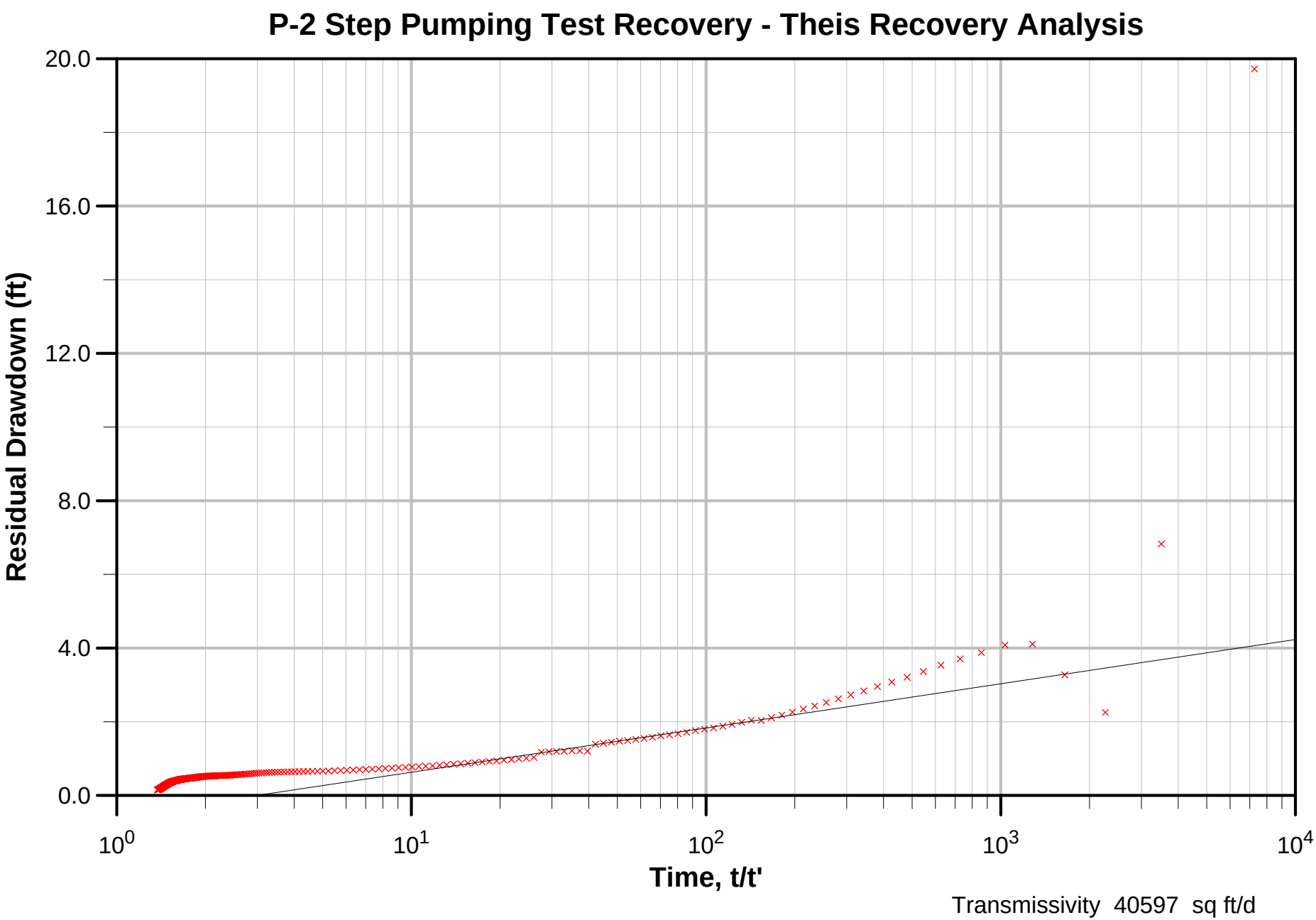

P-1 Step Pumping Test Recovery - Theis Recovery Analysis
Residual Drawdown (ft)
35.0
28.0
21.0
14.0
7.0
0.0
10^0
10^1
10^2
10^3
10^4
10^5
Time, t/t'
Transmissivity 33790 sq ft/d

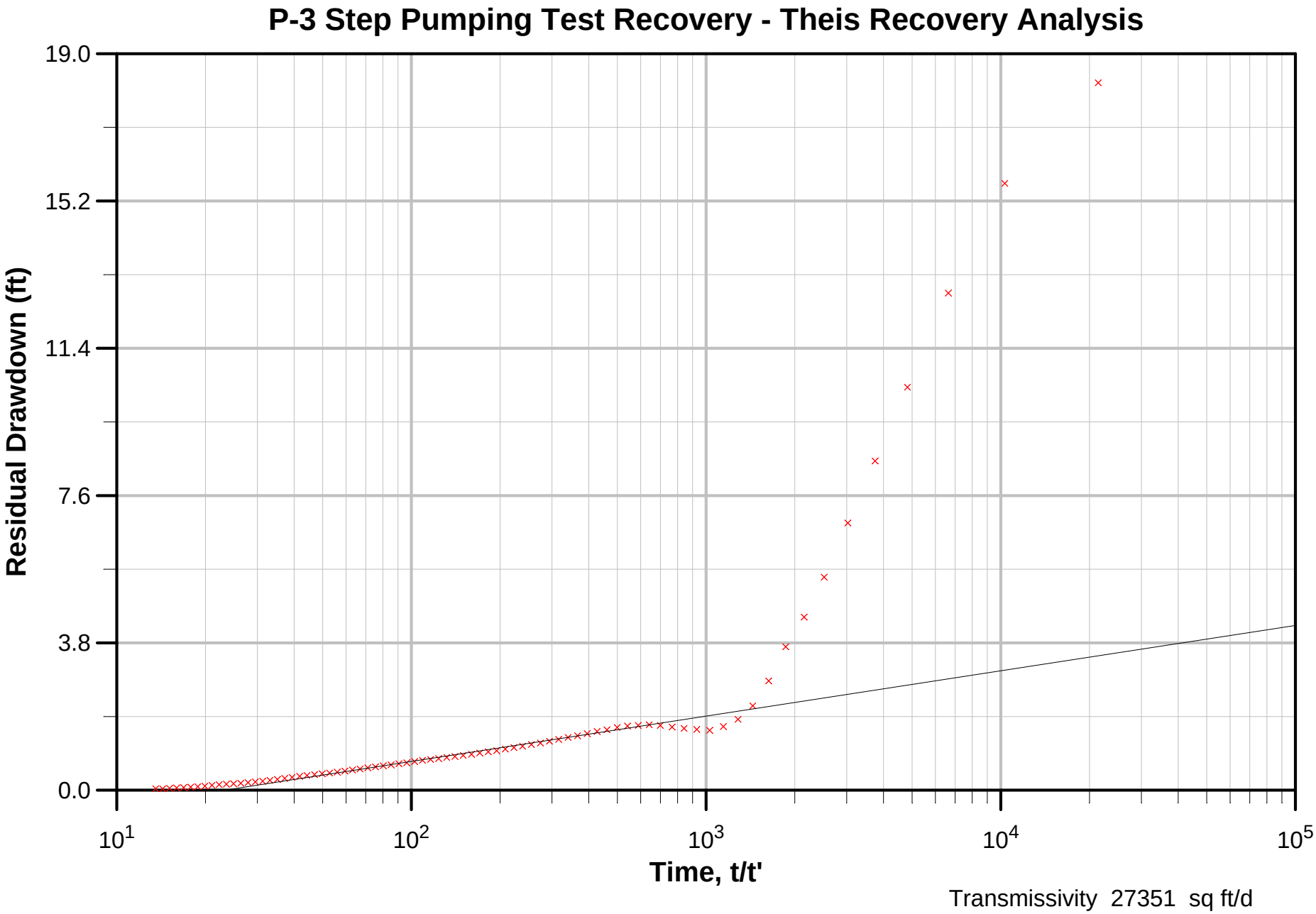

P-2 Step Pumping Test - Eden and Hazel Step Test Analysis - Step 1
Drawdown (ft)
40.0
30.0
20.0
10.0
0.0
0
1000
2000
3000
4000
5000
H (gal/min * log(sec))
Transmissivity 64771 sq ft/d


P-2 Step Pumping Test - Eden and Hazel Step Test Analysis - Step 2
Drawdown/Pumping Rate (ft/gal/min)
0.030
0.028
0.025
0.022
0.020
0.017
0.015
500
600
700
800
900
1000
1100
1200
1300
1400
1500
Pumping Rate (gal/min)


P-2 Step Pump Test - Eden and Hazel Step Test Analysis - Predicted Well Response
Drawdown (ft)
40.0
30.0
20.0
10.0
0.0
0.0
80.0
160.0
240.0
320.0
400.0
Time (min)


P-2 Step Pump Test - Eden and Hazel Step Test Analysis - Yield/Drawdown
Drawdown (ft)
40.0
32.0
24.0
16.0
8.0
0.0
0
200
400
600
800
1000
1200
Pumping Rate (gal/min)


P-2 Step Pumping Test Recovery - Theis Recovery Analysis
Residual Drawdown (ft)
20.0
16.0
12.0
8.0
4.0
0.0
10^0
10^1
10^2
10^3
10^4
Time, t/t'
Transmissivity 40597 sq ft/d


P-3 Step Pumping Test Recovery - Theis Recovery Analysis
19.0
15.2
11.4
7.6
3.8
0.0
Residual Drawdown (ft)
10^1
10^2
10^3
10^4
10^5
Time, t/t'
Transmissivity 27351 sq ft/d

APPENDIX H

Variable Rate Step Test Tabulates Water Level Data

P-1 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/21/04 8:31	-1.0418	0.000	
9/21/04 8:41	-0.8751	0.000	
9/21/04 8:51	-0.7085	0.000	
9/21/04 9:01	-0.5418	0.004	
9/21/04 9:11	-0.3751	0.008	
9/21/04 9:21	-0.2085	0.017	
9/21/04 9:31	-0.0418	0.023	
9/21/04 9:33	-0.0013	0.025	
9/21/04 9:33	-0.0012	0.010	
9/21/04 9:33	-0.0011	0.004	
9/21/04 9:33	-0.0010	0.002	
9/21/04 9:33	-0.0009	0.000	
9/21/04 9:33	-0.0008	0.000	
9/21/04 9:33	-0.0008	-0.002	
9/21/04 9:33	-0.0007	-0.002	
9/21/04 9:33	-0.0006	-0.002	
9/21/04 9:33	-0.0005	-0.004	
9/21/04 9:33	-0.0004	-0.002	
9/21/04 9:33	-0.0003	-0.004	
9/21/04 9:33	-0.0003	-0.004	
9/21/04 9:33	-0.0002	-0.003	
9/21/04 9:33	-0.0001	-0.005	
9/21/04 9:33	0.0000	-0.005	step 1
9/21/04 9:33	0.0000	0.366	Pumping
9/21/04 9:33	0.0001	1.630	begins
9/21/04 9:33	0.0002	6.572	
9/21/04 9:33	0.0003	14.572	
9/21/04 9:33	0.0003	8.384	
9/21/04 9:33	0.0004	6.872	
9/21/04 9:33	0.0005	6.910	
9/21/04 9:33	0.0006	8.620	
9/21/04 9:33	0.0008	10.795	
9/21/04 9:33	0.0009	12.792	
9/21/04 9:33	0.0010	14.816	
9/21/04 9:33	0.0011	16.654	
9/21/04 9:33	0.0013	18.279	
9/21/04 9:33	0.0014	19.624	
9/21/04 9:33	0.0016	21.019	
9/21/04 9:33	0.0018	22.287	
9/21/04 9:33	0.0020	23.558	
9/21/04 9:33	0.0022	24.702	
9/21/04 9:33	0.0024	25.849	
9/21/04 9:33	0.0026	26.845	
9/21/04 9:33	0.0028	27.786	
9/21/04 9:33	0.0031	28.681	
9/21/04 9:33	0.0033	29.566	
9/21/04 9:33	0.0036	30.277	
9/21/04 9:33	0.0039	30.985	
9/21/04 9:33	0.0042	31.543	
9/21/04 9:33	0.0046	32.008	
9/21/04 9:33	0.0049	32.431	
9/21/04 9:33	0.0053	32.868	
9/21/04 9:33	0.0057	32.402	
9/21/04 9:33	0.0061	31.243	
9/21/04 9:33	0.0065	29.416	
9/21/04 9:33	0.0069	27.306	
9/21/04 9:34	0.0074	24.878	
9/21/04 9:34	0.0079	22.401	
9/21/04 9:34	0.0084	20.139	
9/21/04 9:34	0.0090	17.722	
9/21/04 9:34	0.0096	15.634	
9/21/04 9:34	0.0103	14.279	
9/21/04 9:34	0.0110	13.131	
9/21/04 9:34	0.0117	11.925	
9/21/04 9:34	0.0125	11.012	
9/21/04 9:34	0.0133	10.263	
9/21/04 9:34	0.0141	10.525	
9/21/04 9:34	0.0151	10.944	
9/21/04 9:34	0.0160	11.154	
9/21/04 9:34	0.0171	11.357	
9/21/04 9:34	0.0181	11.032	
9/21/04 9:34	0.0193	10.884	
9/21/04 9:34	0.0205	10.958	
9/21/04 9:34	0.0218	10.929	
9/21/04 9:34	0.0232	10.843	
9/21/04 9:35	0.0247	10.776	
9/21/04 9:35	0.0263	10.783	
9/21/04 9:35	0.0279	10.771	
9/21/04 9:35	0.0296	10.770	
9/21/04 9:35	0.0315	10.904	
9/21/04 9:35	0.0334	10.804	
9/21/04 9:35	0.0355	10.692	
9/21/04 9:35	0.0377	10.832	
9/21/04 9:35	0.0400	10.834	
9/21/04 9:36	0.0425	10.706	
9/21/04 9:36	0.0451	10.892	
9/21/04 9:36	0.0479	10.798	
9/21/04 9:36	0.0508	10.820	
9/21/04 9:36	0.0539	10.877	
9/21/04 9:37	0.0573	10.934	
9/21/04 9:37	0.0608	10.825	
9/21/04 9:37	0.0644	10.818	
9/21/04 9:37	0.0684	10.965	
9/21/04 9:37	0.0725	10.840	
9/21/04 9:38	0.0769	10.804	
9/21/04 9:38	0.0816	10.828	
9/21/04 9:38	0.0865	10.877	

P-2 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/21/04 9:01	-0.5297	-0.022	
9/21/04 9:11	-0.3630	-0.017	
9/21/04 9:21	-0.1963	-0.009	
9/21/04 9:31	-0.0297	0.000	
9/21/04 9:34	0.0078	0.051	step 1
9/21/04 9:34	0.0120	0.127	
9/21/04 9:34	0.0162	0.189	
9/21/04 9:35	0.0245	0.255	
9/21/04 9:35	0.0370	0.307	
9/21/04 9:36	0.0537	0.359	
9/21/04 9:38	0.0828	0.417	
9/21/04 9:41	0.1245	0.470	
9/21/04 9:41	0.1370	0.483	
9/21/04 9:44	0.1870	0.522	
9/21/04 9:50	0.2828	0.573	
9/21/04 9:51	0.3037	0.582	
9/21/04 9:59	0.4328	0.625	
9/21/04 10:01	0.4703	0.636	
9/21/04 10:11	0.6370	0.674	
9/21/04 10:12	0.6412	0.676	
9/21/04 10:21	0.8037	0.704	
9/21/04 10:29	0.9370	0.728	
9/21/04 10:31	0.9703	0.732	
9/21/04 10:41	1.1370	0.756	
9/21/04 10:51	1.3037	0.775	
9/21/04 10:53	1.3328	0.779	
9/21/04 11:01	1.4703	0.792	
9/21/04 11:11	1.6370	0.809	
9/21/04 11:21	1.8037	0.825	
9/21/04 11:25	1.8620	0.831	step 2
9/21/04 11:26	1.8787	0.896	
9/21/04 11:27	1.8953	0.947	
9/21/04 11:29	1.9245	1.001	
9/21/04 11:31	1.9703	1.046	
9/21/04 11:32	1.9787	1.052	
9/21/04 11:39	2.0953	1.104	
9/21/04 11:41	2.1370	1.117	
9/21/04 11:51	2.3037	1.151	
9/21/04 11:53	2.3245	1.155	
9/21/04 12:01	2.4703	1.177	
9/21/04 12:11	2.6370	1.198	
9/21/04 12:16	2.7120	1.207	
9/21/04 12:21	2.8037	1.218	
9/21/04 12:31	2.9578	1.259	step 3
9/21/04 12:31	2.9703	1.317	
9/21/04 12:32	2.9745	1.332	
9/21/04 12:33	2.9912	1.383	
9/21/04 12:34	3.0203	1.437	
9/21/04 12:38	3.0745	1.489	
9/21/04 12:41	3.1370	1.523	
9/21/04 12:44	3.1787	1.540	
9/21/04 12:51	3.3037	1.574	
9/21/04 12:56	3.3787	1.592	
9/21/04 13:01	3.4703	1.607	
9/21/04 13:11	3.6370	1.632	
9/21/04 13:15	3.6995	1.643	
9/21/04 13:21	3.8037	1.654	
9/21/04 13:31	3.9703	1.671	
9/21/04 13:35	4.0245	1.697	step 4
9/21/04 13:36	4.0412	1.757	
9/21/04 13:37	4.0662	1.809	
9/21/04 13:41	4.1287	1.860	
9/21/04 13:41	4.1370	1.864	
9/21/04 13:50	4.2787	1.911	
9/21/04 13:51	4.3037	1.916	
9/21/04 14:01	4.4703	1.933	
9/21/04 14:11	4.6370	1.948	
9/21/04 14:21	4.8037	1.961	
9/21/04 14:25	4.8578	1.963	
9/21/04 14:31	4.9703	1.963	
9/21/04 14:41	5.1370	1.959	
9/21/04 14:51	5.3037	1.959	
9/21/04 15:01	5.4703	1.950	
9/21/04 15:11	5.6370	1.939	
9/21/04 15:21	5.8037	1.935	
9/21/04 15:31	5.9703	1.924	
9/21/04 15:40	6.1162	1.905	recovery
9/21/04 15:40	6.1203	1.847	
9/21/04 15:41	6.1245	1.761	
9/21/04 15:41	6.1287	1.673	
9/21/04 15:41	6.1328	1.591	
9/21/04 15:41	6.1370	1.520	
9/21/04 15:42	6.1412	1.454	
9/21/04 15:42	6.1453	1.398	
9/21/04 15:42	6.1495	1.346	
9/21/04 15:43	6.1578	1.260	
9/21/04 15:43	6.1662	1.189	
9/21/04 15:44	6.1745	1.129	
9/21/04 15:44	6.1828	1.078	
9/21/04 15:45	6.1953	1.013	
9/21/04 15:46	6.2078	0.959	
9/21/04 15:47	6.2245	0.904	
9/21/04 15:48	6.2453	0.846	
9/21/04 15:49	6.2703	0.788	
9/21/04 15:51	6.2995	0.736	
9/21/04 15:51	6.3037	0.732	
9/21/04 15:53	6.3370	0.683	

P-3 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/21/04 8:56	-0.6242	-0.051	
9/21/04 9:06	-0.4575	-0.037	
9/21/04 9:16	-0.2908	-0.021	
9/21/04 9:26	-0.1242	-0.002	
9/21/04 9:26	-0.1186	0.000	
9/21/04 9:35	0.0369	0.057	step 1
9/21/04 9:36	0.0425	0.066	
9/21/04 9:37	0.0703	0.109	
9/21/04 9:40	0.1203	0.162	
9/21/04 9:44	0.1869	0.217	
9/21/04 9:46	0.2092	0.228	
9/21/04 9:49	0.2647	0.267	
9/21/04 9:54	0.3425	0.317	
9/21/04 9:56	0.3758	0.331	
9/21/04 10:03	0.4981	0.368	
9/21/04 10:06	0.5425	0.370	
9/21/04 10:15	0.6925	0.420	
9/21/04 10:16	0.7092	0.429	
9/21/04 10:23	0.8369	0.470	
9/21/04 10:26	0.8758	0.479	
9/21/04 10:36	1.0425	0.494	
9/21/04 10:41	1.1314	0.523	
9/21/04 10:46	1.2092	0.543	
9/21/04 10:53	1.3314	0.575	
9/21/04 10:56	1.3758	0.591	
9/21/04 11:06	1.5425	0.623	
9/21/04 11:07	1.5647	0.626	
9/21/04 11:16	1.7092	0.610	
9/21/04 11:26	1.8758	0.635	step 2
9/21/04 11:28	1.9092	0.679	
9/21/04 11:34	2.0147	0.731	
9/21/04 11:36	2.0425	0.747	
9/21/04 11:42	2.1481	0.781	
9/21/04 11:46	2.2092	0.809	
9/21/04 11:51	2.3036	0.831	
9/21/04 11:56	2.3758	0.857	
9/21/04 12:06	2.5425	0.873	
9/21/04 12:09	2.5981	0.882	
9/21/04 12:16	2.7092	0.905	
9/21/04 12:24	2.8536	0.934	
9/21/04 12:26	2.8758	0.937	
9/21/04 12:36	3.0425	0.978	step 3
9/21/04 12:36	3.0536	0.985	
9/21/04 12:41	3.1314	1.037	
9/21/04 12:46	3.2092	1.058	
9/21/04 12:54	3.3536	1.087	
9/21/04 12:56	3.3758	1.094	
9/21/04 13:06	3.5425	1.101	
9/21/04 13:16	3.7092	1.092	
9/21/04 13:26	3.8758	1.085	
9/21/04 13:36	4.0425	1.092	step 4
9/21/04 13:40	4.1092	1.138	
9/21/04 13:46	4.2092	1.165	
9/21/04 13:52	4.3092	1.188	
9/21/04 13:56	4.3758	1.197	
9/21/04 14:06	4.5425	1.213	
9/21/04 14:16	4.7092	1.222	
9/21/04 14:26	4.8758	1.229	
9/21/04 14:36	5.0425	1.227	
9/21/04 14:46	5.2092	1.206	
9/21/04 14:56	5.3758	1.204	
9/21/04 15:06	5.5425	1.161	
9/21/04 15:16	5.7092	1.167	
9/21/04 15:26	5.8758	1.211	
9/21/04 15:36	6.0425	1.188	
9/21/04 15:41	6.1369	1.126	recovery
9/21/04 15:42	6.1536	1.069	
9/21/04 15:43	6.1703	1.007	
9/21/04 15:44	6.1869	0.953	
9/21/04 15:45	6.2036	0.902	
9/21/04 15:46	6.2092	0.886	
9/21/04 15:47	6.2258	0.845	
9/21/04 15:49	6.2592	0.790	
9/21/04 15:52	6.3147	0.740	
9/21/04 15:55	6.3703	0.690	
9/21/04 15:56	6.3758	0.690	
9/21/04 15:59	6.4369	0.639	
9/21/04 16:04	6.5147	0.589	
9/21/04 16:06	6.5425	0.580	
9/21/04 16:11	6.6314	0.539	
9/21/04 16:16	6.7092	0.502	
9/21/04 16:17	6.7258	0.489	
9/21/04 16:26	6.8758	0.477	
9/21/04 16:36	7.0425	0.454	
9/21/04 16:37	7.0647	0.438	
9/21/04 16:45	7.1981	0.386	
9/21/04 16:46	7.2092	0.379	
9/21/04 16:56	7.3758	0.351	
9/21/04 17:01	7.4592	0.331	
9/21/04 17:06	7.5425	0.294	
9/21/04 17:08	7.5814	0.278	
9/21/04 17:16	7.7092	0.242	
9/21/04 17:18	7.7536	0.228	
9/21/04 17:26	7.8758	0.194	
9/21/04 17:30	7.9425	0.178	
9/21/04 17:36	8.0425	0.164	
9/21/04 17:43	8.1703	0.127	

P-1 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/21/04 9:39	0.0917	10.835	
9/21/04 9:39	0.0973	10.937	
9/21/04 9:39	0.1031	10.883	
9/21/04 9:40	0.1093	10.946	
9/21/04 9:40	0.1159	10.853	
9/21/04 9:40	0.1229	10.972	
9/21/04 9:41	0.1303	11.014	
9/21/04 9:41	0.1381	10.938	
9/21/04 9:42	0.1464	11.012	
9/21/04 9:42	0.1552	10.966	
9/21/04 9:43	0.1645	10.901	
9/21/04 9:44	0.1744	10.859	
9/21/04 9:44	0.1848	10.928	
9/21/04 9:45	0.1959	10.932	
9/21/04 9:46	0.2076	11.000	
9/21/04 9:46	0.2200	10.962	
9/21/04 9:47	0.2332	10.899	
9/21/04 9:48	0.2471	10.924	
9/21/04 9:49	0.2619	10.901	
9/21/04 9:50	0.2775	10.831	
9/21/04 9:51	0.2941	10.893	
9/21/04 9:52	0.3116	10.863	
9/21/04 9:53	0.3302	10.865	
9/21/04 9:54	0.3499	10.919	
9/21/04 9:55	0.3708	10.879	
9/21/04 9:57	0.3928	10.924	
9/21/04 9:58	0.4163	10.931	
9/21/04 10:00	0.4411	10.881	
9/21/04 10:01	0.4673	10.929	
9/21/04 10:03	0.4951	10.943	
9/21/04 10:05	0.5246	10.938	
9/21/04 10:06	0.5558	10.994	
9/21/04 10:08	0.5889	10.914	
9/21/04 10:11	0.6239	10.996	
9/21/04 10:13	0.6610	10.932	
9/21/04 10:15	0.7003	10.946	
9/21/04 10:18	0.7419	10.996	
9/21/04 10:20	0.7861	11.030	
9/21/04 10:23	0.8328	10.996	
9/21/04 10:26	0.8823	11.014	
9/21/04 10:29	0.9347	10.974	
9/21/04 10:32	0.9902	10.994	
9/21/04 10:36	1.0490	10.950	
9/21/04 10:40	1.1113	10.968	
9/21/04 10:44	1.1773	11.008	
9/21/04 10:48	1.2472	11.071	
9/21/04 10:52	1.3213	10.986	
9/21/04 10:57	1.3997	10.962	
9/21/04 11:02	1.4828	11.018	
9/21/04 11:07	1.5661	11.141	
9/21/04 11:12	1.6494	10.990	
9/21/04 11:17	1.7328	11.111	
9/21/04 11:22	1.8161	11.167	
9/21/04 11:24	1.8561	11.004	
9/21/04 11:24	1.8562	10.909	
9/21/04 11:24	1.8563	11.028	
9/21/04 11:24	1.8564	10.951	
9/21/04 11:24	1.8564	11.032	
9/21/04 11:24	1.8565	10.997	
9/21/04 11:24	1.8566	11.034	
9/21/04 11:24	1.8567	11.017	
9/21/04 11:24	1.8568	11.110	
9/21/04 11:24	1.8569	11.136	
9/21/04 11:24	1.8569	11.717	step 2
9/21/04 11:25	1.8570	11.586	
9/21/04 11:25	1.8571	11.727	
9/21/04 11:25	1.8572	12.043	
9/21/04 11:25	1.8573	12.007	
9/21/04 11:25	1.8574	12.160	
9/21/04 11:25	1.8574	12.342	
9/21/04 11:25	1.8575	12.382	
9/21/04 11:25	1.8576	12.688	
9/21/04 11:25	1.8577	12.940	
9/21/04 11:25	1.8578	13.128	
9/21/04 11:25	1.8579	13.464	
9/21/04 11:25	1.8580	13.728	
9/21/04 11:25	1.8581	13.992	
9/21/04 11:25	1.8582	14.341	
9/21/04 11:25	1.8583	14.690	
9/21/04 11:25	1.8584	14.962	
9/21/04 11:25	1.8586	15.248	
9/21/04 11:25	1.8587	15.542	
9/21/04 11:25	1.8589	15.744	
9/21/04 11:25	1.8590	16.026	
9/21/04 11:25	1.8592	16.244	
9/21/04 11:25	1.8594	16.414	
9/21/04 11:25	1.8596	16.611	
9/21/04 11:25	1.8598	16.902	
9/21/04 11:25	1.8600	17.026	
9/21/04 11:25	1.8603	17.212	
9/21/04 11:25	1.8605	17.343	
9/21/04 11:25	1.8608	17.442	
9/21/04 11:25	1.8610	17.512	
9/21/04 11:25	1.8614	17.679	
9/21/04 11:25	1.8617	17.840	
9/21/04 11:25	1.8620	17.905	
9/21/04 11:25	1.8623	17.979	

P-2 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/21/04 15:56	6.3828	0.631
9/21/04 16:00	6.4412	0.577
9/21/04 16:01	6.4703	0.556
9/21/04 16:04	6.5120	0.526
9/21/04 16:09	6.6037	0.474
9/21/04 16:11	6.6370	0.457
9/21/04 16:16	6.7162	0.422
9/21/04 16:21	6.8037	0.391
9/21/04 16:25	6.8620	0.371
9/21/04 16:31	6.9703	0.339
9/21/04 16:36	7.0453	0.319
9/21/04 16:41	7.1370	0.298
9/21/04 16:51	7.2912	0.268
9/21/04 16:51	7.3037	0.263
9/21/04 17:01	7.4703	0.231
9/21/04 17:07	7.5620	0.216
9/21/04 17:11	7.6370	0.203
9/21/04 17:21	7.8037	0.177
9/21/04 17:27	7.8953	0.165
9/21/04 17:31	7.9703	0.156
9/21/04 17:41	8.1370	0.132
9/21/04 17:51	8.3037	0.113
9/21/04 17:52	8.3078	0.113
9/21/04 18:01	8.4703	0.093
9/21/04 18:11	8.6370	0.074
9/21/04 18:18	8.7412	0.061
9/21/04 18:21	8.8037	0.055
9/21/04 18:31	8.9703	0.040
9/21/04 18:41	9.1370	0.021
9/21/04 18:48	9.2412	0.010
9/21/04 18:51	9.3037	0.003
End of Data		

