



WELL CONSTRUCTION & TESTING REPORT

FOR SURFICIAL AQUIFER PRODUCTION
WELLS NPB-5C, NPB-6B, BR-22B & BR-25B

SEACOAST UTILITY AUTHORITY

Prepared for:

Seacoast Utility Authority

and

Holtz Consulting Engineers, Inc.
1605 S US Hwy. 1, Suite 203
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December 2013

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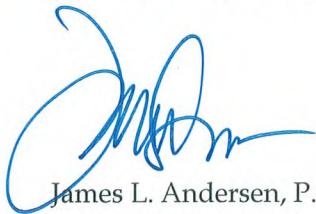
RE: *Seacoast Utility Authority, Surficial Aquifer Replacement Production wells NPB-5C, NPB-6B, BR-22B, and BR-25B Well Completion Report*

Dear David,

We are pleased to submit five (5) copies of the Well Completion Report for Seacoast Utility Authority, Surficial aquifer production wells NPB-5C, NPB-6B, BR-22B, and BR-25B well completion report. This report summarizes construction, development and testing of four (4) Surficial aquifer replacement production wells, constructed for the Seacoast Utility Authority Hood Road Water Treatment Plant.

If we can do anything further, please call us.

Sincerely,
JLA Geosciences, Inc.



James L. Andersen, P.G.
Principal Hydrogeologist

JLA/jla
Encls.

WELL COMPLETION REPORT

SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELLS
NPB-5C, NPB-6B, BR-22B, & BR-25B

PALM BEACH GARDENS, FLORIDA

Prepared for:

Seacoast Utility Authority


and

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Jupiter, Florida 33477

December 2013

Prepared by:

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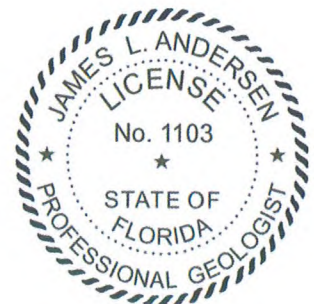


TABLE OF CONTENTS

LETTER OF TRANSMITTAL i

TABLE OF CONTENTS ii

LIST OF FIGURES..... iii

LIST OF TABLES..... iv

LIST OF APPENDICES..... iv

EXECUTIVE SUMMARY..... 1

SECTION 1.0 INTRODUCTION.....4

SECTION 2.0 WELL CONSTRUCTION AND TESTING.....5

 2.1 Pilot Hole Drilling6

 2.1.1 Geophysical Logging7

 2.1.2 Test Well Construction.....7

 2.2 Well Construction9

 2.2.1 30-inch Surface Casing Installation.....9

 2.2.2 24-inch Intermediate Casing Installation 10

 2.2.3 Completion Interval Drilling 11

 2.2.4 16-inch Screen and Casing Installation..... 11

 2.3 Well Development 13

 2.3.1 Airlift Development..... 13

 2.3.2 Borehole Jetting Development..... 13

 2.3.3 Pump Development 14

 2.4 Step Drawdown Test 14

 2.5 Video Logging 15

SECTION 3.0 HYDROGEOLOGY 16

SECTION 4.0 CONCLUSIONS AND RECOMMENDATIONS 18

 4.1 Conclusions 18

 4.2 Recommendations..... 20

SECTION 5.0 REFERENCES 22

LIST OF FIGURES

FIGURE 1	PROJECT SITE LOCATION MAP
FIGURE 2	PRODUCTION WELL NPB-5C, NPB-6B, BR-22B, & BR-25B AS-BUILT DIAGRAM
FIGURE 3	PRODUCTION WELL NPB-5C, STEP DRAWDOWN TEST WATER LEVEL PLOT
FIGURE 4	PRODUCTION WELL NPB-6B, STEP DRAWDOWN TEST WATER LEVEL PLOT
FIGURE 5	PRODUCTION WELL BR-22B, STEP DRAWDOWN TEST WATER LEVEL PLOT
FIGURE 6	PRODUCTION WELL BR-25B, STEP DRAWDOWN TEST WATER LEVEL PLOT
FIGURE 7	PRODUCTION WELL NPB-5C, STEP DRAWDOWN TEST SPECIFIC CAPACITY VS. PUMPING RATE PLOT
FIGURE 8	PRODUCTION WELL NPB-6B, STEP DRAWDOWN TEST SPECIFIC CAPACITY VS. PUMPING RATE PLOT
FIGURE 9	PRODUCTION WELL BR-22B, STEP DRAWDOWN TEST SPECIFIC CAPACITY VS. PUMPING RATE PLOT
FIGURE 10	PRODUCTION WELLS BR-25B, STEP DRAWDOWN TEST SPECIFIC CAPACITY VS. PUMPING RATE PLOT
FIGURE 11	NPB-5C, GENERALIZED HYDROSTRATIGRAPHIC SECTION
FIGURE 12	NPB-6B, GENERALIZED HYDROSTRATIGRAPHIC SECTION & TEST WELL DATA
FIGURE 13	BR-22B, GENERALIZED HYDROSTRATIGRAPHIC SECTION
FIGURE 14	BR-25B, GENERALIZED HYDROSTRATIGRAPHIC SECTION & TEST WELL DATA

LIST OF TABLES

TABLE 1	PRODUCTION WELLS NPB-5C, NPB-6B, BR-22B, BR-25B, WELL CONSTRUCTION DETAILS
TABLE 2	NPB-6B TEST WELL WATER QUALITY AND PERFORMANCE DATA
TABLE 3	BR-25B TEST WELL WATER QUALITY AND PERFORMANCE DATA
TABLE 4	PRODUCTION WELL NPB-5C, STEP DRAWDOWN TEST SUMMARY
TABLE 5	PRODUCTION WELL NPB-6B, STEP DRAWDOWN TEST SUMMARY
TABLE 6	PRODUCTION WELL BR-22B, STEP DRAWDOWN TEST SUMMARY
TABLE 7	PRODUCTION WELL BR-25B, STEP DRAWDOWN TEST SUMMARY
TABLE 8	PRODUCTION WELLS NPB-5C, NPB-6B, BR-22B, BR-25B, SUMMARY OF LABORATORY ANALYSIS

LIST OF APPENDICES

A.	DRILLER'S WELL COMPLETION REPORT AND CONTRACTOR SUBMITTALS
B.	LITHOLOGIC LOGS
C.	GEOPHYSICAL & WELL VIDEO LOGS
D.	GRAVEL PACK DATA
E.	LABORATORY REPORTS
F.	PROJECT PHOTOGRAPHS & ELECTRONIC COPY OF WELL COMPLETION REPORT

EXECUTIVE SUMMARY

Between September 2011 and November 2012, JLA Geosciences, Inc. (JLA) provided hydrogeologic consulting services for the construction of four (4) Surficial aquifer production wells for Seacoast Utilities Authority (SUA) and Holtz Consulting Engineers, Inc. (HCE). Production Wells NPB-5C, NPB-6B, BR-22B, and BR-25B will serve as replacement Surficial aquifer production wells to supply the new SUA, nano-filtration membrane water treatment plant at the Hood Road Water Treatment Plant site (HRWTP), located in Palm Beach Gardens, Florida. Advanced Well Drilling (AWD) of Palm Bay, Florida was subcontracted by TLC Diversified, Inc. (TLC) under contract to SUA to construct the production wells.

The final completion interval of each replacement well varied depending on site specific conditions and well performance. Each replacement well was completed as follows:

Well	NPB-5C	NPB-6B	BR-22B	BR-25B
Stainless Steel Screen Interval (feet BLS) <i>16-inch diameter, 0.090-inch slot</i>	136 - 176	135 - 170	131 - 169	119 - 164

BLS: below land surface

A step drawdown (SDD) test was performed at each replacement production well following completion of well development. SDD testing included four (4) or five (5) steps at two (2) hours per step. Rates varied from well to well, but ranged between 195 gallons per minute (GPM) and 780 GPM. Specific capacities at the design pumping rate during the step drawdown tests are summarized below:

Pumping Rate (gpm)	Specific Capacity (gpm/ft)			
	NPB-5C	NPB-6B	BR-22B	BR-25B
300	15.3	15.8	10.1	17.2
400	15.0	15.5	9.8	17.0
500	14.6	15.2	9.4	16.2

gpm: gallons per minute

gpm/ft: gallons per minute per foot of drawdown

Water quality measured during SDD testing at the design rates (~300 GPM) are as follows:

Parameter	NPB-5C	NPB-6B	BR-22B	BR-25B
Chloride* (mg/L)	46.3	48.1	81.3	40.3
Total Dissolved Solids* (mg/L)	183	346	442	330
Sand Concentration** (ppm)	0.3	<0.1	<0.1	0.4
Silt Density Index**	2.5	2.2	2.7	2.4

*Laboratory Analysis during final well video

**Field Analysis

Recommended Silt Density Index (SDI) values for Nano Membrane facilities are 3.0 units with ideal values less than 1.0. All wells met the SDI Nano criteria at the maximum design pumping rates.

Laboratory testing results of the water quality analysis indicated that the formation water meets Florida Department of Environmental Protection (FDEP) requirements for primary and secondary drinking water standards with the exception of apparent color and odor. Exceedance of color and odor in groundwater in south Florida is common.

Based on drilling and testing results, JLA recommends the following:

Water quality monitoring of the production wells should include, at a minimum the following parameters (frequency of measurement should be monthly):

- Water Quality: specific conductance, chloride concentration and sand content.
- Well Performance: static water levels, pumping water levels, pumping rates, and specific capacity calculation.
- Water level and water quality monitoring must include all applicable requirements as determined by the SUA, SFWMD Consumptive Use Permit 50-00365-W (CUP).

	Monthly	Annually
Well Capacity		
Pumping Rate	X	X
Static Water Level	X	X
Pumping Water Level	X	X
Well Construction		
Depth to top of Gravel Pack	X	X
Water Quality*		
Specific Conductance	X	X
Total Dissolved Solids	X	X
Chloride	X	X
Sand Content	X	X
Silt Density Index	X	X

*Water level and water quality monitoring must include all applicable requirements as determined by the SFWMD CUP.

For well NPB-5C, NPB-6B, BR-22B, and BR-25B performed regular measurements of depth to the top of the gravel pack and replenish if the level drops lower than 20 feet above the top of screen ranging between 119-feet and 131-feet below land surface (BLS). Gravel should not be filled above pump setting depth. If additional gravel is required, a sieve analysis of new gravel should be performed and the gravel should be evaluated to confirm the replenishment gravel is the correct size. Any replenishment gravel should be approximately the same as the grain size distribution as reported in the gravel pack analysis included with this report. A detailed log of dates and quantities of gravel addition to each well should be maintained.

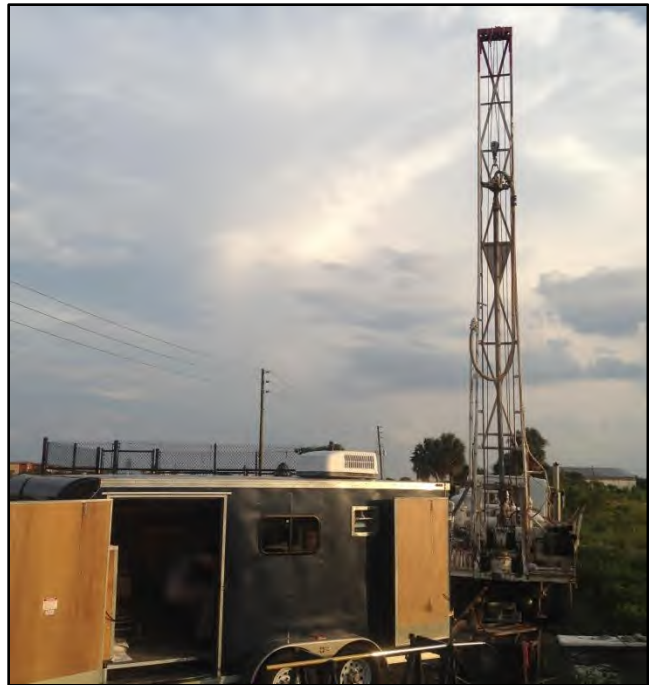
Maintenance personnel should implement a program of continuous water level monitoring. Monitoring should include monthly measurements of pumping rate, static and pumping water levels in each production well. Data should be recorded with dates, times of measurement, and personnel performing measurements.

All data should be plotted electronically in time series format for periodic well performance evaluation. Consistently low pumping water levels or a specific capacity loss of 20% or greater than reported in this report may indicate the need for evaluation and potential well rehabilitation.

1.0 INTRODUCTION

JLA was contracted by Holtz Consulting Engineers, Inc. (Holtz) to provide hydrogeologic consulting services associated with the construction of four (4) Surficial aquifer production wells, identified as NPB-5C, NPB-6B, BR-22B, and BR-25B to provide public water supply for the Seacoast Utility Authority (SUA), Hood Road Water Treatment Plant (HRWTP) located at 4200 Hood Road, Palm Beach Gardens, Florida. Copies of the Driller Well Completion Reports are included in Appendix A.

JLA provided the following services during construction of the HRWTP production wells: providing field construction observation during pilot hole and test well drilling, geophysical and video logging, water quality and test well sampling, measurement and testing services; interpretation of hydrogeologic, water quality and geophysical data; and providing recommendations as to the depths of boreholes, well casings, and screened completion intervals.



Advanced Well Drilling, Inc. (AWD) of Palm Bay, Florida was subcontracted by TLC Diversified, Inc. (TLC), under contract to SUA to construct the production wells. AWD complied with the standards of the American Water Works Association for Deep Wells (AWWA A100-06), as referenced in the specifications.

Construction of the production wells began in May, 2012 and was completed in February, 2013. Production wells NPB-5C, NPB-6B, BR-22B, and BR-25B were

completed with a 16-inch diameter, 0.090-inch slot size, stainless steel well screen, with 16-inch diameter SDR17 PVC riser casing.

The site location and well location are shown on [Figure 1](#).

Figure 1, Site Location Map



2.0 WELL CONSTRUCTION AND TESTING

JLA performed onsite hydrogeologic observation during rotary drilling of pilot holes, geophysical logging, casing installations, casing grouting, reverse air drilling of completion intervals, development, and pump testing.

The well construction details for the wells are provided in [Table 1](#).

Table 1, Well Construction Details

	NPB-5C	NPB-6B	BR-22B	BR-25B
Total Depth (feet BLS)	176	170	169	164
Surface Casing Depth (feet BLS) <i>30-inch diameter steel 0.375-inch wall thickness</i>	50	57	69	71
Well Casing Depth (feet BLS) <i>24-inch diameter Schedule 40 PVC</i>	136	135	131	119
Nominal Borehole Diameter (inches)	22	22	22	22
Riser Casing Depth (feet BLS) <i>16-inch diameter SDR17 PVC</i>	136	135	131	119
Stainless Steel Screen Interval (feet BLS) <i>16-inch diameter, 0.090-inch slot</i>	136 - 176	135 - 170	131 - 169	119 - 164
Gravel Pack Depth (feet BLS) <i>*Edgar Minerals 4 x 9 Lake Wales 3 x 10</i>	*115	110	100	97

feet BLS - feet below land surface

2.1 Pilot Hole Drilling

Prior to production well construction, nominal 8-inch diameter exploratory pilot holes were drilled using the mud rotary method to obtain lithologic data at all four (4) well sites. Pilot hole drilling started on May 9, 2012 at well BR-25B and was completed on June 18, 2012 at well NPB-5C. The BR-22B and BR-25B pilot holes were drilled to a depth of 200 feet-BLS, and the NPB-5C and NPB-6B pilot holes were drilled to a depth of 210 feet BLS. Lithologic samples were collected every five (5) feet during pilot borehole drilling in order to evaluate the geologic character of the aquifer with depth. A

copy of the lithologic log compiled from the collected samples is included as Appendix B. Upon completion of pilot borehole drilling the drilling fluid was circulated to clear the hole of cuttings in preparation for geophysical logging.

2.1.1 Geophysical Logging

Geophysical logging was conducted by RM Baker, LLC of Orlando, FL (RMB) on May 10, 2012 at BR-25B, on May 29, 2012 at NPB-6B and BR-22B, and on June 12, 2012 at NPB-5C. Geophysical logging included caliper, resistivity, dual induction, and gamma ray logs. Electronic copies of the geophysical logs are included in Appendix C. Results of the geophysical logging and analysis of the lithologic samples from the 8-inch borehole were used to select appropriate intervals for water quality and performance testing in the test wells and final casing setting depths for the four (4) replacement production wells.

2.1.2 Test Well Construction

Upon completion of geophysical logging, test well construction began at sites NPB-6B and BR-25B on May 14, 2012. Test wells were constructed to obtain water quality and aquifer performance data with depth for replacement well design. Interval testing at various depths allowed the JLA hydrogeologist to determine the optimum completion interval for the production zone of each replacement well based on water quality and



quantity data. No test well was constructed at the NPB-5C and BR-22B wells site due to availability of data from other test wells near the site.

Test wells were constructed using 2-inch diameter steel casing attached to a 5-foot section of 0.040 inch slot stainless steel well screen. The test well was installed to the deepest test interval selected for each respective test well and the annular space between the casing/screen and the

8-inch borehole was then filled with 6/14 gravel pack to a depth of approximately 50 feet above the shallowest test interval. The selected screened interval was then developed by airlift development and treated with BMR (or its equivalent) to reduce the amount of mud ‘cake’ buildup on the walls of the borehole, in order for the production capacity of the zone to be more accurately determined. Development continued until turbidity and sand content were consistently low.

Sampling and testing at various depths in the test well was accomplished by setting the casing and screen to the total depth of the well, developing and testing the first zone, then raising the screen and casing string to the next selected depth and repeating the process. This was performed for six (6) zones in each test well. Testing for each zone included field water quality sampling and performance testing to determine specific capacity. Measurement of pumping rate (Q) and drawdown in the well (dh), at each depth interval, allowed for calculation of the specific capacity (Cs) of the zone to be approximated using the formula $Cs = Q/dh$ (Freeze and Cherry, 1979). The following depth intervals (in feet below land surface (feet BLS) were selected for sampling and testing based on the results of pilot hole drilling and geophysical logging:

Well Interval Depth (feet BLS*)	Specific Capacity (gpm/ft)	
	NPB-6B	BR-25B
Interval #1	110-115	100-105
Interval #2	135-140	120-125
Interval #3	145-150	140-145
Interval #4	155-160	150-155
Interval #5	165-170	160-165
Interval #6	178-183	172-176

* Feet BLS- Feet below land surface

Following test interval development a 1-inch diameter drop tubing was installed in the test well and pumped with a centrifugal pump in order to test the interval. Testing of each selected sampling interval involved pumping the zone while measuring both water quality and drawdown. Performance testing was conducted by pumping the well with a centrifugal pump for one to two hours at each test interval depth, and comparing the

pumping water level to the static water level. Tables 2 and 3 provide summaries of the water quality data and calculated values for specific capacity from the pump tests conducted during the test well interval sampling at sites NPB-6B and BR-25B, respectively.

Measured field water quality parameters included temperature, specific conductance, total dissolved solids, turbidity, pH, hydrogen sulfide, total iron, soluble iron and chloride. Chloride analysis was performed by JLA using a Hach titrator and silver nitrate titrant.

Following completion of testing at each selected depth interval, the casing and screen were raised to the next selected depth, gravel pack was added as needed, and the process was repeated. When all selected intervals were tested, the casing and screen were removed and the borehole was cleaned out to total depth and abandoned using neat cement grout.

Upon completion of each test well, the water quality, hydrogeologic and geophysical data were analyzed and a completion interval and construction details were determined for the replacement production wells.

2.2 Well Construction

2.2.1 30-inch Surface Casing Installation

By contract, AWD was responsible for all aspects of the production well construction and performed all of the construction elements. Surface casing was installed using two (2) different methodologies. At well NPB-5C, surface casing installation began with drilling of a nominal 40-inch diameter borehole using the mud rotary method. Following completion of 40-inch diameter borehole drilling, AWD installed 30-inch diameter, 0.375-inch wall thick carbon steel pipe with factory-beveled, butt welded joints, steel surface casing to a depth of 50-feet BLSs as outlined in Table 1. Steel centering guides were

welded to the outside of the casing 5 feet above the casing base and at 30-foot intervals up to land surface. The guides position the casing in the center of the borehole to help ensure more uniform grouting of the casing. Upon completion of the casing installation, the annular space was pressure grouted to land surface in a single lift using API Class B Portland neat cement. The cement was allowed 48 hours to cure before drilling was resumed.

Table 1 (excerpt), 30-inch diameter Surface Casing Depth

	NPB-5C	NPB-6B	BR-22B	BR-25B
Surface Casing Depth (feet BLS) <i>30-inch dia. steel, 0.375-inch wall thickness</i>	50	57	69	71

At the NPB-6B, BR-22B, and BR-25B sites AWD installed the 30 inch diameter surface casing using the vibration method to a depths between 57-feet BLS and 71-feet BLS. Vibrating of the 30 inch diameter surface casing was performed using a hydraulically powered, American Piledriving Equipment, Inc. (APE) vibratory hammer. The 30 inch surface casing was vibrated until refusal by competent formation material. JLA personnel provided oversight during the vibrating, drilling, installation and grouting of each production well surface casing.

2.2.2 24-inch Diameter Casing Installation

Following installation and cementing of the surface casing, a nominal 28-inch diameter borehole was drilled using the mud rotary method. Lithologic samples were collected every five (5) feet to evaluate encountered formation. Upon completion of borehole drilling, drilling fluid was circulated to clear the hole of cuttings. Based on the analysis of the lithologic samples (drill cuttings) from the pilot hole, drilling penetration, and geophysical logs, JLA recommended casing setting depths between 119-feet BLS and 136-feet BLS for the 24-inch diameter PVC casing strings. The well construction details for each site are presented in Table 1.

Table 1 (excerpt), 24-inch diameter Well Casing Depth

	NPB-5C	NPB-6B	BR-22B	BR-25B
Intermediate Casing Depth (feet BLS) <i>24-inch diameter schedule 40 PVC</i>	136	135	131	119

Centering guides were strapped to the outside of the casing beginning at 5 feet from the base of the casing and at subsequent 30-foot intervals. The guides position the casing in the center of the borehole to help ensure more uniform grouting of the casing. Upon completion of the casing installation, the annular space was grouted to land surface using API Class B Portland neat cement. The cement was allowed 48 hours to cure before drilling was resumed.

2.2.3 Completion Interval Drilling

After grouting the 24-inch diameter casing string, drilling operations resumed with the drilling of a nominal 22-inch diameter borehole using the using the mud rotary method. A JLA hydrogeologist was on site during drilling of the completion interval to collect lithologic samples. Drilling continued to the total depth of each production well. Following completion of 22-inch diameter borehole drilling, the borehole was circulated to facilitate installation of the final production well screen and riser casing.

2.2.4 16-inch Diameter Well Screen and Riser Casing Installation

Final casing string consisted of 16-inch outside diameter CertainTeed, Certa-Lok, lock coupling SDR17 PVC riser casing and Johnson Screens 16-inch diameter stainless steel, continuous slot 0.090-inch slot size screen attached by a PVC coupling was installed in each well. The primary objective in selecting the screened interval was to enable the wells, when completed, to efficiently produce the specified quantity of water at the design withdrawal rate while obtaining the best available water quality. Based on results of drilling and geophysical logging the final screened interval selected for the 16-inch diameter PVC riser casing and 16-inch well screen were as follows:

Table 1 (excerpt), 16-inch diameter Well Screen and Riser Interval

	NPB-5C	NPB-6B	BR-22B	BR-25B
Riser Casing Depth (feet BLS) <i>16-inch diameter SDR17 PVC</i>	136	135	131	119
Stainless Steel Screen Interval (feet BLS) <i>16-inch diameter, 0.090-inch slot</i>	136 - 176	135 - 170	131 - 169	119 - 164

Stainless steel centralizers were strapped to the PVC casing and stainless steel screen at the top and bottom of the well screen and every 30 feet beginning above the well screen. Following installation of PVC riser casing and stainless steel screen, the annulus between the screen completion interval borehole was gravel packed via the tremmie method from the base of the screen to a depth at least 20 feet above the top of the well screen. BMR was installed with the gravel pack to reduce the amount of mud ‘cake’ buildup on the walls of the borehole in the completion interval. Two (2) different gravel packs were used during this project. The Lake Wales (LW) 3x10 gravel was used in wells NPB-6B, BR-22B and BR25B and the Edgar Minerals (EM) 4x9 gravel was used in well NPB-5C.

A grain size analysis summary and a grain size distribution graph of both the LW 3x10 and EM 4x9 gravels are presented in [Appendix D](#).

2.3 Well Development

2.3.1 Airlift Development

Following completion of well riser casing and screen installation, the borehole was developed. The purpose of the development process is to remove drilling mud and fine sediment from the gravel pack and adjacent formation. Removal of the fines and residual drilling fluid acts to maximize overall well efficiency, increase well life, and minimize suspended solid content in the raw water. Drilling fluid was removed from the borehole initially using compressed air lift. Compressed air was forced into the well above the base of the casing to remove drilling fluid and stabilize the gravel pack. The compressed air flow rate was obtained with a 750 cubic feet per minute (CFM) compressor. The top of the gravel pack was continuously monitored and extra gravel was added to maintain its original elevation, 20-feet above the top of the screen. Formation water generated during development was discharged into and settled in a bermed area on the ground adjacent to the well at all four sites.

2.3.2 Borehole Jetting Development

The borehole jetting phase of development was designed to deliver a high velocity of water directly into the screen with the use of a rotating jetting tool. Jetting was performed on each well following screen installation. The jetting tool consisting of four (4), 1-inch diameter, opposing jets spaced 90 degrees apart, was lowered to the screened interval of the well. Using a transfer pump, approximately 500 gpm of chlorinated raw water from the SUA raw water main was delivered through the four (4) jet development tool, imparting an exit velocity of approximately 50 feet per second. Formation water is discharged from the well during the jetting process to remove jet-dislodged sediment from the well bore. As with airlift development, formation discharge water generated during jetting was discharged and settled on the. This process was continued as the jetting tool was slowly rotated and passed up and down through the screened interval from the base of 16-inch diameter riser casing to the well total depth.

Specific capacity of the wells were measured daily during development to evaluate progress by improvement in well performance. Additionally, the discharge water was monitored for development solids and turbidity throughout jetting. Once the gravel pack, development solids and turbidity had stabilized to relatively low levels, jetting was discontinued.

2.3.3 Pump Development

The pump development protocol called for steady pumping of the well until the discharge water was visibly free of solids and turbidity. The maximum rate of pump development ranged from 1,000 gpm to over 2,000 gpm. Following the steady pumping period, the well was pumped intermittently with surge and rest periods. Development progress was measured by performing Rossum sand testing, silt density index (SDI) testing, and specific capacity testing of the raw water. Development was considered complete when SDI and Rossum sand testing results consistently met criteria for membrane plants at the design pumping rate for each well.

A combined total of 1,201 hours of airlift, jetting, and pump development was performed on the production wells.

Total Well Development Hours

Well	NPB-5C	NPB-6B	BR-22B	BR-25B	TOTAL
Development Hours	336	310	345	210	1201

2.4 Step Drawdown Testing

Following completion of well development, step drawdown testing was performed using the same pump and discharge setup used for the development. The step drawdown test was completed to assess well yield and anticipated drawdown. The test results

were also used to measure specific capacity values for each well at increasing pumping rates.

The flow rate during the test was measured with the use of an in-line flow meter that was calibrated just prior to the start of the project. Prior to starting the test, the static water level was measured with the use of an electronic water level tape and verified with the use of an electronic data logger.

Four (4) or five (5) 120-minute duration steps were pumped at rates between 195 gpm and 780 gpm. Pumping water levels were measured in the well with an electronic water level data logger and verified with manual water level measurements. Field water quality samples were collected during each step to measure temperature, specific conductance, total dissolved solids, chloride, turbidity, SDI, sand concentration, hydrogen sulfide and total iron. Water level charts depicting water levels versus pumping rates are provided in Figures 3, 4, 5, and 6. Results of the step drawdown test, including specific capacity results, are provided in Tables 4, 5, 6, and 7. Charts depicting specific capacity with corresponding pumping rates are provided in Figures 7, 8, 9, and 10.

2.5 Video Logging

Following completion of well construction and testing, AWD performed a down-hole video log of each well. All well videos were performed under static and dynamic (pumping) conditions. The 16-inch PVC riser casing and 16-inch diameter stainless steel screen in each well appeared to be in good condition, with some minor sand on the ledges in the lower 5 feet of the screen. Some sand was visible on startup in well BR-22B; however, Rossum sand testing results consistently met criteria for membrane plants at the design maximum expected pumping rate for all wells. The gravel pack was visible behind the screen throughout the entire length of screen in all wells. Electronic copies of each well video are included in Appendix C.

During the video logging, laboratory sampling of the well was performed by AWD for primary and secondary drinking water standards in accordance with the project specifications. The results of this testing are presented in [Table 8](#) and in [Appendix E](#). Laboratory testing results of the water quality analysis indicated that the formation water meets Florida Department of Environmental Protection (FDEP) requirements for primary and secondary drinking water standards with the exception of the following parameters: Apparent Color (NPB-5C, NPB-6B, BR-22B, and BR-25B) and Threshold Odor Number (NPB-5C and BR-22B). Surficial aquifer groundwater in South Florida typically exceeds regulatory standards for color and odor.

3.0 HYDROGEOLOGY

Palm Beach County is underlain by two aquifer systems; the Surficial aquifer system (SAS) and the Floridan Aquifer system (FAS). The drilling phase of the project penetrated the SAS to a maximum depth of 210 feet. A JLA geologist was present during key phases of the drilling to collect and log the lithologic samples as the formation materials were encountered. Lithologic logs of each well are provided in [Appendix B](#). A hydrostratigraphic section showing the site lithologies, aquifer and formation names encountered during drilling at each site are provided as [Figures 11, 12, 13 and 14](#).

The surficial aquifer is the only fresh groundwater resource in mainland southeast Florida. Descending from land surface, the surficial aquifer system formations include the Pamlico Sand, Anastasia, Fort Thompson, and Tamiami formations (Reese and Wacker, 2007).

The veneer of sand covering most of south Florida, known as the Pamlico Sand, is present beneath the site, consisting of fine to medium grained loose quartz sand grains, loose detrital clay and shell. Sand extends to a depth of approximately 20 feet beneath the site where it becomes interbedded with sand and shell. The Anastasia Formation underlies the Pamlico and is commonly composed of coquina and mixtures of sand,

shell, unconsolidated layers of shell hash, sandy limestone and quartz sandstone (Lovejoy, 1992). Underlying the Anastasia is the Fort Thompson Formation, which consists of marine limestone, minor gastropod-rich freshwater limestone, quartz sandstone, and sandy limestone.

Encountered beneath the Fort Thompson Formation is the Tamiami Formation. The Tamiami Formation is typically divided into two members: the Pinecrest Sand Member and Ochopee Limestone Member. The Tamiami Formation consists of quartz sand, carbonate sands and shell, calcareous quartz-rich sandstones, sandy limestone, pelecypod-rich quartz sandstone and floatstone, and locally abundant phosphate grains. The formations encountered while drilling at the SUA North Palm Beach (NPB) and Burma Road (BR) wellfields include the Pamlico Sand, Anastasia Formation and both the Pinecrest Member and Ochopee Member of the Tamiami Formation.

The lithostratigraphic units that contain the most productive parts of the surficial aquifer system in Palm Beach County are the sandstone and limestone units of the Anastasia, Fort Thompson, and Tamiami Formations (Reese and Wacker, 2007). The surficial aquifer can be subdivided into 3 primary zones of permeability, or subaquifers, and are designated, from shallowest to deepest, as Zone 1, Zone 2, and Zone 3 (Reese and Wacker, 2007).

Zone 1 includes lithostratigraphic units above the Tamiami Formation, including the Anastasia and Fort Thompson Formations. Zone 1 comprises the water table aquifer and is found throughout Palm Beach County, except for inland eastern areas (Reese and Wacker, 2009). Presence of Zone 1 at the System 9 site could not be confirmed; however, if present would likely begin at the top of the Anastasia Formation, between 20 feet BLS and 30 feet BLS.

Zone 2 is composed of shelly, highly permeable, well cemented limestone and quartz-rich sandstones, primarily of the Pinecrest Sand Member of the Tamiami Formation. Zone 2 is the most transmissive of the three zones, however, presence and thickness of

this zone are variable and typically thickness decreases to 0 as it approaches the coast. Thickness and transmissivity of zone 2 is highest in inland eastern areas of Palm Beach County (Reese and Wacker, 2009). The production zone of the NPB and BR replacement wells are likely located in Zone 2 beginning at the top of the Pinecrest Member of the Tamiami Formation, located at between 120 feet BLS and 140 feet BLS.

Zone 3 is composed sandy lime rudstone or floatstone, quartz-rich sandstone and quartz or carbonate sands, primarily of the Ochopee Limestone member of the Tamiami Formation. Thickness of zone 3 is greatest in southeastern parts of the county. In areas where the semiconfining unit between zone 2 and zone 3 are indistinguishable, these zones can be mapped together as one productive zone (Reese and Wacker, 2009).

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

The following conclusions are made based on results of the drilling and testing conducted during well construction.

1. SAS Replacement Production Wells NPB-5C, NPB-6B, BR-22B, and BR-25B were constructed for Seacoast Utility Authority, Hood Road Water Treatment Plant between May, 2012 to February, 2013. Final completion intervals are as follows:

	NPB-5C	NPB-6B	BR-22B	BR-25B
Riser Casing Depth (feet BLS) <i>16-inch diameter SDR17 PVC</i>	136	135	131	119
Stainless Steel Screen Interval (feet BLS) <i>16-inch diameter, 0.090-inch slot</i>	136 - 176	135 - 170	131 - 169	119 - 164
Gravel Pack Depth (feet BLS) <i>*Edgar Minerals 4x9 Lake Wales 3x10</i>	115*	110	100	97

2. A step drawdown test was performed at each well following completion of well development. Step drawdown testing included four or five steps at two hours per step. Rates varied slightly from well to well, but were between 195 GPM and 780 GPM. Specific capacities (gpm/ft) at the design pumping rates during the step drawdown tests are as follows:

Pumping Rate (gpm)	Specific Capacity (gpm/ft)			
	NPB-5C	NPB-6B	BR-22B	BR-25B
300	15.3	15.8	10.1	17.2

3. Water quality measured during step drawdown testing at the design rates is as follows:

Parameter	NPB-5C	NPB-6B	BR-22B	BR-25B
Design Rate (gpm)	300	300	300	300
Chloride* (mg/L)	46.3	48.1	81.3	40.3
TDS* (mg/L)	183	346	442	330
Sand Conc.** (ppm)	0.3	<0.1	<0.1	0.4
SDI**	2.5	2.2	2.7	2.4

*Laboratory Analysis during Final Well Video

**Field Analysis

4. Recommended Silt Density Index (SDI) values for Nano Membrane facilities are 3.0 units with ideal values less than 1.0. SDI test results of raw water produced from the production wells met the SDI Nano criteria at SDI values less than 3.0 at their respective design rates.
5. Laboratory testing results of the water quality analysis indicated that the formation water meets Florida Department of Environmental Protection (FDEP) requirements for primary and secondary drinking water standards with the

exception of the following parameters: Apparent Color (NPB-5C, NPB-6B, BR-22B and BR-25B), Threshold Odor Number (BR-22B), and Iron (NPB-5C).

4.2 Recommendations

1. Performed regular measurements of depth to the top of the gravel pack and replenish if the level drops lower than 20 feet above the top of the well screened interval for wells NPB-5C, NPB-6B, BR-22B and BR-25B. Gravel should not be filled above the pump setting depth. If additional gravel is required, a sieve analysis of new gravel should be performed and the gravel should be evaluated to confirm the replenishment gravel is the correct size. Any replenishment gravel should be approximately the same as the grain size distribution as reported in the gravel pack analysis included with this report. A detailed log of dates and quantities of gravel addition to the well should be maintained.
2. Water quality monitoring in the production wells should include, at a minimum the following parameters (frequency of measurement should be monthly):
 - Water Quality: specific conductance, chloride concentration and sand content.
 - Well Performance: static water levels, pumping water levels, pumping rates, and specific capacity calculation.
 - Water level and water quality monitoring must include all applicable requirements stipulated in the SUA, SFWMD Consumptive Use Permit (CUP) 50-00365-W (Permit).

	Monthly	Annually
Well Capacity		
Pumping Rate	X	X
Static Water Level	X	X
Pumping Water Level	X	X
Well Construction		
Depth to top of Gravel Pack	X	X
Water Quality*		
Specific Conductance	X	X
Total Dissolved Solids	X	X
Chloride	X	X
Sand Content	X	X
Silt Density Index	X	X

*Water level and water quality monitoring must include all applicable requirements as determined by the SFWMD permit.

3. Data should be recorded with dates, times of measurement, and personnel performing measurements. All data should be plotted electronically in time series format for periodic well performance evaluation. All data should be plotted electronically in time series format for periodic well performance evaluation.
4. Maintenance personnel should implement a program of continued water level monitoring. Monitoring should include monthly measurements of both static and pumping water levels in each production well. Consistently low water levels or a specific capacity loss of 20% or greater than reported herein may indicate the need for evaluation and potential rehabilitation.

5.0 REFERENCES

Freeze, R.A., and J.A. Cherry. 1979. Groundwater. Prentice-Hall, Inc., Englewood, N.J. 604 p.

Lovejoy, D., 1992, Classic exposures of the Anastasia Formation in Martin and Palm Beach Counties, Florida, 31 p.

Reese, R.S., and Wacker, M.A., 2007, Hydrostratigraphic Framework and Selection and Correlation of Geophysical Log Markers in the Surficial Aquifer System, Palm Beach County, Florida: U.S. Geological Survey Scientific Investigations Map 2971, 2 sheets.

Reese, R.S., and Wacker, M.A., 2009, Hydrogeologic and Hydraulic Characterization of the Surficial Aquifer System, and Origin of High Salinity Groundwater, Palm Beach County, Florida: U.S. Geologic Survey Scientific Investigations Report 2009-5113, 83 p (appendixes on CD).

FIGURES

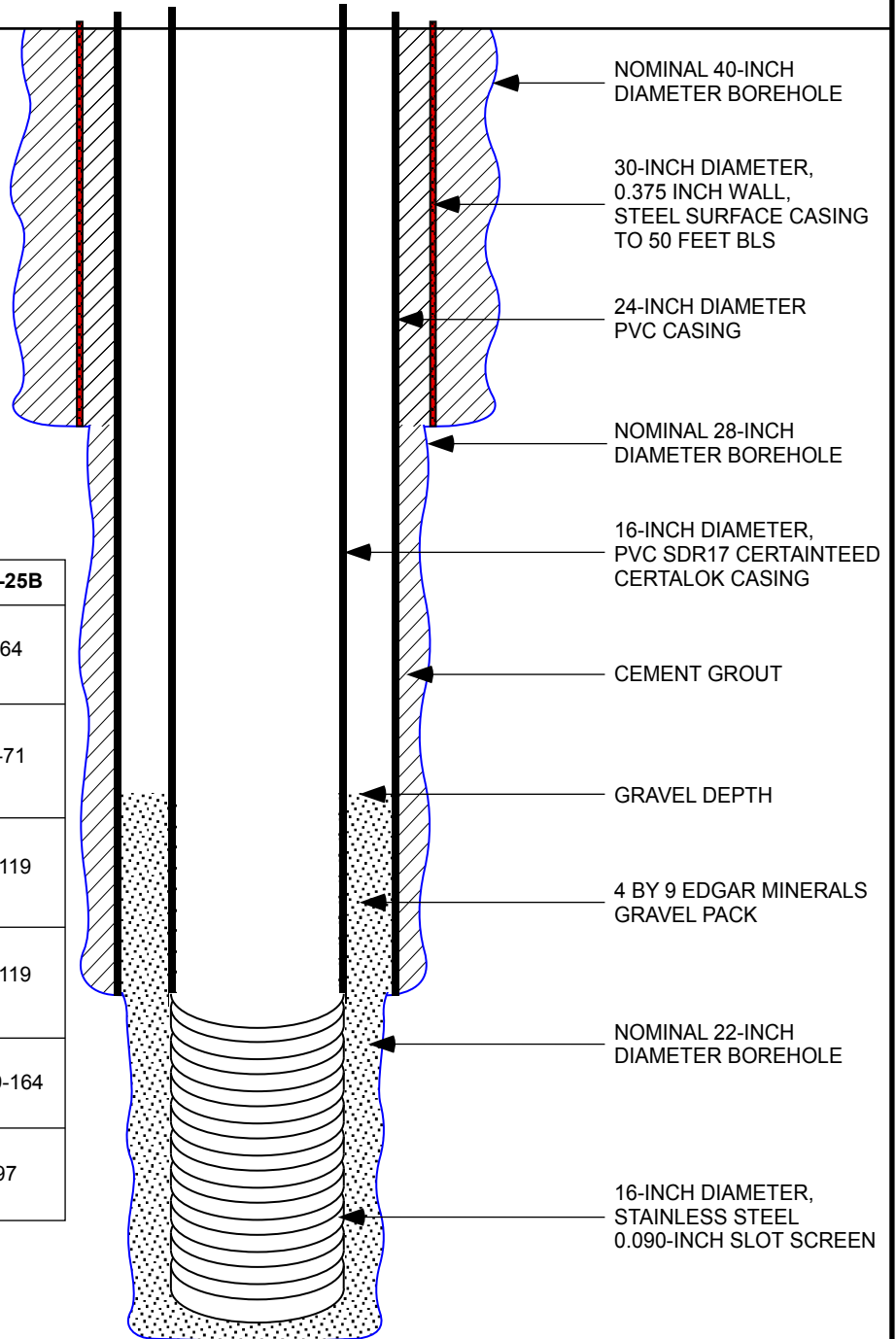


FIGURE TITLE:	SEACOAST UTILITY AUTHORITY		JLA Geosciences, Inc.
	SURFICIAL AQUIFER PRODUCTION WELLS NPB-5C, NPB-6B, BR-22B, & BR-25B		
	PROJECT SITE LOCATION MAP		
	DATE:	3/31/13	FIGURE NO:
	DRAWN BY:	JWF	1
	PROJECT NO:	10-034	

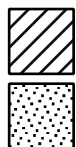
LAND SURFACE

PRODUCTION WELL CONSTRUCTION DETAILS

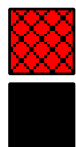
Well ID	NPB-5C	NPB-6B	BR-22A	BR-25B
Total Depth (ft. BLS)	176	170	169	164
30-IN. Steel Casing Depth (ft. BLS)	0-50	0-57	0-69	0-71
24-IN. PVC Casing Depth (ft. BLS)	0-136	0-135	0-131	0-119
Riser Casing Interval (ft. BLS)	0-136	0-135	0-131	0-119
Screen Interval (ft. BLS)	136-176	135-170	131-169	119-164
Gravel Depth (ft. BLS)	115	110	100	97



LEGEND:



CEMENT GROUT
GRAVEL PACK



STEEL WELL CASING
PVC WELL CASING



WELL SCREEN

PROJECT SITE: SEACOAST UTILITY AUTHORITY
PRODUCTION WELLS NPB-5C, NPB-6B, BR-22A, & BR-25B

JLA Geosciences, Inc.

DATE: 6/14/13 DRAWN BY: JWF

FIGURE TITLE: AS BUILT DIAGRAM WITH CONSTRUCTION DETAILS

PROJECT NO: 10-034

FIGURE NO: 2

FIGURE 3

SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELL NPB-5C
STEP DRAWDOWN TEST
WATER LEVEL CHART

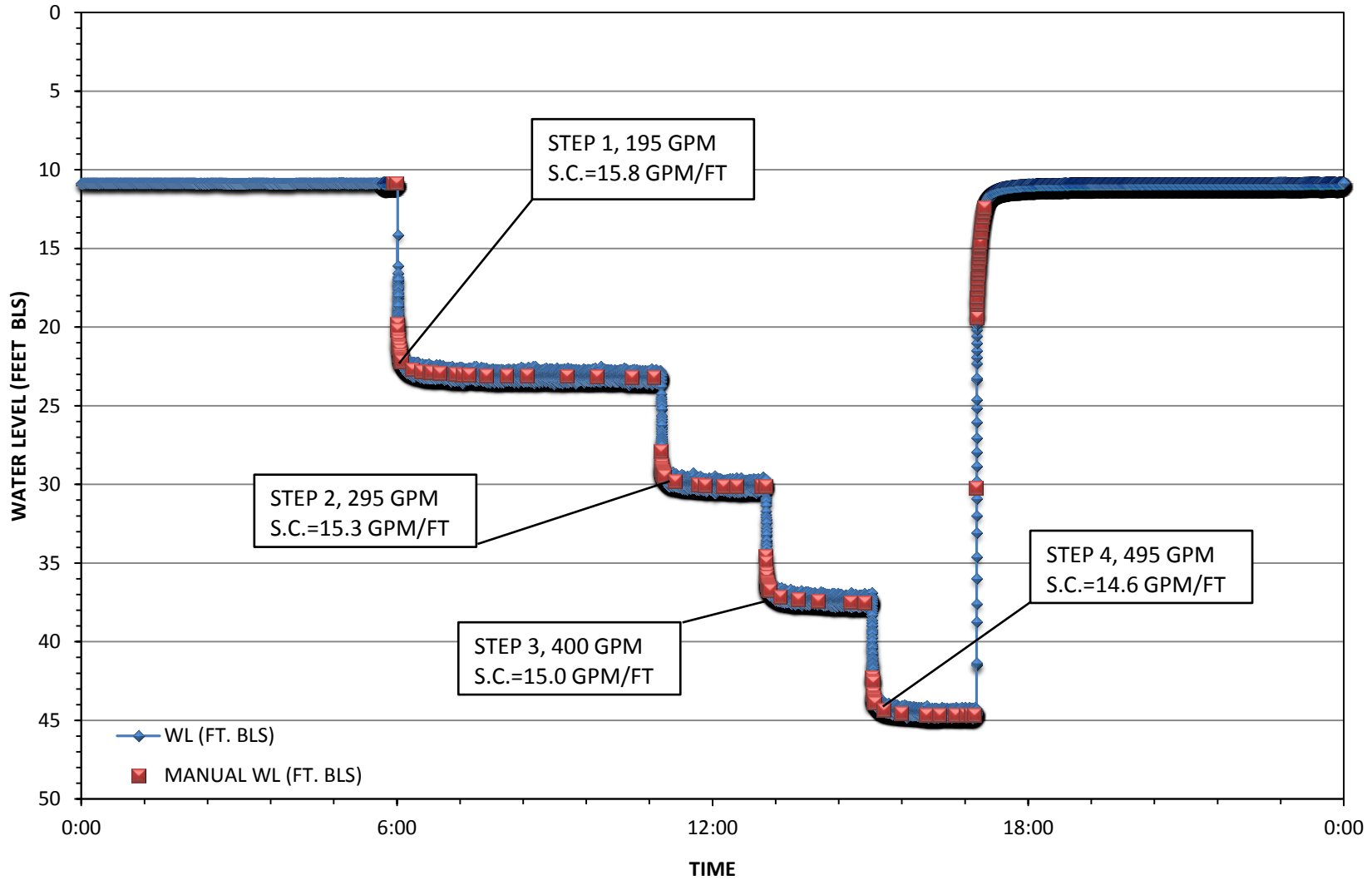


FIGURE 4

SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELL NPB-6B
STEP DRAWDOWN TEST
WATER LEVEL CHART

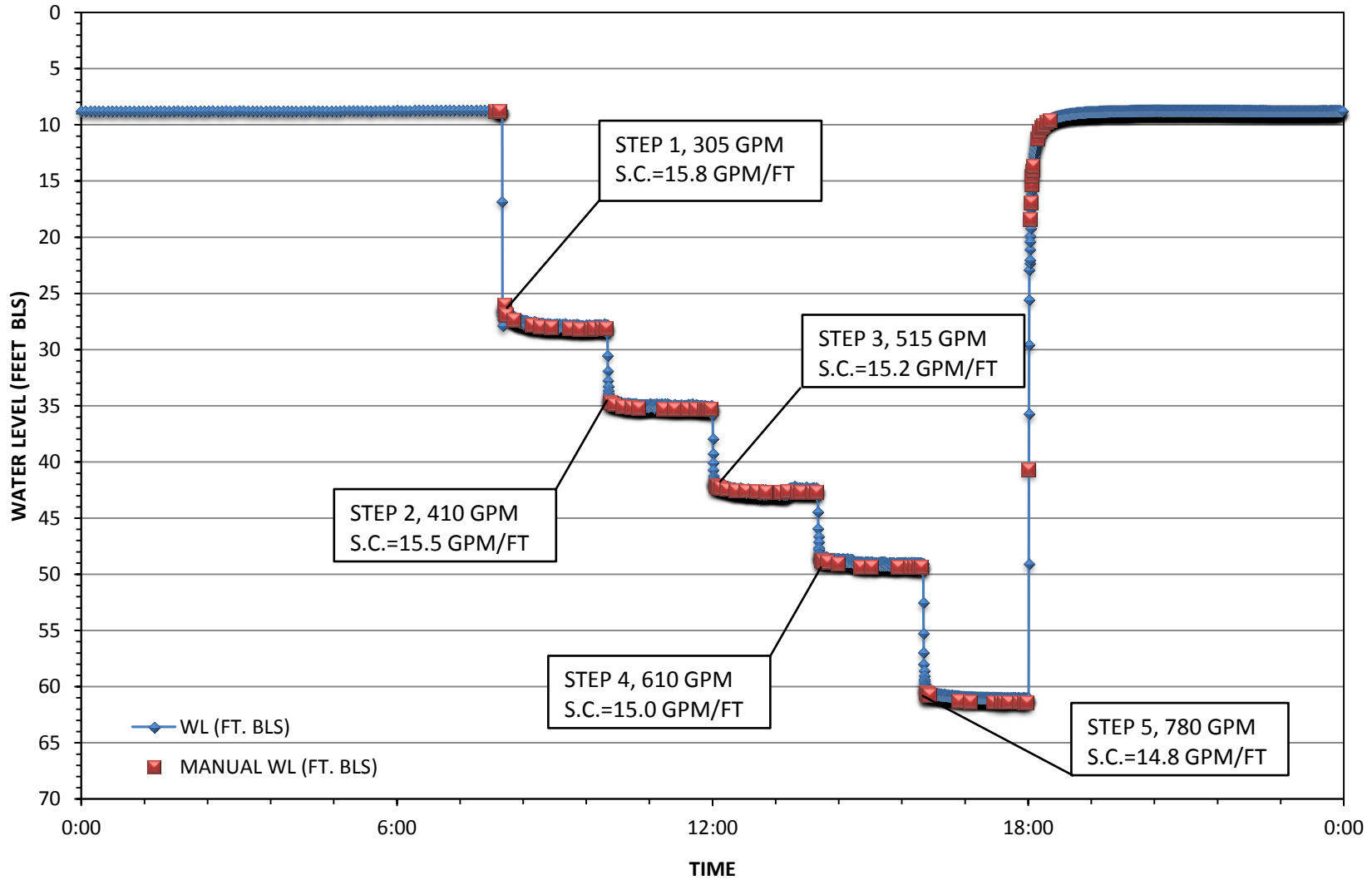


FIGURE 5

SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELL BR-22B
STEP DRAWDOWN TEST
WATER LEVEL CHART

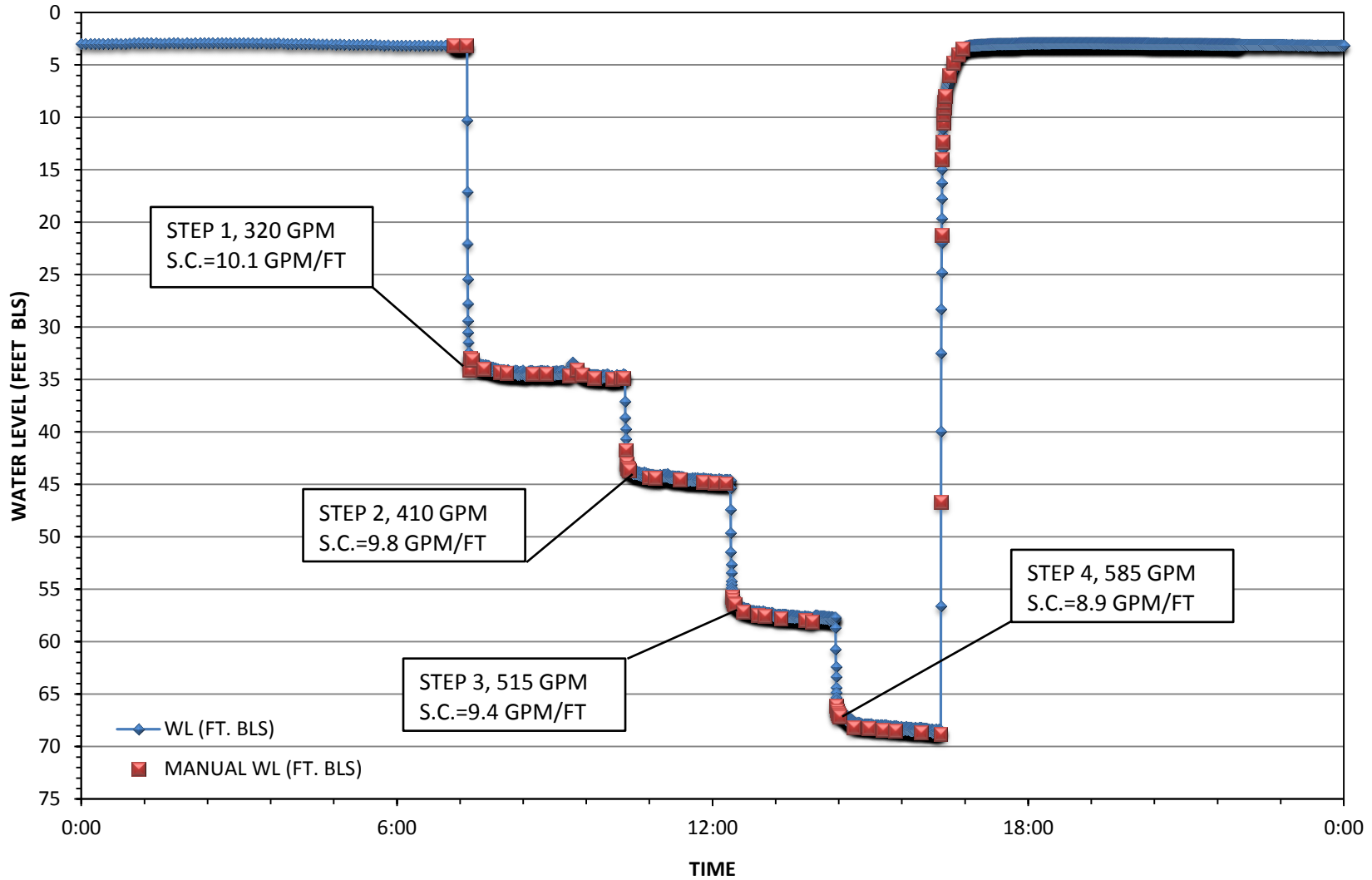


FIGURE 6

SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELL BR-25B
STEP DRAWDOWN TEST
WATER LEVEL CHART

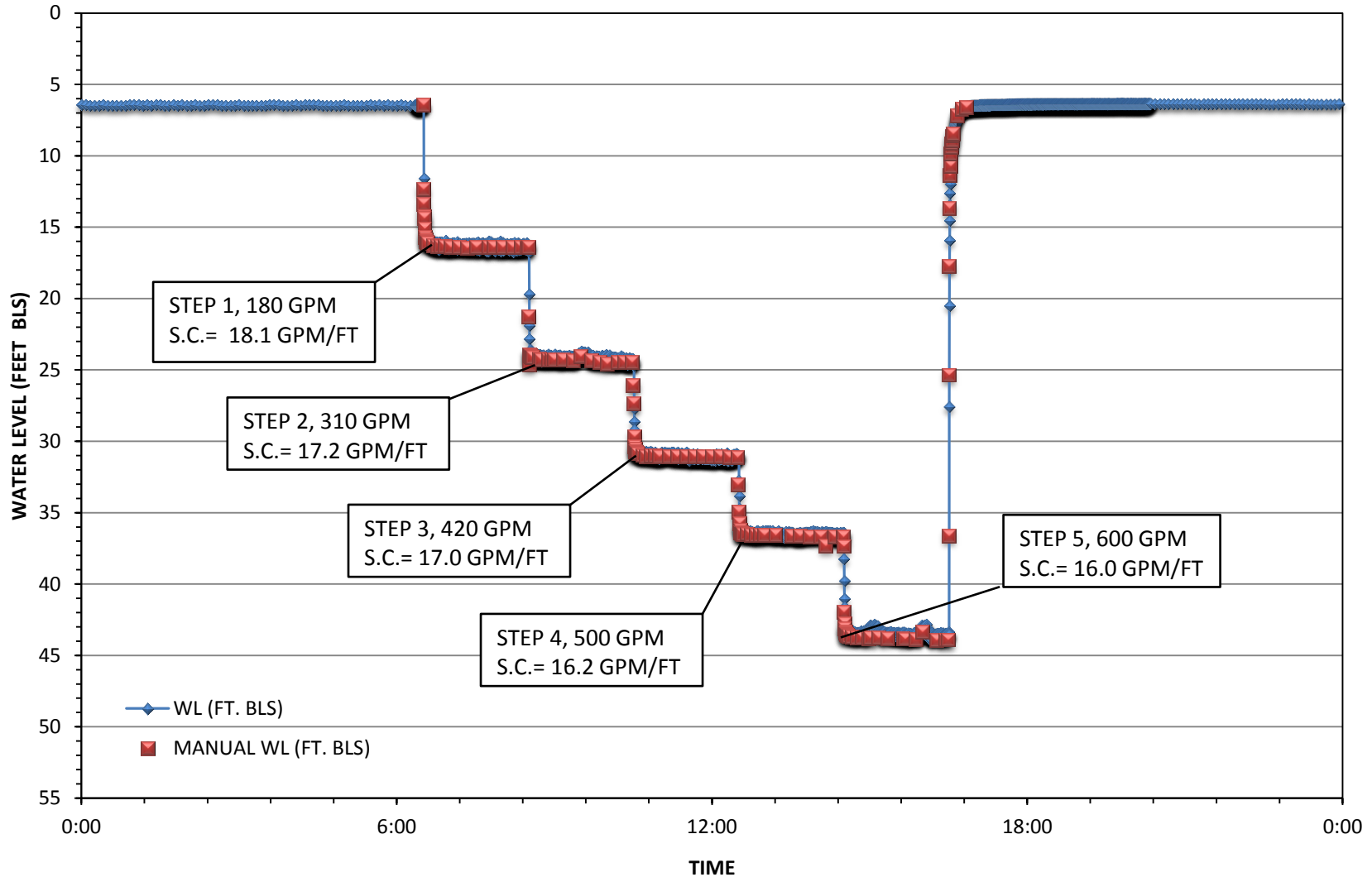


FIGURE 7

SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELL NPB-5C
STEP DRAWDOWN TEST
SPECIFIC CAPACITY (GPM/FT.) vs. PUMPING RATE (GPM)

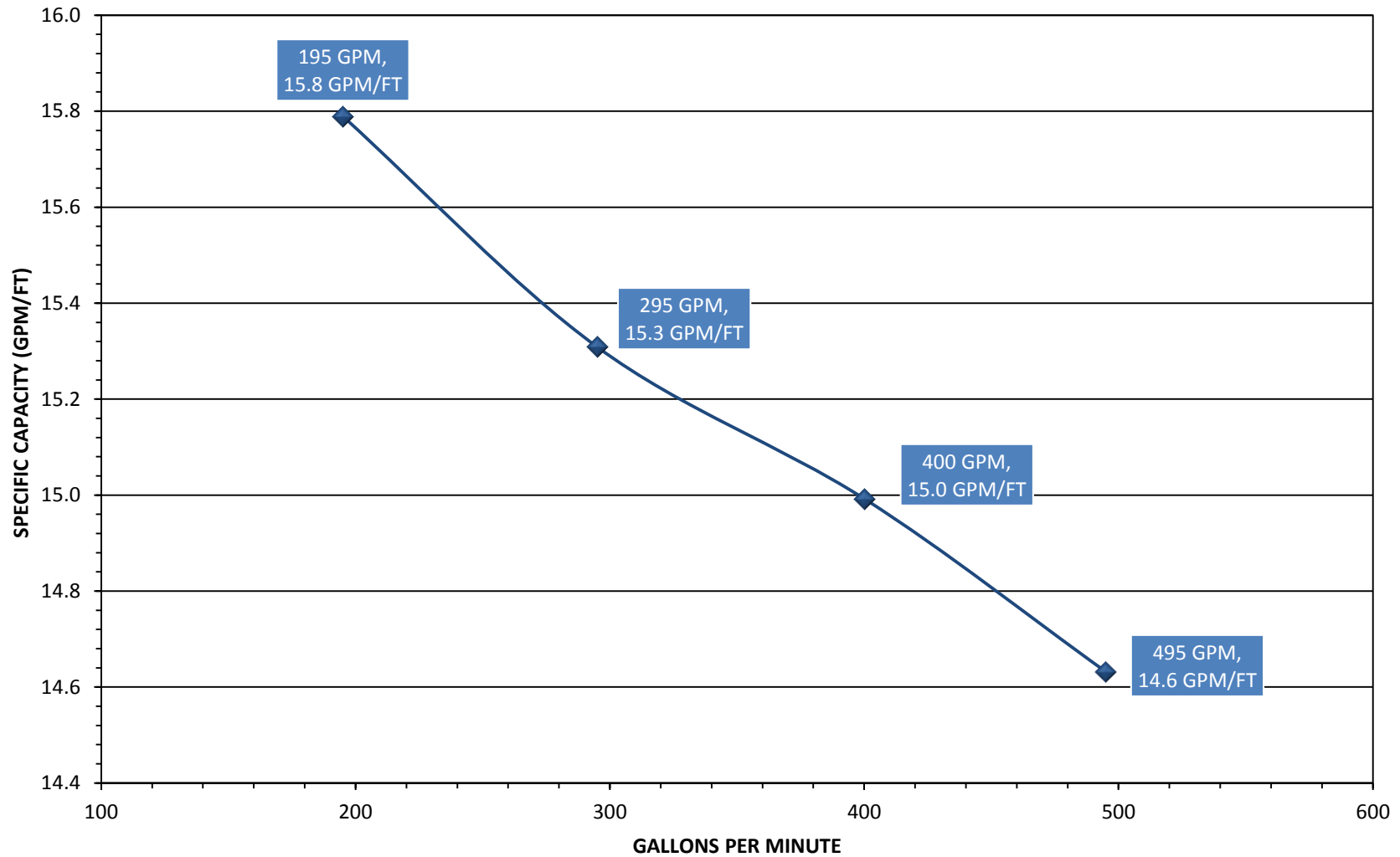


FIGURE 8

**SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELL NPB-6B
STEP DRAWDOWN TEST
SPECIFIC CAPACITY (GPM/FT.) vs. PUMPING RATE (GPM)**

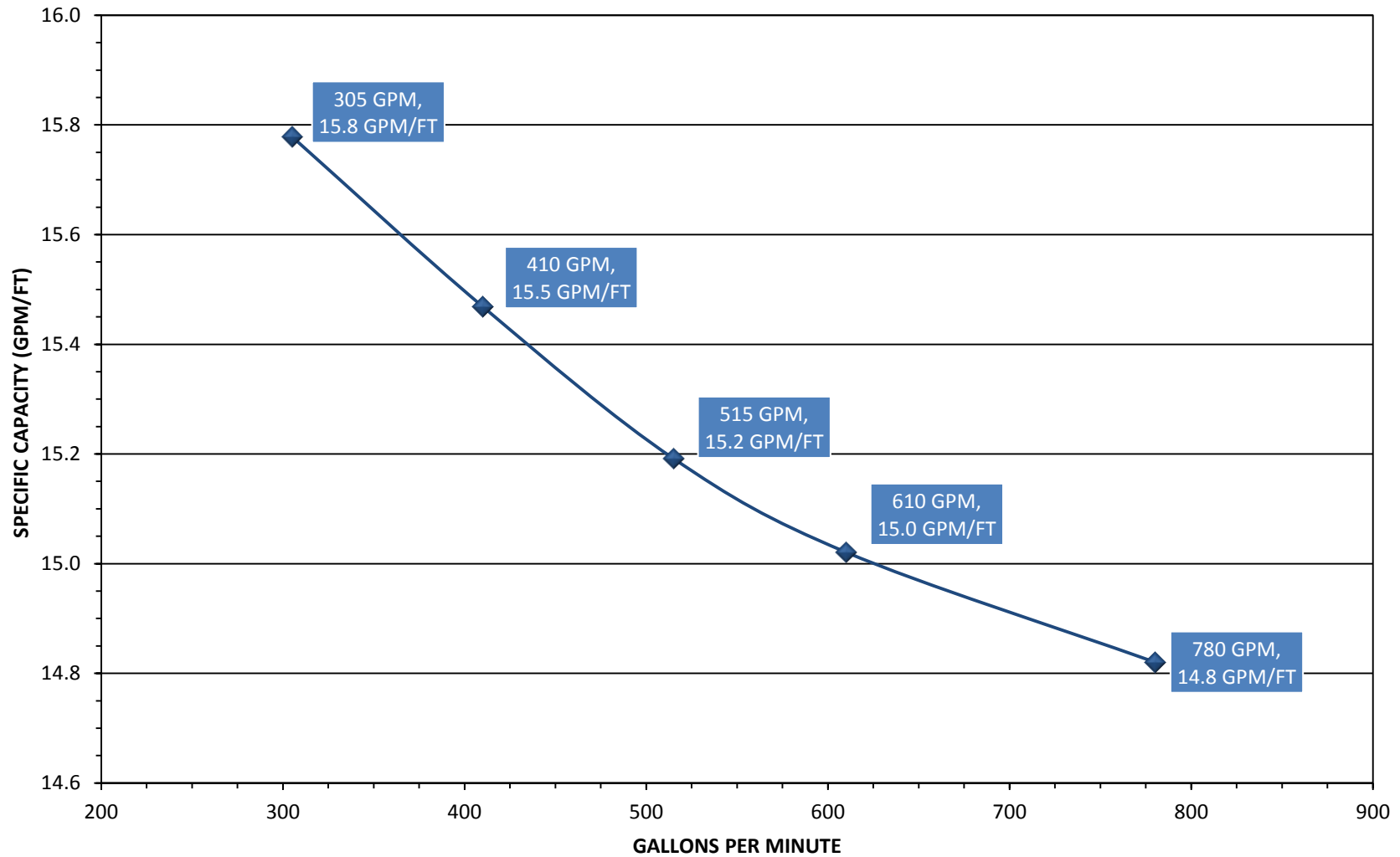


FIGURE 9

SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELL BR-22A
STEP DRAWDOWN TEST
SPECIFIC CAPACITY (GPM/FT.) vs. PUMPING RATE (GPM)