P-3 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/21/04 17:46	8.2092	0.121
9/21/04 17:56	8.3758	0.082
9/21/04 17:57	8.3981	0.077
9/21/04 18:06	8.5425	0.054
9/21/04 18:11	8.6369	0.027
9/21/04 18:16	8.7092	0.015
End of Data		

P-1 Pumping			P-2 Observation			P-3 Observation		
Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/21/04 11:25	1.8627	18.100						
9/21/04 11:25	1.8631	18.083						
9/21/04 11:25	1.8635	18.085						
9/21/04 11:25	1.8639	18.181						
9/21/04 11:25	1.8644	18.195						
9/21/04 11:25	1.8649	18.233						
9/21/04 11:25	1.8654	18.126						
9/21/04 11:25	1.8659	17.924						
9/21/04 11:25	1.8665	17.898						
9/21/04 11:25	1.8671	17.765						
9/21/04 11:25	1.8677	17.746						
9/21/04 11:25	1.8684	17.655						
9/21/04 11:25	1.8691	17.677						
9/21/04 11:25	1.8699	17.679						
9/21/04 11:25	1.8707	17.580						
9/21/04 11:25	1.8716	17.602						
9/21/04 11:25	1.8725	17.574						
9/21/04 11:25	1.8735	17.575						
9/21/04 11:26	1.8745	17.849						
9/21/04 11:26	1.8756	18.024						
9/21/04 11:26	1.8767	18.097						
9/21/04 11:26	1.8780	18.172						
9/21/04 11:26	1.8793	18.137						
9/21/04 11:26	1.8807	18.119						
9/21/04 11:26	1.8821	18.156						
9/21/04 11:26	1.8837	18.190						
9/21/04 11:26	1.8853	18.122						
9/21/04 11:26	1.8871	18.116						
9/21/04 11:26	1.8889	18.167						
9/21/04 11:27	1.8909	18.133						
9/21/04 11:27	1.8929	18.200						
9/21/04 11:27	1.8951	18.225						
9/21/04 11:27	1.8975	18.198						
9/21/04 11:27	1.8999	18.208						
9/21/04 11:27	1.9025	18.213						
9/21/04 11:27	1.9053	18.284						
9/21/04 11:28	1.9083	18.138						
9/21/04 11:28	1.9114	18.271						
9/21/04 11:28	1.9147	18.241						
9/21/04 11:28	1.9182	18.236						
9/21/04 11:28	1.9219	18.287						
9/21/04 11:29	1.9258	18.233						
9/21/04 11:29	1.9299	18.305						
9/21/04 11:29	1.9343	18.292						
9/21/04 11:29	1.9390	18.288						
9/21/04 11:30	1.9439	18.310						
9/21/04 11:30	1.9492	18.276						
9/21/04 11:30	1.9547	18.385						
9/21/04 11:31	1.9605	18.341						
9/21/04 11:31	1.9668	18.337						
9/21/04 11:31	1.9734	18.379						
9/21/04 11:32	1.9803	18.351						
9/21/04 11:32	1.9877	18.337						
9/21/04 11:33	1.9955	18.367						
9/21/04 11:33	2.0039	18.333						
9/21/04 11:34	2.0126	18.329						
9/21/04 11:34	2.0219	18.353						
9/21/04 11:35	2.0318	18.373						
9/21/04 11:36	2.0422	18.317						
9/21/04 11:36	2.0533	18.371						
9/21/04 11:37	2.0650	18.389						
9/21/04 11:38	2.0774	18.345						
9/21/04 11:39	2.0906	18.391						
9/21/04 11:39	2.1045	18.406						
9/21/04 11:40	2.1193	18.400						
9/21/04 11:41	2.1349	18.410						
9/21/04 11:42	2.1515	18.351						
9/21/04 11:43	2.1690	18.387						
9/21/04 11:44	2.1876	18.430						
9/21/04 11:46	2.2073	18.389						
9/21/04 11:47	2.2282	18.343						
9/21/04 11:48	2.2503	18.385						
9/21/04 11:50	2.2737	18.391						
9/21/04 11:51	2.2985	18.331						
9/21/04 11:53	2.3247	18.371						
9/21/04 11:54	2.3525	18.395						
9/21/04 11:56	2.3820	18.325						
9/21/04 11:58	2.4132	18.373						
9/21/04 12:00	2.4463	18.543						
9/21/04 12:02	2.4813	18.426						
9/21/04 12:04	2.5184	18.381						
9/21/04 12:07	2.5577	18.404						
9/21/04 12:09	2.5994	18.440						
9/21/04 12:12	2.6435	18.474						
9/21/04 12:14	2.6902	18.420						
9/21/04 12:17	2.7397	18.466						
9/21/04 12:21	2.7921	18.476						
9/21/04 12:24	2.8476	18.504						
9/21/04 12:27	2.9064	18.508						
9/21/04 12:30	2.9433	18.430						
9/21/04 12:30	2.9434	18.512						
9/21/04 12:30	2.9435	18.508						
9/21/04 12:30	2.9436	18.566						
9/21/04 12:30	2.9436	18.516						
9/21/04 12:30	2.9437	18.534						
9/21/04 12:30	2.9438	18.502						
9/21/04 12:30	2.9439	18.503						

P-1 Pumping				P-2 Observation			P-3 Observation		
Date/Time	Elapsed Time (Hours)	Drawdown (feet)		Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/21/04 12:30	2.9440	18.481							
9/21/04 12:30	2.9441	18.578							
9/21/04 12:30	2.9441	18.550							
9/21/04 12:30	2.9442	18.525							
9/21/04 12:30	2.9443	18.634							
9/21/04 12:30	2.9444	18.550							
9/21/04 12:30	2.9445	18.493							
9/21/04 12:30	2.9446	18.594							
9/21/04 12:30	2.9446	18.535							
9/21/04 12:30	2.9447	18.600							
9/21/04 12:30	2.9448	18.533							
9/21/04 12:30	2.9449	18.715	step 3						
9/21/04 12:30	2.9450	18.954							
9/21/04 12:30	2.9451	19.088							
9/21/04 12:30	2.9452	19.327							
9/21/04 12:30	2.9453	19.394							
9/21/04 12:30	2.9454	19.809							
9/21/04 12:30	2.9455	19.948							
9/21/04 12:30	2.9456	20.220							
9/21/04 12:30	2.9458	20.692							
9/21/04 12:30	2.9459	21.170							
9/21/04 12:30	2.9461	21.617							
9/21/04 12:30	2.9462	22.047							
9/21/04 12:30	2.9464	22.395							
9/21/04 12:30	2.9466	22.784							
9/21/04 12:30	2.9468	23.101							
9/21/04 12:30	2.9470	23.389							
9/21/04 12:30	2.9472	23.681							
9/21/04 12:30	2.9475	23.937							
9/21/04 12:30	2.9477	24.215							
9/21/04 12:30	2.9480	24.416							
9/21/04 12:30	2.9482	24.648							
9/21/04 12:30	2.9486	24.978							
9/21/04 12:30	2.9489	25.188							
9/21/04 12:30	2.9492	25.349							
9/21/04 12:30	2.9495	25.545							
9/21/04 12:30	2.9499	25.589							
9/21/04 12:30	2.9503	25.660							
9/21/04 12:30	2.9507	25.792							
9/21/04 12:30	2.9511	26.100							
9/21/04 12:30	2.9516	26.133							
9/21/04 12:30	2.9521	26.349							
9/21/04 12:30	2.9526	26.372							
9/21/04 12:30	2.9531	26.311							
9/21/04 12:30	2.9537	26.125							
9/21/04 12:30	2.9543	26.133							
9/21/04 12:30	2.9549	26.580							
9/21/04 12:30	2.9556	27.105							
9/21/04 12:30	2.9563	27.489							
9/21/04 12:31	2.9571	27.560							
9/21/04 12:31	2.9579	27.305							
9/21/04 12:31	2.9588	27.013							
9/21/04 12:31	2.9597	26.808							
9/21/04 12:31	2.9607	27.534							
9/21/04 12:31	2.9617	27.888							
9/21/04 12:31	2.9628	27.932							
9/21/04 12:31	2.9639	27.873							
9/21/04 12:31	2.9652	27.703							
9/21/04 12:31	2.9665	27.623							
9/21/04 12:31	2.9679	27.534							
9/21/04 12:31	2.9693	27.504							
9/21/04 12:31	2.9709	27.506							
9/21/04 12:31	2.9725	27.489							
9/21/04 12:32	2.9743	27.526							
9/21/04 12:32	2.9761	27.465							
9/21/04 12:32	2.9781	27.512							
9/21/04 12:32	2.9801	27.509							
9/21/04 12:32	2.9823	27.528							
9/21/04 12:32	2.9847	27.525							
9/21/04 12:32	2.9871	27.544							
9/21/04 12:32	2.9897	27.556							
9/21/04 12:33	2.9925	27.549							
9/21/04 12:33	2.9955	27.622							
9/21/04 12:33	2.9986	27.623							
9/21/04 12:33	3.0019	27.577							
9/21/04 12:33	3.0054	27.627							
9/21/04 12:34	3.0091	27.603							
9/21/04 12:34	3.0130	27.590							
9/21/04 12:34	3.0171	27.580							
9/21/04 12:34	3.0215	27.580							
9/21/04 12:35	3.0262	27.568							
9/21/04 12:35	3.0311	27.611							
9/21/04 12:35	3.0364	27.621							
9/21/04 12:36	3.0419	27.653							
9/21/04 12:36	3.0477	27.631							
9/21/04 12:36	3.0540	27.573							
9/21/04 12:37	3.0606	27.579							
9/21/04 12:37	3.0675	27.643							
9/21/04 12:38	3.0749	27.652							
9/21/04 12:38	3.0827	27.621							
9/21/04 12:39	3.0911	27.603							
9/21/04 12:39	3.0998	27.637							
9/21/04 12:40	3.1091	27.662							
9/21/04 12:40	3.1190	27.583							
9/21/04 12:41	3.1294	27.623							
9/21/04 12:42	3.1405	27.637							
9/21/04 12:42	3.1522	27.678							

P-1 Pumping				P-2 Observation			P-3 Observation		
Date/Time	Elapsed Time (Hours)	Drawdown (feet)		Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/21/04 12:43	3.1646	27.636							
9/21/04 12:44	3.1778	27.662							
9/21/04 12:45	3.1917	27.634							
9/21/04 12:45	3.2065	27.690							
9/21/04 12:46	3.2221	27.634							
9/21/04 12:47	3.2387	27.610							
9/21/04 12:48	3.2562	27.604							
9/21/04 12:50	3.2748	27.563							
9/21/04 12:51	3.2945	27.644							
9/21/04 12:52	3.3154	27.618							
9/21/04 12:53	3.3375	27.654							
9/21/04 12:55	3.3609	27.630							
9/21/04 12:56	3.3857	27.676							
9/21/04 12:58	3.4119	27.674							
9/21/04 12:59	3.4397	27.690							
9/21/04 13:01	3.4692	27.662							
9/21/04 13:03	3.5004	27.652							
9/21/04 13:05	3.5335	27.658							
9/21/04 13:07	3.5685	27.707							
9/21/04 13:09	3.6056	27.572							
9/21/04 13:12	3.6449	27.773							
9/21/04 13:14	3.6866	27.745							
9/21/04 13:17	3.7307	27.789							
9/21/04 13:20	3.7774	27.755							
9/21/04 13:23	3.8269	27.809							
9/21/04 13:26	3.8793	27.680							
9/21/04 13:29	3.9348	27.694							
9/21/04 13:33	3.9936	27.731							
09/21/2004 13:34	4.0099	27.739							
09/21/2004 13:34	4.0100	27.773							
09/21/2004 13:34	4.0101	27.748							
09/21/2004 13:34	4.0102	27.722							
09/21/2004 13:34	4.0102	27.740							
09/21/2004 13:34	4.0103	27.736							
09/21/2004 13:34	4.0104	27.682							
09/21/2004 13:34	4.0105	27.772							
09/21/2004 13:34	4.0106	27.742							
09/21/2004 13:34	4.0107	27.706							
09/21/2004 13:34	4.0107	27.756							
09/21/2004 13:34	4.0108	27.738							
09/21/2004 13:34	4.0109	27.766							
09/21/2004 13:34	4.0110	27.728							
09/21/2004 13:34	4.0111	27.760							
09/21/2004 13:34	4.0112	27.724							
09/21/2004 13:34	4.0112	27.750							
09/21/2004 13:34	4.0113	27.710							
09/21/2004 13:34	4.0114	27.667							
09/21/2004 13:34	4.0115	27.709							
09/21/2004 13:34	4.0116	27.727							
09/21/2004 13:34	4.0117	27.748							
09/21/2004 13:34	4.0118	27.737							
09/21/2004 13:34	4.0119	27.756							
09/21/2004 13:34	4.0120	27.725							
09/21/2004 13:34	4.0121	27.737							
09/21/2004 13:34	4.0122	27.703							
09/21/2004 13:34	4.0124	27.788	step 4						
09/21/2004 13:34	4.0125	28.006							
09/21/2004 13:34	4.0127	28.201							
09/21/2004 13:34	4.0129	28.632							
09/21/2004 13:34	4.0130	29.180							
09/21/2004 13:34	4.0132	29.892							
09/21/2004 13:34	4.0134	30.770							
09/21/2004 13:34	4.0136	31.536							
09/21/2004 13:34	4.0138	32.438							
09/21/2004 13:34	4.0141	33.117							
09/21/2004 13:34	4.0143	33.867							
09/21/2004 13:34	4.0146	34.487							
09/21/2004 13:34	4.0149	35.105							
09/21/2004 13:34	4.0151	35.647							
09/21/2004 13:34	4.0155	36.051							
09/21/2004 13:34	4.0158	36.292							
09/21/2004 13:34	4.0161	36.459							
09/21/2004 13:34	4.0165	36.599							
09/21/2004 13:34	4.0169	36.594							
09/21/2004 13:34	4.0173	36.596							
09/21/2004 13:34	4.0177	36.532							
09/21/2004 13:34	4.0182	36.435							
09/21/2004 13:34	4.0186	36.315							
09/21/2004 13:34	4.0191	36.086							
09/21/2004 13:34	4.0197	35.888							
09/21/2004 13:34	4.0203	35.619							
09/21/2004 13:34	4.0209	35.498							
09/21/2004 13:34	4.0215	35.390							
09/21/2004 13:34	4.0222	35.316							
09/21/2004 13:34	4.0229	35.288							
09/21/2004 13:35	4.0237	35.362							
09/21/2004 13:35	4.0245	35.338							
09/21/2004 13:35	4.0254	35.385							
09/21/2004 13:35	4.0263	35.400							
09/21/2004 13:35	4.0273	35.382							
09/21/2004 13:35	4.0283	35.375							
09/21/2004 13:35	4.0294	35.426							
09/21/2004 13:35	4.0305	35.439							
09/21/2004 13:35	4.0318	35.423							
09/21/2004 13:35	4.0331	35.400							
09/21/2004 13:35	4.0345	35.465							
09/21/2004 13:35	4.0359	35.445							

P-1 Pumping			P-2 Observation			P-3 Observation		
Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)
09/21/2004 13:35	4.0375	35.403						
09/21/2004 13:35	4.0391	35.382						
09/21/2004 13:36	4.0409	35.392						
09/21/2004 13:36	4.0427	35.864						
09/21/2004 13:36	4.0446	35.212						
09/21/2004 13:36	4.0467	34.960						
09/21/2004 13:36	4.0489	34.872						
09/21/2004 13:36	4.0513	34.815						
09/21/2004 13:36	4.0537	34.848						
09/21/2004 13:36	4.0563	34.810						
09/21/2004 13:37	4.0591	34.798						
09/21/2004 13:37	4.0621	34.827						
09/21/2004 13:37	4.0652	34.807						
09/21/2004 13:37	4.0685	34.779						
09/21/2004 13:37	4.0720	34.787						
09/21/2004 13:38	4.0757	34.765						
09/21/2004 13:38	4.0796	34.769						
09/21/2004 13:38	4.0837	34.789						
09/21/2004 13:38	4.0881	34.776						
09/21/2004 13:39	4.0928	34.862						
09/21/2004 13:39	4.0977	34.886						
09/21/2004 13:39	4.1030	34.852						
09/21/2004 13:40	4.1085	34.927						
09/21/2004 13:40	4.1143	34.945						
09/21/2004 13:40	4.1206	34.900						
09/21/2004 13:41	4.1271	34.965						
09/21/2004 13:41	4.1341	34.981						
09/21/2004 13:42	4.1415	34.969						
09/21/2004 13:42	4.1493	34.963						
09/21/2004 13:43	4.1576	34.986						
09/21/2004 13:43	4.1664	34.957						
09/21/2004 13:44	4.1757	34.977						
09/21/2004 13:44	4.1856	34.979						
09/21/2004 13:45	4.1960	34.931						
09/21/2004 13:46	4.2071	34.931						
09/21/2004 13:46	4.2188	34.983						
09/21/2004 13:47	4.2312	34.996						
09/21/2004 13:48	4.2444	34.969						
09/21/2004 13:49	4.2583	34.955						
09/21/2004 13:49	4.2731	35.018						
09/21/2004 13:50	4.2887	35.008						
09/21/2004 13:51	4.3053	35.032						
09/21/2004 13:52	4.3228	35.072						
09/21/2004 13:54	4.3414	35.020						
09/21/2004 13:55	4.3611	35.030						
09/21/2004 13:56	4.3820	34.699						
09/21/2004 13:57	4.4041	34.577						
09/21/2004 13:59	4.4275	34.464						
09/21/2004 14:00	4.4523	34.597						
09/21/2004 14:02	4.4785	34.595						
09/21/2004 14:03	4.5063	34.605						
09/21/2004 14:05	4.5358	34.589						
09/21/2004 14:07	4.5670	34.563						
09/21/2004 14:09	4.6001	34.518						
09/21/2004 14:11	4.6351	34.569						
09/21/2004 14:13	4.6722	34.562						
09/21/2004 14:16	4.7115	34.554						
09/21/2004 14:18	4.7532	34.633						
09/21/2004 14:21	4.7973	34.623						
09/21/2004 14:24	4.8440	34.571						
09/21/2004 14:27	4.8935	34.651						
09/21/2004 14:30	4.9459	34.464						
09/21/2004 14:33	5.0014	34.357						
09/21/2004 14:37	5.0602	34.415						
09/21/2004 14:40	5.1225	34.383						
09/21/2004 14:44	5.1885	34.351						
09/21/2004 14:49	5.2584	34.413						
09/21/2004 14:53	5.3325	34.391						
09/21/2004 14:58	5.4109	34.419						
09/21/2004 15:03	5.4940	34.424						
09/21/2004 15:08	5.5773	34.422						
09/21/2004 15:13	5.6607	34.401						
09/21/2004 15:18	5.7440	34.419						
09/21/2004 15:23	5.8273	34.405						
09/21/2004 15:28	5.9107	34.397						
09/21/2004 15:33	5.9940	34.379						
09/21/2004 15:38	6.0773	34.389						
09/21/2004 15:39	6.1015	34.399						
09/21/2004 15:39	6.1016	34.369						
09/21/2004 15:39	6.1017	34.355						
09/21/2004 15:39	6.1018	34.367						
09/21/2004 15:39	6.1018	34.348						
09/21/2004 15:39	6.1019	34.334						
09/21/2004 15:39	6.1020	34.387						
09/21/2004 15:39	6.1021	34.358						
09/21/2004 15:39	6.1022	34.356						
09/21/2004 15:39	6.1023	34.344						
09/21/2004 15:39	6.1023	34.350						
09/21/2004 15:39	6.1024	34.320						
09/21/2004 15:39	6.1025	34.374						
09/21/2004 15:39	6.1026	34.368						
09/21/2004 15:39	6.1027	34.366						
09/21/2004 15:39	6.1028	34.376						
09/21/2004 15:39	6.1028	34.346						
09/21/2004 15:39	6.1029	34.384						
09/21/2004 15:39	6.1030	34.372						
09/21/2004 15:39	6.1031	34.330						

P-1 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
09/21/2004 15:39	6.1032	34.366	
09/21/2004 15:39	6.1033	34.380	
09/21/2004 15:39	6.1034	34.354	
09/21/2004 15:39	6.1035	34.398	
09/21/2004 15:39	6.1036	34.400	
09/21/2004 15:39	6.1037	34.406	
09/21/2004 15:39	6.1038	34.384	
09/21/2004 15:39	6.1040	34.316	
09/21/2004 15:39	6.1041	34.386	
09/21/2004 15:39	6.1043	34.388	
09/21/2004 15:39	6.1045	34.384	
09/21/2004 15:39	6.1046	34.374	
09/21/2004 15:39	6.1048	34.382	
09/21/2004 15:39	6.1050	34.384	
09/21/2004 15:39	6.1052	34.370	
09/21/2004 15:39	6.1054	34.398	
09/21/2004 15:39	6.1057	34.400	
09/21/2004 15:39	6.1059	34.400	
09/21/2004 15:39	6.1062	34.386	
09/21/2004 15:39	6.1065	34.378	
09/21/2004 15:40	6.1067	34.384	
09/21/2004 15:40	6.1071	34.362	
09/21/2004 15:40	6.1074	34.381	
09/21/2004 15:40	6.1077	34.390	
09/21/2004 15:40	6.1081	34.376	
09/21/2004 15:40	6.1085	34.391	
09/21/2004 15:40	6.1089	34.394	
09/21/2004 15:40	6.1093	34.401	
09/21/2004 15:40	6.1098	34.389	
09/21/2004 15:40	6.1102	34.395	
09/21/2004 15:40	6.1107	34.399	
09/21/2004 15:40	6.1113	34.362	pump off
09/21/2004 15:40	6.1119	25.628	recovery
09/21/2004 15:40	6.1125	14.450	
09/21/2004 15:40	6.1131	6.374	
09/21/2004 15:40	6.1138	1.736	
09/21/2004 15:40	6.1145	0.602	
09/21/2004 15:40	6.1153	1.543	
09/21/2004 15:40	6.1161	2.305	
09/21/2004 15:40	6.1170	2.478	
09/21/2004 15:40	6.1179	2.518	
09/21/2004 15:40	6.1189	2.393	
09/21/2004 15:40	6.1199	2.335	
09/21/2004 15:40	6.1210	2.212	
09/21/2004 15:40	6.1221	2.147	
09/21/2004 15:41	6.1234	2.060	
09/21/2004 15:41	6.1247	1.980	
09/21/2004 15:41	6.1261	1.923	
09/21/2004 15:41	6.1275	1.855	
09/21/2004 15:41	6.1291	1.788	
09/21/2004 15:41	6.1307	1.732	
09/21/2004 15:41	6.1325	1.681	
09/21/2004 15:41	6.1343	1.633	
09/21/2004 15:41	6.1362	1.586	
09/21/2004 15:41	6.1383	1.540	
09/21/2004 15:42	6.1405	1.496	
09/21/2004 15:42	6.1429	1.455	
09/21/2004 15:42	6.1453	1.415	
09/21/2004 15:42	6.1479	1.381	
09/21/2004 15:42	6.1507	1.343	
09/21/2004 15:42	6.1537	1.308	
09/21/2004 15:43	6.1568	1.274	
09/21/2004 15:43	6.1601	1.244	
09/21/2004 15:43	6.1636	1.212	
09/21/2004 15:43	6.1673	1.185	
09/21/2004 15:43	6.1712	1.153	
09/21/2004 15:44	6.1753	1.125	
09/21/2004 15:44	6.1797	1.101	
09/21/2004 15:44	6.1844	1.075	
09/21/2004 15:44	6.1893	1.051	
09/21/2004 15:45	6.1946	1.030	
09/21/2004 15:45	6.2001	1.007	
09/21/2004 15:45	6.2059	0.983	
09/21/2004 15:46	6.2122	0.962	
09/21/2004 15:46	6.2187	0.939	
09/21/2004 15:47	6.2257	0.922	
09/21/2004 15:47	6.2331	0.899	
09/21/2004 15:48	6.2409	0.880	
09/21/2004 15:48	6.2492	0.862	
09/21/2004 15:49	6.2580	0.842	
09/21/2004 15:49	6.2673	0.825	
09/21/2004 15:50	6.2772	0.806	
09/21/2004 15:50	6.2876	0.789	
09/21/2004 15:51	6.2987	0.771	
09/21/2004 15:52	6.3104	0.751	
09/21/2004 15:52	6.3228	0.736	
09/21/2004 15:53	6.3360	0.719	
09/21/2004 15:54	6.3499	0.702	
09/21/2004 15:55	6.3647	0.688	
09/21/2004 15:56	6.3803	0.669	
09/21/2004 15:57	6.3969	0.653	
09/21/2004 15:58	6.4144	0.636	
09/21/2004 15:59	6.4330	0.621	
09/21/2004 16:00	6.4527	0.606	
09/21/2004 16:02	6.4736	0.590	
09/21/2004 16:03	6.4957	0.574	
09/21/2004 16:04	6.5191	0.559	

P-2 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)

P-3 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)

P-1 Pumping			P-2 Observation			P-3 Observation		
Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)
09/21/2004 16:06	6.5439	0.542						
09/21/2004 16:07	6.5701	0.528						
09/21/2004 16:09	6.5979	0.512						
09/21/2004 16:11	6.6274	0.496						
09/21/2004 16:13	6.6586	0.483						
09/21/2004 16:15	6.6917	0.468						
09/21/2004 16:17	6.7267	0.453						
09/21/2004 16:19	6.7638	0.438						
09/21/2004 16:21	6.8031	0.424						
09/21/2004 16:24	6.8448	0.409						
09/21/2004 16:26	6.8889	0.395						
09/21/2004 16:29	6.9356	0.380						
09/21/2004 16:32	6.9851	0.368						
09/21/2004 16:35	7.0375	0.352						
09/21/2004 16:39	7.0930	0.340						
09/21/2004 16:42	7.1518	0.325						
09/21/2004 16:46	7.2141	0.311						
09/21/2004 16:50	7.2801	0.298						
09/21/2004 16:54	7.3500	0.282						
09/21/2004 16:59	7.4241	0.266						
09/21/2004 17:03	7.5025	0.254						
09/21/2004 17:08	7.5856	0.239						
09/21/2004 17:13	7.6689	0.221						
09/21/2004 17:18	7.7523	0.209						
09/21/2004 17:23	7.8356	0.197						
09/21/2004 17:28	7.9189	0.185						
09/21/2004 17:33	8.0023	0.172						
09/21/2004 17:38	8.0856	0.161						
09/21/2004 17:43	8.1689	0.151						
09/21/2004 17:48	8.2523	0.143						
09/21/2004 17:53	8.3356	0.132						
09/21/2004 17:58	8.4189	0.121						
09/21/2004 18:03	8.5023	0.111						
09/21/2004 18:08	8.5856	0.099						
09/21/2004 18:13	8.6689	0.091						
09/21/2004 18:18	8.7523	0.081						
09/21/2004 18:23	8.8356	0.073						
09/21/2004 18:28	8.9189	0.065						
09/21/2004 18:33	9.0023	0.057						
09/21/2004 18:38	9.0856	0.047						
09/21/2004 18:43	9.1689	0.037						
09/21/2004 18:48	9.2523	0.031						
09/21/2004 18:53	9.3356	0.022						
09/21/2004 18:58	9.4189	0.012						
09/21/2004 19:03	9.5023	0.003						
End of Data								

P-2 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/24/04 9:50	0.0000	0.505	step1
9/24/04 9:50	0.0001	3.611	pumping
9/24/04 9:50	0.0003	12.113	begins
9/24/04 9:50	0.0004	6.523	
9/24/04 9:50	0.0006	8.132	
9/24/04 9:50	0.0007	11.134	
9/24/04 9:50	0.0009	13.449	
9/24/04 9:50	0.0011	15.924	
9/24/04 9:50	0.0013	18.009	
9/24/04 9:50	0.0015	19.059	
9/24/04 9:50	0.0017	20.188	
9/24/04 9:50	0.0020	20.674	
9/24/04 9:50	0.0022	20.403	
9/24/04 9:50	0.0025	19.863	
9/24/04 9:50	0.0027	18.697	
9/24/04 9:50	0.0030	18.033	
9/24/04 9:50	0.0033	16.985	
9/24/04 9:50	0.0037	16.282	
9/24/04 9:50	0.0040	15.639	
9/24/04 9:50	0.0044	15.046	
9/24/04 9:50	0.0048	14.667	
9/24/04 9:50	0.0052	14.353	
9/24/04 9:50	0.0056	14.028	
9/24/04 9:50	0.0061	13.918	
9/24/04 9:50	0.0065	13.765	
9/24/04 9:50	0.0070	13.624	
9/24/04 9:50	0.0076	13.041	
9/24/04 9:50	0.0081	12.189	
9/24/04 9:50	0.0088	11.428	
9/24/04 9:50	0.0094	10.763	
9/24/04 9:50	0.0101	9.806	
9/24/04 9:50	0.0108	9.204	
9/24/04 9:50	0.0116	8.823	
9/24/04 9:50	0.0124	8.833	
9/24/04 9:51	0.0133	8.850	
9/24/04 9:51	0.0142	8.798	
9/24/04 9:51	0.0151	8.814	
9/24/04 9:51	0.0162	8.571	
9/24/04 9:51	0.0173	8.592	
9/24/04 9:51	0.0184	8.310	
9/24/04 9:51	0.0196	8.353	
9/24/04 9:51	0.0209	8.447	
9/24/04 9:51	0.0223	8.380	
9/24/04 9:51	0.0238	8.302	
9/24/04 9:51	0.0254	8.360	
9/24/04 9:51	0.0270	8.437	
9/24/04 9:51	0.0288	8.405	
9/24/04 9:52	0.0306	8.245	
9/24/04 9:52	0.0325	8.451	
9/24/04 9:52	0.0346	8.400	
9/24/04 9:52	0.0368	8.372	
9/24/04 9:52	0.0391	8.537	
9/24/04 9:52	0.0416	8.455	
9/24/04 9:52	0.0442	8.530	
9/24/04 9:53	0.0470	8.468	
9/24/04 9:53	0.0499	8.420	
9/24/04 9:53	0.0531	8.571	
9/24/04 9:53	0.0564	8.545	
9/24/04 9:53	0.0599	8.540	
9/24/04 9:54	0.0636	8.514	
9/24/04 9:54	0.0675	8.480	
9/24/04 9:54	0.0716	8.484	
9/24/04 9:54	0.0760	8.502	
9/24/04 9:55	0.0807	8.576	
9/24/04 9:55	0.0856	8.622	
9/24/04 9:55	0.0908	8.439	
9/24/04 9:56	0.0964	8.553	
9/24/04 9:56	0.1022	8.536	
9/24/04 9:56	0.1084	8.598	
9/24/04 9:57	0.1150	8.534	
9/24/04 9:57	0.1220	8.650	
9/24/04 9:57	0.1294	8.613	
9/24/04 9:58	0.1372	8.568	
9/24/04 9:58	0.1455	8.641	
9/24/04 9:59	0.1543	8.620	
9/24/04 10:00	0.1636	8.585	
9/24/04 10:00	0.1735	8.645	
9/24/04 10:01	0.1839	8.628	
9/24/04 10:01	0.1950	8.652	
9/24/04 10:02	0.2067	8.658	
9/24/04 10:03	0.2191	8.705	
9/24/04 10:04	0.2323	8.615	
9/24/04 10:05	0.2462	8.660	
9/24/04 10:05	0.2610	8.673	
9/24/04 10:06	0.2766	8.723	
9/24/04 10:07	0.2932	8.703	
9/24/04 10:08	0.3107	8.718	

P-1 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/24/04 9:25	-0.4158	0.000	
9/24/04 9:30	-0.3325	0.010	
9/24/04 9:35	-0.2492	0.018	
9/24/04 9:40	-0.1658	0.026	
9/24/04 9:45	-0.0825	0.036	
9/24/04 9:50	0.0008	0.044	
9/24/04 9:50	0.0050	0.059	
9/24/04 9:51	0.0133	0.155	
9/24/04 9:51	0.0217	0.218	
9/24/04 9:52	0.0342	0.276	
9/24/04 9:53	0.0550	0.337	
9/24/04 9:55	0.0842	0.393	
9/24/04 9:55	0.0883	0.399	
9/24/04 9:58	0.1342	0.452	
9/24/04 10:00	0.1675	0.480	
9/24/04 10:02	0.2050	0.506	
9/24/04 10:05	0.2508	0.532	
9/24/04 10:08	0.3092	0.558	
9/24/04 10:10	0.3342	0.565	
9/24/04 10:15	0.4175	0.591	
9/24/04 10:19	0.4800	0.609	
9/24/04 10:20	0.5008	0.615	
9/24/04 10:25	0.5842	0.635	
9/24/04 10:30	0.6675	0.651	
9/24/04 10:32	0.7092	0.661	
9/24/04 10:35	0.7508	0.671	
9/24/04 10:40	0.8342	0.690	
9/24/04 10:45	0.9175	0.704	
9/24/04 10:47	0.9550	0.712	
9/24/04 10:50	1.0008	0.718	
9/24/04 10:55	1.0842	0.730	
9/24/04 11:00	1.1675	0.740	
9/24/04 11:05	1.2508	0.752	
9/24/04 11:10	1.3342	0.762	
9/24/04 11:10	1.3425	0.764	
9/24/04 11:15	1.4175	0.772	
9/24/04 11:20	1.5008	0.782	
9/24/04 11:25	1.5842	0.792	
9/24/04 11:30	1.6675	0.802	
9/24/04 11:35	1.7508	0.810	
9/24/04 11:38	1.8008	0.815	
9/24/04 11:40	1.8342	0.817	
9/24/04 11:45	1.9175	0.827	
9/24/04 11:50	2.0008	0.835	
9/24/04 11:55	2.0842	0.877	
9/24/04 11:55	2.0883	0.897	step 2
9/24/04 11:56	2.1008	0.948	
9/24/04 11:57	2.1217	1.012	
9/24/04 11:59	2.1592	1.064	
9/24/04 12:00	2.1675	1.073	
9/24/04 12:03	2.2217	1.117	
9/24/04 12:05	2.2508	1.131	
9/24/04 12:10	2.3342	1.167	
9/24/04 12:10	2.3425	1.169	
9/24/04 12:15	2.4175	1.196	
9/24/04 12:20	2.5008	1.218	
9/24/04 12:20	2.5092	1.220	
9/24/04 12:25	2.5842	1.228	
9/24/04 12:30	2.6675	1.238	
9/24/04 12:35	2.7508	1.244	
9/24/04 12:40	2.8342	1.254	
9/24/04 12:45	2.9175	1.258	
9/24/04 12:50	3.0008	1.268	
9/24/04 12:51	3.0175	1.272	
9/24/04 12:55	3.0842	1.280	
9/24/04 12:58	3.1383	1.323	step 3
9/24/04 12:59	3.1508	1.375	
9/24/04 13:00	3.1675	1.417	
9/24/04 13:00	3.1758	1.431	
9/24/04 13:03	3.2258	1.482	
9/24/04 13:05	3.2508	1.500	
9/24/04 13:09	3.3217	1.534	
9/24/04 13:10	3.3342	1.538	
9/24/04 13:15	3.4175	1.564	
9/24/04 13:20	3.5008	1.581	
9/24/04 13:21	3.5217	1.585	
9/24/04 13:25	3.5842	1.597	
9/24/04 13:30	3.6675	1.609	
9/24/04 13:35	3.7508	1.619	
9/24/04 13:40	3.8342	1.631	
9/24/04 13:42	3.8717	1.637	
9/24/04 13:45	3.9175	1.639	
9/24/04 13:50	4.0008	1.647	
9/24/04 13:55	4.0842	1.659	
9/24/04 13:59	4.1508	1.703	step 4
9/24/04 14:00	4.1675	1.762	
9/24/04 14:00	4.1717	1.770	

P-3 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/24/04 9:16	-0.5695	0.021	
9/24/04 9:17	-0.5486	-0.050	
9/24/04 9:21	-0.4861	-0.048	
9/24/04 9:26	-0.4028	-0.039	
9/24/04 9:31	-0.3195	-0.032	
9/24/04 9:36	-0.2361	-0.023	
9/24/04 9:41	-0.1528	-0.016	
9/24/04 9:46	-0.0695	-0.006	
9/24/04 9:50	-0.0028	0.000	
9/24/04 9:51	0.0139	0.023	
9/24/04 9:51	0.0222	0.067	
9/24/04 9:52	0.0347	0.122	
9/24/04 9:53	0.0514	0.174	
9/24/04 9:54	0.0722	0.224	
9/24/04 9:56	0.0972	0.266	
9/24/04 9:56	0.1056	0.282	
9/24/04 9:59	0.1514	0.334	
9/24/04 10:01	0.1806	0.359	
9/24/04 10:03	0.2139	0.384	
9/24/04 10:06	0.2639	0.414	
9/24/04 10:08	0.3056	0.435	
9/24/04 10:11	0.3472	0.453	
9/24/04 10:16	0.4306	0.478	
9/24/04 10:17	0.4472	0.485	
9/24/04 10:21	0.5139	0.501	
9/24/04 10:26	0.5972	0.519	
9/24/04 10:29	0.6597	0.535	
9/24/04 10:31	0.6806	0.542	
9/24/04 10:36	0.7639	0.567	
9/24/04 10:40	0.8347	0.586	
9/24/04 10:41	0.8472	0.586	
9/24/04 10:46	0.9306	0.602	
9/24/04 10:51	1.0139	0.613	
9/24/04 10:56	1.0972	0.627	
9/24/04 11:00	1.1722	0.636	
9/24/04 11:01	1.1806	0.638	
9/24/04 11:06	1.2639	0.647	
9/24/04 11:11	1.3472	0.657	
9/24/04 11:16	1.4306	0.666	
9/24/04 11:21	1.5139	0.677	
9/24/04 11:26	1.5972	0.684	
9/24/04 11:26	1.6056	0.686	
9/24/04 11:31	1.6806	0.693	
9/24/04 11:36	1.7639	0.702	
9/24/04 11:41	1.8472	0.709	
9/24/04 11:46	1.9306	0.716	
9/24/04 11:51	2.0139	0.727	
9/24/04 11:55	2.0847	0.737	step 2
9/24/04 11:56	2.0972	0.764	
9/24/04 11:56	2.1056	0.787	
9/24/04 11:58	2.1306	0.842	
9/24/04 12:00	2.1639	0.892	
9/24/04 12:01	2.1806	0.910	
9/24/04 12:03	2.2222	0.942	
9/24/04 12:06	2.2639	0.970	
9/24/04 12:08	2.3097	0.993	
9/24/04 12:11	2.3472	1.009	
9/24/04 12:16	2.4306	1.043	
9/24/04 12:16	2.4347	1.045	
9/24/04 12:21	2.5139	1.066	
9/24/04 12:26	2.5972	1.078	
9/24/04 12:31	2.6806	1.084	
9/24/04 12:36	2.7639	1.093	
9/24/04 12:38	2.7972	1.096	
9/24/04 12:41	2.8472	1.100	
9/24/04 12:46	2.9306	1.103	
9/24/04 12:51	3.0139	1.109	
9/24/04 12:56	3.0972	1.121	step 3
9/24/04 12:59	3.1472	1.146	
9/24/04 13:00	3.1722	1.196	
9/24/04 13:01	3.1806	1.208	
9/24/04 13:03	3.2181	1.251	
9/24/04 13:06	3.2639	1.285	
9/24/04 13:07	3.2889	1.301	
9/24/04 13:11	3.3472	1.324	
9/24/04 13:16	3.4306	1.349	
9/24/04 13:16	3.4347	1.352	
9/24/04 13:21	3.5139	1.368	
9/24/04 13:26	3.5972	1.381	
9/24/04 13:31	3.6806	1.395	
9/24/04 13:33	3.7139	1.402	
9/24/04 13:36	3.7639	1.404	
9/24/04 13:41	3.8472	1.418	
9/24/04 13:46	3.9306	1.429	
9/24/04 13:51	4.0139	1.436	
9/24/04 13:56	4.0972	1.448	
9/24/04 13:58	4.1431	1.452	step 4

P-2 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/24/04 10:09	0.3293	8.681	
9/24/04 10:11	0.3490	8.636	
9/24/04 10:12	0.3699	8.722	
9/24/04 10:13	0.3919	8.812	
9/24/04 10:15	0.4154	8.595	
9/24/04 10:16	0.4402	8.673	
9/24/04 10:18	0.4664	8.735	
9/24/04 10:19	0.4942	8.588	
9/24/04 10:21	0.5237	8.722	
9/24/04 10:23	0.5549	8.732	
9/24/04 10:25	0.5880	8.769	
9/24/04 10:27	0.6230	8.618	
9/24/04 10:29	0.6601	8.687	
9/24/04 10:32	0.6994	8.687	
9/24/04 10:34	0.7411	8.721	
9/24/04 10:37	0.7852	8.683	
9/24/04 10:40	0.8319	8.687	
9/24/04 10:43	0.8814	8.678	
9/24/04 10:46	0.9338	8.962	
9/24/04 10:49	0.9893	8.702	
9/24/04 10:53	1.0481	8.633	
9/24/04 10:56	1.1104	8.783	
9/24/04 11:00	1.1764	8.798	
9/24/04 11:05	1.2463	8.695	
9/24/04 11:09	1.3204	8.703	
9/24/04 11:14	1.3988	8.817	
9/24/04 11:19	1.4819	8.785	
9/24/04 11:24	1.5652	8.849	
9/24/04 11:29	1.6486	8.714	
9/24/04 11:34	1.7319	8.830	
9/24/04 11:39	1.8152	8.766	
9/24/04 11:44	1.8986	8.785	
9/24/04 11:49	1.9819	8.815	
9/24/04 11:55	2.0819	16.380	step 2
9/24/04 11:57	2.1152	16.490	
9/24/04 11:58	2.1319	16.390	
9/24/04 11:59	2.1486	16.390	
9/24/04 12:00	2.1652	16.380	
9/24/04 12:01	2.1819	16.390	
9/24/04 12:02	2.1986	16.390	
9/24/04 12:03	2.2152	16.390	
9/24/04 12:04	2.2319	16.370	
9/24/04 12:05	2.2486	16.380	
9/24/04 12:06	2.2652	16.390	
9/24/04 12:08	2.2986	16.430	
9/24/04 12:10	2.3319	16.420	
9/24/04 12:12	2.3652	16.410	
9/24/04 12:14	2.3986	16.450	
9/24/04 12:16	2.4319	16.440	
9/24/04 12:18	2.4652	16.450	
9/24/04 12:20	2.4986	16.490	
9/24/04 12:25	2.5819	16.240	
9/24/04 12:30	2.6652	16.140	
9/24/04 12:35	2.7486	16.130	
9/24/04 12:40	2.8319	16.150	
9/24/04 12:55	3.0819	16.380	
9/24/04 12:57	3.1152	16.212	
9/24/04 12:57	3.1153	16.226	
9/24/04 12:57	3.1154	16.202	
9/24/04 12:57	3.1155	16.211	
9/24/04 12:57	3.1156	16.213	
9/24/04 12:57	3.1156	16.242	
9/24/04 12:57	3.1157	16.175	
9/24/04 12:57	3.1158	16.201	
9/24/04 12:57	3.1159	16.282	
9/24/04 12:57	3.1160	16.224	
9/24/04 12:57	3.1161	16.199	
9/24/04 12:57	3.1161	16.224	
9/24/04 12:57	3.1162	16.169	
9/24/04 12:57	3.1163	16.227	
9/24/04 12:57	3.1164	16.205	
9/24/04 12:57	3.1165	16.182	
9/24/04 12:57	3.1166	16.218	
9/24/04 12:57	3.1166	16.195	
9/24/04 12:57	3.1167	16.203	
9/24/04 12:57	3.1168	16.223	
9/24/04 12:57	3.1169	16.190	
9/24/04 12:57	3.1170	16.231	
9/24/04 12:57	3.1171	16.201	
9/24/04 12:57	3.1172	16.263	
9/24/04 12:57	3.1173	16.246	
9/24/04 12:57	3.1174	16.208	
9/24/04 12:57	3.1176	16.220	
9/24/04 12:57	3.1177	16.236	
9/24/04 12:57	3.1179	16.229	
9/24/04 12:57	3.1180	16.184	
9/24/04 12:57	3.1182	16.224	

P-1 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/24/04 14:02	4.2050	1.822	
9/24/04 14:04	4.2383	1.873	
9/24/04 14:05	4.2508	1.885	
9/24/04 14:08	4.3092	1.927	
9/24/04 14:10	4.3342	1.936	
9/24/04 14:15	4.4175	1.966	
9/24/04 14:18	4.4633	1.978	
9/24/04 14:20	4.5008	1.984	
9/24/04 14:25	4.5842	2.004	
9/24/04 14:30	4.6675	2.016	
9/24/04 14:34	4.7383	2.030	
9/24/04 14:35	4.7508	2.034	
9/24/04 14:40	4.8342	2.044	
9/24/04 14:45	4.9175	2.064	
9/24/04 14:50	5.0008	2.078	
9/24/04 14:52	5.0300	2.082	
9/24/04 14:55	5.0842	2.087	
9/24/04 15:00	5.1675	2.097	
9/24/04 15:05	5.2508	2.107	
9/24/04 15:10	5.3342	2.115	
9/24/04 15:14	5.4008	2.133	
9/24/04 15:15	5.4175	2.143	
9/24/04 15:20	5.5008	2.171	
9/24/04 15:22	5.5342	2.184	
9/24/04 15:25	5.5842	2.208	
9/24/04 15:30	5.6675	2.226	
9/24/04 15:33	5.7258	2.236	
9/24/04 15:35	5.7508	2.240	
9/24/04 15:40	5.8342	2.250	
9/24/04 15:45	5.9175	2.256	
9/24/04 15:50	6.0008	2.266	
9/24/04 15:55	6.0842	2.272	
9/24/04 16:00	6.1675	2.274	
9/24/04 16:04	6.2300	2.123	recovery
9/24/04 16:04	6.2342	2.032	
9/24/04 16:04	6.2383	1.946	
9/24/04 16:04	6.2425	1.867	
9/24/04 16:05	6.2467	1.799	
9/24/04 16:05	6.2508	1.738	
9/24/04 16:05	6.2550	1.684	
9/24/04 16:06	6.2633	1.593	
9/24/04 16:06	6.2717	1.518	
9/24/04 16:07	6.2800	1.456	
9/24/04 16:07	6.2883	1.405	
9/24/04 16:08	6.3008	1.339	
9/24/04 16:09	6.3133	1.288	
9/24/04 16:10	6.3300	1.230	
9/24/04 16:10	6.3342	1.216	
9/24/04 16:11	6.3508	1.172	
9/24/04 16:12	6.3758	1.117	
9/24/04 16:14	6.4092	1.059	
9/24/04 16:15	6.4175	1.045	
9/24/04 16:17	6.4467	1.008	
9/24/04 16:20	6.4967	0.954	
9/24/04 16:20	6.5008	0.950	
9/24/04 16:24	6.5633	0.901	
9/24/04 16:25	6.5842	0.887	
9/24/04 16:29	6.6508	0.849	
9/24/04 16:30	6.6675	0.839	
9/24/04 16:35	6.7508	0.803	
9/24/04 16:36	6.7675	0.797	
9/24/04 16:40	6.8342	0.776	
9/24/04 16:45	6.9175	0.752	
9/24/04 16:46	6.9425	0.746	
9/24/04 16:50	7.0008	0.732	
9/24/04 16:55	7.0842	0.718	
9/24/04 17:00	7.1675	0.704	
9/24/04 17:04	7.2383	0.694	
9/24/04 17:05	7.2508	0.694	
9/24/04 17:10	7.3342	0.682	
9/24/04 17:15	7.4175	0.674	
9/24/04 17:20	7.5008	0.666	
9/24/04 17:25	7.5842	0.660	
9/24/04 17:30	7.6675	0.654	
9/24/04 17:35	7.7508	0.651	
9/24/04 17:40	7.8342	0.647	
9/24/04 17:42	7.8758	0.643	
9/24/04 17:45	7.9175	0.643	
9/24/04 17:50	8.0008	0.639	
9/24/04 17:55	8.0842	0.635	
9/24/04 18:00	8.1675	0.633	
9/24/04 18:05	8.2508	0.629	
9/24/04 18:10	8.3342	0.627	
9/24/04 18:15	8.4175	0.625	
9/24/04 18:20	8.5008	0.623	
9/24/04 18:25	8.5842	0.619	
9/24/04 18:30	8.6675	0.617	

P-3 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/24/04 14:01	4.1806	1.507	
9/24/04 14:01	4.1847	1.509	
9/24/04 14:03	4.2222	1.560	
9/24/04 14:06	4.2639	1.605	
9/24/04 14:06	4.2681	1.610	
9/24/04 14:11	4.3472	1.656	
9/24/04 14:11	4.3556	1.660	
9/24/04 14:16	4.4306	1.685	
9/24/04 14:21	4.5139	1.708	
9/24/04 14:21	4.5222	1.711	
9/24/04 14:26	4.5972	1.724	
9/24/04 14:31	4.6806	1.738	
9/24/04 14:36	4.7639	1.749	
9/24/04 14:40	4.8389	1.761	
9/24/04 14:41	4.8472	1.761	
9/24/04 14:46	4.9306	1.777	
9/24/04 14:51	5.0139	1.791	
9/24/04 14:56	5.0972	1.802	
9/24/04 14:57	5.1264	1.813	
9/24/04 15:01	5.1806	1.809	
9/24/04 15:06	5.2639	1.820	
9/24/04 15:11	5.3472	1.829	
9/24/04 15:16	5.4306	1.850	
9/24/04 15:18	5.4722	1.864	
9/24/04 15:21	5.5139	1.871	
9/24/04 15:26	5.5972	1.898	
9/24/04 15:30	5.6722	1.914	
9/24/04 15:31	5.6806	1.919	
9/24/04 15:36	5.7639	1.928	
9/24/04 15:41	5.8472	1.942	
9/24/04 15:46	5.9306	1.948	
9/24/04 15:51	6.0139	1.958	
9/24/04 15:54	6.0722	1.964	
9/24/04 15:56	6.0972	1.967	
9/24/04 16:01	6.1806	1.969	
9/24/04 16:04	6.2389	1.891	recovery
9/24/04 16:05	6.2472	1.804	
9/24/04 16:05	6.2556	1.722	
9/24/04 16:06	6.2639	1.642	
9/24/04 16:06	6.2681	1.605	
9/24/04 16:06	6.2764	1.539	
9/24/04 16:07	6.2847	1.484	
9/24/04 16:07	6.2931	1.432	
9/24/04 16:08	6.3056	1.363	
9/24/04 16:09	6.3181	1.306	
9/24/04 16:10	6.3347	1.242	
9/24/04 16:11	6.3472	1.201	
9/24/04 16:11	6.3514	1.189	
9/24/04 16:12	6.3722	1.132	
9/24/04 16:14	6.3972	1.077	
9/24/04 16:15	6.4264	1.025	
9/24/04 16:16	6.4306	1.018	
9/24/04 16:18	6.4639	0.970	
9/24/04 16:20	6.5097	0.918	
9/24/04 16:21	6.5139	0.915	
9/24/04 16:24	6.5639	0.867	
9/24/04 16:26	6.5972	0.844	
9/24/04 16:28	6.6389	0.817	
9/24/04 16:31	6.6806	0.796	
9/24/04 16:35	6.7472	0.764	
9/24/04 16:36	6.7639	0.760	
9/24/04 16:41	6.8472	0.730	
9/24/04 16:44	6.9056	0.711	
9/24/04 16:46	6.9306	0.707	
9/24/04 16:51	7.0139	0.686	
9/24/04 16:56	7.0972	0.671	
9/24/04 16:59	7.1597	0.661	
9/24/04 17:01	7.1806	0.659	
9/24/04 17:06	7.2639	0.648	
9/24/04 17:11	7.3472	0.636	
9/24/04 17:16	7.4306	0.629	
9/24/04 17:21	7.5139	0.623	
9/24/04 17:26	7.5972	0.615	
9/24/04 17:28	7.6306	0.611	
9/24/04 17:31	7.6806	0.611	
9/24/04 17:36	7.7639	0.606	
9/24/04 17:41	7.8472	0.602	
9/24/04 17:46	7.9306	0.599	
9/24/04 17:51	8.0139	0.597	
9/24/04 17:56	8.0972	0.597	
9/24/04 18:01	8.1806	0.595	
9/24/04 18:06	8.2639	0.595	
9/24/04 18:11	8.3472	0.593	
9/24/04 18:16	8.4306	0.595	
9/24/04 18:21	8.5139	0.591	
9/24/04 18:26	8.5972	0.588	
9/24/04 18:31	8.6806	0.586	

P-2 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/24/04 12:57	3.1184	16.250	
9/24/04 12:57	3.1185	16.246	
9/24/04 12:57	3.1187	16.237	
9/24/04 12:57	3.1189	16.184	
9/24/04 12:57	3.1192	16.190	
9/24/04 12:57	3.1194	16.214	
9/24/04 12:57	3.1196	16.211	
9/24/04 12:57	3.1199	16.218	
9/24/04 12:57	3.1202	16.224	
9/24/04 12:57	3.1205	16.263	
9/24/04 12:57	3.1208	16.250	
9/24/04 12:57	3.1211	16.231	
9/24/04 12:57	3.1215	16.198	
9/24/04 12:57	3.1218	16.200	
9/24/04 12:57	3.1222	16.228	
9/24/04 12:57	3.1226	16.203	
9/24/04 12:57	3.1231	16.209	
9/24/04 12:57	3.1235	16.213	
9/24/04 12:57	3.1240	16.224	
9/24/04 12:57	3.1245	16.207	
9/24/04 12:57	3.1250	16.209	step 3
9/24/04 12:57	3.1256	16.598	
9/24/04 12:57	3.1262	16.964	
9/24/04 12:57	3.1268	17.258	
9/24/04 12:57	3.1275	17.996	
9/24/04 12:57	3.1282	19.233	
9/24/04 12:57	3.1290	20.775	
9/24/04 12:57	3.1298	21.638	
9/24/04 12:57	3.1307	22.432	
9/24/04 12:58	3.1316	23.614	
9/24/04 12:58	3.1326	24.317	
9/24/04 12:58	3.1336	24.477	
9/24/04 12:58	3.1347	24.197	
9/24/04 12:58	3.1359	23.632	
9/24/04 12:58	3.1371	23.462	
9/24/04 12:58	3.1384	23.798	
9/24/04 12:58	3.1398	23.740	
9/24/04 12:58	3.1412	23.588	
9/24/04 12:58	3.1428	23.504	
9/24/04 12:58	3.1444	23.377	
9/24/04 12:58	3.1462	23.304	
9/24/04 12:58	3.1480	23.270	
9/24/04 12:59	3.1500	23.156	
9/24/04 12:59	3.1521	23.067	
9/24/04 12:59	3.1542	22.945	
9/24/04 12:59	3.1566	22.948	
9/24/04 12:59	3.1591	22.942	
9/24/04 12:59	3.1617	22.846	
9/24/04 12:59	3.1644	22.860	
9/24/04 13:00	3.1674	22.849	
9/24/04 13:00	3.1705	22.862	
9/24/04 13:00	3.1738	22.827	
9/24/04 13:00	3.1773	22.833	
9/24/04 13:00	3.1810	22.864	
9/24/04 13:01	3.1849	22.888	
9/24/04 13:01	3.1891	22.866	
9/24/04 13:01	3.1934	22.888	
9/24/04 13:01	3.1981	22.898	
9/24/04 13:02	3.2031	22.913	
9/24/04 13:02	3.2083	22.917	
9/24/04 13:02	3.2138	22.857	
9/24/04 13:03	3.2197	22.865	
9/24/04 13:03	3.2259	22.865	
9/24/04 13:04	3.2325	22.884	
9/24/04 13:04	3.2394	22.914	
9/24/04 13:04	3.2468	22.947	
9/24/04 13:05	3.2547	22.891	
9/24/04 13:05	3.2630	22.899	
9/24/04 13:06	3.2717	22.873	
9/24/04 13:06	3.2811	22.934	
9/24/04 13:07	3.2909	22.942	
9/24/04 13:08	3.3014	22.934	
9/24/04 13:08	3.3124	22.949	
9/24/04 13:09	3.3241	22.962	
9/24/04 13:10	3.3366	22.978	
9/24/04 13:11	3.3497	22.948	
9/24/04 13:11	3.3637	22.946	
9/24/04 13:12	3.3784	22.914	
9/24/04 13:13	3.3941	22.947	
9/24/04 13:14	3.4106	22.947	
9/24/04 13:15	3.4282	22.940	
9/24/04 13:16	3.4467	22.908	
9/24/04 13:18	3.4664	22.987	
9/24/04 13:19	3.4873	22.931	
9/24/04 13:20	3.5094	22.979	
9/24/04 13:22	3.5328	22.948	
9/24/04 13:23	3.5576	22.989	