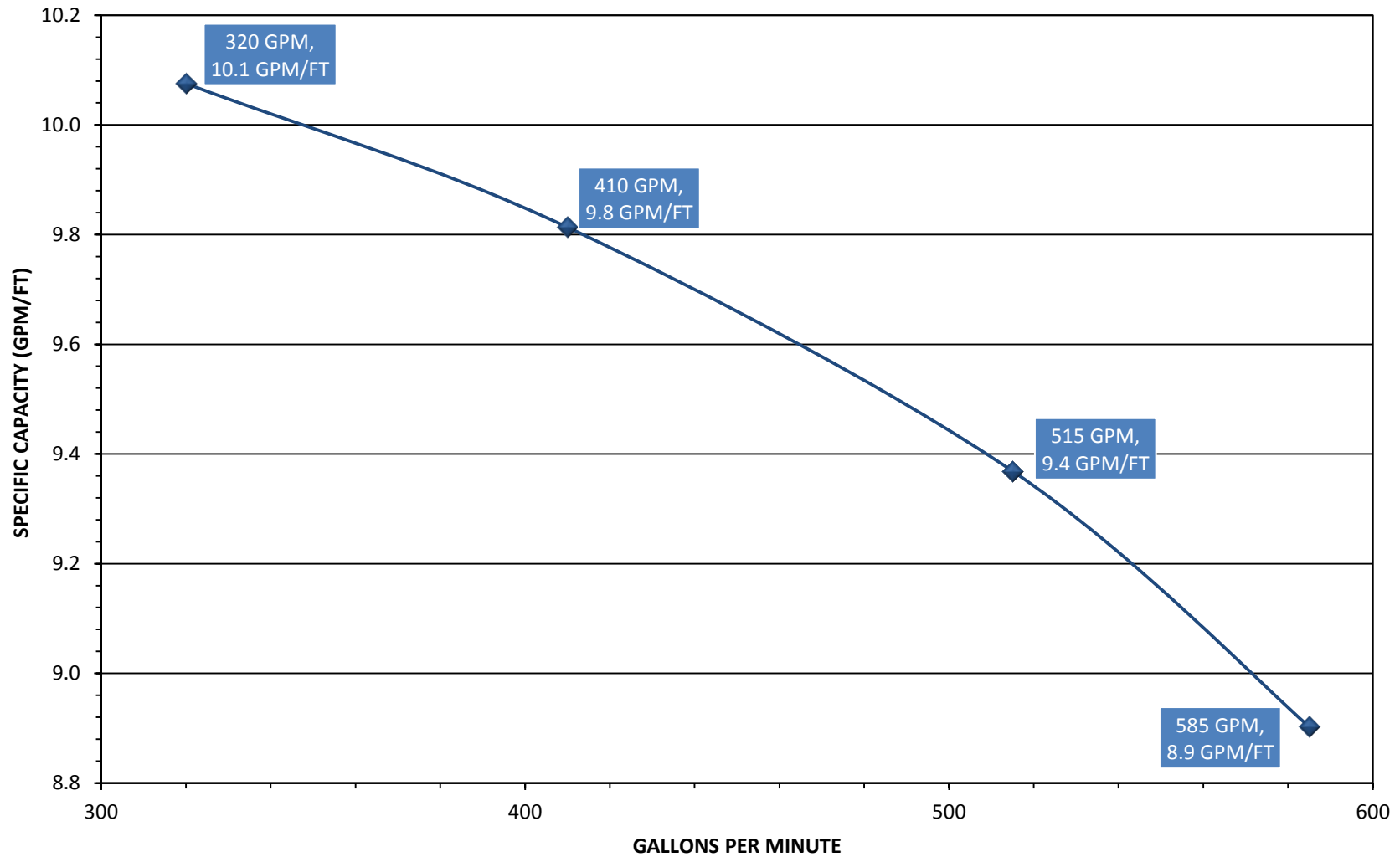
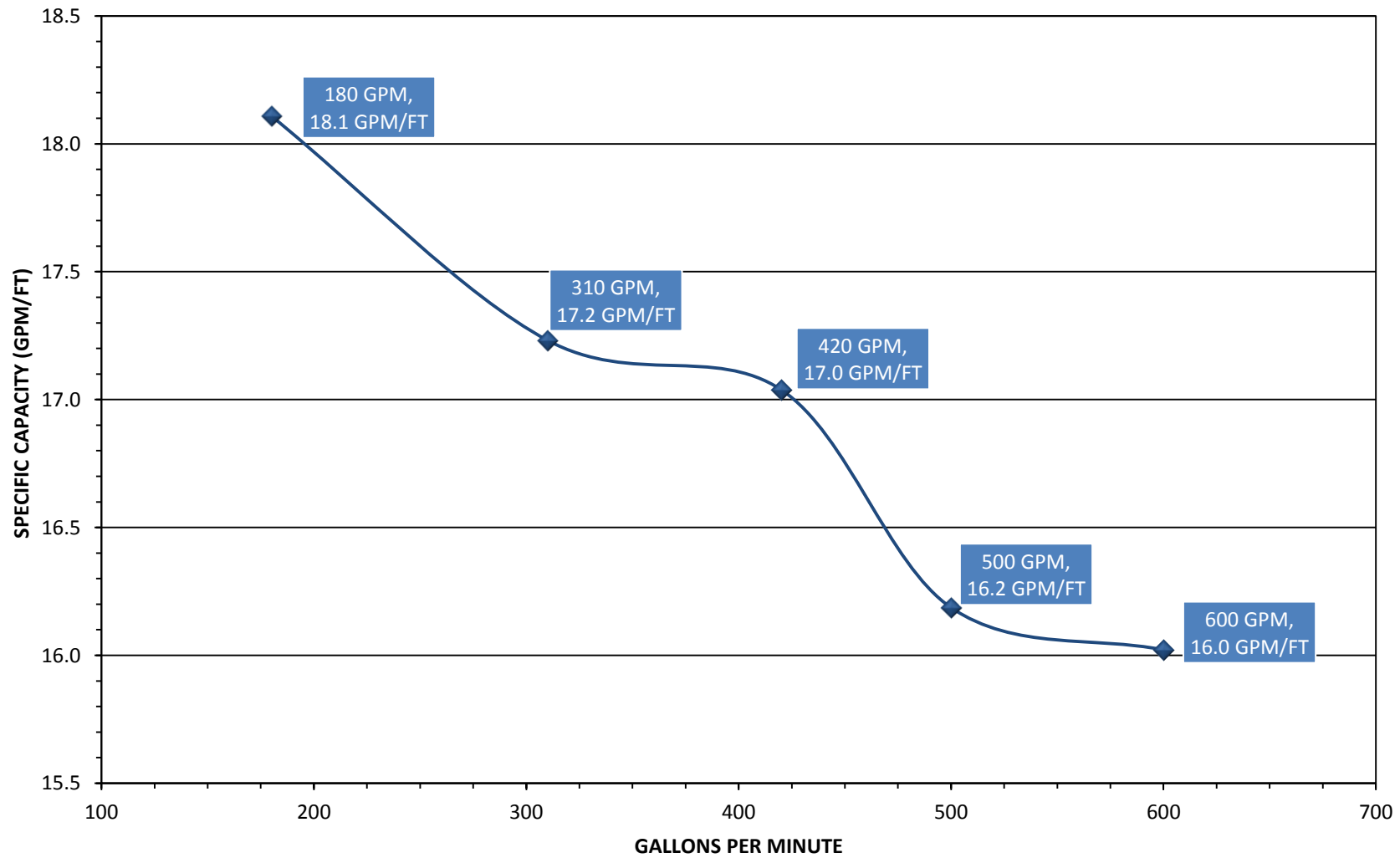
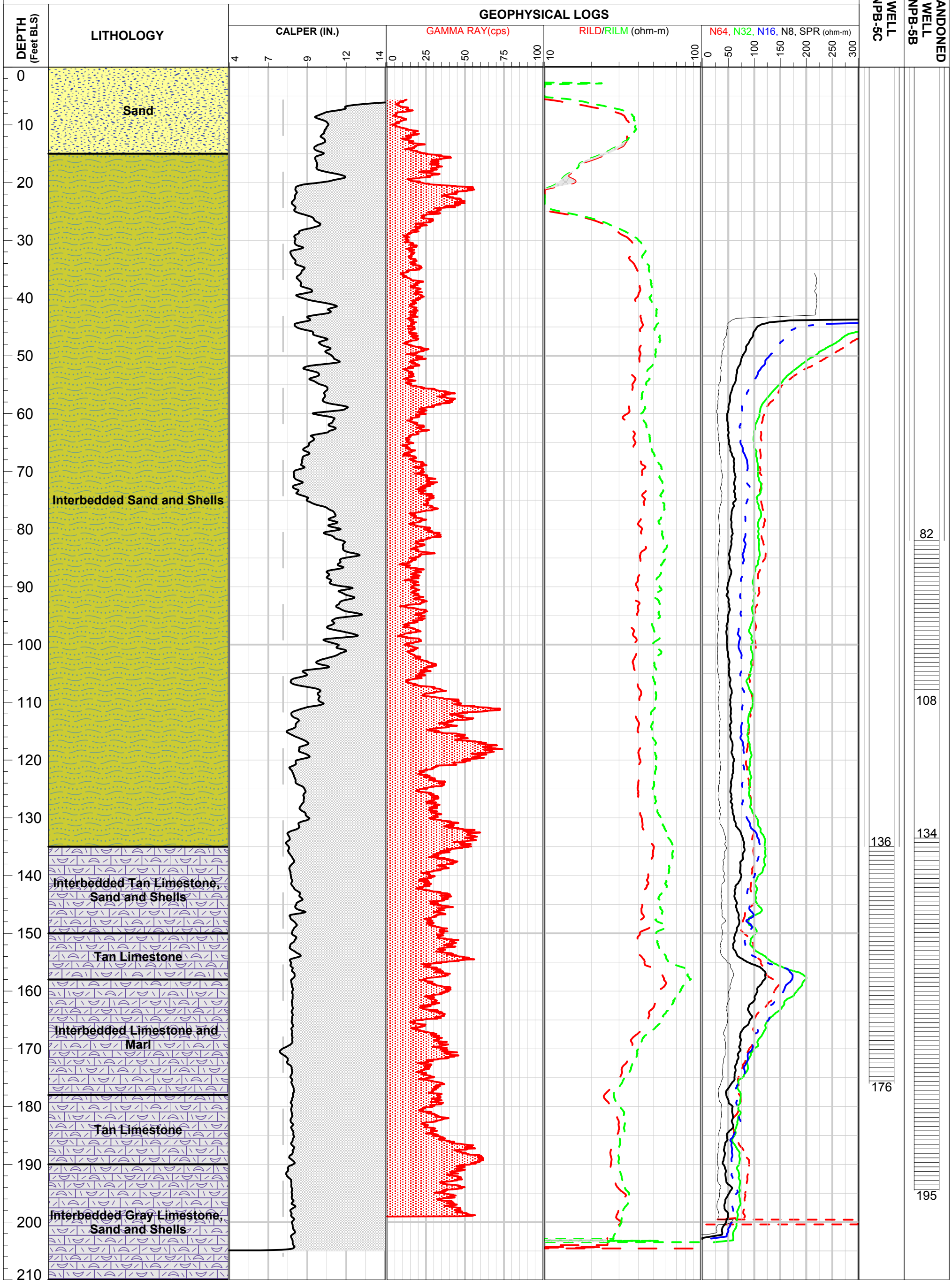


FIGURE 10

SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELL BR-25B
STEP DRAWDOWN TEST
SPECIFIC CAPACITY (GPM/FT.) vs. PUMPING RATE (GPM)

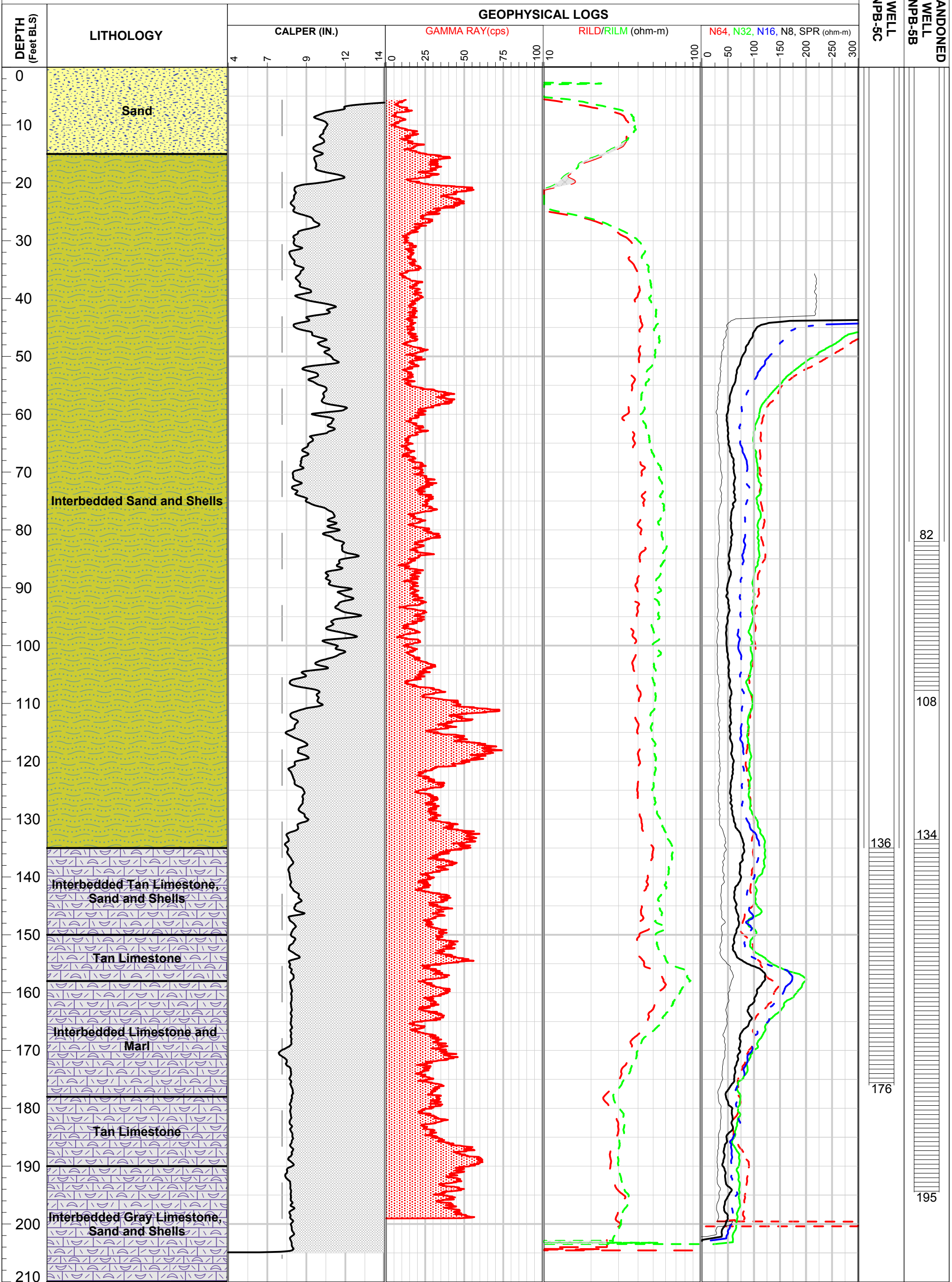


SEACOAST UTILITY AUTHORITY, SURFICIAL AQUIFER REPLACEMENT WELL NPB-5C



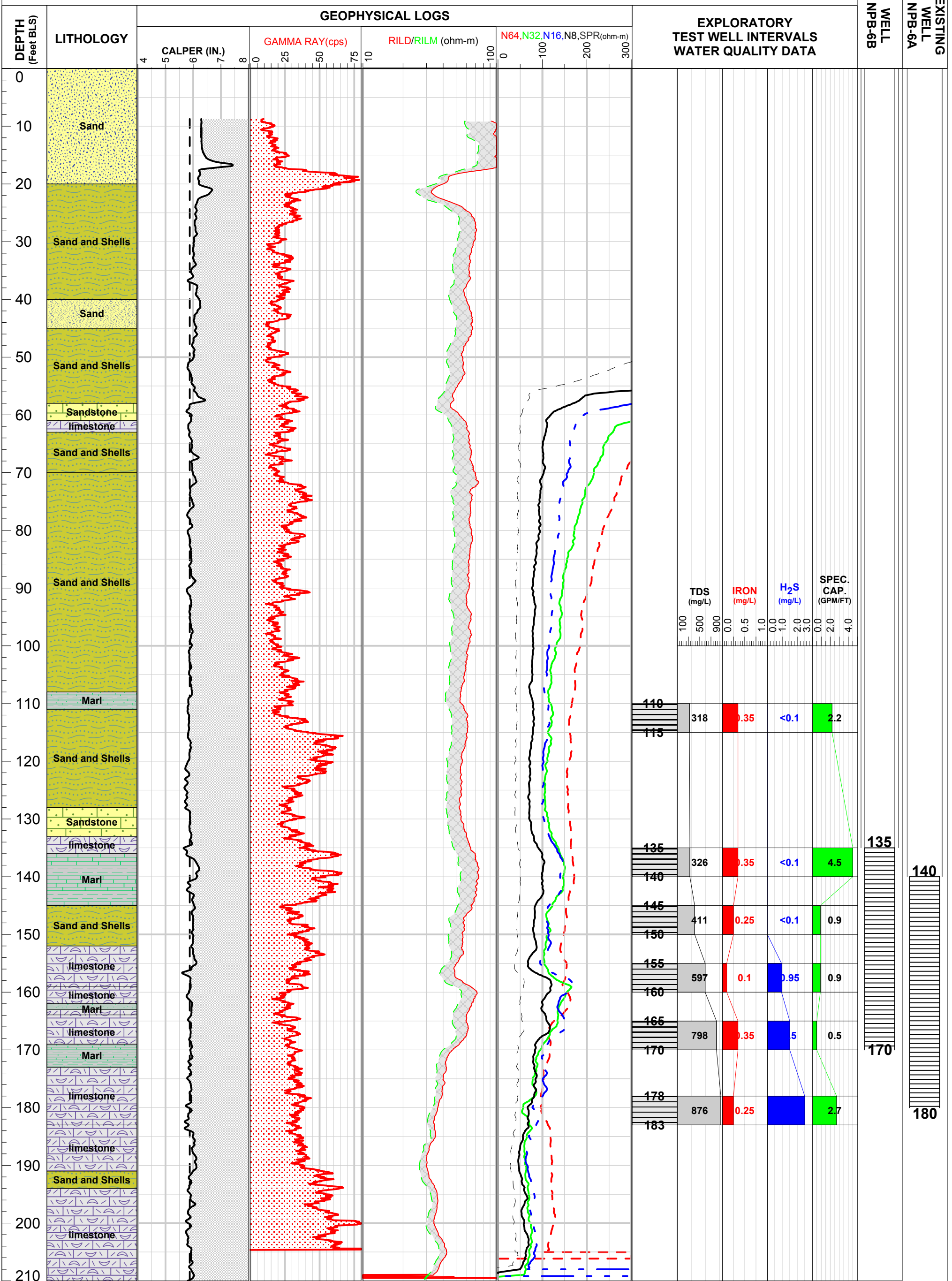
SYMBOL LEGEND: SHELLY SAND SANDY LIMESTONE SAND LIMESTONE MARL	WATER QUALITY LEGEND: TDS: total dissolved solids Fe ⁺ : total iron H ₂ S: hydrogen sulfide mg/L: milligrams per liter	JLA Geosciences, Inc.	
		DRAWN BY: JWF	DATE: 6/19/12
PROJECT SITE: SEACOAST UTILITY AUTHORITY SURFICIAL AQUIFER REPLACEMENT WELL NPB-5C PILOT HOLE		SCALE: AS SHOWN	PROJECT #: 10-034
FIGURE TITLE: GENERALIZED HYDROSTRATIGRAPHIC SECTION, SUA, NPB-5C LITHOLOGIC DATA, GEOPHYSICAL DATA AND CONSTRUCTION DETAILS		FIGURE #:	11

SEACOAST UTILITY AUTHORITY, SURFICIAL AQUIFER REPLACEMENT WELL NPB-5C



SYMBOL LEGEND: SHELLY SAND SANDY LIMESTONE SAND LIMESTONE MARL	WATER QUALITY LEGEND: TDS: total dissolved solids Fe ^T : total iron H ₂ S: hydrogen sulfide mg/L: milligrams per liter	JLA Geosciences, Inc.	
		DRAWN BY: JWF	DATE: 6/19/12
PROJECT SITE: SEACOAST UTILITY AUTHORITY SURFICIAL AQUIFER REPLACEMENT WELL NPB-5C PILOT HOLE		SCALE: AS SHOWN	PROJECT #: 10-034
FIGURE TITLE: GENERALIZED HYDROSTRATIGRAPHIC SECTION, SUA, NPB-5C LITHOLOGIC DATA, GEOPHYSICAL DATA AND CONSTRUCTION DETAILS		FIGURE #:	11

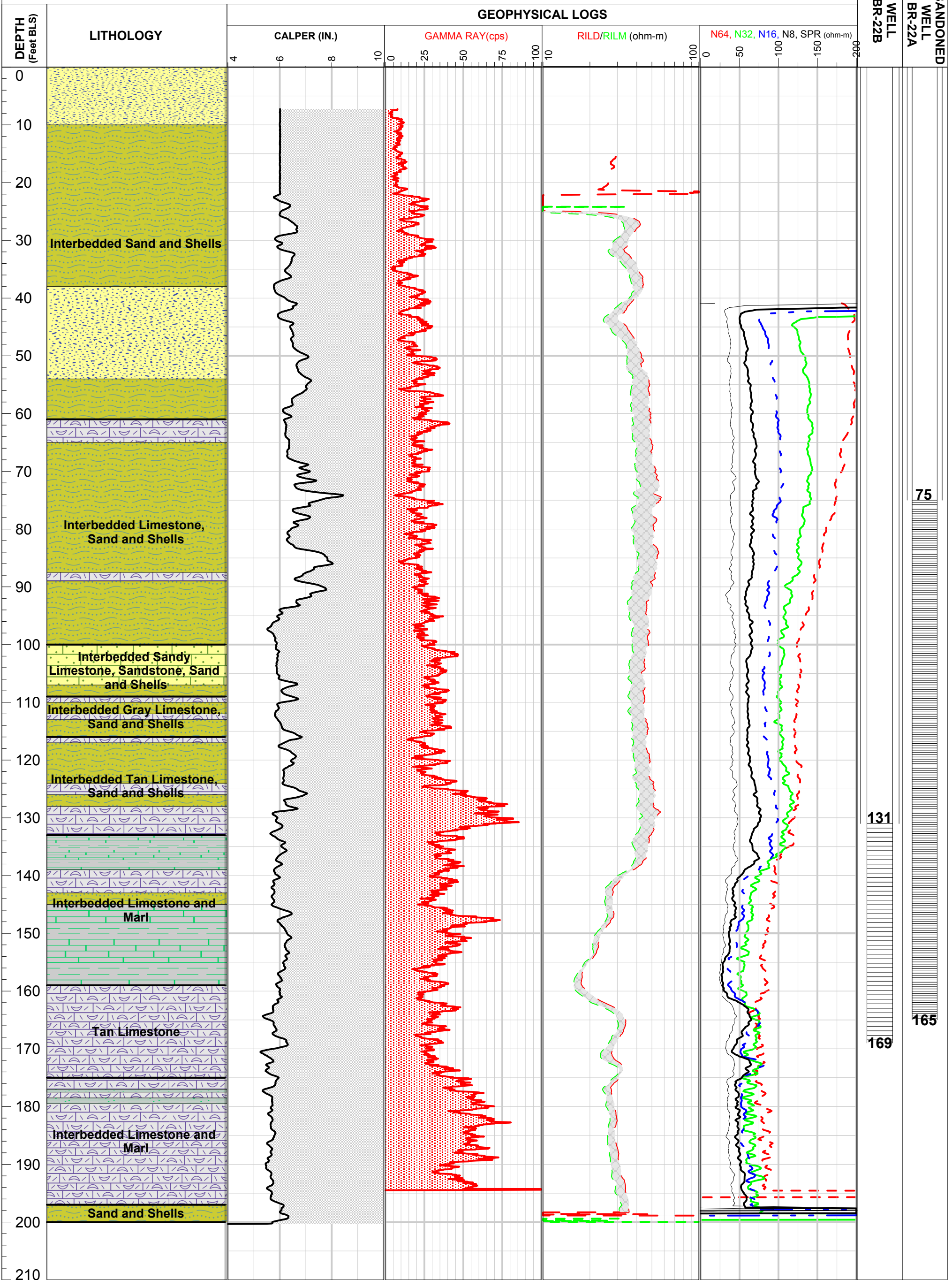
SEACOAST UTILITY AUTHORITY, SURFICIAL AQUIFER REPLACEMENT WELL NPB-6B



SYMBOL LEGEND: SHELLY SAND SANDY LIMESTONE SAND LIMESTONE MARL	WATER QUALITY LEGEND: TDS: total dissolved solids Fe ^T : total iron H ₂ S: hydrogen sulfide mg/L: milligrams per liter	JLA Geosciences, Inc.	
		DRAWN BY: JWF	DATE: 05/21/12
PROJECT SITE: SEACOAST UTILITY AUTHORITY SURFICIAL AQUIFER REPLACEMENT WELL NPB-6B TEST WELL		SCALE: AS SHOWN	PROJECT #: 10-034
		FIGURE #: 12	

FIGURE TITLE: GENERALIZED HYDROSTRATIGRAPHIC SECTION, SUA, NPB-6B TEST WELL, WATER QUALITY DATA AND CONSTRUCTION DETAILS

SEACOAST UTILITY AUTHORITY, SURFICIAL AQUIFER REPLACEMENT WELL BR-22B



WELL
BR-22B

WELL
BR-22A

75

131

165

169

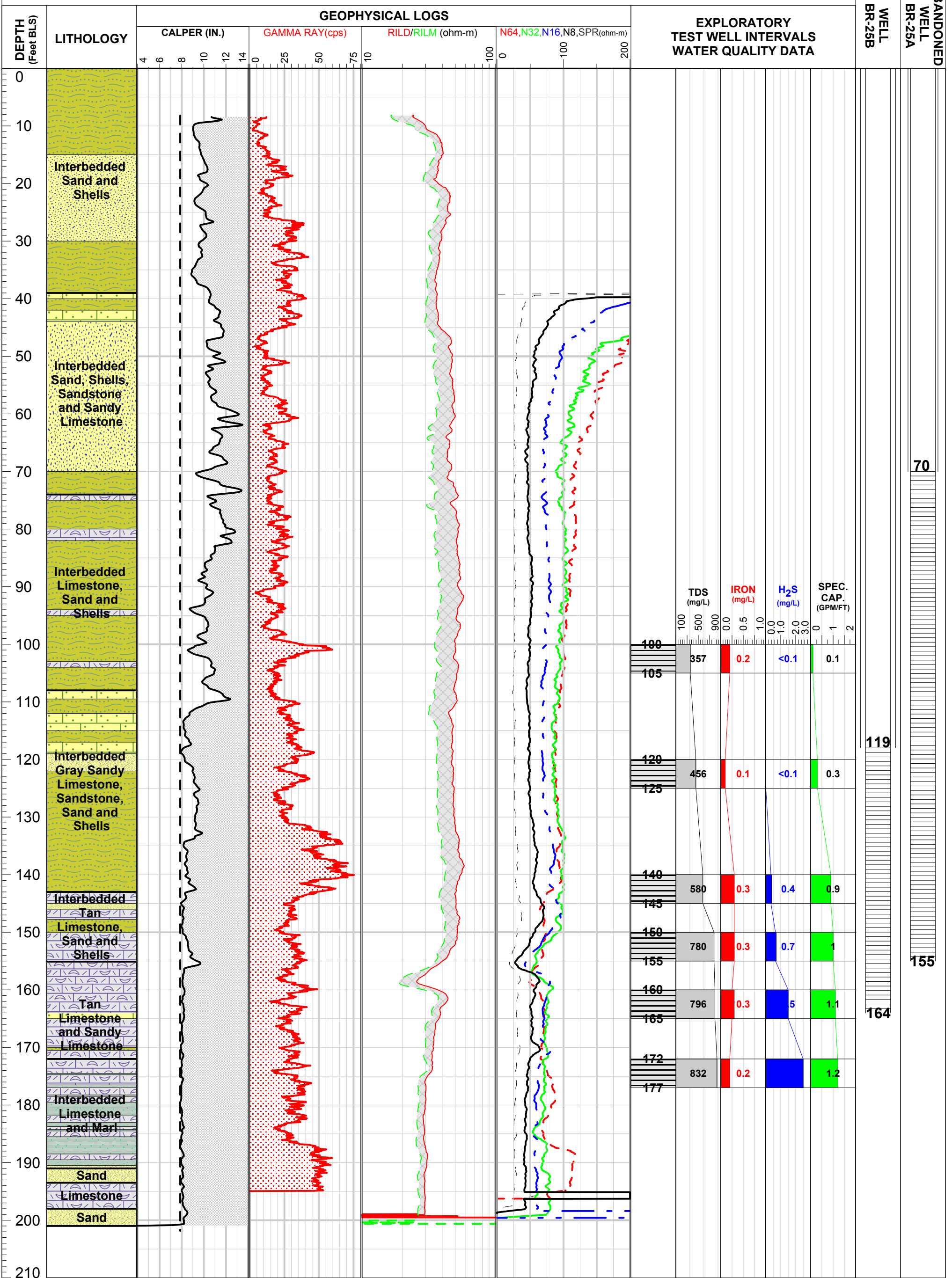
SYMBOL LEGEND: SHELLY SAND SANDY LIMESTONE SAND LIMESTONE MARL	WATER QUALITY LEGEND: TDS: total dissolved solids Fe ⁺ : total iron H ₂ S: hydrogen sulfide mg/L: milligrams per liter	JLA Geosciences, Inc.	
		DRAWN BY: JWF	DATE: 5/30/12
PROJECT SITE: SEACOAST UTILITY AUTHORITY SURFICIAL AQUIFER REPLACEMENT WELL BR-22B PILOT HOLE		SCALE: AS SHOWN	PROJECT #: 10-034
FIGURE TITLE: GENERALIZED HYDROSTRATIGRAPHIC SECTION, SUA, BR-22B LITHOLOGIC DATA, GEOPHYSICAL DATA AND CONSTRUCTION DETAILS		FIGURE #:	13

SEACOAST UTILITY AUTHORITY, SURFICIAL AQUIFER REPLACEMENT WELL BR-25B

WELL
BR-25B

WELL
BR-25A

ABANDONED



SYMBOL LEGEND: SHELLY SAND SANDY LIMESTONE SAND LIMESTONE MARL	WATER QUALITY LEGEND: TDS: total dissolved solids Fe ^T : total iron H ₂ S: hydrogen sulfide mg/L: milligrams per liter	JLA Geosciences, Inc.	
		DRAWN BY: JWF	DATE: 05/21/12
PROJECT SITE: SEACOAST UTILITY AUTHORITY SURFICIAL AQUIFER REPLACEMENT WELL BR-25B TEST WELL		SCALE: AS SHOWN	
FIGURE TITLE: GENERALIZED HYDROSTRATIGRAPHIC SECTION, SUA, BR-25B TEST WELL, WATER QUALITY DATA AND CONSTRUCTION DETAILS		PROJECT #: 10-034	
		FIGURE #: 14	

TABLES

TABLE 1
SEACOAST UTILITY AUTHORITY
NPB-5C, NPB-6B, BR-22B & BR-25B
WELL CONSTRUCTION DETAILS

	NPB-5C	NPB-6B	BR-22B	BR-25B
Total Depth (feet BLS)	176	170	169	164
Surface Casing Depth (feet BLS) <i>30-inch diameter steel 0.375-inch wall thickness</i>	50	57	69	71
Well Casing Depth (feet BLS) <i>24-inch diameter Schedule 40 PVC</i>	136	135	131	119
Nominal Borehole Diameter (inches)	22	22	22	22
Riser Casing Depth (feet BLS) <i>16-inch diameter SDR17 PVC</i>	136	135	131	119
Stainless Steel Screen Interval (feet BLS) <i>16-inch diameter, 0.090-inch slot</i>	136 - 176	135 - 170	131 - 169	119 - 164
Gravel Pack Depth (feet BLS) <i>*Edgar Minerals 4 x 9 Lake Wales 3 x 10</i>	*115	110	100	97

feet BLS - feet below land surface

TABLE 4
SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELL PBG-5C
STEP DRAWDOWN TEST AND WATER QUALITY RESULTS

WELL: PBG-5C

TEST DATE: 02/8/2013

STATIC WATER LEVEL: Referenced starting water level, 10.95 feet BLS.

DRAWDOWN DATA

Pumping Rate (gpm)	Pumping Duration (min)	Water Level (ft. BLS)	Drawdown (feet)	Specific Capacity (gpm/ft)
195	300	23.20	12.25	15.8
295	120	30.12	19.17	15.3
400	120	37.53	26.58	15.0
495	120	44.68	33.73	14.6

WATER QUALITY DATA

Pumping Rate (gpm)	Specific Cond. (mmhos/cm)	Chloride (mg/L)	SDI#1	SDI#2	SDI#3	SDI#4	Sand Conc. (ppm)	Turbidity (ntu)	H ₂ S (ppm)	Fe ^T (ppm)	Fe ^S (ppm)
195	546	59	3.1	3.0	3.0	2.8	0.1	0.01	0.1	0.6	0.6
295	549	59	3.4	3.0	2.7	2.5	0.3	0.28	0.1	0.6	0.6
400	550	58	3.0	3.0	2.5	2.4	0.4	0.34	0.1	0.6	0.6
495	555	58	3.3	2.7	2.5	2.3	0.6	0.33	0.1	0.6	0.6

Notes:

- gpm - gallons per minute
- mg/L - milligrams per liter
- µmhos/cm - millimhos per cm
- ppm - parts per million
- BLS - Below land surface
- ntu - nephelometric turbidity units
- H₂S - Hydrogen Sulfide Concentration
- Fe^T - Total Iron Concentration
- Fe^S - Soluble Iron Concentration
- * - SDI run at 23-PSI

TABLE 5
SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELL NPB-6B
STEP DRAWDOWN TEST AND WATER QUALITY RESULTS

WELL: NPB-6B

TEST DATE: 09/17/2012

STATIC WATER LEVEL: Referenced starting water level, 8.77 feet BLS.

DRAWDOWN DATA

Pumping Rate (gpm)	Pumping Duration (min)	Water Level (ft. BLS)	Drawdown (feet)	Specific Capacity (gpm/ft)
305	120	28.10	19.33	15.8
410	120	35.28	26.51	15.5
515	120	42.67	33.90	15.2
610	120	49.38	40.61	15.0
780	120	61.40	52.63	14.8

WATER QUALITY DATA

Pumping Rate (gpm)	Specific Cond. (mmhos/cm)	Chloride (mg/L)	SDI#1	SDI#2	SDI#3	SDI#4	Sand Conc. (ppm)	Turbidity (ntu)	H ₂ S (ppm)	Fe ^T (ppm)	Fe ^S (ppm)
305	592	65	3.3	2.3	2.2	2.2	<0.1	0.8	0.1	0.3	0.4
410	597	69	2.3	2.2	2.0	2.1	<0.1	0.7	0.1	0.4	0.4
515	592	68	2.5	2.4	2.4	2.3	0.1	0.7	0.1	0.4	0.4
610	598	69	2.5	2.4	2.3	2.0	0.2	0.6	0.1	0.4	0.4
780	601	69	2.5	2.7	2.7	2.6	0.3	0.5	0.1	0.4	0.4

Notes:

- gpm - gallons per minute
- mg/L - milligrams per liter
- µmhos/cm - millimhos per cm
- ppm - parts per million
- BLS - Below land surface
- ntu - nephelometric turbidity units
- H₂S - Hydrogen Sulfide Concentration
- Fe^T - Total Iron Concentration
- Fe^S - Soluble Iron Concentration
- * - SDI run at 23-PSI

TABLE 6
SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELL BR-22A
STEP DRAWDOWN TEST AND WATER QUALITY RESULTS

WELL: BR-22A

TEST DATE: 11/5/2012

STATIC WATER LEVEL: Referenced starting water level, 3.12 feet BLS.

DRAWDOWN DATA

Pumping Rate (gpm)	Pumping Duration (min)	Water Level (ft. BLS)	Drawdown (feet)	Specific Capacity (gpm/ft)
325	180	34.88	31.76	10.1
410	120	44.90	41.78	9.8
515	120	58.09	54.97	9.4
585	120	68.83	65.71	8.9

WATER QUALITY DATA

Pumping Rate (gpm)	Specific Cond. (mmhos/cm)	Chloride (mg/L)	SDI#1	SDI#2	SDI#3	SDI#4	Sand Conc. (ppm)	Turbidity (ntu)	H ₂ S (ppm)	Fe ^T (ppm)	Fe ^S (ppm)
325	729	83	2.7	3.5	2.5	2.7	<0.1	0.2	1.0	<0.1	<0.1
410	731	83	4.0	2.4	3.1	2.7	0.4	0.5	1.0	0.1	0.1
515	727	85	3.8	3.2	2.8	3.4	0.8	0.7	1.0	<0.1	<0.1
585	725	82	3.5	2.6	2.6	2.4	0.9	0.5	1.0	<0.1	<0.1

Notes:

- gpm - gallons per minute
- mg/L - milligrams per liter
- µmhos/cm - millimhos per cm
- ppm - parts per million
- BLS - Below land surface
- ntu - nephelometric turbidity units
- H₂S - Hydrogen Sulfide Concentration
- Fe^T - Total Iron Concentration
- Fe^S - Soluble Iron Concentration
- * - SDI run at 23-PSI

TABLE 7
SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELL BR-25A
STEP DRAWDOWN TEST AND WATER QUALITY RESULTS

WELL: BR-25A

TEST DATE: 12/05/2012

STATIC WATER LEVEL: Referenced starting water level, 6.46 feet BLS.

DRAWDOWN DATA

Pumping Rate (gpm)	Pumping Duration (min)	Water Level (ft. BLS)	Drawdown (feet)	Specific Capacity (gpm/ft)
180	120	16.40	9.94	18.1
310	120	24.45	17.99	17.2
420	120	31.11	24.65	17.0
500	120	37.35	30.89	16.2
600	120	43.91	37.45	16.0

WATER QUALITY DATA

Pumping Rate (gpm)	Specific Cond. (mmhos/cm)	Chloride (mg/L)	SDI#1	SDI#2	SDI#3	SDI#4	Sand Conc. (ppm)	Turbidity (ntu)	H ₂ S (ppm)	Fe ^T (ppm)	Fe ^S (ppm)
180	548	--	3.7	3.1	2.9	2.8	0.1	0.13	0.3	0.1	0.1
310	550	--	2.9	2.7	2.4	2.4	0.4	0.01	0.4	0.1	<0.1
420	549	--	2.8	2.5	2.4	2.6	0.7	0.63	0.4	0.1	0.1
500	551	--	2.7	2.7	2.5	2.5	0.7	0.49	0.4	0.1	0.1
600	553	--	2.7	2.5	2.4	2.4	0.9	0.10	0.4	0.1	0.1

Notes:

- gpm - gallons per minute
- mg/L - milligrams per liter
- µmhos/cm - millimhos per cm
- ppm - parts per million
- BLS - Below land surface
- ntu - nephelometric turbidity units
- H₂S - Hydrogen Sulfide Concentration
- Fe^T - Total Iron Concentration
- Fe^S - Soluble Iron Concentration
- * - SDI run at 23-PSI

TABLE 8
SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELLS NPB-5C, NPB-6B, BR-22B AND BR-25B
Summary of Laboratory Water Quality Analyses

Parameter	Units	NPB-5C	NPB-6B	BR-22B	BR-25B	MCL
PRIMARY DRINKING WATER STANDARDS						
INORGANIC CONTAMINANTS						
Antimony	mg/L	0.00050U	0.00050U	0.00050U	0.00050U	0.006
Arsenic	mg/L	0.00050U	0.00050U	0.00050U	0.00050U	0.010
Barium	mg/L	0.0054 l	0.0067 l	0.0065 l	0.0050U	2
Beryllium	mg/L	0.00050U	0.00050U	0.00050U	0.00050U	0.004
Cadmium	mg/L	0.00050U	0.00050U	0.00050U	0.00050U	0.005
Chromium	mg/L	0.0025U	0.0025U	0.0025U	0.0025U	0.1
Cyanide	mg/L	0.0050U	0.0050U	0.0050U	0.0050U	0.2
Fluoride	mg/L	0.26	0.34	0.30	0.32	4
Lead	mg/L	0.00050U	0.00050U	0.00050U	0.00050U	0.015
Mercury	mg/L	0.00010U	0.00010U	0.00010U	0.0001U	0.002
Nickel	mg/L	0.0025U	0.0025U	0.0025U	0.0025U	0.1
Nitrate as N	mg/L	0.025U	0.025U	0.025U	0.025U	10
Nitrite as N	mg/L	0.025U	0.025U	0.025U	0.025U	1
Selenium	mg/L	0.00050U	0.00050U	0.00050U	0.00050U	0.05
Sodium	mg/L	27.2	32.8	53.6	27.7	160
Thallium	mg/L	0.00050U	0.00050U	0.00050U	0.00050U	0.002
RESIDUAL DISINFECTANT AND DISINFECTION BYPRODUCTS						
Chlorite	ug/L	1.1U	1.1U	N/A	1.1U	1000
Bromate	ug/L	1.0U	1.0U	N/A	1.0U	10
Monochloroacetic Acid	ug/L	0.61U	0.61U	0.61U	0.61U	60
Dichloroacetic Acid	ug/L	0.61U	0.61U	0.61U	0.61U	60
Trichloroacetic Acid	ug/L	0.61U	0.61U	0.61U	0.61U	60
Monobromoacetic Acid	ug/L	0.61U	0.61U	0.61U	0.61U	60
Dibromoacetic Acid	ug/L	0.61U	0.61U	0.61U	0.61U	60
Haloacetic Acids (Total)	ug/L	0.61U	0.61U	0.61U	0.61U	60
Chloroform	ug/L	0.25U	0.25U	0.25U	0.25U	80
Bromoform	ug/L	0.25U	0.25U	0.25U	0.025U	80
Bromodichloromethane	ug/L	0.25U	0.25U	0.25U	0.025U	80
Dibromochloromethane	ug/L	0.25U	0.25U	0.25U	0.025U	80
Total Trihalomethanes (Calc.)	ug/L	0.25U	0.25U	0.25U	0.025U	80
VOLITILE ORGANICS						
1,1-Dichloroethene	ug/L	0.25U	0.25U	0.25U	0.25U	7.0
1,1,1-Trichloroethane	ug/L	0.25U	0.25U	0.25U	0.25U	200
1,1,2-Trichloroethane	ug/L	0.25U	0.25U	0.25U	0.25U	5.0
1,2-Dichloroethane	ug/L	0.25U	0.25U	0.25U	0.25U	3.0
1,2-Dichloropropane	ug/L	0.25U	0.25U	0.25U	0.25U	5.0
1,2,4-Trichlorobenzene	ug/L	0.25U	0.25U	0.25U	0.25U	70
Benzene	ug/L	0.25U	0.25U	0.25U	0.25U	1.0
Carbon tetrachloride	ug/L	0.25U	0.25U	0.25U	0.25U	3.0
cis-1,2-Dichloroethene	ug/L	0.25U	0.25U	0.25U	0.25U	70
Ethylbenzene	ug/L	0.25U	0.25U	0.25U	0.25U	700
Chlorobenzene	ug/L	0.25U	0.25U	0.25U	0.25U	100
1,2-Dichlorobenzene	ug/L	0.25U	0.25U	0.25U	0.25U	600
1,4-Dichlorobenzene	ug/L	0.25U	0.25U	0.25U	0.25U	75
Methylene Chloride	ug/L	0.44U	0.44U	0.44U	0.44U	5.0
Styrene	ug/L	0.25U	0.25U	0.25U	0.25U	100
Tetrachloroethene	ug/L	0.25U	0.25U	0.25U	0.25U	3
Toluene	ug/L	0.25U	0.25U	0.25U	0.25U	1,000
Trichloroethene	ug/L	0.25U	0.25U	0.25U	0.25U	3
Vinyl chloride	ug/L	0.25U	0.25U	0.25U	0.25U	1
Xylene (Total)	ug/L	0.25U	0.25U	0.25U	0.25U	10,000
trans-1,2-Dichloroethene	ug/L	0.25U	0.25U	0.25U	0.25U	100
SYNTHETIC ORGANICS						
bis(2-Ethylhexyl)adipate	ug/L	0.37U	0.37U	0.37U	0.38U	400
bis(2-Ethylhexyl)phthalate	ug/L	0.48U	0.48U	0.49U	0.50U	6
Alachlor	ug/L	0.032U	0.033U	0.034U	0.068U	2

TABLE 8
SEACOAST UTILITY AUTHORITY
SURFICIAL AQUIFER PRODUCTION WELLS NPB-5C, NPB-6B, BR-22B AND BR-25B
Summary of Laboratory Water Quality Analyses

Parameter	Units	NPB-5C	NPB-6B	BR-22B	BR-25B	MCL
Atrazine	ug/L	0.020U	0.020U	0.021U	0.042U	3
Chlordane (Technical)	ug/L	0.045U	0.045U	0.046U	0.094U	2
Endrin	ug/L	0.0019U	0.0019U	0.0020U	0.0040U	2
Heptachlor	ug/L	0.0057U	0.0057U	0.0059U	0.012U	0.4
gamma-BHC (Lindane)	ug/L	0.0028U	0.0029U	0.0030U	0.0060U	0.2
Heptachlor epoxide	ug/L	0.0028U	0.0029U	0.0030U	0.0060U	0.2
Hexachlorobenzene	ug/L	0.010U	0.011U	0.011U	0.022U	1
Hexachlorocyclopentadiene	ug/L	0.011U	0.011U	0.012U	0.024U	50
Methoxychlor	ug/L	0.013U	0.013U	0.014U	0.028U	40
PCB-1016 (Aroclor 1016)	ug/L	0.076U	0.077U	0.079U	0.16U	0.5
PCB-1221 (Aroclor 1221)	ug/L	0.028U	0.028U	0.029U	0.058U	0.5
PCB-1232 (Aroclor 1232)	ug/L	0.028U	0.028U	0.029U	0.058U	0.5
PCB-1242 (Aroclor 1242)	ug/L	0.048U	0.049U	0.050U	0.10U	0.5
PCB-1248 (Aroclor 1248)	ug/L	0.059U	0.059U	0.061U	0.12U	0.5
PCB-1254 (Aroclor 1254)	ug/L	0.022U	0.022U	0.023U	0.046U	0.5
PCB-1260 (Aroclor 1260)	ug/L	0.063U	0.063U	0.065U	0.13U	0.5
PCB, Total	ug/L	0.076U	0.077U	0.079U	0.16U	0.5
Simazine	ug/L	0.042U	0.042U	0.043U	0.088U	4
Toxaphene	ug/L	0.58U	0.58U	0.60U	1.2U	3
2,4,5-TP (Silvex)	ug/L	0.16U	0.16U	0.16U	0.16U	50
2,4-D	ug/L	0.081U	0.081U	0.081U	0.081U	70
Dalapon	ug/L	0.89U	0.89U	0.89U	0.89U	200
Dinoseb	ug/L	0.16U	0.16U	0.16U	0.16U	7
Pentachlorophenol	ug/L	0.030U	0.030U	0.030U	0.030U	1
Picloram	ug/L	0.094U	0.094U	0.094U	0.094U	500
Carbofuran	ug/L	0.32U	0.32U	0.32U	0.32U	40
Oxamyl	ug/L	0.41U	0.41U	0.41U	0.41U	200
Glyphosate	ug/L	2.1U	2.1U	2.1U	2.1U	700
Endothall	ug/L	2.7U	2.7U	2.7U	2.7U	100
Diquat	ug/L	0.15U	0.15U	0.15U	0.15U	20
Benzo(a)pyrene	ug/L	0.018U	0.018U	0.018U	0.019U	0.2
1,2-Dibromo-3-chloropropane	ug/L	0.0054U	0.0048U	0.0050U	0.0049U	0.2
Dibromoethane (EDB)	ug/L	0.0069U	0.0061U	0.0063U	0.0062U	0.02
SECONDARY DRINKING WATER STANDARDS						
Aluminum	mg/L	0.0092 I	0.0060 I	0.0058U	0.0089 I	0.2
Chloride	mg/L	46.3	48.1	81.3	40.3	250
Copper	mg/L	0.00093U	0.00093U	0.00093U	0.00093U	1
Iron	mg/L	0.35	0.29	0.020U	0.035 I	0.3
Manganese	mg/L	0.0098	0.0070	0.0051U	0.0039 I	0.05
Silver	mg/L	0.0025U	0.0025U	0.0025U	0.0025U	0.1
Sulfate	mg/L	9.7	6.9	7.5	6.1	250
Zinc	mg/L	0.010U	0.010U	0.010U	0.010U	5
Apparent Color	U	35.0	35.0	25.0	25.0	15
Threshold Odor Number	T.O.N	2.0	1.0U	10.0	1.0U	3
Foaming Agents (Surfactants)	mg/L	0.059U	0.11 I	0.059U	0.060 I	0.5
pH at 25 Degrees C	SU	7.6	8.8	7.5	7.5	6.5-8.5
Total Dissolved Solids	mg/L	183	346	442	330	500
RADIONUCLEOTIDES						
Gross Alpha	pCi/L	0.711U ± 0.455	0.247 ± 0.603	0.965U ± 0.636	1.68 ± 0.824	15
Radium-226	pCi/L	0.900U ± 0.465	-0.013 ± 0.504	0.418U ± 0.284	0.592 ± 0.416	5
Radium-228	pCi/L	0.658U ± 0.295	0.230 ± 0.290	0.877U ± 0.439	0.738U ± 0.344	5

NOTES:
MCL = Maximum Contaminant Level
N/A = Not Applicable
ug/L = micrograms per liter
mg/L = milligrams per liter
S.U. = standard units
C.U. = Color Units
T.O.N = Threshold Odor Number
pCi/L = picocuries per liter
U = reported value is below maximum detection limit
I = reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
BOLD: The sample exceeded the maximum contaminant level for that parameter

APPENDIX A
DRILLER'S WELL COMPLETION REPORT



STATE OF FLORIDA WELL COMPLETION REPORT

Southwest
Northwest
St. Johns River
South Florida
Suwannee River
DEP
Delegated Authority (If Applicable)

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

Date Stamp
Official Use Only

1. *Permit Number 1420-2012 *CUP/WUP Number 50-00365-W *DID Number BR25A 62-524 Delineation No.
2. *Number of permitted wells constructed, repaired, or abandoned 1 *Number of permitted wells not constructed, repaired, or abandoned 0
3. *Owner's Name Seacoast Utilities Authority 4. *Completion Date 12/07/2012 5. Florida Unique ID

6. 3250 Northlake BLVD. Lake Park, FL 33403
*Well Location - Address, Road Name or Number, City, ZIP

7. *County Palm Beach *Section 19 Land Grant *Township 42 *Range 43

8. Latitude Longitude
9. Data Obtained From: [] GPS [] Map [] Survey Datum: NAD 27 NAD 83 WGS 84

10. *Type of Work: [x] Construction [] Repair [] Modification [x] Abandonment

11. *Specify Intended Use(s) of Well(s)
[] Domestic [] Bottled Water Supply [] Public Water Supply (Limited Use/DOH) [x] Public Water Supply (Community or Non-Community/DEP) [] Class I Injection
[] Landscape Irrigation [] Recreation Area Irrigation [] Agricultural Irrigation [] Livestock [] Nursery Irrigation [] Commercial/Industrial [] Golf Course Irrigation
[] Site Investigations [] Monitoring [] Test [] Earth-Coupled Geothermal [] HVAC Supply [] HVAC Return
Class V Injection: [] Recharge [] Commercial/Industrial Disposal [] Aquifer Storage and Recovery [] Drainage
Remediation: [] Recovery [] Air Sparge [] Other (Describe)
[] Other (Describe)

12. *Drill Method [] Auger [] Cable Tool [x] Rotary [] Combination (Two or More Methods) [] Jetted [] Sonic
[] Horizontal Drilling [] Hydraulic Point (Direct Push) [] Other

13. *Measured Static Water Level 7.99 ft. Measured Pumping Water Level ft. After Hours at GPM
14. *Measuring Point (Describe) top of casing Which is 1.95 ft. X Above Below Land Surface *Flowing: [] Yes [x] No

15. *Casing Material: [] Black Steel [] Galvanized [x] PVC [] Stainless Steel [] Not Cased [] Other
16. *Total Well Depth 163 ft. Cased Depth ft. *Open Hole: From To ft. *Screen: From 118 To 163 ft. Slot Size 90

17. *Abandonment: [] Other (Explain)
From 0 ft. To 147 ft. No. of Bags 175 Seal Material (Check One): [] Neat Cement [] Bentonite [] Other 6% grout
From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other

18. *Surface Casing Diameter and Depth:
Dia 30 in. From 0 ft. To 71 ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [x] Otherdriven
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other

19. *Primary Casing Diameter and Depth:
Dia 24 in. From 0 ft. To 118 ft. No. of Bags 155 Seal Material (Check One): [x] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other

20. *Liner Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other

21. *Telescope Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other

22. Pump Type (If Known): [] Centrifugal [] Jet [] Submersible [] Turbine
Horsepower Pump Capacity (GPM)
Pump Depth ft. Intake Depth ft.
23. Chemical Analysis (When Required):
Iron ppm Sulfate ppm Chloride ppm
[] Laboratory Test [] Field Test Kit

24. Water Well Contractor:
*Contractor Name Guillermo Griffa *License Number 7309 E-mail Address Meg@awdfi.com
*Contractor's Signature *Driller's Name (Print or Type) Gerard Griffa

(I certify that the information provided in this report is accurate and true.)

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
 2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
 PHONE: (352) 796-7211 or (800) 423-1476
 WWW.SWFWMD.STATE.FL.US

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
 P.O. BOX 24680
 3301 GUN CLUB ROAD
 WEST PALM BEACH, FL 33416-4680
 PHONE: (561) 686-8800
 WWW.SFWMD.GOV

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 4049 REID STREET, PALATKA, FL 32178-1429
 PHONE: (386) 329-4500
 WWW.SJRWMD.COM

SUWANNEE RIVER WATER MANAGEMENT DISTRICT
 9225 CR 49
 LIVE OAK, FL 32060
 PHONE: (386) 362-1001 or (800) 226-1066 (Florida only)
 WWW.MYSUWANNEERIVER.COM

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
 152 WATER MANAGEMENT DR., HAVANA, FL 32333-4712
 (U.S. Highway 90, 10 miles west of Tallahassee)
 PHONE: (850) 539-5999
 WWW.NWFWMD.STATE.FL.US

*DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zone. Grain Size: F=Fine, M=Medium, and C=Coarse)						
From	0	ft.	To	15	ft.	Color _____
						Grain Size (F, M, C) <u>F</u>
						Material <u>sand</u>
From	15	ft.	To	40	ft.	Color _____
						Grain Size (F, M, C) <u>F</u>
						Material <u>sand some shell</u>
From	40	ft.	To	70	ft.	Color _____
						Grain Size (F, M, C) <u>M</u>
						Material <u>sand/shell 50/50</u>
From	70	ft.	To	106	ft.	Color _____
						Grain Size (F, M, C) _____
						Material <u>shell, sandy clay, silvers, some rock</u>
From	106	ft.	To	118	ft.	Color <u>grayish</u>
						Grain Size (F, M, C) _____
						Material <u>limestone with shell</u>
From	118	ft.	To	163	ft.	Color <u>tan/ light orange</u>
						Grain Size (F, M, C) _____
						Material <u>limestone</u>
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____

Comments: _____

***Detailed Site Map of Well Location**





STATE OF FLORIDA WELL COMPLETION REPORT

Date Stamp
Official Use Only

Southwest
Northwest
St. Johns River
South Florida
Suwannee River
DEP
Delegated Authority (If Applicable)

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

1. *Permit Number 1518-2012 *CUP/WUP Number 50-00365-W *DID Number NPB-6A 62-524 Delineation No.
2. *Number of permitted wells constructed, repaired, or abandoned 1 *Number of permitted wells not constructed, repaired, or abandoned 0
3. *Owner's Name Seacoast Utilities Authority 4. *Completion Date 12/11/12 5. Florida Unique ID
6. 1156 Richard Rd. Lake Park, FL 33403
*Well Location - Address, Road Name or Number, City, ZIP
7. *County Palm Beach *Section 18 Land Grant *Township 42 *Range 43
8. Latitude Longitude
9. Data Obtained From: GPS Map Survey Datum: NAD 27 NAD 83 WGS 84
10. *Type of Work: Construction Repair Modification Abandonment
11. *Specify Intended Use(s) of Well(s)
12. *Drill Method Auger Cable Tool Rotary Combination (Two or More Methods) Jetted Sonic
13. *Measured Static Water Level 12.46 ft. Measured Pumping Water Level ft. After Hours at GPM
14. *Measuring Point (Describe) top of casing Which is 2.12 ft. X Above Below Land Surface *Flowing: Yes No
15. *Casing Material: Black Steel Galvanized PVC Stainless Steel Not Cased Other
16. *Total Well Depth ft. Cased Depth ft. *Open Hole: From To ft. *Screen: From 135 To 170 ft. Slot Size 90
17. *Abandonment: Other (Explain)
18. *Surface Casing Diameter and Depth:
19. *Primary Casing Diameter and Depth:
20. *Liner Casing Diameter and Depth:
21. *Telescope Casing Diameter and Depth:
22. Pump Type (If Known):
23. Chemical Analysis (When Required):
24. Water Well Contractor:
*Contractor Name Guillermo Griffa *License Number 7309 E-mail Address Meg@awdfi.com
*Contractor's Signature *Driller's Name (Print or Type) Gerard Griffa

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
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 152 WATER MANAGEMENT DR., HAVANA, FL 32333-4712
 (U.S. Highway 90, 10 miles west of Tallahassee)
 PHONE: (850) 539-5999
 WWW.NWFWMD.STATE.FL.US

*DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zone. Grain Size: F=Fine, M=Medium, and C=Coarse)						
From	0	ft.	To	12	ft.	Color _____
						Grain Size (F, M, C) F
						Material sand
From	12	ft.	To	35	ft.	Color _____
						Grain Size (F, M, C) F
						Material sand with some shell
From	35	ft.	To	62	ft.	Color _____
						Grain Size (F, M, C) M
						Material sand/ shell 65/35%
From	62	ft.	To	100	ft.	Color _____
						Grain Size (F, M, C) _____
						Material shell with rock and sand layers
From	100	ft.	To	122	ft.	Color _____
						Grain Size (F, M, C) _____
						Material mostly shell with slivers of sandy clay
From	122	ft.	To	135	ft.	Color grey/ tan
						Grain Size (F, M, C) _____
						Material shell, sand, rock layers, limestone
From	135	ft.	To	170	ft.	Color tan/ orange
						Grain Size (F, M, C) _____
						Material limestone
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____

Comments: _____

***Detailed Site Map of Well Location**





STATE OF FLORIDA WELL COMPLETION REPORT

Southwest
Northwest
St. Johns River
South Florida
Suwannee River
DEP
Delegated Authority (If Applicable)

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

Date Stamp
Official Use Only

1. *Permit Number 1519-2012 *CUP/WUP Number 50-00365-W *DID Number NPB-5A 62-524 Delineation No.

2. *Number of permitted wells constructed, repaired, or abandoned 1 *Number of permitted wells not constructed, repaired, or abandoned 0

3. *Owner's Name Seacoast Utilities Authority 4. *Completion Date 2/01/2013 5. Florida Unique ID

6. 1156 Richard Rd. Lake Park, FL 33403
*Well Location - Address, Road Name or Number, City, ZIP

7. *County Palm Beach *Section 18 Land Grant *Township 42 *Range 43

8. Latitude Longitude

9. Data Obtained From: [] GPS [] Map [] Survey Datum: NAD 27 NAD 83 WGS 84

10. *Type of Work: [x] Construction [] Repair [] Modification [] Abandonment

11. *Specify Intended Use(s) of Well(s)
[] Domestic [] Landscape Irrigation [] Agricultural Irrigation [] Site Investigations
[] Bottled Water Supply [] Recreation Area Irrigation [] Livestock [] Monitoring
[] Public Water Supply (Limited Use/DOH) [] Nursery Irrigation [] Test
[x] Public Water Supply (Community or Non-Community/DEP) [] Commercial/Industrial [] Earth-Coupled Geothermal
[] Class I Injection [] Golf Course Irrigation [] HVAC Supply
[] HVAC Return
Class V Injection: [] Recharge [] Commercial/Industrial Disposal [] Aquifer Storage and Recovery [] Drainage
Remediation: [] Recovery [] Air Sparge [] Other (Describe)
[] Other (Describe)

12. *Drill Method: [] Auger [] Cable Tool [x] Rotary [] Combination (Two or More Methods) [] Jetted [] Sonic
[] Horizontal Drilling [] Hydraulic Point (Direct Push) [] Other

13. *Measured Static Water Level 13.06 ft. Measured Pumping Water Level ft. After Hours at GPM

14. *Measuring Point (Describe) top of casing Which is 1.91 ft. X Above Below Land Surface *Flowing: [] Yes [] No

15. *Casing Material: [] Black Steel [] Galvanized [x] PVC [] Stainless Steel [] Not Cased [] Other

16. *Total Well Depth 175 ft. Cased Depth ft. *Open Hole: From To ft. *Screen: From 135 To 175 ft. Slot Size 90

17. *Abandonment: [] Other (Explain)
From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite Other
From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite Other

18. *Surface Casing Diameter and Depth:
Dia 30 in. From 0 ft. To 52 ft. No. of Bags 105 Seal Material (Check One): [x] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other

19. *Primary Casing Diameter and Depth:
Dia 24 in. From 0 ft. To 135 ft. No. of Bags 195 Seal Material (Check One): [x] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other

20. *Liner Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other

21. *Telescope Casing Diameter and Depth:
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other
Dia in. From ft. To ft. No. of Bags Seal Material (Check One): [] Neat Cement [] Bentonite [] Other

22. Pump Type (If Known):
[] Centrifugal [] Jet [] Submersible [] Turbine
Horsepower Pump Capacity (GPM)
Pump Depth ft. Inlake Depth ft.

23. Chemical Analysis (When Required):
Iron ppm Sulfate ppm Chloride ppm
[] Laboratory Test [] Field Test Kit

24. Water Well Contractor:
*Contractor Name Guillermo Griffa *License Number 7309 E-mail Address Meg@awdfl.com

*Contractor's Signature *Driller's Name (Print or Type) Gerard Griffa

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
 2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
 PHONE: (352) 796-7211 or (800) 423-1476
 WWW.SWFWMD.STATE.FL.US

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
 P.O. BOX 24680
 3301 GUN CLUB ROAD
 WEST PALM BEACH, FL 33416-4680
 PHONE: (561) 686-8800
 WWW.SFWMD.GOV

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 4049 REID STREET, PALATKA, FL 32178-1429
 PHONE: (386) 329-4500
 WWW.SJRWMD.COM

SUWANNEE RIVER WATER MANAGEMENT DISTRICT
 9225 CR 49
 LIVE OAK, FL 32060
 PHONE: (386) 362-1001 or (800) 226-1066 (Florida only)
 WWW.MYSUWANNEERIVER.COM

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
 152 WATER MANAGEMENT DR., HAVANA, FL 32333-4712
 (U.S. Highway 90, 10 miles west of Tallahassee)
 PHONE: (850) 539-5999
 WWW.NWFWMD.STATE.FL.US

*DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zone. Grain Size: F=Fine, M=Medium, and C=Coarse)						
From	0	ft.	To	15	ft.	Color _____
						Grain Size (F, M, C) <u>F</u>
						Material <u>sand</u>
From	15	ft.	To	45	ft.	Color _____
						Grain Size (F, M, C) <u>F</u>
						Material <u>sand with some shell</u>
From	45	ft.	To	64	ft.	Color _____
						Grain Size (F, M, C) <u>M</u>
						Material <u>sand/shell 60/40</u>
From	64	ft.	To	98	ft.	Color _____
						Grain Size (F, M, C) _____
						Material <u>shell with rock and sand layers</u>
From	98	ft.	To	124	ft.	Color _____
						Grain Size (F, M, C) _____
						Material <u>shell, rock layers, some clay</u>
From	124	ft.	To	135	ft.	Color <u>grey</u>
						Grain Size (F, M, C) _____
						Material <u>shell, rock, limestone</u>
From	135	ft.	To	175	ft.	Color <u>tan/orange</u>
						Grain Size (F, M, C) _____
						Material <u>limestone</u>
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____

Comments: _____

***Detailed Site Map of Well Location**





STATE OF FLORIDA WELL COMPLETION REPORT

Southwest
Northwest
St. Johns River
✓ South Florida
Suwannee River
DEP

PLEASE, FILL OUT ALL APPLICABLE FIELDS
(*Denotes Required Fields Where Applicable)

Date Stamp

Delegated Authority (If Applicable) _____

Official Use Only

1. *Permit Number 1520-2012 *CUP/WUP Number 50-00365-W *DID Number BR-22A 62-524 Delineation No. _____

2. *Number of permitted wells constructed, repaired, or abandoned 1 *Number of permitted wells not constructed, repaired, or abandoned 0

3. *Owner's Name Seacoast Utilities Authority 4. *Completion Date 12/12/12 5. Florida Unique ID _____

6. 1156 Richard Rd. Lake Park, FL 33403
*Well Location - Address, Road Name or Number, City, ZIP

7. County Palm Beach *Section 19 Land Grant _____ *Township 42 *Range 43

8. Latitude _____ Longitude _____

9. Data Obtained From: GPS Map Survey Datum: _____ NAD 27 _____ NAD 83 _____ WGS 84

10. *Type of Work: Construction Repair Modification Abandonment

11. *Specify Intended Use(s) of Well(s)
 Domestic Landscape Irrigation Agricultural Irrigation Site Investigations
 Bottled Water Supply Recreation Area Irrigation Livestock Monitoring
 Public Water Supply (Limited Use/DOH) Nursery Irrigation Test
 Public Water Supply (Community or Non-Community/DEP) Commercial/Industrial Earth-Coupled Geothermal
 Class I Injection Golf Course Irrigation HVAC Supply
Class V Injection: Recharge Commercial/Industrial Disposal Aquifer Storage and Recovery Drainage
Remediation: Recovery Air Sparge Other (Describe) _____
 Other (Describe) _____

12. *Drill Method: Auger Cable Tool Rotary Combination (Two or More Methods) Jetted Sonic
 Horizontal Drilling Hydraulic Point (Direct Push) Other _____

13. *Measured Static Water Level 5.21 ft. Measured Pumping Water Level _____ ft. After _____ Hours at _____ GPM

14. *Measuring Point (Describe) top of casing Which is 1.71 ft. X Above Below Land Surface *Flowing: Yes No

15. *Casing Material: Black Steel Galvanized PVC Stainless Steel Not Cased Other _____

16. *Total Well Depth 168 ft. Cased Depth _____ ft. *Open Hole: From _____ To _____ ft. *Screen: From 130 To 168 ft. Slot Size 90

17. *Abandonment: Other (Explain) _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____
From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____

18. *Surface Casing Diameter and Depth:
Dia 30 in. From 0 ft. To 69 ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other driven
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other _____

19. *Primary Casing Diameter and Depth:
Dia 24 in. From 0 ft. To 130 ft. No. of Bags 135 Seal Material (Check One): Neat Cement Bentonite Other
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other

20. *Liner Casing Diameter and Depth:
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other

21. *Telescope Casing Diameter and Depth:
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other
Dia _____ in. From _____ ft. To _____ ft. No. of Bags _____ Seal Material (Check One): Neat Cement Bentonite Other

22. Pump Type (If Known): Centrifugal Jet Submersible Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump Depth _____ ft. Intake Depth _____ ft.
23. Chemical Analysis (When Required):
Iron _____ ppm Sulfate _____ ppm Chloride _____ ppm
 Laboratory Test Field Test Kit

24. Water Well Contractor:
*Contractor Name Guillermo Griffa *License Number 7309 E-mail Address Meg@awdff.com

*Contractor's Signature Guillermo Griffa *Driller's Name (Print or Type) Gerard Griffa
(I certify that the information provided in this report is accurate and true.)

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
 2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
 PHONE: (352) 796-7211 or (800) 423-1476
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 P.O. BOX 24680
 3301 GUN CLUB ROAD
 WEST PALM BEACH, FL 33416-4680
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ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 4049 REID STREET, PALATKA, FL 32178-1429
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SUWANNEE RIVER WATER MANAGEMENT DISTRICT
 9225 CR 49
 LIVE OAK, FL 32060
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 152 WATER MANAGEMENT DR., HAVANA, FL 32333-4712
 (U.S. Highway 90, 10 miles west of Tallahassee)
 PHONE: (850) 539-5999
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*DRILL CUTTINGS LOG (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zone. Grain Size: F=Fine, M=Medium, and C=Coarse)						
From	0	ft.	To	12	ft.	Color _____
						Grain Size (F, M, C) F
						Material sand
From	12	ft.	To	26	ft.	Color _____
						Grain Size (F, M, C) F
						Material sand with some shell
From	26	ft.	To	55	ft.	Color _____
						Grain Size (F, M, C) M
						Material sand/shell 60/40
From	55	ft.	To	100	ft.	Color _____
						Grain Size (F, M, C) _____
						Material shell with rock and sand layers
From	100	ft.	To	120	ft.	Color _____
						Grain Size (F, M, C) M,C
						Material mostly shell
From	120	ft.	To	130	ft.	Color grey
						Grain Size (F, M, C) _____
						Material limestone with some shell
From	130	ft.	To	160	ft.	Color tan
						Grain Size (F, M, C) _____
						Material hard limestone
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____
From	_____	ft.	To	_____	ft.	Color _____
						Grain Size (F, M, C) _____
						Material _____

Comments: _____

***Detailed Site Map of Well Location**



APPENDIX B LITHOLOGIC LOGS

Lithologic Log
Seacoast Utility Authority
Production Well NPB-5C

Depth (feet bls)	Lithologic Description
0 - 2	SAND (60%), pale yellowish brown (10YR 6/2), unconsolidated, very fine sand to fine sand sized quartz, well rounded, well sorted; ORGANICS (40%), brownish black (5YR 2/1), decomposed organic material.
2-5	SAND (100%), pale yellowish brown (10YR 6/2) to very light gray (N8), unconsolidated, very fine sand to fine sand sized quartz, sub-rounded to well rounded, well sorted.
5-11	SAND (100%), pale brown (5YR 5/2) to pale yellowish brown (10YR 6/2), unconsolidated, medium sand to coarse sand sized quartz grains, sub-angular to sub-rounded, well sorted. Overall, minor quantities of organics present.
11-15	SAND (100%), very pale orange (10YR 8/2), unconsolidated, very fine sand to medium sand sized quartz grains, sub-rounded, well sorted. Poorly lithified sand layer at 13ft.
15 - 24	CLAY AND SAND (100%), light olive gray (5Y 5/2), unconsolidated, clay to silt sized mud, minor silt to very fine sand sized quartz and phosphate grains, moderately cohesive.
24-27	CLAY (100%), light olive gray (5Y 6/1) to pale olive (10Y 6/2), unconsolidated, clay to silt sized mud, minor silt to very fine sand sized quartz, undifferentiated shell fragments. Overall, thin interbedded layers of shell hash at 24' decreasing with depth to 26'. From 26'-27' shell content increased.
27-40	SHELL HASH AND SAND (100%), very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), unconsolidated, medium sand to very coarse sand sized undifferentiated shell fragments, medium sand to coarse sand sized quartz grains, sub-angular to sub-rounded, poorly sorted.
40 - 53	SHELL HASH AND SAND (90%), to light gray (N7) to light bluish gray (5B 7/1) to yellowish gray (5Y 8/1), unconsolidated, medium sand to very coarse sand sized undifferentiated shell fragments, medium sand to coarse sand sized quartz and phosphate grains, sub-angular to sub-rounded, poorly sorted; CLAY (10%), light olive gray (5Y 6/1) to pale olive (10Y 6/2), unconsolidated, clay to silt sized mud, poorly cohesive. Overall, increased quartz content and decreased phosphate content compared to 27'-40'.
53 - 75	SHELL HASH AND SAND (100%), very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), unconsolidated, medium sand to very coarse undifferentiated shell fragments, fine sand sized quartz grains, sub-rounded, poorly sorted.
75-115	SHELL HASH AND SAND (100%), yellowish gray (5Y 8/1) to medium bluish gray (5B 5/1) to medium light gray (N6), unconsolidated, medium sand to pebble sized undifferentiated shell fragments, fine sand to some pebble sized quartz and phosphate grains, sub-angular, poorly sorted.
115-135	SHELL HASH AND SAND (100%), same as above. Overall, some poorly lithified shell fragments.
135-150	SHELL HASH AND SAND (60%), same as above; LIMESTONE (40%), light olive gray (5Y 6/1) to pale yellowish brown (10YR 6/2), poorly lithified, granular texture, carbonate cemented fine sand to medium sand sized quartz and minor undifferentiated shell fragments, very soft, friable, moderate permeability.
150-152	LIMESTONE (100%), light olive gray (5Y 6/1) to pale yellowish brown (10YR 6/2) to very pale orange (10 YR 8/2), moderately lithified, granular texture, carbonate cemented fine sand to medium sand sized quartz and minor undifferentiated shell fragments, moderately to well cemented, moderate permeability.
152-158	LIMESTONE (100%), very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), moderately lithified, granular texture, carbonate cemented fine sand to medium sand sized quartz, soft to moderate hardness, moderately good carbonate cementation, moderate permeability.
158-178	LIMESTONE (100%), very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), poorly lithified, granular texture, carbonate cemented fine sand to medium sand sized quartz and carbonate grains, soft, poor carbonate cementation, minor calcite crystallization, moderate intergranular porosity, moderate permeability. Overall, interbedded thin marl layers.
178-192	LIMESTONE (100%), very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), moderately lithified, fine sand granular texture, moderately hard, moderate carbonate cementation,

minor calcite recrystallization, moderate intergranular permeability.

192-210 LIMESTONE (60%), light olive gray (5Y 6/1) to yellowish gray (5Y 8/1), well lithified, granular texture, well carbonate cemented fine sand to medium sand sized quartz and minor undifferentiated shell fragments, moderately hard, moderate permeability; LIMESTONE (30%), same as above; SHELL (10%), very pale orange (10YR 8/2), unconsolidated, medium sand sized undifferentiated shell fragments.

feet. bls - feet below land surface

Lithologic Log
Seacoast Utility Authority
Production Well NPB-6B

Depth (feet bls)	Lithologic Description
0 - 5	SAND (100%), pale yellowish brown (10YR 6/2), unconsolidated, very fine sand to fine sand sized quartz, well rounded, well sorted. Overall, trace organic material present.
5-10	SAND (100%), pale yellowish brown (10YR 6/2) to moderate yellowish brown (10YR 5/4), unconsolidated, fine sand sized quartz grains, sub-rounded to well rounded, well sorted. Overall, moderate organic material present.
10-20	SAND (100%), pale brown (5YR 5/2) to pale yellowish brown (10YR 6/2), unconsolidated, fine sand to medium sand sized quartz grains, minor fine sand sized undifferentiated shell fragments, sub-angular to sub-rounded, well sorted. Overall, minor organic material present.
20-40	SHELL HASH AND SAND (100%), very pale orange (10YR 8/2) to medium light gray (N6), unconsolidated, medium sand to coarse sand sized undifferentiated shell fragments, fine sand sized quartz grains, sub-angular, poor to moderately sorted. Overall, minor organic material present.
40-45	SAND (100%), pale brown (5YR 5/2) to pale yellowish brown (10YR 6/2), unconsolidated, fine sand to medium sand sized quartz grains, minor fine sand sized undifferentiated shell fragments, sub-angular to sub-rounded, well sorted.
45-57	SHELL HASH AND SAND (100%), very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), unconsolidated, medium sand to coarse sand sized undifferentiated shell fragments, fine sand sized quartz grains, sub-angular, poor to moderately sorted. Overall, minor organic material present and interbedded thin silt layers.
57-68	LIMESTONE (100%), medium light gray (N6), poorly lithified, granular texture, carbonate cemented fine sand to medium sand sized undifferentiated shell fragments, soft, friable, moderately well permeability. Overall, moderate organic material present.
68-72	SHELL HASH AND SAND (80%), pale yellowish brown (10YR 6/2) to yellowish gray (5Y 8/1), unconsolidated, medium sand to very coarse sand sized undifferentiated shell fragments, fine sand to medium sand sized quartz, sub-angular to sub-rounded, poorly sorted; LIMESTONE (20%), same as above.
72-108	SHELL HASH AND SAND (90%), medium bluish gray (5B 5/1) to pale yellowish brown (10YR 6/2) to yellowish gray (5Y 8/1), unconsolidated, medium sand to very coarse sand sized undifferentiated shell fragments, fine sand to medium sand sized quartz, sub-angular to sub-rounded, poorly sorted; SANDSTONE (10%), medium gray (N5), moderately well lithified, fine granular texture, fine sand sized quartz and undifferentiated shell fragments.
108-111	SHELL HASH (90%), same as above; MARL (10%), medium light gray (N6), unconsolidated, clay to fine grained calcareous mud.
111-128	SHELL HASH AND SAND (100%), same as above.
128-136	SHELL HASH AND SAND (60%), same as above; LIMESTONE (40%), light olive gray (5Y 6/1) to pale yellowish brown (10YR 6/2), poorly lithified, granular texture, carbonate cemented fine sand to medium sand sized quartz and minor undifferentiated shell fragments, granular texture, very soft, friable, moderate permeability.
136-145	MARL (90%), yellowish gray (5Y 8/1), unconsolidated, clay to fine grained calcareous mud, minor fine sand sized phosphate grains; SHELL HASH AND SAND (10%), same as above.
145-153	SHELL HASH AND SAND (90%), same as above; MARL (20%), same as above.
153-187	LIMESTONE (100%), very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), poorly lithified, granular texture, carbonate cemented fine sand to medium sand sized quartz and carbonate grains, soft, poor carbonate cementation, minor calcite crystallization, moderate intergranular porosity, moderate permeability. Overall, interbedded thin marl layers.
187-210	LIMESTONE (70%), light olive gray (5Y 6/1) to yellowish gray (5Y 8/1), well lithified, granular texture, well carbonate cemented fine sand to medium sand sized quartz and minor undifferentiated shell fragments, moderately hard, moderate permeability; LIMESTONE (20%), same as above; SHELL (10%), very pale orange (10YR 8/2), unconsolidated, medium sand sized undifferentiated shell fragments. Overall, interbedded thin marl layers.

feet. bls - feet below land surface

Lithologic Log
Seacoast Utility Authority
Production Well BR-22B

Depth (feet bls)	Lithologic Description
0-10	SAND (100%), moderate yellowish brown (10YR 5/4) to very pale orange (10YR 8/2), unconsolidated, fine sand to medium sand sized quartz grains, trace undifferentiated shell fragments, sub-angular, well sorted.
10-38	SAND AND SHELL (100%), very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2) to yellowish gray (5Y8/1), unconsolidated, medium sand to very coarse sand sized undifferentiated shell fragments, fine sand sized quartz grains, sub-angular to sub-rounded, poorly sorted.
38-54	SAND (90%), yellowish gray (5Y 8/1), unconsolidated, fine sand sized quartz grains, sub-angular to rounded, well sorted sand; SHELL (10%), very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), unconsolidated, medium sand to very coarse sand sized undifferentiated shell fragments.
54-61	SAND AND SHELL (100%), yellowish gray (5Y 8/1) to very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), unconsolidated, medium sand to very coarse sand sized undifferentiated shell fragments, fine sand sized quartz grains, sub-angular to rounded, well sorted sand. Overall, predominantly shell fragments.
61-65	SAND AND SHELL (90%), yellowish gray (5Y 8/1) to very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), unconsolidated, fine sand sized quartz grains, medium sand to very coarse sand sized undifferentiated shell fragments, sub-angular to rounded, moderately sorted to well sorted sand; LIMESTONE (10%), yellowish gray (5Y 8/1) to very pale orange (10YR 8/2), poorly lithified, soft, carbonate cemented fine sand to medium sand sized quartz grains and shell fragments, granular texture.
65-77	SAND AND SHELL (50%), yellowish gray (5Y 8/1) to very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), unconsolidated, fine sand sized quartz grains, medium sand to very coarse sand sized undifferentiated shell fragments, sub-angular to rounded, moderately sorted to well sorted sand; LIMESTONE (50%), yellowish gray (5Y 8/1) to very pale orange (10YR 8/2), poorly lithified, soft, carbonate cemented fine sand to medium sand sized quartz grains and shell fragments, granular texture.
77-87	SAND AND SHELL (100%), yellowish gray (5Y 8/1) to pale yellowish brown (10YR 6/2) to medium light gray (N6), unconsolidated, fine sand sized quartz grains, medium sand to very coarse sand sized undifferentiated shell fragments, sub-angular to rounded, moderately sorted to well sorted sand. Some phosphate grains.
87-89	LIMESTONE (100%), yellowish gray (5Y 8/1) to very pale orange (10YR 8/2), poorly lithified, soft, carbonate cemented fine sand to medium sand sized quartz grains and shell fragments, granular texture.
89-102	SAND AND SHELL (100%), yellowish gray (5Y 8/1) to light gray (N7) to medium gray (N5), unconsolidated, fine sand sized to coarse sand sized quartz grains, medium sand to fine gravel sized undifferentiated shell fragments, sub-angular to sub-rounded, poorly sorted. Overall, increasing shell content with depth.
102 -107	SANDSTONE (100%), light olive gray (5Y 6/1), poor to moderately lithified, soft to medium hardness, carbonate cemented fine sand sized quartz and shell fragments, sub-angular to sub-rounded, moderate permeability.
107-133	SAND AND SHELL (60%), very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2) to light gray (N7), unconsolidated, medium sand to very coarse sand sized undifferentiated shell fragments, fine sand to medium sand sized quartz grains, sub-angular to sub-rounded, moderate to poorly sorted; LIMESTONE (40%), yellowish gray (5Y 8/1) to medium gray (N5), moderate to poorly lithified, moderately soft, carbonate cemented fine sand to medium sand sized quartz grains and shell fragments, granular texture, moderate permeability.
133-139	MARL (100%), dark yellowish brown (10YR 4/2) to brownish gray (5YR 4/1), unconsolidated, clay to fine grained calcareous mud, undifferentiated shell fragments.
139-143	LIMESTONE (100%), yellowish gray (5Y 8/1) to medium gray (N5), moderate to poorly lithified,

moderately soft, carbonate cemented fine sand to medium sand sized quartz grains and shell fragments, granular texture, moderate permeability.

143-145	SAND AND SHELL (100%), very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2) to light gray (N7), unconsolidated, medium sand to very coarse sand sized undifferentiated shell fragments, fine sand to medium sand sized quartz grains, sub-angular to sub-rounded, moderate to poorly sorted.
145-154	MARL (100%), dark yellowish brown (10YR 4/2) to brownish gray (5YR 4/1), unconsolidated, clay to fine grained calcareous mud, undifferentiated shell fragments.
154-159	MARL (80%), dark yellowish brown (10YR 4/2) to brownish gray (5YR 4/1), unconsolidated, clay to fine grained calcareous mud, undifferentiated shell fragments; SHELL (20%), very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), unconsolidated, medium sand to coarse sand grained undifferentiated shell fragments.
159-160	MARL (100%), brownish gray (5YR 4/1), to brownish black (5YR 2/1), unconsolidated, clay to fine grained calcareous mud, undifferentiated shell fragments.
160-170	LIMESTONE (100%), yellowish gray (5Y 8/1) to very pale orange (10YR 8/2), moderately lithified, moderately hard, carbonate cemented fine sand sized quartz grains and shell fragments, granular texture, intergranular porosity, moderate permeability.
170-197	LIMESTONE (100%), yellowish gray (5Y 8/1, 5Y 7/2) to light gray (N7), moderately lithified, moderately hard, carbonate cemented fine sand sized quartz grains, phosphate grains, and shell fragments, granular texture, intergranular porosity, moderate permeability. Overall, interbedded thin layers of marl.
197-198	SAND AND SHELL (100%), pale yellowish brown (10YR 6/2) to light gray (N7), unconsolidated, medium sand to very coarse sand sized undifferentiated shell fragments, fine sand to medium sand sized quartz grains, sub-angular to sub-rounded, moderate to poorly sorted.
198-200	LIMESTONE (100%), light olive gray (5Y 6/1), moderately to well lithified, moderately hard, carbonate cemented fine sand to medium sand sized quartz grains and undifferentiated shell fragments, granular texture, some moldic porosity.

feet. bls - feet below land surface

Lithologic Log
Seacoast Utility Authority
Production Well BR-25B

Depth (feet bls)	Lithologic Description
0-10	SAND (100%), pale yellowish brown (10YR 6/2), unconsolidated, medium sand to coarse sand sized quartz grains, moderate fine sand to coarse sand sized undifferentiated shell fragments, sub-angular, poorly sorted. Overall, moderate organic material present.
10-20	SAND (100%), pale yellowish brown (10YR 6/2), unconsolidated, fine sand to medium sand sized quartz grains, sub-angular, well sorted. Overall, trace organic material.
20-30	SAND (100%), very light gray (N8) to grayish orange (10YR 7/4), unconsolidated, medium sand to very coarse sand sized quartz grains, sub angular to sub-rounded, moderately well sorted.
30-42	SHELL (70%), very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), unconsolidated, medium sand to very coarse sand sized undifferentiated shell fragments; SAND (30%), yellowish gray (5Y 8/1), unconsolidated, fine sand sized quartz grains, sub-angular to rounded, well sorted sand.
42-67	SAND (100%), very light gray (N8), unconsolidated, very fine sand to medium sand sized quartz grains, trace very fine sand sized phosphate grains, sub-rounded, well sorted.
67-80	SAND AND SHELL (100%), yellowish gray (5Y 8/1) to very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), unconsolidated, medium sand to very coarse sand sized undifferentiated shell fragments, fine sand sized quartz grains, sub-angular, poor to moderately sorted. Overall, predominantly shell fragments with decreasing sand content with depth.
80-105	SAND AND SHELL (80%), yellowish gray (5Y 8/1) to medium light gray (N6) to light gray (N7), unconsolidated, fine sand sized quartz grains, medium sand to pebble sized undifferentiated shell fragments, sub-angular to sub-rounded sand, rounded shell fragments, poorly sorted; LIMESTONE (20%), medium light gray (N6) to light gray (N7), poorly lithified, soft, carbonate cemented fine sand to medium sand sized quartz grains and shell fragments, granular texture, moderate intergranular porosity, moderate permeability. Overall, interbedded limestone and sand and shell layers.
105-119	LIMESTONE (70%), medium dark gray (N4) to medium bluish gray (5B 5/1) to light olive gray (5Y 5/2), moderately well lithified, hard, carbonate cemented fine sand to medium sand sized undifferentiated shell fragments and quartz grains, granular texture, secondary porosity; SAND AND SHELL (30%), yellowish gray (5Y 8/1) to very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), unconsolidated, fine sand sized quartz grains, medium sand to gravel sized undifferentiated shell fragments, sub-angular to rounded, poorly sorted.
80-119	SAND AND SHELL (100%), yellowish gray (5Y 8/1) to pale yellowish brown (10YR 6/2) to medium light gray (N6), unconsolidated, fine sand sized quartz grains, medium sand to very coarse sand sized undifferentiated shell fragments, some phosphate present, sub-angular to rounded, moderately sorted to well sorted sand.
119-143	SAND AND SHELL (100%), yellowish gray (5Y 8/1) to very pale orange (10YR 8/2) to light gray (N7), unconsolidated, fine sand sized to coarse sand sized quartz grains, medium sand to fine gravel sized undifferentiated shell fragments, sub-angular to sub-rounded, poorly sorted. Overall, increasing shell content with depth.
143-155	LIMESTONE (80%), medium light gray (N6) to light gray (N7) to pale yellowish brown (10YR 6/2), moderately well lithified, hard, carbonate cemented fine sand to medium sand sized undifferentiated shell fragments and quartz grains, granular texture, secondary porosity; SAND AND SHELL (20%), yellowish gray (5Y 8/1) to light gray (N7) to pale yellowish brown (10YR 6/2), unconsolidated, fine sand sized quartz grains, medium sand to gravel sized undifferentiated shell fragments, sub-angular to rounded, poorly sorted.
155-193	LIMESTONE (100%), very pale orange (10YR 8/2) to yellowish gray (5Y 8/1), moderately lithified, soft to medium hardness, granular texture, carbonate cemented fine sand sized quartz, sub-angular to sub-rounded, moderate permeability. Overall, interbedded with thin marl, sand and shell, and sandy limestone layers.
193-202	LIMESTONE (70%), yellowish gray (5Y 7/2), well lithified, hard, granular texture, carbonate

cemented fine sand sized quartz grains, moderate permeability; SAND AND SHELL (30%), pale yellowish brown (10YR 6/2) to light gray (N7) yellowish gray (5Y 7/2), unconsolidated, fine sand to medium sand sized undifferentiated shell fragments, fine sand to medium sand sized quartz grains, sub-angular, poorly sorted. Overall, interbedded limestone, sand and shell beds.

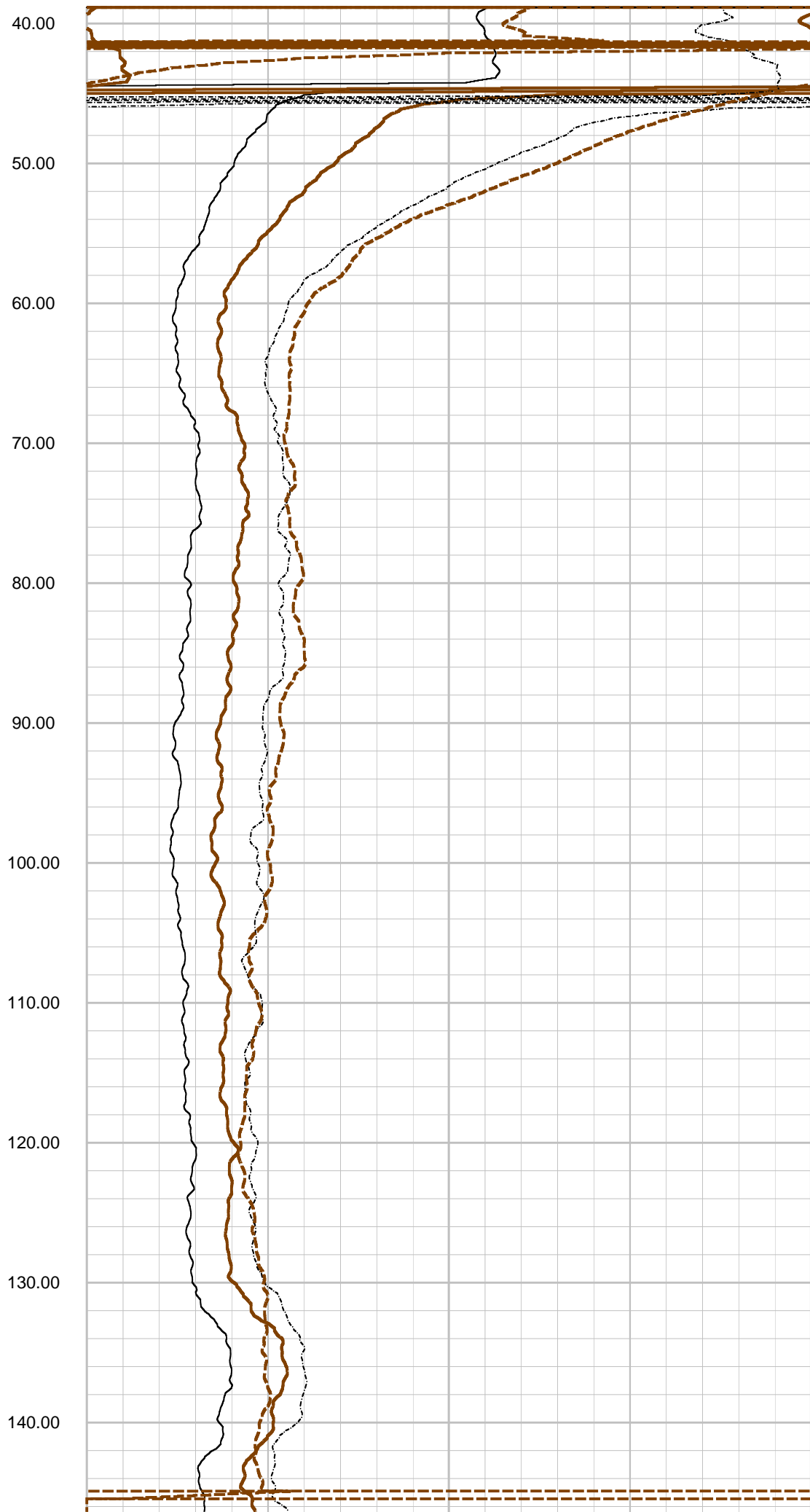
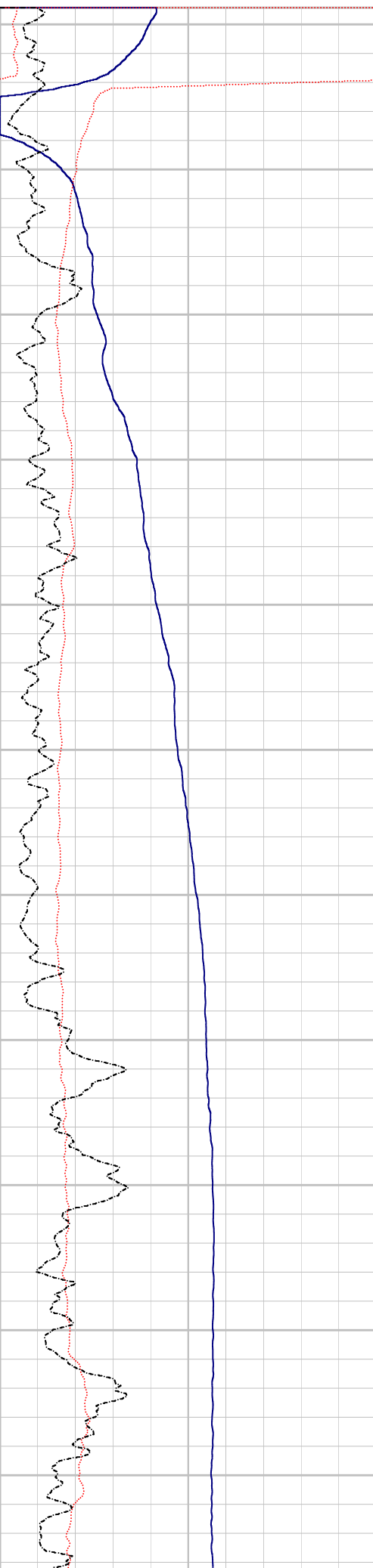
feet. bls - feet below land surface

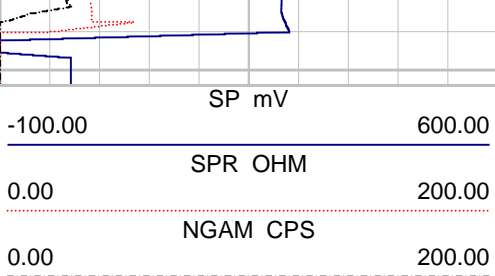
APPENDIX C

GEOPHYSICAL & WELL VIDEO LOGS

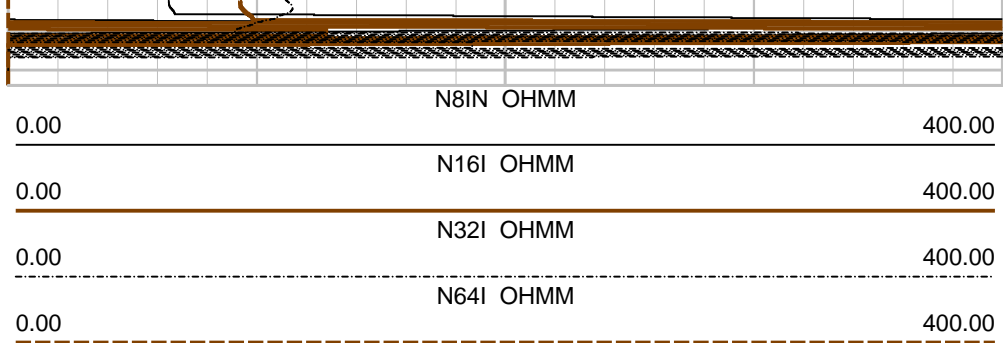
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0.00	SPR OHM	200.00
0.00	NGAM CPS	200.00

0.00	N8IN OHMM	400.00
0.00	N16I OHMM	400.00
0.00	N32I OHMM	400.00
0.00	N64I OHMM	400.00





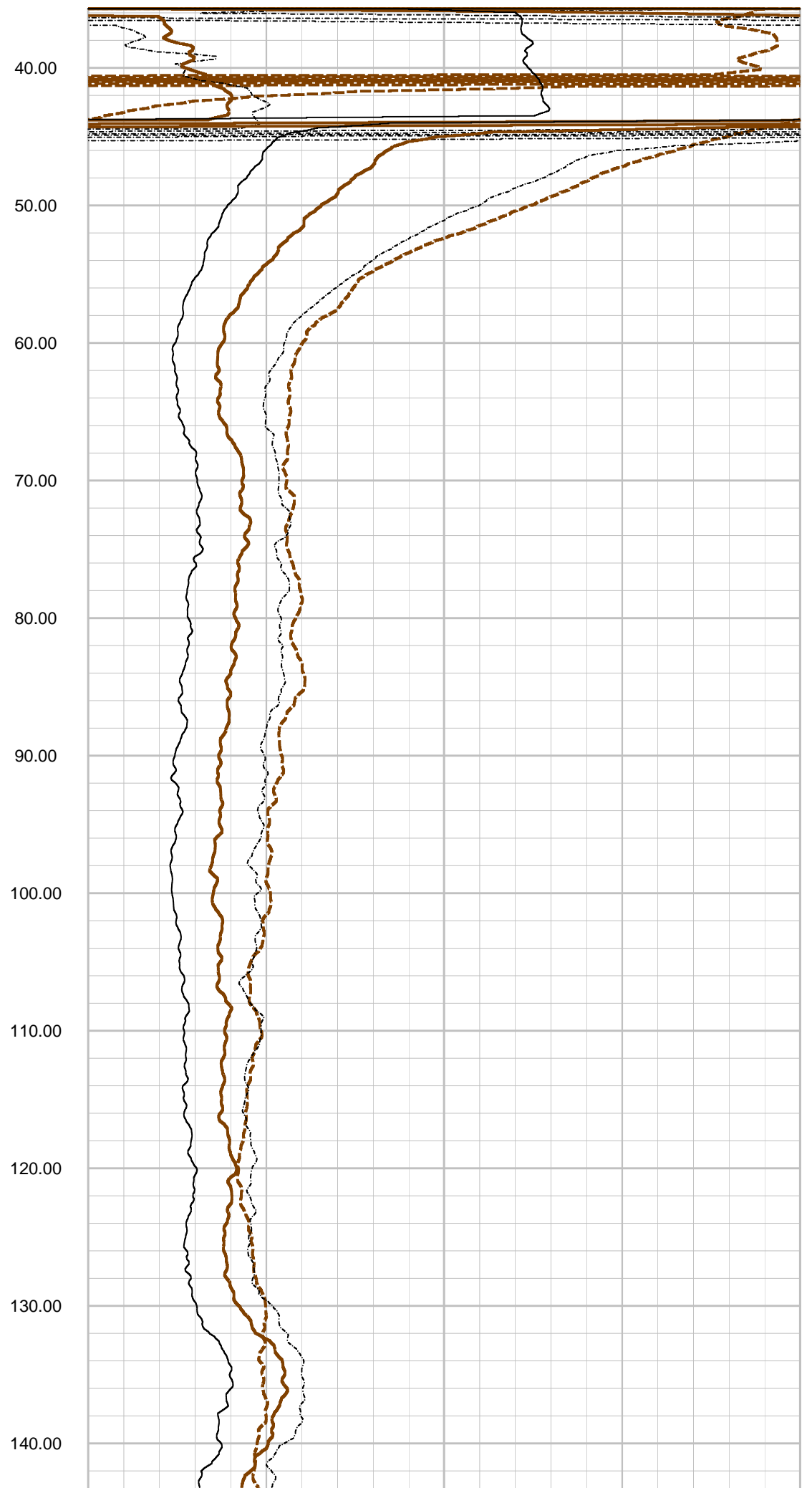
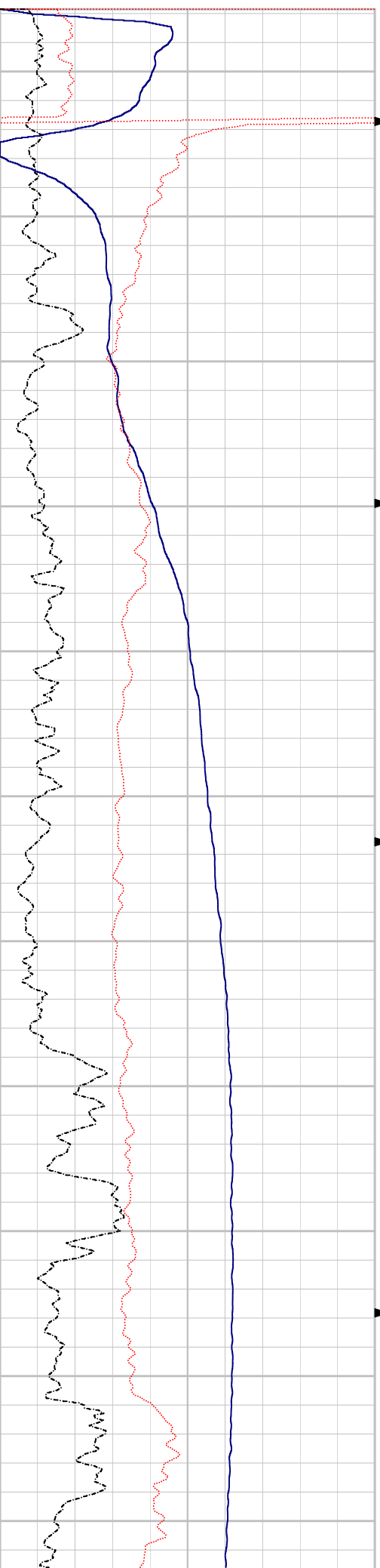
150.00

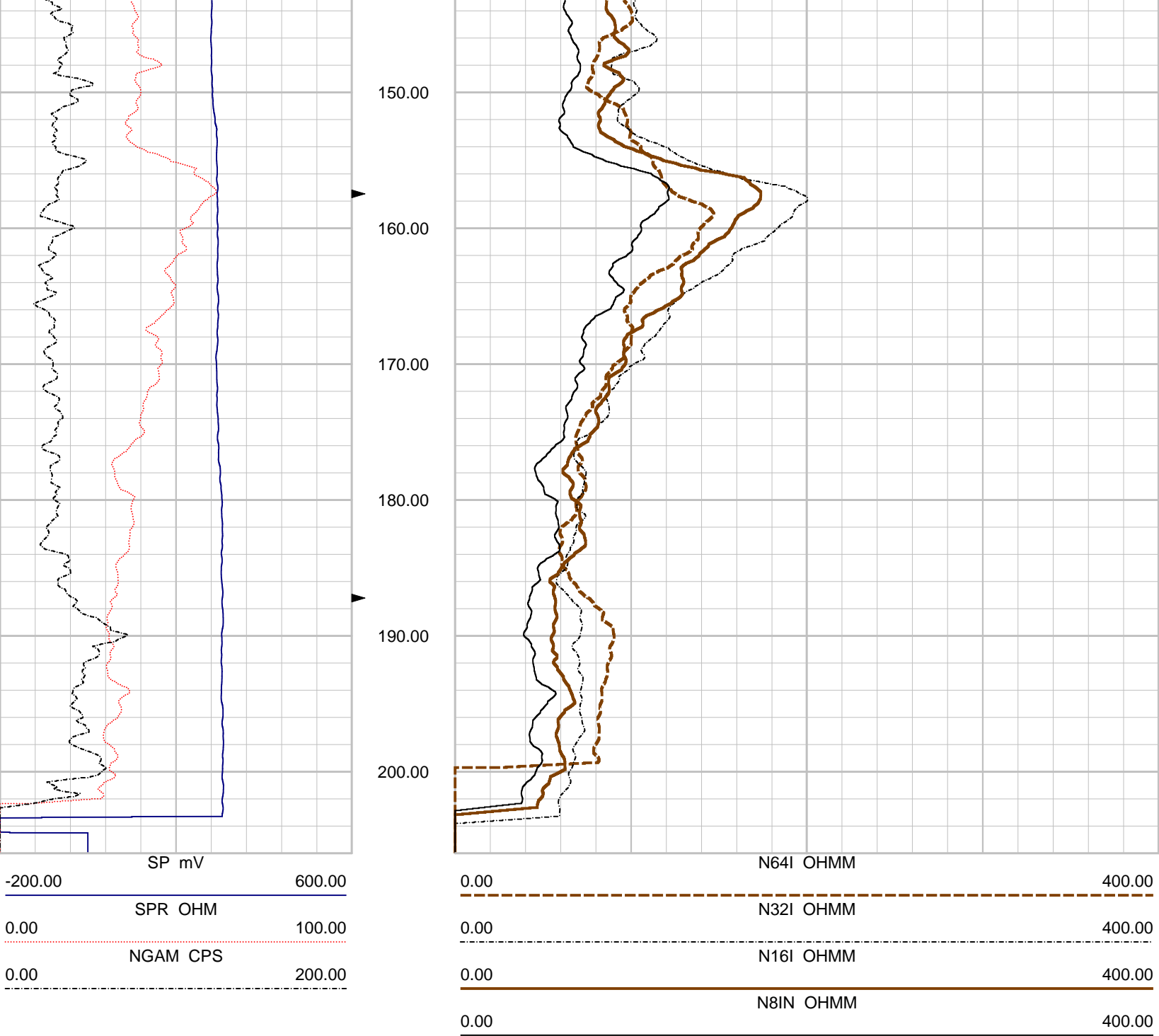


Depth: 38.00 ft Date: 18 Jun 2012 Time: 22:12:19 File: "C:\WinLogger\Data\WELL 5B\5B ELECTRIC1 REP.LGX"

-200.00	SP mV	600.00
0.00	SPR OHM	100.00
0.00	NGAM CPS	200.00

0.00	N64I OHMM	400.00
0.00	N32I OHMM	400.00
0.00	N16I OHMM	400.00
0.00	N8IN OHMM	400.00

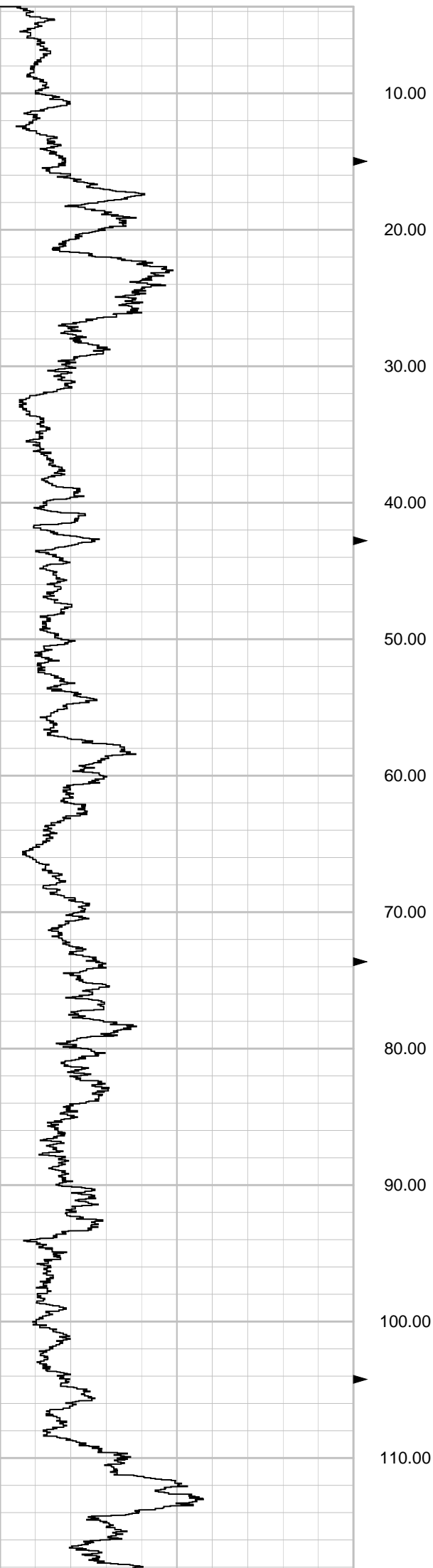




Depth: 35.00 ft Date: 18 Jun 2012 Time: 22:04:10 File: "C:\WinLogger\Data\WELL 5B\5B ELECTRIC1.LGX"

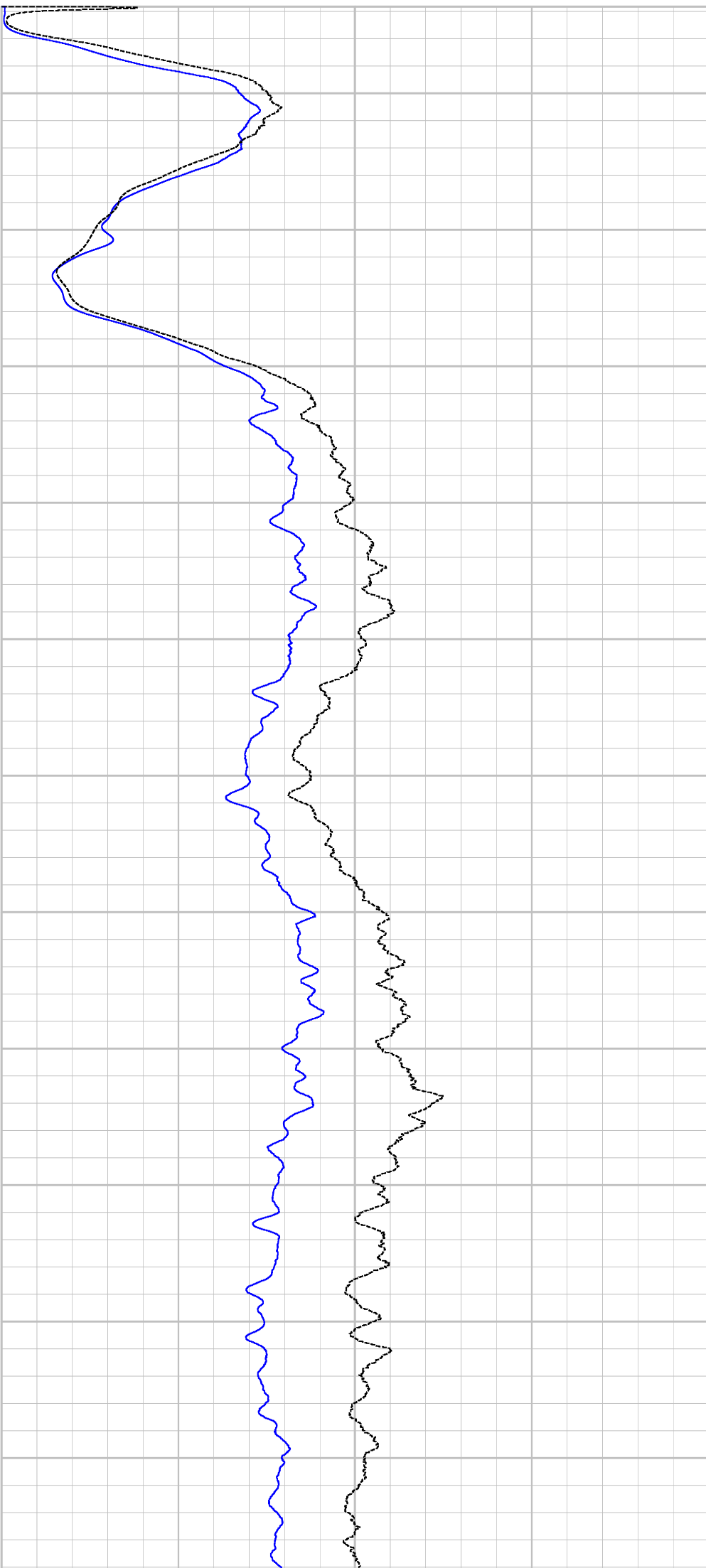
NGAM CPS

0.00 100.00



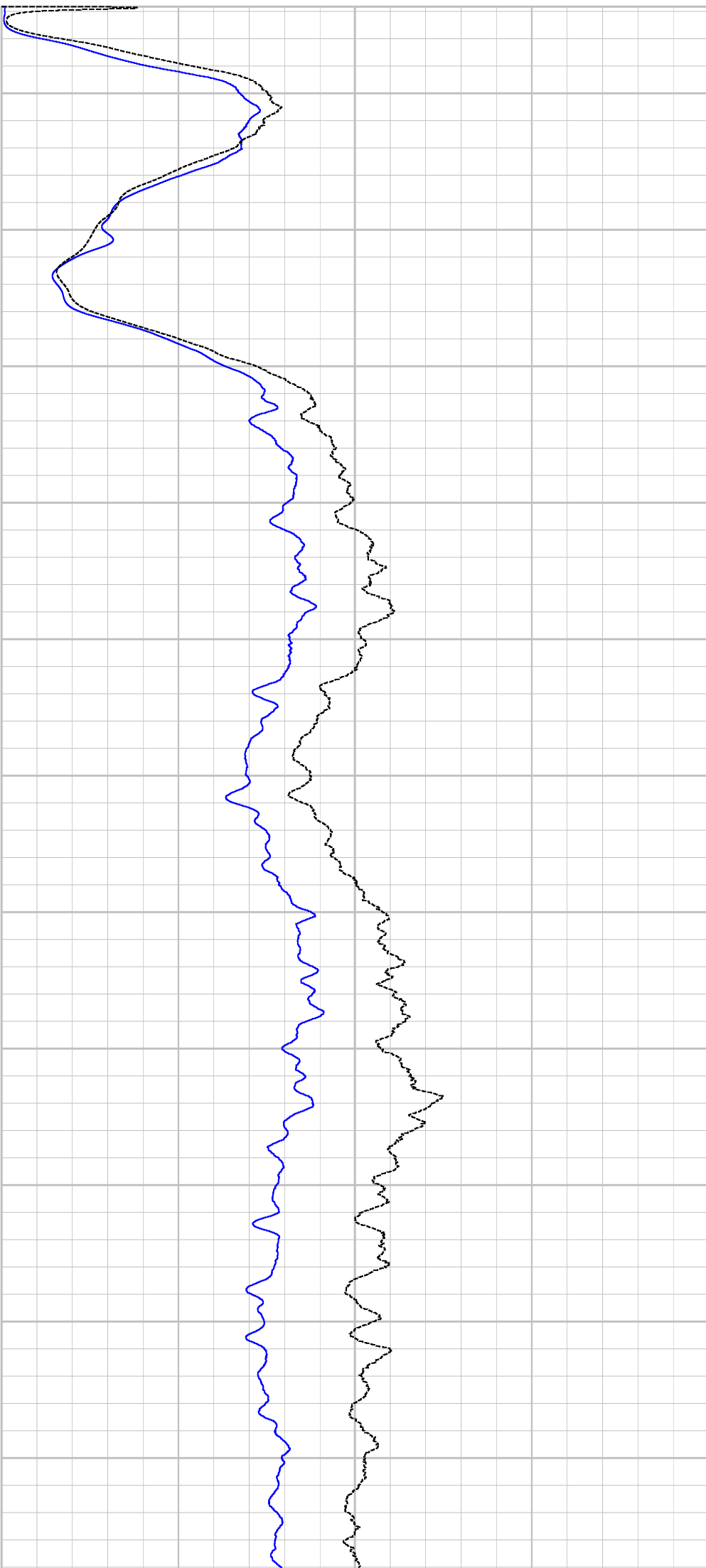
SHLW Ohm.m

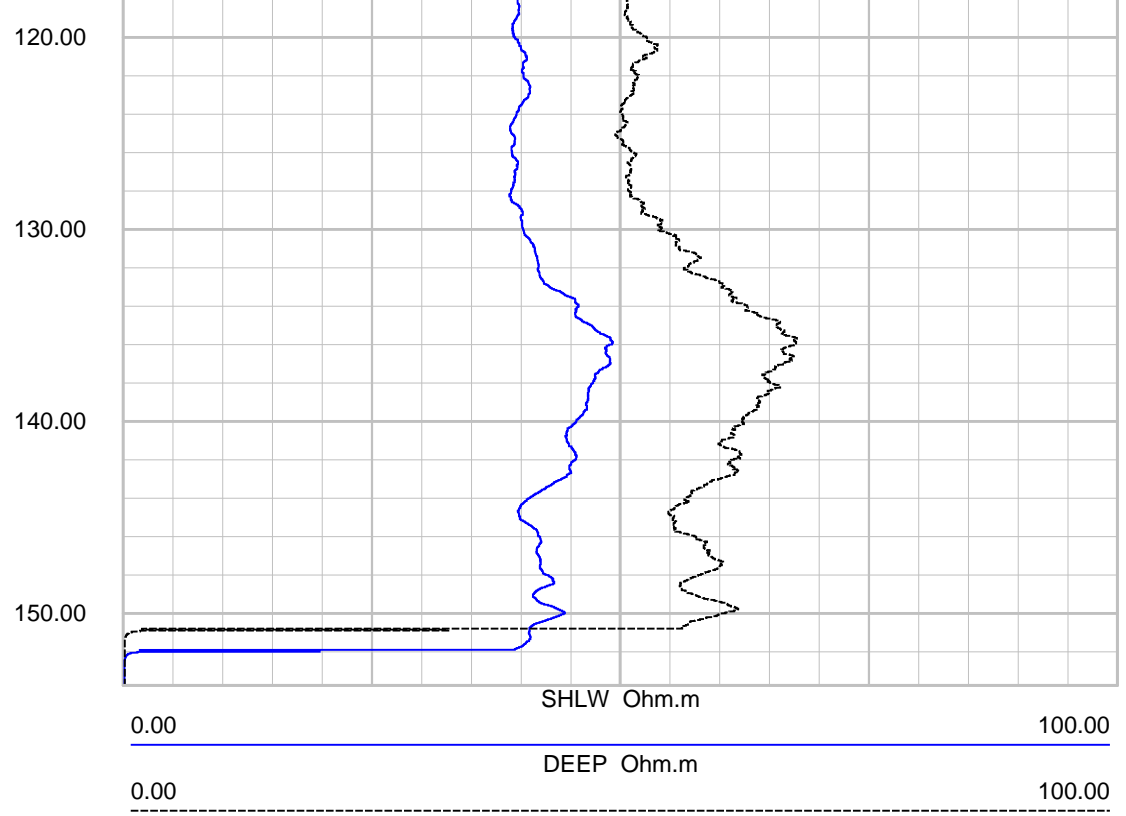
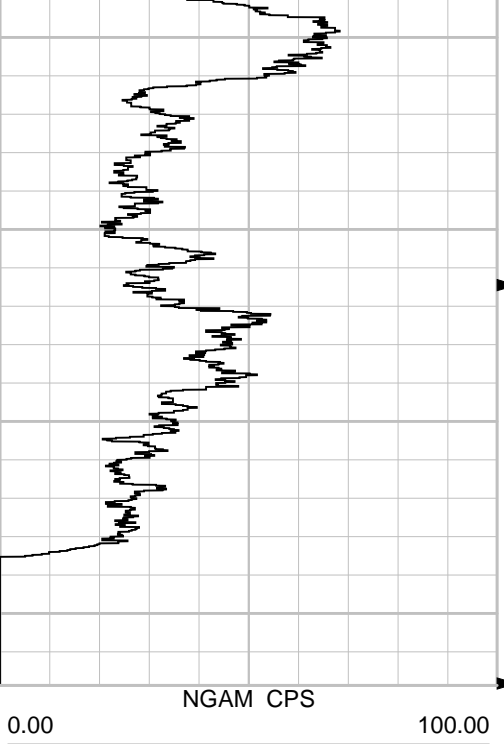
0.00 100.00



DEEP Ohm.m

0.00 100.00





Depth: 3.00 ft Date: 18 Jun 2012 Time: 22:56:06 File: "C:\WinLogger\Data\WELL 5B\5B DUIN1 REP.LOG"

NGAM CPS

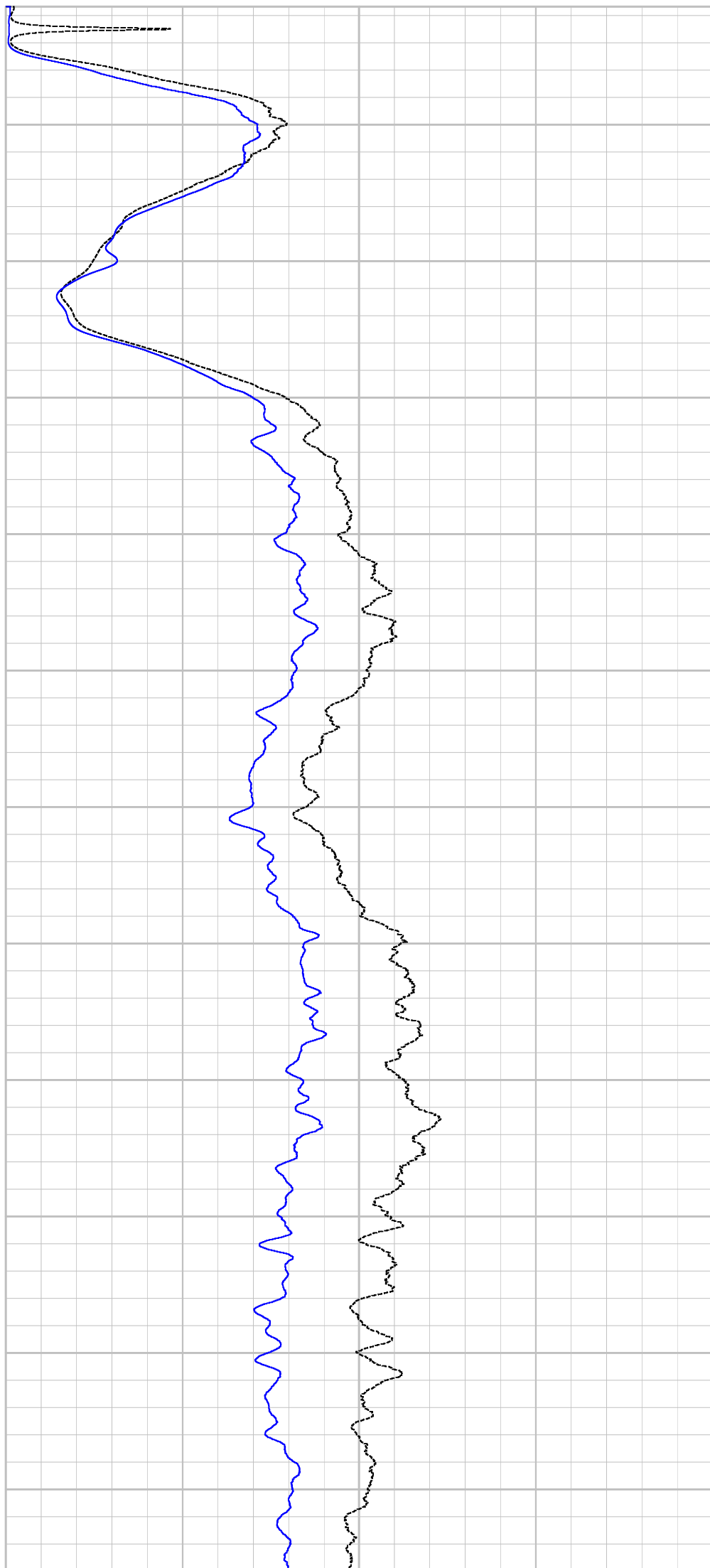
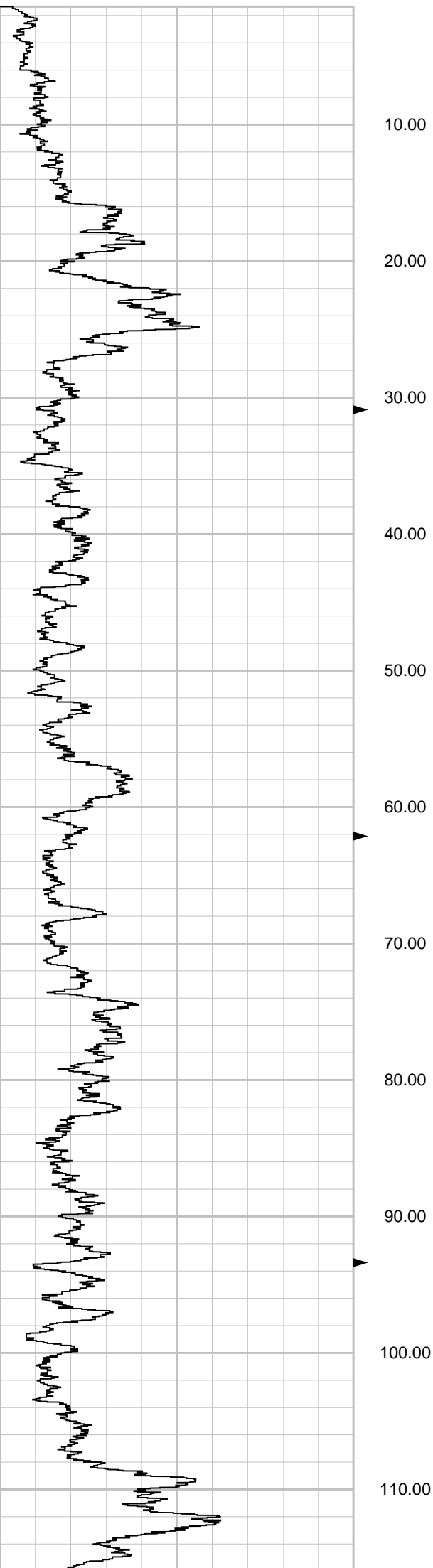
0.00 100.00

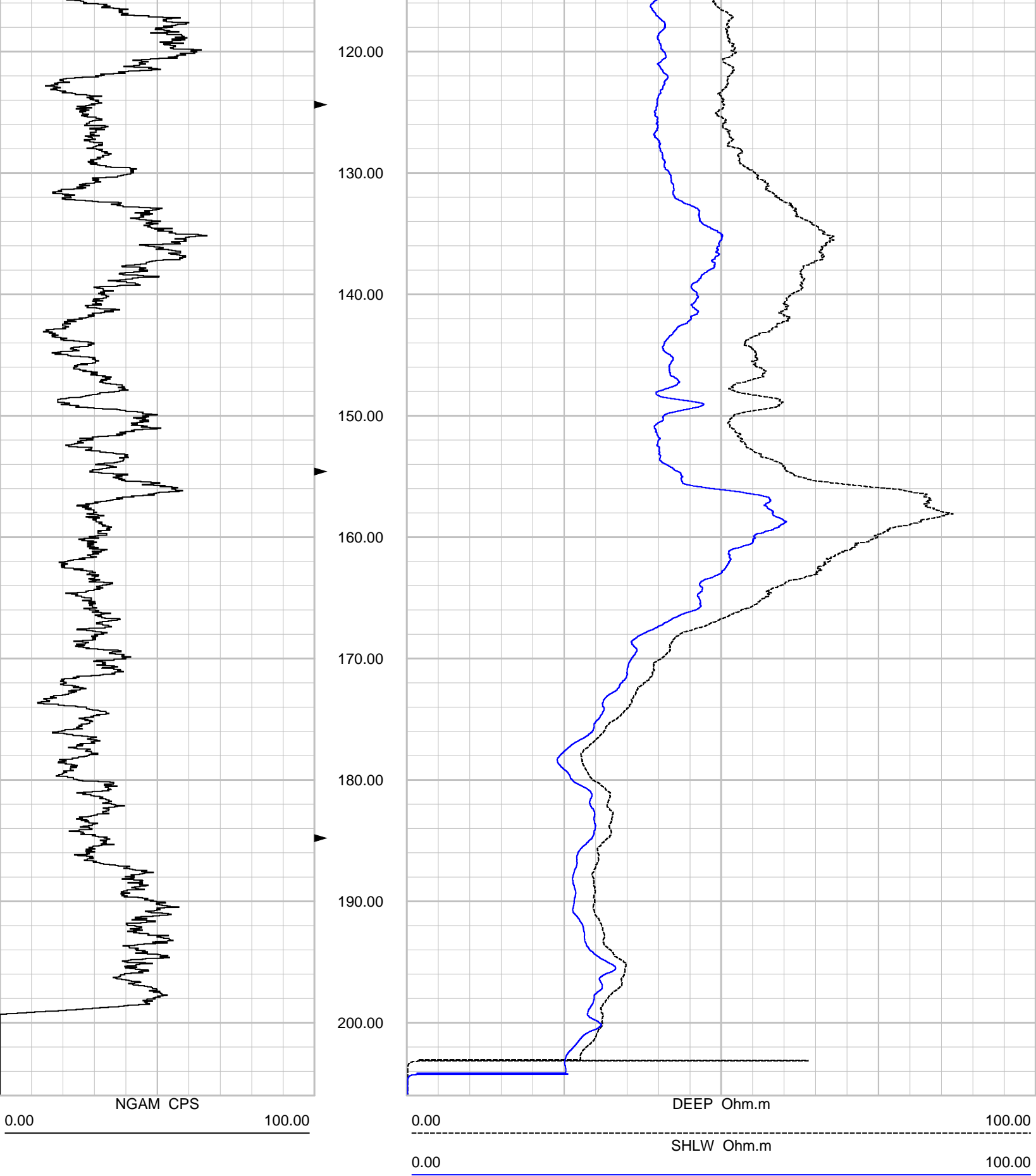
DEEP Ohm.m

0.00 100.00

SHLW Ohm.m

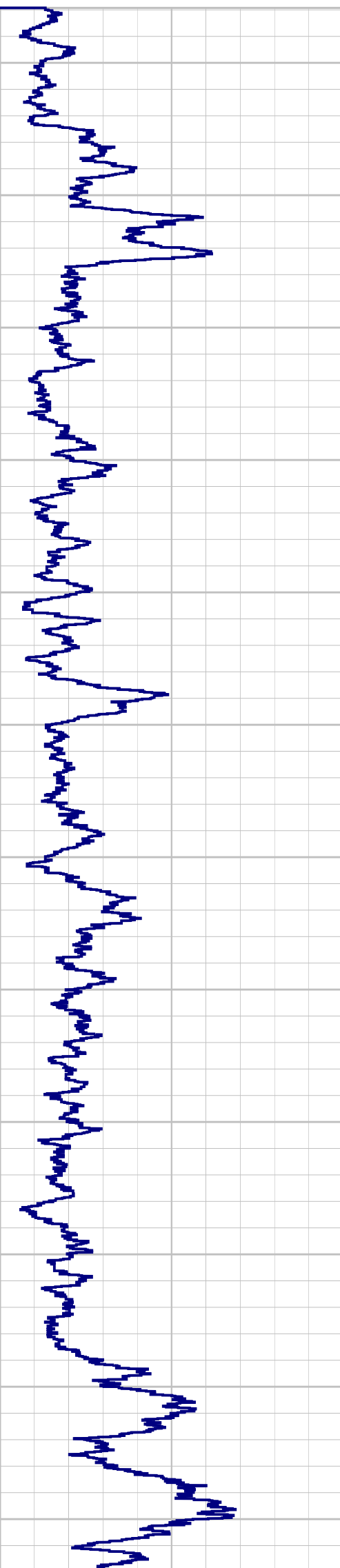
0.00 100.00



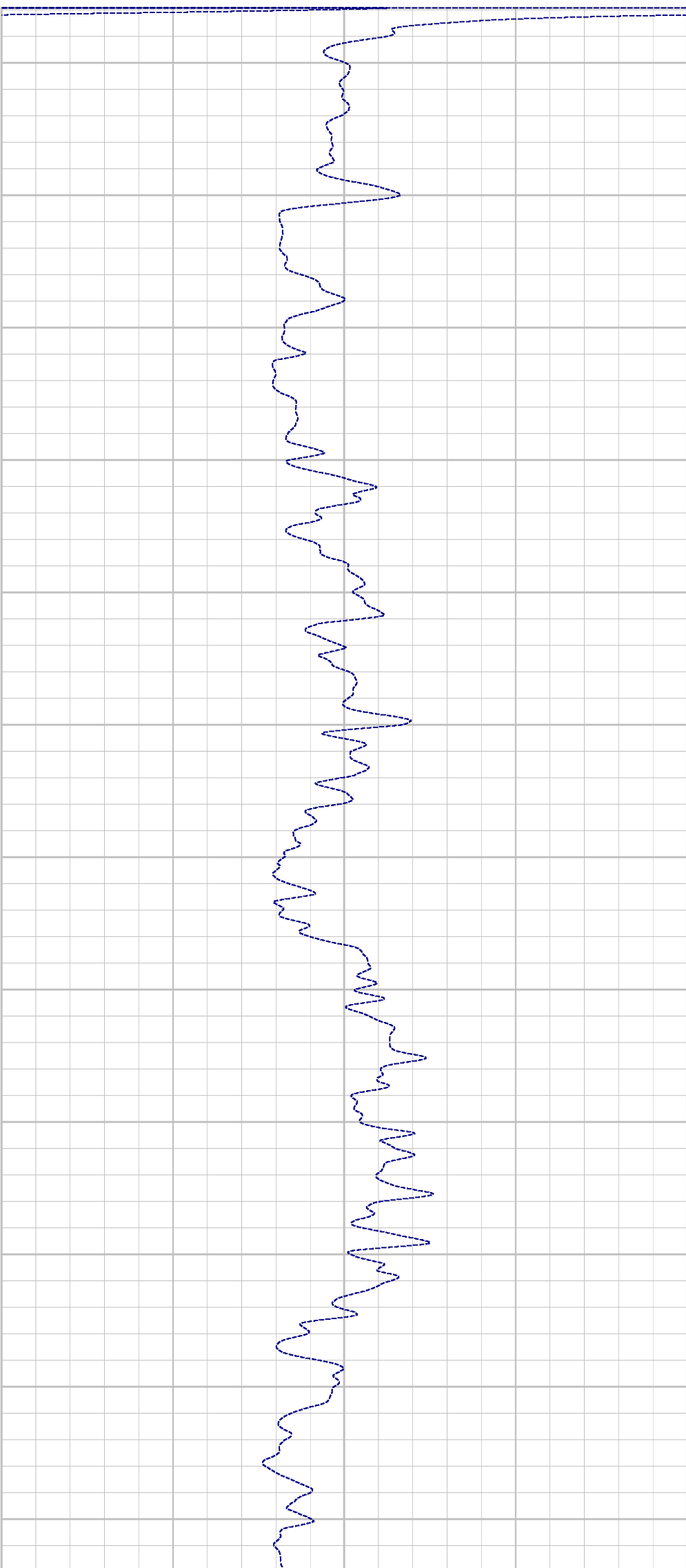


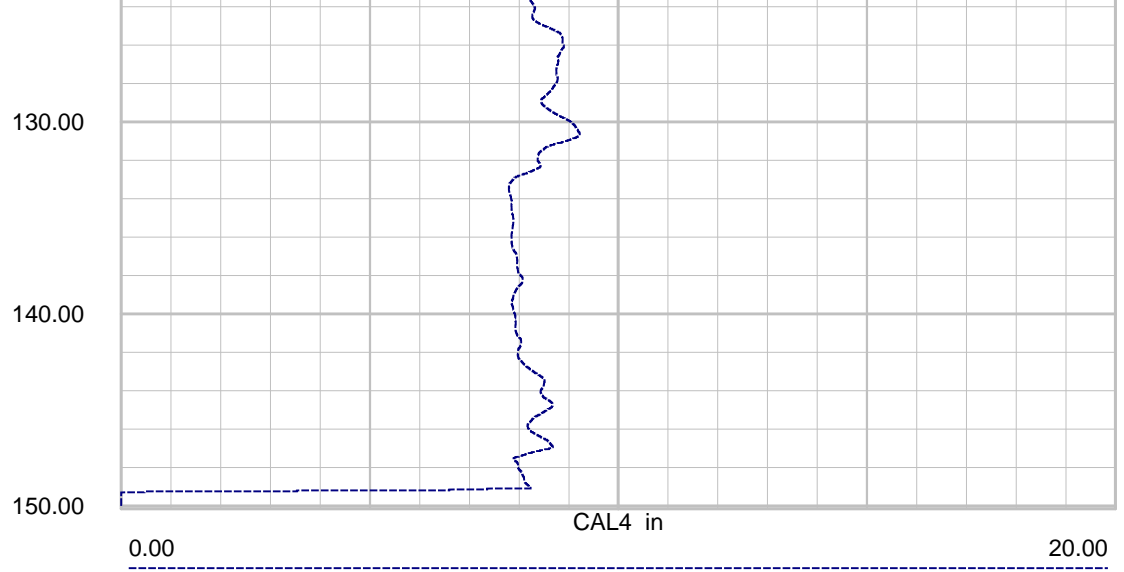
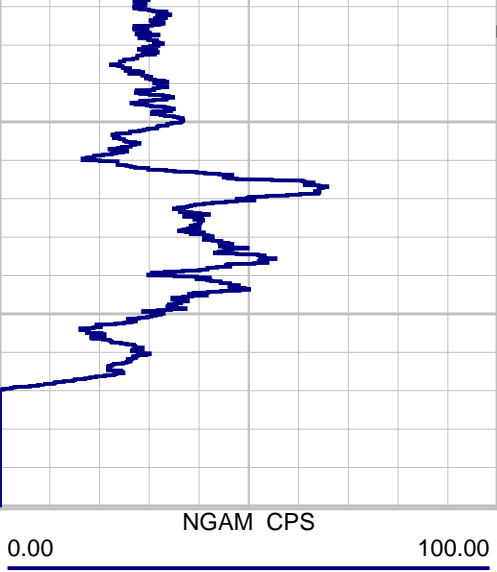
Depth: 1.00 ft Date: 18 Jun 2012 Time: 22:35:47 File: "C:\WinLogger\Data\WELL 5B\5B DUIN1.LOG"

0.00 NGAM CPS 100.00



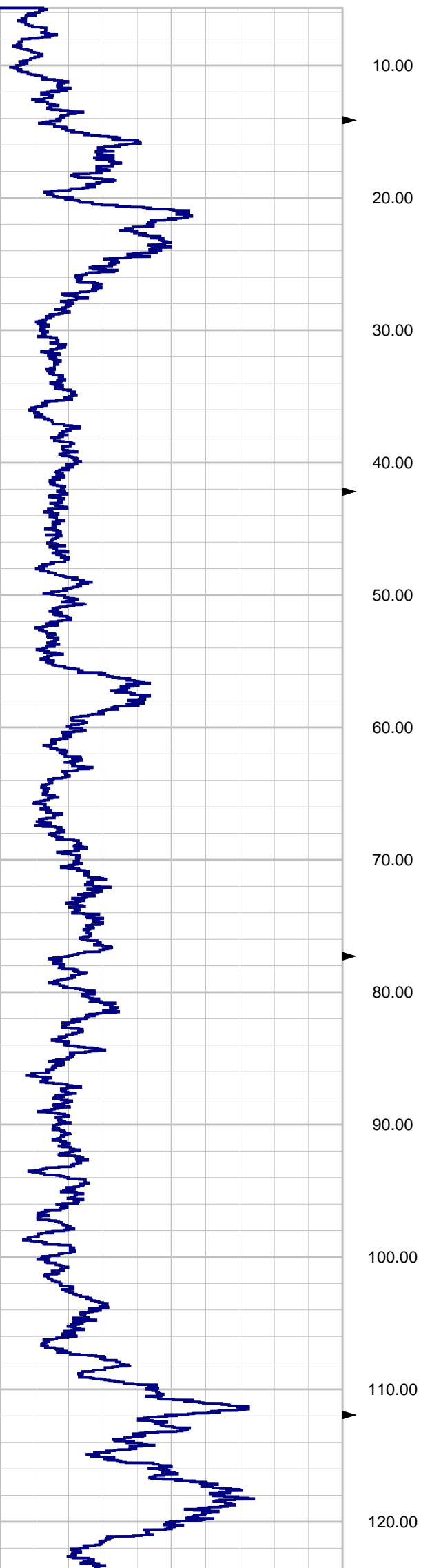
0.00 CAL4 in 20.00



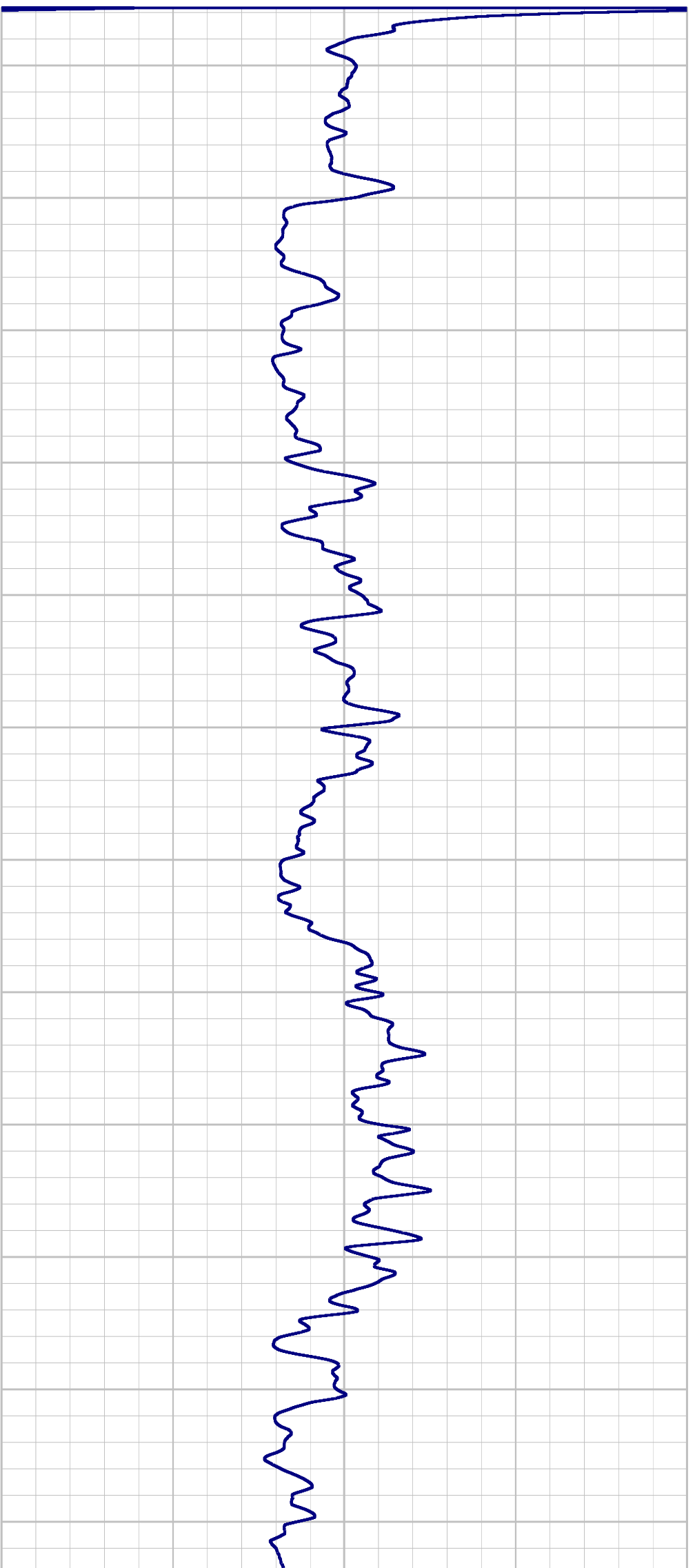


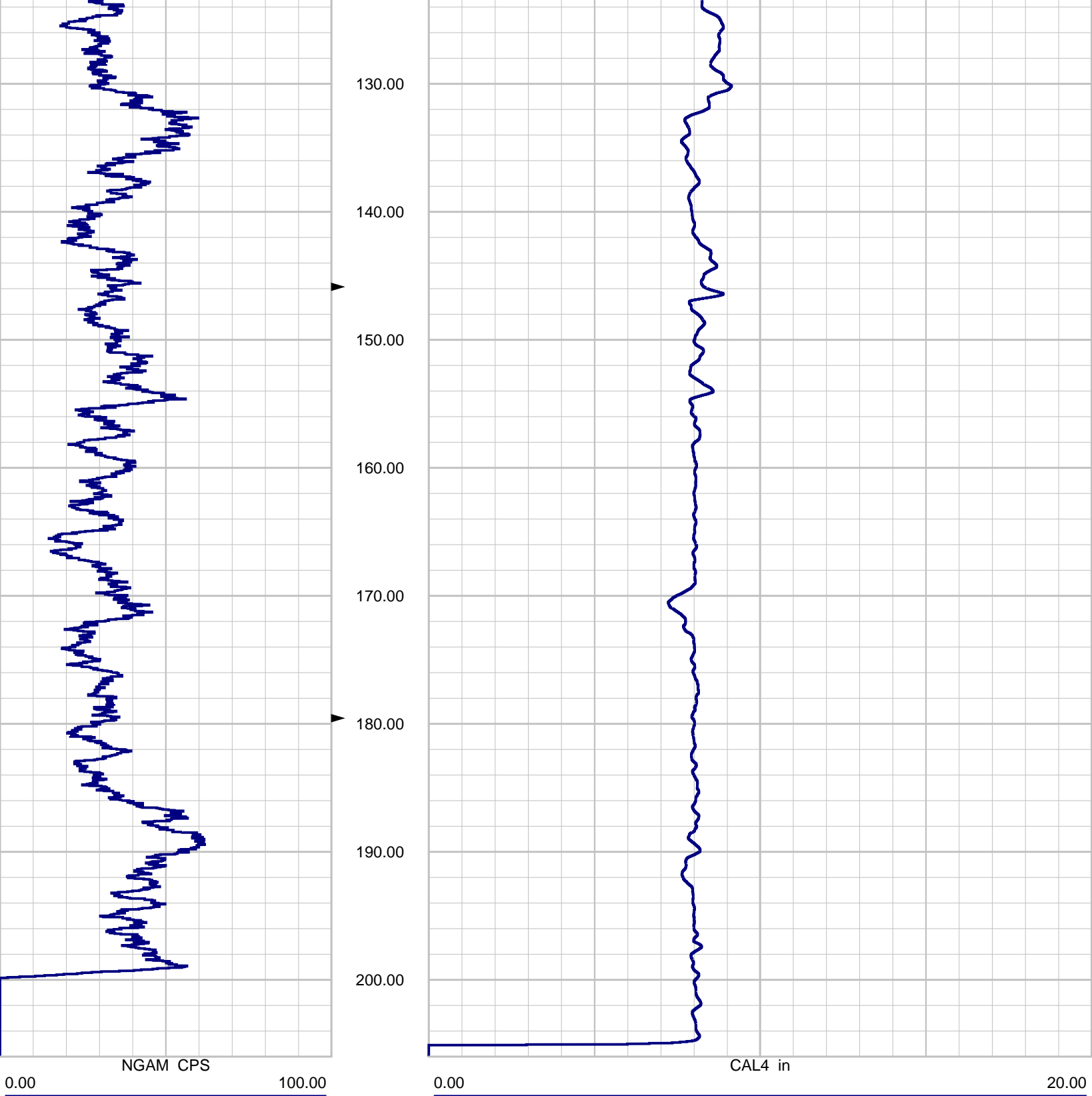
Depth: 5.00 ft Date: 18 Jun 2012 Time: 21:39:45 File: "C:\WinLogger\Data\WELL 5B\5B CALIPER1 REP.LOG"