P-1 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/24/04 18:35	8.7508	0.613
9/24/04 18:40	8.8342	0.611
9/24/04 18:45	8.9175	0.609
9/24/04 18:50	9.0008	0.605
9/24/04 18:55	9.0842	0.603
9/24/04 19:00	9.1675	0.597
9/24/04 19:05	9.2508	0.595
9/24/04 19:08	9.3050	0.591
9/24/04 19:10	9.3342	0.591
9/24/04 19:15	9.4175	0.589
9/24/04 19:20	9.5008	0.585
9/24/04 19:25	9.5842	0.581
9/24/04 19:30	9.6675	0.577
9/24/04 19:35	9.7508	0.573
9/24/04 19:40	9.8342	0.571
9/24/04 19:45	9.9175	0.567
9/24/04 19:50	10.0008	0.565
9/24/04 19:55	10.0842	0.561
9/24/04 20:00	10.1675	0.559
9/24/04 20:05	10.2508	0.555
9/24/04 20:10	10.3342	0.553
9/24/04 20:15	10.4175	0.551
9/24/04 20:20	10.5008	0.549
9/24/04 20:25	10.5842	0.547
9/24/04 20:30	10.6675	0.545
9/24/04 20:35	10.7508	0.543
9/24/04 20:40	10.8342	0.541
9/24/04 20:41	10.8592	0.539
9/24/04 20:45	10.9175	0.539
9/24/04 20:50	11.0008	0.539
9/24/04 20:55	11.0842	0.537
9/24/04 21:00	11.1675	0.535
9/24/04 21:05	11.2508	0.535
9/24/04 21:10	11.3342	0.535
9/24/04 21:15	11.4175	0.533
9/24/04 21:20	11.5008	0.533
9/24/04 21:25	11.5842	0.531
9/24/04 21:30	11.6675	0.531
9/24/04 21:35	11.7508	0.529
9/24/04 21:40	11.8342	0.529
9/24/04 21:45	11.9175	0.527
9/24/04 21:50	12.0008	0.527
9/24/04 21:55	12.0842	0.526
9/24/04 22:00	12.1675	0.523
9/24/04 22:05	12.2508	0.523
9/24/04 22:10	12.3342	0.521
9/24/04 22:15	12.4175	0.522
9/24/04 22:20	12.5008	0.519
9/24/04 22:25	12.5842	0.517
9/24/04 22:30	12.6675	0.517
9/24/04 22:35	12.7508	0.513
9/24/04 22:40	12.8342	0.511
9/24/04 22:45	12.9175	0.511
9/24/04 22:50	13.0008	0.507
9/24/04 22:55	13.0842	0.507
9/24/04 23:00	13.1675	0.505
9/24/04 23:05	13.2508	0.503
9/24/04 23:10	13.3342	0.501
9/24/04 23:15	13.4175	0.499
9/24/04 23:20	13.5008	0.497
9/24/04 23:25	13.5842	0.495
9/24/04 23:30	13.6675	0.492
9/24/04 23:35	13.7508	0.492
9/24/04 23:40	13.8342	0.488
9/24/04 23:40	13.8383	0.488
9/24/04 23:45	13.9175	0.486
9/24/04 23:50	14.0008	0.484
9/24/04 23:55	14.0842	0.482
9/25/04 0:00	14.1675	0.480
9/25/04 0:05	14.2508	0.480
9/25/04 0:10	14.3342	0.478
9/25/04 0:15	14.4175	0.476
9/25/04 0:20	14.5008	0.474
9/25/04 0:25	14.5842	0.472
9/25/04 0:30	14.6675	0.470
9/25/04 0:35	14.7508	0.468
9/25/04 0:40	14.8342	0.466
9/25/04 0:45	14.9175	0.464
9/25/04 0:50	15.0008	0.462
9/25/04 0:55	15.0842	0.462
9/25/04 1:00	15.1675	0.460
9/25/04 1:05	15.2508	0.456
9/25/04 1:10	15.3342	0.456
9/25/04 1:15	15.4175	0.454
9/25/04 1:20	15.5008	0.452
9/25/04 1:25	15.5842	0.450
9/25/04 1:30	15.6675	0.448

P-3 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/24/04 18:36	8.7639	0.581
9/24/04 18:41	8.8472	0.577
9/24/04 18:46	8.9306	0.572
9/24/04 18:51	9.0139	0.565
9/24/04 18:54	9.0681	0.561
9/24/04 18:56	9.0972	0.558
9/24/04 19:01	9.1806	0.554
9/24/04 19:06	9.2639	0.545
9/24/04 19:11	9.3472	0.538
9/24/04 19:16	9.4306	0.531
9/24/04 19:21	9.5139	0.526
9/24/04 19:26	9.5972	0.520
9/24/04 19:30	9.6722	0.510
9/24/04 19:31	9.6806	0.513
9/24/04 19:36	9.7639	0.508
9/24/04 19:41	9.8472	0.501
9/24/04 19:46	9.9306	0.494
9/24/04 19:51	10.0139	0.490
9/24/04 19:56	10.0972	0.485
9/24/04 20:01	10.1806	0.483
9/24/04 20:06	10.2639	0.478
9/24/04 20:11	10.3472	0.474
9/24/04 20:16	10.4306	0.471
9/24/04 20:21	10.5139	0.467
9/24/04 20:26	10.5972	0.467
9/24/04 20:31	10.6806	0.464
9/24/04 20:34	10.7389	0.460
9/24/04 20:36	10.7639	0.460
9/24/04 20:41	10.8472	0.460
9/24/04 20:46	10.9306	0.458
9/24/04 20:51	11.0139	0.455
9/24/04 20:56	11.0972	0.455
9/24/04 21:01	11.1806	0.455
9/24/04 21:06	11.2639	0.453
9/24/04 21:11	11.3472	0.453
9/24/04 21:16	11.4306	0.451
9/24/04 21:21	11.5139	0.448
9/24/04 21:26	11.5972	0.448
9/24/04 21:31	11.6806	0.448
9/24/04 21:36	11.7639	0.446
9/24/04 21:41	11.8472	0.444
9/24/04 21:46	11.9306	0.444
9/24/04 21:51	12.0139	0.442
9/24/04 21:56	12.0972	0.442
9/24/04 22:01	12.1806	0.439
9/24/04 22:06	12.2639	0.435
9/24/04 22:11	12.3472	0.435
9/24/04 22:16	12.4306	0.432
9/24/04 22:21	12.5139	0.430
9/24/04 22:26	12.5972	0.428
9/24/04 22:31	12.6806	0.426
9/24/04 22:36	12.7639	0.421
9/24/04 22:41	12.8472	0.419
9/24/04 22:46	12.9306	0.419
9/24/04 22:51	13.0139	0.414
9/24/04 22:52	13.0389	0.410
9/24/04 22:56	13.0972	0.412
9/24/04 23:01	13.1806	0.407
9/24/04 23:06	13.2639	0.407
9/24/04 23:11	13.3472	0.403
9/24/04 23:16	13.4306	0.400
9/24/04 23:21	13.5139	0.398
9/24/04 23:26	13.5972	0.396
9/24/04 23:31	13.6806	0.391
9/24/04 23:36	13.7639	0.391
9/24/04 23:41	13.8472	0.387
9/24/04 23:46	13.9306	0.384
9/24/04 23:51	14.0139	0.382
9/24/04 23:56	14.0972	0.380
9/25/04 0:01	14.1806	0.378
9/25/04 0:06	14.2639	0.375
9/25/04 0:11	14.3472	0.375
9/25/04 0:16	14.4306	0.373
9/25/04 0:21	14.5139	0.371
9/25/04 0:26	14.5972	0.371
9/25/04 0:31	14.6806	0.368
9/25/04 0:36	14.7639	0.366
9/25/04 0:41	14.8472	0.366
9/25/04 0:46	14.9306	0.362
9/25/04 0:51	15.0139	0.362
9/25/04 0:52	15.0389	0.359
9/25/04 0:56	15.0972	0.359
9/25/04 1:01	15.1806	0.357
9/25/04 1:06	15.2639	0.355
9/25/04 1:11	15.3472	0.352
9/25/04 1:16	15.4306	0.350
9/25/04 1:21	15.5139	0.346

P-2 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/24/04 13:25	3.5839	22.929	
9/24/04 13:26	3.6117	22.998	
9/24/04 13:28	3.6411	22.948	
9/24/04 13:30	3.6724	23.006	
9/24/04 13:32	3.7054	22.901	
9/24/04 13:34	3.7404	22.978	
9/24/04 13:36	3.7776	22.966	
9/24/04 13:39	3.8169	22.985	
9/24/04 13:41	3.8585	22.978	
9/24/04 13:44	3.9026	22.994	
9/24/04 13:47	3.9493	22.987	
9/24/04 13:50	3.9988	23.004	
9/24/04 13:53	4.0512	23.017	
9/24/04 13:56	4.1067	23.000	
9/24/04 13:57	4.1287	23.039	
9/24/04 13:57	4.1288	22.981	
9/24/04 13:57	4.1289	23.001	
9/24/04 13:57	4.1289	22.990	
9/24/04 13:57	4.1290	23.012	
9/24/04 13:57	4.1291	23.046	
9/24/04 13:57	4.1292	22.982	
9/24/04 13:57	4.1293	22.990	
9/24/04 13:57	4.1294	22.993	
9/24/04 13:57	4.1294	23.038	
9/24/04 13:57	4.1295	22.995	
9/24/04 13:57	4.1296	23.003	
9/24/04 13:57	4.1297	23.001	
9/24/04 13:57	4.1298	22.988	
9/24/04 13:57	4.1299	22.995	
9/24/04 13:57	4.1299	23.004	
9/24/04 13:57	4.1300	22.993	
9/24/04 13:57	4.1301	22.939	
9/24/04 13:57	4.1302	23.010	
9/24/04 13:57	4.1303	22.997	
9/24/04 13:57	4.1304	22.978	
9/24/04 13:57	4.1305	23.006	
9/24/04 13:57	4.1306	22.959	
9/24/04 13:57	4.1307	22.971	
9/24/04 13:57	4.1308	22.997	
9/24/04 13:57	4.1309	22.984	
9/24/04 13:57	4.1310	22.999	
9/24/04 13:57	4.1312	23.012	
9/24/04 13:57	4.1313	22.997	
9/24/04 13:58	4.1315	22.989	
9/24/04 13:58	4.1316	22.978	
9/24/04 13:58	4.1318	22.999	
9/24/04 13:58	4.1320	22.993	
9/24/04 13:58	4.1322	22.958	
9/24/04 13:58	4.1324	23.038	
9/24/04 13:58	4.1326	23.016	
9/24/04 13:58	4.1329	22.993	
9/24/04 13:58	4.1331	22.994	
9/24/04 13:58	4.1334	22.979	
9/24/04 13:58	4.1336	23.003	
9/24/04 13:58	4.1339	23.031	
9/24/04 13:58	4.1342	22.932	
9/24/04 13:58	4.1346	22.992	
9/24/04 13:58	4.1349	23.025	
9/24/04 13:58	4.1353	22.988	
9/24/04 13:58	4.1357	22.984	
9/24/04 13:58	4.1361	22.951	
9/24/04 13:58	4.1365	22.898	
9/24/04 13:58	4.1370	22.728	
9/24/04 13:58	4.1374	23.014	
9/24/04 13:58	4.1379	23.494	step 4
9/24/04 13:58	4.1385	24.273	
9/24/04 13:58	4.1390	26.158	
9/24/04 13:58	4.1397	26.824	
9/24/04 13:58	4.1403	28.006	
9/24/04 13:58	4.1410	28.977	
9/24/04 13:58	4.1417	30.072	
9/24/04 13:58	4.1425	30.849	
9/24/04 13:58	4.1433	31.333	
9/24/04 13:58	4.1442	31.366	
9/24/04 13:58	4.1451	31.212	
9/24/04 13:58	4.1460	31.125	
9/24/04 13:58	4.1471	31.064	
9/24/04 13:59	4.1482	31.012	
9/24/04 13:59	4.1493	30.931	
9/24/04 13:59	4.1505	30.930	
9/24/04 13:59	4.1519	30.937	
9/24/04 13:59	4.1532	30.806	
9/24/04 13:59	4.1547	30.865	
9/24/04 13:59	4.1563	30.845	
9/24/04 13:59	4.1579	30.868	
9/24/04 13:59	4.1597	30.896	
9/24/04 13:59	4.1615	30.729	

P-1 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/25/04 1:35	15.7508	0.446
9/25/04 1:40	15.8342	0.444
9/25/04 1:45	15.9175	0.442
9/25/04 1:50	16.0008	0.440
9/25/04 1:55	16.0842	0.440
9/25/04 1:57	16.1217	0.436
9/25/04 2:00	16.1675	0.436
9/25/04 2:05	16.2508	0.434
9/25/04 2:10	16.3342	0.432
9/25/04 2:15	16.4175	0.428
9/25/04 2:20	16.5008	0.426
9/25/04 2:25	16.5842	0.424
9/25/04 2:30	16.6675	0.422
9/25/04 2:35	16.7508	0.418
9/25/04 2:40	16.8342	0.416
9/25/04 2:45	16.9175	0.414
9/25/04 2:50	17.0008	0.410
9/25/04 2:55	17.0842	0.408
9/25/04 3:00	17.1675	0.406
9/25/04 3:05	17.2508	0.404
9/25/04 3:10	17.3342	0.400
9/25/04 3:15	17.4175	0.398
9/25/04 3:20	17.5008	0.396
9/25/04 3:25	17.5842	0.392
9/25/04 3:30	17.6675	0.390
9/25/04 3:35	17.7508	0.386
9/25/04 3:40	17.8300	0.384
9/25/04 3:40	17.8342	0.384
9/25/04 3:45	17.9175	0.382
9/25/04 3:50	18.0008	0.380
9/25/04 3:55	18.0842	0.376
9/25/04 4:00	18.1675	0.374
9/25/04 4:05	18.2508	0.370
9/25/04 4:10	18.3342	0.366
9/25/04 4:15	18.4175	0.362
9/25/04 4:20	18.5008	0.360
9/25/04 4:25	18.5842	0.356
9/25/04 4:30	18.6675	0.352
9/25/04 4:35	18.7508	0.348
9/25/04 4:40	18.8342	0.344
9/25/04 4:45	18.9175	0.340
9/25/04 4:50	19.0008	0.336
9/25/04 4:54	19.0675	0.333
9/25/04 4:55	19.0842	0.333
9/25/04 5:00	19.1675	0.331
9/25/04 5:05	19.2508	0.325
9/25/04 5:10	19.3342	0.321
9/25/04 5:15	19.4175	0.317
9/25/04 5:20	19.5008	0.313
9/25/04 5:25	19.5842	0.309
9/25/04 5:30	19.6675	0.307
9/25/04 5:35	19.7508	0.301
9/25/04 5:40	19.8342	0.299
9/25/04 5:45	19.9175	0.293
9/25/04 5:50	20.0008	0.289
9/25/04 5:55	20.0842	0.287
9/25/04 6:00	20.1675	0.281
9/25/04 6:00	20.1717	0.281
9/25/04 6:05	20.2508	0.277
9/25/04 6:10	20.3342	0.273
9/25/04 6:15	20.4175	0.271
9/25/04 6:20	20.5008	0.265
9/25/04 6:25	20.5842	0.261
9/25/04 6:30	20.6675	0.257
9/25/04 6:35	20.7508	0.255
9/25/04 6:40	20.8342	0.251
9/25/04 6:45	20.9175	0.247
9/25/04 6:50	21.0008	0.243
9/25/04 6:55	21.0842	0.239
9/25/04 7:00	21.1675	0.237
9/25/04 7:05	21.2508	0.233
9/25/04 7:09	21.3217	0.229
9/25/04 7:10	21.3342	0.229
9/25/04 7:15	21.4175	0.225
9/25/04 7:20	21.5008	0.223
9/25/04 7:25	21.5842	0.219
9/25/04 7:30	21.6675	0.215
9/25/04 7:35	21.7508	0.213
9/25/04 7:40	21.8342	0.209
9/25/04 7:45	21.9175	0.206
9/25/04 7:50	22.0008	0.204
9/25/04 7:55	22.0842	0.202
9/25/04 8:00	22.1675	0.198
9/25/04 8:05	22.2508	0.198
9/25/04 8:10	22.3342	0.196
9/25/04 8:15	22.4175	0.194
9/25/04 8:20	22.5008	0.192

P-3 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/25/04 1:26	15.5972	0.348
9/25/04 1:31	15.6806	0.343
9/25/04 1:36	15.7639	0.339
9/25/04 1:41	15.8472	0.336
9/25/04 1:46	15.9306	0.332
9/25/04 1:51	16.0139	0.332
9/25/04 1:56	16.0972	0.330
9/25/04 2:01	16.1806	0.327
9/25/04 2:06	16.2639	0.320
9/25/04 2:11	16.3472	0.318
9/25/04 2:16	16.4306	0.316
9/25/04 2:21	16.5139	0.311
9/25/04 2:21	16.5264	0.309
9/25/04 2:26	16.5972	0.307
9/25/04 2:31	16.6806	0.302
9/25/04 2:36	16.7639	0.300
9/25/04 2:41	16.8472	0.300
9/25/04 2:46	16.9306	0.295
9/25/04 2:51	17.0139	0.291
9/25/04 2:56	17.0972	0.286
9/25/04 3:01	17.1806	0.284
9/25/04 3:06	17.2639	0.279
9/25/04 3:11	17.3472	0.275
9/25/04 3:16	17.4306	0.272
9/25/04 3:21	17.5139	0.268
9/25/04 3:26	17.5972	0.266
9/25/04 3:31	17.6806	0.261
9/25/04 3:32	17.7014	0.259
9/25/04 3:36	17.7639	0.259
9/25/04 3:41	17.8472	0.254
9/25/04 3:46	17.9306	0.252
9/25/04 3:51	18.0139	0.247
9/25/04 3:56	18.0972	0.243
9/25/04 4:01	18.1806	0.240
9/25/04 4:06	18.2639	0.234
9/25/04 4:11	18.3472	0.229
9/25/04 4:16	18.4306	0.224
9/25/04 4:21	18.5139	0.222
9/25/04 4:26	18.5972	0.215
9/25/04 4:31	18.6806	0.211
9/25/04 4:34	18.7431	0.208
9/25/04 4:36	18.7639	0.206
9/25/04 4:41	18.8472	0.204
9/25/04 4:46	18.9306	0.197
9/25/04 4:51	19.0139	0.195
9/25/04 4:56	19.0972	0.188
9/25/04 5:01	19.1806	0.183
9/25/04 5:06	19.2639	0.179
9/25/04 5:11	19.3472	0.174
9/25/04 5:16	19.4306	0.167
9/25/04 5:21	19.5139	0.165
9/25/04 5:26	19.5972	0.160
9/25/04 5:28	19.6431	0.158
9/25/04 5:31	19.6806	0.156
9/25/04 5:36	19.7639	0.154
9/25/04 5:41	19.8472	0.147
9/25/04 5:46	19.9306	0.142
9/25/04 5:51	20.0139	0.140
9/25/04 5:56	20.0972	0.135
9/25/04 6:01	20.1806	0.131
9/25/04 6:06	20.2639	0.124
9/25/04 6:11	20.3472	0.119
9/25/04 6:16	20.4306	0.117
9/25/04 6:21	20.5139	0.115
9/25/04 6:23	20.5597	0.108
9/25/04 6:26	20.5972	0.108
9/25/04 6:31	20.6806	0.106
9/25/04 6:36	20.7639	0.101
9/25/04 6:41	20.8472	0.094
9/25/04 6:46	20.9306	0.092
9/25/04 6:51	21.0139	0.090
9/25/04 6:56	21.0972	0.087
9/25/04 7:01	21.1806	0.083
9/25/04 7:06	21.2639	0.076
9/25/04 7:11	21.3472	0.071
9/25/04 7:16	21.4306	0.069
9/25/04 7:21	21.5139	0.064
9/25/04 7:26	21.5972	0.058
9/25/04 7:27	21.6264	0.058
9/25/04 7:31	21.6806	0.055
9/25/04 7:36	21.7639	0.053
9/25/04 7:41	21.8472	0.048
9/25/04 7:46	21.9306	0.044
9/25/04 7:51	22.0139	0.039
9/25/04 7:56	22.0972	0.039
9/25/04 8:01	22.1806	0.032
9/25/04 8:06	22.2639	0.030

P-2 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/24/04 13:59	4.1634	29.755	
9/24/04 14:00	4.1655	29.226	
9/24/04 14:00	4.1677	28.124	
9/24/04 14:00	4.1700	27.707	
9/24/04 14:00	4.1725	27.505	
9/24/04 14:00	4.1751	27.403	
9/24/04 14:00	4.1779	27.435	
9/24/04 14:00	4.1809	27.404	
9/24/04 14:01	4.1840	28.943	
9/24/04 14:01	4.1873	31.151	
9/24/04 14:01	4.1908	31.308	
9/24/04 14:01	4.1945	31.372	
9/24/04 14:02	4.1984	31.362	
9/24/04 14:02	4.2025	31.305	
9/24/04 14:02	4.2069	31.387	
9/24/04 14:02	4.2116	31.397	
9/24/04 14:03	4.2165	31.412	
9/24/04 14:03	4.2217	31.442	
9/24/04 14:03	4.2273	31.457	
9/24/04 14:04	4.2331	31.441	
9/24/04 14:04	4.2394	31.449	
9/24/04 14:04	4.2459	31.453	
9/24/04 14:05	4.2529	31.472	
9/24/04 14:05	4.2603	31.458	
9/24/04 14:06	4.2681	31.428	
9/24/04 14:06	4.2764	31.466	
9/24/04 14:07	4.2852	31.414	
9/24/04 14:07	4.2945	31.477	
9/24/04 14:08	4.3044	31.470	
9/24/04 14:09	4.3148	31.442	
9/24/04 14:09	4.3259	31.474	
9/24/04 14:10	4.3376	31.418	
9/24/04 14:11	4.3500	31.498	
9/24/04 14:11	4.3632	31.413	
9/24/04 14:12	4.3771	31.372	
9/24/04 14:13	4.3919	31.452	
9/24/04 14:14	4.4075	31.424	
9/24/04 14:15	4.4241	31.342	
9/24/04 14:16	4.4416	31.415	
9/24/04 14:17	4.4602	31.415	
9/24/04 14:18	4.4799	31.430	
9/24/04 14:20	4.5008	31.439	
9/24/04 14:21	4.5229	31.430	
9/24/04 14:22	4.5463	31.424	
9/24/04 14:24	4.5711	31.430	
9/24/04 14:25	4.5973	31.445	
9/24/04 14:27	4.6251	31.450	
9/24/04 14:29	4.6546	31.417	
9/24/04 14:31	4.6858	31.445	
9/24/04 14:33	4.7189	31.469	
9/24/04 14:35	4.7539	31.447	
9/24/04 14:37	4.7910	31.450	
9/24/04 14:39	4.8303	31.372	
9/24/04 14:42	4.8720	31.971	
9/24/04 14:45	4.9161	31.969	
9/24/04 14:47	4.9628	32.034	
9/24/04 14:50	5.0123	32.006	
9/24/04 14:53	5.0647	32.038	
9/24/04 14:57	5.1202	32.001	
9/24/04 15:00	5.1790	32.008	
9/24/04 15:04	5.2413	31.967	
9/24/04 15:08	5.3073	32.006	
9/24/04 15:12	5.3772	31.807	
9/24/04 15:17	5.4513	33.551	
9/24/04 15:21	5.5297	34.711	
9/24/04 15:26	5.6128	34.801	
9/24/04 15:31	5.6961	34.755	
9/24/04 15:36	5.7795	34.798	
9/24/04 15:41	5.8628	34.698	
9/24/04 15:46	5.9461	34.659	
9/24/04 15:51	6.0295	34.657	
9/24/04 15:56	6.1128	34.293	
9/24/04 16:02	6.2053	34.392	Pump off
9/24/04 16:02	6.2054	34.351	recovery
9/24/04 16:02	6.2055	34.405	
9/24/04 16:02	6.2055	34.386	
9/24/04 16:02	6.2056	34.421	
9/24/04 16:02	6.2057	34.440	
9/24/04 16:02	6.2058	34.406	
9/24/04 16:02	6.2059	34.386	
9/24/04 16:02	6.2060	34.376	
9/24/04 16:02	6.2060	34.421	
9/24/04 16:02	6.2061	34.410	
9/24/04 16:02	6.2062	34.397	
9/24/04 16:02	6.2063	34.436	
9/24/04 16:02	6.2064	34.430	
9/24/04 16:02	6.2065	34.406	

P-1 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/25/04 8:25	22.5842	0.192
9/25/04 8:30	22.6675	0.190
9/25/04 8:35	22.7508	0.190
9/25/04 8:40	22.8342	0.190
9/25/04 8:45	22.9175	0.188
End of Data		

P-3 Observation

Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/25/04 8:11	22.3472	0.028
9/25/04 8:16	22.4306	0.028
9/25/04 8:21	22.5139	0.026
9/25/04 8:26	22.5972	0.021
9/25/04 8:31	22.6806	0.021
9/25/04 8:36	22.7639	0.019
End of data		

P-2 Pumping			P-1 Observation			P-3 Observation		
Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/24/04 16:02	6.2065	34.427						
9/24/04 16:02	6.2066	34.397						
9/24/04 16:02	6.2067	34.439						
9/24/04 16:02	6.2068	34.376						
9/24/04 16:02	6.2069	34.413						
9/24/04 16:02	6.2070	34.395						
9/24/04 16:02	6.2071	34.380						
9/24/04 16:02	6.2072	34.402						
9/24/04 16:02	6.2073	34.389						
9/24/04 16:02	6.2074	34.413						
9/24/04 16:02	6.2075	34.406						
9/24/04 16:02	6.2076	34.389						
9/24/04 16:02	6.2078	34.400						
9/24/04 16:02	6.2079	34.389						
9/24/04 16:02	6.2081	34.410						
9/24/04 16:02	6.2082	34.363						
9/24/04 16:02	6.2084	34.380						
9/24/04 16:02	6.2086	34.395						
9/24/04 16:02	6.2088	34.369						
9/24/04 16:02	6.2090	34.391						
9/24/04 16:02	6.2092	34.386						
9/24/04 16:02	6.2095	34.399						
9/24/04 16:02	6.2097	34.419						
9/24/04 16:02	6.2100	34.408						
9/24/04 16:02	6.2102	34.384						
9/24/04 16:02	6.2105	34.365						
9/24/04 16:02	6.2109	34.374						
9/24/04 16:02	6.2112	34.375						
9/24/04 16:02	6.2115	34.384						
9/24/04 16:02	6.2119	34.388						
9/24/04 16:02	6.2123	34.414						
9/24/04 16:02	6.2127	34.390						
9/24/04 16:02	6.2131	34.347						
9/24/04 16:02	6.2136	34.360						
9/24/04 16:02	6.2140	34.397						
9/24/04 16:03	6.2145	34.375						
9/24/04 16:03	6.2151	34.406						
9/24/04 16:03	6.2157	34.390						
9/24/04 16:03	6.2163	34.412						
9/24/04 16:03	6.2169	34.384						
9/24/04 16:03	6.2176	34.408						
9/24/04 16:03	6.2183	34.397						
9/24/04 16:03	6.2191	34.401						
9/24/04 16:03	6.2199	33.877						
9/24/04 16:03	6.2208	19.722						
9/24/04 16:03	6.2217	6.826						
9/24/04 16:03	6.2227	2.253						
9/24/04 16:03	6.2237	3.273						
9/24/04 16:03	6.2248	4.107						
9/24/04 16:03	6.2259	4.084						
9/24/04 16:03	6.2272	3.878						
9/24/04 16:03	6.2285	3.706						
9/24/04 16:03	6.2298	3.536						
9/24/04 16:04	6.2313	3.364						
9/24/04 16:04	6.2329	3.211						
9/24/04 16:04	6.2345	3.078						
9/24/04 16:04	6.2363	2.956						
9/24/04 16:04	6.2381	2.838						
9/24/04 16:04	6.2400	2.728						
9/24/04 16:04	6.2421	2.621						
9/24/04 16:04	6.2443	2.524						
9/24/04 16:04	6.2467	2.429						
9/24/04 16:05	6.2491	2.346						
9/24/04 16:05	6.2517	2.260						
9/24/04 16:05	6.2545	2.180						
9/24/04 16:05	6.2575	2.110						
9/24/04 16:05	6.2606	2.036						
9/24/04 16:05	6.2639	2.041						
9/24/04 16:06	6.2674	1.985						
9/24/04 16:06	6.2711	1.927						
9/24/04 16:06	6.2750	1.878						
9/24/04 16:06	6.2791	1.832						
9/24/04 16:07	6.2835	1.794						
9/24/04 16:07	6.2882	1.762						
9/24/04 16:07	6.2931	1.716						
9/24/04 16:08	6.2983	1.678						
9/24/04 16:08	6.3039	1.647						
9/24/04 16:08	6.3097	1.615						
9/24/04 16:09	6.3160	1.579						
9/24/04 16:09	6.3225	1.547						
9/24/04 16:09	6.3295	1.520						
9/24/04 16:10	6.3369	1.491						
9/24/04 16:10	6.3447	1.475						
9/24/04 16:11	6.3530	1.447						
9/24/04 16:11	6.3618	1.419						
9/24/04 16:12	6.3711	1.391						
9/24/04 16:12	6.3810	1.204						