0.00 NGAM CPS 100.00



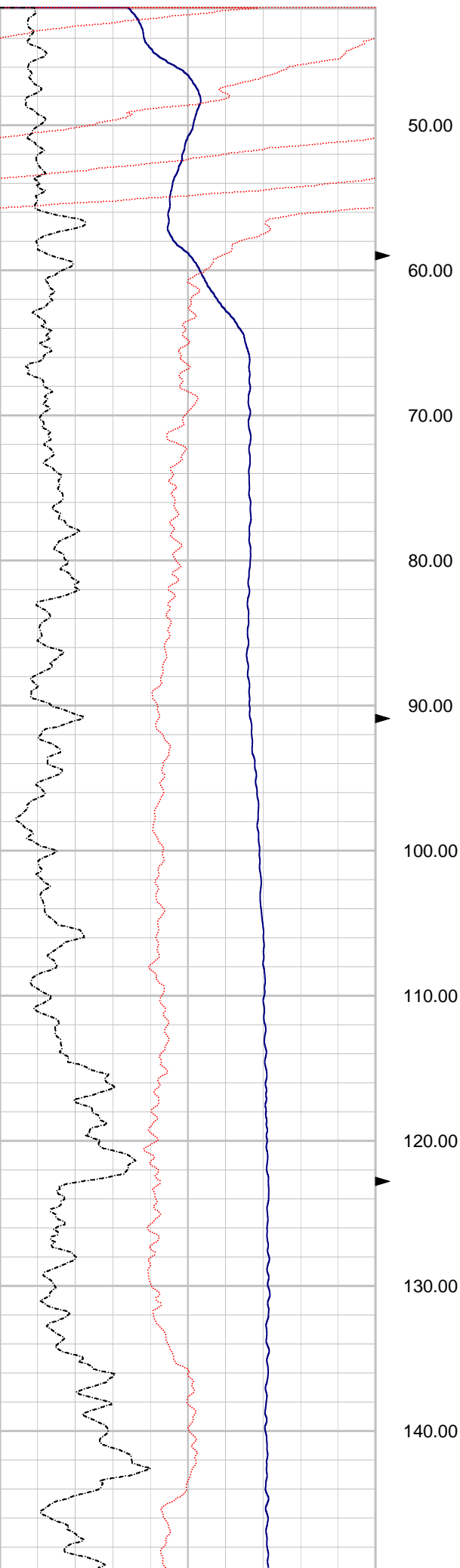
0.00 CAL4 in 20.00



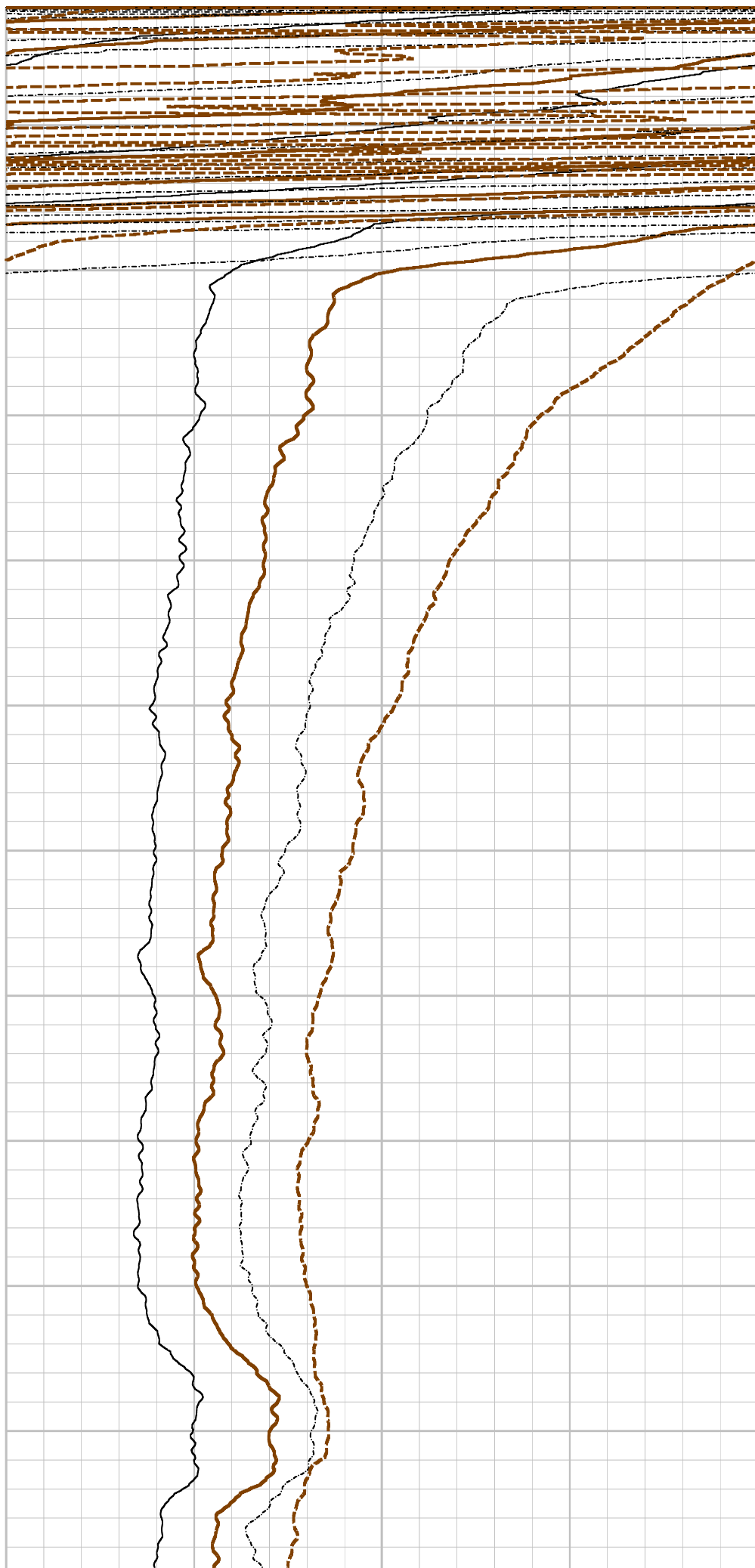


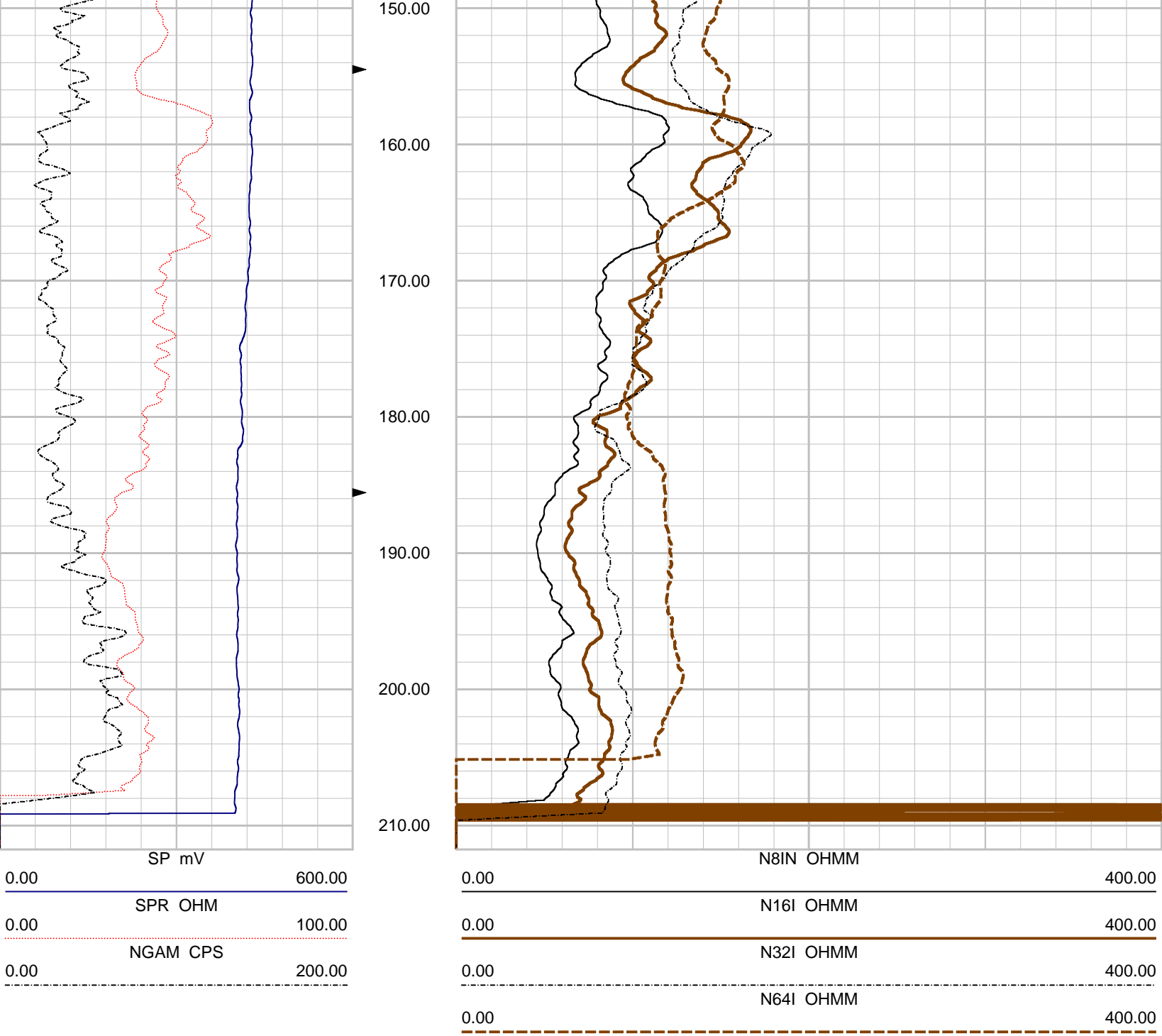
Depth: 5.00 ft Date: 18 Jun 2012 Time: 21:26:15 File: "C:\WinLogger\Data\WELL 5B\5B CALIPER1.LOG"

0.00	SP mV	600.00
<hr/>		
0.00	SPR OHM	100.00
<hr style="border-top: 1px dotted red;"/>		
0.00	NGAM CPS	200.00
<hr style="border-top: 1px dashed black;"/>		



0.00	N8IN OHMM	400.00
<hr/>		
0.00	N16I OHMM	400.00
<hr style="border-top: 1px solid brown;"/>		
0.00	N32I OHMM	400.00
<hr style="border-top: 1px dashed black;"/>		
0.00	N64I OHMM	400.00
<hr style="border-top: 1px dashed brown;"/>		

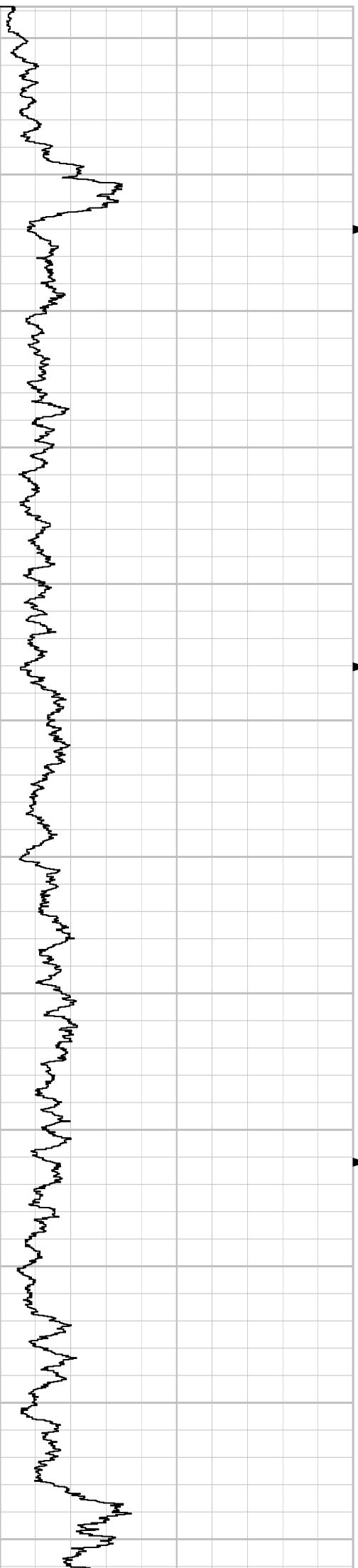




Depth: 41.00 ft Date: 10 May 2012 Time: 17:41:14 File: "C:\WinLogger\Data\WELL 6B\6B ELOG1.LGX"

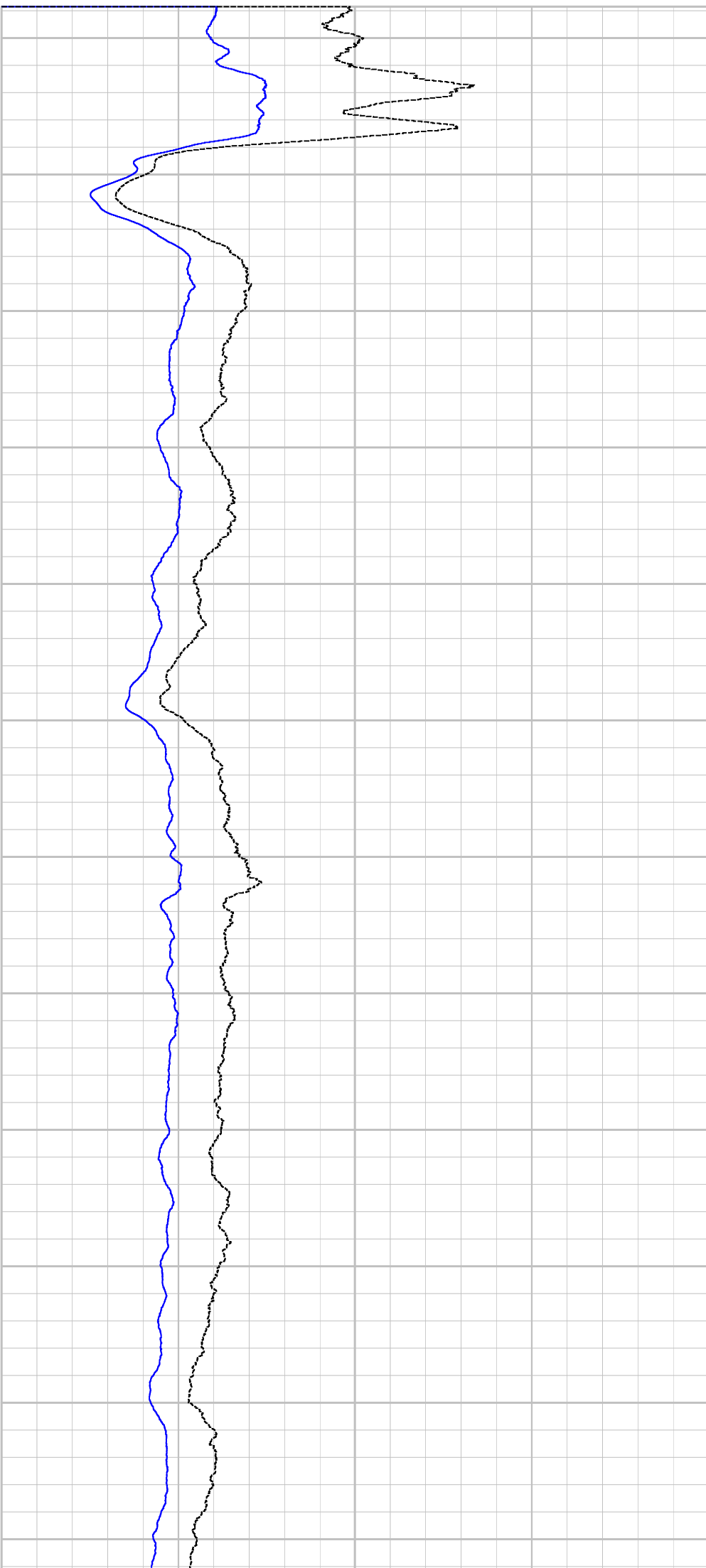
NGAM CPS

0.00 200.00



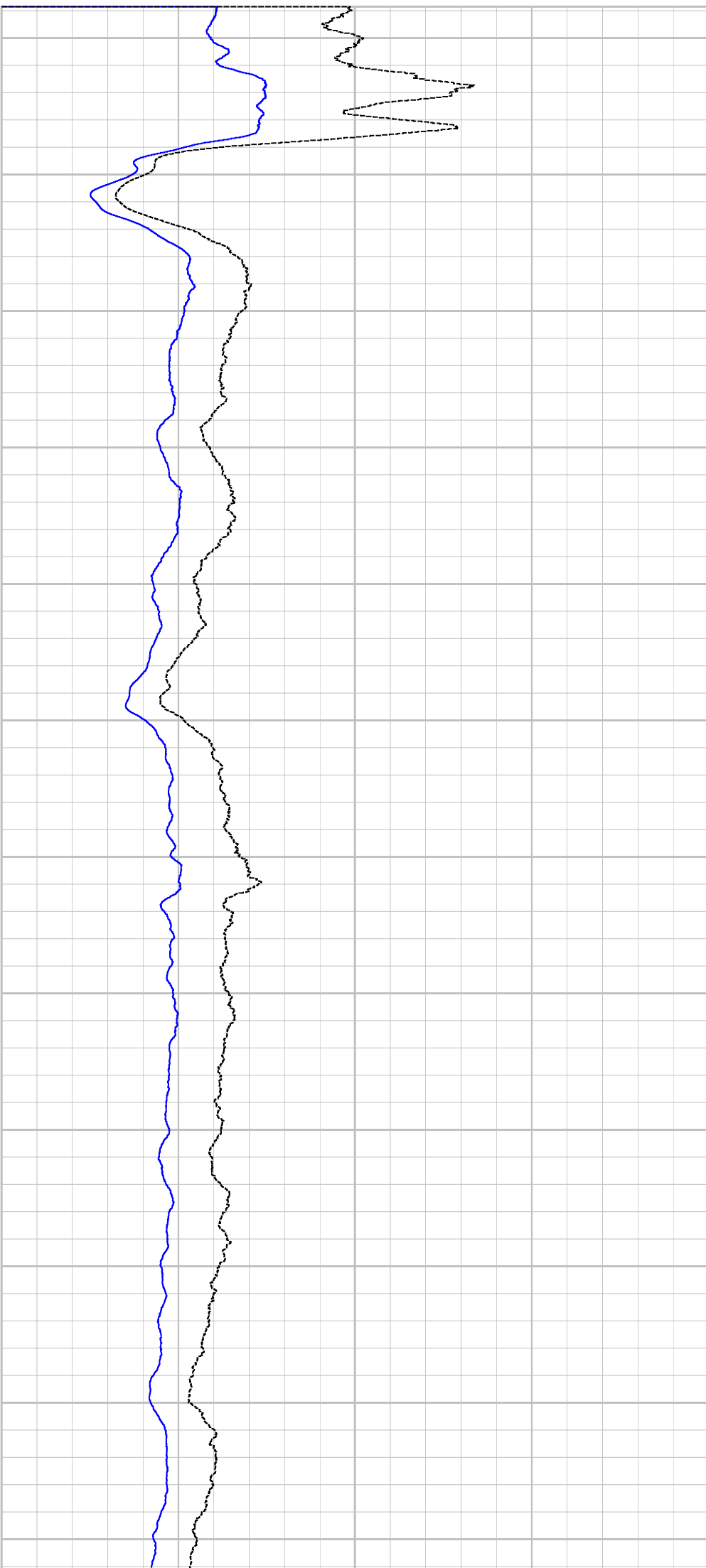
SHLW Ohm.m

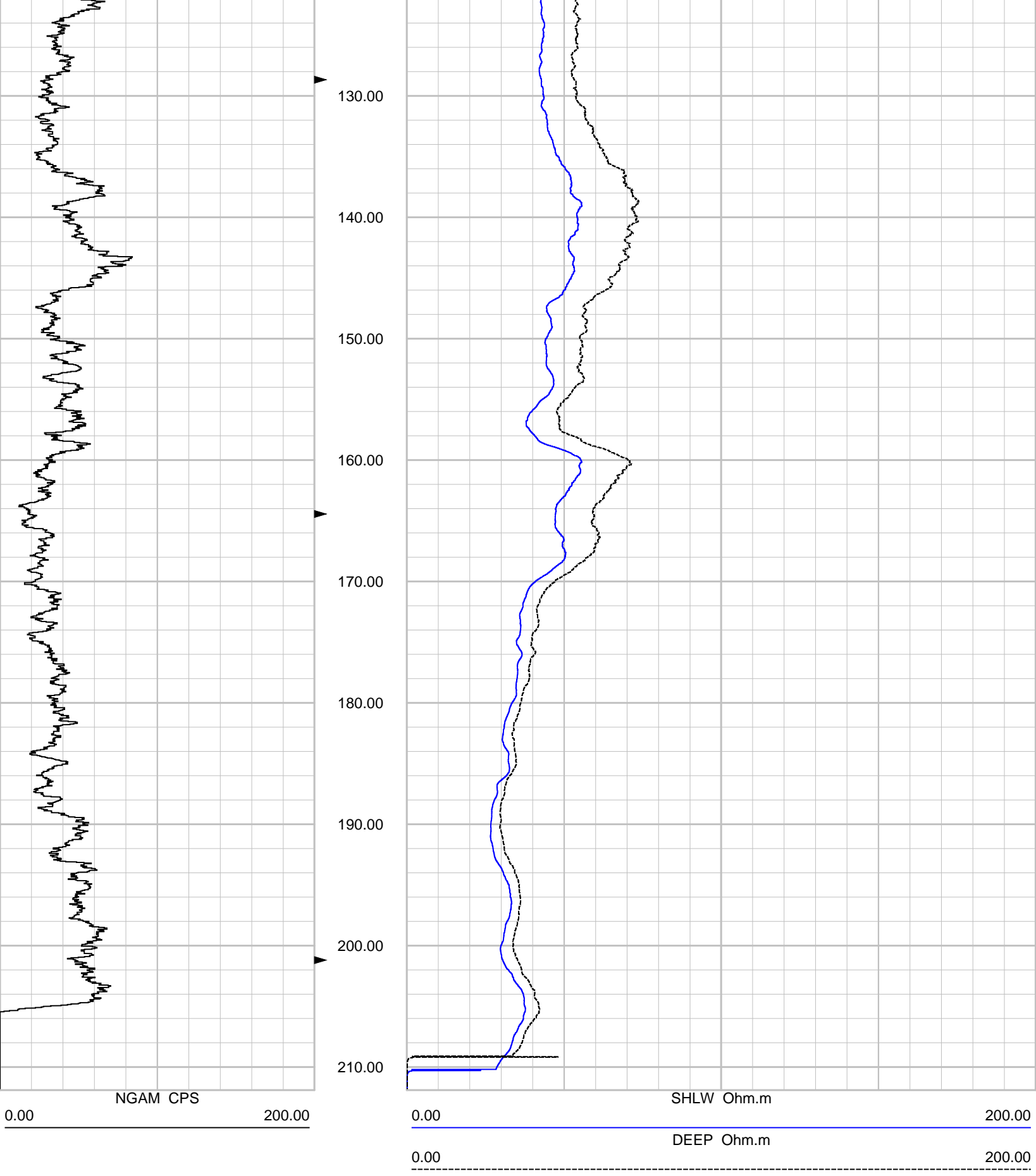
0.00 200.00



DEEP Ohm.m

0.00 200.00

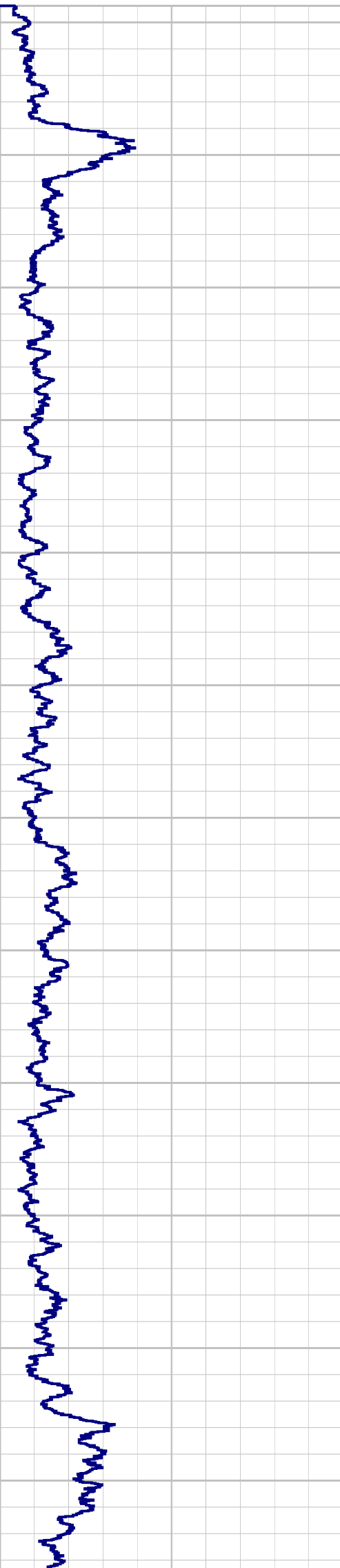




Depth: 7.00 ft Date: 10 May 2012 Time: 17:05:49 File: "C:\WinLogger\Data\WELL 6B\6B DUIN2.LOG"

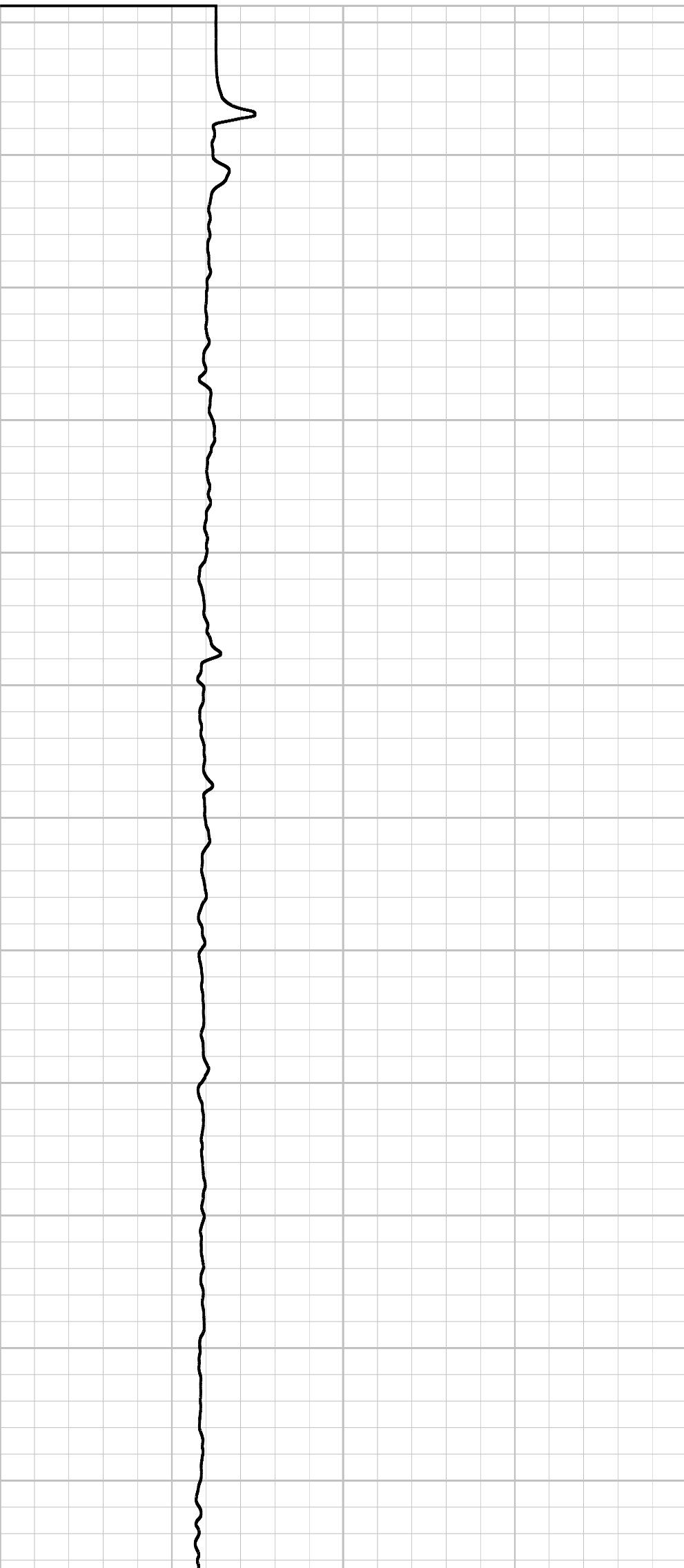
NGAM CPS

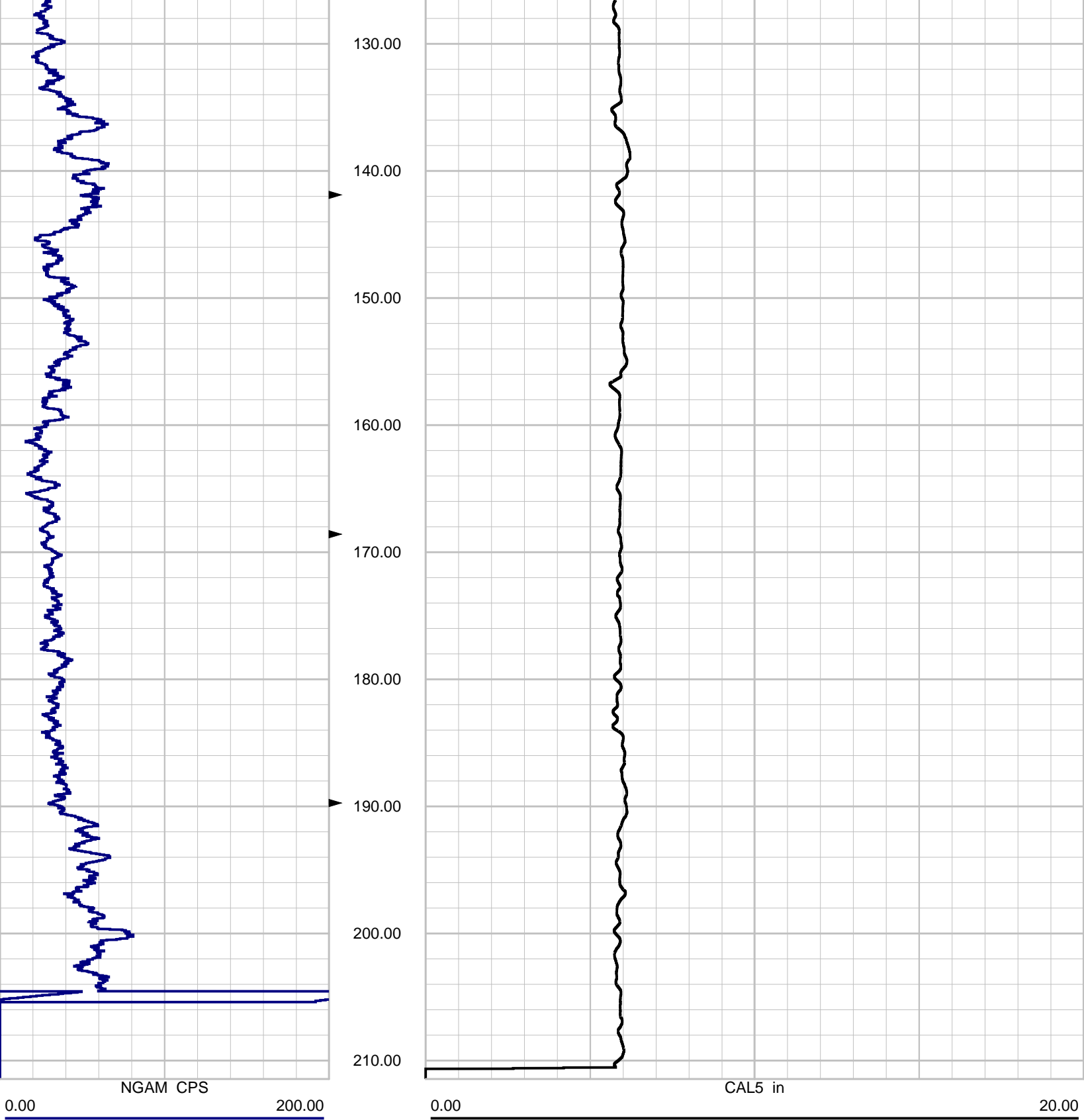
0.00 200.00



CAL5 in

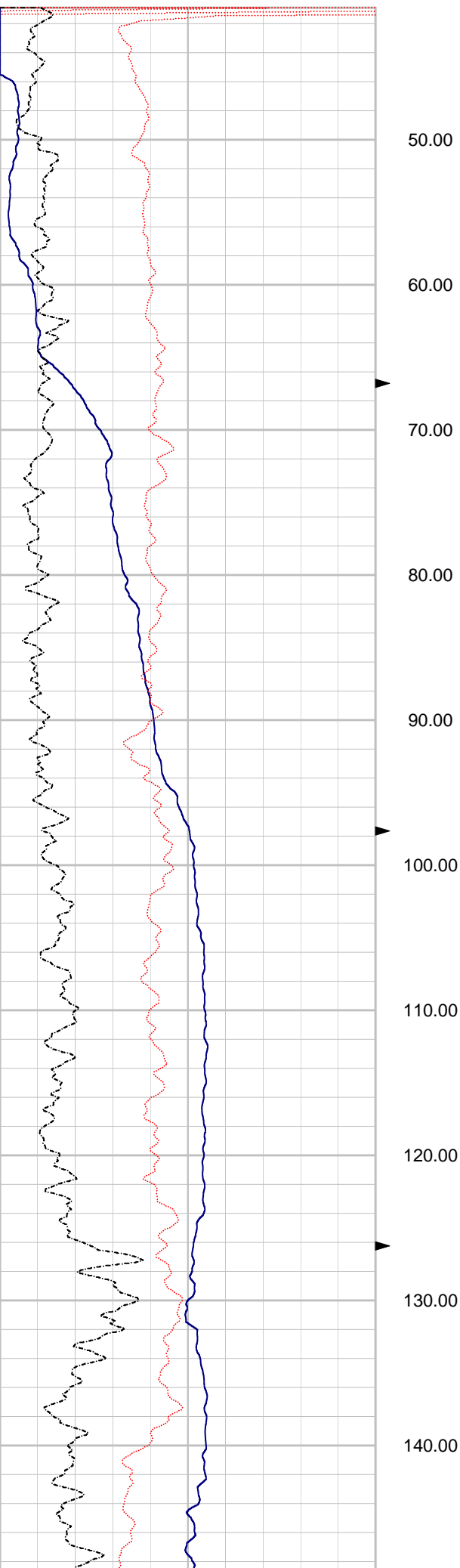
0.00 20.00



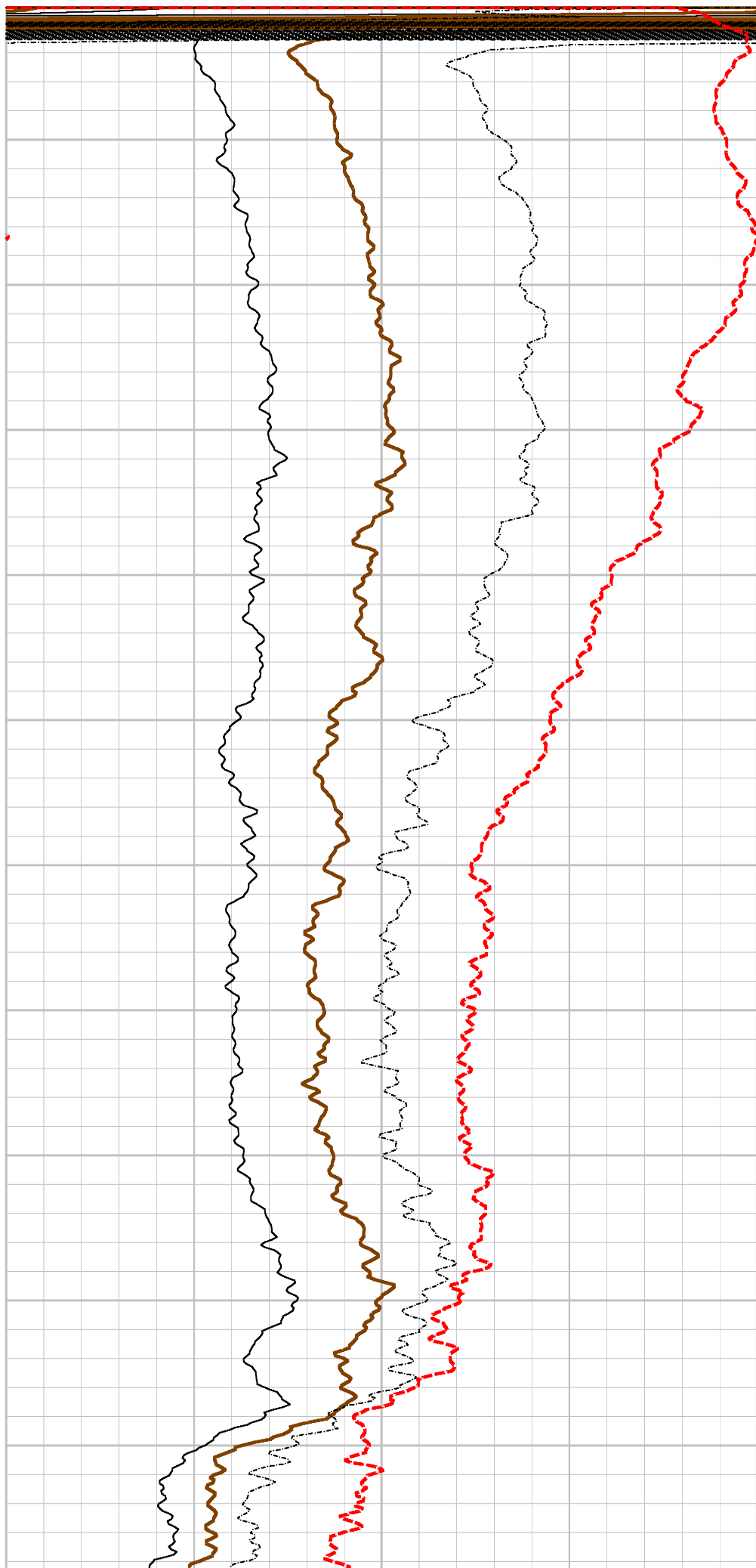


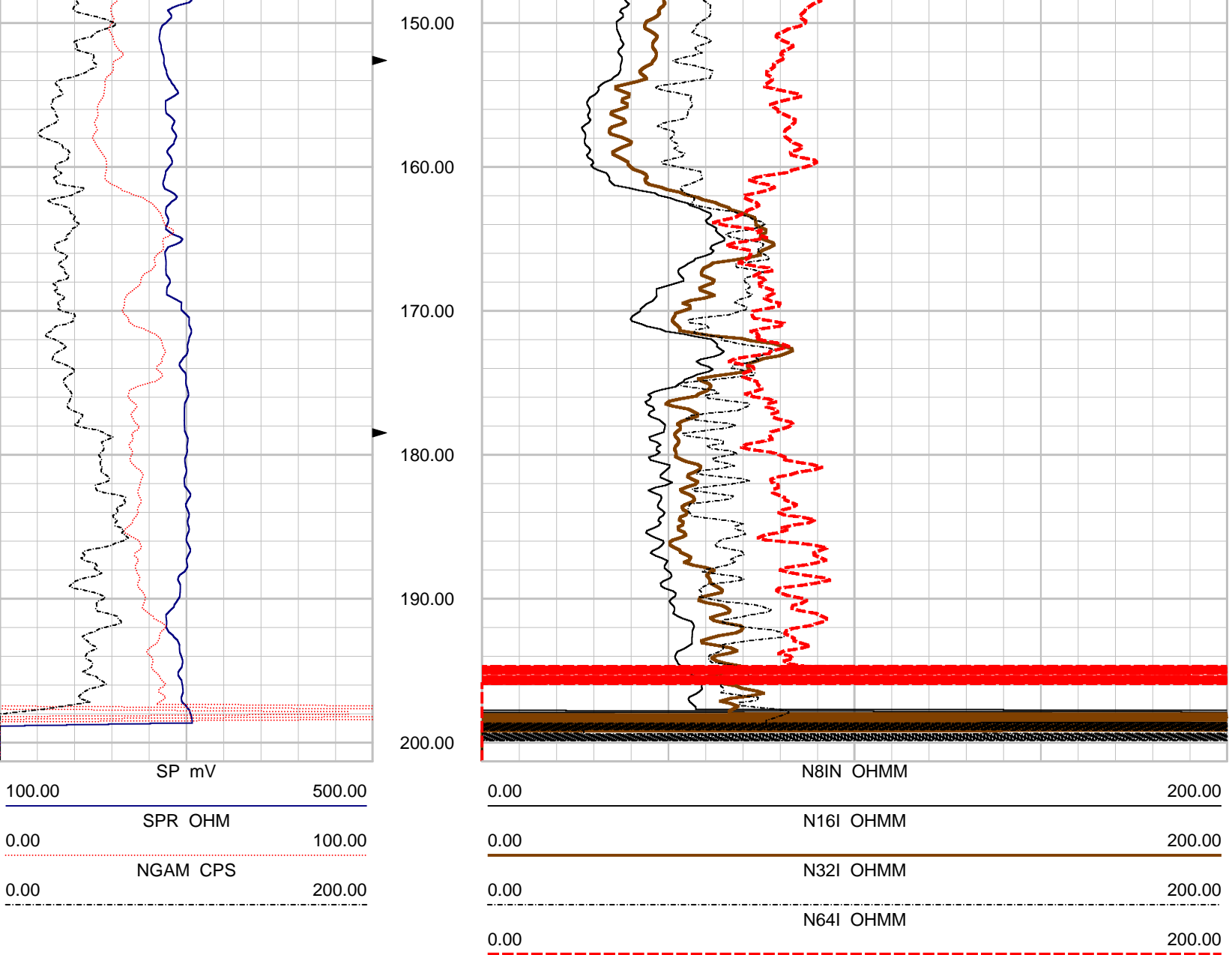
Depth: 8.00 ft Date: 10 May 2012 Time: 16:00:49 File: "C:\WinLogger\Data\WELL 6B\6B CALIPER1.LOG"

100.00 SP mV 500.00
0.00 SPR OHM 100.00
0.00 NGAM CPS 200.00



0.00 N8IN OHMM 200.00
0.00 N16I OHMM 200.00
0.00 N32I OHMM 200.00
0.00 N64I OHMM 200.00

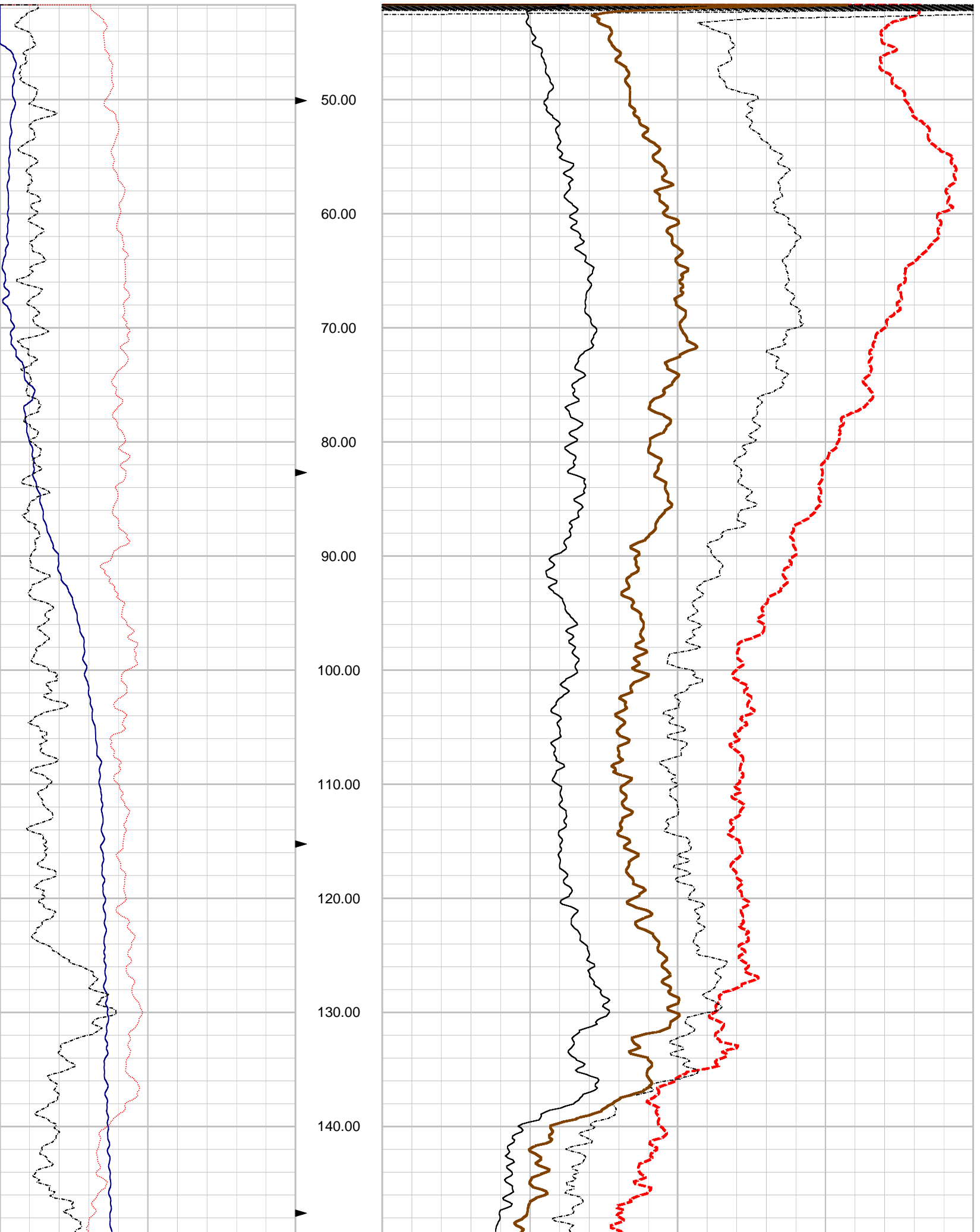


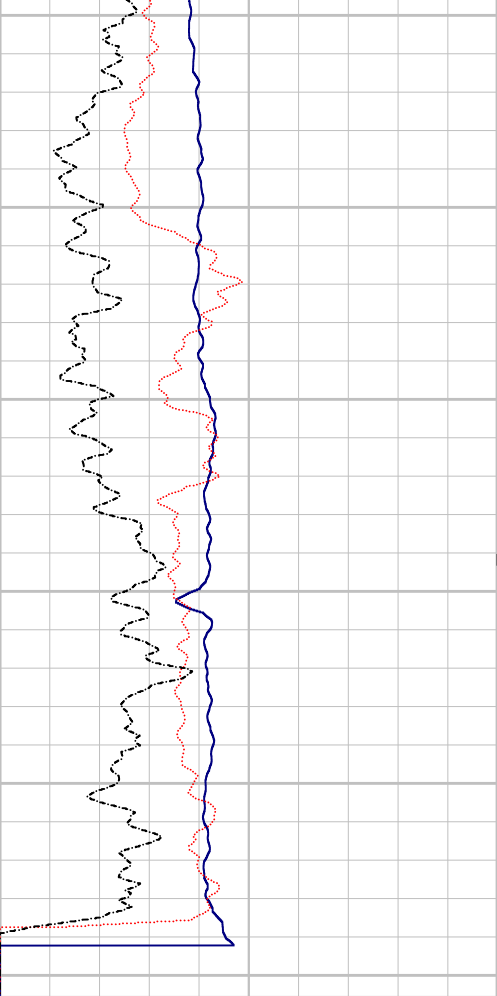


Depth: 40.00 ft Date: 29 May 2012 Time: 18:38:08 File: "C:\WinLogger\Data\WELL 22B\22 ELOG1 REP.LGX.LGX"

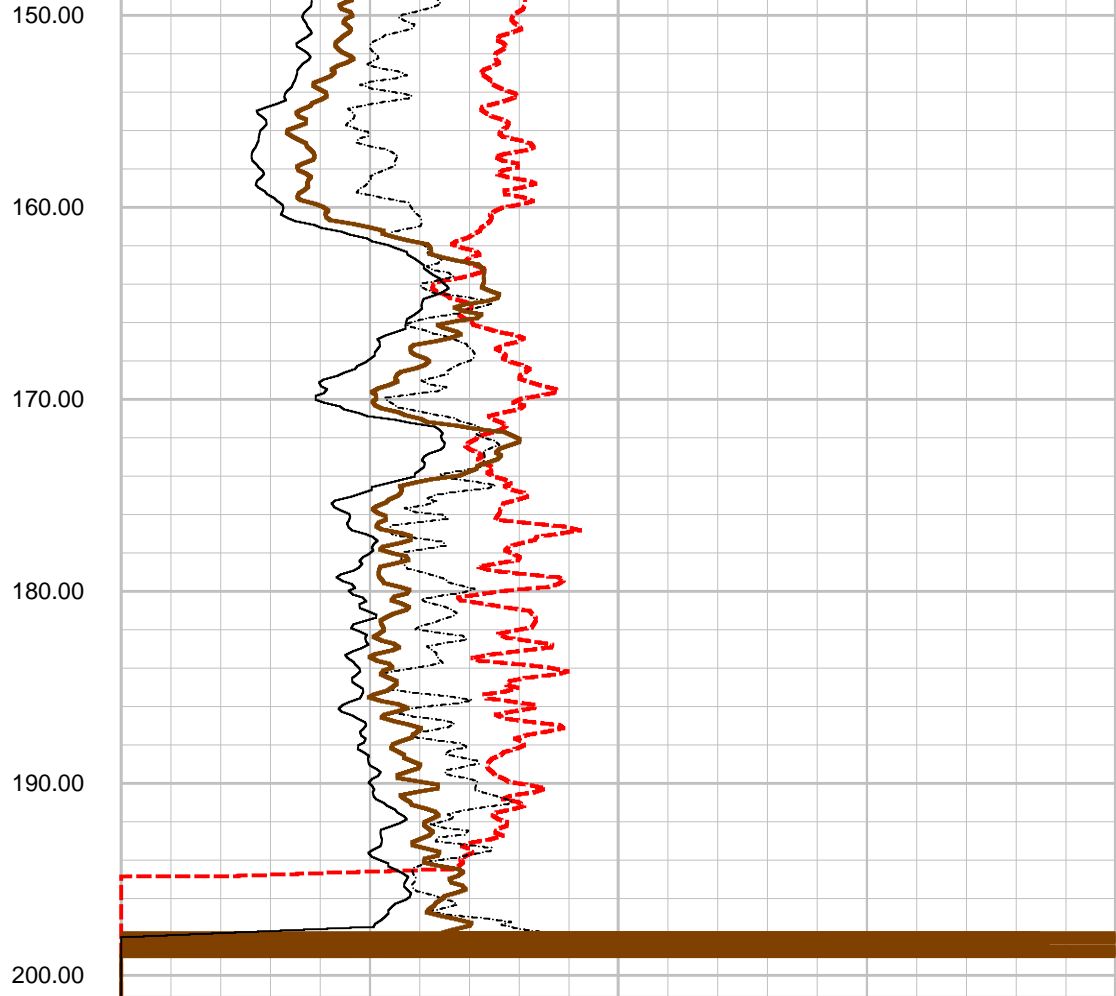
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0.00	SPR OHM	100.00
0.00	NGAM CPS	200.00

0.00	N64I OHMM	200.00
0.00	N32I OHMM	200.00
0.00	N16I OHMM	200.00
0.00	N8IN OHMM	200.00





100.00	SP mV	500.00
0.00	SPR OHM	100.00
0.00	NGAM CPS	200.00



0.00	N64I OHMM	200.00
0.00	N32I OHMM	200.00
0.00	N16I OHMM	200.00
0.00	N8IN OHMM	200.00

Depth: 41.00 ft Date: 29 May 2012 Time: 18:27:05 File: "C:\WinLogger\Data\WELL 22B\22 ELOG1.LGX"

NGAM CPS

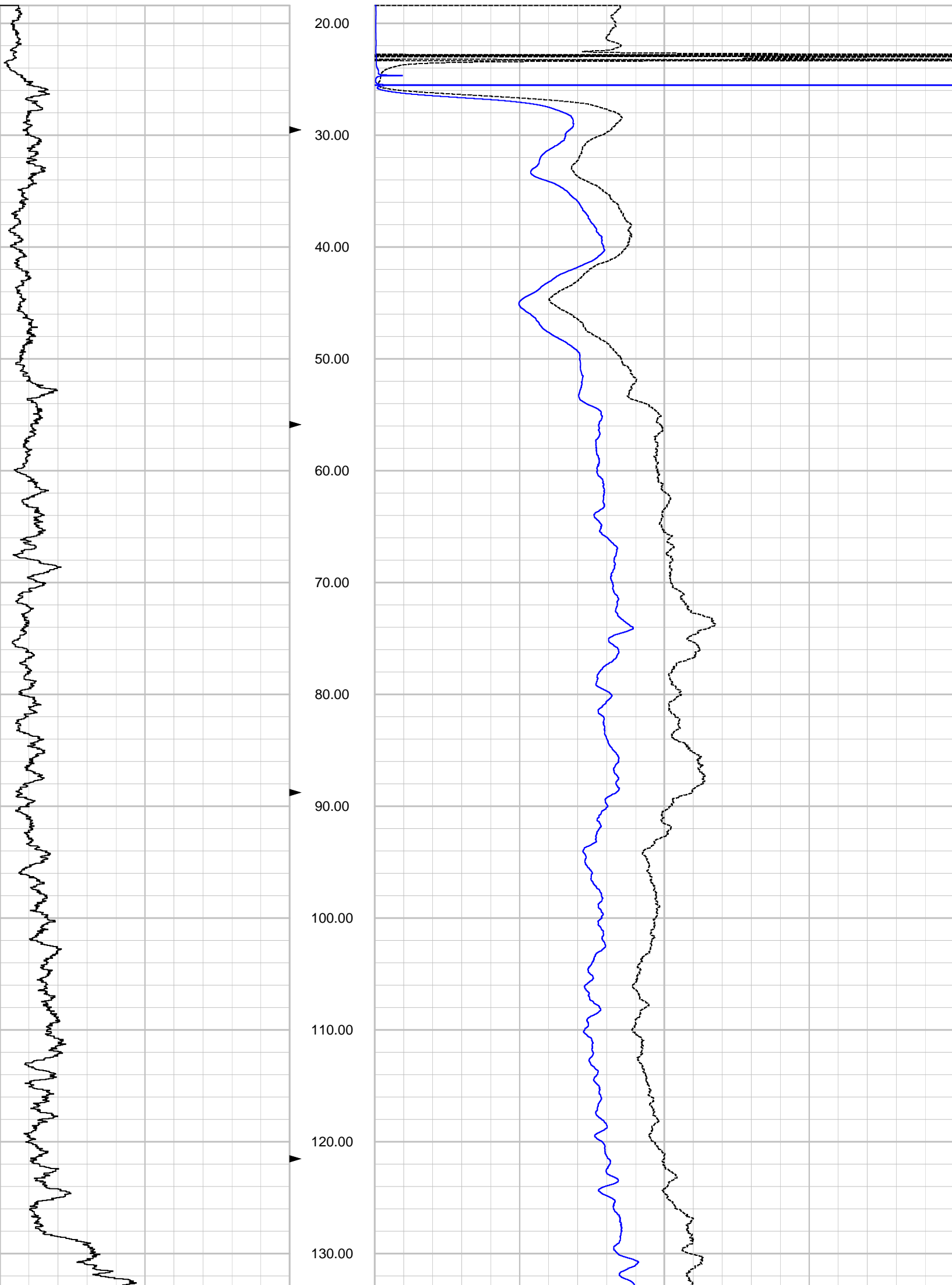
0.00 200.00

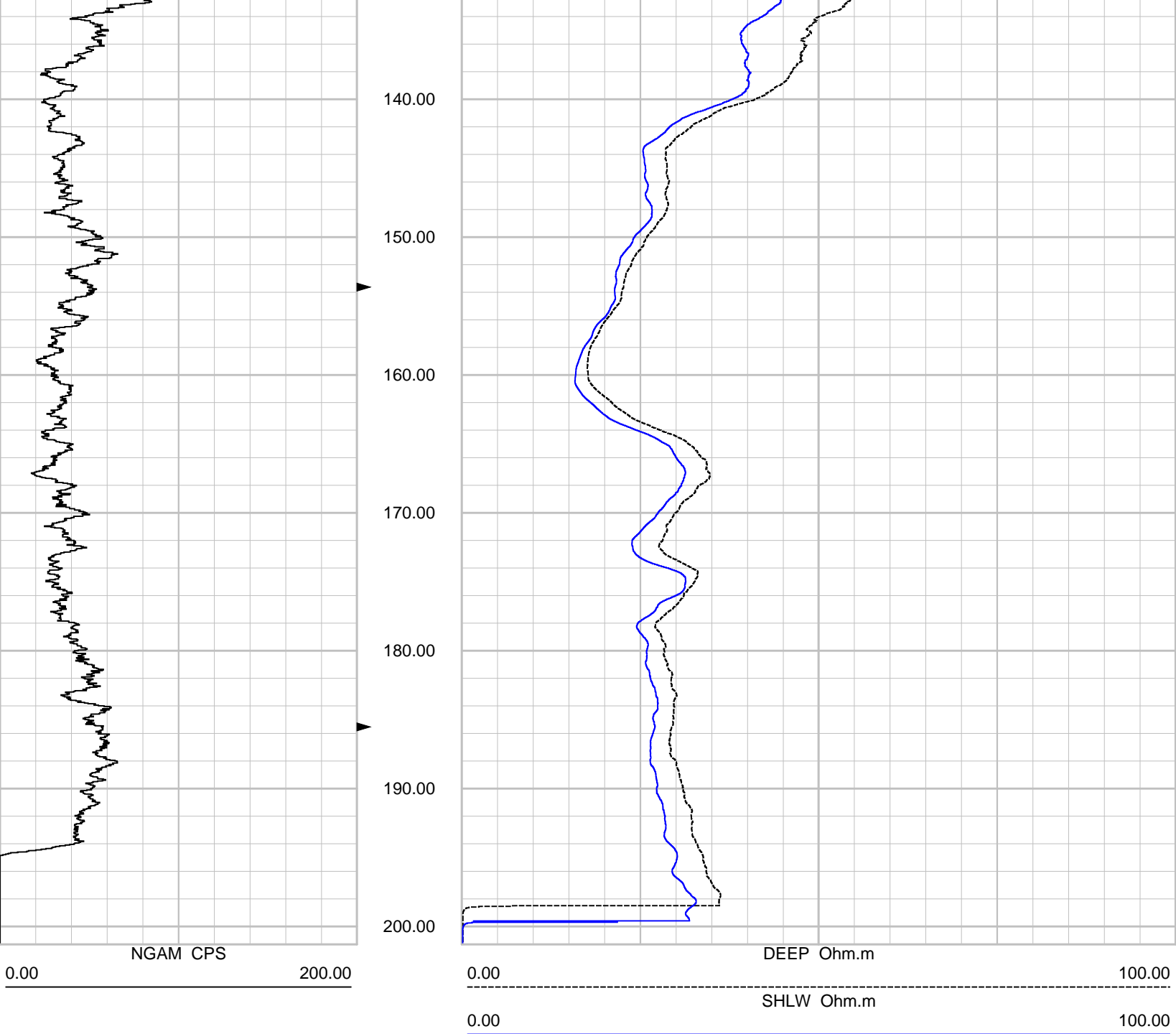
DEEP Ohm.m

0.00 100.00

SHLW Ohm.m

0.00 100.00

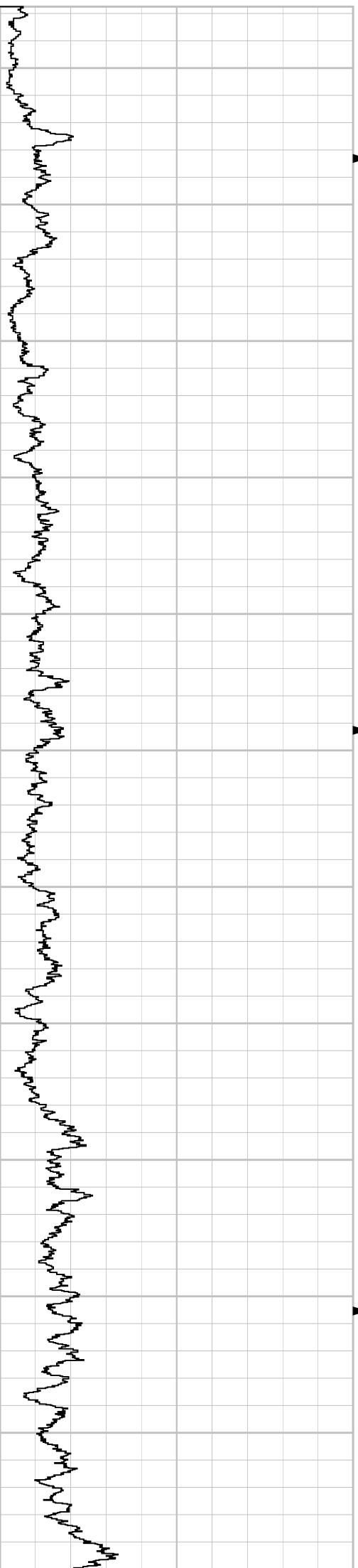




Depth: 18.00 ft Date: 29 May 2012 Time: 19:15:45 File: "C:\WinLogger\Data\WELL 22B\22 DUIN1 REP.LOG"

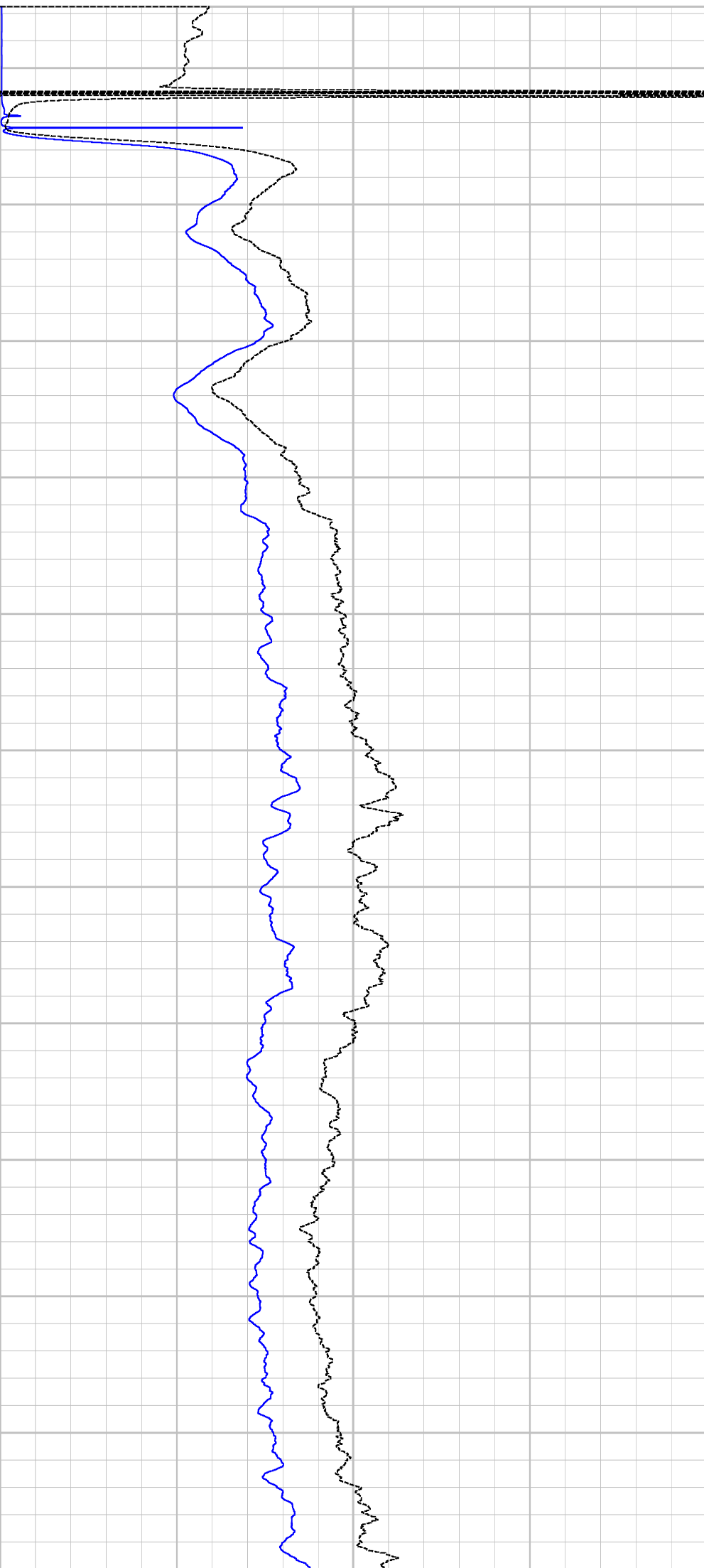
NGAM CPS

0.00 200.00



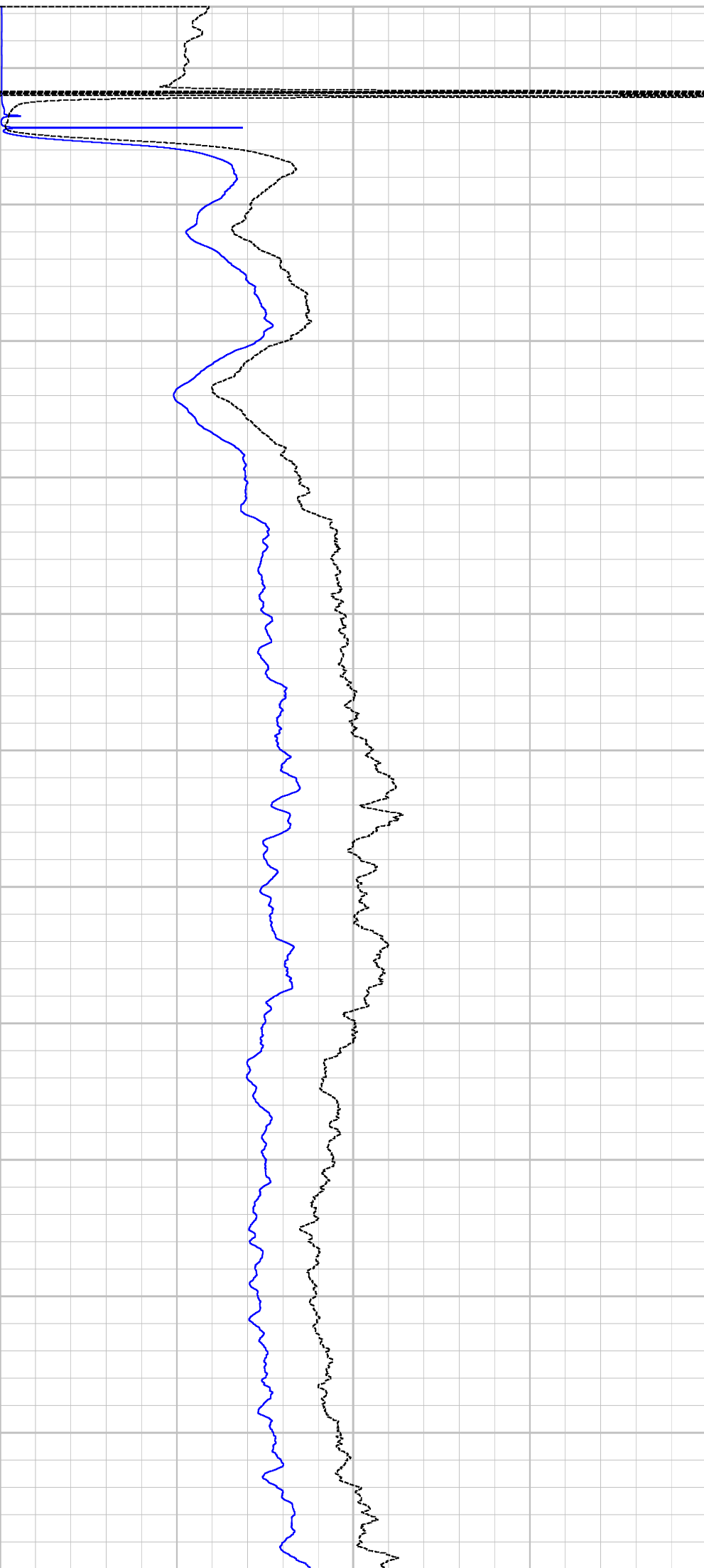
SHLW Ohm.m

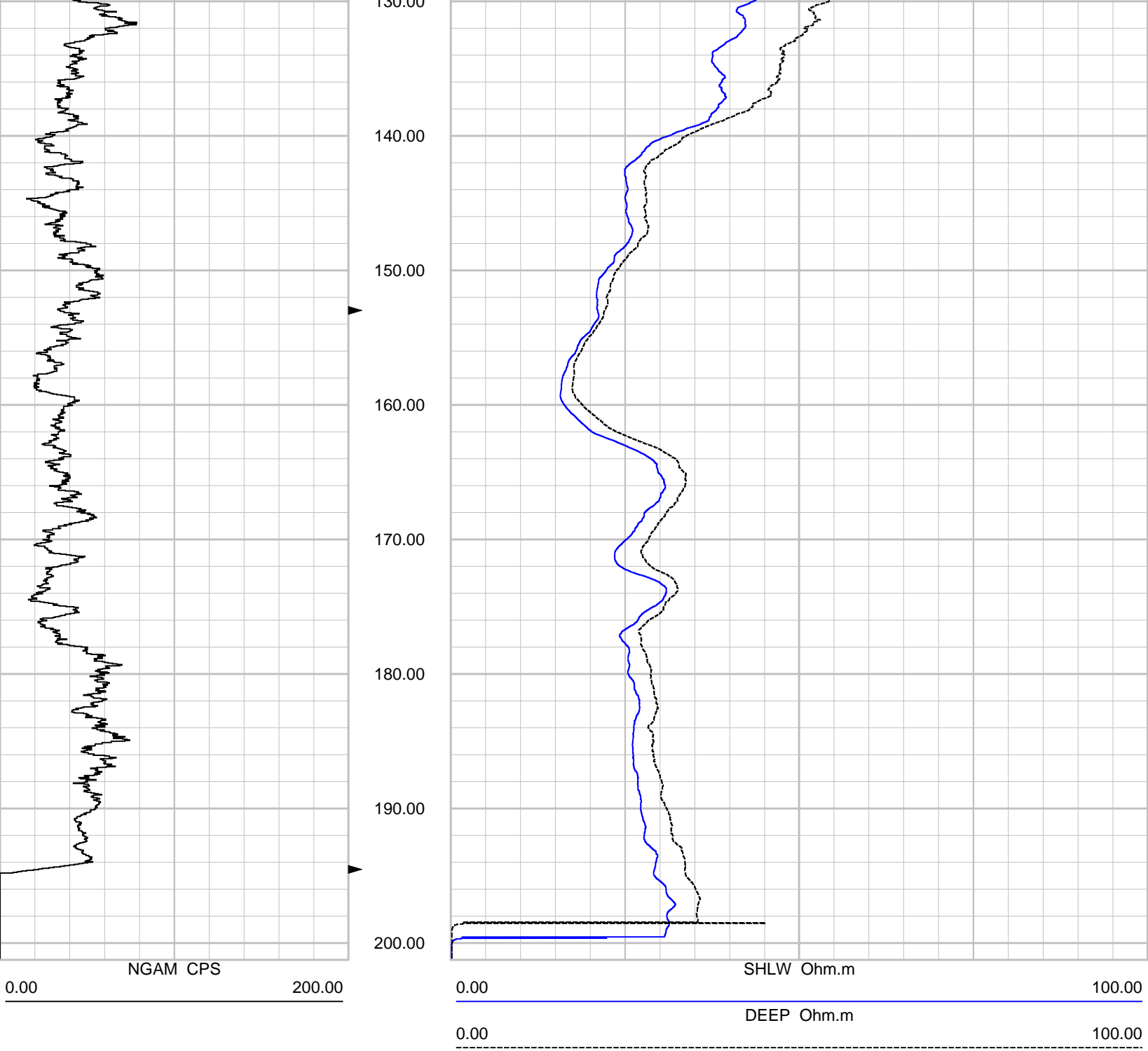
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DEEP Ohm.m