P-2 Pumping			P-1 Observation			P-3 Observation		
Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/24/04 16:13	6.3914	1.213						
9/24/04 16:14	6.4025	1.212						
9/24/04 16:14	6.4142	1.200						
9/24/04 16:15	6.4266	1.195						
9/24/04 16:16	6.4398	1.187						
9/24/04 16:17	6.4537	1.175						
9/24/04 16:18	6.4685	1.033						
9/24/04 16:19	6.4841	1.012						
9/24/04 16:20	6.5007	0.993						
9/24/04 16:21	6.5182	0.975						
9/24/04 16:22	6.5368	0.958						
9/24/04 16:23	6.5565	0.938						
9/24/04 16:24	6.5774	0.924						
9/24/04 16:26	6.5995	0.907						
9/24/04 16:27	6.6229	0.891						
9/24/04 16:28	6.6477	0.877						
9/24/04 16:30	6.6739	0.862						
9/24/04 16:32	6.7017	0.847						
9/24/04 16:34	6.7312	0.834						
9/24/04 16:35	6.7624	0.821						
9/24/04 16:37	6.7955	0.807						
9/24/04 16:39	6.8305	0.795						
9/24/04 16:42	6.8676	0.785						
9/24/04 16:44	6.9069	0.771						
9/24/04 16:47	6.9486	0.761						
9/24/04 16:49	6.9927	0.752						
9/24/04 16:52	7.0394	0.740						
9/24/04 16:55	7.0889	0.732						
9/24/04 16:58	7.1413	0.721						
9/24/04 17:01	7.1968	0.712						
9/24/04 17:05	7.2556	0.706						
9/24/04 17:09	7.3179	0.699						
9/24/04 17:13	7.3839	0.690						
9/24/04 17:17	7.4538	0.685						
9/24/04 17:21	7.5279	0.678						
9/24/04 17:26	7.6063	0.673						
9/24/04 17:31	7.6894	0.665						
9/24/04 17:36	7.7727	0.662						
9/24/04 17:41	7.8561	0.658						
9/24/04 17:46	7.9394	0.655						
9/24/04 17:51	8.0227	0.652						
9/24/04 17:56	8.1061	0.650						
9/24/04 18:01	8.1894	0.646						
9/24/04 18:06	8.2727	0.644						
9/24/04 18:11	8.3561	0.642						
9/24/04 18:16	8.4394	0.640						
9/24/04 18:21	8.5227	0.638						
9/24/04 18:26	8.6061	0.636						
9/24/04 18:31	8.6894	0.633						
9/24/04 18:36	8.7727	0.632						
9/24/04 18:41	8.8561	0.629						
9/24/04 18:46	8.9394	0.625						
9/24/04 18:51	9.0227	0.622						
9/24/04 18:56	9.1061	0.618						
9/24/04 19:01	9.1894	0.611						
9/24/04 19:06	9.2727	0.609						
9/24/04 19:11	9.3561	0.604						
9/24/04 19:16	9.4394	0.600						
9/24/04 19:21	9.5227	0.595						
9/24/04 19:26	9.6061	0.591						
9/24/04 19:31	9.6894	0.586						
9/24/04 19:36	9.7727	0.584						
9/24/04 19:41	9.8561	0.577						
9/24/04 19:46	9.9394	0.574						
9/24/04 19:51	10.0227	0.571						
9/24/04 19:56	10.1061	0.569						
9/24/04 20:01	10.1894	0.565						
9/24/04 20:06	10.2727	0.563						
9/24/04 20:11	10.3561	0.560						
9/24/04 20:16	10.4394	0.556						
9/24/04 20:21	10.5227	0.554						
9/24/04 20:26	10.6061	0.551						
9/24/04 20:31	10.6894	0.549						
9/24/04 20:36	10.7727	0.547						
9/24/04 20:41	10.8561	0.546						
9/24/04 20:46	10.9394	0.543						
9/24/04 20:51	11.0227	0.543						
9/24/04 20:56	11.1061	0.541						
9/24/04 21:01	11.1894	0.540						
9/24/04 21:06	11.2727	0.538						
9/24/04 21:11	11.3561	0.538						
9/24/04 21:16	11.4394	0.536						
9/24/04 21:21	11.5227	0.536						
9/24/04 21:26	11.6061	0.535						
9/24/04 21:31	11.6894	0.535						
9/24/04 21:36	11.7727	0.533						
9/24/04 21:41	11.8561	0.531						

P-2 Pumping			P-1 Observation			P-3 Observation		
Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/24/04 21:46	11.9394	0.529						
9/24/04 21:51	12.0227	0.527						
9/24/04 21:56	12.1061	0.527						
9/24/04 22:01	12.1894	0.525						
9/24/04 22:06	12.2727	0.525						
9/24/04 22:11	12.3561	0.523						
9/24/04 22:16	12.4394	0.520						
9/24/04 22:21	12.5227	0.518						
9/24/04 22:26	12.6061	0.518						
9/24/04 22:31	12.6894	0.513						
9/24/04 22:36	12.7727	0.512						
9/24/04 22:41	12.8561	0.509						
9/24/04 22:46	12.9394	0.505						
9/24/04 22:51	13.0227	0.505						
9/24/04 22:56	13.1061	0.503						
9/24/04 23:01	13.1894	0.500						
9/24/04 23:06	13.2727	0.499						
9/24/04 23:11	13.3561	0.494						
9/24/04 23:16	13.4394	0.492						
9/24/04 23:21	13.5227	0.490						
9/24/04 23:26	13.6061	0.488						
9/24/04 23:31	13.6894	0.484						
9/24/04 23:36	13.7727	0.484						
9/24/04 23:41	13.8561	0.481						
9/24/04 23:46	13.9394	0.479						
9/24/04 23:51	14.0227	0.477						
9/24/04 23:56	14.1061	0.473						
9/25/04 0:01	14.1894	0.471						
9/25/04 0:06	14.2727	0.469						
9/25/04 0:11	14.3561	0.469						
9/25/04 0:16	14.4394	0.466						
9/25/04 0:21	14.5227	0.464						
9/25/04 0:26	14.6061	0.462						
9/25/04 0:31	14.6894	0.462						
9/25/04 0:36	14.7727	0.460						
9/25/04 0:41	14.8561	0.458						
9/25/04 0:46	14.9394	0.456						
9/25/04 0:51	15.0227	0.453						
9/25/04 0:56	15.1061	0.453						
9/25/04 1:01	15.1894	0.451						
9/25/04 1:06	15.2727	0.449						
9/25/04 1:11	15.3561	0.447						
9/25/04 1:16	15.4394	0.445						
9/25/04 1:21	15.5227	0.443						
9/25/04 1:26	15.6061	0.441						
9/25/04 1:31	15.6894	0.438						
9/25/04 1:36	15.7727	0.436						
9/25/04 1:41	15.8561	0.434						
9/25/04 1:46	15.9394	0.434						
9/25/04 1:51	16.0227	0.430						
9/25/04 1:56	16.1061	0.427						
9/25/04 2:01	16.1894	0.425						
9/25/04 2:06	16.2727	0.423						
9/25/04 2:11	16.3561	0.419						
9/25/04 2:16	16.4394	0.415						
9/25/04 2:21	16.5227	0.412						
9/25/04 2:26	16.6061	0.410						
9/25/04 2:31	16.6894	0.406						
9/25/04 2:36	16.7727	0.406						
9/25/04 2:41	16.8561	0.402						
9/25/04 2:46	16.9394	0.399						
9/25/04 2:51	17.0227	0.397						
9/25/04 2:56	17.1061	0.393						
9/25/04 3:01	17.1894	0.389						
9/25/04 3:06	17.2727	0.387						
9/25/04 3:11	17.3561	0.385						
9/25/04 3:16	17.4394	0.382						
9/25/04 3:21	17.5227	0.378						
9/25/04 3:26	17.6061	0.376						
9/25/04 3:31	17.6894	0.372						
9/25/04 3:36	17.7727	0.369						
9/25/04 3:41	17.8561	0.372						
9/25/04 3:46	17.9394	0.363						
9/25/04 3:51	18.0227	0.361						
9/25/04 3:56	18.1061	0.359						
9/25/04 4:01	18.1894	0.354						
9/25/04 4:06	18.2727	0.350						
9/25/04 4:11	18.3561	0.346						
9/25/04 4:16	18.4394	0.341						
9/25/04 4:21	18.5227	0.337						
9/25/04 4:26	18.6061	0.333						
9/25/04 4:31	18.6894	0.331						
9/25/04 4:36	18.7727	0.325						
9/25/04 4:41	18.8561	0.320						
9/25/04 4:46	18.9394	0.316						
9/25/04 4:51	19.0227	0.311						
9/25/04 4:56	19.1061	0.307						

P-2 Pumping			P-1 Observation			P-3 Observation		
Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)	Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/25/04 5:01	19.1894	0.305						
9/25/04 5:06	19.2727	0.301						
9/25/04 5:11	19.3561	0.292						
9/25/04 5:16	19.4394	0.292						
9/25/04 5:21	19.5227	0.286						
9/25/04 5:26	19.6061	0.281						
9/25/04 5:31	19.6894	0.277						
9/25/04 5:36	19.7727	0.273						
9/25/04 5:41	19.8561	0.268						
9/25/04 5:46	19.9394	0.266						
9/25/04 5:51	20.0227	0.262						
9/25/04 5:56	20.1061	0.258						
9/25/04 6:01	20.1894	0.253						
9/25/04 6:06	20.2727	0.249						
9/25/04 6:11	20.3561	0.245						
9/25/04 6:16	20.4394	0.240						
9/25/04 6:21	20.5227	0.236						
9/25/04 6:26	20.6061	0.232						
9/25/04 6:31	20.6894	0.228						
9/25/04 6:36	20.7727	0.223						
9/25/04 6:41	20.8561	0.219						
9/25/04 6:46	20.9394	0.217						
9/25/04 6:51	21.0227	0.210						
9/25/04 6:56	21.1061	0.208						
9/25/04 7:01	21.1894	0.204						
9/25/04 7:06	21.2727	0.200						
9/25/04 7:11	21.3561	0.200						
9/25/04 7:16	21.4394	0.193						
9/25/04 7:21	21.5227	0.189						
9/25/04 7:26	21.6061	0.185						
9/25/04 7:31	21.6894	0.182						
9/25/04 7:36	21.7727	0.178						
9/25/04 7:41	21.8561	0.174						
9/25/04 7:46	21.9394	0.172						
9/25/04 7:51	22.0227	0.167						
9/25/04 7:56	22.1061	0.166						
9/25/04 8:01	22.1894	0.163						
9/25/04 8:06	22.2727	0.163						
9/25/04 8:11	22.3561	0.163						
9/25/04 8:16	22.4394	0.159						
9/25/04 8:21	22.5227	0.159						
9/25/04 8:26	22.6061	0.154						
9/25/04 8:31	22.6894	0.154						
9/25/04 8:36	22.7727	0.152						
End of Data								

P-3 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/23/04 10:01	0.0000	0.000	step 1
9/23/04 10:01	0.0008	7.306	pumping starts
9/23/04 10:01	0.0017	14.116	
9/23/04 10:01	0.0026	18.231	
9/23/04 10:01	0.0036	19.253	
9/23/04 10:01	0.0046	19.275	
9/23/04 10:01	0.0057	18.879	
9/23/04 10:01	0.0068	18.632	
9/23/04 10:01	0.0081	13.369	
9/23/04 10:01	0.0094	12.545	
9/23/04 10:01	0.0108	12.368	
9/23/04 10:01	0.0122	12.685	
9/23/04 10:01	0.0138	12.971	
9/23/04 10:02	0.0154	13.364	
9/23/04 10:02	0.0172	13.394	
9/23/04 10:02	0.0190	13.288	
9/23/04 10:02	0.0209	13.258	
9/23/04 10:02	0.0230	13.055	
9/23/04 10:02	0.0252	12.927	
9/23/04 10:02	0.0276	12.798	
9/23/04 10:02	0.0300	12.755	
9/23/04 10:03	0.0326	12.700	
9/23/04 10:03	0.0354	12.691	
9/23/04 10:03	0.0384	12.682	
9/23/04 10:03	0.0415	12.645	
9/23/04 10:03	0.0448	12.663	
9/23/04 10:04	0.0483	12.716	
9/23/04 10:04	0.0520	12.698	
9/23/04 10:04	0.0559	12.744	
9/23/04 10:04	0.0600	12.719	
9/23/04 10:05	0.0644	12.737	
9/23/04 10:05	0.0691	12.737	
9/23/04 10:05	0.0740	12.771	
9/23/04 10:05	0.0793	12.780	
9/23/04 10:06	0.0848	12.812	
9/23/04 10:06	0.0906	12.792	
9/23/04 10:06	0.0969	12.788	
9/23/04 10:07	0.1034	12.757	
9/23/04 10:07	0.1104	12.792	
9/23/04 10:08	0.1178	12.829	
9/23/04 10:08	0.1256	12.813	
9/23/04 10:09	0.1339	12.852	
9/23/04 10:09	0.1427	12.808	
9/23/04 10:10	0.1520	12.861	
9/23/04 10:10	0.1619	12.836	
9/23/04 10:11	0.1723	12.847	
9/23/04 10:12	0.1834	12.834	
9/23/04 10:12	0.1951	12.808	
9/23/04 10:13	0.2075	12.834	
9/23/04 10:14	0.2207	12.850	
9/23/04 10:15	0.2346	12.816	
9/23/04 10:16	0.2494	12.806	
9/23/04 10:17	0.2650	12.848	
9/23/04 10:18	0.2816	12.854	
9/23/04 10:19	0.2991	12.886	
9/23/04 10:20	0.3177	12.905	
9/23/04 10:21	0.3374	12.850	
9/23/04 10:22	0.3583	12.868	
9/23/04 10:23	0.3804	12.887	
9/23/04 10:25	0.4038	12.862	
9/23/04 10:26	0.4286	12.905	
9/23/04 10:28	0.4548	12.871	
9/23/04 10:30	0.4826	12.917	
9/23/04 10:31	0.5121	12.821	
9/23/04 10:33	0.5433	12.889	
9/23/04 10:35	0.5764	12.876	
9/23/04 10:37	0.6114	12.862	
9/23/04 10:40	0.6485	12.903	
9/23/04 10:42	0.6878	12.919	
9/23/04 10:44	0.7295	12.949	
9/23/04 10:47	0.7736	12.880	
9/23/04 10:50	0.8203	12.802	
9/23/04 10:53	0.8698	12.805	
9/23/04 10:56	0.9222	12.834	
9/23/04 10:59	0.9777	12.871	
9/23/04 11:03	1.0365	12.823	
9/23/04 11:07	1.0988	12.764	
9/23/04 11:11	1.1648	12.791	
9/23/04 11:15	1.2347	12.821	
9/23/04 11:19	1.3088	12.816	
9/23/04 11:24	1.3872	12.981	
9/23/04 11:29	1.4703	12.871	
9/23/04 11:34	1.5536	12.837	
9/23/04 11:39	1.6370	12.985	
9/23/04 11:44	1.7203	13.010	
9/23/04 11:49	1.8036	12.985	
9/23/04 11:54	1.8870	12.981	
9/23/04 11:59	1.9703	12.919	
9/23/04 12:03	2.0420	12.971	

P-2 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/23/04 8:54	-1.1111	0.000	
9/23/04 8:59	-1.0278	0.000	
9/23/04 9:04	-0.9445	0.004	
9/23/04 9:09	-0.8611	0.004	
9/23/04 9:14	-0.7778	0.008	
9/23/04 9:19	-0.6945	0.008	
9/23/04 9:24	-0.6111	0.010	
9/23/04 9:29	-0.5278	0.010	
9/23/04 9:34	-0.4445	0.011	
9/23/04 9:39	-0.3611	0.012	
9/23/04 9:44	-0.2778	0.013	
9/23/04 9:49	-0.1945	0.012	
9/23/04 9:54	-0.1111	0.015	
9/23/04 9:59	-0.0278	0.019	
9/23/04 10:01	0.0139	0.055	step 1
9/23/04 10:02	0.0264	0.111	
9/23/04 10:03	0.0431	0.176	
9/23/04 10:04	0.0556	0.212	
9/23/04 10:04	0.0639	0.234	
9/23/04 10:06	0.0931	0.287	
9/23/04 10:08	0.1306	0.339	
9/23/04 10:09	0.1389	0.345	
9/23/04 10:12	0.1931	0.390	
9/23/04 10:14	0.2222	0.410	
9/23/04 10:18	0.2889	0.442	
9/23/04 10:19	0.3056	0.446	
9/23/04 10:24	0.3889	0.474	
9/23/04 10:28	0.4597	0.494	
9/23/04 10:29	0.4722	0.496	
9/23/04 10:34	0.5556	0.513	
9/23/04 10:39	0.6389	0.528	
9/23/04 10:44	0.7222	0.541	
9/23/04 10:45	0.7431	0.545	
9/23/04 10:49	0.8056	0.552	
9/23/04 10:54	0.8889	0.563	
9/23/04 10:59	0.9722	0.573	
9/23/04 11:04	1.0556	0.582	
9/23/04 11:09	1.1389	0.588	
9/23/04 11:11	1.1722	0.597	
9/23/04 11:14	1.2222	0.599	
9/23/04 11:19	1.3056	0.608	
9/23/04 11:24	1.3889	0.616	
9/23/04 11:29	1.4722	0.623	
9/23/04 11:34	1.5556	0.629	
9/23/04 11:39	1.6389	0.636	
9/23/04 11:44	1.7222	0.642	
9/23/04 11:49	1.8056	0.646	
9/23/04 11:50	1.8264	0.649	
9/23/04 11:54	1.8889	0.653	
9/23/04 11:59	1.9722	0.657	
9/23/04 12:04	2.0556	0.666	step 2
9/23/04 12:05	2.0764	0.700	
9/23/04 12:07	2.1097	0.754	
9/23/04 12:09	2.1389	0.782	
9/23/04 12:11	2.1722	0.805	
9/23/04 12:14	2.2222	0.827	
9/23/04 12:19	2.3056	0.853	
9/23/04 12:19	2.3139	0.857	
9/23/04 12:24	2.3889	0.870	
9/23/04 12:29	2.4722	0.885	
9/23/04 12:34	2.5556	0.897	
9/23/04 12:39	2.6389	0.906	
9/23/04 12:40	2.6514	0.908	
9/23/04 12:44	2.7222	0.917	
9/23/04 12:49	2.8056	0.923	
9/23/04 12:54	2.8889	0.932	
9/23/04 12:59	2.9722	0.938	
9/23/04 13:04	3.0556	0.945	
9/23/04 13:05	3.0764	0.960	
9/23/04 13:09	3.1389	1.001	step 3
9/23/04 13:10	3.1597	1.011	
9/23/04 13:14	3.2222	1.026	
9/23/04 13:19	3.3056	1.037	
9/23/04 13:24	3.3889	1.041	
9/23/04 13:29	3.4722	1.050	
9/23/04 13:34	3.5556	1.057	
9/23/04 13:35	3.5806	1.063	
9/23/04 13:39	3.6389	1.061	
9/23/04 13:44	3.7222	1.065	
9/23/04 13:49	3.8056	1.070	
9/23/04 13:54	3.8889	1.074	
9/23/04 13:59	3.9722	1.080	
9/23/04 14:04	4.0556	1.087	
9/23/04 14:07	4.1056	1.117	step 4
9/23/04 14:09	4.1389	1.158	
9/23/04 14:10	4.1514	1.168	
9/23/04 14:14	4.2222	1.202	
9/23/04 14:18	4.2847	1.220	
9/23/04 14:19	4.3056	1.224	

P-1 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/23/04 8:46	-1.2463	0.000	
9/23/04 8:51	-1.1630	-0.006	
9/23/04 8:56	-1.0797	-0.004	
9/23/04 9:01	-0.9963	0.000	
9/23/04 9:06	-0.9130	0.004	
9/23/04 9:11	-0.8297	0.008	
9/23/04 9:16	-0.7463	0.010	
9/23/04 9:21	-0.6630	0.014	
9/23/04 9:26	-0.5797	0.014	
9/23/04 9:31	-0.4963	0.016	
9/23/04 9:36	-0.4130	0.018	
9/23/04 9:41	-0.3297	0.020	
9/23/04 9:46	-0.2463	0.022	
9/23/04 9:51	-0.1630	0.024	
9/23/04 9:56	-0.0797	0.026	
9/23/04 10:01	0.0037	0.030	step 1
9/23/04 10:03	0.0328	0.052	
9/23/04 10:05	0.0745	0.108	
9/23/04 10:06	0.0870	0.119	
9/23/04 10:09	0.1328	0.159	
9/23/04 10:11	0.1703	0.183	
9/23/04 10:14	0.2245	0.211	
9/23/04 10:16	0.2537	0.222	
9/23/04 10:21	0.3370	0.252	
9/23/04 10:23	0.3745	0.262	
9/23/04 10:26	0.4203	0.272	
9/23/04 10:31	0.5037	0.290	
9/23/04 10:36	0.5870	0.308	
9/23/04 10:38	0.6245	0.314	
9/23/04 10:41	0.6703	0.320	
9/23/04 10:46	0.7537	0.332	
9/23/04 10:51	0.8370	0.344	
9/23/04 10:56	0.9203	0.353	
9/23/04 11:01	1.0037	0.363	
9/23/04 11:01	1.0120	0.365	
9/23/04 11:06	1.0870	0.373	
9/23/04 11:11	1.1703	0.381	
9/23/04 11:16	1.2537	0.389	
9/23/04 11:21	1.3370	0.397	
9/23/04 11:26	1.4203	0.405	
9/23/04 11:31	1.5037	0.413	
9/23/04 11:33	1.5412	0.417	
9/23/04 11:36	1.5870	0.419	
9/23/04 11:41	1.6703	0.427	
9/23/04 11:46	1.7537	0.433	
9/23/04 11:51	1.8370	0.439	
9/23/04 11:56	1.9203	0.445	
9/23/04 12:01	2.0037	0.451	
9/23/04 12:06	2.0870	0.468	step 2
9/23/04 12:06	2.0912	0.469	
9/23/04 12:11	2.1703	0.510	
9/23/04 12:12	2.1953	0.520	
9/23/04 12:16	2.2537	0.536	
9/23/04 12:21	2.3370	0.558	
9/23/04 12:26	2.4162	0.572	
9/23/04 12:26	2.4203	0.572	
9/23/04 12:31	2.5037	0.584	
9/23/04 12:36	2.5870	0.594	
9/23/04 12:41	2.6703	0.605	
9/23/04 12:46	2.7537	0.614	
9/23/04 12:51	2.8370	0.622	
9/23/04 12:52	2.8537	0.623	
9/23/04 12:56	2.9203	0.629	
9/23/04 13:01	3.0037	0.635	
9/23/04 13:06	3.0870	0.647	step 3
9/23/04 13:11	3.1703	0.671	
9/23/04 13:12	3.1870	0.675	
9/23/04 13:16	3.2537	0.687	
9/23/04 13:21	3.3370	0.695	
9/23/04 13:26	3.4203	0.703	
9/23/04 13:31	3.5037	0.711	
9/23/04 13:36	3.5870	0.719	
9/23/04 13:41	3.6703	0.723	
9/23/04 13:43	3.7037	0.726	
9/23/04 13:46	3.7537	0.728	
9/23/04 13:51	3.8370	0.734	
9/23/04 13:56	3.9203	0.739	
9/23/04 14:01	4.0037	0.744	
9/23/04 14:06	4.0870	0.748	
9/23/04 14:10	4.1578	0.778	step 4
9/23/04 14:11	4.1703	0.782	
9/23/04 14:16	4.2537	0.804	
9/23/04 14:21	4.3370	0.820	
9/23/04 14:25	4.3995	0.830	
9/23/04 14:26	4.4203	0.832	
9/23/04 14:31	4.5037	0.838	
9/23/04 14:36	4.5870	0.842	
9/23/04 14:41	4.6703	0.846	
9/23/04 14:46	4.7537	0.851	

P-3 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/23/04 12:03	2.0421	12.969	
9/23/04 12:03	2.0421	12.965	
9/23/04 12:03	2.0422	13.000	
9/23/04 12:03	2.0423	12.974	
9/23/04 12:03	2.0424	12.967	
9/23/04 12:03	2.0425	12.988	
9/23/04 12:03	2.0426	12.977	
9/23/04 12:03	2.0426	12.961	
9/23/04 12:03	2.0427	12.995	
9/23/04 12:03	2.0428	12.931	
9/23/04 12:03	2.0429	12.961	
9/23/04 12:03	2.0430	12.993	
9/23/04 12:03	2.0431	12.949	
9/23/04 12:03	2.0431	13.009	
9/23/04 12:03	2.0432	12.927	
9/23/04 12:03	2.0433	12.977	
9/23/04 12:03	2.0434	12.991	
9/23/04 12:03	2.0435	12.922	
9/23/04 12:03	2.0436	12.904	
9/23/04 12:03	2.0436	12.977	
9/23/04 12:03	2.0437	12.954	
9/23/04 12:03	2.0438	12.957	
9/23/04 12:03	2.0439	12.964	
9/23/04 12:03	2.0441	12.934	
9/23/04 12:03	2.0442	12.954	
9/23/04 12:03	2.0443	12.938	
9/23/04 12:03	2.0445	12.950	
9/23/04 12:03	2.0446	12.932	
9/23/04 12:03	2.0448	12.932	
9/23/04 12:03	2.0449	12.933	
9/23/04 12:03	2.0451	12.979	
9/23/04 12:03	2.0453	12.947	
9/23/04 12:03	2.0455	12.975	
9/23/04 12:03	2.0457	12.979	
9/23/04 12:03	2.0459	12.977	
9/23/04 12:03	2.0461	12.993	
9/23/04 12:03	2.0464	12.956	
9/23/04 12:03	2.0466	12.940	
9/23/04 12:03	2.0469	12.942	
9/23/04 12:03	2.0472	13.002	
9/23/04 12:04	2.0475	13.000	
9/23/04 12:04	2.0479	12.954	
9/23/04 12:04	2.0482	13.155	step 2
9/23/04 12:04	2.0486	13.658	Hand
9/23/04 12:04	2.0490	14.407	Measurements
9/23/04 12:04	2.0494	14.965	
9/23/04 12:04	2.0498	15.441	
9/23/04 12:04	2.0502	16.020	
9/23/04 12:04	2.0507	16.752	
9/23/04 12:04	2.0512	17.365	
9/23/04 12:04	2.0517	17.871	
9/23/04 12:04	2.0523	18.857	
9/23/04 12:05	2.0640	21.520	
9/23/04 12:06	2.0807	21.530	
9/23/04 12:11	2.1640	21.570	
9/23/04 12:12	2.1807	21.570	
9/23/04 12:13	2.1973	21.560	
9/23/04 12:14	2.2140	21.560	
9/23/04 12:18	2.2807	21.620	
9/23/04 12:19	2.2973	21.630	
9/23/04 12:20	2.3140	21.620	
9/23/04 12:22	2.3473	21.590	
9/23/04 12:25	2.3973	21.610	
9/23/04 12:30	2.4807	21.620	
9/23/04 12:36	2.5807	21.590	
9/23/04 12:40	2.6473	21.600	
9/23/04 13:06	3.0807	26.010	step 3
9/23/04 13:08	3.1140	26.400	Hand
9/23/04 13:09	3.1307	25.960	Measurements
9/23/04 13:10	3.1473	25.960	
9/23/04 13:11	3.1640	25.950	
9/23/04 13:13	3.1973	25.950	
9/23/04 13:14	3.2140	26.040	
9/23/04 13:16	3.2473	26.040	
9/23/04 13:19	3.2973	25.320	
9/23/04 13:20	3.3140	25.180	
9/23/04 13:24	3.3807	25.200	
9/23/04 13:26	3.4140	25.260	
9/23/04 13:28	3.4473	25.290	
9/23/04 13:30	3.4807	25.300	
9/23/04 13:35	3.5640	25.290	
9/23/04 13:40	3.6473	25.170	
9/23/04 13:57	3.9307	25.280	
9/23/04 13:59	3.9640	25.290	
9/23/04 14:00	3.9807	25.300	
9/23/04 14:07	4.0973	33.060	step 4
9/23/04 14:10	4.1473	32.800	Hand
9/23/04 14:11	4.1640	32.660	Measurements
9/23/04 14:12	4.1807	32.880	

P-2 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/23/04 14:24	4.3889	1.237	
9/23/04 14:29	4.4722	1.246	
9/23/04 14:34	4.5556	1.244	
9/23/04 14:39	4.6389	1.248	
9/23/04 14:44	4.7222	1.250	
9/23/04 14:49	4.8056	1.255	
9/23/04 14:54	4.8889	1.259	
9/23/04 14:59	4.9722	1.261	
9/23/04 15:04	5.0556	1.267	
9/23/04 15:05	5.0681	1.270	
9/23/04 15:09	5.1389	1.272	
9/23/04 15:14	5.2222	1.278	
9/23/04 15:19	5.3056	1.278	
9/23/04 15:24	5.3889	1.282	
9/23/04 15:29	5.4722	1.284	
9/23/04 15:34	5.5556	1.286	
9/23/04 15:39	5.6389	1.288	
9/23/04 15:44	5.7222	1.293	
9/23/04 15:49	5.8056	1.293	
9/23/04 15:54	5.8889	1.298	
9/23/04 15:59	5.9722	1.299	
9/23/04 16:04	6.0556	1.299	
9/23/04 16:09	6.1389	1.303	recovery
9/23/04 16:10	6.1597	1.207	
9/23/04 16:11	6.1681	1.142	
9/23/04 16:11	6.1764	1.082	
9/23/04 16:12	6.1847	1.028	
9/23/04 16:12	6.1972	0.962	
9/23/04 16:13	6.2097	0.906	
9/23/04 16:14	6.2222	0.861	
9/23/04 16:14	6.2264	0.848	
9/23/04 16:15	6.2472	0.792	
9/23/04 16:17	6.2722	0.734	
9/23/04 16:19	6.3056	0.678	
9/23/04 16:19	6.3097	0.672	
9/23/04 16:22	6.3556	0.618	
9/23/04 16:24	6.3889	0.586	
9/23/04 16:25	6.4139	0.567	
9/23/04 16:29	6.4722	0.528	
9/23/04 16:31	6.5014	0.515	
9/23/04 16:34	6.5556	0.492	
9/23/04 16:38	6.6264	0.463	
9/23/04 16:39	6.6389	0.461	
9/23/04 16:44	6.7222	0.436	
9/23/04 16:49	6.8056	0.414	
9/23/04 16:49	6.8139	0.412	
9/23/04 16:54	6.8889	0.399	
9/23/04 16:59	6.9722	0.384	
9/23/04 17:04	7.0556	0.371	
9/23/04 17:09	7.1347	0.360	
9/23/04 17:09	7.1389	0.360	
9/23/04 17:14	7.2222	0.351	
9/23/04 17:19	7.3056	0.341	
9/23/04 17:24	7.3889	0.332	
9/23/04 17:29	7.4722	0.326	
9/23/04 17:34	7.5556	0.320	
9/23/04 17:39	7.6389	0.318	
9/23/04 17:44	7.7222	0.313	
9/23/04 17:48	7.7972	0.309	
9/23/04 17:49	7.8056	0.309	
9/23/04 17:54	7.8889	0.309	
9/23/04 17:59	7.9722	0.306	
9/23/04 18:04	8.0556	0.307	
9/23/04 18:09	8.1389	0.307	
9/23/04 18:14	8.2222	0.309	
9/23/04 18:19	8.3056	0.309	
9/23/04 18:24	8.3889	0.313	
9/23/04 18:29	8.4722	0.313	
9/23/04 18:34	8.5556	0.313	
9/23/04 18:39	8.6389	0.313	
9/23/04 18:44	8.7222	0.313	
9/23/04 18:49	8.8056	0.315	
9/23/04 18:54	8.8889	0.315	
9/23/04 18:59	8.9722	0.315	
9/23/04 19:04	9.0556	0.313	
9/23/04 19:09	9.1389	0.313	
9/23/04 19:14	9.2222	0.313	
9/23/04 19:19	9.3056	0.311	
9/23/04 19:24	9.3889	0.311	
9/23/04 19:29	9.4722	0.309	
9/23/04 19:34	9.5556	0.309	
9/23/04 19:39	9.6389	0.307	
9/23/04 19:44	9.7222	0.306	
9/23/04 19:49	9.8056	0.304	
9/23/04 19:54	9.8889	0.304	
9/23/04 19:59	9.9722	0.302	
9/23/04 20:04	10.0556	0.302	
9/23/04 20:09	10.1389	0.300	
9/23/04 20:14	10.2222	0.298	

P-1 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/23/04 14:51	4.8370	0.855	
9/23/04 14:56	4.9203	0.859	
9/23/04 15:01	5.0037	0.863	
9/23/04 15:06	5.0870	0.867	
9/23/04 15:11	5.1703	0.871	
9/23/04 15:16	5.2537	0.875	
9/23/04 15:21	5.3370	0.877	
9/23/04 15:25	5.4120	0.881	
9/23/04 15:26	5.4203	0.881	
9/23/04 15:31	5.5037	0.885	
9/23/04 15:36	5.5870	0.887	
9/23/04 15:41	5.6703	0.889	
9/23/04 15:46	5.7537	0.891	
9/23/04 15:51	5.8370	0.893	
9/23/04 15:56	5.9203	0.897	
9/23/04 16:01	6.0037	0.897	
9/23/04 16:06	6.0870	0.901	
9/23/04 16:11	6.1703	0.875	recovery
9/23/04 16:12	6.1912	0.826	
9/23/04 16:14	6.2162	0.772	
9/23/04 16:15	6.2453	0.720	
9/23/04 16:16	6.2537	0.711	
9/23/04 16:18	6.2870	0.667	
9/23/04 16:21	6.3370	0.617	
9/23/04 16:21	6.3412	0.613	
9/23/04 16:26	6.4203	0.562	
9/23/04 16:26	6.4245	0.560	
9/23/04 16:31	6.5037	0.520	
9/23/04 16:33	6.5328	0.508	
9/23/04 16:36	6.5870	0.490	
9/23/04 16:41	6.6703	0.465	
9/23/04 16:43	6.7078	0.457	
9/23/04 16:46	6.7537	0.447	
9/23/04 16:51	6.8370	0.429	
9/23/04 16:56	6.9203	0.415	
9/23/04 17:00	6.9828	0.405	
9/23/04 17:01	7.0037	0.403	
9/23/04 17:06	7.0870	0.391	
9/23/04 17:11	7.1703	0.381	
9/23/04 17:16	7.2537	0.371	
9/23/04 17:21	7.3370	0.363	
9/23/04 17:26	7.4203	0.357	
9/23/04 17:28	7.4620	0.353	
9/23/04 17:31	7.5037	0.351	
9/23/04 17:36	7.5870	0.347	
9/23/04 17:41	7.6703	0.341	
9/23/04 17:46	7.7537	0.336	
9/23/04 17:51	7.8370	0.332	
9/23/04 17:56	7.9203	0.332	
9/23/04 18:01	8.0037	0.330	
9/23/04 18:06	8.0870	0.328	
9/23/04 18:11	8.1703	0.328	
9/23/04 18:16	8.2537	0.328	
9/23/04 18:21	8.3370	0.330	
9/23/04 18:26	8.4203	0.330	
9/23/04 18:31	8.5037	0.330	
9/23/04 18:36	8.5870	0.332	
9/23/04 18:41	8.6703	0.332	
9/23/04 18:46	8.7537	0.332	
9/23/04 18:51	8.8370	0.332	
9/23/04 18:56	8.9203	0.334	
9/23/04 19:01	9.0037	0.332	
9/23/04 19:06	9.0870	0.332	
9/23/04 19:11	9.1703	0.332	
9/23/04 19:16	9.2537	0.332	
9/23/04 19:21	9.3370	0.332	
9/23/04 19:26	9.4203	0.330	
9/23/04 19:31	9.5037	0.330	
9/23/04 19:36	9.5870	0.330	
9/23/04 19:41	9.6703	0.330	
9/23/04 19:46	9.7537	0.328	
9/23/04 19:51	9.8370	0.328	
9/23/04 19:56	9.9203	0.328	
9/23/04 20:01	10.0037	0.326	
9/23/04 20:06	10.0870	0.326	
9/23/04 20:11	10.1703	0.324	
9/23/04 20:16	10.2537	0.324	
9/23/04 20:21	10.3370	0.324	
9/23/04 20:26	10.4203	0.324	
9/23/04 20:31	10.5037	0.322	
9/23/04 20:36	10.5870	0.320	
9/23/04 20:41	10.6703	0.322	
9/23/04 20:46	10.7537	0.322	
9/23/04 20:51	10.8370	0.320	
9/23/04 20:56	10.9203	0.318	
9/23/04 21:01	11.0037	0.318	
9/23/04 21:06	11.0870	0.315	
9/23/04 21:11	11.1703	0.316	
9/23/04 21:16	11.2537	0.316	

P-3 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)	
9/23/04 14:13	4.1973	33.360	
9/23/04 14:15	4.2307	32.800	
9/23/04 14:19	4.2973	32.770	
9/23/04 14:22	4.3473	32.780	
9/23/04 14:24	4.3807	32.790	
9/23/04 14:26	4.4140	32.680	
9/23/04 14:31	4.4973	32.230	
9/23/04 14:36	4.5807	31.850	
9/23/04 16:04	6.0473	31.730	
9/23/04 16:03	6.0640	31.720	
9/23/04 16:04	6.0807	31.700	
9/23/04 16:05	6.0973	31.720	
9/23/04 16:06	6.1140	31.730	
9/23/04 16:07	6.1307	31.730	
9/23/04 16:09	6.1740	19.519	Pump off
9/23/04 16:09	6.1743	18.249	Recovery
9/23/04 16:09	6.1746	15.654	
9/23/04 16:09	6.1749	12.824	
9/23/04 16:09	6.1753	10.396	
9/23/04 16:09	6.1756	8.491	
9/23/04 16:09	6.1760	6.892	
9/23/04 16:09	6.1765	5.497	
9/23/04 16:09	6.1769	4.464	
9/23/04 16:09	6.1773	3.700	
9/23/04 16:09	6.1778	2.818	
9/23/04 16:09	6.1783	2.176	
9/23/04 16:09	6.1788	1.827	
9/23/04 16:09	6.1794	1.642	
9/23/04 16:09	6.1800	1.544	
9/23/04 16:10	6.1806	1.568	
9/23/04 16:10	6.1813	1.593	
9/23/04 16:10	6.1821	1.628	
9/23/04 16:10	6.1828	1.670	
9/23/04 16:10	6.1836	1.689	
9/23/04 16:10	6.1845	1.671	
9/23/04 16:10	6.1854	1.656	
9/23/04 16:10	6.1864	1.618	
9/23/04 16:10	6.1874	1.560	
9/23/04 16:10	6.1885	1.515	
9/23/04 16:10	6.1897	1.459	
9/23/04 16:10	6.1909	1.403	
9/23/04 16:10	6.1922	1.359	
9/23/04 16:10	6.1936	1.310	
9/23/04 16:10	6.1951	1.263	
9/23/04 16:10	6.1966	1.216	
9/23/04 16:11	6.1983	1.177	
9/23/04 16:11	6.2000	1.135	
9/23/04 16:11	6.2018	1.099	
9/23/04 16:11	6.2038	1.060	
9/23/04 16:11	6.2059	1.020	
9/23/04 16:11	6.2081	0.990	
9/23/04 16:11	6.2104	0.960	
9/23/04 16:11	6.2129	0.927	
9/23/04 16:12	6.2155	0.897	
9/23/04 16:12	6.2183	0.869	
9/23/04 16:12	6.2212	0.844	
9/23/04 16:12	6.2243	0.816	
9/23/04 16:12	6.2276	0.793	
9/23/04 16:13	6.2311	0.770	
9/23/04 16:13	6.2348	0.738	
9/23/04 16:13	6.2387	0.706	
9/23/04 16:13	6.2429	0.683	
9/23/04 16:14	6.2473	0.653	
9/23/04 16:14	6.2519	0.630	
9/23/04 16:14	6.2569	0.602	
9/23/04 16:14	6.2621	0.577	
9/23/04 16:15	6.2676	0.547	
9/23/04 16:15	6.2735	0.522	
9/23/04 16:15	6.2797	0.494	
9/23/04 16:16	6.2863	0.467	
9/23/04 16:16	6.2933	0.444	
9/23/04 16:17	6.3006	0.426	
9/23/04 16:17	6.3085	0.403	
9/23/04 16:18	6.3168	0.380	
9/23/04 16:18	6.3256	0.358	
9/23/04 16:19	6.3349	0.332	
9/23/04 16:19	6.3447	0.305	
9/23/04 16:20	6.3552	0.280	
9/23/04 16:21	6.3662	0.256	
9/23/04 16:21	6.3780	0.233	
9/23/04 16:22	6.3904	0.215	
9/23/04 16:23	6.4035	0.196	
9/23/04 16:24	6.4175	0.178	
9/23/04 16:25	6.4322	0.167	
9/23/04 16:26	6.4479	0.156	
9/23/04 16:27	6.4644	0.145	
9/23/04 16:28	6.4820	0.127	
9/23/04 16:29	6.5006	0.107	
9/23/04 16:30	6.5203	0.091	

P-2 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/23/04 20:19	10.3056	0.298
9/23/04 20:24	10.3889	0.298
9/23/04 20:29	10.4722	0.296
9/23/04 20:34	10.5556	0.296
9/23/04 20:39	10.6389	0.293
9/23/04 20:44	10.7222	0.291
9/23/04 20:49	10.8056	0.291
9/23/04 20:54	10.8889	0.292
9/23/04 20:59	10.9722	0.289
9/23/04 21:04	11.0556	0.287
9/23/04 21:09	11.1389	0.287
9/23/04 21:14	11.2222	0.285
9/23/04 21:19	11.3056	0.285
9/23/04 21:24	11.3889	0.285
9/23/04 21:29	11.4722	0.285
9/23/04 21:34	11.5556	0.283
9/23/04 21:39	11.6389	0.281
9/23/04 21:44	11.7222	0.280
9/23/04 21:49	11.8056	0.278
9/23/04 21:54	11.8889	0.277
9/23/04 21:59	11.9722	0.276
9/23/04 22:04	12.0556	0.274
9/23/04 22:09	12.1389	0.275
9/23/04 22:14	12.2222	0.272
9/23/04 22:19	12.3056	0.272
9/23/04 22:24	12.3889	0.270
9/23/04 22:29	12.4722	0.268
9/23/04 22:34	12.5556	0.268
9/23/04 22:39	12.6389	0.266
9/23/04 22:44	12.7222	0.264
9/23/04 22:49	12.8056	0.264
9/23/04 22:54	12.8889	0.263
9/23/04 22:59	12.9722	0.261
9/23/04 23:04	13.0556	0.261
9/23/04 23:09	13.1389	0.264
9/23/04 23:10	13.1514	0.257
9/23/04 23:14	13.2222	0.257
9/23/04 23:19	13.3056	0.255
9/23/04 23:24	13.3889	0.255
9/23/04 23:29	13.4722	0.253
9/23/04 23:34	13.5556	0.251
9/23/04 23:39	13.6389	0.251
9/23/04 23:44	13.7222	0.246
9/23/04 23:49	13.8056	0.246
9/23/04 23:54	13.8889	0.246
9/23/04 23:59	13.9722	0.244
9/24/04 0:04	14.0556	0.242
9/24/04 0:09	14.1389	0.242
9/24/04 0:14	14.2222	0.240
9/24/04 0:19	14.3056	0.237
9/24/04 0:24	14.3889	0.235
9/24/04 0:29	14.4722	0.235
9/24/04 0:34	14.5556	0.236
9/24/04 0:39	14.6389	0.231
9/24/04 0:44	14.7222	0.229
9/24/04 0:49	14.8056	0.229
9/24/04 0:54	14.8889	0.227
9/24/04 0:59	14.9722	0.225
9/24/04 1:04	15.0556	0.223
9/24/04 1:09	15.1389	0.220
9/24/04 1:14	15.2222	0.220
9/24/04 1:19	15.3056	0.216
9/24/04 1:24	15.3889	0.218
9/24/04 1:29	15.4722	0.216
9/24/04 1:34	15.5556	0.214
9/24/04 1:39	15.6389	0.212
9/24/04 1:44	15.7222	0.212
9/24/04 1:49	15.8056	0.210
9/24/04 1:54	15.8889	0.209
9/24/04 1:59	15.9722	0.207
9/24/04 2:02	16.0306	0.206
9/24/04 2:04	16.0556	0.208
9/24/04 2:09	16.1389	0.206
9/24/04 2:14	16.2222	0.203
9/24/04 2:19	16.3056	0.201
9/24/04 2:24	16.3889	0.199
9/24/04 2:29	16.4722	0.197
9/24/04 2:34	16.5556	0.199
9/24/04 2:39	16.6389	0.195
9/24/04 2:44	16.7222	0.195
9/24/04 2:49	16.8056	0.192
9/24/04 2:54	16.8889	0.193
9/24/04 2:59	16.9722	0.193
9/24/04 3:04	17.0556	0.188
9/24/04 3:09	17.1389	0.188
9/24/04 3:14	17.2222	0.186
9/24/04 3:19	17.3056	0.186
9/24/04 3:24	17.3889	0.184
9/24/04 3:29	17.4722	0.182

P-1 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/23/04 21:21	11.3370	0.316
9/23/04 21:26	11.4203	0.316
9/23/04 21:31	11.5037	0.314
9/23/04 21:36	11.5870	0.314
9/23/04 21:41	11.6703	0.312
9/23/04 21:46	11.7537	0.310
9/23/04 21:51	11.8370	0.310
9/23/04 21:56	11.9203	0.310
9/23/04 22:01	12.0037	0.308
9/23/04 22:06	12.0870	0.308
9/23/04 22:11	12.1703	0.307
9/23/04 22:16	12.2537	0.305
9/23/04 22:21	12.3370	0.304
9/23/04 22:26	12.4203	0.304
9/23/04 22:27	12.4328	0.302
9/23/04 22:31	12.5037	0.302
9/23/04 22:36	12.5870	0.302
9/23/04 22:41	12.6703	0.302
9/23/04 22:46	12.7537	0.300
9/23/04 22:51	12.8370	0.298
9/23/04 22:56	12.9203	0.298
9/23/04 23:01	13.0037	0.296
9/23/04 23:06	13.0870	0.294
9/23/04 23:11	13.1703	0.294
9/23/04 23:16	13.2537	0.292
9/23/04 23:21	13.3370	0.290
9/23/04 23:26	13.4203	0.290
9/23/04 23:31	13.5037	0.288
9/23/04 23:36	13.5870	0.288
9/23/04 23:41	13.6703	0.286
9/23/04 23:46	13.7537	0.286
9/23/04 23:51	13.8370	0.284
9/23/04 23:56	13.9203	0.284
9/24/04 0:01	14.0037	0.282
9/24/04 0:06	14.0870	0.280
9/24/04 0:11	14.1703	0.280
9/24/04 0:16	14.2537	0.278
9/24/04 0:21	14.3370	0.276
9/24/04 0:26	14.4203	0.276
9/24/04 0:31	14.5037	0.272
9/24/04 0:36	14.5870	0.272
9/24/04 0:41	14.6703	0.270
9/24/04 0:46	14.7537	0.270
9/24/04 0:51	14.8370	0.268
9/24/04 0:56	14.9203	0.266
9/24/04 1:01	15.0037	0.264
9/24/04 1:06	15.0870	0.262
9/24/04 1:11	15.1703	0.262
9/24/04 1:16	15.2537	0.260
9/24/04 1:21	15.3370	0.258
9/24/04 1:26	15.4203	0.258
9/24/04 1:31	15.5037	0.256
9/24/04 1:36	15.5870	0.256
9/24/04 1:41	15.6703	0.254
9/24/04 1:46	15.7537	0.254
9/24/04 1:51	15.8328	0.250
9/24/04 1:51	15.8370	0.250
9/24/04 1:56	15.9203	0.250
9/24/04 2:01	16.0037	0.248
9/24/04 2:06	16.0870	0.248
9/24/04 2:11	16.1703	0.246
9/24/04 2:16	16.2537	0.246
9/24/04 2:21	16.3370	0.244
9/24/04 2:26	16.4203	0.242
9/24/04 2:31	16.5037	0.240
9/24/04 2:36	16.5870	0.240
9/24/04 2:41	16.6703	0.238
9/24/04 2:46	16.7537	0.236
9/24/04 2:51	16.8370	0.236
9/24/04 2:56	16.9203	0.234
9/24/04 3:01	17.0037	0.234
9/24/04 3:06	17.0870	0.232
9/24/04 3:11	17.1703	0.230
9/24/04 3:16	17.2537	0.230
9/24/04 3:21	17.3370	0.228
9/24/04 3:26	17.4203	0.228
9/24/04 3:31	17.5037	0.226
9/24/04 3:36	17.5870	0.224
9/24/04 3:41	17.6703	0.224
9/24/04 3:46	17.7537	0.222
9/24/04 3:51	17.8370	0.220
9/24/04 3:56	17.9203	0.220
9/24/04 4:01	18.0037	0.220
9/24/04 4:06	18.0870	0.220
9/24/04 4:11	18.1703	0.218
9/24/04 4:16	18.2537	0.218
9/24/04 4:21	18.3370	0.216
9/24/04 4:26	18.4203	0.216
9/24/04 4:31	18.5037	0.216

P-3 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/23/04 16:31	6.5411	0.081
9/23/04 16:32	6.5632	0.069
9/23/04 16:34	6.5866	0.058
9/23/04 16:35	6.6114	0.049
9/23/04 16:37	6.6377	0.037
9/23/04 16:39	6.6655	0.038
End of data		

P-2 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/24/04 3:34	17.5556	0.182
9/24/04 3:39	17.6389	0.179
9/24/04 3:44	17.7222	0.179
9/24/04 3:49	17.8056	0.177
9/24/04 3:54	17.8889	0.177
9/24/04 3:59	17.9722	0.175
9/24/04 4:04	18.0556	0.175
9/24/04 4:09	18.1389	0.175
9/24/04 4:14	18.2222	0.173
9/24/04 4:19	18.3056	0.173
9/24/04 4:24	18.3889	0.173
9/24/04 4:29	18.4722	0.171
9/24/04 4:34	18.5556	0.171
9/24/04 4:39	18.6389	0.171
9/24/04 4:44	18.7222	0.169
9/24/04 4:49	18.8056	0.169
9/24/04 4:54	18.8889	0.169
9/24/04 4:59	18.9722	0.169
9/24/04 5:04	19.0556	0.167
9/24/04 5:09	19.1389	0.167
9/24/04 5:14	19.2222	0.167
9/24/04 5:19	19.3056	0.164
9/24/04 5:24	19.3889	0.165
9/24/04 5:29	19.4722	0.164
9/24/04 5:34	19.5556	0.164
9/24/04 5:39	19.6389	0.162
End of Data		

P-1 Pumping

Date/Time	Elapsed Time (Hours)	Drawdown (feet)
9/24/04 4:36	18.5870	0.214
9/24/04 4:41	18.6703	0.214
9/24/04 4:46	18.7537	0.214
9/24/04 4:51	18.8370	0.214
9/24/04 4:56	18.9203	0.212
9/24/04 5:01	19.0037	0.214
9/24/04 5:06	19.0870	0.212
9/24/04 5:11	19.1703	0.212
9/24/04 5:16	19.2537	0.210
9/24/04 5:21	19.3370	0.210
9/24/04 5:26	19.4203	0.210
9/24/04 5:31	19.5037	0.210
9/24/04 5:36	19.5870	0.210
9/24/04 5:41	19.6703	0.208
End of Data		

APPENDIX I

Background Water Quality Laboratory Reports

Lab Project Summary

P1

Lab Project #: N0409355

Total Pages: 10

Client: CH2M Hill
4350 W. Cypress St

Tampa FL 33607

Phone: 813-874-6522
Fax: 813-874-3056
E-mail:
Client Project Name: Ave Maria
Laboratory Contact: Andy Konopacki

QUALIFIER DEFINITIONS

B: Results based upon colony counts outside the acceptable range.
J3: The reported value failed to meet the established quality control criteria.
J4: The sample matrix interfered with the ability to make an accurate determination.
J5: The data is questionable because of improper lab or field protocols.
K: Off scale low, actual value is less than the value given.
L: Off scale high, actual value is known to be greater than the value given.
Q: Sample held beyond acceptable holding time.
U: The compound was analyzed for, but not detected.
V: The analyte was detected in both the sample and the associated method blank.
Y: The sample was unpreserved or improperly preserved.
Z: Too many colonies present (TNTC).
* Meets and/or exceeds acceptable drinking water limits, per FAC 62-550.
** This is an uncertified result.
HACH results are uncertified.

A statement of estimated uncertainty of results is available upon request.

Sanders Laboratories follows DEP standard operating procedures for field sampling.

Reports are archived for a minimum of 5 years. Copies of reports which are less than 1 year old are available for a fee of $25.00 per report. Reports older than 1 year are available for a fee of $50.00 per report. Copies will be provided within 1 week of the time of the request.

Client Project: Ave Maria
Lab Project: N0409355
Report Date: 10/19/04

Sanders Laboratories, Inc.
Environmental Testing Services

Laboratory Results

CH2M Hill
4350 W. Cypress St
Tampa, FL 33607

Lab ID	Sample Description	Sample Source	Received Date/Time	Sample Date/Time
N0409355-01	P-1 grab	Ground Water	9/21/04 16:00	9/21/04 13:30

Analysis	Method	Results	Qual	Detection Limit	Units	AnalysisDate/Time	Analyst	Cert ID
Alkalinity	310.1	288		6	mg/L	9/23/04 11:00	JL	E84380
Aluminum	200.7	0.016		0.005	mg/L	9/29/04 9:40	BY	E84380
Ammonia-N	350.3	1.06		0.05	mg/L	9/24/04 9:00	JL	E84380
Antimony	200.7	0.003	U	0.003	mg/L	9/29/04 9:40	BY	E84380
Arsenic	200.7	0.001		0.001	mg/L	9/29/04 9:40	BY	E84380
Barium	200.7	0.012		0.003	mg/L	9/29/04 9:40	BY	E84380
Beryllium	200.7	0.0001	U	0.0001	mg/L	9/29/04 9:40	BY	E84380
Cadmium	200.7	0.001	U	0.001	mg/L	9/29/04 9:40	BY	E84380
Calcium	200.7	88.6		0.009	mg/L	9/29/04 9:40	BY	E84380
Chloride	4500Cl-B	45		10	mg/L	9/22/04 9:00	JL	E84380
Chromium	200.7	0.001	U	0.001	mg/L	9/29/04 9:40	BY	E84380
Color-Apparent	2120B	75		5	PtCo units	9/21/04 16:30	JL	E84380
Copper	200.7	0.001	V, J3	0.001	mg/L	9/29/04 9:40	BY	E84380
Dissolved Oxygen-field	360.1	4.68	***	0.01	mg/L	9/21/04 13:30	NO	E84380
Hydrogen Sulfide-field	HACH	absent		n/a	none	9/21/04 13:30	NO	E84380
Iron	200.7	0.259		0.006	mg/L	9/29/04 9:40	BY	E84380
Iron-Dissolved	200.7	0.234		0.006	mg/L	10/19/04 12:18	JPW	E84380
Lead	200.7	0.001		0.001	mg/L	9/29/04 9:40	BY	E84380

Client Project: Ave Maria
Lab Project: N0409355
Report Date: 10/19/04

Laboratory Results

Lab ID	Sample Description	Sample Source	Received Date/Time	Sample Date/Time
N0409355-01	P-1 grab	Ground Water	9/21/04 16:00	9/21/04 13:30

Analysis	Method	Results	Qual	Detection Limit	Units	AnalysisDate/Time	Analyst	Cert ID
Magnesium	200.7	17.8	J3	0.006	mg/L	9/29/04 9:40	BY	E84380
Manganese	200.7	0.009		0.001	mg/L	9/29/04 9:40	BY	E84380
Manganese-Dissolved	200.7	0.009		0.001	mg/L	10/19/04 12:18	JPW	E84380
Mercury	245.1	0.001	U	0.001	mg/L	9/28/04 12:22	BY	E84380
Nickel	200.7	0.002		0.002	mg/L	9/29/04 9:40	BY	E84380
Nitrate-N	353.2	0.01	U	0.01	mg/L	9/22/04 10:12	SJ	E84380
Nitrite-N	353.2	0.01	U	0.01	mg/L	9/22/04 19:48	SJ	E84380
Odor	SM2150B	1	U	1	TON	9/21/04 16:30	EW	E84380
Ortho-phosphate	365.2	0.070		0.010	mg/L	9/22/04 10:10	JL	E84380
pH - field	150.1	6.58		0.01	std units	9/21/04 13:30	NO	E84380
Phosphorus, Total	365.2	0.090		0.010	mg/L	10/13/04 13:00	JL	E84380
Potassium	200.7	7.69	J3	0.016	mg/L	9/29/04 9:40	BY	E84380
See attached results	Subcontract					9/22/04 8:50	SUB	
Selenium	200.7	0.001	U	0.001	mg/L	9/29/04 9:40	BY	E84380
Silica	370.1	21.8		5.0	mg/L	9/23/04 9:30	JL	E84380
Silver	200.7	0.001	U,J3	0.001	mg/L	9/29/04 9:40	BY	E84380
Sodium	200.7	28.3		0.200	mg/L	9/29/04 9:40	BY	E84380
Specific Conductance-field	120.1	704		0.1	umhos/cm	9/21/04 13:30	NO	E84380
Sulfate	375.4	18		5	mg/L	10/1/04 13:00	EW	E84380
Thallium	200.7	0.002	U	0.002	mg/L	9/29/04 9:40	BY	E84380
Total Coliform, MF	9222B	1	U,Q	1	col/100ml	9/22/04 8:00	RG	E84380

Client Project: Ave Maria
Lab Project: N0409355
Report Date: 10/19/04

Laboratory Results

Lab ID	Sample Description	Sample Source	Received Date/Time	Sample Date/Time
N0409355-01	P-1 grab	Ground Water	9/21/04 16:00	9/21/04 13:30

Analysis	Method	Results	Qual	Detection Limit	Units	AnalysisDate/Time	Analyst	Cert ID
Total Dissolved Solids	160.1	432		10	mg/L	9/22/04 12:00	EW	E84380
Water Temperature-field	170.1	25.0		0.1	C	9/21/04 13:30	NO	E84380
Weather-field	DEPSOP	cloudy, rain		n/a	none	9/21/04 13:30	NO	E84380
Zinc	200.7	0.005		0.002	mg/L	9/29/04 9:40	BY	E84380

Approved by:

Andrew Konopacki/Lab Supervisor
Kathrine Bartkiewicz/Lab Supervisor

Comments: ***Strong discharge, aeration of sample may have occurred.

Test Results meet all the requirements of the NELAC standards.