0.00 100.00

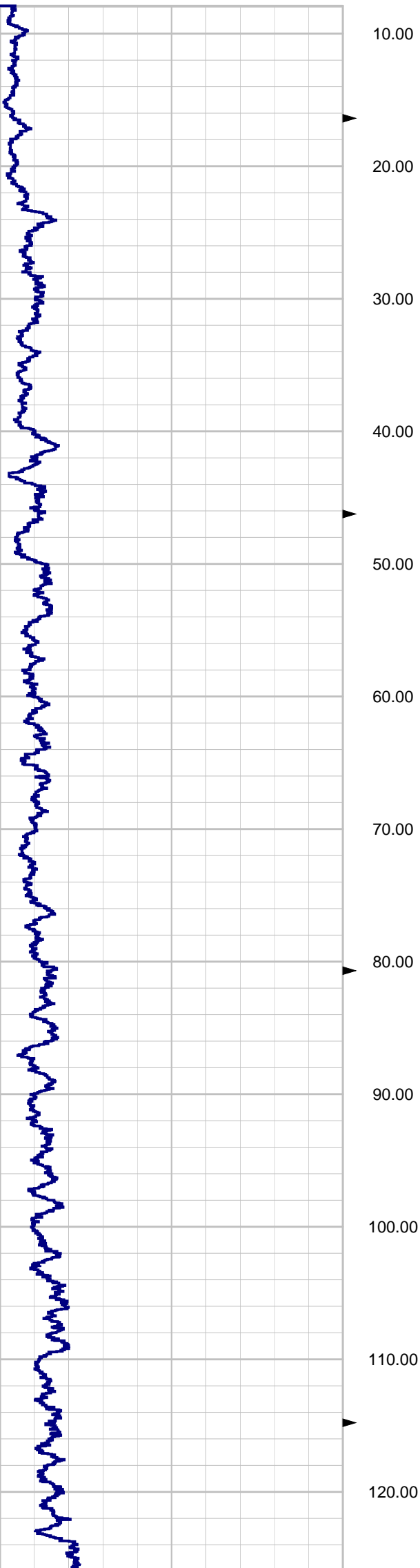




Depth: 15.00 ft Date: 29 May 2012 Time: 19:03:41 File: "C:\WinLogger\Data\WELL 22B\22 DUIN1.LOG"

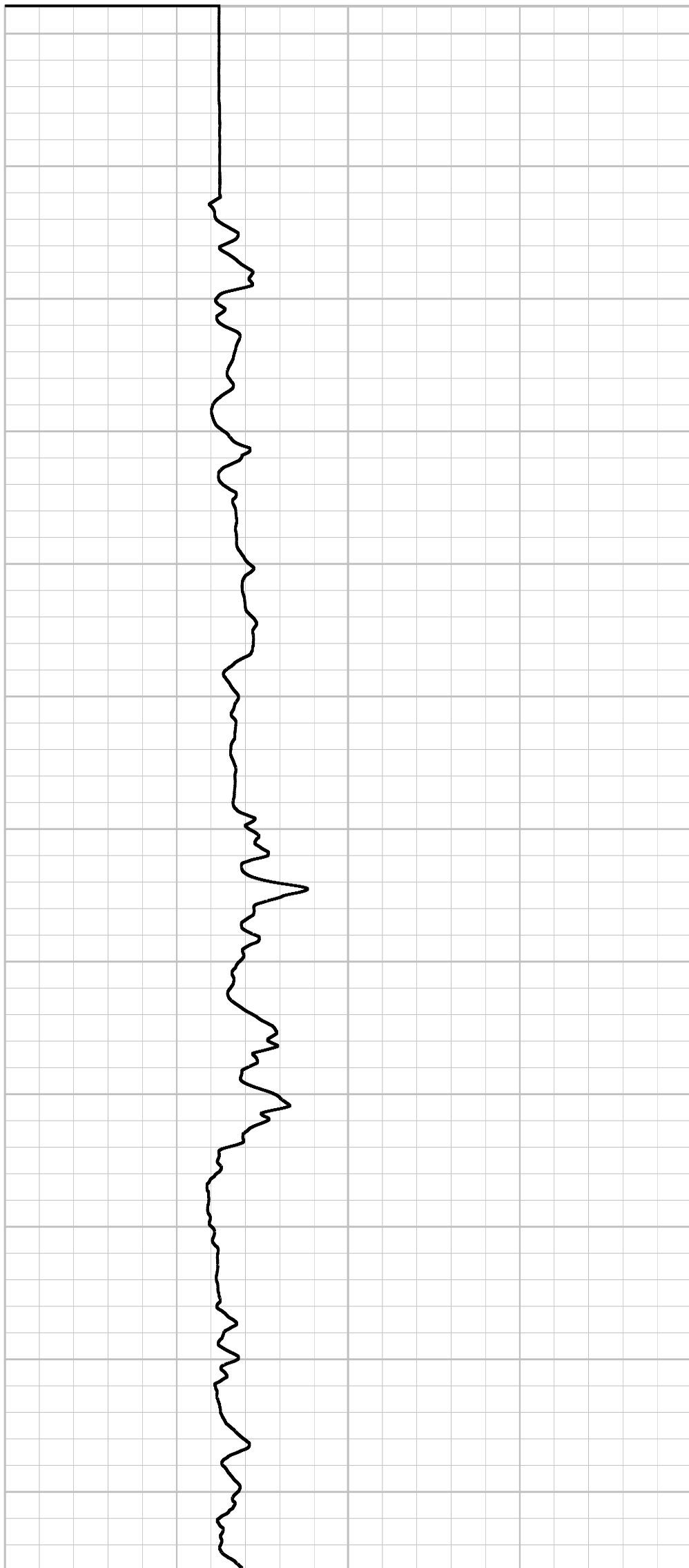
NGAM CPS

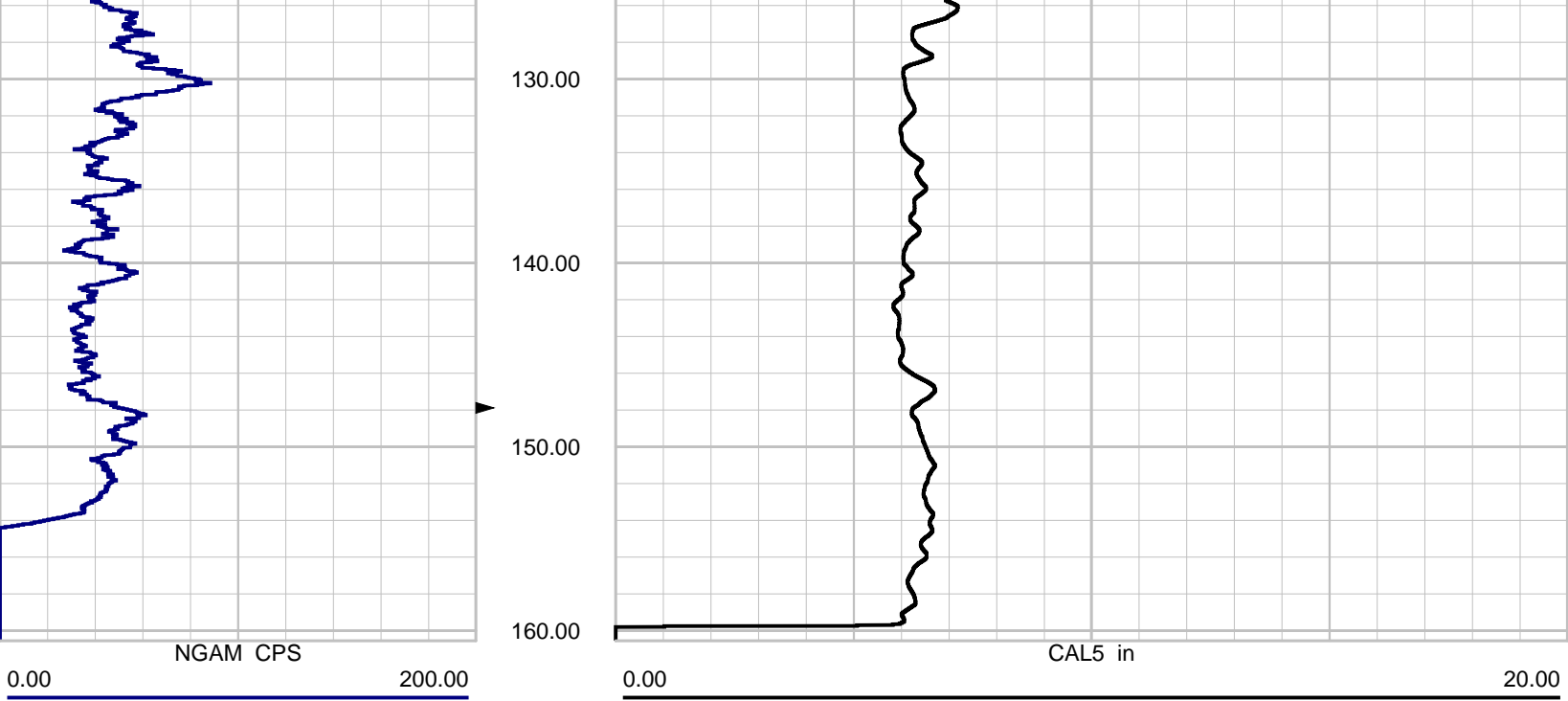
0.00 200.00



CAL5 in

0.00 20.00

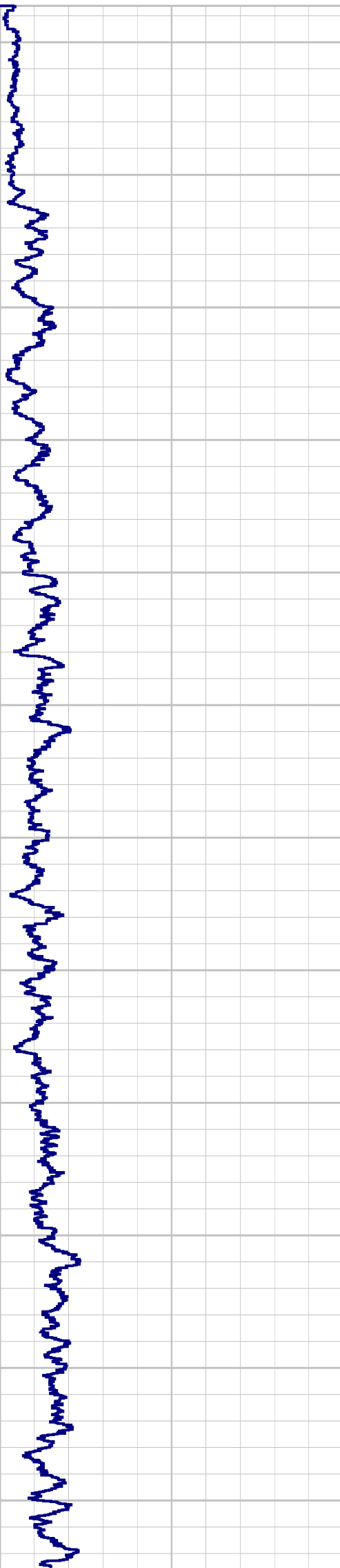




Depth: 7.00 ft Date: 29 May 2012 Time: 18:01:11 File: "C:\WinLogger\Data\WELL 22B\22 CALIPER1 REP.LOG"

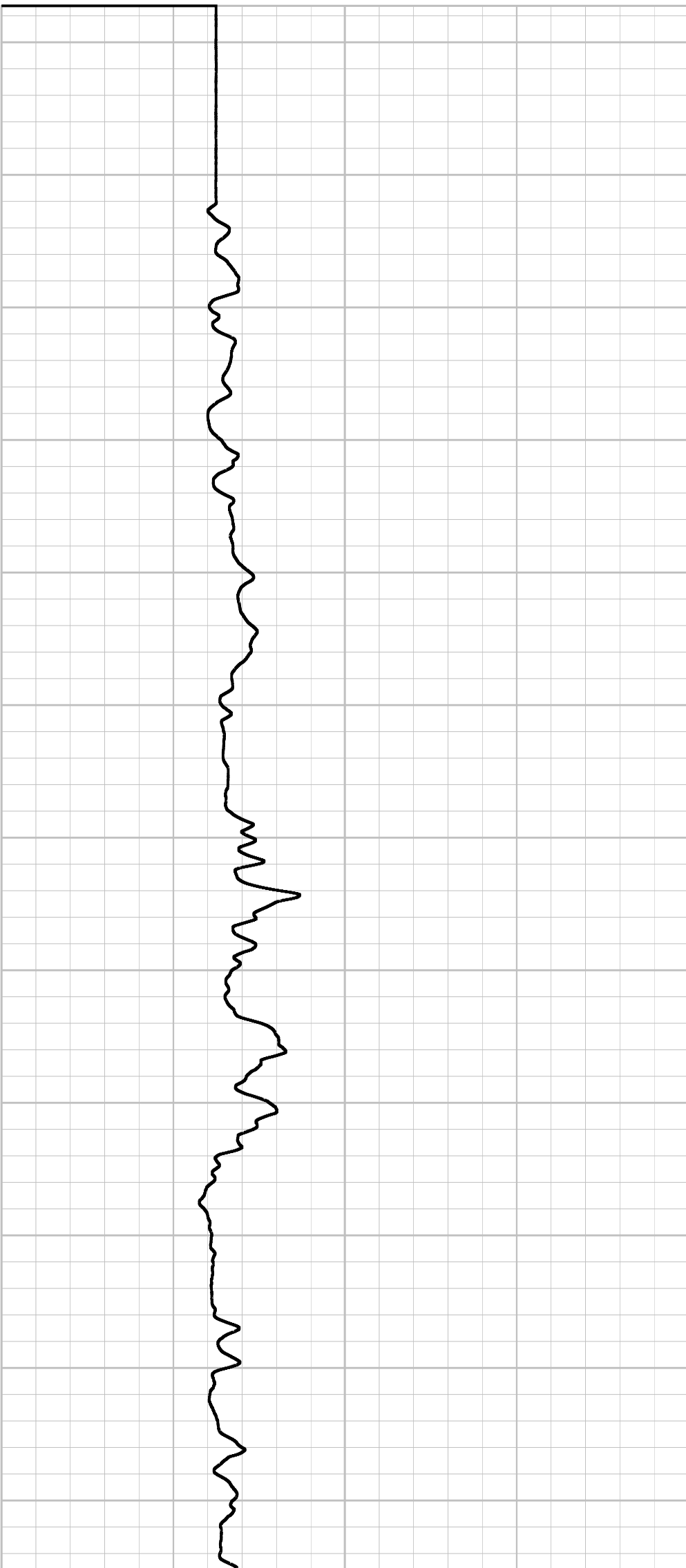
NGAM CPS

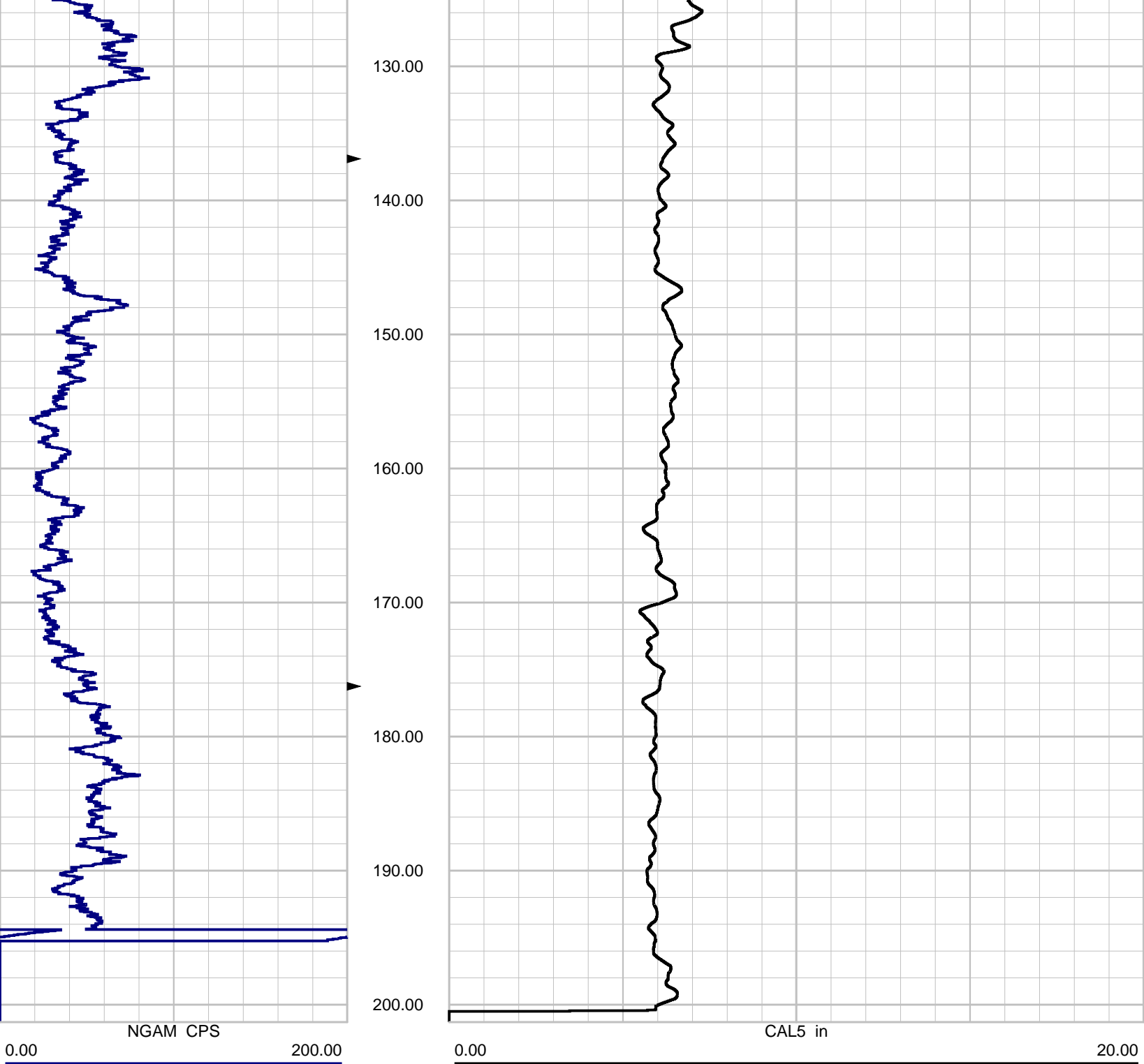
0.00 200.00



CAL5 in

0.00 20.00

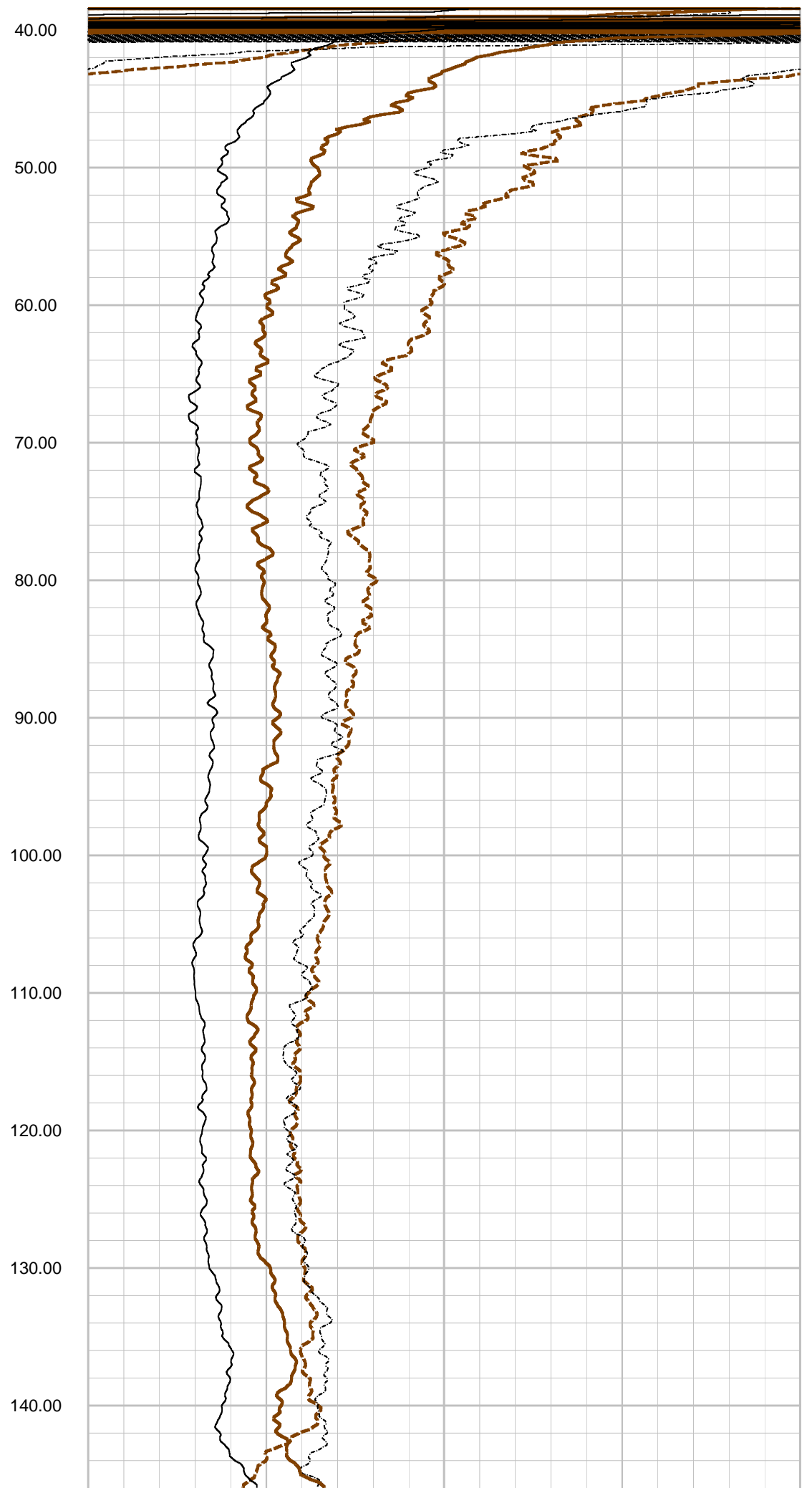
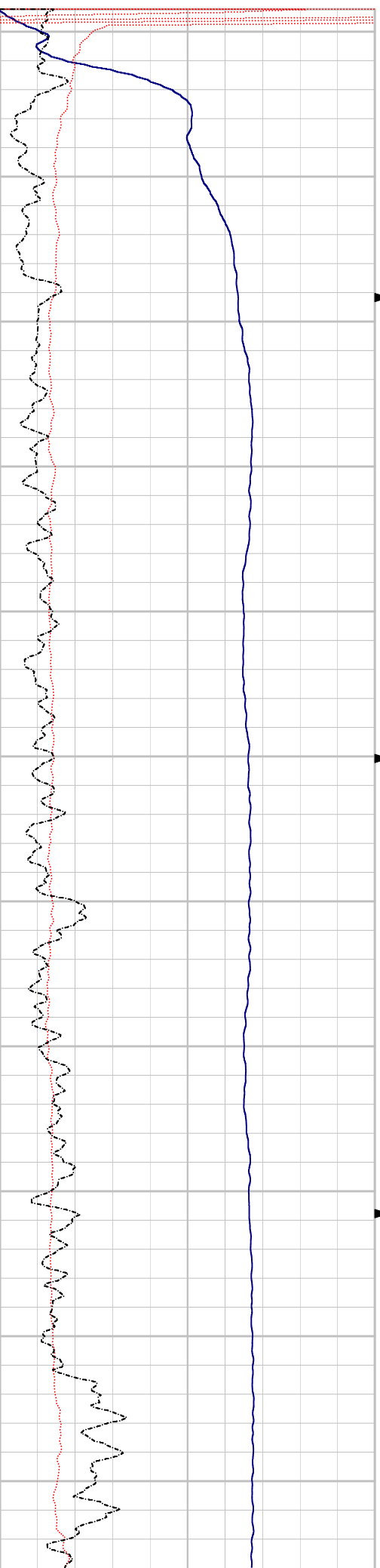


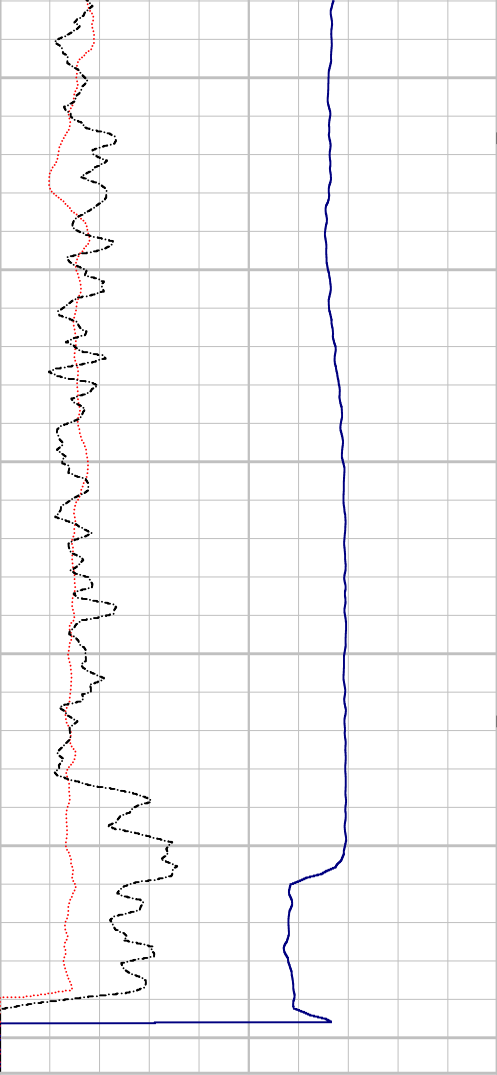


Depth: 7.00 ft Date: 29 May 2012 Time: 17:44:54 File: "C:\WinLogger\Data\WELL 22B\22 CALIPER1.LOG"

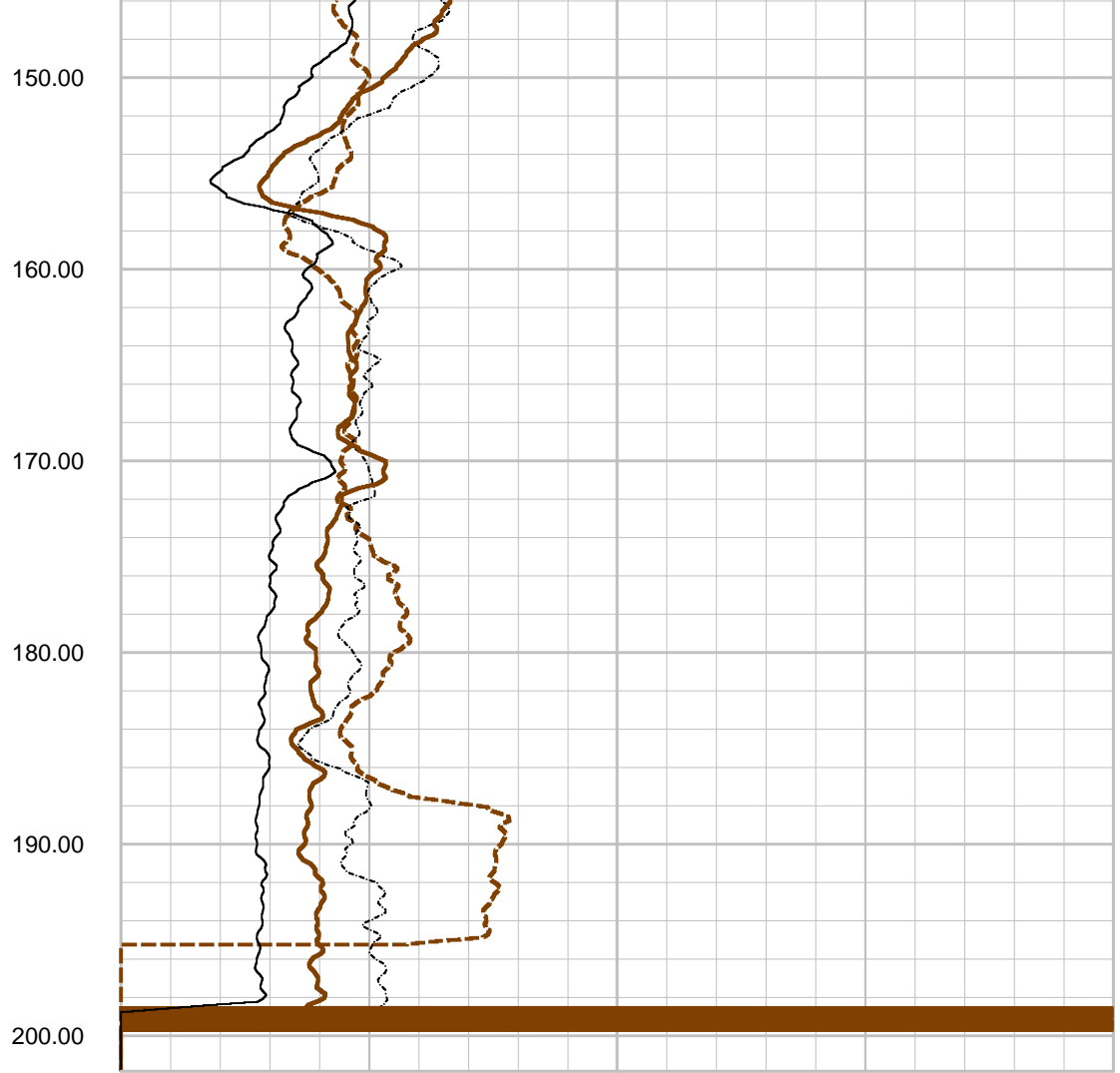
0.00	SP mV	600.00
<hr/>		
0.00	SPR OHM	200.00
<hr/>		
0.00	NGAM CPS	200.00
<hr/>		

0.00	N64I OHMM	300.00
<hr/>		
0.00	N32I OHMM	300.00
<hr/>		
0.00	N16I OHMM	300.00
<hr/>		
0.00	N8IN OHMM	300.00
<hr/>		





0.00	SPR OHM	600.00
0.00	NGAM CPS	200.00

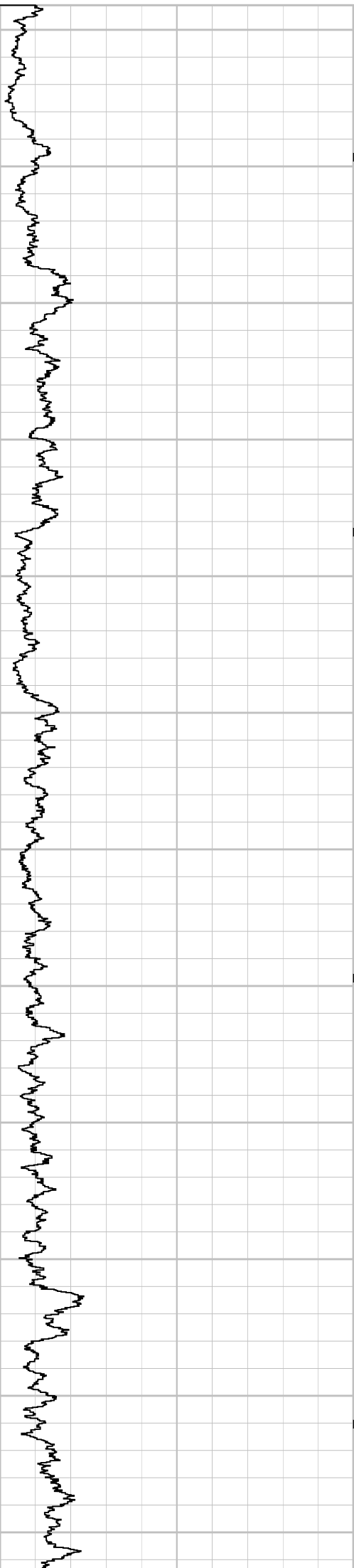


0.00	N64I OHMM	300.00
0.00	N32I OHMM	300.00
0.00	N16I OHMM	300.00
0.00	N8IN OHMM	300.00

Depth: 38.00 ft Date: 10 May 2012 Time: 20:25:58 File: "C:\WinLogger\Data\WELL 25\25 ELOG1.LGX"

NGAM CPS

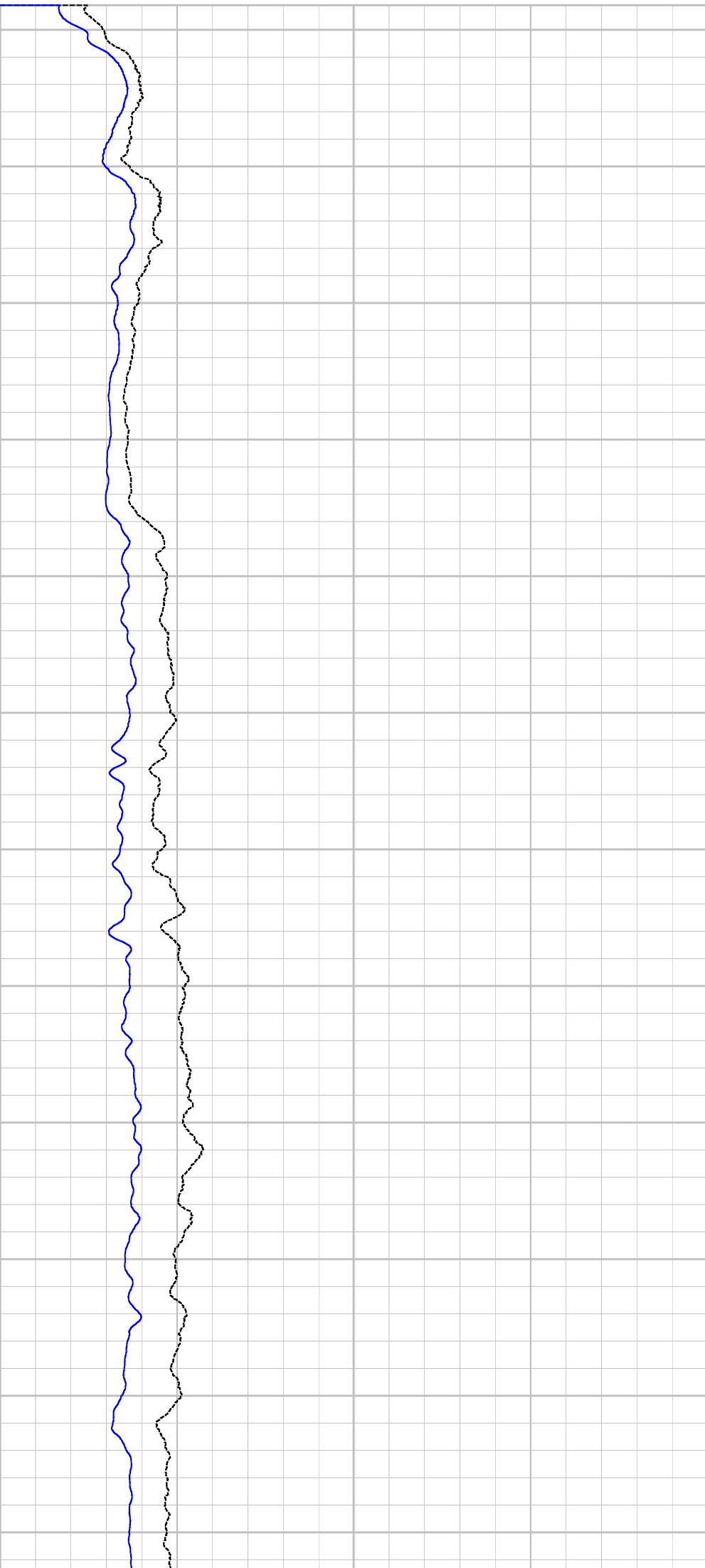
0.00 200.00

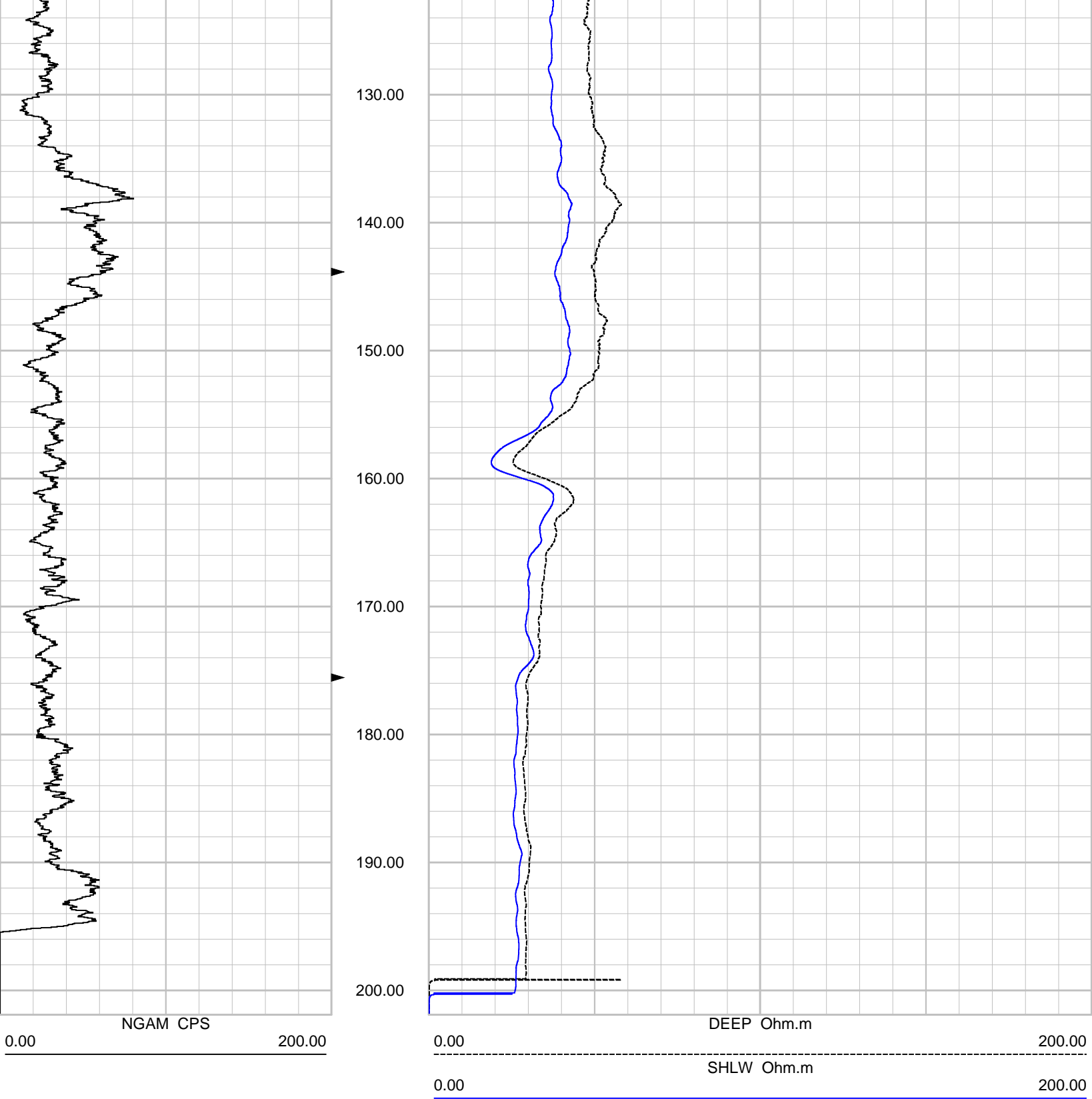


DEEP Ohm.m

0.00 200.00

SHLW Ohm.m 0.00 200.00

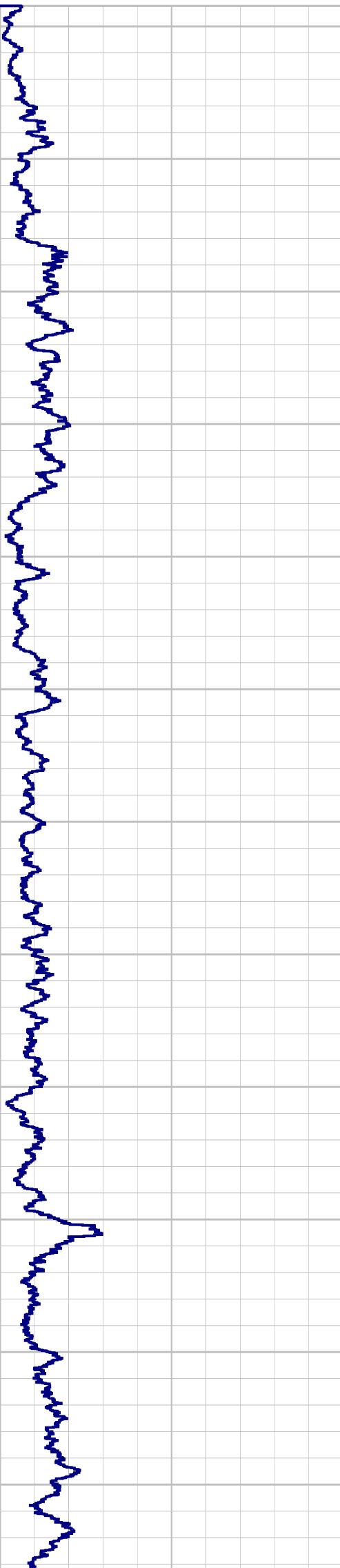




Depth: 8.00 ft Date: 10 May 2012 Time: 19:52:30 File: "C:\WinLogger\Data\WELL 25\25 DUIN1.LOG"

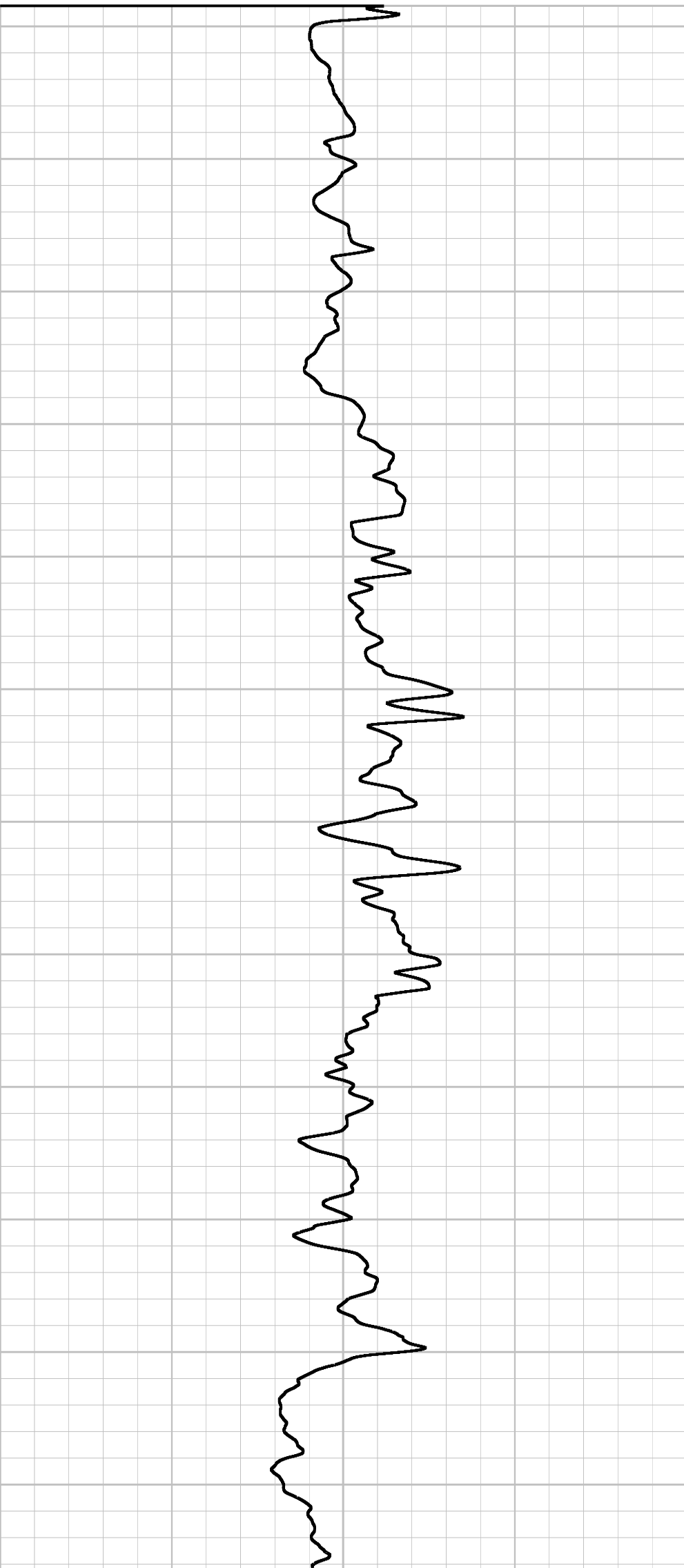
NGAM CPS

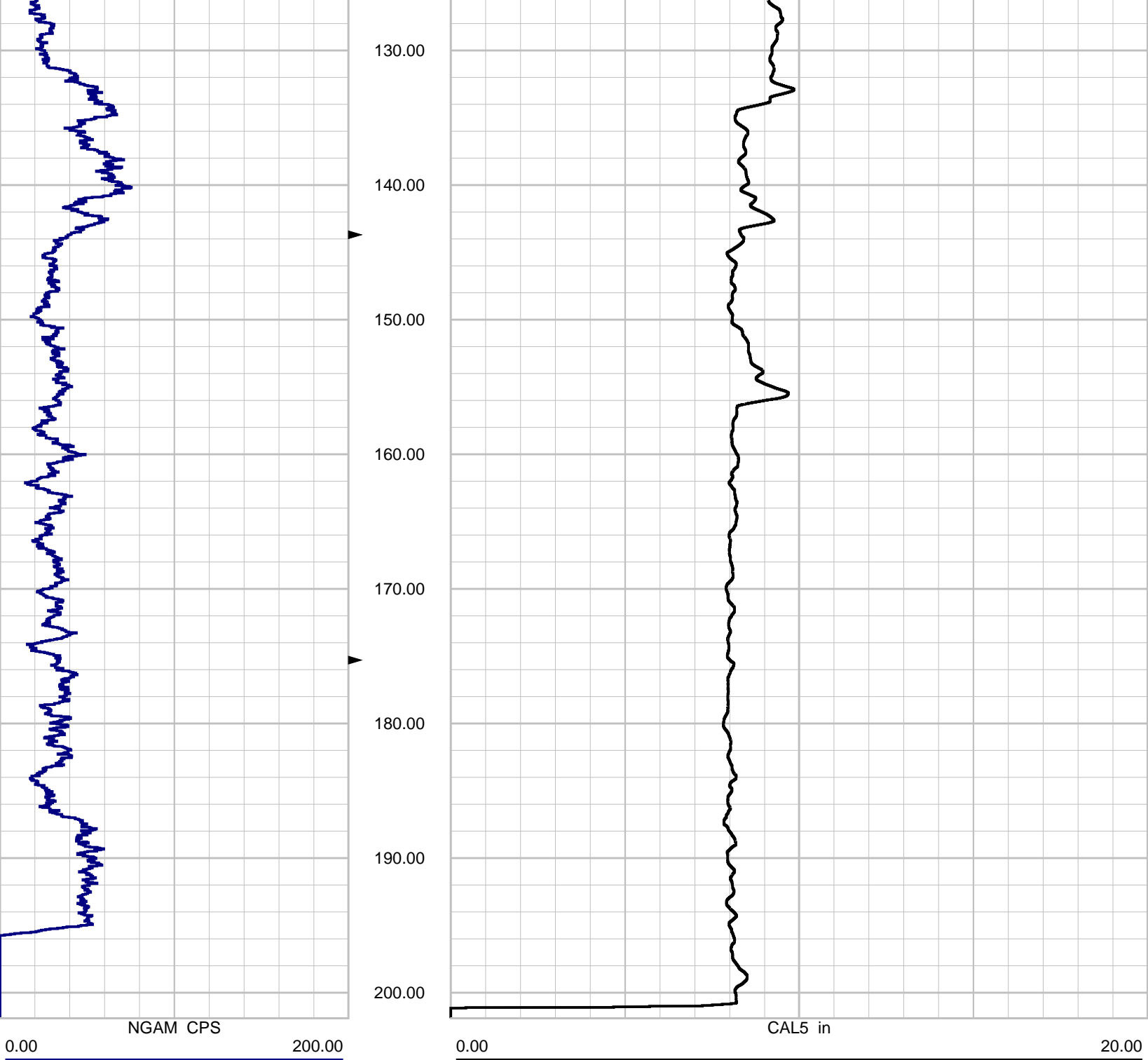
0.00 200.00



CAL5 in

0.00 20.00





Depth: 8.00 ft Date: 10 May 2012 Time: 19:12:40 File: "C:\WinLogger\Data\WELL 25\25 CALP1.LOG"

APPENDIX D

GRAVEL PACK DATA

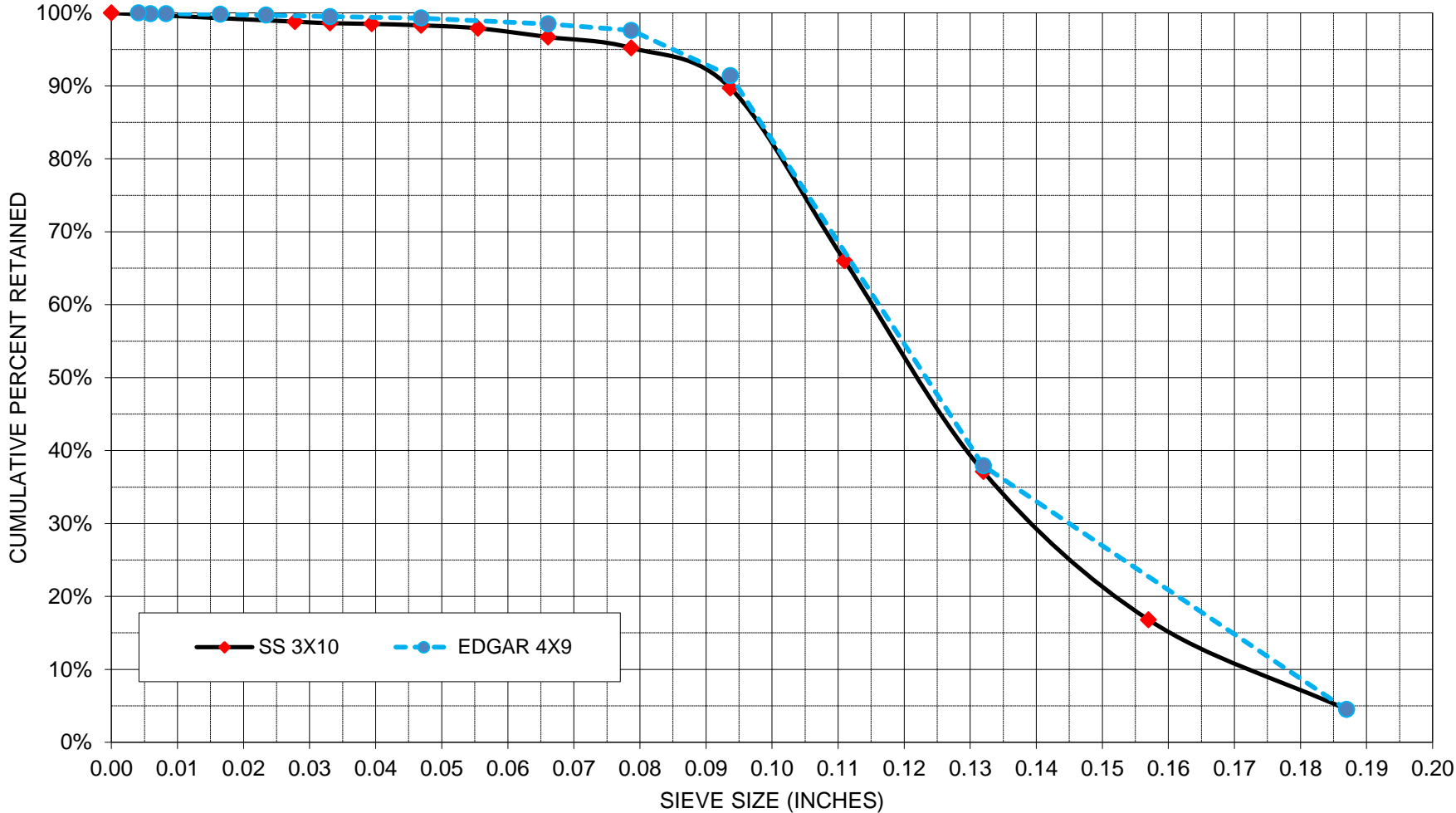
APPENDIX D
 SEACOAST UTILITY AUTHORITY
 SURFICAL AQUIFER PRODUCTION WELLS NPB-5C
 Edgar Minerals 4x9 Grain Size Analysis

Sieve Size	mm	Cumulative Percent Retained	Percent Passing
4	4.760	4.5%	95.5%
6	3.360	37.9%	62.1%
8	2.380	91.4%	8.6%
10	2.000	97.6%	2.4%
12	1.680	98.5%	1.5%
16	1.190	99.3%	0.7%
20	0.841	99.5%	0.5%
30	0.595	99.7%	0.3%
40	0.420	99.8%	0.2%
70	0.210	99.9%	0.1%
100	0.149	99.9%	0.1%
140	0.105	100.0%	0.0%
Effective Size: 2.41		Uniformity Coefficient: 1.38	

APPENDIX D
 SEACOAST UTILITY AUTHORITY
 SURFICIAL AQUIFER PRODUCTION WELLS NPB-6B, BR-22B & BR-25B
 Lake Wales 3x10 Grain Size Analysis

Sieve Size	mm	Cumulative Percent Retained	Percent Passing
4	4.76	3.5%	96.5%
5	4.00	13.2%	86.8%
6	3.36	29.7%	70.3%
7	2.83	55.8%	44.2%
8	2.38	78.6%	21.4%
10	2.00	86.6%	13.4%
12	1.68	90.8%	9.2%
14	1.41	95.9%	4.1%
16	1.19	97.6%	2.4%
18	1.00	98.1%	1.9%
20	0.84	98.4%	1.6%
25	0.71	98.5%	1.5%
Effective Size: 1.74		Uniformity Coefficient: 1.81	

APPENDIX D
SEACOAST UTILITY AUTHORITY
GRAINSIZE DISTRIBUTION PLOT



APPENDIX E
LABORATORY WATER QUALITY REPORTS

February 26, 2013

Mo Rahgozar
Advanced Well Drilling
2715 Garden Street
Malabar, FL 32950

RE: Project: NPB #5
Pace Project No.: 3581705

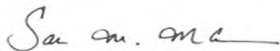
Dear Mo Rahgozar:

Enclosed are the analytical results for sample(s) received by the laboratory between February 01, 2013 and February 04, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Sakina McKenzie

sakina.mckenzie@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

CERTIFICATIONS

Project: NPB #5
Pace Project No.: 3581705

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4 Greensburg, PA 15601
ACCLASS DOD-ELAP Accreditation #: ADE-1544
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California/TNI Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Guam/PADEP Certification
Hawaii/PADEP Certification
Idaho Certification
Illinois/PADEP Certification
Indiana/PADEP Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana/TNI Certification #: LA080002
Louisiana/TNI Certification #: 4086
Maine Certification #: PA0091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nevada Certification
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188
Utah/TNI Certification #: ANTE
Virgin Island/PADEP Certification
Virginia Certification #: 00112
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia Certification #: 143
Wisconsin/PADEP Certification
Wyoming Certification #: 8TMS-Q

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236

Montana Certification #: Cert 0074
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pace Analytical Services - Ormond certification number
E83509
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

REPORT OF LABORATORY ANALYSIS

SAMPLE SUMMARY

Project: NPB #5
Pace Project No.: 3581705

Lab ID	Sample ID	Matrix	Date Collected	Date Received
3581705001	NPB #5	Water	02/01/13 09:30	02/01/13 12:20
3581705003	NPB # 5	Water	02/04/13 08:45	02/04/13 14:55

REPORT OF LABORATORY ANALYSIS

SAMPLE ANALYTE COUNT

Project: NPB #5
Pace Project No.: 3581705

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3581705001	NPB #5	EPA 504.1	JLR	2	PASI-O
		EPA 508.1	JTT	21	PASI-O
		EPA 515.3	LJM	7	PASI-O
		EPA 531.1	WFH	3	PASI-O
		EPA 547	WFH	1	PASI-O
		EPA 549.2	WFH	1	PASI-O
		EPA 200.7	JTJ	10	PASI-O
		EPA 200.8	DRS	7	PASI-O
		EPA 245.1	HEA	1	PASI-O
		EPA 525.2	WFH	6	PASI-O
		EPA 548.1	EAO	1	PASI-O
		EPA 524.2	JBH	25	PASI-O
		EPA 524.2	JBH	9	PASI-O
		EPA 900.0m	CJJ	1	PASI-PA
		EPA 903.1	SLA	1	PASI-PA
		EPA 904.0	MAW	1	PASI-PA
		SM 2120B	JP1	1	PASI-O
		SM 2150B	IRL	2	PASI-O
		SM 2540C	AGS	1	PASI-O
		SM 4500-CIO2	KHC	1	PASI-O
		SM 4500-H+B	GMD	2	PASI-O
		SM 5540C	KDM	1	PASI-O
		EPA 300.0	MMD	2	PASI-O
		EPA 300.0	MMD	3	PASI-O
		EPA 300.1	KDM	2	PASI-O
		EPA 300.1	KDM	2	PASI-O
		EPA 335.4	SOA	1	PASI-O
3581705003	NPB # 5	EPA 552.2	JLR	7	PASI-O

REPORT OF LABORATORY ANALYSIS

ANALYTICAL RESULTS

Project: NPB #5
Pace Project No.: 3581705

Sample: NPB #5 **Lab ID: 3581705001** Collected: 02/01/13 09:30 Received: 02/01/13 12:20 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504.1 GCS EDB and DBCP		Analytical Method: EPA 504.1 Preparation Method: EPA 504.1							
1,2-Dibromo-3-chloropropane	0.0054U	ug/L	0.022	0.0054	1	02/08/13 11:00	02/08/13 21:02	96-12-8	
1,2-Dibromoethane (EDB)	0.0069U	ug/L	0.011	0.0069	1	02/08/13 11:00	02/08/13 21:02	106-93-4	
508.1 GCS Pesticides		Analytical Method: EPA 508.1 Preparation Method: EPA 508.1							
Alachlor	0.032U	ug/L	0.19	0.032	1	02/13/13 15:00	02/14/13 18:54	15972-60-8	
Atrazine	0.020U	ug/L	0.095	0.020	1	02/13/13 15:00	02/14/13 18:54	1912-24-9	
gamma-BHC (Lindane)	0.0028U	ug/L	0.019	0.0028	1	02/13/13 15:00	02/14/13 18:54	58-89-9	
Chlordane (Technical)	0.045U	ug/L	0.19	0.045	1	02/13/13 15:00	02/14/13 18:54	57-74-9	
Endrin	0.0019U	ug/L	0.0095	0.0019	1	02/13/13 15:00	02/14/13 18:54	72-20-8	
Heptachlor	0.0057U	ug/L	0.038	0.0057	1	02/13/13 15:00	02/14/13 18:54	76-44-8	
Heptachlor epoxide	0.0028U	ug/L	0.019	0.0028	1	02/13/13 15:00	02/14/13 18:54	1024-57-3	
Hexachlorobenzene	0.010U	ug/L	0.095	0.010	1	02/13/13 15:00	02/14/13 18:54	118-74-1	
Hexachlorocyclopentadiene	0.011U	ug/L	0.095	0.011	1	02/13/13 15:00	02/14/13 18:54	77-47-4	
Methoxychlor	0.013U	ug/L	0.095	0.013	1	02/13/13 15:00	02/14/13 18:54	72-43-5	
PCB-1016 (Aroclor 1016)	0.076U	ug/L	0.095	0.076	1	02/13/13 15:00	02/14/13 18:54	12674-11-2	
PCB-1221 (Aroclor 1221)	0.028U	ug/L	0.095	0.028	1	02/13/13 15:00	02/14/13 18:54	11104-28-2	
PCB-1232 (Aroclor 1232)	0.028U	ug/L	0.095	0.028	1	02/13/13 15:00	02/14/13 18:54	11141-16-5	
PCB-1242 (Aroclor 1242)	0.048U	ug/L	0.095	0.048	1	02/13/13 15:00	02/14/13 18:54	53469-21-9	
PCB-1248 (Aroclor 1248)	0.059U	ug/L	0.095	0.059	1	02/13/13 15:00	02/14/13 18:54	12672-29-6	
PCB-1254 (Aroclor 1254)	0.022U	ug/L	0.095	0.022	1	02/13/13 15:00	02/14/13 18:54	11097-69-1	
PCB-1260 (Aroclor 1260)	0.063U	ug/L	0.095	0.063	1	02/13/13 15:00	02/14/13 18:54	11096-82-5	
PCB, Total	0.076U	ug/L	0.095	0.076	1	02/13/13 15:00	02/14/13 18:54	1336-36-3	
Simazine	0.042U	ug/L	0.066	0.042	1	02/13/13 15:00	02/14/13 18:54	122-34-9	
Toxaphene	0.58U	ug/L	0.95	0.58	1	02/13/13 15:00	02/14/13 18:54	8001-35-2	
Surrogates									
Decachlorobiphenyl (S)	87 %		70-130		1	02/13/13 15:00	02/14/13 18:54	2051-24-3	
515.3 Chlorinated Herbicides		Analytical Method: EPA 515.3 Preparation Method: EPA 515.3							
2,4-D	0.081U	ug/L	0.10	0.081	1	02/09/13 09:45	02/13/13 06:59	94-75-7	
Dalapon	0.89U	ug/L	1.0	0.89	1	02/09/13 09:45	02/13/13 06:59	75-99-0	
Dinoseb	0.16U	ug/L	0.20	0.16	1	02/09/13 09:45	02/13/13 06:59	88-85-7	
Pentachlorophenol	0.030U	ug/L	0.040	0.030	1	02/09/13 09:45	02/13/13 06:59	87-86-5	
Picloram	0.094U	ug/L	0.10	0.094	1	02/09/13 09:45	02/13/13 06:59	1918-02-1	
2,4,5-TP (Silvex)	0.16U	ug/L	0.20	0.16	1	02/09/13 09:45	02/13/13 06:59	93-72-1	
Surrogates									
2,4-DCAA (S)	83 %		70-130		1	02/09/13 09:45	02/13/13 06:59	19719-28-9	
531.1 HPLC Carbamates		Analytical Method: EPA 531.1							
Carbofuran	0.32U	ug/L	2.0	0.32	1		02/08/13 20:12	1563-66-2	
Oxamyl	0.41U	ug/L	2.0	0.41	1		02/08/13 20:12	23135-22-0	
Surrogates									
Propoxur (S)	93 %		80-120		1		02/08/13 20:12	114-26-1	
547 HPLC Glyphosate		Analytical Method: EPA 547							
Glyphosate	2.1U	ug/L	6.0	2.1	1		02/05/13 04:53		

ANALYTICAL RESULTS

Project: NPB #5
Pace Project No.: 3581705

Sample: NPB #5 **Lab ID: 3581705001** Collected: 02/01/13 09:30 Received: 02/01/13 12:20 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
549.2 HPLC Paraquat Diquat									
Analytical Method: EPA 549.2 Preparation Method: EPA 549.2									
Diquat	0.15U	ug/L	0.40	0.15	1	02/05/13 08:00	02/05/13 23:00	85-00-7	
Analytical Method: EPA 552.2 Preparation Method: EPA 552.2									
Dibromoacetic Acid	0.61U	ug/L	1.0	0.61	1	02/13/13 10:30	02/15/13 10:25	631-64-1	
Dichloroacetic Acid	0.61U	ug/L	1.0	0.61	1	02/13/13 10:30	02/15/13 10:25	79-43-6	
Haloacetic Acids (Total)	0.61U	ug/L	1.0	0.61	1	02/13/13 10:30	02/15/13 10:25		
Monobromoacetic Acid	0.61U	ug/L	1.0	0.61	1	02/13/13 10:30	02/15/13 10:25	79-08-3	
Monochloroacetic Acid	0.61U	ug/L	1.0	0.61	1	02/13/13 10:30	02/15/13 10:25	79-11-8	
Trichloroacetic Acid	0.61U	ug/L	1.0	0.61	1	02/13/13 10:30	02/15/13 10:25	76-03-9	
Surrogates									
2,3-Dibromopropanoic Acid (S)	117 %		70-130		1	02/13/13 10:30	02/15/13 10:25	600-05-5	
200.7 MET ICP									
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Barium	0.0054 I	mg/L	0.010	0.0050	1	02/04/13 12:14	02/05/13 04:58	7440-39-3	
Beryllium	0.00050U	mg/L	0.0010	0.00050	1	02/04/13 12:14	02/05/13 04:58	7440-41-7	
Cadmium	0.00050U	mg/L	0.0010	0.00050	1	02/04/13 12:14	02/05/13 04:58	7440-43-9	
Chromium	0.0025U	mg/L	0.0050	0.0025	1	02/04/13 12:14	02/05/13 04:58	7440-47-3	
Iron	0.35	mg/L	0.040	0.020	1	02/04/13 12:14	02/05/13 04:58	7439-89-6	
Manganese	0.0098	mg/L	0.0050	0.0025	1	02/04/13 12:14	02/05/13 04:58	7439-96-5	
Nickel	0.0025U	mg/L	0.0050	0.0025	1	02/04/13 12:14	02/05/13 04:58	7440-02-0	
Silver	0.0025U	mg/L	0.0050	0.0025	1	02/04/13 12:14	02/05/13 04:58	7440-22-4	
Sodium	27.2	mg/L	1.0	0.50	1	02/04/13 12:14	02/05/13 04:58	7440-23-5	
Zinc	0.010U	mg/L	0.020	0.010	1	02/04/13 12:14	02/05/13 04:58	7440-66-6	
200.8 MET ICPMS									
Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Aluminum	0.0092 I	mg/L	0.010	0.0058	1	02/04/13 12:14	02/05/13 17:38	7429-90-5	
Antimony	0.00050U	mg/L	0.0010	0.00050	1	02/04/13 12:14	02/05/13 17:38	7440-36-0	
Arsenic	0.00050U	mg/L	0.0010	0.00050	1	02/04/13 12:14	02/05/13 17:38	7440-38-2	
Copper	0.00093U	mg/L	0.0010	0.00093	1	02/04/13 12:14	02/05/13 17:38	7440-50-8	
Lead	0.00050U	mg/L	0.0010	0.00050	1	02/04/13 12:14	02/05/13 17:38	7439-92-1	
Selenium	0.00050U	mg/L	0.0010	0.00050	1	02/04/13 12:14	02/05/13 17:38	7782-49-2	
Thallium	0.00050U	mg/L	0.0010	0.00050	1	02/04/13 12:14	02/05/13 17:38	7440-28-0	
245.1 Mercury									
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1									
Mercury	0.00010U	mg/L	0.00020	0.00010	1	02/04/13 14:14	02/05/13 10:37	7439-97-6	
525.2 Base Neutral Extractable									
Analytical Method: EPA 525.2 Preparation Method: EPA 525.2									
Benzo(a)pyrene	0.018U	ug/L	0.097	0.018	1	02/13/13 10:00	02/14/13 17:31	50-32-8	
bis(2-Ethylhexyl)adipate	0.37U	ug/L	1.5	0.37	1	02/13/13 10:00	02/14/13 17:31	103-23-1	
bis(2-Ethylhexyl)phthalate	0.48U	ug/L	1.9	0.48	1	02/13/13 10:00	02/14/13 17:31	117-81-7	
Surrogates									
1,3-Dimethyl-2-nitrobenzene(S)	99 %		70-130		1	02/13/13 10:00	02/14/13 17:31	81209	
Perylene-d12 (S)	89 %		70-130		1	02/13/13 10:00	02/14/13 17:31	1520963	
Triphenylphosphate (S)	97 %		70-130		1	02/13/13 10:00	02/14/13 17:31	115-86-6	

ANALYTICAL RESULTS

Project: NPB #5
Pace Project No.: 3581705

Sample: NPB #5 **Lab ID: 3581705001** Collected: 02/01/13 09:30 Received: 02/01/13 12:20 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
548.1 GCS Endothall									
Analytical Method: EPA 548.1 Preparation Method: EPA 548.1									
Endothall	2.7U	ug/L	9.0	2.7	1	02/08/13 10:00	02/19/13 07:50		J(M0), L3
524.2 MSV									
Analytical Method: EPA 524.2									
Benzene	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	71-43-2	
Carbon tetrachloride	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	56-23-5	
Chlorobenzene	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	108-90-7	
1,2-Dichlorobenzene	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	95-50-1	
1,4-Dichlorobenzene	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	106-46-7	
1,2-Dichloroethane	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	107-06-2	
1,1-Dichloroethene	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	75-35-4	
cis-1,2-Dichloroethene	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	156-59-2	
trans-1,2-Dichloroethene	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	156-60-5	
1,2-Dichloropropane	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	78-87-5	
Ethylbenzene	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	100-41-4	
Methylene Chloride	0.44U	ug/L	0.50	0.44	1		02/04/13 16:38	75-09-2	L3
Styrene	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	100-42-5	
Tetrachloroethene	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	127-18-4	
Toluene	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	108-88-3	
1,2,4-Trichlorobenzene	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	120-82-1	
1,1,1-Trichloroethane	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	71-55-6	
1,1,2-Trichloroethane	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	79-00-5	
Trichloroethene	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	79-01-6	
Vinyl chloride	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	75-01-4	
Xylene (Total)	0.25U	ug/L	0.50	0.25	1		02/04/13 16:38	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	105 %		70-130		1		02/04/13 16:38	460-00-4	
Dibromofluoromethane (S)	100 %		70-130		1		02/04/13 16:38	1868-53-7	
Toluene-d8 (S)	105 %		70-130		1		02/04/13 16:38	2037-26-5	
1,2-Dichloroethane-d4 (S)	93 %		70-130		1		02/04/13 16:38	17060-07-0	
524.2 THM									
Analytical Method: EPA 524.2									
Bromodichloromethane	0.25U	ug/L	0.50	0.25	1		02/05/13 00:21	75-27-4	
Bromoform	0.25U	ug/L	0.50	0.25	1		02/05/13 00:21	75-25-2	
Chloroform	0.25U	ug/L	0.50	0.25	1		02/05/13 00:21	67-66-3	
Dibromochloromethane	0.25U	ug/L	0.50	0.25	1		02/05/13 00:21	124-48-1	
Total Trihalomethanes (Calc.)	0.25U	ug/L	0.50	0.25	1		02/05/13 00:21		
Surrogates									
4-Bromofluorobenzene (S)	104 %		70-130		1		02/05/13 00:21	460-00-4	
Dibromofluoromethane (S)	102 %		70-130		1		02/05/13 00:21	1868-53-7	
Toluene-d8 (S)	105 %		70-130		1		02/05/13 00:21	2037-26-5	
1,2-Dichloroethane-d4 (S)	92 %		70-130		1		02/05/13 00:21	17060-07-0	
2120B Apparent Color									
Analytical Method: SM 2120B									
Apparent Color	35.0	units	5.0	5.0	1		02/02/13 12:45		

ANALYTICAL RESULTS

Project: NPB #5
Pace Project No.: 3581705

Sample: NPB #5 Lab ID: 3581705001 Collected: 02/01/13 09:30 Received: 02/01/13 12:20 Matrix: Water									
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2150B Threshold Odor Number Analytical Method: SM 2150B									
Temperature, Water (C)	44.1	deg C			1		02/02/13 09:15		
Threshold Odor Number	2.0	TON	1.0	1.0	1		02/02/13 09:15		
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	183	mg/L	5.0	5.0	1		02/07/13 15:39		
4500CIO2 Chlorine Dioxide Analytical Method: SM 4500-CIO2									
Chlorine Dioxide	0.22	mg/L	0.10	0.067	1		02/19/13 14:35		Q
4500H+ pH, Electrometric Analytical Method: SM 4500-H+B									
Temperature, Water (C)	23.0	deg C	0.010	0.010	1		02/04/13 11:25		Q
pH at 25 Degrees C	7.6	Std. Units	0.10	0.10	1		02/04/13 11:25		Q
5540C MBAS Surfactants Analytical Method: SM 5540C									
Surfactants	0.059U	mg/L	0.20	0.059	1		02/02/13 11:33		
300.0 IC Anions Analytical Method: EPA 300.0									
Nitrate as N	0.025U	mg/L	0.050	0.025	1		02/02/13 18:36	14797-55-8	J(M1)
Nitrite as N	0.025U	mg/L	0.050	0.025	1		02/02/13 18:36	14797-65-0	J(M1)
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	46.3	mg/L	5.0	2.5	1		02/02/13 18:36	16887-00-6	
Fluoride	0.26	mg/L	0.050	0.025	1		02/02/13 18:36	16984-48-8	
Sulfate	9.7	mg/L	5.0	2.5	1		02/02/13 18:36	14808-79-8	
300.1 Oxihalide IC Anions 14d Analytical Method: EPA 300.1									
Chlorite	1.1U	ug/L	10.0	1.1	2		02/08/13 13:14		D3
Surrogates									
Dichloroacetate (S)	94	%	90-115		2		02/08/13 13:14	79-43-6	
300.1 Oxihalide IC Anions 28d Analytical Method: EPA 300.1									
Bromate	1.0U	ug/L	5.0	1.0	2		02/08/13 13:14	15541-45-4	D3
Surrogates									
Dichloroacetate (S)	94	%	90-115		2		02/08/13 13:14	79-43-6	
335.4 Cyanide, Total Analytical Method: EPA 335.4 Preparation Method: EPA 335.4									
Cyanide	0.0050U	mg/L	0.010	0.0050	1	02/08/13 11:30	02/08/13 15:02	57-12-5	

ANALYTICAL RESULTS

Project: NPB #5
Pace Project No.: 3581705

Sample: NPB # 5 **Lab ID: 3581705003** Collected: 02/04/13 08:45 Received: 02/04/13 14:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
552.2 Haloacetic Acids		Analytical Method: EPA 552.2 Preparation Method: EPA 552.2							
Dibromoacetic Acid	0.61U	ug/L	1.0	0.61	1	02/12/13 12:30	02/19/13 08:40	631-64-1	
Dichloroacetic Acid	0.61U	ug/L	1.0	0.61	1	02/12/13 12:30	02/19/13 08:40	79-43-6	
Haloacetic Acids (Total)	0.61U	ug/L	1.0	0.61	1	02/12/13 12:30	02/19/13 08:40		
Monobromoacetic Acid	0.61U	ug/L	1.0	0.61	1	02/12/13 12:30	02/19/13 08:40	79-08-3	
Monochloroacetic Acid	0.61U	ug/L	1.0	0.61	1	02/12/13 12:30	02/19/13 08:40	79-11-8	
Trichloroacetic Acid	0.61U	ug/L	1.0	0.61	1	02/12/13 12:30	02/19/13 08:40	76-03-9	
Surrogates									
2,3-Dibromopropanoic Acid (S)	104	%	70-130		1	02/12/13 12:30	02/19/13 08:40	600-05-5	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: GCSV/7812 Analysis Method: EPA 531.1
QC Batch Method: EPA 531.1 Analysis Description: 531.1 HPLC Carbamate
Associated Lab Samples: 3581705001

METHOD BLANK: 558161 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Carbofuran	ug/L	0.32U	2.0	02/08/13 05:25	
Oxamyl	ug/L	0.41U	2.0	02/08/13 05:25	
Propoxur (S)	%	94	80-120	02/08/13 05:25	

LABORATORY CONTROL SAMPLE: 558162

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbofuran	ug/L	10	10.4	104	80-120	
Oxamyl	ug/L	10	8.7	87	80-120	
Propoxur (S)	%			107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 558163 558164

Parameter	Units	3582000001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Carbofuran	ug/L	0.32U	10	10	10.1	9.8	101	98	80-120	3	20	
Oxamyl	ug/L	0.41U	10	10	7.4	8.0	74	80	80-120	8	20	J(M1)
Propoxur (S)	%						107	102	80-120			

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: GCSV/7782 Analysis Method: EPA 547
QC Batch Method: EPA 547 Analysis Description: 547 HPLC Glyphosate
Associated Lab Samples: 3581705001

METHOD BLANK: 555474 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Glyphosate	ug/L	2.1U	6.0	02/05/13 00:15	

LABORATORY CONTROL SAMPLE: 555475

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Glyphosate	ug/L	50	44.1	88	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 555476 555477

Parameter	Units	3581693007 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Glyphosate	ug/L	2.1U	50	50	44.2	44.0	88	88	70-130	.3	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 555478 555479

Parameter	Units	3581482001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Glyphosate	ug/L	2.1U	50	50	44.5	44.2	89	88	70-130	.8	30	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: MERP/3489 Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury
Associated Lab Samples: 3581705001

METHOD BLANK: 555556 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	0.00010U	0.00020	02/05/13 09:54	

LABORATORY CONTROL SAMPLE: 555557

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.002	0.0021	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 555558 555559

Parameter	Units	92146520006 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Mercury	mg/L	ND	.002	.002	0.0021	0.0021	106	104	70-130	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 555560 555561

Parameter	Units	3581705001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Mercury	mg/L	0.00010 U	.002	.002	0.0022	0.0021	108	104	70-130	3	20	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: MPRP/12055 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 MET
Associated Lab Samples: 3581705001

METHOD BLANK: 555425 Matrix: Water

Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	0.0050U	0.010	02/05/13 05:49	
Beryllium	mg/L	0.00050U	0.0010	02/05/13 05:49	
Cadmium	mg/L	0.00050U	0.0010	02/05/13 05:49	
Chromium	mg/L	0.0025U	0.0050	02/05/13 05:49	
Iron	mg/L	0.020U	0.040	02/05/13 05:49	
Manganese	mg/L	0.0025U	0.0050	02/05/13 05:49	
Nickel	mg/L	0.0025U	0.0050	02/05/13 05:49	
Silver	mg/L	0.0025U	0.0050	02/05/13 05:49	
Sodium	mg/L	0.50U	1.0	02/05/13 05:49	
Zinc	mg/L	0.010U	0.020	02/05/13 05:49	

LABORATORY CONTROL SAMPLE: 555426

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	.25	0.24	95	85-115	
Beryllium	mg/L	.025	0.025	100	85-115	
Cadmium	mg/L	.025	0.025	101	85-115	
Chromium	mg/L	.25	0.25	100	85-115	
Iron	mg/L	2.5	2.4	96	85-115	
Manganese	mg/L	.25	0.25	101	85-115	
Nickel	mg/L	.25	0.25	101	85-115	
Silver	mg/L	.025	0.024	96	85-115	
Sodium	mg/L	12.5	12.4	99	85-115	
Zinc	mg/L	1.2	1.2	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 555427 555428

Parameter	Units	3581670002		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Barium	mg/L	110 ug/L	.25	.25	0.35	0.36	95	101	70-130	4	20	
Beryllium	mg/L	0.50U ug/L	.025	.025	0.023	0.024	92	95	70-130	4	20	
Cadmium	mg/L	0.50U ug/L	.025	.025	0.023	0.024	90	93	70-130	4	20	
Chromium	mg/L	57.7 ug/L	.25	.25	0.29	0.30	91	96	70-130	5	20	
Iron	mg/L	2.9	2.5	2.5	5.1	5.3	91	96	70-130	2	20	
Manganese	mg/L	110 ug/L	.25	.25	0.34	0.35	91	97	70-130	4	20	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 555427												555428	
Parameter	Units	3581670002 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	RPD	RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits				
Nickel	mg/L	19.3 ug/L	.25	.25	0.24	0.25	87	91	70-130	4	20		
Silver	mg/L	2.5U ug/L	.025	.025	0.028	0.030	107	113	70-130	6	20		
Sodium	mg/L	3070	12.5	12.5	3030	3210	-304	1140	70-130	6	20	M6	
Zinc	mg/L	480 ug/L	1.2	1.2	1.8	1.8	103	109	70-130	4	20		

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: MPRP/12056 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
Associated Lab Samples: 3581705001

METHOD BLANK: 555429 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	mg/L	0.0058U	0.010	02/05/13 17:28	
Antimony	mg/L	0.00050U	0.0010	02/05/13 17:28	
Arsenic	mg/L	0.00050U	0.0010	02/05/13 17:28	
Copper	mg/L	0.00093U	0.0010	02/06/13 16:18	
Lead	mg/L	0.00050U	0.0010	02/05/13 17:28	
Selenium	mg/L	0.00050U	0.0010	02/05/13 17:28	
Thallium	mg/L	0.00050U	0.0010	02/05/13 17:28	

LABORATORY CONTROL SAMPLE: 555430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	.5	0.52	104	85-115	
Antimony	mg/L	.05	0.052	104	85-115	
Arsenic	mg/L	.05	0.054	109	85-115	
Copper	mg/L	.05	0.055	110	85-115	
Lead	mg/L	.05	0.051	101	85-115	
Selenium	mg/L	.05	0.055	110	85-115	
Thallium	mg/L	.05	0.050	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 555431 555432

Parameter	Units	3581705001		555432		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Aluminum	mg/L	0.0092	.5	.5	0.58	0.56	113	110	70-130	3	20
Antimony	mg/L	0.00050 U	.05	.05	0.051	0.051	102	101	70-130	.2	20
Arsenic	mg/L	0.00050 U	.05	.05	0.052	0.052	103	103	70-130	0	20
Copper	mg/L	0.00093 U	.05	.05	0.050	0.051	100	102	70-130	2	20
Lead	mg/L	0.00050 U	.05	.05	0.051	0.052	102	103	70-130	.6	20
Selenium	mg/L	0.00050 U	.05	.05	0.051	0.052	102	103	70-130	1	20
Thallium	mg/L	0.00050 U	.05	.05	0.051	0.051	101	103	70-130	1	20

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: MSV/7662 Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2 Analysis Description: 524.2 MSV
Associated Lab Samples: 3581705001

METHOD BLANK: 555459 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	0.25U	0.50	02/04/13 10:31	
1,1,2-Trichloroethane	ug/L	0.25U	0.50	02/04/13 10:31	
1,1-Dichloroethene	ug/L	0.25U	0.50	02/04/13 10:31	
1,2,4-Trichlorobenzene	ug/L	0.25U	0.50	02/04/13 10:31	
1,2-Dichlorobenzene	ug/L	0.25U	0.50	02/04/13 10:31	
1,2-Dichloroethane	ug/L	0.25U	0.50	02/04/13 10:31	
1,2-Dichloropropane	ug/L	0.25U	0.50	02/04/13 10:31	
1,4-Dichlorobenzene	ug/L	0.25U	0.50	02/04/13 10:31	
Benzene	ug/L	0.25U	0.50	02/04/13 10:31	
Carbon tetrachloride	ug/L	0.25U	0.50	02/04/13 10:31	
Chlorobenzene	ug/L	0.25U	0.50	02/04/13 10:31	
cis-1,2-Dichloroethene	ug/L	0.25U	0.50	02/04/13 10:31	
Ethylbenzene	ug/L	0.25U	0.50	02/04/13 10:31	
Methylene Chloride	ug/L	0.44U	0.50	02/04/13 10:31	
Styrene	ug/L	0.25U	0.50	02/04/13 10:31	
Tetrachloroethene	ug/L	0.25U	0.50	02/04/13 10:31	
Toluene	ug/L	0.25U	0.50	02/04/13 10:31	
trans-1,2-Dichloroethene	ug/L	0.25U	0.50	02/04/13 10:31	
Trichloroethene	ug/L	0.25U	0.50	02/04/13 10:31	
Vinyl chloride	ug/L	0.25U	0.50	02/04/13 10:31	
Xylene (Total)	ug/L	0.25U	0.50	02/04/13 10:31	
1,2-Dichloroethane-d4 (S)	%	96	70-130	02/04/13 10:31	
4-Bromofluorobenzene (S)	%	103	70-130	02/04/13 10:31	
Dibromofluoromethane (S)	%	101	70-130	02/04/13 10:31	
Toluene-d8 (S)	%	103	70-130	02/04/13 10:31	

LABORATORY CONTROL SAMPLE & LCSD: 555460

555461

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	5	4.8	5.3	97	107	70-130	10	40	
1,1,2-Trichloroethane	ug/L	5	5.7	5.8	114	116	70-130	2	40	
1,1-Dichloroethene	ug/L	5	4.2	4.3	84	86	70-130	3	40	
1,2,4-Trichlorobenzene	ug/L	5	4.5	4.9	90	98	70-130	8	40	
1,2-Dichlorobenzene	ug/L	5	5.1	5.3	102	106	70-130	4	40	
1,2-Dichloroethane	ug/L	5	5.1	4.9	101	99	70-130	3	40	
1,2-Dichloropropane	ug/L	5	5.3	5.4	107	108	70-130	2	40	
1,4-Dichlorobenzene	ug/L	5	5.0	5.0	101	100	70-130	.8	40	
Benzene	ug/L	5	5.7	5.7	113	114	70-130	.8	40	
Carbon tetrachloride	ug/L	5	5.6	5.1	112	102	70-130	10	40	
Chlorobenzene	ug/L	5	5.2	5.3	105	106	70-130	2	40	
cis-1,2-Dichloroethene	ug/L	5	5.0	5.4	100	107	70-130	7	40	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

LABORATORY CONTROL SAMPLE & LCSD: 555460		555461		LCS		LCSD		% Rec	Max		
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	% Rec	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
Ethylbenzene	ug/L	5	5.3	5.1	105	102	70-130	3	40		
Methylene Chloride	ug/L	5	6.6	3.6	132	72	70-130	59	40	J(D6),J(L0)	
Styrene	ug/L	5	5.2	5.2	104	103	70-130	.7	40		
Tetrachloroethene	ug/L	5	5.8	5.9	116	118	70-130	2	40		
Toluene	ug/L	5	5.2	5.1	104	102	70-130	2	40		
trans-1,2-Dichloroethene	ug/L	5	4.9	5.1	99	103	70-130	4	40		
Trichloroethene	ug/L	5	5.2	5.9	105	118	70-130	12	40		
Vinyl chloride	ug/L	5	5.5	5.7	110	114	70-130	4	40		
Xylene (Total)	ug/L	15	15.5	15.1	103	101	70-130	2	40		
1,2-Dichloroethane-d4 (S)	%				90	93	70-130				
4-Bromofluorobenzene (S)	%				106	103	70-130				
Dibromofluoromethane (S)	%				94	96	70-130				
Toluene-d8 (S)	%				104	104	70-130				

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: MSV/7664 Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2 Analysis Description: 524.2 THM MSV
Associated Lab Samples: 3581705001

METHOD BLANK: 555574 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromodichloromethane	ug/L	0.25U	0.50	02/04/13 21:32	
Bromoform	ug/L	0.25U	0.50	02/04/13 21:32	
Chloroform	ug/L	0.25U	0.50	02/04/13 21:32	
Dibromochloromethane	ug/L	0.25U	0.50	02/04/13 21:32	
Total Trihalomethanes (Calc.)	ug/L	0.25U	0.50	02/04/13 21:32	
1,2-Dichloroethane-d4 (S)	%	92	70-130	02/04/13 21:32	
4-Bromofluorobenzene (S)	%	102	70-130	02/04/13 21:32	
Dibromofluoromethane (S)	%	100	70-130	02/04/13 21:32	
Toluene-d8 (S)	%	101	70-130	02/04/13 21:32	

LABORATORY CONTROL SAMPLE & LCSD: 555575

Parameter	Units	555576								
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Bromodichloromethane	ug/L	5	5.7	5.5	114	110	70-130	3	40	
Bromoform	ug/L	5	5.4	5.3	108	106	70-130	2	40	
Chloroform	ug/L	5	5.6	5.7	111	113	70-130	2	40	
Dibromochloromethane	ug/L	5	5.3	5.0	105	99	70-130	6	40	
Total Trihalomethanes (Calc.)	ug/L	20	21.9	21.4	109	107	70-130	2	40	
1,2-Dichloroethane-d4 (S)	%				95	96	70-130			
4-Bromofluorobenzene (S)	%				108	105	70-130			
Dibromofluoromethane (S)	%				98	99	70-130			
Toluene-d8 (S)	%				102	98	70-130			

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: OEXT/11469 Analysis Method: EPA 504.1
QC Batch Method: EPA 504.1 Analysis Description: 504 EDB DBCP
Associated Lab Samples: 3581705001

METHOD BLANK: 559309 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.0049U	0.020	02/08/13 15:17	
1,2-Dibromoethane (EDB)	ug/L	0.0062U	0.010	02/08/13 15:17	

LABORATORY CONTROL SAMPLE & LCSD: 559310

Parameter	Units	559422								Qualifiers
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	
1,2-Dibromo-3-chloropropane	ug/L	.25	0.26	0.25	105	98	70-130	6	40	
1,2-Dibromoethane (EDB)	ug/L	.25	0.25	0.25	101	99	70-130	1	40	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 559311

Parameter	Units	559312										Qual
		3581510001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	
1,2-Dibromo-3-chloropropane	ug/L	ND	.44	.44	0.42	0.42	96	97	65-135	1	40	
1,2-Dibromoethane (EDB)	ug/L	ND	.44	.44	0.42	0.43	97	98	65-135	1	40	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: OEXT/11518 Analysis Method: EPA 508.1
QC Batch Method: EPA 508.1 Analysis Description: 508 GCS Pesticide
Associated Lab Samples: 3581705001

METHOD BLANK: 562415 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alachlor	ug/L	0.034U	0.20	02/14/13 12:32	
Atrazine	ug/L	0.021U	0.10	02/14/13 12:32	
Chlordane (Technical)	ug/L	0.047U	0.20	02/14/13 12:32	
Endrin	ug/L	0.0020U	0.010	02/14/13 12:32	
gamma-BHC (Lindane)	ug/L	0.0030U	0.020	02/14/13 12:32	
Heptachlor	ug/L	0.0060U	0.040	02/14/13 12:32	
Heptachlor epoxide	ug/L	0.0030U	0.020	02/14/13 12:32	
Hexachlorobenzene	ug/L	0.011U	0.10	02/14/13 12:32	
Hexachlorocyclopentadiene	ug/L	0.012U	0.10	02/14/13 12:32	
Methoxychlor	ug/L	0.014U	0.10	02/14/13 12:32	
PCB, Total	ug/L	0.080U	0.10	02/14/13 12:32	
PCB-1016 (Aroclor 1016)	ug/L	0.080U	0.10	02/14/13 12:32	
PCB-1221 (Aroclor 1221)	ug/L	0.029U	0.10	02/14/13 12:32	
PCB-1232 (Aroclor 1232)	ug/L	0.029U	0.10	02/14/13 12:32	
PCB-1242 (Aroclor 1242)	ug/L	0.051U	0.10	02/14/13 12:32	
PCB-1248 (Aroclor 1248)	ug/L	0.062U	0.10	02/14/13 12:32	
PCB-1254 (Aroclor 1254)	ug/L	0.023U	0.10	02/14/13 12:32	
PCB-1260 (Aroclor 1260)	ug/L	0.066U	0.10	02/14/13 12:32	
Simazine	ug/L	0.044U	0.070	02/14/13 12:32	
Toxaphene	ug/L	0.61U	1.0	02/14/13 12:32	
Decachlorobiphenyl (S)	%	101	70-130	02/14/13 12:32	

LABORATORY CONTROL SAMPLE: 562416

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alachlor	ug/L	1	0.94	94	70-130	
Atrazine	ug/L	1.2	1.5	119	70-130	
Endrin	ug/L	.05	0.052	104	70-130	
gamma-BHC (Lindane)	ug/L	.1	0.088	88	70-130	
Heptachlor	ug/L	.2	0.19	93	70-130	
Heptachlor epoxide	ug/L	.1	0.092	92	70-130	
Hexachlorobenzene	ug/L	.5	0.48	96	70-130	
Hexachlorocyclopentadiene	ug/L	.5	0.59	117	70-130	
Methoxychlor	ug/L	.5	0.53	106	70-130	
Simazine	ug/L	.88	0.65	74	70-130	
Decachlorobiphenyl (S)	%			95	70-130	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

Parameter	Units	3582081001		563488		563489		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Alachlor	ug/L	0.035U	2	2	3.5	3.6	173	179	70-130	4	40	J(M1)		
Atrazine	ug/L	0.021U	2.5	2.5	3.2	3.3	127	133	70-130	5	40	J(M1)		
Endrin	ug/L	0.0020U	.1	.1	0.098	0.10	98	105	70-130	6	40			
gamma-BHC (Lindane)	ug/L	0.0031U	.2	.2	0.28	0.056	139	28	70-130	133	40	J(M1), J(R1)		
Heptachlor	ug/L	0.0061U	.4	.4	0.45	0.47	114	118	70-130	4	40			
Heptachlor epoxide	ug/L	0.0031U	.2	.2	0.19	0.20	95	100	70-130	4	40			
Hexachlorobenzene	ug/L	0.011U	1	1	0.95	0.97	95	97	70-130	2	40			
Hexachlorocyclopentadiene	ug/L	0.012U	1	1	1.2	1.2	122	118	70-130	3	40			
Methoxychlor	ug/L	0.014U	1	1	1.2	1.3	118	127	70-130	8	40			
Simazine	ug/L	0.045U	1.8	1.8	2.0	2.1	115	121	70-130	5	40			
Decachlorobiphenyl (S)	%						99	108	70-130		40			

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: OEXT/11483 Analysis Method: EPA 515.3
QC Batch Method: EPA 515.3 Analysis Description: 5153 GCS Herbicides
Associated Lab Samples: 3581705001

METHOD BLANK: 560627 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4,5-TP (Silvex)	ug/L	0.16U	0.20	02/12/13 05:19	
2,4-D	ug/L	0.081U	0.10	02/12/13 05:19	
Dalapon	ug/L	0.89U	1.0	02/12/13 05:19	
Dinoseb	ug/L	0.16U	0.20	02/12/13 05:19	
Pentachlorophenol	ug/L	0.030U	0.040	02/12/13 05:19	
Picloram	ug/L	0.094U	0.10	02/12/13 05:19	
2,4-DCAA (S)	%	91	70-130	02/12/13 05:19	

LABORATORY CONTROL SAMPLE: 560628

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-TP (Silvex)	ug/L	1	0.88	88	70-130	
2,4-D	ug/L	.5	0.43	86	70-130	
Dalapon	ug/L	5	4.5	91	70-130	
Dinoseb	ug/L	1	0.95	95	70-130	
Pentachlorophenol	ug/L	.2	0.18	88	70-130	
Picloram	ug/L	.5	0.42	84	70-130	
2,4-DCAA (S)	%			106	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 560629 560630

Parameter	Units	10219297001		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result							
2,4,5-TP (Silvex)	ug/L	<0.20	1	1	0.77	0.85	77	85	70-130	10	40			
2,4-D	ug/L	<0.10	.5	.5	0.40	0.46	80	93	70-130	15	40			
Dalapon	ug/L	<1.0	5	5	4.7	4.9	94	98	70-130	3	40			
Dinoseb	ug/L	<0.20	1	1	1.2	1.4	121	136	70-130	12	40	J(M1)		
Pentachlorophenol	ug/L	<0.040	.2	.2	0.17	0.18	83	92	70-130	10	40			
Picloram	ug/L	<0.10	.5	.5	0.40	0.45	80	89	70-130	11	40			
2,4-DCAA (S)	%						102	89	70-130					

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 560631 560632

Parameter	Units	3582512001		MS		MSD		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result							
2,4,5-TP (Silvex)	ug/L	0.16U	1	1	0.92	1.0	92	102	70-130	11	40			
2,4-D	ug/L	0.081U	.5	.5	0.49	0.74	99	148	70-130	40	40	J(M1)		
Dalapon	ug/L	4.4	5	5	11.4	10.5	138	121	70-130	8	40	J(M1)		

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

Parameter	Units	3582512001		560631		560632		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Dinoseb	ug/L	0.16U	1	1	1.3	1.4	130	140	70-130	8	40	J(M1)		
Pentachlorophenol	ug/L	0.030U	.2	.2	0.25	0.27	126	134	70-130	6	40	J(M1)		
Picloram	ug/L	0.094U	.5	.5	0.61	0.53	122	106	70-130	14	40			
2,4-DCAA (S)	%						82	83	70-130					

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: OEXT/11517 Analysis Method: EPA 525.2
QC Batch Method: EPA 525.2 Analysis Description: 525.2 Base Neutral Extractables
Associated Lab Samples: 3581705001

METHOD BLANK: 562391 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzo(a)pyrene	ug/L	0.019U	0.10	02/14/13 13:22	
bis(2-Ethylhexyl)adipate	ug/L	0.38U	1.6	02/14/13 13:22	
bis(2-Ethylhexyl)phthalate	ug/L	0.50U	2.0	02/14/13 13:22	
1,3-Dimethyl-2-nitrobenzene(S)	%	97	70-130	02/14/13 13:22	
Perylene-d12 (S)	%	104	70-130	02/14/13 13:22	
Triphenylphosphate (S)	%	101	70-130	02/14/13 13:22	

LABORATORY CONTROL SAMPLE: 562392

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzo(a)pyrene	ug/L	.4	0.50	126	70-130	
bis(2-Ethylhexyl)adipate	ug/L	6.4	6.6	103	70-130	
bis(2-Ethylhexyl)phthalate	ug/L	8	7.4	93	70-130	
1,3-Dimethyl-2-nitrobenzene(S)	%			102	70-130	
Perylene-d12 (S)	%			101	70-130	
Triphenylphosphate (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 563118 563119

Parameter	Units	3581869001		563118		563119		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Benzo(a)pyrene	ug/L	0.018U	.8	.8	1.0	1.0	128	130	70-130	1	40			
bis(2-Ethylhexyl)adipate	ug/L	0.36U	12.8	12.8	13.1	13.6	103	106	70-130	3	40			
bis(2-Ethylhexyl)phthalate	ug/L	0.47U	16	16	14.6	14.7	91	92	70-130	.3	40			
1,3-Dimethyl-2-nitrobenzene(S)	%						103	101	70-130					
Perylene-d12 (S)	%						104	106	70-130					
Triphenylphosphate (S)	%						102	102	70-130					

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: OEXT/11452 Analysis Method: EPA 548.1
QC Batch Method: EPA 548.1 Analysis Description: 548 GCS Endothall
Associated Lab Samples: 3581705001

METHOD BLANK: 558350 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Endothall	ug/L	2.7U	9.0	02/15/13 10:42	

LABORATORY CONTROL SAMPLE: 558351

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endothall	ug/L	50	66.3	133	80-120	J(L0)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 558352 558353

Parameter	Units	3581705001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual	
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD		RPD
Endothall	ug/L	2.7U	50	50	50	38.2	35.9	76	72	80-120	6	40	J(M0)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 558354 558355

Parameter	Units	3582200001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Endothall	ug/L	2.7U	50	50	50	6.8	7.1	14	14	80-120	40	J(M0)

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: OEXT/11405 Analysis Method: EPA 549.2
QC Batch Method: EPA 549.2 Analysis Description: 549 HPLC Paraquat Diquat
Associated Lab Samples: 3581705001

METHOD BLANK: 555653 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diquat	ug/L	0.15U	0.40	02/05/13 19:18	

LABORATORY CONTROL SAMPLE: 555654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diquat	ug/L	2	1.8	88	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 555655 555656

Parameter	Units	3581395001		555655		555656		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.					
Diquat	ug/L	0.15U	2	2	2.3	2.3	115	113	70-130	2	40	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 555657 555658

Parameter	Units	3581510001		555657		555658		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Diquat	ug/L	ND	2	2	2.7	2.7	133	136	70-130	2	40 J(M1)

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: OEXT/11511 Analysis Method: EPA 552.2
QC Batch Method: EPA 552.2 Analysis Description: 5522 Haloacetic Acids
Associated Lab Samples: 3581705003

METHOD BLANK: 561778 Matrix: Water
Associated Lab Samples: 3581705003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,3-Dibromopropanoic Acid (S)	%	126	70-130	02/13/13 14:56	

LABORATORY CONTROL SAMPLE: 561779

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,3-Dibromopropanoic Acid (S)	%			117	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 561780 561781

Parameter	Units	3582033007		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
2,3-Dibromopropanoic Acid (S)	%							117	110	70-130		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

Parameter	Units	Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: OEXT/11532 Analysis Method: EPA 552.2
QC Batch Method: EPA 552.2 Analysis Description: 5522 Haloacetic Acids
Associated Lab Samples: 3581705001

METHOD BLANK: 562967 Matrix: Water

Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromoacetic Acid	ug/L	0.61U	1.0	02/14/13 23:41	
Dichloroacetic Acid	ug/L	0.61U	1.0	02/14/13 23:41	
Haloacetic Acids (Total)	ug/L	0.61U	1.0	02/14/13 23:41	
Monobromoacetic Acid	ug/L	0.61U	1.0	02/14/13 23:41	
Monochloroacetic Acid	ug/L	0.61U	1.0	02/14/13 23:41	
Trichloroacetic Acid	ug/L	0.61U	1.0	02/14/13 23:41	
2,3-Dibromopropanoic Acid (S)	%	85	70-130	02/14/13 23:41	

LABORATORY CONTROL SAMPLE: 562968

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromoacetic Acid	ug/L	10	8.7	87	70-130	
Dichloroacetic Acid	ug/L	10	8.7	87	70-130	
Haloacetic Acids (Total)	ug/L	50	42.2	84		
Monobromoacetic Acid	ug/L	10	8.3	83	70-130	
Monochloroacetic Acid	ug/L	10	8.2	82	70-130	
Trichloroacetic Acid	ug/L	10	8.3	83	70-130	
2,3-Dibromopropanoic Acid (S)	%			93	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 562969 562970

Parameter	Units	3582173005		MSD		MSD		% Rec		Max		Qual	
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD		RPD
Dibromoacetic Acid	ug/L	0.84 I	10	10	10	8.8	11.0	80	102	70-130	22	30	
Dichloroacetic Acid	ug/L	4.9	10	10	10	12.3	14.9	74	101	70-130	19	30	
Haloacetic Acids (Total)	ug/L	11.7	50	50	50	54.6	65.9	86	108		19		
Monobromoacetic Acid	ug/L	0.61U	10	10	10	9.3	10.9	93	109	70-130	16	30	
Monochloroacetic Acid	ug/L	1.5	10	10	10	12.5	14.4	110	129	70-130	14	30	
Trichloroacetic Acid	ug/L	4.5	10	10	10	11.7	14.7	73	102	70-130	22	30	
2,3-Dibromopropanoic Acid (S)	%							85	102	70-130			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 562971 562972

Parameter	Units	3582173016		MSD		MSD		% Rec		Max		Qual	
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD		RPD
Dibromoacetic Acid	ug/L	1.5	10	10	10	12.3	11.3	108	97	70-130	9	30	
Dichloroacetic Acid	ug/L	7.2	10	10	10	16.0	16.7	88	94	70-130	4	30	
Haloacetic Acids (Total)	ug/L	11.1	50	50	50	61.0	62.9	100	104		3		

Date: 02/26/2013 12:45 PM

REPORT OF LABORATORY ANALYSIS

Page 28 of 46

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QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

Parameter	Units	3582173016		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec							
Monobromoacetic Acid	ug/L	0.61U	10	10	11.3	12.6	113	126	70-130	11	30				
Monochloroacetic Acid	ug/L	1.4	10	10	9.9	11.3	85	99	70-130	13	30				
Trichloroacetic Acid	ug/L	0.87 l	10	10	11.4	11.0	105	102	70-130	3	30				
2,3-Dibromopropanoic Acid (S)	%						128	106	70-130						

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: WET/17435 Analysis Method: SM 2120B
QC Batch Method: SM 2120B Analysis Description: 2120B Color
Associated Lab Samples: 3581705001

METHOD BLANK: 555217 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0U	5.0	02/02/13 09:00	

LABORATORY CONTROL SAMPLE: 555218

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 555219

Parameter	Units	3581563001 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	5.0	5.0	0	20	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch:	WET/17440	Analysis Method:	SM 2150B
QC Batch Method:	SM 2150B	Analysis Description:	Threshold Odor Number
Associated Lab Samples:	3581705001		

METHOD BLANK: 555313 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Temperature, Water (C)	deg C	44.1		02/02/13 09:15	
Threshold Odor Number	TON	1.0U	1.0	02/02/13 09:15	

SAMPLE DUPLICATE: 555314

Parameter	Units	3581611001 Result	Dup Result	RPD	Max RPD	Qualifiers
Temperature, Water (C)	deg C	44.1	44.1	0	20	Q
Threshold Odor Number	TON	ND	1.0U		20	Q

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: WET/17515 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 3581705001

METHOD BLANK: 558104 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	5.0U	5.0	02/07/13 15:36	

LABORATORY CONTROL SAMPLE: 558105

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	289	96	90-110	

SAMPLE DUPLICATE: 558106

Parameter	Units	3581717001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	224	222	.9	20	

SAMPLE DUPLICATE: 558107

Parameter	Units	3581647003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2180	2220	2	20	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: WET/17723	Analysis Method: SM 4500-CIO2
QC Batch Method: SM 4500-CIO2	Analysis Description: 4500CIO2 Chlorine Dioxide
Associated Lab Samples: 3581705001	

METHOD BLANK: 567449 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorine Dioxide	mg/L	0.067U	0.10	02/19/13 14:35	Q

SAMPLE DUPLICATE: 567450

Parameter	Units	3581514001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorine Dioxide	mg/L	ND	0.067U		20	Q

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch:	WET/17447	Analysis Method:	SM 4500-H+B
QC Batch Method:	SM 4500-H+B	Analysis Description:	4500H+B pH
Associated Lab Samples:	3581705001		

SAMPLE DUPLICATE: 555659

Parameter	Units	3581687001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.7	8.7	0	20	Q
Temperature, Water (C)	deg C	22.0	22.0	0	20	Q

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: WET/17432 Analysis Method: SM 5540C
QC Batch Method: SM 5540C Analysis Description: 5540C MBAS Surfactants
Associated Lab Samples: 3581705001

METHOD BLANK: 555094 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Surfactants	mg/L	0.059U	0.20	02/01/13 18:01	

LABORATORY CONTROL SAMPLE: 555095

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Surfactants	mg/L	.3	0.30	100	90-110	

MATRIX SPIKE SAMPLE: 555097

Parameter	Units	3581563001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Surfactants	mg/L	0.070 I	.3	0.36	97	80-120	

SAMPLE DUPLICATE: 555096

Parameter	Units	3581563001 Result	Dup Result	RPD	Max RPD	Qualifiers
Surfactants	mg/L	0.070 I	0.059U		20	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: WETA/23567 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 3581705001

METHOD BLANK: 555345 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate as N	mg/L	0.025U	0.050	02/02/13 12:30	
Nitrite as N	mg/L	0.025U	0.050	02/02/13 12:30	

LABORATORY CONTROL SAMPLE: 555346

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	5	4.7	93	90-110	
Nitrite as N	mg/L	5	4.6	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 555347 555348

Parameter	Units	3581207042 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result	MSD Result						
Nitrate as N	mg/L	0.025U	5	5	4.5	4.6	91	91	90-110	.09	20	
Nitrite as N	mg/L	0.025U	5	5	4.4	4.4	87	88	90-110	.7	20	J(M1)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 555349 555350

Parameter	Units	3581705001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result	MSD Result						
Nitrate as N	mg/L	0.025U	5	5	4.5	4.5	89	89	90-110	.2	20	J(M1)
Nitrite as N	mg/L	0.025U	5	5	4.4	4.4	87	87	90-110	.09	20	J(M1)

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: WETA/23568 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 3581705001

METHOD BLANK: 555351 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	2.5U	5.0	02/02/13 12:30	
Fluoride	mg/L	0.025U	0.050	02/02/13 12:30	
Sulfate	mg/L	2.5U	5.0	02/02/13 12:30	

LABORATORY CONTROL SAMPLE: 555352

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.1	96	90-110	
Fluoride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	50	48.1	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 555353 555354

Parameter	Units	3581207042 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Fluoride	mg/L	0.25	5	5	5.1	5.1	97	97	90-110	.8	20	
Sulfate	mg/L	6.8	50	50	53.8	54.0	94	94	90-110	.4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 555355 555356

Parameter	Units	3581705001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Chloride	mg/L	46.3	50	50	98.8	98.9	105	105	90-110	.03	20	
Fluoride	mg/L	0.26	5	5	5.1	5.1	97	98	90-110	.2	20	
Sulfate	mg/L	9.7	50	50	57.1	57.1	95	95	90-110	.007	20	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: WETA/23668 Analysis Method: EPA 300.1
QC Batch Method: EPA 300.1 Analysis Description: 300.1 Oxihalides IC Anions
Associated Lab Samples: 3581705001

METHOD BLANK: 558528 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorite	ug/L	0.55U	5.0	02/07/13 15:47	
Dichloroacetate (S)	%	99	90-115	02/07/13 15:47	

LABORATORY CONTROL SAMPLE: 558529

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorite	ug/L	40	41.4	104	85-115	
Dichloroacetate (S)	%			103	90-115	

MATRIX SPIKE SAMPLE: 558531

Parameter	Units	3581611001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chlorite	ug/L	ND	40	35.3	88	75-125	
Dichloroacetate (S)	%				98	90-115	

MATRIX SPIKE SAMPLE: 558533

Parameter	Units	3582291001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chlorite	ug/L	11.2 I	200	182	86	75-125	
Dichloroacetate (S)	%				93	90-115	

SAMPLE DUPLICATE: 558530

Parameter	Units	3581611001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorite	ug/L	ND	0.55U		20	
Dichloroacetate (S)	%	100	99	1		

SAMPLE DUPLICATE: 558532

Parameter	Units	3582291001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorite	ug/L	11.2 I	9.0 I		20	D3
Dichloroacetate (S)	%	98	97	.4		

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: WETA/23715 Analysis Method: EPA 300.1
QC Batch Method: EPA 300.1 Analysis Description: 300.1 Oxihalides IC Anions
Associated Lab Samples: 3581705001

METHOD BLANK: 560378 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromate	ug/L	0.52U	2.5	02/09/13 01:06	
Dichloroacetate (S)	%	95	90-115	02/09/13 01:06	

LABORATORY CONTROL SAMPLE: 560379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromate	ug/L	20	20.4	102	85-115	
Dichloroacetate (S)	%			103	90-115	

MATRIX SPIKE SAMPLE: 560387

Parameter	Units	3582476001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromate	ug/L	ND	20	17.8	89	75-125	
Dichloroacetate (S)	%				94	90-115	

MATRIX SPIKE SAMPLE: 560426

Parameter	Units	3582367002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromate	ug/L	5.8	20	24.7	94	75-125	
Dichloroacetate (S)	%				95	90-115	

SAMPLE DUPLICATE: 560388

Parameter	Units	3582476001 Result	Dup Result	RPD	Max RPD	Qualifiers
Bromate	ug/L	ND	0.52U		20	
Dichloroacetate (S)	%	97	97	.2		

SAMPLE DUPLICATE: 560425

Parameter	Units	3582367002 Result	Dup Result	RPD	Max RPD	Qualifiers
Bromate	ug/L	5.8	6.0	3	20	
Dichloroacetate (S)	%	97	97	.09		

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch: WETA/23705 Analysis Method: EPA 335.4
QC Batch Method: EPA 335.4 Analysis Description: 335.4 Cyanide, Total
Associated Lab Samples: 3581705001

METHOD BLANK: 559374 Matrix: Water
Associated Lab Samples: 3581705001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	0.0050U	0.010	02/08/13 14:39	

LABORATORY CONTROL SAMPLE: 559375

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.05	0.051	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 559376 559377

Parameter	Units	3582397001		559376		559377		% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
Cyanide	mg/L	0.0050 U	.05	.05	0.044	0.043	87	85	90-110	3	20 J(M1)

ANALYTICAL RESULTS

Project: NPB #5
Pace Project No.: 3581705

Sample: NPB #5 **Lab ID: 3581705001** Collected: 02/01/13 09:30 Received: 02/01/13 12:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC)	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0m	0.711U ± 0.455 (0.711)	pCi/L	02/11/13 17:03	12587-46-1	
Radium-226	EPA 903.1	0.900U ± 0.465 (0.900)	pCi/L	02/13/13 14:34	13982-63-3	
Radium-228	EPA 904.0	0.658U ± 0.295 (0.658)	pCi/L	02/11/13 14:34	15262-20-1	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch:	RADC/14604	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228
Associated Lab Samples:	3581705001		

METHOD BLANK:	541097	Matrix:	Water
Associated Lab Samples:	3581705001		

Parameter	Act ± Unc (MDC)	Units	Analyzed	Qualifiers
Radium-228	0.287 ± 0.341 (0.724)	pCi/L	02/11/13 11:32	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch:	RADC/14602	Analysis Method:	EPA 903.1
QC Batch Method:	EPA 903.1	Analysis Description:	903.1 Radium-226
Associated Lab Samples:	3581705001		

METHOD BLANK:	541095	Matrix:	Water
Associated Lab Samples:	3581705001		

Parameter	Act ± Unc (MDC)	Units	Analyzed	Qualifiers
Radium-226	0.0480 ± 0.456 (0.800)	pCi/L	02/13/13 13:58	

QUALITY CONTROL DATA

Project: NPB #5
Pace Project No.: 3581705

QC Batch:	RADC/14626	Analysis Method:	EPA 900.0m
QC Batch Method:	EPA 900.0m	Analysis Description:	900.0 Gross Alpha/Beta
Associated Lab Samples:	3581705001		

METHOD BLANK:	542201	Matrix:	Water
Associated Lab Samples:	3581705001		

Parameter	Act ± Unc (MDC)	Units	Analyzed	Qualifiers
Gross Alpha	0.291 ± 0.602 (1.40)	pCi/L	02/12/13 06:58	

QUALIFIERS

Project: NPB #5
Pace Project No.: 3581705

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty

(MDC) - Minimum Detectable Concentration

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

PASI-PA Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

J(D6) Estimated Value. The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

J(L0) Estimated Value. Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

J(M0) Estimated Value. Matrix spike recovery was outside laboratory control limits.

J(M1) Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

J(R1) Estimated Value. RPD value was outside control limits.

L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

Q Sample held beyond the accepted holding time.

Q Sample held beyond the accepted holding time. Analysis initiated more than 15 minutes after sample collection.

Q Sample held beyond the accepted holding time. Sample was received outside EPA method holding time.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NPB #5
Pace Project No.: 3581705

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3581705001	NPB #5	EPA 504.1	OEXT/11469	EPA 504.1	GCSV/7829
3581705001	NPB #5	EPA 508.1	OEXT/11518	EPA 508.1	GCSV/7869
3581705001	NPB #5	EPA 515.3	OEXT/11483	EPA 515.3	GCSV/7834
3581705001	NPB #5	EPA 531.1	GCSV/7812		
3581705001	NPB #5	EPA 547	GCSV/7782		
3581705001	NPB #5	EPA 549.2	OEXT/11405	EPA 549.2	GCSV/7796
3581705003	NPB # 5	EPA 552.2	OEXT/11511	EPA 552.2	GCSV/7861
3581705001	NPB #5	EPA 200.7	MPRP/12055	EPA 200.7	ICP/7765
3581705001	NPB #5	EPA 200.8	MPRP/12056	EPA 200.8	ICPM/4883
3581705001	NPB #5	EPA 245.1	MERP/3489	EPA 245.1	MERC/3488
3581705001	NPB #5	EPA 525.2	OEXT/11517	EPA 525.2	MSSV/4327
3581705001	NPB #5	EPA 548.1	OEXT/11452	EPA 548.1	MSSV/4329
3581705001	NPB #5	EPA 524.2	MSV/7662		
3581705001	NPB #5	EPA 524.2	MSV/7664		
3581705001	NPB #5	EPA 900.0m	RADC/14626		
3581705001	NPB #5	EPA 903.1	RADC/14602		
3581705001	NPB #5	EPA 904.0	RADC/14604		
3581705001	NPB #5	SM 2120B	WET/17435		
3581705001	NPB #5	SM 2150B	WET/17440		
3581705001	NPB #5	SM 2540C	WET/17515		
3581705001	NPB #5	SM 4500-CIO2	WET/17723		
3581705001	NPB #5	SM 4500-H+B	WET/17447		
3581705001	NPB #5	SM 5540C	WET/17432		
3581705001	NPB #5	EPA 300.0	WETA/23567		
3581705001	NPB #5	EPA 300.0	WETA/23568		
3581705001	NPB #5	EPA 300.1	WETA/23668		
3581705001	NPB #5	EPA 300.1	WETA/23715		
3581705001	NPB #5	EPA 335.4	WETA/23705	EPA 335.4	WETA/23707

Florida Department of Environmental Protection Safe Drinking Water Program Laboratory Reporting Format

PUBLIC WATER SYSTEM INFORMATION (to be completed by sampler -- please type or print legibly)

System Name: _____ PWS I.D. #:

System Type (check one): Community Nontransient Noncommunity Transient Noncommunity

Address: _____

City: _____ ZIP Code: _____

Phone # _____ Fax #: _____ E-Mail Address: _____

SAMPLE INFORMATION (to be completed by sampler)

Sample Number: _____ Sample Date: _____ Sample Time: _____ AM PM (Circle One)

Sample Location (be specific): _____ Location Code: _____

Disinfectant Residual (Required when reporting results for trihalomethanes and haloacetic acids): _____ mg/L Field pH: _____

Sample Type (Check Only One)

Reason(s) for Sample (Check all that apply)

- | | | |
|---|--|---|
| <input type="checkbox"/> Distribution | <input type="checkbox"/> Routine Compliance with 62-550 | <input type="checkbox"/> Replacement (of Invalidated Sample) |
| <input type="checkbox"/> Entry Point (to Distribution) | <input type="checkbox"/> Confirmation of MCL Exceedance* | <input type="checkbox"/> Special (not for compliance with 62-550) |
| <input type="checkbox"/> Plant Tap (not for compliance with 62-550) | <input type="checkbox"/> Composite of Multiple Sites** | <input type="checkbox"/> Clearance (permitting) |
| <input type="checkbox"/> Raw (at well or intake) | <input type="checkbox"/> Other: _____ | |
- Max Residence Time
 Ave Residence Time
 Near First Customer

Sampling Procedure Used or Other Comments: _____

*See 62-550.500(6) for requirements and restrictions.
And 62-550.512(3) for nitrate or nitrite exceedances.
**See 62-550.550(4) for requirements and
attach a results page for each site.

SAMPLER CERTIFICATION

I, _____, _____, do HEREBY CERTIFY
(Print Name) (Print Title)

that the above public water system and sample collection information is complete and correct.

Signature: _____ Date: _____

Certified Operator #: _____ Phone #: _____ Sampler's Fax #: _____

Sampler's E-mail: _____
Reporting Format 62-550.730
Effective January 1995, Revised February 2010

Florida Department of Environmental Protection Safe Drinking Water Program Laboratory Reporting Format

LABORATORY CERTIFICATION INFORMATION (to be completed by lab – please type or print legibly)

Lab Name: Pace Analytical Services, Inc. Florida DOH Certification #: E 83079 Certification Expiration Date: 06/30/2014

Address: 8 East Tower Circle, Ormond Beach, FL 32174 Phone #: (386) 672-5668

Were any analyses subcontracted? Yes No If yes, please provide DOH certification number(s): _____

ATTACH CURRENT DOH ANALYTE SHEET*

Phone #: (386) 672-5668

ATTACH DOH ANALYTE SHEET FOR EACH SUBCONTRACTED LAB*

ANALYSIS INFORMATION (to be completed by lab)

Date Sample(s) Received: 02/01/2012

PWS ID (From Page 1): _____ Sample Number (From Page 1): _____ Lab Assigned Report # or Job ID: 3581705001

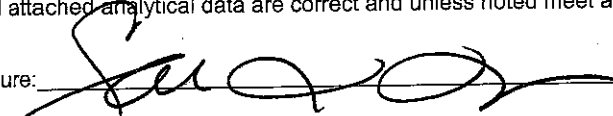
Group(s) Analyzed & Results attached for compliance with Chapter 62-550, F.A.C. (Check all that apply):

- | | | | | | |
|---|---|--|--|---|--|
| <u>Inorganics</u> | <u>Synthetic Organics</u> | <u>Volatile Organics</u> | <u>Disinfection Byproducts</u> | <u>Radionuclides</u> | <u>Secondaries</u> |
| <input checked="" type="checkbox"/> All Except Asbestos | <input type="checkbox"/> All 30 | <input checked="" type="checkbox"/> All 21 | <input checked="" type="checkbox"/> Trihalomethanes | <input checked="" type="checkbox"/> Single Sample | <input checked="" type="checkbox"/> All 14 |
| <input type="checkbox"/> Partial | <input checked="" type="checkbox"/> All Except Dioxin | <input type="checkbox"/> Partial | <input checked="" type="checkbox"/> Haloacetic Acids | <input type="checkbox"/> Qtrly Composite** | <input type="checkbox"/> Partial |
| <input type="checkbox"/> Nitrate | <input type="checkbox"/> Partial | | <input type="checkbox"/> Chlorite | | |
| <input type="checkbox"/> Nitrite | <input type="checkbox"/> Dioxin Only | | <input checked="" type="checkbox"/> Bromate | | |
| <input type="checkbox"/> Asbestos | | | | | |

LAB CERTIFICATION

I, Sakina M. McKenzie, Project Manager, do HEREBY CERTIFY
(Print Name) (Print Title)

that all attached analytical data are correct and unless noted meet all requirements of the National Environmental Laboratory Accreditation Conference (NELAC).

Signature:  Date: 9/4/2013

* Failure to provide a valid and current Florida DOH lab certification number and a current Analyte Sheet for the attached analysis results will result in rejection of the report, possible enforcement against the public water system for failure to sample, and may result in notification of the DOH Bureau of Laboratory Services.
** Please provide radiological sample dates & locations for each quarter.

CONFIRMATION & NOTIFICATION IS REQUIRED WITHIN 24 HRS FOR NITRATE OR NITRITE MCL EXCEEDANCES
NON-DETECTS ARE TO BE REPORTED AS THE MDL WITH A "U" QUALIFIER. (Non-detects reported as "BDL" or with a "<" are not acceptable.)

COMPLIANCE DETERMINATION (to be completed by DEP or DOH -- attach notes as necessary)

Sample Collection & Analysis Satisfactory: Yes No _____ Replacement Sample or Report Requested (circle or highlight group(s) above)

Person Notified: _____ Date Notified: _____ DEP/DOH Reviewing Official: _____

Florida Department of Environmental Protection

Safe Drinking Water Program Laboratory Reporting Format

INORGANIC CONTAMINANTS

62-550.310(1)

Report Number/ Job 3581705001

PWS ID (from Page 1): _____

Contam ID	Contam Name	MCL	Units	Analysis Result	Qualifier*	Analytical Method	Lab MDL	Analysis Date	Analysis Time	DOH Lab Certification #
1040	Nitrate as N	10	mg/L	0.025	UJ	EPA 300.0	0.025	02/02/2013	18:36	E83079
1041	Nitrite as N	1.0	mg/L	0.025	UJ	EPA 300.0	0.025	02/02/2013	18:36	E83079
1005	Arsenic	0.01	mg/L	0.00050	U	EPA 200.8	0.00050	02/05/2013	17:38	E83079
1010	Barium	2.0	mg/L	0.0054	I	EPA 200.7	0.0050	02/05/2013	04:58	E83079
1015	Cadmium	0.005	mg/L	0.00050	U	EPA 200.7	0.00050	02/05/2013	04:58	E83079
1020	Chromium	0.1	mg/L	0.0025	U	EPA 200.7	0.0025	02/05/2013	04:58	E83079
1024	Cyanide	0.2	mg/L	0.0050	U	EPA 335.4	0.0050	02/08/2013	15:02	E83079
1025	Fluoride	4.0	mg/L	0.26		EPA 300.0	0.025	02/02/2013	18:36	E83079
1030	Lead	0.015	mg/L	0.00050	U	EPA 200.8	0.00050	02/05/2013	17:38	E83079
1035	Mercury	0.002	mg/L	0.00010	U	EPA 245.1	0.00010	02/05/2013	10:37	E83079
1036	Nickel	0.1	mg/L	0.0025	U	EPA 200.7	0.0025	02/05/2013	04:58	E83079
1045	Selenium	0.05	mg/L	0.00050	U	EPA 200.8	0.00050	02/05/2013	17:38	E83079
1052	Sodium	160	mg/L	27.2		EPA 200.7	0.50	02/05/2013	04:58	E83079
1074	Antimony	0.006	mg/L	0.00050	U	EPA 200.8	0.00050	02/05/2013	17:38	E83079
1075	Beryllium	0.004	mg/L	0.00050	U	EPA 200.7	0.00050	02/05/2013	04:58	E83079
1085	Thallium	0.002	mg/L	0.00050	U	EPA 200.8	0.00050	02/05/2013	17:38	E83079

Reporting Format 62-
Effective January 1995, Revised February 2010

*Results must be reported with appropriate qualifiers in accordance with Florida Administrative Code Rule 62-160, Table 1. Results qualified with A, F, H, N, O, T, Z, ?, *, are unacceptable for compliance with 62-550. Results qualified with a J, Q, R, or Y must be accompanied by written justification and will be evaluated on a case by case basis. To avoid a monitoring violation, unacceptable results must be replaced with acceptable results from samples collected during the same monitoring period.

Florida Department of Environmental Protection

Safe Drinking Water Program Laboratory Reporting Format

SECONDARY CONTAMINANTS

62-550.320

Report Number/ Job 3581705001

PWS ID (from Page 1): _____

Contam ID	Contam Name	MCL	Units	Analysis Result	Qualifier*	Analytical Method	Lab MDL	Analysis Date	Analysis Time	DOH Lab Certification #
1002	Aluminum	0.2	mg/L	0.0092	I	EPA 200.8	0.0058	02/05/2013	17:38	E83079
1017	Chloride	250	mg/L	46.3		EPA 300.0	2.5	02/02/2013	18:36	E83079
1022	Copper	1.0	mg/L	0.00093	U	EPA 200.8	0.00093	02/05/2013	17:38	E83079
1025	Fluoride	2.0	mg/L	0.26		EPA 300.0	0.025	02/02/2013	18:36	E83079
1028	Iron	0.3	mg/L	0.35		EPA 200.7	0.020	02/05/2013	04:58	E83079
1032	Manganese	0.05	mg/L	0.0098		EPA 200.7	0.0025	02/05/2013	04:58	E83079
1050	Silver	0.1	mg/L	0.0025	U	EPA 200.7	0.0025	02/05/2013	04:58	E83079
1055	Sulfate	250	mg/L	9.7		EPA 300.0	2.5	02/02/2013	18:36	E83079
1095	Zinc	5.0	mg/L	0.010	U	EPA 200.7	0.010	02/05/2013	04:58	E83079
1905	Color	15	units	35.0		SM 2120B	5.0	02/02/2013	12:45	E83079
1920	Odor	3.0	TON	2.0		SM 2150B	1.0	02/02/2013	09:15	E83079
1925	pH (field pH from page 1)	6.5 - 8.5	Std. Units	7.6	Q	SM 4500-H+B	0.10	02/04/2013	11:25	E83079
1930	Total Dissolved Solids	500	mg/L	183		SM 2540C	5.0	02/07/2013	15:39	E83079
2905	Foaming Agents	0.5	mg/L	0.059	U	SM 5540C	0.059	02/02/2013	11:33	E83079

Reporting Format 62-
Effective January 1995, Revised February 2010

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Florida Department of Environmental Protection

Safe Drinking Water Program Laboratory Reporting Format

DISINFECTION BYPRODUCTS
62-550.310(3)

Report Number/ Job ID: 3581705001
 Disinfectant Residual (mg/L) (From Page 1): _____
 PWS ID (from Page 1): _____

Contam ID	Contam Name	MCL	Units	Analysis Result	Qualifier*	Analytical Method	Lab MDL	Regulatory MRL**	Analysis Date	Analysis Time	DOH Lab Certification #
1009	Chlorite	1000	ug/L	1.1	U	EPA 300.1	1.1	20***	02/08/2013	13:14	E83079
1011	Bromate	10	ug/L	1.0	U	EPA 300.1	1.0	5.0 or 1.0****	02/08/2013	13:14	E83079
2450	Monochloroacetic Acid	N/A	ug/L	0.61	U	EPA 552.2	0.61	2.0	02/15/2013	10:25	E83079
2451	Dichloroacetic Acid	N/A	ug/L	0.61	U	EPA 552.2	0.61	1.0	02/15/2013	10:25	E83079
2452	Trichloroacetic Acid	N/A	ug/L	0.61	U	EPA 552.2	0.61	1.0	02/15/2013	10:25	E83079
2453	Monobromoacetic Acid	N/A	ug/L	0.61	U	EPA 552.2	0.61	1.0	02/15/2013	10:25	E83079
2454	Dibromoacetic Acid	N/A	ug/L	0.61	U	EPA 552.2	0.61	1.0	02/15/2013	10:25	E83079
2456	Total Haloacetic Acids (HAA5)	60	ug/L	0.61	U	EPA 552.2	0.61	---	02/15/2013	10:25	E83079
2941	Chloroform	N/A	ug/L	0.25	U	EPA 524.2	0.25	1.0	02/05/2013	00:21	E83079
2942	Bromoform	N/A	ug/L	0.25	U	EPA 524.2	0.25	1.0	02/05/2013	00:21	E83079
2943	Bromodichloromethane	N/A	ug/L	0.25	U	EPA 524.2	0.25	1.0	02/05/2013	00:21	E83079
2944	Dibromochloromethane	N/A	ug/L	0.25	U	EPA 524.2	0.25	1.0	02/05/2013	00:21	E83079
2950	Total Trihalomethanes	80	ug/L	0.25	U	EPA 524.2	0.25	---	02/05/2013	00:21	E83079

** Laboratories are required to adhere to the minimum reporting level (MRL) requirements of 40 CFR 141.131(b)(2)(iv).

*** Applicable to monitoring as prescribed in 40 CFR 141.132.(b)(2)(i)(B) and (b)(2)(ii).

**** Laboratories that use EPA Methods 317.0 Revision 2.0, 326.0 or 321.8 must meet a 1.0 µg/L MRL for bromate.

NOTE: Do not round values. Report results to the accuracy, precision, and sensitivity of the analytical

Reporting Format 62-

Effective January 1995, Revised February 2010

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Florida Department of Environmental Protection

Safe Drinking Water Program Laboratory Reporting Format

RADIONUCLIDES
62-550.310(6)

Report Number/ Job 3581705001
PWS ID (from Page 1): _____

Contam ID	Contam Name	MCL	Units	Analysis Result	Qualifier*	Analytical Method	Lab MDL	RDL	Analysis Error	Analysis Date	Analysis Time	DOH Lab Certification #
4002	Gross Alpha Incl. Uranium	***	pCi/L	0.711	U	EPA 900.0m	0.711	3	± 0.455	02/11/2013	17:03	E87683
4020	Radium-226	5.0	pCi/L	0.900	U	EPA 903.1	0.900	1	± 0.465	02/13/2013	14:34	E87683
4030	Radium-228	5.0	pCi/L	0.658	U	EPA 904.0	0.658	1	± 0.295	02/11/2013	14:34	E87683

** If the result exceeds 5 pCi/L, a measurement for radium-226 is required. Uranium is reported separately under Contam ID 4006.

*** If the results exceed 5 pCi/L, a measurement for radium-226 is required. If the results exceed 15 pCi/L, a measurement for Combined Uranium must be reported separately. The DEP/DOH will subtract the U value from the Gross Alpha (ID 4002) to determine compliance with MCL for Gross Alpha (Excl. U) of 15pCi/L. If the result for ID 4002 Gross Alpha (Including Uranium) does not exceed 15pCi/L, Combined Uranium need not be measured nor

**** If using Uranium testing methods ASTM D5174 or EPA 200.8 only, then Analysis Error need not be reported.

Reporting Format 62-
Effective January 1995, Revised February 2010

*Results must be reported with appropriate qualifiers in accordance with Florida Administrative Code Rule 62-160, Table 1. Results qualified with A, F, H, N, O, T, Z, ?, *, are unacceptable for compliance with 62-550. Results qualified with a J, Q, R, or Y must be accompanied by written justification and will be evaluated on a case by case basis. To avoid a monitoring violation, unacceptable results must be replaced with acceptable results from samples collected during the same monitoring period.

Florida Department of Environmental Protection

Safe Drinking Water Program Laboratory Reporting Format

VOLATILE ORGANICS

62-550.310(4)(a)

Report Number/ Job 3581705001

PWS ID (from Page 1): _____

Contam ID	Contam Name	MCL	Units	Analysis Result	Qualifier*	Analytical Method	Lab MDL	RDL	Analysis Date	Analysis Time	DOH Lab Certification #
2378	1,2,4-Trichlorobenzene	70	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2380	cis-1,2-Dichloroethene	70	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2955	Xylene (Total)	10000	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2964	Dichloromethane	5.0	ug/L	0.44	U	EPA 524.2	0.44	0.5	02/04/2013	16:38	E83079
2968	o-Dichlorobenzene	600	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2969	para-Dichlorobenzene	75	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2976	Vinyl chloride	1.0	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2977	1,1-Dichloroethene	7.0	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2979	trans-1,2-Dichloroethene	100	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2980	1,2-Dichloroethane	3.0	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2981	1,1,1-Trichloroethane	200	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2982	Carbon tetrachloride	3.0	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2983	1,2-Dichloropropane	5.0	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2984	Trichloroethene	3.0	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2985	1,1,2-Trichloroethane	5.0	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2987	Tetrachloroethene	3.0	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2989	Monochlorobenzene	100	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2990	Benzene	1.0	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2991	Toluene	1000	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2992	Ethylbenzene	700	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079
2996	Styrene	100	ug/L	0.25	U	EPA 524.2	0.25	0.5	02/04/2013	16:38	E83079

Reporting Format 62-550.730

Effective January 1995, Revised February 2010

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Florida Department of Environmental Protection

Safe Drinking Water Program Laboratory Reporting Format

SYNTHETIC ORGANICS

62-550.310(4)(b)

Report Number/ Job 3581705001

PWS ID (from Page 1): _____

Contam ID	Contam Name	MCL	Units	Analysis Result	Qualifier*	Analytical Method	Lab MDL	RDL	Extraction Date	Analysis Date	Analysis Time	DOH Lab Certification #
2005	Endrin	2.0	ug/L	0.0019	U	EPA 508.1	0.0019	0.01	02/13/2013	02/14/2013	18:54	E83079
2010	Lindane	0.2	ug/L	0.0028	U	EPA 508.1	0.0028	0.02	02/13/2013	02/14/2013	18:54	E83079
2015	Methoxychlor	40	ug/L	0.013	U	EPA 508.1	0.013	0.1	02/13/2013	02/14/2013	18:54	E83079
2020	Toxaphene	3.0	ug/L	0.58	U	EPA 508.1	0.58	1	02/13/2013	02/14/2013	18:54	E83079
2031	Dalapon	200	ug/L	0.89	U	EPA 515.3	0.89	1	02/09/2013	02/13/2013	06:59	E83079
2032	Diquat	20	ug/L	0.15	U	EPA 549.2	0.15	0.4	02/05/2013	02/05/2013	23:00	E83079
2033	Endothal	100	ug/L	2.7	U	EPA 548.1	2.7	9	02/08/2013	02/19/2013	07:50	E83079
2034	Glyphosate	700	ug/L	2.1	U	EPA 547	2.1	6	02/05/2013	02/05/2013	04:53	E83079
2035	Di(2-ethylhexyl)adipate	400	ug/L	0.37	U	EPA 525.2	0.37	0.6	02/13/2013	02/14/2013	17:31	E83079
2036	Oxamyl (Vydate)	200	ug/L	0.41	U	EPA 531.1	0.41	2	02/08/2013	02/08/2013	20:12	E83079
2037	Simazine	4.0	ug/L	0.042	U	EPA 508.1	0.042	0.07	02/13/2013	02/14/2013	18:54	E83079
2039	Di(2-ethylhexyl)phthalate	6.0	ug/L	0.48	U	EPA 525.2	0.48	0.6	02/13/2013	02/14/2013	17:31	E83079
2040	Picloram	500	ug/L	0.094	U	EPA 515.3	0.094	0.1	02/09/2013	02/13/2013	06:59	E83079
2041	Dinoseb	7.0	ug/L	0.16	U	EPA 515.3	0.16	0.2	02/09/2013	02/13/2013	06:59	E83079
2042	Hexachlorocyclopentadinene	50	ug/L	0.011	U	EPA 508.1	0.011	0.1	02/13/2013	02/14/2013	18:54	E83079
2046	Carbofuran	40	ug/L	0.32	U	EPA 531.1	0.32	0.9	02/08/2013	02/08/2013	20:12	E83079
2050	Atrazine	3.0	ug/L	0.020	U	EPA 508.1	0.020	0.1	02/13/2013	02/14/2013	18:54	E83079
2051	Alachlor	2.0	ug/L	0.032	U	EPA 508.1	0.032	0.2	02/13/2013	02/14/2013	18:54	E83079
2065	Heptachlor	0.4	ug/L	0.0057	U	EPA 508.1	0.0057	0.04	02/13/2013	02/14/2013	18:54	E83079
2067	Heptachlor epoxide	0.2	ug/L	0.0028	U	EPA 508.1	0.0028	0.02	02/13/2013	02/14/2013	18:54	E83079
2105	2,4-D	70	ug/L	0.081	U	EPA 515.3	0.081	0.1	02/09/2013	02/13/2013	06:59	E83079
2110	2,4,5-TP (Silvex)	50	ug/L	0.16	U	EPA 515.3	0.16	0.2	02/09/2013	02/13/2013	06:59	E83079
2274	Hexachlorobenzene	1.0	ug/L	0.010	U	EPA 508.1	0.010	0.1	02/13/2013	02/14/2013	18:54	E83079
2306	Benzo(a)pyrene	0.2	ug/L	0.018	U	EPA 525.2	0.018	0.02	02/13/2013	02/14/2013	17:31	E83079
2326	Pentachlorophenol	1.0	ug/L	0.030	U	EPA 515.3	0.030	0.04	02/09/2013	02/13/2013	06:59	E83079
2383	Polychlorinated biphenyls	0.5	ug/L	0.076	U	EPA 508.1	0.076	0.1	02/13/2013	02/14/2013	18:54	E83079
2931	Dibromochloropropane	0.2	ug/L	0.0054	U	EPA 504.1	0.0054	0.02	02/08/2013	02/08/2013	21:02	E83079
2946	Ethylene Dibromide (EDB)	0.02	ug/L	0.0069	U	EPA 504.1	0.0069	0.01	02/08/2013	02/08/2013	21:02	E83079
2959	Chlordane	2.0	ug/L	0.045	U	EPA 508.1	0.045	0.2	02/13/2013	02/14/2013	18:54	E83079

Reporting Format 62-550.730
Effective January 1995, Revised February 2010

NOTE: Results indicating non-detection with a reported lab MDL >50% of the MCL will not be accepted for compliance with 62-550.310(4)(b).

*Results must be reported with appropriate qualifiers in accordance with Florida Administrative Code Rule 62-160, Table 1. Results qualified with A, F, H, N, O, T, Z, ? , are unacceptable for compliance with 62-550. Results qualified with a J, Q, R, or Y must be accompanied by written justification and will be evaluated on a case by case basis. To avoid a monitoring violation, unacceptable results must be replaced with acceptable results from samples collected during the same monitoring period.