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

Sanders Laboratories
1050 Endeavor Court
Nokomis, FL 34275

October 7, 2004
Project No: 45420

Laboratory Report

Project Name	**N0409366**
Sample Description	**N0409366-01I**
Matrix	**Groundwater**
SAL Sample Number	**45420.01**
Date/Time Collected	**09/21/04 13:30**
Date/Time Received	**09/22/04 12:27**

Parameters	Units	Results	Method	Detection Limit	Date/Time Analyzed	Date/Time Prep	Analyst
Volatile Organic Compounds (Primary DW)							
1,1,1-Trichloroethane	ug/l	0.3 U	EPA 502.2	0.3	09/23/04 20:47		JRW
1,1,2-Trichloroethane	ug/l	0.3 U	EPA 502.2	0.3	09/23/04 20:47		JRW
1,1-Dichloroethylene	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
1,2,4 Trichlorobenzene	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
1,2-Dichloroethane	ug/l	0.2 U	EPA 502.2	0.2	09/23/04 20:47		JRW
1,2-Dichloropropane	ug/l	0.3 U	EPA 502.2	0.3	09/23/04 20:47		JRW
Benzene	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
Carbon tetrachloride	ug/l	0.3 U	EPA 502.2	0.3	09/23/04 20:47		JRW
cis-1,2-Dichloroethylene	ug/l	0.2 U	EPA 502.2	0.2	09/23/04 20:47		JRW
Dichloromethane	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
Ethylbenzene	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
Monochlorobenzene	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
o-Dichlorobenzene	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
para-Dichlorobenzene	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
Styrene	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
Tetrachloroethylene	ug/l	0.2 U	EPA 502.2	0.2	09/23/04 20:47		JRW
Toluene	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
trans-1,2-Dichloroethylene	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
Trichloroethylene	ug/l	0.2 U	EPA 502.2	0.2	09/23/04 20:47		JRW
Vinyl chloride	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
Xylenes (Total)	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
m/p-xylenes	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
o-xylene	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
Trihalomethane Analyses							
Bromodichloromethane	ug/l	0.3 U	EPA 502.2	0.3	09/23/04 20:47		JRW
Bromoform	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
Chloroform	ug/l	0.2 U	EPA 502.2	0.2	09/23/04 20:47		JRW
Dibromochloromethane	ug/l	0.5 U	EPA 502.2	0.5	09/23/04 20:47		JRW
Total Trihalomethanes	ug/l	0.2 U	EPA 502.2	0.2	09/23/04 20:47		JRW
Chlorinated Pesticides (Primary DW)							
Date Extracted		09/24/04	EPA 508.1			09/24/04 08:30	ARM
Chlordane	ug/l	0.05 U	EPA 508.1	0.05	09/27/04 18:36	09/24/04 08:30	DB
Toxaphene	ug/l	0.5 U	EPA 508.1	0.5	09/27/04 18:36	09/24/04 08:30	DB
Polychlorinated biphenyls (PCBs)	ug/l	0.2 U	EPA 508.1	0.2	09/27/04 18:36	09/24/04 08:30	DB
Chlorinated Herbicides (Primary DW)							
Date Extracted		09/23/04	EPA 515.3			09/23/04 09:00	POM
Dalapon	ug/l	1 U	EPA 515.3	1	09/25/04 01:46	09/23/04 09:00	BTJ

FDOH Laboratory No. E84129
NELAP Accredited

Francis I. Daniels, Laboratory Director
Leslie C. Boardman, Q. A. Manager

SOUTHERN ANALYTICAL LABORATORIES, INC.
110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

Sanders Laboratories
1050 Endeavor Court
Nokomis, FL 34275

October 7, 2004
Project No: 45420

Laboratory Report

Project Name	**N0409366**
Sample Description	**N0409366-01I**
Matrix	**Groundwater**
SAL Sample Number	**45420.01**
Date/Time Collected	**09/21/04 13:30**
Date/Time Received	**09/22/04 12:27**

Parameters	Units	Results	Method	Detection Limit	Date/Time Analyzed	Date/Time Prep	Analyst
Chlorinated Herbicides (Primary DW)							
2,4-D	ug/l	1 U	EPA 515.3	1	09/25/04 01:46	09/23/04 09:00	BTJ
Pentachlorophenol	ug/l	0.1 U	EPA 515.3	0.1	09/25/04 01:46	09/23/04 09:00	BTJ
2,4,5-TP (Silvex)	ug/l	0.25 U	EPA 515.3	0.25	09/25/04 01:46	09/23/04 09:00	BTJ
Dinoseb	ug/l	0.5 U	EPA 515.3	0.5	09/25/04 01:46	09/23/04 09:00	BTJ
Picloram	ug/l	0.75 U	EPA 515.3	0.75	09/25/04 01:46	09/23/04 09:00	BTJ
Semivolatile Analyses (Primary DW)							
Date Extracted		09/24/04	EPA 525.2			09/24/04 08:30	ARM
Alachlor	ug/l	0.2 U	EPA 525.2	0.2	09/28/04 01:57	09/24/04 08:30	BTJ
Atrazine	ug/l	0.06 U	EPA 525.2	0.06	09/28/04 01:57	09/24/04 08:30	BTJ
Benzo(a)pyrene	ug/l	0.1 U	EPA 525.2	0.1	09/28/04 01:57	09/24/04 08:30	BTJ
Di(2-ethylhexyl)adipate	ug/l	0.3 U	EPA 525.2	0.3	09/28/04 01:57	09/24/04 08:30	BTJ
Di(2-ethylhexyl)phthalate	ug/l	1.0 U	EPA 525.2	1.0	09/28/04 01:57	09/24/04 08:30	BTJ
Endrin	ug/l	0.1 U	EPA 525.2	0.1	09/28/04 01:57	09/24/04 08:30	BTJ
Heptachlor	ug/l	0.08 U	EPA 525.2	0.08	09/28/04 01:57	09/24/04 08:30	BTJ
Heptachlor Epoxide	ug/l	0.1 U	EPA 525.2	0.1	09/28/04 01:57	09/24/04 08:30	BTJ
Hexachlorobenzene	ug/l	0.05 U	EPA 525.2	0.05	09/28/04 01:57	09/24/04 08:30	BTJ
Hexachlorocyclopentadiene	ug/l	0.2 U	EPA 525.2	0.2	09/28/04 01:57	09/24/04 08:30	BTJ
Lindane	ug/l	0.06 U	EPA 525.2	0.06	09/28/04 01:57	09/24/04 08:30	BTJ
Methoxychlor	ug/l	0.05 U	EPA 525.2	0.05	09/28/04 01:57	09/24/04 08:30	BTJ
Simazine	ug/l	0.07 U	EPA 525.2	0.07	09/28/04 01:57	09/24/04 08:30	BTJ
Pesticide Analyses (Primary DW)							
Date Extracted		09/27/04	EPA 549.2			09/27/04 10:00	BML
Diquat	ug/l	1 U	EPA 549.2	1	09/27/04 17:45	09/27/04 10:00	BML
Total Haloacetic Acids Analyses							
Date Extracted		09/27/04	EPA 552.2			09/27/04 08:45	ARM
Monochloroacetic Acid	ug/l	1 U	EPA 552.2	1	09/28/04 04:27	09/27/04 08:45	BTJ
Monobromoacetic Acid	ug/l	1 U	EPA 552.2	1	09/28/04 04:27	09/27/04 08:45	BTJ
Dichloroacetic Acid	ug/l	1 U	EPA 552.2	1	09/28/04 04:27	09/27/04 08:45	BTJ
Trichloroacetic Acid	ug/l	1 U	EPA 552.2	1	09/28/04 04:27	09/27/04 08:45	BTJ
Dibromoacetic Acid	ug/l	1 U	EPA 552.2	1	09/28/04 04:27	09/27/04 08:45	BTJ
Total Haloacetic Acids	ug/l	1 U	EPA 552.2	1	09/28/04 04:27	09/27/04 08:45	BTJ
Pesticide Analyses (Primary DW)							
Date Extracted		09/28/04	EPA 504.1			09/28/04 13:30	BML
Dibromochloropropane	ug/l	0.005 U	EPA 504.1	0.005	09/29/04 22:56	09/28/04 13:30	DB
Ethylene Dibromide (EDB)	ug/l	0.005 U	EPA 504.1	0.005	09/29/04 22:56	09/28/04 13:30	DB

SOUTHERN ANALYTICAL LABORATORIES, INC.
110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

Sanders Laboratories
1050 Endeavor Court
Nokomis, FL 34275

October 7, 2004
Project No: 45420

Laboratory Report

Project Name	**N0409355**
Sample Description	**N0409355-01I**
Matrix	**Groundwater**
SAL Sample Number	**45420.01**
Date/Time Collected	**09/21/04 13:30**
Date/Time Received	**09/22/04 12:27**

Parameters	Units	Results	Method	Detection Limit	Date/Time Analyzed	Date/Time Prep	Analyst
Carbamate Pesticides (Primary DW)							
Carbofuran	ug/l	0.5 U	EPA 531.1	0.5	09/23/04 07:02		DF
Oxamyl (Vydate)	ug/l	0.5 U	EPA 531.1	0.5	09/23/04 07:02		DF
Pesticide Analyses (Primary DW)							
Glyphosate	ug/l	10 U	EPA 547	10	09/24/04 16:49		BML
Pesticide Analyses (Primary DW)							
Date Extracted		09/24/04	EPA 548.1			09/24/04 14:30	DB
Endothall	ug/l	20 U	EPA 548.1	20	09/29/04 22:24	09/24/04 14:30	DB
Inorganics							
Cyanide	mg/l	0.005 U	SM 4500 CN	0.005	10/05/04 14:00	10/05/04 08:40	MAM
Fluoride	mg/l	0.20	EPA 300.0	0.003	09/28/04 22:11		DF
Hydrogen Sulfide (Unionized)	mg/l	0.1 U	EPA 376.1	0.1	09/23/04 12:52		WMC
Foaming Agents	mg/l	0.053	SM 5540 C	0.05	09/23/04 09:00		WMC
Total Organic Carbon	mg/l	15	EPA 415.1	1	09/29/04 18:29		MAM
Metals							
Boron	mg/l	0.065	EPA 200.7	0.05	09/27/04 09:20	09/24/04 12:10	LLS
Strontium	mg/l	0.23	EPA 6010	0.01	09/27/04 09:20	09/24/04 12:10	LLS
Radiochemistry							
Gross Alpha (Incl. Uranium)	pCi/l	2.3±0.7	EPA 900.0	1.6	09/30/04 06:52	09/28/04 08:00	AWW
Radium-226	pCi/l	2.6±0.1	EPA 903.1	0.06	10/02/04 16:00	09/25/04 11:20	AWW
Radium-228	pCi/l	1.2±0.2	EPA RA-05	0.9	10/06/04 16:30	10/06/04 13:00	AWW

SOUTHERN ANALYTICAL LABORATORIES, INC.
110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

Sanders Laboratories
1050 Endeavor Court
Nokomis, FL 34275

October 7, 2004
Project No: 45420

Laboratory Report

Footnotes

*	Test results presented in this report meet all the requirements of the NELAC standards.
**	A statement of estimated uncertainty of test results is available upon request.
U	Analyte was not detected; indicated concentration is method detection limit.

FDOH Laboratory No. E84129
NELAP Accredited

Approved By: **Francis I. Daniels, Laboratory Director**
Leslie C. Boardman, Q. A. Manager

Sanders Laboratories INC.
Environmental Testing Services

CHAIN-OF-CUSTODY RECORD

PROJECT # N0409355

Page 1 of 2

Client CH2M Hill
Address
Phone Fax

Report To:
Bill To:
P.O. #
Project Name East Inn(?)
Project Location:

Sample Supply: GW (2-550 DW Stds)
Customer Type:
Field Report #:
Kit #
REQUESTED DUE DATE: 9/28/04

Sampled By (PRINT) Noah Olenych
Sampler Signature [signature]

Bottle #	SAMPLE DESCRIPTION	DATE	TIME	TYPE	4°C	UNPRESERVED	H_2SO_4	HNO_3	HCl	Thio	TDS, Cl, SO4, PH, Color	Odor	NO2, NO3	RS Metals Ca, Mg	TC	Fe, Manganese (Dissolved)	NH3, TP	Alk, DR, Silica	(Field) PH, Cond, Temp	DO, H2S, Weddick	Sample ID #
	P-1	9-21-04	1330	G		X					X								X	X	-01A
	↓	↓	↓	↓		X						X									-01B
						X							X								-01C
								X						X							-01D
										X					X						-01E
								X								X					-01F
							X										X				-01G
	↓	↓	↓	↓		X												X			-01H

Bottle Lot #	OUT / DATE	SHIPMENT METHOD RETURNED DATE	VIA	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
				[signature]	9-21-04	1600	T. Bright	9/21/04	1600

COMMENTS:

COOLER #

COOLER SEAL INTACT
Yes No

Sanders Laboratories INC.
Environmental Testing Services

CHAIN-OF-CUSTODY RECORD

PROJECT # N0409355

Page 2 of 2

Client CH2M Hill

Address

Phone Fax

Report To:

Bill To:

P.O. #

Project Name East Irmo

Project Location:

Sample Supply: GW (62-550 DW STDS)

Customer Type:

Field Report #:

Kit #

REQUESTED DUE DATE: 9/28/04

Sampled By (PRINT) Noah Olanyk

Sampler Signature Noah Olanyk

Bottle #	SAMPLE DESCRIPTION	Sample DATE	Sample TIME	Sample TYPE	PRESERVATIVES 4°C	UNPRESERVED	H_2SO_4	HNO_3	HCL	ANALYSES REQUEST Cr; MEAS. F-	VOC, TTHM	Pest PCB	Sc. Boron	H2S	TOC, HAAS	GA. Rads 226 228	Sample ID #
	P-1	9-21-04	1330	G						X	X	X	X	X	X	X	-01I

Bottle Lot #	OUT / DATE	SHIPMENT METHOD RETURNED / DATE	VIA	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
				Noah Olanyk	9-24	1330	T. Bright	9/24/04	1600

COMMENTS:

COOLER #

COOLER SEAL INTACT Yes No

1050 Endeavor Ct., Nokomis, FL 34275-3623 • (941)488-8103 • FAX 484-6774 • 16880 Gator Road, Fort Myers, FL 33912 • (239) 590-0337 • FAX (239) 590-0536

Lab Project Summary

Lab Project #: N0408336

Total Pages: 13

Client: CH2M Hill
4350 W. Cypress St

Tampa FL 33607
Phone: 813-874-6522
Fax: 813-874-3056
E-mail:
Client Project Name: Ave Maria
Laboratory Contact: Andy Konopacki

QUALIFIER DEFINITIONS

B: Results based upon colony counts outside the acceptable range.
J3: The reported value failed to meet the established quality control criteria.
J4: The sample matrix interfered with the ability to make an accurate determination.
J5: The data is questionable because of improper lab or field protocols.
K: Off scale low, actual value is less than the value given.
L: Off scale high, actual value is known to be greater than the value given.
Q: Sample held beyond acceptable holding time.
U: The compound was analyzed for, but not detected.
V: The analyte was detected in both the sample and the associated method blank.
Y: The sample was unpreserved or improperly preserved.
Z: Too many colonies present (TNTC).
* Meets and/or exceeds acceptable drinking water limits, per FAC 62-550.
** This is an uncertified result.
HACH results are uncertified.

A statement of estimated uncertainty of results is available upon request.

Sanders Laboratories follows DEP standard operating procedures for field sampling.

Reports are archived for a minimum of 5 years. Copies of reports which are less than 1 year old are available for a fee of $25.00 per report. Reports older than 1 year are available for a fee of $50.00 per report. Copies will be provided within 1 week of the time of the request.

Client Project: Ave Maria
Lab Project: N0408336
Report Date: 09/16/04

Sanders Laboratories, Inc.
Environmental Testing Services

Laboratory Results

CH2M Hill
4350 W. Cypress St
Tampa, FL 33607

Lab ID	Sample Description	Sample Source	Received Date/Time	Sample Date/Time
N0408336-01	P-2 grab	Ground Water	8/30/04 13:45	8/30/04 10:30

Analysis	Method	Results	Qual	Detection Limit	Units	AnalysisDate/Time	Analyst	Cert ID
Air Temperature-field	170.1	31.3		0.1	C	8/30/04 10:30	SO	E84380
Alkalinity	310.1	300		15	mg/L	9/1/04 9:00	JL	E84380
Aluminum	200.7	0.008		0.005	mg/L	9/8/04 15:26	JPW	E84380
Ammonia-N	350.3	0.91		0.05	mg/L	9/1/04 10:30	JL	E84380
Antimony	200.7	0.003	U	0.003	mg/L	9/8/04 15:26	JPW	E84380
Arsenic	200.7	0.001		0.001	mg/L	9/8/04 15:26	JPW	E84380
Barium	200.7	0.008		0.003	mg/L	9/8/04 15:26	JPW	E84380
Beryllium	200.7	0.0001	U	0.0001	mg/L	9/8/04 15:26	JPW	E84380
Cadmium	200.7	0.001	U	0.001	mg/L	9/8/04 15:26	JPW	E84380
Calcium	200.7	89.9	J3	0.180	mg/L	9/8/04 15:26	JPW	E84380
Chloride	4500Cl-B	28		2	mg/L	8/31/04 12:00	JL	E84380
Chromium	200.7	0.001	U	0.001	mg/L	9/8/04 15:26	JPW	E84380
Color-Apparent	2120B	32		1	PtCo units	8/31/04 11:00	JL	E84380
Copper	200.7	0.001	U,V	0.001	mg/L	9/8/04 15:26	JPW	E84380
Dissolved Oxygen-field	360.1	4.25		0.01	mg/L	8/30/04 10:30	SO	E84380
Hydrogen Sulfide-field	HACH	absent		n/a	none	8/30/04 10:30	SO	E84380
Iron	200.7	0.006	U	0.006	mg/L	9/8/04 15:26	JPW	E84380
Iron-Dissolved	200.7	0.006	U	0.006	mg/L	9/7/04 11:47	JPW	E84380

Client Project: Ave Maria
Lab Project: N0408336
Report Date: 09/16/04

Laboratory Results

Lab ID	Sample Description	Sample Source	Received Date/Time	Sample Date/Time
N0408336-01	P-2 grab	Ground Water	8/30/04 13:45	8/30/04 10:30

Analysis	Method	Results	Qual	Detection Limit	Units	AnalysisDate/Time	Analyst	Cert ID
Lead	200.7	0.001	U	0.001	mg/L	9/8/04 15:26	JPW	E84380
Magnesium	200.7	12.8		0.006	mg/L	9/8/04 15:26	JPW	E84380
Manganese	200.7	0.003		0.001	mg/L	9/8/04 15:26	JPW	E84380
Manganese-Dissolved	200.7	0.003		0.001	mg/L	9/7/04 11:47	JPW	E84380
Mercury	245.1	0.001	U	0.001	mg/L	9/16/04 12:43	BY	E84380
Nickel	200.7	0.002	U	0.002	mg/L	9/8/04 15:26	JPW	E84380
Nitrate-N	353.2	0.01	U	0.01	mg/L	8/31/04 14:53	SJ	E84380
Nitrite-N	353.2	0.01	U	0.01	mg/L	8/30/04 15:43	SJ	E84380
Odor	SM2150B	3		1	TON	8/30/04 14:00	EW	E84380
Ortho-phosphate	365.2	0.048		0.010	mg/L	8/31/04 11:00	JL	E84380
pH - field	150.1	7.28		0.01	std units	8/30/04 10:30	SO	E84380
Phosphorus, Total	365.2	0.072		0.010	mg/L	8/31/04 14:30	JL	E84380
Potassium	200.7	4.83	J3	0.016	mg/L	9/8/04 15:26	JPW	E84380
See attached results	Subcontract					9/1/04 15:49	SUB	
Selenium	200.7	0.001	U,V	0.001	mg/L	9/8/04 15:26	JPW	E84380
Silica	370.1	15.6		2.0	mg/L	9/1/04 12:00	JL	E84380
Silver	200.7	0.001	U	0.001	mg/L	9/8/04 15:26	JPW	E84380
Sodium	200.7	28.3		0.200	mg/L	9/8/04 15:26	JPW	E84380
Specific Conductance-field	120.1	616		0.1	umhos/cm	8/30/04 10:30	SO	E84380
Sulfate	375.4	9		5	mg/L	9/3/04 12:00	EW	E84380
Thallium	200.7	0.002	U	0.002	mg/L	9/8/04 15:26	JPW	E84380

Client Project: Ave Maria
Lab Project: N0408336
Report Date: 09/16/04

Laboratory Results

Lab ID	Sample Description	Sample Source	Received Date/Time	Sample Date/Time
N0408336-01	P-2 grab	Ground Water	8/30/04 13:45	8/30/04 10:30

Analysis	Method	Results	Qual	Detection Limit	Units	AnalysisDate/Time	Analyst	Cert ID
Total Chlorine Residual	330.5	0.1	U	0.1	mg/L	8/30/04 10:30	SO	E84380
Total Coliform, MF	9222B	1	U	1	col/100ml	8/30/04 16:30	RG	E84380
Total Dissolved Solids	160.1	352		10	mg/L	9/1/04 13:00	EW	E84380
Water Temperature-field	170.1	27.0		0.1	C	8/30/04 10:30	SO	E84380
Weather-field	DEPSOP	clear		n/a	none	8/30/04 10:30	SO	E84380
Zinc	200.7	0.002	U	0.002	mg/L	9/8/04 15:26	JPW	E84380

Approved by:

Comments:

Andrew Kobopacki/Lab Supervisor
Katharine Bartkiewicz/Lab Supervisor

Test Results meet all the requirements of the NELAC standards.

Sanders Laboratories, Inc.
Environmental Testing Services

9/16/04

CH2M Hill
4350 W. Cypress St.
Tampa, FL 33607

To: Pete Larkin

Re: Qualifiers on Report N0408336.

Sanders Laboratories performed sampling and analysis on Well P2 at Ave Maria on August 30th, 2004. Sanders Laboratories associated project number is N0408336.

This report has a qualifier code "J3" on Calcium and Potassium. This qualifier for both Calcium and Potassium was used due to the matrix spike being outside the acceptable limits. This matrix spike is performed on one sample for every batch of ten samples. The matrix spike for this batch of samples was on a different sample.

Also, a "V" qualifier code is used for Copper and Selenium. The method digested blank had a measurement of 0.002 mg/L for Copper and 0.001 mg/L for Selenium. These numbers are at or above the method detection limit, therefore the "V" qualifier code.

All other quality control for these samples was within the acceptable limits.

If there are any questions please contact me at 941-488-8103.

Sincerely,

Andrew J. Konopacki
Laboratory/Field Supervisor

1050 Endeavor Court • Nokomis, FL 34275 • Phone: (941) 488-8103 • (800) 255-3108 • Fax: (941) 484-6774

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

Sanders Laboratories
1050 Endeavor Court
Nokomis, FL 34275

September 13, 2004
Project No: 44896

Laboratory Report

Project Name	**N0408336**
Sample Description	**N0408336-01**
Matrix	**Groundwater**
SAL Sample Number	**44896.01**
Date/Time Collected	**08/30/04 10:30**
Date/Time Received	**08/31/04 10:00**

Parameters	Units	Results	Method	Detection Limit	Date/Time Analyzed	Date/Time Prep	Analyst
Volatile Organic Compounds (Primary DW)							
1,1,1-Trichloroethane	ug/l	0.3 U	EPA 502.2	0.3	09/01/04 10:47		JRW
1,1,2-Trichloroethane	ug/l	0.3 U	EPA 502.2	0.3	09/01/04 10:47		JRW
1,1-Dichloroethylene	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
1,2,4 Trichlorobenzene	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
1,2-Dichloroethane	ug/l	0.2 U	EPA 502.2	0.2	09/01/04 10:47		JRW
1,2-Dichloropropane	ug/l	0.3 U	EPA 502.2	0.3	09/01/04 10:47		JRW
Benzene	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
Carbon tetrachloride	ug/l	0.3 U	EPA 502.2	0.3	09/01/04 10:47		JRW
cis-1,2-Dichloroethylene	ug/l	0.2 U	EPA 502.2	0.2	09/01/04 10:47		JRW
Dichloromethane	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
Ethylbenzene	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
Monochlorobenzene	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
o-Dichlorobenzene	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
para-Dichlorobenzene	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
Styrene	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
Tetrachloroethylene	ug/l	0.2 U	EPA 502.2	0.2	09/01/04 10:47		JRW
Toluene	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
trans-1,2-Dichloroethylene	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
Trichloroethylene	ug/l	0.2 U	EPA 502.2	0.2	09/01/04 10:47		JRW
Vinyl chloride	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
Xylenes (Total)	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
m/p-xylenes	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
o-xylene	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
Trihalomethane Analyses							
Bromodichloromethane	ug/l	0.3 U	EPA 502.2	0.3	09/01/04 10:47		JRW
Bromoform	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
Chloroform	ug/l	0.2 U	EPA 502.2	0.2	09/01/04 10:47		JRW
Dibromochloromethane	ug/l	0.5 U	EPA 502.2	0.5	09/01/04 10:47		JRW
Total Trihalomethanes	ug/l	0.2 U	EPA 502.2	0.2	09/01/04 10:47		JRW
Chlorinated Pesticides (Primary DW)							
Date Extracted		09/09/04	EPA 508.1			09/09/04 08:30	GLG
Chlordane	ug/l	0.05 U	EPA 508.1	0.05	09/10/04 18:21	09/09/04 08:30	DB
Toxaphene	ug/l	0.5 U	EPA 508.1	0.5	09/10/04 18:21	09/09/04 08:30	DB
Polychlorinated biphenyls (PCBs)	ug/l	0.2 U	EPA 508.1	0.2	09/10/04 18:21	09/09/04 08:30	DB
Chlorinated Herbicides (Primary DW)							
Date Extracted		09/02/04	EPA 515.3			09/02/04 08:30	GLG
Dalapon	ug/l	1 U	EPA 515.3	1	09/03/04 14:24	09/02/04 08:30	BTJ

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

Sanders Laboratories
1050 Endeavor Court
Nokomis, FL 34275

September 13, 2004
Project No: 44896

Laboratory Report

Project Name	**N0408336**
Sample Description	**N0408336-01**
Matrix	**Groundwater**
SAL Sample Number	**44896.01**
Date/Time Collected	**08/30/04 10:30**
Date/Time Received	**08/31/04 10:00**

Parameters	Units	Results	Method	Detection Limit	Date/Time Analyzed	Date/Time Prep	Analyst
Chlorinated Herbicides (Primary DW)							
2,4-D	ug/l	1 U	EPA 515.3	1	09/03/04 14:24	09/02/04 08:30	BTJ
Pentachlorophenol	ug/l	0.1 U	EPA 515.3	0.1	09/03/04 14:24	09/02/04 08:30	BTJ
2,4,5-TP (Silvex)	ug/l	0.25 U	EPA 515.3	0.25	09/03/04 14:24	09/02/04 08:30	BTJ
Dinoseb	ug/l	0.5 U	EPA 515.3	0.5	09/03/04 14:24	09/02/04 08:30	BTJ
Picloram	ug/l	0.75 U	EPA 515.3	0.75	09/03/04 14:24	09/02/04 08:30	BTJ
Semivolatile Analyses (Primary DW)							
Date Extracted		09/09/04	EPA 525.2			09/09/04 08:30	GLG
Alachlor	ug/l	0.2 U	EPA 525.2	0.2	09/11/04 19:40	09/09/04 08:30	BTJ
Atrazine	ug/l	0.06 U	EPA 525.2	0.06	09/11/04 19:40	09/09/04 08:30	BTJ
Benzo(a)pyrene	ug/l	0.1 U	EPA 525.2	0.1	09/11/04 19:40	09/09/04 08:30	BTJ
Di(2-ethylhexyl)adipate	ug/l	0.3 U	EPA 525.2	0.3	09/11/04 19:40	09/09/04 08:30	BTJ
Di(2-ethylhexyl)phthalate	ug/l	1.0 U	EPA 525.2	1.0	09/11/04 19:40	09/09/04 08:30	BTJ
Endrin	ug/l	0.1 U	EPA 525.2	0.1	09/11/04 19:40	09/09/04 08:30	BTJ
Heptachlor	ug/l	0.08 U	EPA 525.2	0.08	09/11/04 19:40	09/09/04 08:30	BTJ
Heptachlor Epoxide	ug/l	0.1 U	EPA 525.2	0.1	09/11/04 19:40	09/09/04 08:30	BTJ
Hexachlorobenzene	ug/l	0.05 U	EPA 525.2	0.05	09/11/04 19:40	09/09/04 08:30	BTJ
Hexachlorocyclopentadiene	ug/l	0.2 U	EPA 525.2	0.2	09/11/04 19:40	09/09/04 08:30	BTJ
Lindane	ug/l	0.06 U	EPA 525.2	0.06	09/11/04 19:40	09/09/04 08:30	BTJ
Methoxychlor	ug/l	0.05 U	EPA 525.2	0.05	09/11/04 19:40	09/09/04 08:30	BTJ
Simazine	ug/l	0.07 U	EPA 525.2	0.07	09/11/04 19:40	09/09/04 08:30	BTJ
Pesticide Analyses (Primary DW)							
Date Extracted		09/03/04	EPA 549.2			09/03/04 09:00	ARM
Diquat	ug/l	1 U	EPA 549.2	1	09/08/04 19:20	09/03/04 09:00	JKS
Total Haloacetic Acids Analyses							
Date Extracted		09/01/04	EPA 552.2			09/01/04 09:00	BML
Monochloroacetic Acid	ug/l	1 U	EPA 552.2	1	09/04/04 05:18	09/01/04 09:00	BTJ
Monobromoacetic Acid	ug/l	1 U	EPA 552.2	1	09/04/04 05:18	09/01/04 09:00	BTJ
Dichloroacetic Acid	ug/l	1 U	EPA 552.2	1	09/04/04 05:18	09/01/04 09:00	BTJ
Trichloroacetic Acid	ug/l	1 U	EPA 552.2	1	09/04/04 05:18	09/01/04 09:00	BTJ
Dibromoacetic Acid	ug/l	1 U	EPA 552.2	1	09/04/04 05:18	09/01/04 09:00	BTJ
Total Haloacetic Acids	ug/l	1 U	EPA 552.2	1	09/04/04 05:18	09/01/04 09:00	BTJ
Pesticide Analyses (Primary DW)							
Date Extracted		09/01/04	EPA 504.1			09/01/04 15:45	BML
Dibromochloropropane	ug/l	0.005 U	EPA 504.1	0.005	09/03/04 15:54	09/01/04 15:45	DB
Ethylene Dibromide (EDB)	ug/l	0.005 U	EPA 504.1	0.005	09/03/04 15:54	09/01/04 15:45	DB

SOUTHERN ANALYTICAL LABORATORIES, INC.
110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

Sanders Laboratories
1050 Endeavor Court
Nokomis, FL 34275

September 13, 2004
Project No: 44896

Laboratory Report

Project Name	**N0408336**
Sample Description	**N0408336-01**
Matrix	**Groundwater**
SAL Sample Number	**44896.01**
Date/Time Collected	**08/30/04 10:30**
Date/Time Received	**08/31/04 10:00**

Parameters	Units	Results	Method	Detection Limit	Date/Time Analyzed	Date/Time Prep	Analyst
Carbamate Pesticides (Primary DW)							
Carbofuran	ug/l	0.5 U	EPA 531.1	0.5	09/07/04 16:03		JKS
Oxamyl (Vydate)	ug/l	0.5 U	EPA 531.1	0.5	09/07/04 16:03		JKS
Pesticide Analyses (Primary DW)							
Glyphosate	ug/l	10 U	EPA 547	10	09/01/04 14:36		JKS
Pesticide Analyses (Primary DW)							
Date Extracted		09/01/04	EPA 548.1			09/01/04 11:30	ARM
Endothall	ug/l	20 U	EPA 548.1	20	09/03/04 22:10	09/01/04 11:30	DB
Inorganics							
Cyanide	mg/l	0.005 U	SM 4500 CN	0.005	09/09/04 15:00	09/09/04 10:35	JEH
Fluoride	mg/l	0.21	EPA 300.0	0.003	09/01/04 07:28		DF
Hydrogen Sulfide (Unionized)	mg/l	0.2	EPA 376.1	0.1	09/07/04 11:11		WMC
Foaming Agents	mg/l	0.05 U	SM 5540 C	0.05	09/01/04 10:15		WMC
Total Organic Carbon	mg/l	11	EPA 415.1	1	09/02/04 00:05		MAM
Metals							
Boron	mg/l	0.068	EPA 200.7	0.05	09/08/04 09:30	09/01/04 09:40	LLS
Strontium	mg/l	0.24	EPA 6010	0.01	09/02/04 13:20	09/01/04 09:40	LLS

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Sanders Laboratories
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Nokomis, FL 34275

September 13, 2004
Project No: 44896

Laboratory Report

Footnotes

*	Test results presented in this report meet all the requirements of the NELAC standards.
**	A statement of estimated uncertainty of test results is available upon request.
U	Analyte was not detected; indicated concentration is method detection limit.