December 27, 2012

Mo Rahgozar
Advanced Well Drilling
2715 Garden Street
Malabar, FL 32950

RE: Project: NPB-6
Pace Project No.: 3576908

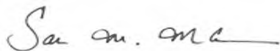
Dear Mo Rahgozar:

Enclosed are the analytical results for sample(s) received by the laboratory on December 11, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Sakina Mckenzie

sakina.mckenzie@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

CERTIFICATIONS

Project: NPB-6
Pace Project No.: 3576908

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4 Greensburg, PA 15601
ACCLASS DOD-ELAP Accreditation #: ADE-1544
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California/TNI Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Guam/PADEP Certification
Hawaii/PADEP Certification
Idaho Certification
Illinois/PADEP Certification
Indiana/PADEP Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana/TNI Certification #: LA080002
Louisiana/TNI Certification #: 4086
Maine Certification #: PA0091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nevada Certification
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188
Utah/TNI Certification #: ANTE
Virgin Island/PADEP Certification
Virginia Certification #: 00112
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia Certification #: 143
Wisconsin/PADEP Certification
Wyoming Certification #: 8TMS-Q

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236

Montana Certification #: Cert 0074
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pace Analytical Services - Ormond certification number
E83509
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

South Florida Certification IDs

3610 Park Central Blvd N Pompano Beach, FL 33064
Pace Analytical Services - Pompano certification number
E96080

Florida Certification #: E86240

REPORT OF LABORATORY ANALYSIS

SAMPLE SUMMARY

Project: NPB-6
Pace Project No.: 3576908

Lab ID	Sample ID	Matrix	Date Collected	Date Received
3576908001	NPB-6	Water	12/11/12 09:50	12/11/12 15:30

REPORT OF LABORATORY ANALYSIS

SAMPLE ANALYTE COUNT

Project: NPB-6
Pace Project No.: 3576908

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3576908001	NPB-6	EPA 504.1	JLR	2	PASI-O
		EPA 508.1	JTT	21	PASI-O
		EPA 515.3	LJM	7	PASI-O
		EPA 531.1	WFH	3	PASI-O
		EPA 547	WFH	1	PASI-O
		EPA 549.2	WFH	1	PASI-O
		EPA 552.2	JLR	7	PASI-O
		EPA 200.7	JTJ	10	PASI-O
		EPA 200.8	HEA	7	PASI-O
		EPA 245.1	DRS	1	PASI-O
		EPA 525.2	WFH	6	PASI-O
		EPA 548.1	EAO	1	PASI-O
		EPA 524.2	JBH	25	PASI-O
		EPA 524.2	JBH	9	PASI-O
		EPA 900.0m	JC2	1	PASI-PA
		EPA 903.1	SLA	1	PASI-PA
		EPA 904.0	MAW	1	PASI-PA
		SM 2150B	LCM	2	PASI-SF
		SM 2120B	KHC	1	PASI-O
		SM 2540C	AGS	1	PASI-O
		SM 4500-H+B	KHC	2	PASI-O
		SM 5540C	KDM	1	PASI-O
		EPA 300.0	IRL	2	PASI-O
		EPA 300.0	IRL	3	PASI-O
		EPA 300.1	KDM	2	PASI-O
		EPA 300.1	KDM	2	PASI-O
		EPA 335.4	SOA	1	PASI-O

REPORT OF LABORATORY ANALYSIS

ANALYTICAL RESULTS

Project: NPB-6
Pace Project No.: 3576908

Sample: NPB-6 **Lab ID: 3576908001** Collected: 12/11/12 09:50 Received: 12/11/12 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504.1 GCS EDB and DBCP		Analytical Method: EPA 504.1 Preparation Method: EPA 504.1							
1,2-Dibromo-3-chloropropane	0.0048U	ug/L	0.020	0.0048	1	12/13/12 12:00	12/13/12 21:59	96-12-8	
1,2-Dibromoethane (EDB)	0.0061U	ug/L	0.0098	0.0061	1	12/13/12 12:00	12/13/12 21:59	106-93-4	
508.1 GCS Pesticides		Analytical Method: EPA 508.1 Preparation Method: EPA 508.1							
Alachlor	0.033U	ug/L	0.19	0.033	1	12/17/12 08:00	12/19/12 04:28	15972-60-8	
Atrazine	0.020U	ug/L	0.096	0.020	1	12/17/12 08:00	12/19/12 04:28	1912-24-9	L3
gamma-BHC (Lindane)	0.0029U	ug/L	0.019	0.0029	1	12/17/12 08:00	12/19/12 04:28	58-89-9	
Chlordane (Technical)	0.045U	ug/L	0.19	0.045	1	12/17/12 08:00	12/19/12 04:28	57-74-9	
Endrin	0.0019U	ug/L	0.0096	0.0019	1	12/17/12 08:00	12/19/12 04:28	72-20-8	
Heptachlor	0.0057U	ug/L	0.038	0.0057	1	12/17/12 08:00	12/19/12 04:28	76-44-8	
Heptachlor epoxide	0.0029U	ug/L	0.019	0.0029	1	12/17/12 08:00	12/19/12 04:28	1024-57-3	
Hexachlorobenzene	0.011U	ug/L	0.096	0.011	1	12/17/12 08:00	12/19/12 04:28	118-74-1	
Hexachlorocyclopentadiene	0.011U	ug/L	0.096	0.011	1	12/17/12 08:00	12/19/12 04:28	77-47-4	
Methoxychlor	0.013U	ug/L	0.096	0.013	1	12/17/12 08:00	12/19/12 04:28	72-43-5	L3
PCB-1016 (Aroclor 1016)	0.077U	ug/L	0.096	0.077	1	12/17/12 08:00	12/19/12 04:28	12674-11-2	
PCB-1221 (Aroclor 1221)	0.028U	ug/L	0.096	0.028	1	12/17/12 08:00	12/19/12 04:28	11104-28-2	
PCB-1232 (Aroclor 1232)	0.028U	ug/L	0.096	0.028	1	12/17/12 08:00	12/19/12 04:28	11141-16-5	
PCB-1242 (Aroclor 1242)	0.049U	ug/L	0.096	0.049	1	12/17/12 08:00	12/19/12 04:28	53469-21-9	
PCB-1248 (Aroclor 1248)	0.059U	ug/L	0.096	0.059	1	12/17/12 08:00	12/19/12 04:28	12672-29-6	
PCB-1254 (Aroclor 1254)	0.022U	ug/L	0.096	0.022	1	12/17/12 08:00	12/19/12 04:28	11097-69-1	
PCB-1260 (Aroclor 1260)	0.063U	ug/L	0.096	0.063	1	12/17/12 08:00	12/19/12 04:28	11096-82-5	
PCB, Total	0.077U	ug/L	0.096	0.077	1	12/17/12 08:00	12/19/12 04:28	1336-36-3	
Simazine	0.042U	ug/L	0.067	0.042	1	12/17/12 08:00	12/19/12 04:28	122-34-9	L3
Toxaphene	0.58U	ug/L	0.96	0.58	1	12/17/12 08:00	12/19/12 04:28	8001-35-2	
Surrogates									
Decachlorobiphenyl (S)	99 %		70-130		1	12/17/12 08:00	12/19/12 04:28	2051-24-3	
515.3 Chlorinated Herbicides		Analytical Method: EPA 515.3 Preparation Method: EPA 515.3							
2,4-D	0.081U	ug/L	0.10	0.081	1	12/13/12 08:15	12/20/12 11:06	94-75-7	
Dalapon	0.89U	ug/L	1.0	0.89	1	12/13/12 08:15	12/20/12 11:06	75-99-0	
Dinoseb	0.16U	ug/L	0.20	0.16	1	12/13/12 08:15	12/20/12 11:06	88-85-7	J(M1)
Pentachlorophenol	0.030U	ug/L	0.040	0.030	1	12/13/12 08:15	12/20/12 11:06	87-86-5	
Picloram	0.094U	ug/L	0.10	0.094	1	12/13/12 08:15	12/20/12 11:06	1918-02-1	J(M0), L3
2,4,5-TP (Silvex)	0.16U	ug/L	0.20	0.16	1	12/13/12 08:15	12/20/12 11:06	93-72-1	
Surrogates									
2,4-DCAA (S)	94 %		70-130		1	12/13/12 08:15	12/20/12 11:06	19719-28-9	
531.1 HPLC Carbamates		Analytical Method: EPA 531.1							
Carbofuran	0.32U	ug/L	2.0	0.32	1		12/13/12 16:42	1563-66-2	L3
Oxamyl	0.41U	ug/L	2.0	0.41	1		12/13/12 16:42	23135-22-0	
Surrogates									
Propoxur (S)	116 %		80-120		1		12/13/12 16:42	114-26-1	
547 HPLC Glyphosate		Analytical Method: EPA 547							
Glyphosate	2.1U	ug/L	6.0	2.1	1		12/13/12 15:12		

ANALYTICAL RESULTS

Project: NPB-6
Pace Project No.: 3576908

Sample: NPB-6 **Lab ID: 3576908001** Collected: 12/11/12 09:50 Received: 12/11/12 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
549.2 HPLC Paraquat Diquat Analytical Method: EPA 549.2 Preparation Method: EPA 549.2									
Diquat	0.15U	ug/L	0.40	0.15	1	12/14/12 08:30	12/17/12 23:42	85-00-7	
552.2 Haloacetic Acids Analytical Method: EPA 552.2 Preparation Method: EPA 552.2									
Dibromoacetic Acid	0.61U	ug/L	1.0	0.61	1	12/19/12 10:30	12/21/12 04:37	631-64-1	
Dichloroacetic Acid	0.61U	ug/L	1.0	0.61	1	12/19/12 10:30	12/21/12 04:37	79-43-6	
Haloacetic Acids (Total)	0.61U	ug/L	1.0	0.61	1	12/19/12 10:30	12/21/12 04:37		
Monobromoacetic Acid	0.61U	ug/L	1.0	0.61	1	12/19/12 10:30	12/21/12 04:37	79-08-3	
Monochloroacetic Acid	0.61U	ug/L	1.0	0.61	1	12/19/12 10:30	12/21/12 04:37	79-11-8	
Trichloroacetic Acid	0.61U	ug/L	1.0	0.61	1	12/19/12 10:30	12/21/12 04:37	76-03-9	
Surrogates									
2,3-Dibromopropanoic Acid (S)	122	%	70-130		1	12/19/12 10:30	12/21/12 04:37	600-05-5	
200.7 MET ICP Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Barium	0.0067 I	mg/L	0.010	0.0050	1	12/12/12 11:16	12/13/12 09:50	7440-39-3	
Beryllium	0.00050U	mg/L	0.0010	0.00050	1	12/12/12 11:16	12/13/12 09:50	7440-41-7	
Cadmium	0.00050U	mg/L	0.0010	0.00050	1	12/12/12 11:16	12/13/12 09:50	7440-43-9	
Chromium	0.0025U	mg/L	0.0050	0.0025	1	12/12/12 11:16	12/13/12 09:50	7440-47-3	
Iron	0.29	mg/L	0.040	0.020	1	12/12/12 11:16	12/13/12 09:50	7439-89-6	
Manganese	0.0070	mg/L	0.0050	0.0025	1	12/12/12 11:16	12/13/12 09:50	7439-96-5	
Nickel	0.0025U	mg/L	0.0050	0.0025	1	12/12/12 11:16	12/13/12 09:50	7440-02-0	
Silver	0.0025U	mg/L	0.0050	0.0025	1	12/12/12 11:16	12/13/12 09:50	7440-22-4	
Sodium	32.8	mg/L	1.0	0.50	1	12/12/12 11:16	12/13/12 09:50	7440-23-5	
Zinc	0.010U	mg/L	0.020	0.010	1	12/12/12 11:16	12/13/12 09:50	7440-66-6	
200.8 MET ICPMS Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Aluminum	0.0060 I	mg/L	0.010	0.0058	1	12/12/12 11:16	12/13/12 14:56	7429-90-5	
Antimony	0.00050U	mg/L	0.0010	0.00050	1	12/12/12 11:16	12/13/12 14:56	7440-36-0	
Arsenic	0.00050U	mg/L	0.0010	0.00050	1	12/12/12 11:16	12/13/12 14:56	7440-38-2	
Copper	0.00093U	mg/L	0.0010	0.00093	1	12/12/12 11:16	12/13/12 14:56	7440-50-8	
Lead	0.00050U	mg/L	0.0010	0.00050	1	12/12/12 11:16	12/13/12 14:56	7439-92-1	
Selenium	0.00050U	mg/L	0.0010	0.00050	1	12/12/12 11:16	12/13/12 14:56	7782-49-2	
Thallium	0.00050U	mg/L	0.0010	0.00050	1	12/12/12 11:16	12/13/12 14:56	7440-28-0	
245.1 Mercury Analytical Method: EPA 245.1 Preparation Method: EPA 245.1									
Mercury	0.00010U	mg/L	0.00020	0.00010	1	12/12/12 15:03	12/13/12 08:45	7439-97-6	
525.2 Base Neutral Extractable Analytical Method: EPA 525.2 Preparation Method: EPA 525.2									
Benzo(a)pyrene	0.018U	ug/L	0.096	0.018	1	12/18/12 08:10	12/18/12 21:23	50-32-8	L3
bis(2-Ethylhexyl)adipate	0.37U	ug/L	1.5	0.37	1	12/18/12 08:10	12/18/12 21:23	103-23-1	
bis(2-Ethylhexyl)phthalate	0.48U	ug/L	1.9	0.48	1	12/18/12 08:10	12/18/12 21:23	117-81-7	
Surrogates									
1,3-Dimethyl-2-nitrobenzene(S)	91	%	70-130		1	12/18/12 08:10	12/18/12 21:23	81209	
Perylene-d12 (S)	124	%	70-130		1	12/18/12 08:10	12/18/12 21:23	1520963	
Triphenylphosphate (S)	109	%	70-130		1	12/18/12 08:10	12/18/12 21:23	115-86-6	

ANALYTICAL RESULTS

Project: NPB-6
Pace Project No.: 3576908

Sample: NPB-6 **Lab ID: 3576908001** Collected: 12/11/12 09:50 Received: 12/11/12 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
548.1 GCS Endothall Analytical Method: EPA 548.1 Preparation Method: EPA 548.1									
Endothall	2.7U	ug/L	9.0	2.7	1	12/13/12 15:00	12/14/12 17:03		
524.2 MSV Analytical Method: EPA 524.2									
Benzene	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	71-43-2	
Carbon tetrachloride	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	56-23-5	
Chlorobenzene	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	108-90-7	
1,2-Dichlorobenzene	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	95-50-1	
1,4-Dichlorobenzene	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	106-46-7	
1,2-Dichloroethane	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	107-06-2	
1,1-Dichloroethene	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	75-35-4	
cis-1,2-Dichloroethene	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	156-59-2	
trans-1,2-Dichloroethene	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	156-60-5	
1,2-Dichloropropane	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	78-87-5	
Ethylbenzene	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	100-41-4	
Methylene Chloride	0.44U	ug/L	0.50	0.44	1		12/12/12 16:19	75-09-2	
Styrene	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	100-42-5	
Tetrachloroethene	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	127-18-4	
Toluene	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	108-88-3	
1,2,4-Trichlorobenzene	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	120-82-1	
1,1,1-Trichloroethane	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	71-55-6	
1,1,2-Trichloroethane	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	79-00-5	
Trichloroethene	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	79-01-6	
Vinyl chloride	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	75-01-4	
Xylene (Total)	0.25U	ug/L	0.50	0.25	1		12/12/12 16:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	89 %		70-130		1		12/12/12 16:19	460-00-4	p2
Dibromofluoromethane (S)	97 %		70-130		1		12/12/12 16:19	1868-53-7	
Toluene-d8 (S)	98 %		70-130		1		12/12/12 16:19	2037-26-5	
1,2-Dichloroethane-d4 (S)	96 %		70-130		1		12/12/12 16:19	17060-07-0	
524.2 THM Analytical Method: EPA 524.2									
Bromodichloromethane	0.25U	ug/L	0.50	0.25	1		12/13/12 15:22	75-27-4	
Bromoform	0.25U	ug/L	0.50	0.25	1		12/13/12 15:22	75-25-2	
Chloroform	0.25U	ug/L	0.50	0.25	1		12/13/12 15:22	67-66-3	
Dibromochloromethane	0.25U	ug/L	0.50	0.25	1		12/13/12 15:22	124-48-1	
Total Trihalomethanes (Calc.)	0.25U	ug/L	0.50	0.25	1		12/13/12 15:22		
Surrogates									
4-Bromofluorobenzene (S)	92 %		70-130		1		12/13/12 15:22	460-00-4	
Dibromofluoromethane (S)	97 %		70-130		1		12/13/12 15:22	1868-53-7	
Toluene-d8 (S)	99 %		70-130		1		12/13/12 15:22	2037-26-5	
1,2-Dichloroethane-d4 (S)	110 %		70-130		1		12/13/12 15:22	17060-07-0	
2150B Threshold Odor Number Analytical Method: SM 2150B									
Temperature, Water (C)	40.7	deg C			1		12/11/12 17:45		
Threshold Odor Number	1.0U	TON	1.0	1.0	1		12/11/12 17:45		

ANALYTICAL RESULTS

Project: NPB-6
Pace Project No.: 3576908

Sample: NPB-6 **Lab ID: 3576908001** Collected: 12/11/12 09:50 Received: 12/11/12 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2120B Apparent Color									
Analytical Method: SM 2120B									
Apparent Color	35.0	units	5.0	5.0	1		12/12/12 09:40		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Total Dissolved Solids	346	mg/L	5.0	5.0	1		12/17/12 12:53		
4500H+ pH, Electrometric									
Analytical Method: SM 4500-H+B									
Temperature, Water (C)	25.0	deg C	0.010	0.010	1		12/18/12 11:30		Q
pH at 25 Degrees C	8.8	Std. Units	0.10	0.10	1		12/18/12 11:30		Q
5540C MBAS Surfactants									
Analytical Method: SM 5540C									
Surfactants	0.11 I	mg/L	0.20	0.059	1		12/12/12 14:15		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Nitrate as N	0.025U	mg/L	0.050	0.025	1		12/12/12 20:45	14797-55-8	
Nitrite as N	0.025U	mg/L	0.050	0.025	1		12/12/12 20:45	14797-65-0	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0									
Chloride	48.1	mg/L	5.0	2.5	1		12/12/12 20:45	16887-00-6	
Fluoride	0.34	mg/L	0.050	0.025	1		12/12/12 20:45	16984-48-8	
Sulfate	6.9	mg/L	5.0	2.5	1		12/12/12 20:45	14808-79-8	
300.1 Oxihalide IC Anions 14d									
Analytical Method: EPA 300.1									
Chlorite	1.1U	ug/L	10.0	1.1	2		12/18/12 08:08		D3
Surrogates									
Dichloroacetate (S)	93 %		90-115		2		12/18/12 08:08	79-43-6	
300.1 Oxihalide IC Anions 28d									
Analytical Method: EPA 300.1									
Bromate	1.0U	ug/L	5.0	1.0	2		12/18/12 08:08	15541-45-4	D3
Surrogates									
Dichloroacetate (S)	93 %		90-115		2		12/18/12 08:08	79-43-6	
335.4 Cyanide, Total									
Analytical Method: EPA 335.4 Preparation Method: EPA 335.4									
Cyanide	0.0050U	mg/L	0.010	0.0050	1	12/14/12 09:20	12/14/12 12:49	57-12-5	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: GCSV/7479 Analysis Method: EPA 531.1
QC Batch Method: EPA 531.1 Analysis Description: 531.1 HPLC Carbamate
Associated Lab Samples: 3576908001

METHOD BLANK: 523673 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Carbofuran	ug/L	0.32U	2.0	12/11/12 14:40	
Oxamyl	ug/L	0.41U	2.0	12/11/12 14:40	
Propoxur (S)	%	84	80-120	12/11/12 14:40	

LABORATORY CONTROL SAMPLE: 523674

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbofuran	ug/L	10	12.4	124	80-120	J(L0)
Oxamyl	ug/L	10	9.9	99	80-120	
Propoxur (S)	%			101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523675 523676

Parameter	Units	3576826001 Result	MS Spike Conc.	MSD Spike Conc.	523675		523676		% Rec Limits	Max RPD	Qual
					MS Result	MSD Result	MS % Rec	MSD % Rec			
Carbofuran	ug/L	0.32U	10	10	10	10.2	100	102	80-120	3	20
Oxamyl	ug/L	0.41U	10	10	8.6	8.7	86	87	80-120	.5	20
Propoxur (S)	%						98	101	80-120		

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: GCSV/7480 Analysis Method: EPA 547
QC Batch Method: EPA 547 Analysis Description: 547 HPLC Glyphosate
Associated Lab Samples: 3576908001

METHOD BLANK: 523691 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Glyphosate	ug/L	2.1U	6.0	12/13/12 12:29	

LABORATORY CONTROL SAMPLE: 523692

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Glyphosate	ug/L	50	45.9	92	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523693 523694

Parameter	Units	3576826001		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.										
Glyphosate	ug/L	2.1U	50	50	48.7	34.0	97	68	70-130	36	30	J(D6), J(M1)	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524495 524496

Parameter	Units	201044702		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.										
Glyphosate	ug/L	<2.1	50	50	46.5	46.3	93	93	70-130	.5	30		

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: MERP/3370 Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury
Associated Lab Samples: 3576908001

METHOD BLANK: 524635 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	0.00010U	0.00020	12/13/12 07:54	

LABORATORY CONTROL SAMPLE: 524636

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.002	0.0019	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524637 524638

Parameter	Units	3576410001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury	mg/L	0.10U ug/L	.002	.002	0.0019	0.0020	93	98	70-130	5	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524639 524640

Parameter	Units	3576971001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury	mg/L	0.00010 U			0.00010 U	0.00010 U					20	J(M1)

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: MPRP/11500 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 MET
Associated Lab Samples: 3576908001

METHOD BLANK: 524445 Matrix: Water

Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	0.0050U	0.010	12/13/12 09:20	
Beryllium	mg/L	0.00050U	0.0010	12/13/12 09:20	
Cadmium	mg/L	0.00050U	0.0010	12/13/12 09:20	
Chromium	mg/L	0.0025U	0.0050	12/13/12 09:20	
Iron	mg/L	0.020U	0.040	12/13/12 09:20	
Manganese	mg/L	0.0025U	0.0050	12/13/12 09:20	
Nickel	mg/L	0.0025U	0.0050	12/13/12 09:20	
Silver	mg/L	0.0025U	0.0050	12/13/12 09:20	
Sodium	mg/L	0.62 l	1.0	12/13/12 09:20	V
Zinc	mg/L	0.010U	0.020	12/13/12 09:20	

LABORATORY CONTROL SAMPLE: 524446

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	.25	0.25	101	85-115	
Beryllium	mg/L	.025	0.026	103	85-115	
Cadmium	mg/L	.025	0.026	102	85-115	
Chromium	mg/L	.25	0.25	101	85-115	
Iron	mg/L	2.5	2.4	97	85-115	
Manganese	mg/L	.25	0.26	102	85-115	
Nickel	mg/L	.25	0.26	104	85-115	
Silver	mg/L	.025	0.024	96	85-115	
Sodium	mg/L	12.5	12.7	102	85-115	
Zinc	mg/L	1.2	1.3	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524447 524448

Parameter	Units	3576968001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Barium	mg/L		.25	.25	0.28	0.28	103	104	70-130	.8	20	
Beryllium	mg/L		.025	.025	0.026	0.026	104	105	70-130	.2	20	
Cadmium	mg/L		.025	.025	0.026	0.025	103	102	70-130	1	20	
Chromium	mg/L		.25	.25	0.26	0.26	103	103	70-130	.08	20	
Iron	mg/L		2.5	2.5	2.7	2.7	96	96	70-130	.3	20	
Manganese	mg/L		.25	.25	0.30	0.30	103	103	70-130	.2	20	
Nickel	mg/L		.25	.25	0.26	0.26	103	103	70-130	.08	20	
Silver	mg/L		.025	.025	0.025	0.025	99	100	70-130	2	20	
Sodium	mg/L	32700 ug/L	12.5	12.5	45.4	45.7	102	104	70-130	.5	20	
Zinc	mg/L		1.2	1.2	1.3	1.3	103	102	70-130	.3	20	

Date: 12/27/2012 12:36 PM

REPORT OF LABORATORY ANALYSIS

Page 12 of 43

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QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: MPRP/11501 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
Associated Lab Samples: 3576908001

METHOD BLANK: 524449 Matrix: Water

Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	mg/L	0.0058U	0.010	12/13/12 14:26	
Antimony	mg/L	0.00050U	0.0010	12/13/12 14:26	
Arsenic	mg/L	0.00050U	0.0010	12/13/12 14:26	
Copper	mg/L	0.00093U	0.0010	12/13/12 14:26	
Lead	mg/L	0.00050U	0.0010	12/13/12 14:26	
Selenium	mg/L	0.00050U	0.0010	12/13/12 14:26	
Thallium	mg/L	0.00050U	0.0010	12/13/12 14:26	

LABORATORY CONTROL SAMPLE: 524450

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	.5	0.47	93	85-115	
Antimony	mg/L	.05	0.051	101	85-115	
Arsenic	mg/L	.05	0.051	103	85-115	
Copper	mg/L	.05	0.050	100	85-115	
Lead	mg/L	.05	0.047	94	85-115	
Selenium	mg/L	.05	0.053	105	85-115	
Thallium	mg/L	.05	0.049	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524451 524452

Parameter	Units	3576894001		524452		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MSD Result							
Aluminum	mg/L	297 ug/L	.5	.5	0.82	0.80	104	100	70-130	3	20	
Antimony	mg/L	0.50U ug/L	.05	.05	0.052	0.052	103	103	70-130	.6	20	
Arsenic	mg/L	0.71 I ug/L	.05	.05	0.052	0.051	103	100	70-130	3	20	
Copper	mg/L	16.0 ug/L	.05	.05	0.066	0.065	100	98	70-130	1	20	
Lead	mg/L	7.8 ug/L	.05	.05	0.058	0.057	100	99	70-130	1	20	
Selenium	mg/L	0.50U ug/L	.05	.05	0.051	0.050	102	100	70-130	2	20	
Thallium	mg/L	0.50U ug/L	.05	.05	0.053	0.052	105	104	70-130	1	20	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: MSV/7259 Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2 Analysis Description: 524.2 MSV
Associated Lab Samples: 3576908001

METHOD BLANK: 524465 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	0.25U	0.50	12/12/12 10:02	
1,1,2-Trichloroethane	ug/L	0.25U	0.50	12/12/12 10:02	
1,1-Dichloroethene	ug/L	0.25U	0.50	12/12/12 10:02	
1,2,4-Trichlorobenzene	ug/L	0.25U	0.50	12/12/12 10:02	
1,2-Dichlorobenzene	ug/L	0.25U	0.50	12/12/12 10:02	
1,2-Dichloroethane	ug/L	0.25U	0.50	12/12/12 10:02	
1,2-Dichloropropane	ug/L	0.25U	0.50	12/12/12 10:02	
1,4-Dichlorobenzene	ug/L	0.25U	0.50	12/12/12 10:02	
Benzene	ug/L	0.25U	0.50	12/12/12 10:02	
Carbon tetrachloride	ug/L	0.25U	0.50	12/12/12 10:02	
Chlorobenzene	ug/L	0.25U	0.50	12/12/12 10:02	
cis-1,2-Dichloroethene	ug/L	0.25U	0.50	12/12/12 10:02	
Ethylbenzene	ug/L	0.25U	0.50	12/12/12 10:02	
Methylene Chloride	ug/L	0.44U	0.50	12/12/12 10:02	
Styrene	ug/L	0.25U	0.50	12/12/12 10:02	
Tetrachloroethene	ug/L	0.25U	0.50	12/12/12 10:02	
Toluene	ug/L	0.25U	0.50	12/12/12 10:02	
trans-1,2-Dichloroethene	ug/L	0.25U	0.50	12/12/12 10:02	
Trichloroethene	ug/L	0.25U	0.50	12/12/12 10:02	
Vinyl chloride	ug/L	0.25U	0.50	12/12/12 10:02	
Xylene (Total)	ug/L	0.25U	0.50	12/12/12 10:02	
1,2-Dichloroethane-d4 (S)	%	97	70-130	12/12/12 10:02	
4-Bromofluorobenzene (S)	%	97	70-130	12/12/12 10:02	
Dibromofluoromethane (S)	%	99	70-130	12/12/12 10:02	
Toluene-d8 (S)	%	99	70-130	12/12/12 10:02	

LABORATORY CONTROL SAMPLE & LCSD: 524466

524467

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	5	5.8	5.5	115	111	70-130	4	40	
1,1,2-Trichloroethane	ug/L	5	5.5	5.3	110	106	70-130	4	40	
1,1-Dichloroethene	ug/L	5	5.7	6.0	114	119	70-130	4	40	
1,2,4-Trichlorobenzene	ug/L	5	5.2	5.5	104	109	70-130	4	40	
1,2-Dichlorobenzene	ug/L	5	5.2	5.3	104	106	70-130	1	40	
1,2-Dichloroethane	ug/L	5	5.4	5.4	108	107	70-130	1	40	
1,2-Dichloropropane	ug/L	5	5.4	5.2	108	104	70-130	4	40	
1,4-Dichlorobenzene	ug/L	5	5.3	5.3	105	107	70-130	2	40	
Benzene	ug/L	5	5.4	5.5	108	110	70-130	2	40	
Carbon tetrachloride	ug/L	5	5.8	5.9	116	118	70-130	2	40	
Chlorobenzene	ug/L	5	5.5	5.7	109	114	70-130	5	40	
cis-1,2-Dichloroethene	ug/L	5	5.4	5.5	108	110	70-130	2	40	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

LABORATORY CONTROL SAMPLE & LCSD:		524466	524467							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethylbenzene	ug/L	5	5.3	5.6	106	112	70-130	5	40	
Methylene Chloride	ug/L	5	4.7	5.1	95	101	70-130	7	40	
Styrene	ug/L	5	5.7	5.8	114	117	70-130	2	40	
Tetrachloroethene	ug/L	5	5.8	5.7	115	115	70-130	.5	40	
Toluene	ug/L	5	5.3	5.6	107	112	70-130	5	40	
trans-1,2-Dichloroethene	ug/L	5	5.2	5.5	105	111	70-130	6	40	
Trichloroethene	ug/L	5	5.5	5.8	109	117	70-130	7	40	
Vinyl chloride	ug/L	5	5.3	4.8	106	96	70-130	10	40	
Xylene (Total)	ug/L	15	16.3	17.1	109	114	70-130	5	40	
1,2-Dichloroethane-d4 (S)	%				98	97	70-130			
4-Bromofluorobenzene (S)	%				102	101	70-130			
Dibromofluoromethane (S)	%				99	99	70-130			
Toluene-d8 (S)	%				100	101	70-130			

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch:	MSV/7270	Analysis Method:	EPA 524.2
QC Batch Method:	EPA 524.2	Analysis Description:	524.2 THM MSV
Associated Lab Samples:	3576908001		

METHOD BLANK: 525513 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromodichloromethane	ug/L	0.25U	0.50	12/13/12 10:05	
Bromoform	ug/L	0.25U	0.50	12/13/12 10:05	
Chloroform	ug/L	0.25U	0.50	12/13/12 10:05	
Dibromochloromethane	ug/L	0.25U	0.50	12/13/12 10:05	
Total Trihalomethanes (Calc.)	ug/L	0.25U	0.50	12/13/12 10:05	
1,2-Dichloroethane-d4 (S)	%	106	70-130	12/13/12 10:05	
4-Bromofluorobenzene (S)	%	91	70-130	12/13/12 10:05	
Dibromofluoromethane (S)	%	101	70-130	12/13/12 10:05	
Toluene-d8 (S)	%	99	70-130	12/13/12 10:05	

LABORATORY CONTROL SAMPLE & LCSD: 525514

525515

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Bromodichloromethane	ug/L	5	4.6	4.8	92	96	70-130	4	40	
Bromoform	ug/L	5	5.4	5.5	107	111	70-130	3	40	
Chloroform	ug/L	5	4.8	4.5	96	90	70-130	6	40	
Dibromochloromethane	ug/L	5	4.4	4.4	87	88	70-130	1	40	
Total Trihalomethanes (Calc.)	ug/L	20	19.1	19.3	96	96	70-130	.7	40	
1,2-Dichloroethane-d4 (S)	%				106	105	70-130			
4-Bromofluorobenzene (S)	%				94	94	70-130			
Dibromofluoromethane (S)	%				98	97	70-130			
Toluene-d8 (S)	%				100	100	70-130			

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: OEXT/10906 Analysis Method: EPA 504.1
QC Batch Method: EPA 504.1 Analysis Description: 504 EDB DBCP
Associated Lab Samples: 3576908001

METHOD BLANK: 524774 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.0049U	0.020	12/13/12 16:57	
1,2-Dibromoethane (EDB)	ug/L	0.0062U	0.010	12/13/12 16:57	

LABORATORY CONTROL SAMPLE & LCSD: 524775

Parameter	Units	524776								Qualifiers
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	
1,2-Dibromo-3-chloropropane	ug/L	.25	0.21	0.20	83	82	70-130	1	40	
1,2-Dibromoethane (EDB)	ug/L	.25	0.21	0.21	85	83	70-130	2	40	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524777

Parameter	Units	524778										
		3576525001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	0.0049 U	.44	.44	0.40	0.43	92	98	65-135	6	40	
1,2-Dibromoethane (EDB)	ug/L	0.0062 U	.44	.44	0.46	0.59	106	134	65-135	23	40	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: OEXT/10929 Analysis Method: EPA 508.1
QC Batch Method: EPA 508.1 Analysis Description: 508 GCS Pesticide
Associated Lab Samples: 3576908001

METHOD BLANK: 525811 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alachlor	ug/L	0.034U	0.20	12/19/12 00:21	
Atrazine	ug/L	0.021U	0.10	12/19/12 00:21	
Chlordane (Technical)	ug/L	0.047U	0.20	12/19/12 00:21	
Endrin	ug/L	0.0020U	0.010	12/19/12 00:21	
gamma-BHC (Lindane)	ug/L	0.0030U	0.020	12/19/12 00:21	
Heptachlor	ug/L	0.0060U	0.040	12/19/12 00:21	
Heptachlor epoxide	ug/L	0.0030U	0.020	12/19/12 00:21	
Hexachlorobenzene	ug/L	0.011U	0.10	12/19/12 00:21	
Hexachlorocyclopentadiene	ug/L	0.012U	0.10	12/19/12 00:21	
Methoxychlor	ug/L	0.014U	0.10	12/19/12 00:21	
PCB, Total	ug/L	0.080U	0.10	12/19/12 00:21	
PCB-1016 (Aroclor 1016)	ug/L	0.080U	0.10	12/19/12 00:21	
PCB-1221 (Aroclor 1221)	ug/L	0.029U	0.10	12/19/12 00:21	
PCB-1232 (Aroclor 1232)	ug/L	0.029U	0.10	12/19/12 00:21	
PCB-1242 (Aroclor 1242)	ug/L	0.051U	0.10	12/19/12 00:21	
PCB-1248 (Aroclor 1248)	ug/L	0.062U	0.10	12/19/12 00:21	
PCB-1254 (Aroclor 1254)	ug/L	0.023U	0.10	12/19/12 00:21	
PCB-1260 (Aroclor 1260)	ug/L	0.066U	0.10	12/19/12 00:21	
Simazine	ug/L	0.044U	0.070	12/19/12 00:21	
Toxaphene	ug/L	0.61U	1.0	12/19/12 00:21	
Decachlorobiphenyl (S)	%	93	70-130	12/19/12 00:21	

LABORATORY CONTROL SAMPLE: 525812

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alachlor	ug/L	1	1.1	112	70-130	
Atrazine	ug/L	.5	1.1	215	70-130	J(L0)
Endrin	ug/L	.05	0.057	115	70-130	
gamma-BHC (Lindane)	ug/L	.1	0.097	97	70-130	
Heptachlor	ug/L	.2	0.19	94	70-130	
Heptachlor epoxide	ug/L	.1	0.11	111	70-130	
Hexachlorobenzene	ug/L	.5	0.48	96	70-130	
Hexachlorocyclopentadiene	ug/L	.5	0.40	81	70-130	
Methoxychlor	ug/L	.5	0.69	137	70-130	J(L0)
Simazine	ug/L	.35	0.46	132	70-130	J(L0)
Decachlorobiphenyl (S)	%			94	70-130	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

Parameter	Units	3576857001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max	RPD	Qual
		Result	Conc.	Spike	Conc.	Result	Result	% Rec	% Rec								
Alachlor	ug/L	<0.032	2	2	2.1	2.2	105	108	70-130	2	40						
Atrazine	ug/L	<0.020	1	1	3.3	3.0	327	301	70-130	8	40	J(M0)					
Endrin	ug/L	<0.0019	.1	.1	0.11	0.11	105	111	70-130	5	40						
gamma-BHC (Lindane)	ug/L	<0.0029	.2	.2	0.21	0.21	106	104	70-130	2	40						
Heptachlor	ug/L	<0.0057	.4	.4	0.34	0.36	86	91	70-130	6	40						
Heptachlor epoxide	ug/L	<0.0029	.2	.2	0.21	0.22	104	109	70-130	5	40						
Hexachlorobenzene	ug/L	<0.011	1	1	0.97	0.94	97	94	70-130	4	40						
Hexachlorocyclopentadiene	ug/L	<0.011	1	1	0.91	0.82	91	82	70-130	10	40						
Methoxychlor	ug/L	<0.013	1	1	1.3	1.4	127	136	70-130	7	40	J(M0)					
Simazine	ug/L	<0.042	.7	.7	2.5	1.8	357	260	70-130	31	40	J(M0)					
Decachlorobiphenyl (S)	%						89	96	70-130		40						

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: OEXT/10915 Analysis Method: EPA 515.3
QC Batch Method: EPA 515.3 Analysis Description: 5153 GCS Herbicides
Associated Lab Samples: 3576908001

METHOD BLANK: 524978 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4,5-TP (Silvex)	ug/L	0.16U	0.20	12/20/12 01:53	
2,4-D	ug/L	0.081U	0.10	12/20/12 01:53	
Dalapon	ug/L	0.89U	1.0	12/20/12 01:53	
Dinoseb	ug/L	0.16U	0.20	12/20/12 01:53	
Pentachlorophenol	ug/L	0.030U	0.040	12/20/12 01:53	
Picloram	ug/L	0.094U	0.10	12/20/12 01:53	
2,4-DCAA (S)	%	96	70-130	12/20/12 01:53	

LABORATORY CONTROL SAMPLE: 524979

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-TP (Silvex)	ug/L	1	0.81	81	70-130	
2,4-D	ug/L	.5	0.47	94	70-130	
Dalapon	ug/L	5	4.9	99	70-130	
Dinoseb	ug/L	1	1.1	109	70-130	
Pentachlorophenol	ug/L	.2	0.15	75	70-130	
Picloram	ug/L	.5	0.82	164	70-130 J(L0)	
2,4-DCAA (S)	%			108	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525365 525366

Parameter	Units	3576865001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
2,4,5-TP (Silvex)	ug/L	0.16U	1	1	1	0.38	0.46	38	46	70-130	20	40	J(M1)
2,4-D	ug/L	0.081U	.5	.5	.5	0.20	0.24	41	48	70-130	16	40	J(M1)
Dalapon	ug/L	1.4	5	5	5	4.6	7.0	65	112	70-130	40	40	
Dinoseb	ug/L	0.16U	1	1	1	0.22	0.23	22	23	70-130	3	40	J(M1)
Pentachlorophenol	ug/L	0.030U	.2	.2	.2	0.049	0.052	24	26	70-130	8	40	J(M1)
Picloram	ug/L	0.094U	.5	.5	.5	0.52	0.72	105	144	70-130	31	40	J(M0)
2,4-DCAA (S)	%							0	0	70-130			J(S0)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525367 525368

Parameter	Units	3576908001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
2,4,5-TP (Silvex)	ug/L	0.16U	1	1	1	0.76	0.82	76	82	70-130	8	40	
2,4-D	ug/L	0.081U	.5	.5	.5	0.48	0.53	96	107	70-130	10	40	
Dalapon	ug/L	0.89U	5	5	5	5.2	5.7	105	115	70-130	9	40	

Date: 12/27/2012 12:36 PM

REPORT OF LABORATORY ANALYSIS

Page 20 of 43

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QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

Parameter	Units	3576908001		525367		525368		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Dinoseb	ug/L	0.16U	1	1	1.4	1.6	142	161	70-130	12	40	J(M1)		
Pentachlorophenol	ug/L	0.030U	.2	.2	0.16	0.17	79	86	70-130	8	40			
Picloram	ug/L	0.094U	.5	.5	0.98	1.2	195	240	70-130	21	40	J(M0)		
2,4-DCAA (S)	%						82	81	70-130					

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: OEXT/10961 Analysis Method: EPA 525.2
QC Batch Method: EPA 525.2 Analysis Description: 525.2 Base Neutral Extractables
Associated Lab Samples: 3576908001

METHOD BLANK: 527614 Matrix: Water

Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzo(a)pyrene	ug/L	0.019U	0.10	12/18/12 15:33	
bis(2-Ethylhexyl)adipate	ug/L	0.38U	1.6	12/18/12 15:33	
bis(2-Ethylhexyl)phthalate	ug/L	0.50U	2.0	12/18/12 15:33	
1,3-Dimethyl-2-nitrobenzene(S)	%	89	70-130	12/18/12 15:33	
Perylene-d12 (S)	%	118	70-130	12/18/12 15:33	
Triphenylphosphate (S)	%	91	70-130	12/18/12 15:33	

LABORATORY CONTROL SAMPLE: 527615

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzo(a)pyrene	ug/L	.4	0.52	131	70-130	J(L0)
bis(2-Ethylhexyl)adipate	ug/L	6.4	7.9	124	70-130	
bis(2-Ethylhexyl)phthalate	ug/L	8	8.0	99	70-130	
1,3-Dimethyl-2-nitrobenzene(S)	%			83	70-130	
Perylene-d12 (S)	%			121	70-130	
Triphenylphosphate (S)	%			109	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 527986 527987

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		92141457003 Result	Spike Conc.	Spike Conc.	MS Result					
Benzo(a)pyrene	ug/L	ND	.8	.8	0.95	0.94	119	118	70-130	.5 40
bis(2-Ethylhexyl)adipate	ug/L	ND	12.8	12.8	14.3	14.8	112	115	70-130	3 40
bis(2-Ethylhexyl)phthalate	ug/L	ND	16	16	15.6	16.0	97	100	70-130	2 40
1,3-Dimethyl-2-nitrobenzene(S)	%						84	88	70-130	
Perylene-d12 (S)	%						120	120	70-130	
Triphenylphosphate (S)	%						104	108	70-130	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: OEXT/10892 Analysis Method: EPA 548.1
QC Batch Method: EPA 548.1 Analysis Description: 548 GCS Endothall
Associated Lab Samples: 3576908001

METHOD BLANK: 523997 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Endothall	ug/L	2.7U	9.0	12/14/12 12:38	

LABORATORY CONTROL SAMPLE: 523998

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endothall	ug/L	50	54.6	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524713 524714

Parameter	Units	3576544001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Endothall	ug/L	2.7U	50	50	50	33.2	26.9	66	54	80-120	21	40	J(M1)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525873 525874

Parameter	Units	3576898002		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Endothall	ug/L	<2.7	50	50	50	20.1	29.9	40	60	80-120	39	40	J(M1)

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: OEXT/10895 Analysis Method: EPA 549.2
QC Batch Method: EPA 549.2 Analysis Description: 549 HPLC Paraquat Diquat
Associated Lab Samples: 3576908001

METHOD BLANK: 524020 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diquat	ug/L	0.15U	0.40	12/17/12 21:41	

LABORATORY CONTROL SAMPLE: 524021

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diquat	ug/L	2	2.3	116	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525839 525840

Parameter	Units	3576857001		525840		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Diquat	ug/L	<0.15	2	2	3.1	3.4	154	171	70-130	11	40 J(M1)

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: OEXT/10979 Analysis Method: EPA 552.2
QC Batch Method: EPA 552.2 Analysis Description: 5522 Haloacetic Acids
Associated Lab Samples: 3576908001

METHOD BLANK: 528513 Matrix: Water

Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromoacetic Acid	ug/L	0.61U	1.0	12/20/12 17:55	
Dichloroacetic Acid	ug/L	0.61U	1.0	12/20/12 17:55	
Haloacetic Acids (Total)	ug/L	0.61U	1.0	12/20/12 17:55	
Monobromoacetic Acid	ug/L	0.61U	1.0	12/20/12 17:55	
Monochloroacetic Acid	ug/L	0.61U	1.0	12/20/12 17:55	
Trichloroacetic Acid	ug/L	0.61U	1.0	12/20/12 17:55	
2,3-Dibromopropanoic Acid (S)	%	116	70-130	12/20/12 17:55	

LABORATORY CONTROL SAMPLE: 528514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromoacetic Acid	ug/L	10	8.4	84	70-130	
Dichloroacetic Acid	ug/L	10	8.7	87	70-130	
Haloacetic Acids (Total)	ug/L	50	46.0	92		
Monobromoacetic Acid	ug/L	10	9.4	94	70-130	
Monochloroacetic Acid	ug/L	10	9.5	95	70-130	
Trichloroacetic Acid	ug/L	10	10.0	100	70-130	
2,3-Dibromopropanoic Acid (S)	%			105	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 528515 528516

Parameter	Units	3577056002		MSD		MSD		% Rec		Max		Qual
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	Limits	RPD	RPD	
Dibromoacetic Acid	ug/L	4.8	10	10	18.3	20.4	134	155	70-130	11	30	J(M1)
Dichloroacetic Acid	ug/L	9.8	10	10	20.2	23.2	103	134	70-130	14	30	J(M1)
Haloacetic Acids (Total)	ug/L	25.2	50	50	87.1	95.4	124	140		9		
Monobromoacetic Acid	ug/L	0.61U	10	10	14.3	15.5	143	155	70-130	8	30	J(M1)
Monochloroacetic Acid	ug/L	1.8	10	10	10.9	10.7	91	89	70-130	2	30	
Trichloroacetic Acid	ug/L	8.7	10	10	23.5	25.5	148	168	70-130	8	30	J(M1)
2,3-Dibromopropanoic Acid (S)	%						141	172	70-130			J(S0)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 528517 528518

Parameter	Units	3577065001		MSD		MSD		% Rec		Max		Qual
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	Limits	RPD	RPD	
Dibromoacetic Acid	ug/L	1.03	10	10	12.0	14.1	120	141	70-130	16	30	J(M1)
Dichloroacetic Acid	ug/L	4.1	10	10	14.5	14.3	104	102	70-130	1	30	
Haloacetic Acids (Total)	ug/L	8.3	50	50	67.5	69.9	118	123		4		

Date: 12/27/2012 12:36 PM

REPORT OF LABORATORY ANALYSIS

Page 25 of 43

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QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

Parameter	Units	3577065001		528517		528518		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Monobromoacetic Acid	ug/L	1.03	10	10	13.8	13.2	138	132	70-130	4	30	J(M1)		
Monochloroacetic Acid	ug/L	0.80 I	10	10	11.2	10.8	104	100	70-130	3	30			
Trichloroacetic Acid	ug/L	3.4	10	10	16.1	17.5	127	141	70-130	8	30	J(M1)		
2,3-Dibromopropanoic Acid (S)	%						120	150	70-130			J(S0)		

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: SFL/6875 Analysis Method: SM 2150B
QC Batch Method: SM 2150B Analysis Description: Threshold Odor Number
Associated Lab Samples: 3576908001

METHOD BLANK: 524112 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Temperature, Water (C)	deg C	40.5		12/11/12 17:45	
Threshold Odor Number	TON	1.0U	1.0	12/11/12 17:45	

SAMPLE DUPLICATE: 524113

Parameter	Units	3576908001 Result	Dup Result	RPD	Max RPD	Qualifiers
Temperature, Water (C)	deg C	40.7	40.2	1	20	
Threshold Odor Number	TON	1.0U	1.0U		20	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: WET/16612 Analysis Method: SM 2120B
QC Batch Method: SM 2120B Analysis Description: 2120B Color
Associated Lab Samples: 3576908001

METHOD BLANK: 524730 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0U	5.0	12/12/12 09:40	

LABORATORY CONTROL SAMPLE: 524731

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 524732

Parameter	Units	3576875001 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	10.0	10.0	0	20	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: WET/16679 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 3576908001

METHOD BLANK: 527344 Matrix: Water

Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	5.0U	5.0	12/17/12 12:50	

LABORATORY CONTROL SAMPLE: 527345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	303	101	90-110	

SAMPLE DUPLICATE: 527346

Parameter	Units	3576846002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2270	2160	5	20	

SAMPLE DUPLICATE: 527347

Parameter	Units	3576887004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	982	992	1	20	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch:	WET/16698	Analysis Method:	SM 4500-H+B
QC Batch Method:	SM 4500-H+B	Analysis Description:	4500H+B pH
Associated Lab Samples:	3576908001		

SAMPLE DUPLICATE: 527999

Parameter	Units	3576866001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.7	7.7	0	20	Q
Temperature, Water (C)	deg C	25.0	25.0	0	20	Q

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: WET/16613 Analysis Method: SM 5540C
QC Batch Method: SM 5540C Analysis Description: 5540C MBAS Surfactants
Associated Lab Samples: 3576908001

METHOD BLANK: 524808 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Surfactants	mg/L	0.059U	0.20	12/12/12 14:15	

LABORATORY CONTROL SAMPLE: 524809

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Surfactants	mg/L	.3	0.30	100	90-110	

MATRIX SPIKE SAMPLE: 524811

Parameter	Units	3577001001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Surfactants	mg/L	0.11 I	.3	0.39	93	80-120	

SAMPLE DUPLICATE: 524810

Parameter	Units	3577001001 Result	Dup Result	RPD	Max RPD	Qualifiers
Surfactants	mg/L	0.11 I	0.12 I		20	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: WETA/22356 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 3576908001

METHOD BLANK: 525057 Matrix: Water

Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate as N	mg/L	0.025U	0.050	12/12/12 19:57	
Nitrite as N	mg/L	0.025U	0.050	12/12/12 19:57	

LABORATORY CONTROL SAMPLE: 525058

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	5	5.0	100	90-110	
Nitrite as N	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525059 525060

Parameter	Units	3576998001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Nitrate as N	mg/L	0.14	5	5	5.2	5.2	101	101	90-110	.1	20	
Nitrite as N	mg/L	<0.025	5	5	4.4	4.3	87	87	90-110	.4	20	J(M1)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525061 525062

Parameter	Units	3577003001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Nitrate as N	mg/L	0.025U	5	5	4.9	4.8	99	97	90-110	2	20	
Nitrite as N	mg/L	0.025U	5	5	4.7	4.8	93	96	90-110	3	20	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: WETA/22359 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 3576908001

METHOD BLANK: 525077 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	2.5U	5.0	12/12/12 13:35	
Fluoride	mg/L	0.025U	0.050	12/12/12 13:35	
Sulfate	mg/L	2.5U	5.0	12/12/12 13:35	

LABORATORY CONTROL SAMPLE: 525078

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.9	102	90-110	
Fluoride	mg/L	5	5.4	108	90-110	
Sulfate	mg/L	50	49.5	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525079 525080

Parameter	Units	3576929001		525079		525080		% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					MSD % Rec
Chloride	mg/L	119	50	50	188	190	138	141	90-110	.9	20	
Fluoride	mg/L	0.24	5	5	5.4	5.4	102	104	90-110	1	20	
Sulfate	mg/L	38.4	50	50	91.4	93.5	106	110	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525081 525082

Parameter	Units	3577007002		525081		525082		% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					MSD % Rec
Chloride	mg/L	1550	1000	1000	2670	2640	111	109	90-110	1	20 M6	
Fluoride	mg/L	0.50U	100	100	107	105	107	105	90-110	1	20	
Sulfate	mg/L	50.0U	1000	1000	1010	982	99	96	90-110	3	20	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: WETA/22480 Analysis Method: EPA 300.1
QC Batch Method: EPA 300.1 Analysis Description: 300.1 Oxihalides IC Anions
Associated Lab Samples: 3576908001

METHOD BLANK: 527888 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorite	ug/L	0.55U	5.0	12/18/12 17:30	
Dichloroacetate (S)	%	91	90-115	12/18/12 17:30	

LABORATORY CONTROL SAMPLE: 527889

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorite	ug/L	40	34.7	87	85-115	
Dichloroacetate (S)	%			94	90-115	

MATRIX SPIKE SAMPLE: 527891

Parameter	Units	3576857001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chlorite	ug/L	<2.8	200	163	82	75-125	
Dichloroacetate (S)	%				99	90-115	

MATRIX SPIKE SAMPLE: 527899

Parameter	Units	3576993006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chlorite	ug/L	<0.55	40	29.1	73	75-125	J(M1)
Dichloroacetate (S)	%				90	90-115	

SAMPLE DUPLICATE: 527890

Parameter	Units	3576857001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorite	ug/L	<2.8	2.8U		20	
Dichloroacetate (S)	%	101	102	.2		

SAMPLE DUPLICATE: 527898

Parameter	Units	3576993006 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorite	ug/L	<0.55	0.55U		20	
Dichloroacetate (S)	%	95	95	.04		

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: WETA/22481 Analysis Method: EPA 300.1
QC Batch Method: EPA 300.1 Analysis Description: 300.1 Oxihalides IC Anions
Associated Lab Samples: 3576908001

METHOD BLANK: 527892 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromate	ug/L	0.52U	2.5	12/18/12 17:30	
Dichloroacetate (S)	%	91	90-115	12/18/12 17:30	

LABORATORY CONTROL SAMPLE: 527893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromate	ug/L	20	17.1	86	85-115	
Dichloroacetate (S)	%			94	90-115	

MATRIX SPIKE SAMPLE: 527895

Parameter	Units	3576857001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromate	ug/L	<2.6	100	80.6	81	75-125	
Dichloroacetate (S)	%				99	90-115	

MATRIX SPIKE SAMPLE: 527897

Parameter	Units	3576993006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromate	ug/L	<0.52	20	14.2	71	75-125	J(M1)
Dichloroacetate (S)	%				90	90-115	

SAMPLE DUPLICATE: 527894

Parameter	Units	3576857001 Result	Dup Result	RPD	Max RPD	Qualifiers
Bromate	ug/L	<2.6	2.6U		20	
Dichloroacetate (S)	%	101	102	.2		

SAMPLE DUPLICATE: 527896

Parameter	Units	3576993006 Result	Dup Result	RPD	Max RPD	Qualifiers
Bromate	ug/L	<0.52	0.52U		20	
Dichloroacetate (S)	%	95	95	.04		

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch: WETA/22432 Analysis Method: EPA 335.4
QC Batch Method: EPA 335.4 Analysis Description: 335.4 Cyanide, Total
Associated Lab Samples: 3576908001

METHOD BLANK: 526307 Matrix: Water
Associated Lab Samples: 3576908001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	0.0050U	0.010	12/14/12 12:40	

LABORATORY CONTROL SAMPLE: 526308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.05	0.052	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 526309 526310

Parameter	Units	201044702 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	<0.0050	.05	.05	0.052	0.054	103	108	90-110	5	20	

ANALYTICAL RESULTS

Project: NPB-6
Pace Project No.: 3576908

Sample: NPB-6 **Lab ID: 3576908001** Collected: 12/11/12 09:50 Received: 12/11/12 15:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC)	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0m	1.88 ± 1.20 (1.81)	pCi/L	12/18/12 14:16	12587-46-1	
Radium-226	EPA 903.1	0.573U ± 0.435 (0.573)	pCi/L	12/24/12 09:35	13982-63-3	
Radium-228	EPA 904.0	0.653U ± 0.307 (0.653)	pCi/L	12/21/12 14:37	15262-20-1	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch:	RADC/14133	Analysis Method:	EPA 900.0m
QC Batch Method:	EPA 900.0m	Analysis Description:	900.0 Gross Alpha/Beta
Associated Lab Samples:	3576908001		

METHOD BLANK:	524778	Matrix:	Water
Associated Lab Samples:	3576908001		

Parameter	Act ± Unc (MDC)	Units	Analyzed	Qualifiers
Gross Alpha	0.247 ± 0.603 (1.39)	pCi/L	12/18/12 07:23	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch:	RADC/14157	Analysis Method:	EPA 903.1
QC Batch Method:	EPA 903.1	Analysis Description:	903.1 Radium-226
Associated Lab Samples:	3576908001		

METHOD BLANK:	525679	Matrix:	Water
Associated Lab Samples:	3576908001		

Parameter	Act ± Unc (MDC)	Units	Analyzed	Qualifiers
Radium-226	-0.013 ± 0.504 (0.988)	pCi/L	12/24/12 09:00	

QUALITY CONTROL DATA

Project: NPB-6
Pace Project No.: 3576908

QC Batch:	RADC/14145	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228
Associated Lab Samples:	3576908001		

METHOD BLANK:	524981	Matrix:	Water
Associated Lab Samples:	3576908001		

Parameter	Act ± Unc (MDC)	Units	Analyzed	Qualifiers
Radium-228	0.230 ± 0.290 (0.621)	pCi/L	12/21/12 12:06	

QUALIFIERS

Project: NPB-6
Pace Project No.: 3576908

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty

(MDC) - Minimum Detectable Concentration

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

PASI-PA Pace Analytical Services - Greensburg

PASI-SF Pace Analytical Services - South Florida

ANALYTE QUALIFIERS

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

J(D6) Estimated Value. The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

J(L0) Estimated Value. Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

J(M0) Estimated Value. Matrix spike recovery was outside laboratory control limits.

J(M1) Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

J(S0) Estimated Value. Surrogate recovery outside laboratory control limits.

L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

Q Sample held beyond the accepted holding time.

Q Sample held beyond the accepted holding time. Analysis initiated more than 15 minutes after sample collection.

V Indicates that the analyte was detected in both the sample and the associated method blank.

QUALIFIERS

Project: NPB-6
Pace Project No.: 3576908

ANALYTE QUALIFIERS

p2 Post-analysis pH measurement indicates pH > 2.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NPB-6
Pace Project No.: 3576908

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3576908001	NPB-6	EPA 504.1	OEXT/10906	EPA 504.1	GCSV/7502
3576908001	NPB-6	EPA 508.1	OEXT/10929	EPA 508.1	GCSV/7525
3576908001	NPB-6	EPA 515.3	OEXT/10915	EPA 515.3	GCSV/7504
3576908001	NPB-6	EPA 531.1	GCSV/7479		
3576908001	NPB-6	EPA 547	GCSV/7480		
3576908001	NPB-6	EPA 549.2	OEXT/10895	EPA 549.2	GCSV/7526
3576908001	NPB-6	EPA 552.2	OEXT/10979	EPA 552.2	GCSV/7542
3576908001	NPB-6	EPA 200.7	MPRP/11500	EPA 200.7	ICP/7440
3576908001	NPB-6	EPA 200.8	MPRP/11501	EPA 200.8	ICPM/4681
3576908001	NPB-6	EPA 245.1	MERP/3370	EPA 245.1	MERC/3370
3576908001	NPB-6	EPA 525.2	OEXT/10961	EPA 525.2	MSSV/4135
3576908001	NPB-6	EPA 548.1	OEXT/10892	EPA 548.1	MSSV/4105
3576908001	NPB-6	EPA 524.2	MSV/7259		
3576908001	NPB-6	EPA 524.2	MSV/7270		
3576908001	NPB-6	EPA 900.0m	RADC/14133		
3576908001	NPB-6	EPA 903.1	RADC/14157		
3576908001	NPB-6	EPA 904.0	RADC/14145		
3576908001	NPB-6	SM 2150B	SFL/6875		
3576908001	NPB-6	SM 2120B	WET/16612		
3576908001	NPB-6	SM 2540C	WET/16679		
3576908001	NPB-6	SM 4500-H+B	WET/16698		
3576908001	NPB-6	SM 5540C	WET/16613		
3576908001	NPB-6	EPA 300.0	WETA/22356		
3576908001	NPB-6	EPA 300.0	WETA/22359		
3576908001	NPB-6	EPA 300.1	WETA/22480		
3576908001	NPB-6	EPA 300.1	WETA/22481		
3576908001	NPB-6	EPA 335.4	WETA/22432	EPA 335.4	WETA/22442

Report Prepared for:

Sakina McKenzie
PASI Florida
8 East Tower Circle
Ormond Beach FL 32174

**REPORT OF
LABORATORY
ANALYSIS FOR
2,3,7,8-TCDD**

Report Summary:

This report contains results of one drinking water sample analyzed to determine 2,3,7,8-TCDD content. This sample was analyzed according to Method 1613 by High Resolution Gas Chromatography/High Resolution Mass Spectrometry.

Report Prepared Date:

December 26, 2012

Report Information:

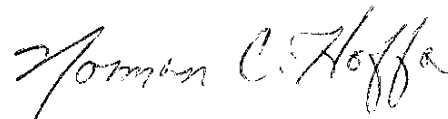
Pace Project #: 10215262
Sample Receipt Date: 12/13/2012
Client Project #: 3576908 Advanced Well
Client Sub PO #: N/A
State Cert #: E87605

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 Drinking Water Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Norman Hoffa, your Pace Project Manager.

This report has been reviewed by:



December 26, 2012

Norman Hoffa, Project Manager
(919) 596-1935
(612) 607-6444 (fax)
norm.hoffa@pacelabs.com



Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.



Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
Alabama	40770	Montana	92
Alaska	MN00064	Nebraska	
Arizona	AZ0014	Nevada	MN_00064_200
Arkansas	88-0680	New Jersey (NE)	MN002
California	01155CA	New Mexico	MN00064
Colorado	MN00064	New York (NEL)	11647
Connecticut	PH-0256	North Carolina	27700
EPA Region 5	WD-15J	North Dakota	R-036
EPA Region 8	8TMS-Q	Ohio	4150
Florida (NELAP)	E87605	Ohio VAP	CL101 9507
Georgia (DNR)	959	Oklahoma	D9922
Guam	959	Oregon (ELAP)	MN200001-005
Hawaii	SLD	Oregon (OREL)	MN300001-001
Idaho	MN00064	Pennsylvania	68-00563
Illinois	200012	Saipan	MP0003
Indiana	C-MN-01	South Carolina	74003001
Indiana	C-MN-01	Tennessee	2818
Iowa	368	Tennessee	02818
Kansas	E-10167	Texas	T104704192-08
Kentucky	90062	Utah (NELAP)	PAM
Louisiana	03086	Virginia	00251
Maine	2007029	Washington	C755
Maryland	322	West Virginia	9952C
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-Q
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

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Reporting Flags

- A = Reporting Limit based on signal to noise
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- I = Interference present
- J = Estimated value
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs
- * = See Discussion

REPORT OF LABORATORY ANALYSIS

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1128

10215262



Chain of Custody

Workorder: 3576908 Workorder Name: NPB-6 Owner Received Date: 12/11/2012 Results Requested By: 12/26/2012

Report To	Subcontract To	
Sakina Mckenzie Pace Analytical Services, Inc. 8 East Tower Circle Ormond Beach, FL 32174 Phone (386)672-5668 Fax (386)672-5668	Pace Analytical Minnesota 1700 Elm Street SE Suite 200 Minneapolis, MN 55414 Phone (612)607-1700	

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		Requested Analysis
						Unpreserved	Preserved	
1	NPB-6	PS	12/11/2012 09:50	3576908001	Water	1		
2								
3								
4								
5								

Quinn

Transfers	Released By	Date/Time	Received By	Date/Time
1			JN <i>Pace</i>	12/13/12/950
2				
3				


Cooler Temperature on Receipt	Z, 5°C	Custody Seal	<input checked="" type="radio"/> Y or <input type="radio"/> N	Received on Ice	<input checked="" type="radio"/> Y or <input type="radio"/> N	Samples Intact	<input checked="" type="radio"/> Y or <input type="radio"/> N
-------------------------------	--------	--------------	---	-----------------	---	----------------	---

Comments

Sample Condition Upon Receipt

Client Name: Pace FL

Project #: **WO#: 10215262**



Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____

Tracking Number: 4961 5133 0182

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No Optional: Proj. Due Date: _____ Proj. Name: _____

Packing Material: Bubble Wrap Bubble Bags None Other: _____ Temp Blank? Yes No

Thermometer Used: B88A912167504 80512447 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temp Read (°C): 2.0 Cooler Temp Corrected (°C): 2.5 Biological Tissue Frozen? Yes No
 Temp should be above freezing to 6°C Date and Initials of Person Examining Contents: 12/13/12 TN

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name and/or Signature on COC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.	
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>			
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13. All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.	<input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Sample # _____ Initial when completed: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: Sakina

Date/Time: 12/13/12

Comments/Resolution: _____

DW sample.