Florida Radiochemistry Services, Inc.

Sample Login

Client:	**Sanders Laboratories, Inc.**	**Date / Time Received**	**Work order #**
		08/31/04 11:00	**0408228**
Client Contact:	**Tami Bright**		
Client P.O.	**N0408336**		
Project I.D.	**N0408336**		

Lab Sample I.D.	Client Sample I.D.	Sample Date/Time	Analysis Requested
0408228-01	N0408336-01	08/30/04 10:30	Ga, Ra226, Ra228

Analysis Results

Gross Alpha	**<1.7**
Error +/-	**1.0**
MDL	**1.7**
EPA Method	**900.0**
Prep Date	**09/07/04**
Analysis Date	**09/08/04**
Analyst	**MJN**

Radium 226	**0.7**	**Radium 228**	**<0.9**
Error +/-	**0.3**	**Error +/-**	**0.6**
MDL	**0.2**	**MDL**	**0.9**
EPA Method	**903.1**	**EPA Method**	**Ra-05**
Prep Date	**09/07/04**	**Prep Date**	**09/07/04**
Analysis Date	**09/14/04**	**Analysis Date**	**09/09/04**
Analyst	**MJN**	**Analyst**	**PJ**
Units	**pCi/l**	**Units**	**pCi/l**

Florida Radiochemistry Services, Inc.

QA Page

Analyte	Sample #	Date Analyzed	Sample Result	Amount Spiked	Spike Result	Spike /Dup Result	Spike % Rec.	Spike Dup % Rpd
Gross Alpha	0408230-02	09/08/04	<1.5	10.2	8.9	9.6	87	7.6
Radium 226	0408193-02	09/14/04	0.2	23.5	21.9	21.9	92	0.0
Radium 228	0408193-02	09/09/04	<1.0	6.3	6.1	6.2	97	1.6

	Quality Control Limits	
	% RPD	% Rec.
Gross Alpha	15.9	69-115
Radium 226	21.1	73-117
Radium 228	18.1	75-125

Sanders Laboratories INC.
Environmental Testing Services

CHAIN-OF-CUSTODY RECORD

PROJECT # ~~N040 8336~~ ~~316-3045~~

Report To: Pete Larkin
Bill To:
P.O. #
Project Name
Project Location:

Sample Supply: GW (62-550 DW STDS)
Customer Type:
Field Report #:
Kit #
REQUESTED DUE DATE: 9/6/04

Client CH2MHill
Address
Phone Fax

Sampled By (PRINT) Shalina Odegard
Sampler Signature Shalina Odegard

Bottle #	SAMPLE DESCRIPTION	Sample DATE	Sample TIME	Sample TYPE	PRESERVATIVES 4°C	UNPRESERVED	H_2SO_4	HNO_3	HCL	ANALYSES REQUEST Cl-, SO4, Color, PH, TDS	Odor	NO2, NO3	P+S, Meta Is, Ca, Mg, K	TC	Fe, Manganese (Dissolved)	NH3, TP	Silica, OP, Alk	Sample ID #
	P-2	8/30/04	1030	G						X								-01
											X							
												X						
													X					
														X				
															X			
																X		
																	X	

Bottle Lot #	OUT / DATE	SHIPMENT METHOD RETURNED / DATE	VIA	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
				Shalina Odegard	8/30/04	1345	Acreage	8/30/04	1345

COMMENTS:
Cl : 0.0
H_2S : absent

COOLER #

COOLER SEAL INTACT Yes No

1050 Endeavor Ct., Nokomis, FL 34275-3623 • (941)488-8103 • FAX 484-6774 • 16880 Gator Road, Fort Myers, FL 33912 • (239) 590-0337 • FAX (239) 590-0536

Sanders Laboratories INC.
Environmental Testing Services

CHAIN-OF-CUSTODY RECORD

PROJECT #: ~~N040 8336~~ ~~316-301 Sa~~

Page 2 of 2

Client: CH2MHill	Report To: Pete Larkin
Address:	Bill To:
	P.O. #:
Phone: Fax:	Project Name:
	Project Location:

Sample Supply: GW (62-550 DW Stds)
Customer Type:
Field Report #:
Kit #:
REQUESTED DUE DATE: 9/6/04

Sampled By (PRINT): Shalina Odegard
Sampler Signature: Shalina Odegard

PRESERVATIVES: 4°C, UNPRESERVED, H_2SO_4, HNO_3, HCL

ANALYSES REQUEST: Cn-MBAS, F; VOC, TTHM; Pest/PCB; Sr, Boron; H2S; TOC, HAAS; GA, Rads 226/228

Bottle #	SAMPLE DESCRIPTION	DATE	TIME	TYPE	4°C	UNPRESERVED	H_2SO_4	HNO_3	HCL	Cn-MBAS, F	VOC, TTHM	Pest/PCB	Sr, Boron	H2S	TOC, HAAS	GA, Rads 226/228				Sample ID #
	P-2	8/30/04	1030	G						X	X	X	X	X	X	X				-01

Bottle Lot #	OUT / DATE	SHIPMENT METHOD RETURNED DATE	VIA	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
				Shalina Odegard	8/30/04	1345	aCreager	8/30/04	1345

COMMENTS:
Cl : 0.0
H_2S : absent

COOLER #

COOLER SEAL INTACT Yes No

Lab Project Summary

P3

Lab Project #: N0409360

Total Pages: 10

Client: CH2M Hill
4350 W. Cypress St

Tampa FL 33607

Phone: 813-874-6522
Fax: 813-874-3056
E-mail:
Client Project Name: Ave Maria
Laboratory Contact: Andy Konopacki

QUALIFIER DEFINITIONS

B: Results based upon colony counts outside the acceptable range.
J3: The reported value failed to meet the established quality control criteria.
J4: The sample matrix interfered with the ability to make an accurate determination.
J5: The data is questionable because of improper lab or field protocols.
K: Off scale low, actual value is less than the value given.
L: Off scale high, actual value is known to be greater than the value given.
Q: Sample held beyond acceptable holding time.
U: The compound was analyzed for, but not detected.
V: The analyte was detected in both the sample and the associated method blank.
Y: The sample was unpreserved or improperly preserved.
Z: Too many colonies present (TNTC).
* Meets and/or exceeds acceptable drinking water limits, per FAC 62-550.
** This is an uncertified result.
HACH results are uncertified.

A statement of estimated uncertainty of results is available upon request.

Sanders Laboratories follows DEP standard operating procedures for field sampling.

Reports are archived for a minimum of 5 years. Copies of reports which are less than 1 year old are available for a fee of $25.00 per report. Reports older than 1 year are available for a fee of $50.00 per report. Copies will be provided within 1 week of the time of the request.

Client Project: Ave Maria
Lab Project: N0409360
Report Date: 10/19/04

Sanders Laboratories, Inc.
Environmental Testing Services

Laboratory Results

CH2M Hill
4350 W. Cypress St
Tampa, FL 33607

Lab ID	Sample Description	Sample Source	Received Date/Time	Sample Date/Time
N0409360-01	p-3 grab	Ground Water	9/22/04 15:15	9/22/04 13:00

Analysis	Method	Results	Qual	Detection Limit	Units	AnalysisDate/Time	Analyst	Cert ID
Alkalinity	310.1	272		6	mg/L	9/23/04 11:00	JL	E84380
Aluminum	200.7	0.022		0.005	mg/L	9/29/04 9:40	BY	E84380
Ammonia-N	350.3	1.31		0.05	mg/L	9/24/04 9:00	JL	E84380
Antimony	200.7	0.003	U	0.003	mg/L	9/29/04 9:40	BY	E84380
Arsenic	200.7	0.001	U	0.001	mg/L	9/29/04 9:40	BY	E84380
Barium	200.7	0.016		0.003	mg/L	9/29/04 9:40	BY	E84380
Beryllium	200.7	0.0001	U	0.0001	mg/L	9/29/04 9:40	BY	E84380
Cadmium	200.7	0.001	U	0.001	mg/L	9/29/04 9:40	BY	E84380
Calcium	200.7	84.3	J3	0.009	mg/L	9/29/04 9:40	BY	E84380
Chloride	4500Cl-B	35		10	mg/L	9/27/04 12:00	JL	E84380
Chromium	200.7	0.001	U	0.001	mg/L	9/29/04 9:40	BY	E84380
Color-Apparent	2120B	90		5	PtCo units	9/22/04 15:30	JL	E84380
Copper	200.7	0.001	U,V	0.001	mg/L	9/29/04 9:40	BY	E84380
Dissolved Oxygen-field	360.1	4.63		0.01	mg/L	9/22/04 13:00	NO	E84380
Hydrogen Sulfide-field	HACH	absent		n/a	none	9/22/04 13:00	NO	E84380
Iron	200.7	0.726		0.006	mg/L	9/29/04 9:40	BY	E84380
Iron-Dissolved	200.7	0.660		0.006	mg/L	10/19/04 12:18	JPW	E84380
Lead	200.7	0.001	U	0.001	mg/L	9/29/04 9:40	BY	E84380

Client Project: Ave Maria
Lab Project: N0409360
Report Date: 10/19/04

Laboratory Results

Lab ID	Sample Description	Sample Source	Received Date/Time	Sample Date/Time
N0409360-01	p-3 grab	Ground Water	9/22/04 15:15	9/22/04 13:00

Analysis	Method	Results	Qual	Detection Limit	Units	AnalysisDate/Time	Analyst	Cert ID
Magnesium	200.7	10.5	J3	0.006	mg/L	9/29/04 9:40	BY	E84380
Manganese	200.7	0.008		0.001	mg/L	9/29/04 9:40	BY	E84380
Manganese-Dissolved	200.7	0.008		0.001	mg/L	10/19/04 12:18	JPW	E84380
Mercury	245.1	0.001	U	0.001	mg/L	9/28/04 12:22	BY	E84380
Nickel	200.7	0.002	U	0.002	mg/L	9/29/04 9:40	BY	E84380
Nitrate-N	353.2	0.01	U	0.01	mg/L	9/22/04 15:45	SJ	E84380
Nitrite-N	353.2	0.01	U	0.01	mg/L	9/22/04 15:22	SJ	E84380
Odor	SM2150B	1	U	1	TON	9/22/04 15:30	JL	E84380
Ortho-phosphate	365.2	0.052		0.010	mg/L	9/23/04 7:45	JL	E84380
pH - field	150.1	6.07		0.01	std units	9/22/04 13:00	NO	E84380
Phosphorus, Total	365.2	0.067		0.010	mg/L	9/24/04 12:00	JL	E84380
Potassium	200.7	7.85	J3	0.016	mg/L	9/29/04 9:40	BY	E84380
See attached results	Subcontract					9/23/04 10:29	SUB	
Selenium	200.7	0.001	U	0.001	mg/L	9/29/04 9:40	BY	E84380
Silica	370.1	26.5		5.0	mg/L	9/23/04 9:30	JL	E84380
Silver	200.7	0.001	U,J3	0.001	mg/L	9/29/04 9:40	BY	E84380
Sodium	200.7	24.0		0.200	mg/L	9/29/04 9:40	BY	E84380
Specific Conductance-field	120.1	662		0.1	umhos/cm	9/22/04 13:00	NO	E84380
Sulfate	375.4	9		5	mg/L	10/1/04 13:00	EW	E84380
Thallium	200.7	0.002	U	0.002	mg/L	9/29/04 9:40	BY	E84380
Total Coliform, MF	9222B	TNTC-NO N	Z	1	col/100ml	9/22/04 16:00	RG	E84380

Client Project: Ave Maria
Lab Project: N0409360
Report Date: 10/19/04

Laboratory Results

Lab ID	Sample Description	Sample Source	Received Date/Time	Sample Date/Time
N0409360-01	p-3 grab	Ground Water	9/22/04 15:15	9/22/04 13:00

Analysis	Method	Results	Qual	Detection Limit	Units	AnalysisDate/Time	Analyst	Cert ID
Total Dissolved Solids	160.1	392		10	mg/L	9/24/04 12:30	EW	E84380
Water Temperature-field	170.1	25.6		0.1	C	9/22/04 13:00	NO	E84380
Weather-field	DEPSOP	cloudy		n/a	none	9/22/04 13:00	NO	E84380
Zinc	200.7	0.012		0.002	mg/L	9/29/04 9:40	BY	E84380

Approved by:

Andrew Konopacki/Lab Supervisor
Kathrine Bartkiewicz/Lab Supervisor

Comments:

Test Results meet all the requirements of the NELAC standards.

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

Sanders Laboratories
1050 Endeavor Court
Nokomis, FL 34275

October 7, 2004
Project No: 45438

Laboratory Report

Project Name	**N0409360**
Sample Description	**N0409360-01I**
Matrix	**Groundwater**
SAL Sample Number	**45438.01**
Date/Time Collected	**09/22/04 13:00**
Date/Time Received	**09/23/04 14:30**

Parameters	Units	Results	Method	Detection Limit	Date/Time Analyzed	Date/Time Prep	Analyst
Volatile Organic Compounds (Primary DW)							
1,1,1-Trichloroethane	ug/l	0.3 U	EPA 502.2	0.3	09/24/04 05:05		JRW
1,1,2-Trichloroethane	ug/l	0.3 U	EPA 502.2	0.3	09/24/04 05:05		JRW
1,1-Dichloroethylene	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
1,2,4 Trichlorobenzene	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
1,2-Dichloroethane	ug/l	0.2 U	EPA 502.2	0.2	09/24/04 05:05		JRW
1,2-Dichloropropane	ug/l	0.3 U	EPA 502.2	0.3	09/24/04 05:05		JRW
Benzene	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
Carbon tetrachloride	ug/l	0.3 U	EPA 502.2	0.3	09/24/04 05:05		JRW
cis-1,2-Dichloroethylene	ug/l	0.2 U	EPA 502.2	0.2	09/24/04 05:05		JRW
Dichloromethane	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
Ethylbenzene	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
Monochlorobenzene	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
o-Dichlorobenzene	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
para-Dichlorobenzene	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
Styrene	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
Tetrachloroethylene	ug/l	0.2 U	EPA 502.2	0.2	09/24/04 05:05		JRW
Toluene	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
trans-1,2-Dichloroethylene	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
Trichloroethylene	ug/l	0.2 U	EPA 502.2	0.2	09/24/04 05:05		JRW
Vinyl chloride	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
Xylenes (Total)	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
m/p-xylenes	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
o-xylene	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
Trihalomethane Analyses							
Bromodichloromethane	ug/l	0.3 U	EPA 502.2	0.3	09/24/04 05:05		JRW
Bromoform	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
Chloroform	ug/l	0.2 U	EPA 502.2	0.2	09/24/04 05:05		JRW
Dibromochloromethane	ug/l	0.5 U	EPA 502.2	0.5	09/24/04 05:05		JRW
Total Trihalomethanes	ug/l	0.2 U	EPA 502.2	0.2	09/24/04 05:05		JRW
Chlorinated Pesticides (Primary DW)							
Date Extracted		09/24/04	EPA 508.1			09/24/04 08:30	ARM
Chlordane	ug/l	0.05 U	EPA 508.1	0.05	09/27/04 19:57	09/24/04 08:30	DB
Toxaphene	ug/l	0.5 U	EPA 508.1	0.5	09/27/04 19:57	09/24/04 08:30	DB
Polychlorinated biphenyls (PCBs)	ug/l	0.2 U	EPA 508.1	0.2	09/27/04 19:57	09/24/04 08:30	DB
Chlorinated Herbicides (Primary DW)							
Date Extracted		09/28/04	EPA 515.3			09/28/04 10:00	POM
Dalapon	ug/l	1 U	EPA 515.3	1	10/02/04 07:00	09/28/04 10:00	BTJ

FDOH Laboratory No. E84129
NELAP Accredited

Francis I. Daniels, Laboratory Director
Leslie C. Boardman, Q. A. Manager

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

Sanders Laboratories
1050 Endeavor Court
Nokomis, FL 34275

October 7, 2004
Project No: 45438

Laboratory Report

Project Name	N0409360
Sample Description	N0409360-01I
Matrix	Groundwater
SAL Sample Number	45438.01
Date/Time Collected	09/22/04 13:00
Date/Time Received	09/23/04 14:30

Parameters	Units	Results	Method	Detection Limit	Date/Time Analyzed	Date/Time Prep	Analyst
Chlorinated Herbicides (Primary DW)							
2,4-D	ug/l	1 U	EPA 515.3	1	10/02/04 07:00	09/28/04 10:00	BTJ
Pentachlorophenol	ug/l	0.1 U	EPA 515.3	0.1	10/02/04 07:00	09/28/04 10:00	BTJ
2,4,5-TP (Silvex)	ug/l	0.25 U	EPA 515.3	0.25	10/02/04 07:00	09/28/04 10:00	BTJ
Dinoseb	ug/l	0.5 U	EPA 515.3	0.5	10/02/04 07:00	09/28/04 10:00	BTJ
Picloram	ug/l	0.75 U	EPA 515.3	0.75	10/02/04 07:00	09/28/04 10:00	BTJ
Semivolatile Analyses (Primary DW)							
Date Extracted		09/24/04	EPA 525.2			09/24/04 08:30	ARM
Alachlor	ug/l	0.2 U	EPA 525.2	0.2	09/28/04 03:54	09/24/04 08:30	BTJ
Atrazine	ug/l	0.06 U	EPA 525.2	0.06	09/28/04 03:54	09/24/04 08:30	BTJ
Benzo(a)pyrene	ug/l	0.1 U	EPA 525.2	0.1	09/28/04 03:54	09/24/04 08:30	BTJ
Di(2-ethylhexyl)adipate	ug/l	0.3 U	EPA 525.2	0.3	09/28/04 03:54	09/24/04 08:30	BTJ
Di(2-ethylhexyl)phthalate	ug/l	1.0 U	EPA 525.2	1.0	09/28/04 03:54	09/24/04 08:30	BTJ
Endrin	ug/l	0.1 U	EPA 525.2	0.1	09/28/04 03:54	09/24/04 08:30	BTJ
Heptachlor	ug/l	0.08 U	EPA 525.2	0.08	09/28/04 03:54	09/24/04 08:30	BTJ
Heptachlor Epoxide	ug/l	0.1 U	EPA 525.2	0.1	09/28/04 03:54	09/24/04 08:30	BTJ
Hexachlorobenzene	ug/l	0.05 U	EPA 525.2	0.05	09/28/04 03:54	09/24/04 08:30	BTJ
Hexachlorocyclopentadiene	ug/l	0.2 U	EPA 525.2	0.2	09/28/04 03:54	09/24/04 08:30	BTJ
Lindane	ug/l	0.06 U	EPA 525.2	0.06	09/28/04 03:54	09/24/04 08:30	BTJ
Methoxychlor	ug/l	0.05 U	EPA 525.2	0.05	09/28/04 03:54	09/24/04 08:30	BTJ
Simazine	ug/l	0.07 U	EPA 525.2	0.07	09/28/04 03:54	09/24/04 08:30	BTJ
Pesticide Analyses (Primary DW)							
Date Extracted		09/27/04	EPA 549.2			09/27/04 10:00	BML
Diquat	ug/l	1 U	EPA 549.2	1	09/27/04 18:29	09/27/04 10:00	BML
Total Haloacetic Acids Analyses							
Date Extracted		09/28/04	EPA 552.2			09/28/04 09:15	ARM
Monochloroacetic Acid	ug/l	1 U	EPA 552.2	1	09/30/04 20:24	09/28/04 09:15	BTJ
Monobromoacetic Acid	ug/l	1 U	EPA 552.2	1	09/30/04 20:24	09/28/04 09:15	BTJ
Dichloroacetic Acid	ug/l	1 U	EPA 552.2	1	09/30/04 20:24	09/28/04 09:15	BTJ
Trichloroacetic Acid	ug/l	1 U	EPA 552.2	1	09/30/04 20:24	09/28/04 09:15	BTJ
Dibromoacetic Acid	ug/l	1 U	EPA 552.2	1	09/30/04 20:24	09/28/04 09:15	BTJ
Total Haloacetic Acids	ug/l	1 U	EPA 552.2	1	09/30/04 20:24	09/28/04 09:15	BTJ
Pesticide Analyses (Primary DW)							
Date Extracted		09/28/04	EPA 504.1			09/28/04 13:30	BML
Dibromochloropropane	ug/l	0.005 U	EPA 504.1	0.005	09/29/04 02:10	09/28/04 13:30	DB
Ethylene Dibromide (EDB)	ug/l	0.005 U	EPA 504.1	0.005	09/29/04 02:10	09/28/04 13:30	DB

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

Sanders Laboratories
1050 Endeavor Court
Nokomis, FL 34275

October 7, 2004
Project No: 45438

Laboratory Report

Project Name	**N0409360**
Sample Description	**N0409360-011**
Matrix	**Groundwater**
SAL Sample Number	**45438.01**
Date/Time Collected	**09/22/04 13:00**
Date/Time Received	**09/23/04 14:30**

Parameters	Units	Results	Method	Detection Limit	Date/Time Analyzed	Date/Time Prep	Analyst
Carbamate Pesticides (Primary DW)							
Carbofuran	ug/l	0.5 U	EPA 531.1	0.5	09/29/04 01:24		DF
Oxamyl (Vydate)	ug/l	0.5 U	EPA 531.1	0.5	09/29/04 01:24		DF
Pesticide Analyses (Primary DW)							
Glyphosate	ug/l	10 U	EPA 547	10	09/24/04 17:27		BML
Pesticide Analyses (Primary DW)							
Date Extracted		09/24/04	EPA 548.1			09/24/04 14:30	DB
Endothall	ug/l	20 U	EPA 548.1	20	09/30/04 00:04	09/24/04 14:30	DB
Inorganics							
Cyanide	mg/l	0.005 U	SM 4500 CN	0.005	09/30/04 16:00	09/30/04 15:00	MAM
Fluoride	mg/l	0.20	EPA 300.0	0.003	09/29/04 01:17		DF
Hydrogen Sulfide (Unionized)	mg/l	0.20	EPA 376.1	0.1	10/04/04 08:10	09/29/04 15:00	AJH
Foaming Agents	mg/l	0.05 U	SM 5540 C	0.05	09/24/04 11:16		WMC
Total Organic Carbon	mg/l	16	EPA 415.1	1	09/29/04 18:42		MAM
Metals							
Boron	mg/l	0.064	EPA 200.7	0.05	09/27/04 09:20	09/24/04 12:10	LLS
Strontium	mg/l	0.21	EPA 6010	0.01	09/27/04 09:20	09/24/04 12:10	LLS
Radiochemistry							
Gross Alpha (Incl. Uranium)	pCi/l	3.7±0.8	EPA 900.0	1.3	09/30/04 06:52	09/28/04 08:00	AWW
Radium-226	pCi/l	0.5±0.07	EPA 903.1	0.1	10/03/04 14:20	09/25/04 10:50	AWW
Radium-228	pCi/l	2.8±0.2	EPA RA-05	0.9	10/06/04 16:30	10/06/04 13:00	AWW

SOUTHERN ANALYTICAL LABORATORIES, INC.
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Sanders Laboratories
1050 Endeavor Court
Nokomis, FL 34275

October 7, 2004
Project No: 45438

Laboratory Report

Footnotes

*	Test results presented in this report meet all the requirements of the NELAC standards.
**	A statement of estimated uncertainty of test results is available upon request.
U	Analyte was not detected; indicated concentration is method detection limit.

Sanders Laboratories INC.
Environmental Testing Services

CHAIN-OF-CUSTODY RECORD

PROJECT # N0409360

Page 1 of 2

Client CH2M Hill

Address

Phone Fax

Report To:

Bill To:

P.O. # 8006216

Project Name East Immokalee / Ave Maria

Project Location:

Sample Supply: GW (62-550 DW Stds)

Customer Type:

Field Report #:

Kit #

REQUESTED DUE DATE: 9/29/04

Sampled By (PRINT) Noah Olenych

Sampler Signature Noah Olenych

Bottle #	SAMPLE DESCRIPTION	Sample DATE	Sample TIME	Sample TYPE	PRESERVATIVES 4°C	UNPRESERVED	H_2SO_4	HNO_3	HCL	ANALYSES REQUEST: TDS, Cl, SO4, PH, Color	Odor	NO2, NO3	P+S Metals, Ca, Mg, K	TC	Fe, Manganese (Dissolved)	NH3, TP	Alk, OP, Silica	Sample ID #
	P-3	9-22-04	1300	G						X								-01A
											X							-01B
												X						-01C
													X					-01D
														X				-01E
															X			-01F
																X		-01G
																	X	-01H

Bottle Lot #	OUT / DATE	SHIPMENT METHOD RETURNED / DATE	VIA	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
					9-22-04	1515	ACreager	9/22/04	1515

COMMENTS:

COOLER #

COOLER SEAL INTACT Yes No

1050 Endeavor Ct., Nokomis, FL 34275-3623 • (941)488-8103 • FAX 484-6774 • 16880 Gator Road, Fort Myers, FL 33912 • (239) 590-0337 • FAX (239) 590-0536

Sanders Laboratories INC.
Environmental Testing Services

CHAIN-OF-CUSTODY RECORD

PROJECT # N0409360

Client CH2M Hill

Address

Phone Fax

Report To:

Bill To:

P.O. #

Project Name East Tennekee / Ave Maria

Project Location:

Sample Supply: GW (62-550 DW Stds)

Customer Type:

Field Report #:

Kit #

REQUESTED DUE DATE: 9/29/04

Sampled By (PRINT) Noah Olenych

Sampler Signature

Bottle #	SAMPLE DESCRIPTION	Sample DATE	Sample TIME	Sample TYPE	PRESERVATIVES 4°C	UNPRESERVED	H_2SO_4	HNO_3	HCL	ANALYSES REQUEST Cl-, MBAS, F-	VOC, TTHM	Pest/PCB	Sr, Boron	H2S	TOC, HAA5	GA, Rads 226/228	Sample ID #
	P-3	92204	1300	G						X	X	X	X	X	X	X	-01I

Bottle Lot #	OUT / DATE	SHIPMENT METHOD RETURNED / DATE	VIA	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
				Noah Olenych	9-22-04	1515	ACreager	9/22/04	1515

COMMENTS:

COOLER #

COOLER SEAL INTACT Yes No

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