Project Manager Review: _____

Date: 12/13/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)



Drinking Water Analysis Results
2,3,7,8-TCDD -- USEPA Method 1613B

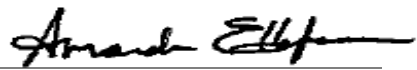
Tel: 612-607-1700
 Fax: 612-607-6444

Sample ID.....NPB-6
 Client..... PASI Florida
 Lab Sample ID..... 3576908001

Date Collected.....12/11/2012
 Date Received.....12/13/2012
 Date Extracted.....12/19/2012

	Sample NPB-6	Method Blank	Lab Spike	Lab Spike Dup
[2,3,7,8-TCDD]	ND	ND	--	--
RL	1.8 pg/L	2.5 pg/L	--	--
2,3,7,8-TCDD Recovery	--	--	105%	101%
Spike Recovery Limit	--	--	73-146%	73-146%
RPD			4.2%	
IS Recovery	81%	83%	81%	80%
IS Recovery Limits	31-137%	31-137%	25-141%	25-141%
CS Recovery	83%	88%	88%	84%
CS Recovery Limits	42-164%	42-164%	37-158%	37-158%
Filename	R121221A_17	R121221A_10	R121221A_07	R121221A_08
Analysis Date	12/21/2012	12/21/2012	12/21/2012	12/21/2012
Analysis Time	19:57	15:59	14:18	14:51
Analyst	ACE	ACE	ACE	ACE
Volume	1.025L	1.018L	1.022L	1.025L
Dilution	NA	NA	NA	NA
ICAL Date	04/24/2012	04/24/2012	04/24/2012	04/24/2012
CCAL Filename	R121221A_05	R121221A_05	R121221A_05	R121221A_05

- ! = Outside the Control Limits
- ND = Not Detected
- RL = Reporting Limit
- Limits = Control Limits from Method 1613 (10/94 Revision), Tables 6A and 7A
- RPD = Relative Percent Difference of Lab Spike Recoveries
- IS = Internal Standard [2,3,7,8-TCDD-¹³C₁₂]
- CS = Cleanup Standard [2,3,7,8-TCDD-³⁷Cl₄]

Analyst: 

January 10, 2013

Mo Rahgozar
Advanced Well Drilling
2715 Garden Street
Malabar, FL 32950

RE: Project: Burma #22
Pace Project No.: 3577013

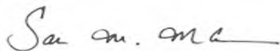
Dear Mo Rahgozar:

Enclosed are the analytical results for sample(s) received by the laboratory on December 12, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Sakina McKenzie

sakina.mckenzie@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Burma #22

Pace Project No.: 3577013

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4 Greensburg, PA 15601
ACCLASS DOD-ELAP Accreditation #: ADE-1544
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California/TNI Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Guam/PADEP Certification
Hawaii/PADEP Certification
Idaho Certification
Illinois/PADEP Certification
Indiana/PADEP Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana/TNI Certification #: LA080002
Louisiana/TNI Certification #: 4086
Maine Certification #: PA0091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nevada Certification
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188
Utah/TNI Certification #: ANTE
Virgin Island/PADEP Certification
Virginia Certification #: 00112
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia Certification #: 143
Wisconsin/PADEP Certification
Wyoming Certification #: 8TMS-Q

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236

Montana Certification #: Cert 0074
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pace Analytical Services - Ormond certification number
E83509
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

South Florida Certification IDs

3610 Park Central Blvd N Pompano Beach, FL 33064
Pace Analytical Services - Pompano certification number
E96080

Florida Certification #: E86240

REPORT OF LABORATORY ANALYSIS

SAMPLE SUMMARY

Project: Burma #22

Pace Project No.: 3577013

Lab ID	Sample ID	Matrix	Date Collected	Date Received
3577013001	Burma #22	Water	12/12/12 09:40	12/12/12 12:10

REPORT OF LABORATORY ANALYSIS

SAMPLE ANALYTE COUNT

Project: Burma #22
Pace Project No.: 3577013

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3577013001	Burma #22	EPA 504.1	JLR	2	PASI-O
		EPA 508.1	JTT	21	PASI-O
		EPA 515.3	LJM	7	PASI-O
		EPA 531.1	WFH	3	PASI-O
		EPA 547	WFH	1	PASI-O
		EPA 549.2	WFH	1	PASI-O
		EPA 552.2	JLR	7	PASI-O
		EPA 200.7	JTJ	10	PASI-O
		EPA 200.8	DRS	7	PASI-O
		EPA 245.1	HEA	1	PASI-O
		EPA 525.2	WFH	6	PASI-O
		EPA 548.1	EAO	1	PASI-O
		EPA 524.2	JBH	25	PASI-O
		EPA 524.2	JBH	9	PASI-O
		EPA 900.0m	JC2	1	PASI-PA
		EPA 903.1	SLA	1	PASI-PA
		EPA 904.0	MAW	1	PASI-PA
		SM 2150B	LCM	2	PASI-SF
		SM 9222B	KMR	1	PASI-SF
		SM 2120B	KHC	1	PASI-O
		SM 2540C	AGS	1	PASI-O
		SM 4500-CIO2	IRL	1	PASI-O
		SM 4500-H+B	MMD	2	PASI-O
		SM 5540C	KDM	1	PASI-O
		EPA 300.0	IRL	2	PASI-O
		EPA 300.0	IRL	3	PASI-O
		EPA 335.4	SOA	1	PASI-O

REPORT OF LABORATORY ANALYSIS

ANALYTICAL RESULTS

Project: Burma #22
Pace Project No.: 3577013

Sample: Burma #22 **Lab ID: 3577013001** Collected: 12/12/12 09:40 Received: 12/12/12 12:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504.1 GCS EDB and DBCP Analytical Method: EPA 504.1 Preparation Method: EPA 504.1									
1,2-Dibromo-3-chloropropane	0.0050U	ug/L	0.020	0.0050	1	12/18/12 10:00	12/18/12 20:02	96-12-8	
1,2-Dibromoethane (EDB)	0.0063U	ug/L	0.010	0.0063	1	12/18/12 10:00	12/18/12 20:02	106-93-4	
508.1 GCS Pesticides Analytical Method: EPA 508.1 Preparation Method: EPA 508.1									
Alachlor	0.034U	ug/L	0.20	0.034	1	12/14/12 12:45	12/17/12 09:43	15972-60-8	
Atrazine	0.021U	ug/L	0.099	0.021	1	12/14/12 12:45	12/17/12 09:43	1912-24-9	L3
gamma-BHC (Lindane)	0.0030U	ug/L	0.020	0.0030	1	12/14/12 12:45	12/17/12 09:43	58-89-9	
Chlordane (Technical)	0.046U	ug/L	0.20	0.046	1	12/14/12 12:45	12/17/12 09:43	57-74-9	
Endrin	0.0020U	ug/L	0.0099	0.0020	1	12/14/12 12:45	12/17/12 09:43	72-20-8	
Heptachlor	0.0059U	ug/L	0.039	0.0059	1	12/14/12 12:45	12/17/12 09:43	76-44-8	
Heptachlor epoxide	0.0030U	ug/L	0.020	0.0030	1	12/14/12 12:45	12/17/12 09:43	1024-57-3	
Hexachlorobenzene	0.011U	ug/L	0.099	0.011	1	12/14/12 12:45	12/17/12 09:43	118-74-1	
Hexachlorocyclopentadiene	0.012U	ug/L	0.099	0.012	1	12/14/12 12:45	12/17/12 09:43	77-47-4	
Methoxychlor	0.014U	ug/L	0.099	0.014	1	12/14/12 12:45	12/17/12 09:43	72-43-5	
PCB-1016 (Aroclor 1016)	0.079U	ug/L	0.099	0.079	1	12/14/12 12:45	12/17/12 09:43	12674-11-2	
PCB-1221 (Aroclor 1221)	0.029U	ug/L	0.099	0.029	1	12/14/12 12:45	12/17/12 09:43	11104-28-2	
PCB-1232 (Aroclor 1232)	0.029U	ug/L	0.099	0.029	1	12/14/12 12:45	12/17/12 09:43	11141-16-5	
PCB-1242 (Aroclor 1242)	0.050U	ug/L	0.099	0.050	1	12/14/12 12:45	12/17/12 09:43	53469-21-9	
PCB-1248 (Aroclor 1248)	0.061U	ug/L	0.099	0.061	1	12/14/12 12:45	12/17/12 09:43	12672-29-6	
PCB-1254 (Aroclor 1254)	0.023U	ug/L	0.099	0.023	1	12/14/12 12:45	12/17/12 09:43	11097-69-1	
PCB-1260 (Aroclor 1260)	0.065U	ug/L	0.099	0.065	1	12/14/12 12:45	12/17/12 09:43	11096-82-5	
PCB, Total	0.079U	ug/L	0.099	0.079	1	12/14/12 12:45	12/17/12 09:43	1336-36-3	
Simazine	0.043U	ug/L	0.069	0.043	1	12/14/12 12:45	12/17/12 09:43	122-34-9	L3
Toxaphene	0.60U	ug/L	0.99	0.60	1	12/14/12 12:45	12/17/12 09:43	8001-35-2	
Surrogates									
Decachlorobiphenyl (S)	80 %		70-130		1	12/14/12 12:45	12/17/12 09:43	2051-24-3	
515.3 Chlorinated Herbicides Analytical Method: EPA 515.3 Preparation Method: EPA 515.3									
2,4-D	0.081U	ug/L	0.10	0.081	1	12/13/12 08:15	12/20/12 16:53	94-75-7	
Dalapon	0.89U	ug/L	1.0	0.89	1	12/13/12 08:15	12/20/12 16:53	75-99-0	
Dinoseb	0.16U	ug/L	0.20	0.16	1	12/13/12 08:15	12/20/12 16:53	88-85-7	
Pentachlorophenol	0.030U	ug/L	0.040	0.030	1	12/13/12 08:15	12/20/12 16:53	87-86-5	
Picloram	0.094U	ug/L	0.10	0.094	1	12/13/12 08:15	12/20/12 16:53	1918-02-1	L3
2,4,5-TP (Silvex)	0.16U	ug/L	0.20	0.16	1	12/13/12 08:15	12/20/12 16:53	93-72-1	
Surrogates									
2,4-DCAA (S)	91 %		70-130		1	12/13/12 08:15	12/20/12 16:53	19719-28-9	
531.1 HPLC Carbamates Analytical Method: EPA 531.1									
Carbofuran	0.32U	ug/L	2.0	0.32	1		12/20/12 22:43	1563-66-2	L3
Oxamyl	0.41U	ug/L	2.0	0.41	1		12/20/12 22:43	23135-22-0	L3
Surrogates									
Propoxur (S)	124 %		80-120		1		12/20/12 22:43	114-26-1	S3
547 HPLC Glyphosate Analytical Method: EPA 547									
Glyphosate	2.1U	ug/L	6.0	2.1	1		12/18/12 17:38		

ANALYTICAL RESULTS

Project: Burma #22
Pace Project No.: 3577013

Sample: Burma #22 Lab ID: 3577013001 Collected: 12/12/12 09:40 Received: 12/12/12 12:10 Matrix: Water									
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
549.2 HPLC Paraquat Diquat Analytical Method: EPA 549.2 Preparation Method: EPA 549.2									
Diquat	0.15U	ug/L	0.40	0.15	1	12/19/12 13:30	12/19/12 17:49	85-00-7	
552.2 Haloacetic Acids Analytical Method: EPA 552.2 Preparation Method: EPA 552.2									
Dibromoacetic Acid	0.61U	ug/L	1.0	0.61	1	12/19/12 10:30	12/21/12 06:01	631-64-1	
Dichloroacetic Acid	0.61U	ug/L	1.0	0.61	1	12/19/12 10:30	12/21/12 06:01	79-43-6	
Haloacetic Acids (Total)	0.61U	ug/L	1.0	0.61	1	12/19/12 10:30	12/21/12 06:01		
Monobromoacetic Acid	0.61U	ug/L	1.0	0.61	1	12/19/12 10:30	12/21/12 06:01	79-08-3	
Monochloroacetic Acid	0.61U	ug/L	1.0	0.61	1	12/19/12 10:30	12/21/12 06:01	79-11-8	
Trichloroacetic Acid	0.61U	ug/L	1.0	0.61	1	12/19/12 10:30	12/21/12 06:01	76-03-9	
Surrogates									
2,3-Dibromopropanoic Acid (S)	132	%	70-130		1	12/19/12 10:30	12/21/12 06:01	600-05-5	S3
200.7 MET ICP Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Barium	0.0065	I mg/L	0.010	0.0050	1	12/13/12 10:38	12/15/12 05:19	7440-39-3	
Beryllium	0.00050U	mg/L	0.0010	0.00050	1	12/13/12 10:38	12/15/12 05:19	7440-41-7	
Cadmium	0.00050U	mg/L	0.0010	0.00050	1	12/13/12 10:38	12/15/12 05:19	7440-43-9	
Chromium	0.0025U	mg/L	0.0050	0.0025	1	12/13/12 10:38	12/15/12 05:19	7440-47-3	
Iron	0.020U	mg/L	0.040	0.020	1	12/13/12 10:38	12/15/12 05:19	7439-89-6	
Manganese	0.0051	mg/L	0.0050	0.0025	1	12/13/12 10:38	12/15/12 05:19	7439-96-5	
Nickel	0.0025U	mg/L	0.0050	0.0025	1	12/13/12 10:38	12/15/12 05:19	7440-02-0	
Silver	0.0025U	mg/L	0.0050	0.0025	1	12/13/12 10:38	12/15/12 05:19	7440-22-4	
Sodium	53.6	mg/L	1.0	0.50	1	12/13/12 10:38	12/15/12 05:19	7440-23-5	
Zinc	0.010U	mg/L	0.020	0.010	1	12/13/12 10:38	12/15/12 05:19	7440-66-6	
200.8 MET ICPMS Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Aluminum	0.0058U	mg/L	0.010	0.0058	1	12/13/12 10:38	12/14/12 10:38	7429-90-5	
Antimony	0.00050U	mg/L	0.0010	0.00050	1	12/13/12 10:38	12/14/12 10:38	7440-36-0	
Arsenic	0.00050U	mg/L	0.0010	0.00050	1	12/13/12 10:38	12/14/12 10:38	7440-38-2	
Copper	0.00093U	mg/L	0.0010	0.00093	1	12/13/12 10:38	12/14/12 10:38	7440-50-8	
Lead	0.00050U	mg/L	0.0010	0.00050	1	12/13/12 10:38	12/14/12 10:38	7439-92-1	
Selenium	0.00050U	mg/L	0.0010	0.00050	1	12/13/12 10:38	12/14/12 10:38	7782-49-2	
Thallium	0.00050U	mg/L	0.0010	0.00050	1	12/13/12 10:38	12/14/12 10:38	7440-28-0	
245.1 Mercury Analytical Method: EPA 245.1 Preparation Method: EPA 245.1									
Mercury	0.00010U	mg/L	0.00020	0.00010	1	12/13/12 14:50	12/14/12 10:56	7439-97-6	
525.2 Base Neutral Extractable Analytical Method: EPA 525.2 Preparation Method: EPA 525.2									
Benzo(a)pyrene	0.018U	ug/L	0.097	0.018	1	12/20/12 07:45	12/20/12 23:44	50-32-8	
bis(2-Ethylhexyl)adipate	0.37U	ug/L	1.6	0.37	1	12/20/12 07:45	12/20/12 23:44	103-23-1	
bis(2-Ethylhexyl)phthalate	0.49U	ug/L	1.9	0.49	1	12/20/12 07:45	12/20/12 23:44	117-81-7	
Surrogates									
1,3-Dimethyl-2-nitrobenzene(S)	93	%	70-130		1	12/20/12 07:45	12/20/12 23:44	81209	
Perylene-d12 (S)	134	%	70-130		1	12/20/12 07:45	12/20/12 23:44	1520963	S3
Triphenylphosphate (S)	110	%	70-130		1	12/20/12 07:45	12/20/12 23:44	115-86-6	

ANALYTICAL RESULTS

Project: Burma #22
Pace Project No.: 3577013

Sample: Burma #22 **Lab ID: 3577013001** Collected: 12/12/12 09:40 Received: 12/12/12 12:10 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
548.1 GCS Endothall									
Analytical Method: EPA 548.1 Preparation Method: EPA 548.1									
Endothall	2.7U	ug/L	9.0	2.7	1	12/19/12 16:00	12/20/12 12:31		J(L2)
524.2 MSV									
Analytical Method: EPA 524.2									
Benzene	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	71-43-2	
Carbon tetrachloride	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	56-23-5	
Chlorobenzene	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	108-90-7	
1,2-Dichlorobenzene	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	95-50-1	
1,4-Dichlorobenzene	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	106-46-7	
1,2-Dichloroethane	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	107-06-2	
1,1-Dichloroethene	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	75-35-4	
cis-1,2-Dichloroethene	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	156-59-2	
trans-1,2-Dichloroethene	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	156-60-5	
1,2-Dichloropropane	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	78-87-5	
Ethylbenzene	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	100-41-4	
Methylene Chloride	0.44U	ug/L	0.50	0.44	1		12/13/12 12:51	75-09-2	
Styrene	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	100-42-5	
Tetrachloroethene	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	127-18-4	
Toluene	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	108-88-3	
1,2,4-Trichlorobenzene	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	120-82-1	
1,1,1-Trichloroethane	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	71-55-6	
1,1,2-Trichloroethane	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	79-00-5	
Trichloroethene	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	79-01-6	
Vinyl chloride	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	75-01-4	
Xylene (Total)	0.25U	ug/L	0.50	0.25	1		12/13/12 12:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	86 %		70-130		1		12/13/12 12:51	460-00-4	
Dibromofluoromethane (S)	100 %		70-130		1		12/13/12 12:51	1868-53-7	
Toluene-d8 (S)	98 %		70-130		1		12/13/12 12:51	2037-26-5	
1,2-Dichloroethane-d4 (S)	96 %		70-130		1		12/13/12 12:51	17060-07-0	
524.2 THM									
Analytical Method: EPA 524.2									
Bromodichloromethane	0.25U	ug/L	0.50	0.25	1		12/13/12 16:35	75-27-4	
Bromoform	0.25U	ug/L	0.50	0.25	1		12/13/12 16:35	75-25-2	
Chloroform	0.25U	ug/L	0.50	0.25	1		12/13/12 16:35	67-66-3	
Dibromochloromethane	0.25U	ug/L	0.50	0.25	1		12/13/12 16:35	124-48-1	
Total Trihalomethanes (Calc.)	0.25U	ug/L	0.50	0.25	1		12/13/12 16:35		
Surrogates									
4-Bromofluorobenzene (S)	93 %		70-130		1		12/13/12 16:35	460-00-4	
Dibromofluoromethane (S)	99 %		70-130		1		12/13/12 16:35	1868-53-7	
Toluene-d8 (S)	100 %		70-130		1		12/13/12 16:35	2037-26-5	
1,2-Dichloroethane-d4 (S)	111 %		70-130		1		12/13/12 16:35	17060-07-0	
2150B Threshold Odor Number									
Analytical Method: SM 2150B									
Temperature, Water (C)	40.3	deg C			1		12/12/12 18:30		
Threshold Odor Number	10.0	TON	1.0	1.0	1		12/12/12 18:30		

ANALYTICAL RESULTS

Project: Burma #22
Pace Project No.: 3577013

Sample: Burma #22 Lab ID: 3577013001 Collected: 12/12/12 09:40 Received: 12/12/12 12:10 Matrix: Water									
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9222B Total Coliform MF Analytical Method: SM 9222B									
Total Coliforms	4.0U	CFU/100 mL	4.0	4.0	2		12/08/12 15:35		
2120B Apparent Color Analytical Method: SM 2120B									
Apparent Color	25.0	units	5.0	5.0	1		12/13/12 08:30		
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	442	mg/L	5.0	5.0	1		12/14/12 13:22		
4500CIO2 Chlorine Dioxide Analytical Method: SM 4500-CIO2									
Chlorine Dioxide	0.070 I	mg/L	0.10	0.067	1		12/20/12 16:00		Q
4500H+ pH, Electrometric Analytical Method: SM 4500-H+B									
Temperature, Water (C)	24.0	deg C	0.010	0.010	1		12/20/12 16:50		Q
pH at 25 Degrees C	7.5	Std. Units	0.10	0.10	1		12/20/12 16:50		Q
5540C MBAS Surfactants Analytical Method: SM 5540C									
Surfactants	0.059U	mg/L	0.20	0.059	1		12/13/12 11:06		
300.0 IC Anions Analytical Method: EPA 300.0									
Nitrate as N	0.025U	mg/L	0.050	0.025	1		12/13/12 10:03	14797-55-8	Q
Nitrite as N	0.025U	mg/L	0.050	0.025	1		12/13/12 10:03	14797-65-0	J(M1),Q
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	81.3	mg/L	5.0	2.5	1		12/13/12 10:03	16887-00-6	J(M1)
Fluoride	0.30	mg/L	0.050	0.025	1		12/13/12 10:03	16984-48-8	
Sulfate	7.5	mg/L	5.0	2.5	1		12/13/12 10:03	14808-79-8	J(M1)
335.4 Cyanide, Total Analytical Method: EPA 335.4 Preparation Method: EPA 335.4									
Cyanide	0.0050U	mg/L	0.010	0.0050	1	12/14/12 09:20	12/14/12 12:50	57-12-5	

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: GCSV/7540 Analysis Method: EPA 531.1
QC Batch Method: EPA 531.1 Analysis Description: 531.1 HPLC Carbamate
Associated Lab Samples: 3577013001

METHOD BLANK: 529172 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Carbofuran	ug/L	0.32U	2.0	12/20/12 12:22	
Oxamyl	ug/L	0.41U	2.0	12/20/12 12:22	
Propoxur (S)	%	116	80-120	12/20/12 12:22	

LABORATORY CONTROL SAMPLE: 529173

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbofuran	ug/L	10	13.4	134	80-120 J(L0)	
Oxamyl	ug/L	10	12.6	126	80-120 J(L0)	
Propoxur (S)	%			133	80-120 J(S0)	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 529174 529175

Parameter	Units	3577328001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Carbofuran	ug/L	0.32U	10	10	13.0	13.2	130	132	80-120	2	20	J(M0)
Oxamyl	ug/L	0.41U	10	10	14.6	11.2	146	112	80-120	27	20	J(D6), J(M0)
Propoxur (S)	%						130	130	80-120			J(S0)

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: GCSV/7510 Analysis Method: EPA 547
QC Batch Method: EPA 547 Analysis Description: 547 HPLC Glyphosate
Associated Lab Samples: 3577013001

METHOD BLANK: 526466 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Glyphosate	ug/L	2.1U	6.0	12/17/12 14:06	

LABORATORY CONTROL SAMPLE: 526467

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Glyphosate	ug/L	50	52.0	104	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 526468 526469

Parameter	Units	3577265001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Glyphosate	ug/L	2.1U	50	50	50	53.8	49.2	108	98	70-130	9	30

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 526470 526471

Parameter	Units	3577148001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Glyphosate	ug/L	2.1U	50	50	50	49.4	48.8	99	98	70-130	1	30

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: MERP/3374 Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury
Associated Lab Samples: 3577013001

METHOD BLANK: 525696 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	0.00010U	0.00020	12/14/12 10:10	

LABORATORY CONTROL SAMPLE: 525697

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.002	0.0020	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525698 525699

Parameter	Units	201044702 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits		
Mercury	mg/L	<0.10 ug/L	.002	.002	0.0019	0.0019	96	94	70-130	3	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525700 525701

Parameter	Units	3576999001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits		
Mercury	mg/L	ND	.002	.002	0.0018	0.0019	92	94	70-130	2	20

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: MPRP/11519 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 MET
Associated Lab Samples: 3577013001

METHOD BLANK: 525415 Matrix: Water

Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	0.0050U	0.010	12/15/12 04:02	
Beryllium	mg/L	0.00050U	0.0010	12/15/12 04:02	
Cadmium	mg/L	0.00050U	0.0010	12/15/12 04:02	
Chromium	mg/L	0.0025U	0.0050	12/15/12 04:02	
Iron	mg/L	0.020U	0.040	12/15/12 04:02	
Manganese	mg/L	0.0025U	0.0050	12/15/12 04:02	
Nickel	mg/L	0.0025U	0.0050	12/15/12 04:02	
Silver	mg/L	0.0025U	0.0050	12/15/12 04:02	
Sodium	mg/L	0.50U	1.0	12/15/12 04:02	
Zinc	mg/L	0.010U	0.020	12/15/12 04:02	

LABORATORY CONTROL SAMPLE: 525416

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	.25	0.25	101	85-115	
Beryllium	mg/L	.025	0.025	102	85-115	
Cadmium	mg/L	.025	0.026	104	85-115	
Chromium	mg/L	.25	0.26	103	85-115	
Iron	mg/L	2.5	2.5	99	85-115	
Manganese	mg/L	.25	0.26	103	85-115	
Nickel	mg/L	.25	0.26	103	85-115	
Silver	mg/L	.025	0.025	100	85-115	
Sodium	mg/L	12.5	12.9	103	85-115	
Zinc	mg/L	1.2	1.3	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525419 525420

Parameter	Units	3577128003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/L	0.000015	.25	.25	0.015	0.015	.01	-.05	70-130	1	20	J(M1)
Beryllium	mg/L	0.0000050U	.025	.025	0.00050U	0.00050U	.07	-.02	70-130		20	J(M1)
Cadmium	mg/L	0.0000050U	.025	.025	0.00050U	0.00050U	.4	.2	70-130		20	J(M1)
Chromium	mg/L	0.0000025U	.25	.25	0.0025U	0.0025U	0	0	70-130		20	J(M1)

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525419												525420	
Parameter	Units	3577128003 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	RPD	RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits				
Iron	mg/L	0.00002 0U	2.5	2.5	0.020U	0.020U	-0.8	-0.5	70-130	20			J(M1)
Manganese	mg/L	0.00000 25U mg/mL	.25	.25	0.0025U	0.0025U	0	0	70-130	20			J(M1)
Nickel	mg/L	0.00000 25U mg/mL	.25	.25	0.0025U	0.0025U	0	0	70-130	20			J(M1)
Silver	mg/L	0.00000 25U mg/mL	.025	.025	0.0025U	0.0025U	0	2	70-130	20			J(M1)
Sodium	mg/L	0.94 mg/mL	12.5	12.5	933	919	-18	-130	70-130	2			M6
Zinc	mg/L	0.00001 0U mg/mL	1.2	1.2	0.010U	0.010U	.04	.01	70-130	20			J(M1)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525421												525422	
Parameter	Units	3577003001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	RPD	RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits				
Barium	mg/L	5.4 l ug/L	.25	.25	0.28	0.28	109	109	70-130	.5			20
Beryllium	mg/L	0.50U ug/L	.025	.025	0.027	0.027	108	107	70-130	.9			20
Cadmium	mg/L	0.50U ug/L	.025	.025	0.028	0.027	110	107	70-130	3			20
Chromium	mg/L	2.5U ug/L	.25	.25	0.27	0.27	109	108	70-130	.7			20
Iron	mg/L	87.7 ug/L	2.5	2.5	2.8	2.7	107	104	70-130	3			20
Manganese	mg/L	14.9 ug/L	.25	.25	0.29	0.29	109	108	70-130	1			20
Nickel	mg/L	2.5U ug/L	.25	.25	0.27	0.27	110	107	70-130	3			20
Silver	mg/L	2.5U ug/L	.025	.025	0.027	0.027	106	106	70-130	.4			20
Sodium	mg/L	2190 ug/L	12.5	12.5	16.6	16.3	115	113	70-130	2			20
Zinc	mg/L	10.0U ug/L	1.2	1.2	1.4	1.4	110	108	70-130	2			20

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: MPRP/11520 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
Associated Lab Samples: 3577013001

METHOD BLANK: 525423 Matrix: Water

Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	mg/L	0.0058U	0.010	12/14/12 10:03	
Antimony	mg/L	0.00050U	0.0010	12/14/12 10:03	
Arsenic	mg/L	0.00050U	0.0010	12/14/12 10:03	
Copper	mg/L	0.00093U	0.0010	12/14/12 10:03	
Lead	mg/L	0.00050U	0.0010	12/14/12 10:03	
Selenium	mg/L	0.00050U	0.0010	12/14/12 10:03	
Thallium	mg/L	0.00050U	0.0010	12/14/12 10:03	

LABORATORY CONTROL SAMPLE: 525424

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	.5	0.51	103	85-115	
Antimony	mg/L	.05	0.048	96	85-115	
Arsenic	mg/L	.05	0.052	103	85-115	
Copper	mg/L	.05	0.053	105	85-115	
Lead	mg/L	.05	0.048	95	85-115	
Selenium	mg/L	.05	0.052	104	85-115	
Thallium	mg/L	.05	0.048	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525425 525426

Parameter	Units	3577003001		MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result						
Aluminum	mg/L	81.2 ug/L	.5	.5	0.58	0.60	100	105	70-130	4	20		
Antimony	mg/L	0.50U ug/L	.05	.05	0.049	0.050	98	99	70-130	.5	20		
Arsenic	mg/L	0.84 I ug/L	.05	.05	0.053	0.053	104	105	70-130	.6	20		
Copper	mg/L	0.93U ug/L	.05	.05	0.055	0.056	108	111	70-130	3	20		
Lead	mg/L	0.70 I ug/L	.05	.05	0.050	0.051	99	101	70-130	2	20		
Selenium	mg/L	0.50U ug/L	.05	.05	0.054	0.052	108	105	70-130	3	20		
Thallium	mg/L	0.50U ug/L	.05	.05	0.051	0.051	101	103	70-130	1	20		

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: MSV/7269 Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2 Analysis Description: 524.2 MSV
Associated Lab Samples: 3577013001

METHOD BLANK: 526430 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	0.25U	0.50	12/13/12 11:03	
1,1,2-Trichloroethane	ug/L	0.25U	0.50	12/13/12 11:03	
1,1-Dichloroethene	ug/L	0.25U	0.50	12/13/12 11:03	
1,2,4-Trichlorobenzene	ug/L	0.25U	0.50	12/13/12 11:03	
1,2-Dichlorobenzene	ug/L	0.25U	0.50	12/13/12 11:03	
1,2-Dichloroethane	ug/L	0.25U	0.50	12/13/12 11:03	
1,2-Dichloropropane	ug/L	0.25U	0.50	12/13/12 11:03	
1,4-Dichlorobenzene	ug/L	0.25U	0.50	12/13/12 11:03	
Benzene	ug/L	0.25U	0.50	12/13/12 11:03	
Carbon tetrachloride	ug/L	0.25U	0.50	12/13/12 11:03	
Chlorobenzene	ug/L	0.25U	0.50	12/13/12 11:03	
cis-1,2-Dichloroethene	ug/L	0.25U	0.50	12/13/12 11:03	
Ethylbenzene	ug/L	0.25U	0.50	12/13/12 11:03	
Methylene Chloride	ug/L	0.44U	0.50	12/13/12 11:03	
Styrene	ug/L	0.25U	0.50	12/13/12 11:03	
Tetrachloroethene	ug/L	0.25U	0.50	12/13/12 11:03	
Toluene	ug/L	0.25U	0.50	12/13/12 11:03	
trans-1,2-Dichloroethene	ug/L	0.25U	0.50	12/13/12 11:03	
Trichloroethene	ug/L	0.25U	0.50	12/13/12 11:03	
Vinyl chloride	ug/L	0.25U	0.50	12/13/12 11:03	
Xylene (Total)	ug/L	0.25U	0.50	12/13/12 11:03	
1,2-Dichloroethane-d4 (S)	%	99	70-130	12/13/12 11:03	
4-Bromofluorobenzene (S)	%	92	70-130	12/13/12 11:03	
Dibromofluoromethane (S)	%	101	70-130	12/13/12 11:03	
Toluene-d8 (S)	%	98	70-130	12/13/12 11:03	

LABORATORY CONTROL SAMPLE & LCSD: 525501

525502

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	5	5.6	6.1	111	122	70-130	9	40	
1,1,2-Trichloroethane	ug/L	5	5.4	5.6	108	112	70-130	4	40	
1,1-Dichloroethene	ug/L	5	5.7	6.0	114	121	70-130	6	40	
1,2,4-Trichlorobenzene	ug/L	5	5.4	5.6	108	111	70-130	3	40	
1,2-Dichlorobenzene	ug/L	5	5.7	6.1	115	122	70-130	6	40	
1,2-Dichloroethane	ug/L	5	5.6	5.7	112	113	70-130	.8	40	
1,2-Dichloropropane	ug/L	5	5.6	5.6	112	111	70-130	.4	40	
1,4-Dichlorobenzene	ug/L	5	5.9	6.2	117	124	70-130	5	40	
Benzene	ug/L	5	5.4	5.7	108	114	70-130	5	40	
Carbon tetrachloride	ug/L	5	5.6	6.3	113	127	70-130	12	40	
Chlorobenzene	ug/L	5	5.8	5.8	115	117	70-130	1	40	
cis-1,2-Dichloroethene	ug/L	5	5.6	5.6	112	112	70-130	.4	40	

Date: 01/10/2013 12:08 PM

REPORT OF LABORATORY ANALYSIS

Page 15 of 43

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QUALITY CONTROL DATA

Project: Burma #22

Pace Project No.: 3577013

LABORATORY CONTROL SAMPLE & LCSD: 525501		525502									
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Ethylbenzene	ug/L	5	5.8	5.8	115	116	70-130	.5	40		
Methylene Chloride	ug/L	5	5.1	5.1	103	102	70-130	.4	40		
Styrene	ug/L	5	5.8	5.6	117	112	70-130	4	40		
Tetrachloroethene	ug/L	5	5.7	6.0	114	119	70-130	5	40		
Toluene	ug/L	5	5.6	5.8	112	116	70-130	3	40		
trans-1,2-Dichloroethene	ug/L	5	5.4	5.7	109	113	70-130	4	40		
Trichloroethene	ug/L	5	5.7	6.0	114	120	70-130	6	40		
Vinyl chloride	ug/L	5	5.4	5.0	109	100	70-130	8	40		
Xylene (Total)	ug/L	15	17.5	17.2	117	115	70-130	2	40		
1,2-Dichloroethane-d4 (S)	%				97	95	70-130				
4-Bromofluorobenzene (S)	%				94	93	70-130				
Dibromofluoromethane (S)	%				101	100	70-130				
Toluene-d8 (S)	%				100	98	70-130				

QUALITY CONTROL DATA

Project: Burma #22

Pace Project No.: 3577013

QC Batch: MSV/7270

Analysis Method: EPA 524.2

QC Batch Method: EPA 524.2

Analysis Description: 524.2 THM MSV

Associated Lab Samples: 3577013001

METHOD BLANK: 525513

Matrix: Water

Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromodichloromethane	ug/L	0.25U	0.50	12/13/12 10:05	
Bromoform	ug/L	0.25U	0.50	12/13/12 10:05	
Chloroform	ug/L	0.25U	0.50	12/13/12 10:05	
Dibromochloromethane	ug/L	0.25U	0.50	12/13/12 10:05	
Total Trihalomethanes (Calc.)	ug/L	0.25U	0.50	12/13/12 10:05	
1,2-Dichloroethane-d4 (S)	%	106	70-130	12/13/12 10:05	
4-Bromofluorobenzene (S)	%	91	70-130	12/13/12 10:05	
Dibromofluoromethane (S)	%	101	70-130	12/13/12 10:05	
Toluene-d8 (S)	%	99	70-130	12/13/12 10:05	

LABORATORY CONTROL SAMPLE & LCSD: 525514

525515

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Bromodichloromethane	ug/L	5	4.6	4.8	92	96	70-130	4	40	
Bromoform	ug/L	5	5.4	5.5	107	111	70-130	3	40	
Chloroform	ug/L	5	4.8	4.5	96	90	70-130	6	40	
Dibromochloromethane	ug/L	5	4.4	4.4	87	88	70-130	1	40	
Total Trihalomethanes (Calc.)	ug/L	20	19.1	19.3	96	96	70-130	.7	40	
1,2-Dichloroethane-d4 (S)	%				106	105	70-130			
4-Bromofluorobenzene (S)	%				94	94	70-130			
Dibromofluoromethane (S)	%				98	97	70-130			
Toluene-d8 (S)	%				100	100	70-130			

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: OEXT/10964 Analysis Method: EPA 504.1
QC Batch Method: EPA 504.1 Analysis Description: 504 EDB DBCP
Associated Lab Samples: 3577013001

METHOD BLANK: 527977 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.0049U	0.020	12/18/12 14:58	
1,2-Dibromoethane (EDB)	ug/L	0.0062U	0.010	12/18/12 14:58	

LABORATORY CONTROL SAMPLE & LCSD: 527978

Parameter	Units	527981								Qualifiers
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	
1,2-Dibromo-3-chloropropane	ug/L	.25	0.20	0.20	80	81	70-130	2	40	
1,2-Dibromoethane (EDB)	ug/L	.25	0.21	0.22	84	86	70-130	3	40	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 527979

Parameter	Units	527980										
		3577214001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	0.0050 U	.44	.44	0.41	0.42	94	97	65-135	3	40	
1,2-Dibromoethane (EDB)	ug/L	0.0064 U	.44	.44	0.42	0.44	96	100	65-135	4	40	

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: OEXT/10933 Analysis Method: EPA 508.1
QC Batch Method: EPA 508.1 Analysis Description: 508 GCS Pesticide
Associated Lab Samples: 3577013001

METHOD BLANK: 526433 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alachlor	ug/L	0.034U	0.20	12/17/12 05:36	
Atrazine	ug/L	0.021U	0.10	12/17/12 05:36	
Chlordane (Technical)	ug/L	0.047U	0.20	12/17/12 05:36	
Endrin	ug/L	0.0020U	0.010	12/17/12 05:36	
gamma-BHC (Lindane)	ug/L	0.0030U	0.020	12/17/12 05:36	
Heptachlor	ug/L	0.0060U	0.040	12/17/12 05:36	
Heptachlor epoxide	ug/L	0.0030U	0.020	12/17/12 05:36	
Hexachlorobenzene	ug/L	0.011U	0.10	12/17/12 05:36	
Hexachlorocyclopentadiene	ug/L	0.012U	0.10	12/17/12 05:36	
Methoxychlor	ug/L	0.014U	0.10	12/17/12 05:36	
PCB, Total	ug/L	0.080U	0.10	12/17/12 05:36	
PCB-1016 (Aroclor 1016)	ug/L	0.080U	0.10	12/17/12 05:36	
PCB-1221 (Aroclor 1221)	ug/L	0.029U	0.10	12/17/12 05:36	
PCB-1232 (Aroclor 1232)	ug/L	0.029U	0.10	12/17/12 05:36	
PCB-1242 (Aroclor 1242)	ug/L	0.051U	0.10	12/17/12 05:36	
PCB-1248 (Aroclor 1248)	ug/L	0.062U	0.10	12/17/12 05:36	
PCB-1254 (Aroclor 1254)	ug/L	0.023U	0.10	12/17/12 05:36	
PCB-1260 (Aroclor 1260)	ug/L	0.066U	0.10	12/17/12 05:36	
Simazine	ug/L	0.044U	0.070	12/17/12 05:36	
Toxaphene	ug/L	0.61U	1.0	12/17/12 05:36	
Decachlorobiphenyl (S)	%	95	70-130	12/17/12 05:36	

LABORATORY CONTROL SAMPLE: 526434

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alachlor	ug/L	1	1.0	102	70-130	
Atrazine	ug/L	.5	1.5	300	70-130	J(L0)
Endrin	ug/L	.05	0.053	105	70-130	
gamma-BHC (Lindane)	ug/L	.1	0.10	103	70-130	
Heptachlor	ug/L	.2	0.17	85	70-130	
Heptachlor epoxide	ug/L	.1	0.10	104	70-130	
Hexachlorobenzene	ug/L	.5	0.48	97	70-130	
Hexachlorocyclopentadiene	ug/L	.5	0.40	80	70-130	
Methoxychlor	ug/L	.5	0.64	127	70-130	
Simazine	ug/L	.35	1.2	353	70-130	J(L0)
Decachlorobiphenyl (S)	%			93	70-130	

QUALITY CONTROL DATA

Project: Burma #22

Pace Project No.: 3577013

Parameter	Units	3577144001		526435		526436		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Alachlor	ug/L	0.034U	2	2	2.1	2.0	105	100	70-130	5	40			
Atrazine	ug/L	0.021U	1	1	2.8	3.2	275	319	70-130	15	40	J(M0)		
Endrin	ug/L	0.0020U	.1	.1	0.11	0.10	110	105	70-130	5	40			
gamma-BHC (Lindane)	ug/L	0.0030U	.2	.2	0.21	0.21	103	103	70-130	.2	40			
Heptachlor	ug/L	0.0060U	.4	.4	0.35	0.38	88	95	70-130	7	40			
Heptachlor epoxide	ug/L	0.0030U	.2	.2	0.21	0.20	106	101	70-130	5	40			
Hexachlorobenzene	ug/L	0.011U	1	1	0.95	0.93	95	93	70-130	2	40			
Hexachlorocyclopentadiene	ug/L	0.012U	1	1	0.59	0.41	59	41	70-130	36	40	J(M1)		
Methoxychlor	ug/L	0.014U	1	1	1.2	1.2	122	118	70-130	3	40			
Simazine	ug/L	0.044U	.7	.7	2.2	3.1	314	439	70-130	33	40	J(M0)		
Decachlorobiphenyl (S)	%						103	93	70-130		40			

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: OEXT/10915 Analysis Method: EPA 515.3
QC Batch Method: EPA 515.3 Analysis Description: 5153 GCS Herbicides
Associated Lab Samples: 3577013001

METHOD BLANK: 524978 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4,5-TP (Silvex)	ug/L	0.16U	0.20	12/20/12 01:53	
2,4-D	ug/L	0.081U	0.10	12/20/12 01:53	
Dalapon	ug/L	0.89U	1.0	12/20/12 01:53	
Dinoseb	ug/L	0.16U	0.20	12/20/12 01:53	
Pentachlorophenol	ug/L	0.030U	0.040	12/20/12 01:53	
Picloram	ug/L	0.094U	0.10	12/20/12 01:53	
2,4-DCAA (S)	%	96	70-130	12/20/12 01:53	

LABORATORY CONTROL SAMPLE: 524979

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-TP (Silvex)	ug/L	1	0.81	81	70-130	
2,4-D	ug/L	.5	0.47	94	70-130	
Dalapon	ug/L	5	4.9	99	70-130	
Dinoseb	ug/L	1	1.1	109	70-130	
Pentachlorophenol	ug/L	.2	0.15	75	70-130	
Picloram	ug/L	.5	0.82	164	70-130 J(L0)	
2,4-DCAA (S)	%			108	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525365 525366

Parameter	Units	3576865001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
2,4,5-TP (Silvex)	ug/L	0.16U	1	1	1	0.38	0.46	38	46	70-130	20	40	J(M1)
2,4-D	ug/L	0.081U	.5	.5	.5	0.20	0.24	41	48	70-130	16	40	J(M1)
Dalapon	ug/L	1.4	5	5	5	4.6	7.0	65	112	70-130	40	40	
Dinoseb	ug/L	0.16U	1	1	1	0.22	0.23	22	23	70-130	3	40	J(M1)
Pentachlorophenol	ug/L	0.030U	.2	.2	.2	0.049	0.052	24	26	70-130	8	40	J(M1)
Picloram	ug/L	0.094U	.5	.5	.5	0.52	0.72	105	144	70-130	31	40	J(M0)
2,4-DCAA (S)	%							0	0	70-130			J(S0)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525367 525368

Parameter	Units	3576908001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
2,4,5-TP (Silvex)	ug/L	0.16U	1	1	1	0.76	0.82	76	82	70-130	8	40	
2,4-D	ug/L	0.081U	.5	.5	.5	0.48	0.53	96	107	70-130	10	40	
Dalapon	ug/L	0.89U	5	5	5	5.2	5.7	105	115	70-130	9	40	

Date: 01/10/2013 12:08 PM

REPORT OF LABORATORY ANALYSIS

Page 21 of 43

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QUALITY CONTROL DATA

Project: Burma #22

Pace Project No.: 3577013

Parameter	Units	3576908001		525367		525368		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Dinoseb	ug/L	0.16U	1	1	1.4	1.6	142	161	70-130	12	40	J(M1)		
Pentachlorophenol	ug/L	0.030U	.2	.2	0.16	0.17	79	86	70-130	8	40			
Picloram	ug/L	0.094U	.5	.5	0.98	1.2	195	240	70-130	21	40	J(M0)		
2,4-DCAA (S)	%						82	81	70-130					

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: OEXT/10990 Analysis Method: EPA 525.2
QC Batch Method: EPA 525.2 Analysis Description: 525.2 Base Neutral Extractables
Associated Lab Samples: 3577013001

METHOD BLANK: 529374 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzo(a)pyrene	ug/L	0.019U	0.10	12/20/12 12:05	
bis(2-Ethylhexyl)adipate	ug/L	0.38U	1.6	12/20/12 12:05	
bis(2-Ethylhexyl)phthalate	ug/L	0.50U	2.0	12/20/12 12:05	
1,3-Dimethyl-2-nitrobenzene(S)	%	80	70-130	12/20/12 12:05	
Perylene-d12 (S)	%	117	70-130	12/20/12 12:05	
Triphenylphosphate (S)	%	112	70-130	12/20/12 12:05	

LABORATORY CONTROL SAMPLE: 529375

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzo(a)pyrene	ug/L	.4	0.52	130	70-130	
bis(2-Ethylhexyl)adipate	ug/L	6.4	7.8	122	70-130	
bis(2-Ethylhexyl)phthalate	ug/L	8	8.3	104	70-130	
1,3-Dimethyl-2-nitrobenzene(S)	%			83	70-130	
Perylene-d12 (S)	%			115	70-130	
Triphenylphosphate (S)	%			109	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 529418 529419

Parameter	Units	3577740001		MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result					
Benzo(a)pyrene	ug/L	0.018U	.8	.8	1.0	1.0	125	129	70-130	3	40	
bis(2-Ethylhexyl)adipate	ug/L	0.36U	12.8	12.8	15.8	15.9	123	124	70-130	.4	40	
bis(2-Ethylhexyl)phthalate	ug/L	0.47U	16	16	17.0	17.0	106	106	70-130	.1	40	
1,3-Dimethyl-2-nitrobenzene(S)	%						88	88	70-130			
Perylene-d12 (S)	%						113	119	70-130			
Triphenylphosphate (S)	%						116	113	70-130			

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: OEXT/10970 Analysis Method: EPA 548.1
QC Batch Method: EPA 548.1 Analysis Description: 548 GCS Endothall
Associated Lab Samples: 3577013001

METHOD BLANK: 528263 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Endothall	ug/L	2.7U	9.0	12/20/12 08:10	

LABORATORY CONTROL SAMPLE: 528264

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endothall	ug/L	50	35.0	70	80-120	1p,J(L0)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 529426 529427

Parameter	Units	3577451001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Endothall	ug/L	2.7U	50	50	28.7	46.1	57	92	80-120	46	40	J(D6), J(M0)	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 530611 530612

Parameter	Units	3577404001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Endothall	ug/L	2.7U	50	50	24.4	38.4	49	77	80-120	45	40	J(D6), J(M0)	

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: OEXT/10978 Analysis Method: EPA 549.2
QC Batch Method: EPA 549.2 Analysis Description: 549 HPLC Paraquat Diquat
Associated Lab Samples: 3577013001

METHOD BLANK: 528508 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diquat	ug/L	0.15U	0.40	12/19/12 16:54	

LABORATORY CONTROL SAMPLE: 528509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diquat	ug/L	2	2.2	111	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 528510 528511

Parameter	Units	3577451001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits		
Diquat	ug/L	0.15U	2	2	2.2	0.81	111	41	70-130	93	40 J(D6), J(M1)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 530087 530088

Parameter	Units	3577740001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits		
Diquat	ug/L	0.15U	2	2	2.1	2.0	107	98	70-130	8	40

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: OEXT/10979 Analysis Method: EPA 552.2
QC Batch Method: EPA 552.2 Analysis Description: 5522 Haloacetic Acids
Associated Lab Samples: 3577013001

METHOD BLANK: 528513 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromoacetic Acid	ug/L	0.61U	1.0	12/20/12 17:55	
Dichloroacetic Acid	ug/L	0.61U	1.0	12/20/12 17:55	
Haloacetic Acids (Total)	ug/L	0.61U	1.0	12/20/12 17:55	
Monobromoacetic Acid	ug/L	0.61U	1.0	12/20/12 17:55	
Monochloroacetic Acid	ug/L	0.61U	1.0	12/20/12 17:55	
Trichloroacetic Acid	ug/L	0.61U	1.0	12/20/12 17:55	
2,3-Dibromopropanoic Acid (S)	%	116	70-130	12/20/12 17:55	

LABORATORY CONTROL SAMPLE: 528514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromoacetic Acid	ug/L	10	8.4	84	70-130	
Dichloroacetic Acid	ug/L	10	8.7	87	70-130	
Haloacetic Acids (Total)	ug/L	50	46.0	92		
Monobromoacetic Acid	ug/L	10	9.4	94	70-130	
Monochloroacetic Acid	ug/L	10	9.5	95	70-130	
Trichloroacetic Acid	ug/L	10	10.0	100	70-130	
2,3-Dibromopropanoic Acid (S)	%			105	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 528515 528516

Parameter	Units	3577056002		MSD		MSD		% Rec		Max		Qual	
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD		
Dibromoacetic Acid	ug/L	4.8	10	10	10	18.3	20.4	134	155	70-130	11	30	J(M1)
Dichloroacetic Acid	ug/L	9.8	10	10	10	20.2	23.2	103	134	70-130	14	30	J(M1)
Haloacetic Acids (Total)	ug/L	25.2	50	50	50	87.1	95.4	124	140		9		
Monobromoacetic Acid	ug/L	0.61U	10	10	10	14.3	15.5	143	155	70-130	8	30	J(M1)
Monochloroacetic Acid	ug/L	1.8	10	10	10	10.9	10.7	91	89	70-130	2	30	
Trichloroacetic Acid	ug/L	8.7	10	10	10	23.5	25.5	148	168	70-130	8	30	J(M1)
2,3-Dibromopropanoic Acid (S)	%							141	172	70-130			J(S0)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 528517 528518

Parameter	Units	3577065001		MSD		MSD		% Rec		Max		Qual	
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD		
Dibromoacetic Acid	ug/L	1.03	10	10	10	12.0	14.1	120	141	70-130	16	30	J(M1)
Dichloroacetic Acid	ug/L	4.1	10	10	10	14.5	14.3	104	102	70-130	1	30	
Haloacetic Acids (Total)	ug/L	8.3	50	50	50	67.5	69.9	118	123		4		

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REPORT OF LABORATORY ANALYSIS

Page 26 of 43

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QUALITY CONTROL DATA

Project: Burma #22

Pace Project No.: 3577013

Parameter	Units	3577065001		528517		528518		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Monobromoacetic Acid	ug/L	1.03	10	10	13.8	13.2	138	132	70-130	4	30	J(M1)		
Monochloroacetic Acid	ug/L	0.80 I	10	10	11.2	10.8	104	100	70-130	3	30			
Trichloroacetic Acid	ug/L	3.4	10	10	16.1	17.5	127	141	70-130	8	30	J(M1)		
2,3-Dibromopropanoic Acid (S)	%						120	150	70-130			J(S0)		

QUALITY CONTROL DATA

Project: Burma #22

Pace Project No.: 3577013

QC Batch: SFL/6907

Analysis Method: SM 2150B

QC Batch Method: SM 2150B

Analysis Description: Threshold Odor Number

Associated Lab Samples: 3577013001

METHOD BLANK: 525795

Matrix: Water

Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Temperature, Water (C)	deg C	40.7		12/12/12 18:30	
Threshold Odor Number	TON	1.0U	1.0	12/12/12 18:30	

SAMPLE DUPLICATE: 525796

Parameter	Units	3577013001 Result	Dup Result	RPD	Max RPD	Qualifiers
Temperature, Water (C)	deg C	40.3	40.5	.5	20	
Threshold Odor Number	TON	10.0	10.0	0	20	

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: WET/16632 Analysis Method: SM 2120B
QC Batch Method: SM 2120B Analysis Description: 2120B Color
Associated Lab Samples: 3577013001

METHOD BLANK: 525447 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0U	5.0	12/13/12 08:30	

LABORATORY CONTROL SAMPLE: 525448

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 525449

Parameter	Units	3577013001 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	25.0	25.0	0	20	

QUALITY CONTROL DATA

Project: Burma #22

Pace Project No.: 3577013

QC Batch: WET/16647

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 3577013001

METHOD BLANK: 526329

Matrix: Water

Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	5.0U	5.0	12/14/12 13:21	

LABORATORY CONTROL SAMPLE: 526330

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	300	100	90-110	

SAMPLE DUPLICATE: 526331

Parameter	Units	3576684003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	35500	34700	2	20	

SAMPLE DUPLICATE: 526332

Parameter	Units	3576764003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	758	780	3	20	

QUALITY CONTROL DATA

Project: Burma #22

Pace Project No.: 3577013

QC Batch:	WET/16779	Analysis Method:	SM 4500-CIO2
QC Batch Method:	SM 4500-CIO2	Analysis Description:	4500CIO2 Chlorine Dioxide
Associated Lab Samples:	3577013001		

METHOD BLANK: 530433 Matrix: Water

Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorine Dioxide	mg/L	0.067U	0.10	12/20/12 16:00	Q

SAMPLE DUPLICATE: 530434

Parameter	Units	3577013001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorine Dioxide	mg/L	0.070 I	0.090 I		20	Q

QUALITY CONTROL DATA

Project: Burma #22

Pace Project No.: 3577013

QC Batch: WET/16780 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 3577013001

SAMPLE DUPLICATE: 530464

Parameter	Units	201053333 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.9	9.0	.4	20	Q
Temperature, Water (C)	deg C	24.0	24.0	0	20	Q

SAMPLE DUPLICATE: 530465

Parameter	Units	3577001001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.6	.9	20	Q
Temperature, Water (C)	deg C	26.0	26.0	0	20	Q

QUALITY CONTROL DATA

Project: Burma #22

Pace Project No.: 3577013

QC Batch: WET/16613

Analysis Method: SM 5540C

QC Batch Method: SM 5540C

Analysis Description: 5540C MBAS Surfactants

Associated Lab Samples: 3577013001

METHOD BLANK: 524808

Matrix: Water

Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Surfactants	mg/L	0.059U	0.20	12/12/12 14:15	

LABORATORY CONTROL SAMPLE: 524809

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Surfactants	mg/L	.3	0.30	100	90-110	

MATRIX SPIKE SAMPLE: 524811

Parameter	Units	3577001001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Surfactants	mg/L	0.11 I	.3	0.39	93	80-120	

SAMPLE DUPLICATE: 524810

Parameter	Units	3577001001 Result	Dup Result	RPD	Max RPD	Qualifiers
Surfactants	mg/L	0.11 I	0.12 I		20	

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: WETA/22405 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 3577013001

METHOD BLANK: 525939 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate as N	mg/L	0.025U	0.050	12/13/12 09:02	
Nitrite as N	mg/L	0.025U	0.050	12/13/12 09:02	

LABORATORY CONTROL SAMPLE: 525940

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	5	5.0	101	90-110	
Nitrite as N	mg/L	5	5.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525941 525942

Parameter	Units	3577013001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result	MSD Result						
Nitrate as N	mg/L	0.025U	5	5	4.9	5.2	98	103	90-110	5	20	Q
Nitrite as N	mg/L	0.025U	5	5	4.3	4.8	87	96	90-110	10	20	J(M1), Q

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525943 525944

Parameter	Units	3577099001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result	MSD Result						
Nitrate as N	mg/L	0.050U	10	10	8.4	8.3	84	83	90-110	.7	20	J(M1)
Nitrite as N	mg/L	0.050U	10	10	8.0	8.0	80	80	90-110	.2	20	J(M1)

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: WETA/22408 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 3577013001

METHOD BLANK: 525963 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	2.5U	5.0	12/13/12 09:02	
Fluoride	mg/L	0.025U	0.050	12/13/12 09:02	
Sulfate	mg/L	2.5U	5.0	12/13/12 09:02	

LABORATORY CONTROL SAMPLE: 525964

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.6	99	90-110	
Fluoride	mg/L	5	5.3	106	90-110	
Sulfate	mg/L	50	50.4	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525965 525966

Parameter	Units	3577013001		525965		525966		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Chloride	mg/L	81.3	50	50	137	148	111	133	8	20	J(M1)
Fluoride	mg/L	0.30	5	5	5.1	5.6	97	107	9	20	
Sulfate	mg/L	7.5	50	50	59.1	63.0	103	111	6	20	J(M1)

QUALITY CONTROL DATA

Project: Burma #22
Pace Project No.: 3577013

QC Batch: WETA/22432 Analysis Method: EPA 335.4
QC Batch Method: EPA 335.4 Analysis Description: 335.4 Cyanide, Total
Associated Lab Samples: 3577013001

METHOD BLANK: 526307 Matrix: Water
Associated Lab Samples: 3577013001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	0.0050U	0.010	12/14/12 12:40	

LABORATORY CONTROL SAMPLE: 526308

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.05	0.052	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 526309 526310

Parameter	Units	201044702 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	<0.0050	.05	.05	0.052	0.054	103	108	90-110	5	20	

ANALYTICAL RESULTS

Project: Burma #22

Pace Project No.: 3577013

Sample: Burma #22 **Lab ID: 3577013001** Collected: 12/12/12 09:40 Received: 12/12/12 12:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC)	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0m	0.965U ± 0.636 (0.965)	pCi/L	12/20/12 16:09	12587-46-1	
Radium-226	EPA 903.1	0.418U ± 0.284 (0.418)	pCi/L	12/27/12 11:50	13982-63-3	
Radium-228	EPA 904.0	0.877U ± 0.439 (0.877)	pCi/L	12/21/12 14:42	15262-20-1	

QUALITY CONTROL DATA

Project: Burma #22

Pace Project No.: 3577013

QC Batch: RADC/14145

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Associated Lab Samples: 3577013001

METHOD BLANK: 524981

Matrix: Water

Associated Lab Samples: 3577013001

Parameter	Act ± Unc (MDC)	Units	Analyzed	Qualifiers
Radium-228	0.230 ± 0.290 (0.621)	pCi/L	12/21/12 12:06	

QUALITY CONTROL DATA

Project: Burma #22

Pace Project No.: 3577013

QC Batch: RADC/14173

Analysis Method: EPA 900.0m

QC Batch Method: EPA 900.0m

Analysis Description: 900.0 Gross Alpha/Beta

Associated Lab Samples: 3577013001

METHOD BLANK: 526175

Matrix: Water

Associated Lab Samples: 3577013001

Parameter	Act ± Unc (MDC)	Units	Analyzed	Qualifiers
Gross Alpha	0.154 ± 0.204 (0.341)	pCi/L	12/20/12 16:09	

QUALITY CONTROL DATA

Project: Burma #22

Pace Project No.: 3577013

QC Batch: RADC/14159

Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1

Analysis Description: 903.1 Radium-226

Associated Lab Samples: 3577013001

METHOD BLANK: 525681

Matrix: Water

Associated Lab Samples: 3577013001

Parameter	Act ± Unc (MDC)	Units	Analyzed	Qualifiers
Radium-226	-0.112 ± 0.270 (0.674)	pCi/L	12/27/12 11:35	

QUALIFIERS

Project: Burma #22
Pace Project No.: 3577013

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
 ND - Not Detected at or above adjusted reporting limit.
 MDL - Adjusted Method Detection Limit.
 PRL - Pace Reporting Limit.
 RL - Reporting Limit.
 S - Surrogate
 1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.
 Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
 LCS(D) - Laboratory Control Sample (Duplicate)
 MS(D) - Matrix Spike (Duplicate)
 DUP - Sample Duplicate
 RPD - Relative Percent Difference
 NC - Not Calculable.
 SG - Silica Gel - Clean-Up
 U - Indicates the compound was analyzed for, but not detected.
 N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
 Act - Activity
 Unc - Uncertainty
 (MDC) - Minimum Detectable Concentration
 Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
 TNI - The NELAC Institute.

LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach
 PASI-PA Pace Analytical Services - Greensburg
 PASI-SF Pace Analytical Services - South Florida

ANALYTE QUALIFIERS

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
 1p An extracted reporting limit standard was extracted and run with this batch. The recovery on the reporting limit standard was within LCS control limits, which verifies that adequate instrument sensitivity was present to verify at the detection limit. Samples are reported as the analyte was not detected.
 J(D6) Estimated Value. The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
 J(L0) Estimated Value. Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
 J(L2) Estimated Value. Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
 J(M0) Estimated Value. Matrix spike recovery was outside laboratory control limits.
 J(M1) Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
 J(S0) Estimated Value. Surrogate recovery outside laboratory control limits.
 L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
 M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
 Q Sample held beyond the accepted holding time.

QUALIFIERS

Project: Burma #22

Pace Project No.: 3577013

ANALYTE QUALIFIERS

- Q Sample held beyond the accepted holding time. Analysis initiated more than 15 minutes after sample collection.
- S3 Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Burma #22
Pace Project No.: 3577013

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3577013001	Burma #22	EPA 504.1	OEXT/10964	EPA 504.1	GCSV/7520
3577013001	Burma #22	EPA 508.1	OEXT/10933	EPA 508.1	GCSV/7516
3577013001	Burma #22	EPA 515.3	OEXT/10915	EPA 515.3	GCSV/7504
3577013001	Burma #22	EPA 531.1	GCSV/7540		
3577013001	Burma #22	EPA 547	GCSV/7510		
3577013001	Burma #22	EPA 549.2	OEXT/10978	EPA 549.2	GCSV/7544
3577013001	Burma #22	EPA 552.2	OEXT/10979	EPA 552.2	GCSV/7542
3577013001	Burma #22	EPA 200.7	MPRP/11519	EPA 200.7	ICP/7450
3577013001	Burma #22	EPA 200.8	MPRP/11520	EPA 200.8	ICPM/4686
3577013001	Burma #22	EPA 245.1	MERP/3374	EPA 245.1	MERC/3372
3577013001	Burma #22	EPA 525.2	OEXT/10990	EPA 525.2	MSSV/4141
3577013001	Burma #22	EPA 548.1	OEXT/10970	EPA 548.1	MSSV/4138
3577013001	Burma #22	EPA 524.2	MSV/7269		
3577013001	Burma #22	EPA 524.2	MSV/7270		
3577013001	Burma #22	EPA 900.0m	RADC/14173		
3577013001	Burma #22	EPA 903.1	RADC/14159		
3577013001	Burma #22	EPA 904.0	RADC/14145		
3577013001	Burma #22	SM 2150B	SFL/6907		
3577013001	Burma #22	SM 9222B	SFL/6911		
3577013001	Burma #22	SM 2120B	WET/16632		
3577013001	Burma #22	SM 2540C	WET/16647		
3577013001	Burma #22	SM 4500-CIO2	WET/16779		
3577013001	Burma #22	SM 4500-H+B	WET/16780		
3577013001	Burma #22	SM 5540C	WET/16613		
3577013001	Burma #22	EPA 300.0	WETA/22405		
3577013001	Burma #22	EPA 300.0	WETA/22408		
3577013001	Burma #22	EPA 335.4	WETA/22432	EPA 335.4	WETA/22442

EMSL Analytical, Inc.

19501 NE 10th Ave. Bay A N. Miami Beach, FL 33179
Phone/Fax: (305) 650-0577 / (305) 650-0578
<http://www.emsl.com> / miamilab@emsl.com

EMSL Order ID: 171206219
Customer ID: ELAB50
Customer PO: FLB-0415
Project ID:

Attn: Sakina McKenzie
Pace Analytical Services, Inc.
8 East Tower Circle
Ormond Beach, FL 32174

Phone: (386) 672-5668
Fax: (386) 673-4001
Collected: 12/12/2012
Received: 12/13/2012
Analyzed: 12/26/2012

Proj: Workorder: 3577013 Workorder Name: BURMA #22

Test Report: Determination of Asbestos Structures > 10µm in Water Performed by the 100.2 Method (EPA 600/R-94/134)

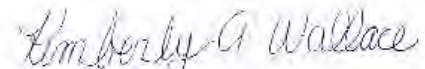
Sample ID Client / EMSL	Sample Filtration Date/Time	Original Sample Vol. Filtered (ml)	Effective Filter Area (mm ²)	Area Analyzed (mm ²)	ASBESTOS				
					Asbestos Types	Fibers Detected	Analytical Sensitivity	Concentration	Confidence Limits
1 171206219-0001	12/13/2012 11:15 AM	100	1033	0.0560	None Detected	ND	0.18	<0.18	0.00 - 0.68

MFL (million fibers per liter)

Collection Date 12/12/2012 9:40 Analyzed: 13:40

Analyst(s)

Joe McOscar (1)



Kimberly Wallace, Laboratory Manager
or Other Approved Signatory

Any questions please contact Kim Wallace.

Initial report from: 12/26/2012 15:48:18

Sample collection and containers provided by the client, acceptable bottle blank level is defined as $\leq 0.01\text{MFL} > 10\mu\text{m}$. ND=None Detected. This report may not be reproduced, except in full, without written permission by EMSL Analytical, Inc. The test results contained within this report meet the requirements of NELAC unless otherwise noted. This report relates only to the samples reported above. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. N. Miami Beach, FL FL DOH E86795

December 21, 2012

Mo Rahgozar
Advanced Well Drilling
2715 Garden Street
Malabar, FL 32950

RE: Project: Burma #25
Pace Project No.: 3576618

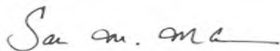
Dear Mo Rahgozar:

Enclosed are the analytical results for sample(s) received by the laboratory on December 07, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Sakina Mckenzie

sakina.mckenzie@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

CERTIFICATIONS

Project: Burma #25

Pace Project No.: 3576618

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4 Greensburg, PA 15601
ACCLASS DOD-ELAP Accreditation #: ADE-1544
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California/TNI Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Guam/PADEP Certification
Hawaii/PADEP Certification
Idaho Certification
Illinois/PADEP Certification
Indiana/PADEP Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana/TNI Certification #: LA080002
Louisiana/TNI Certification #: 4086
Maine Certification #: PA0091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nevada Certification
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188
Utah/TNI Certification #: ANTE
Virgin Island/PADEP Certification
Virginia Certification #: 00112
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia Certification #: 143
Wisconsin/PADEP Certification
Wyoming Certification #: 8TMS-Q

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Arizona Certification #: AZ0735
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maine Certification #: FL01264
Massachusetts Certification #: M-FL1264
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236

Montana Certification #: Cert 0074
Nevada Certification: FL NELAC Reciprocity
New Hampshire Certification #: 2958
New Jersey Certification #: FL765
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Pace Analytical Services - Ormond certification number
E83509
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Washington Certification #: C955
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

South Florida Certification IDs

3610 Park Central Blvd N Pompano Beach, FL 33064
Pace Analytical Services - Pompano certification number
E96080

Florida Certification #: E86240

REPORT OF LABORATORY ANALYSIS

SAMPLE SUMMARY

Project: Burma #25

Pace Project No.: 3576618

Lab ID	Sample ID	Matrix	Date Collected	Date Received
3576618001	Burma #25	Water	12/07/12 08:00	12/07/12 14:55
3576618002	Trip Blank	Water	12/07/12 08:00	12/07/12 14:55

REPORT OF LABORATORY ANALYSIS

SAMPLE ANALYTE COUNT

Project: Burma #25
Pace Project No.: 3576618

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
3576618001	Burma #25	EPA 504.1	JLR	2	PASI-O
		EPA 508.1	JTT	21	PASI-O
		EPA 515.3	LJM	7	PASI-O
		EPA 531.1	WFH	3	PASI-O
		EPA 547	WFH	1	PASI-O
		EPA 549.2	WFH	1	PASI-O
		EPA 552.2	JLR	7	PASI-O
		EPA 200.7	JTJ	10	PASI-O
		EPA 200.8	DRS	7	PASI-O
		EPA 245.1	DRS	1	PASI-O
		EPA 525.2	WFH	6	PASI-O
		EPA 548.1	EAO	1	PASI-O
		EPA 524.2	JBH	25	PASI-O
		EPA 524.2	JBH	9	PASI-O
		EPA 900.0m	JC2	1	PASI-PA
		EPA 903.1	SLA	1	PASI-PA
		EPA 904.0	MAW	1	PASI-PA
		SM 2150B	LCM	2	PASI-SF
		SM 2540C	LCM	1	PASI-SF
		SM 2120B	KHC	1	PASI-O
		SM 4500-H+B	KHC	2	PASI-O
		SM 5540C	KDM	1	PASI-O
		EPA 300.0	IRL	2	PASI-O
		EPA 300.0	IRL	3	PASI-O
		EPA 300.1	KDM	2	PASI-O
		EPA 300.1	KDM	2	PASI-O
		EPA 335.4	SOA	1	PASI-O
3576618002	Trip Blank	EPA 524.2	JBH	25	PASI-O

REPORT OF LABORATORY ANALYSIS

ANALYTICAL RESULTS

Project: Burma #25
Pace Project No.: 3576618

Sample: Burma #25 **Lab ID: 3576618001** Collected: 12/07/12 08:00 Received: 12/07/12 14:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504.1 GCS EDB and DBCP									
Analytical Method: EPA 504.1 Preparation Method: EPA 504.1									
1,2-Dibromo-3-chloropropane	0.0049U	ug/L	0.020	0.0049	1	12/13/12 12:00	12/13/12 19:13	96-12-8	
1,2-Dibromoethane (EDB)	0.0062U	ug/L	0.010	0.0062	1	12/13/12 12:00	12/13/12 19:13	106-93-4	
508.1 GCS Pesticides									
Analytical Method: EPA 508.1 Preparation Method: EPA 508.1									
Alachlor	0.068U	ug/L	0.40	0.068	1	12/17/12 13:00	12/18/12 19:36	15972-60-8	
Atrazine	0.042U	ug/L	0.20	0.042	1	12/17/12 13:00	12/18/12 19:36	1912-24-9	L3
gamma-BHC (Lindane)	0.0060U	ug/L	0.040	0.0060	1	12/17/12 13:00	12/18/12 19:36	58-89-9	
Chlordane (Technical)	0.094U	ug/L	0.40	0.094	1	12/17/12 13:00	12/18/12 19:36	57-74-9	
Endrin	0.0040U	ug/L	0.020	0.0040	1	12/17/12 13:00	12/18/12 19:36	72-20-8	
Heptachlor	0.012U	ug/L	0.080	0.012	1	12/17/12 13:00	12/18/12 19:36	76-44-8	
Heptachlor epoxide	0.0060U	ug/L	0.040	0.0060	1	12/17/12 13:00	12/18/12 19:36	1024-57-3	
Hexachlorobenzene	0.022U	ug/L	0.20	0.022	1	12/17/12 13:00	12/18/12 19:36	118-74-1	
Hexachlorocyclopentadiene	0.024U	ug/L	0.20	0.024	1	12/17/12 13:00	12/18/12 19:36	77-47-4	
Methoxychlor	0.028U	ug/L	0.20	0.028	1	12/17/12 13:00	12/18/12 19:36	72-43-5	
PCB-1016 (Aroclor 1016)	0.16U	ug/L	0.20	0.16	1	12/17/12 13:00	12/18/12 19:36	12674-11-2	
PCB-1221 (Aroclor 1221)	0.058U	ug/L	0.20	0.058	1	12/17/12 13:00	12/18/12 19:36	11104-28-2	
PCB-1232 (Aroclor 1232)	0.058U	ug/L	0.20	0.058	1	12/17/12 13:00	12/18/12 19:36	11141-16-5	
PCB-1242 (Aroclor 1242)	0.10U	ug/L	0.20	0.10	1	12/17/12 13:00	12/18/12 19:36	53469-21-9	
PCB-1248 (Aroclor 1248)	0.12U	ug/L	0.20	0.12	1	12/17/12 13:00	12/18/12 19:36	12672-29-6	
PCB-1254 (Aroclor 1254)	0.046U	ug/L	0.20	0.046	1	12/17/12 13:00	12/18/12 19:36	11097-69-1	
PCB-1260 (Aroclor 1260)	0.13U	ug/L	0.20	0.13	1	12/17/12 13:00	12/18/12 19:36	11096-82-5	
PCB, Total	0.16U	ug/L	0.20	0.16	1	12/17/12 13:00	12/18/12 19:36	1336-36-3	
Simazine	0.088U	ug/L	0.14	0.088	1	12/17/12 13:00	12/18/12 19:36	122-34-9	L3
Toxaphene	1.2U	ug/L	2.0	1.2	1	12/17/12 13:00	12/18/12 19:36	8001-35-2	
Surrogates									
Decachlorobiphenyl (S)	96 %		70-130		1	12/17/12 13:00	12/18/12 19:36	2051-24-3	
515.3 Chlorinated Herbicides									
Analytical Method: EPA 515.3 Preparation Method: EPA 515.3									
2,4-D	0.081U	ug/L	0.10	0.081	1	12/11/12 08:50	12/14/12 14:25	94-75-7	
Dalapon	0.89U	ug/L	1.0	0.89	1	12/11/12 08:50	12/14/12 14:25	75-99-0	
Dinoseb	0.16U	ug/L	0.20	0.16	1	12/11/12 08:50	12/12/12 15:32	88-85-7	
Pentachlorophenol	0.030U	ug/L	0.040	0.030	1	12/11/12 08:50	12/14/12 14:25	87-86-5	
Picloram	0.094U	ug/L	0.10	0.094	1	12/11/12 08:50	12/14/12 14:25	1918-02-1	
2,4,5-TP (Silvex)	0.16U	ug/L	0.20	0.16	1	12/11/12 08:50	12/14/12 14:25	93-72-1	
Surrogates									
2,4-DCAA (S)	117 %		70-130		1	12/11/12 08:50	12/14/12 14:25	19719-28-9	
531.1 HPLC Carbamates									
Analytical Method: EPA 531.1									
Carbofuran	0.32U	ug/L	2.0	0.32	1		12/11/12 21:19	1563-66-2	L3
Oxamyl	0.41U	ug/L	2.0	0.41	1		12/11/12 21:19	23135-22-0	
Surrogates									
Propoxur (S)	125 %		80-120		1		12/11/12 21:19	114-26-1	S3
547 HPLC Glyphosate									
Analytical Method: EPA 547									
Glyphosate	2.1U	ug/L	6.0	2.1	1		12/13/12 14:37		

ANALYTICAL RESULTS

Project: Burma #25
Pace Project No.: 3576618

Sample: Burma #25 Lab ID: 3576618001 Collected: 12/07/12 08:00 Received: 12/07/12 14:55 Matrix: Water									
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
549.2 HPLC Paraquat Diquat Analytical Method: EPA 549.2 Preparation Method: EPA 549.2									
Diquat	0.15U	ug/L	0.40	0.15	1	12/14/12 08:30	12/17/12 22:18	85-00-7	
552.2 Haloacetic Acids Analytical Method: EPA 552.2 Preparation Method: EPA 552.2									
Dibromoacetic Acid	0.61U	ug/L	1.0	0.61	1	12/12/12 11:45	12/15/12 00:31	631-64-1	
Dichloroacetic Acid	0.61U	ug/L	1.0	0.61	1	12/12/12 11:45	12/15/12 00:31	79-43-6	
Haloacetic Acids (Total)	0.61U	ug/L	1.0	0.61	1	12/12/12 11:45	12/15/12 00:31		
Monobromoacetic Acid	0.61U	ug/L	1.0	0.61	1	12/12/12 11:45	12/15/12 00:31	79-08-3	
Monochloroacetic Acid	0.61U	ug/L	1.0	0.61	1	12/12/12 11:45	12/15/12 00:31	79-11-8	
Trichloroacetic Acid	0.61U	ug/L	1.0	0.61	1	12/12/12 11:45	12/15/12 00:31	76-03-9	
Surrogates									
2,3-Dibromopropanoic Acid (S)	101 %		70-130		1	12/12/12 11:45	12/15/12 00:31	600-05-5	
200.7 MET ICP Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Barium	0.0050U	mg/L	0.010	0.0050	1	12/11/12 12:15	12/12/12 03:57	7440-39-3	
Beryllium	0.00050U	mg/L	0.0010	0.00050	1	12/11/12 12:15	12/12/12 03:57	7440-41-7	
Cadmium	0.00050U	mg/L	0.0010	0.00050	1	12/11/12 12:15	12/12/12 03:57	7440-43-9	
Chromium	0.0025U	mg/L	0.0050	0.0025	1	12/11/12 12:15	12/12/12 03:57	7440-47-3	
Iron	0.035 I	mg/L	0.040	0.020	1	12/11/12 12:15	12/12/12 03:57	7439-89-6	
Manganese	0.0039 I	mg/L	0.0050	0.0025	1	12/11/12 12:15	12/12/12 03:57	7439-96-5	
Nickel	0.0025U	mg/L	0.0050	0.0025	1	12/11/12 12:15	12/12/12 03:57	7440-02-0	
Silver	0.0025U	mg/L	0.0050	0.0025	1	12/11/12 12:15	12/12/12 03:57	7440-22-4	
Sodium	27.7	mg/L	1.0	0.50	1	12/11/12 12:15	12/12/12 03:57	7440-23-5	
Zinc	0.010U	mg/L	0.020	0.010	1	12/11/12 12:15	12/12/12 03:57	7440-66-6	
200.8 MET ICPMS Analytical Method: EPA 200.8 Preparation Method: EPA 200.8									
Aluminum	0.0089 I	mg/L	0.010	0.0058	1	12/11/12 12:15	12/12/12 12:07	7429-90-5	
Antimony	0.00050U	mg/L	0.0010	0.00050	1	12/11/12 12:15	12/12/12 12:07	7440-36-0	
Arsenic	0.00050U	mg/L	0.0010	0.00050	1	12/11/12 12:15	12/12/12 12:07	7440-38-2	
Copper	0.00093U	mg/L	0.0010	0.00093	1	12/11/12 12:15	12/12/12 12:07	7440-50-8	
Lead	0.00050U	mg/L	0.0010	0.00050	1	12/11/12 12:15	12/12/12 12:07	7439-92-1	
Selenium	0.00050U	mg/L	0.0010	0.00050	1	12/11/12 12:15	12/12/12 12:07	7782-49-2	
Thallium	0.00050U	mg/L	0.0010	0.00050	1	12/11/12 12:15	12/12/12 12:07	7440-28-0	
245.1 Mercury Analytical Method: EPA 245.1 Preparation Method: EPA 245.1									
Mercury	0.00010U	mg/L	0.00020	0.00010	1	12/10/12 15:10	12/11/12 11:16	7439-97-6	
525.2 Base Neutral Extractable Analytical Method: EPA 525.2 Preparation Method: EPA 525.2									
Benzo(a)pyrene	0.019U	ug/L	0.10	0.019	1	12/13/12 10:30	12/13/12 21:55	50-32-8	L3
bis(2-Ethylhexyl)adipate	0.38U	ug/L	1.6	0.38	1	12/13/12 10:30	12/13/12 21:55	103-23-1	
bis(2-Ethylhexyl)phthalate	0.50U	ug/L	2.0	0.50	1	12/13/12 10:30	12/13/12 21:55	117-81-7	
Surrogates									
1,3-Dimethyl-2-nitrobenzene(S)	90 %		70-130		1	12/13/12 10:30	12/13/12 21:55	81209	
Perylene-d12 (S)	123 %		70-130		1	12/13/12 10:30	12/13/12 21:55	1520963	
Triphenylphosphate (S)	111 %		70-130		1	12/13/12 10:30	12/13/12 21:55	115-86-6	

ANALYTICAL RESULTS

Project: Burma #25
Pace Project No.: 3576618

Sample: Burma #25 **Lab ID: 3576618001** Collected: 12/07/12 08:00 Received: 12/07/12 14:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
548.1 GCS Endothall									
Analytical Method: EPA 548.1 Preparation Method: EPA 548.1									
Endothall	2.7U	ug/L	9.0	2.7	1	12/12/12 17:00	12/14/12 14:36		
524.2 MSV									
Analytical Method: EPA 524.2									
Benzene	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	71-43-2	
Carbon tetrachloride	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	56-23-5	
Chlorobenzene	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	108-90-7	
1,2-Dichlorobenzene	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	95-50-1	
1,4-Dichlorobenzene	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	106-46-7	
1,2-Dichloroethane	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	107-06-2	
1,1-Dichloroethene	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	75-35-4	
cis-1,2-Dichloroethene	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	156-59-2	
trans-1,2-Dichloroethene	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	156-60-5	
1,2-Dichloropropane	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	78-87-5	
Ethylbenzene	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	100-41-4	
Methylene Chloride	0.44U	ug/L	0.50	0.44	1		12/11/12 12:00	75-09-2	L3
Styrene	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	100-42-5	
Tetrachloroethene	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	127-18-4	
Toluene	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	108-88-3	
1,2,4-Trichlorobenzene	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	120-82-1	
1,1,1-Trichloroethane	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	71-55-6	
1,1,2-Trichloroethane	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	79-00-5	
Trichloroethene	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	79-01-6	
Vinyl chloride	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	75-01-4	
Xylene (Total)	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	81 %		70-130		1		12/11/12 12:00	460-00-4	
Dibromofluoromethane (S)	98 %		70-130		1		12/11/12 12:00	1868-53-7	
Toluene-d8 (S)	99 %		70-130		1		12/11/12 12:00	2037-26-5	
1,2-Dichloroethane-d4 (S)	104 %		70-130		1		12/11/12 12:00	17060-07-0	
524.2 THM									
Analytical Method: EPA 524.2									
Bromodichloromethane	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	75-27-4	
Bromoform	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	75-25-2	
Chloroform	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	67-66-3	
Dibromochloromethane	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00	124-48-1	
Total Trihalomethanes (Calc.)	0.25U	ug/L	0.50	0.25	1		12/11/12 12:00		
Surrogates									
4-Bromofluorobenzene (S)	81 %		70-130		1		12/11/12 12:00	460-00-4	J(HS)
Dibromofluoromethane (S)	98 %		70-130		1		12/11/12 12:00	1868-53-7	
Toluene-d8 (S)	99 %		70-130		1		12/11/12 12:00	2037-26-5	
1,2-Dichloroethane-d4 (S)	104 %		70-130		1		12/11/12 12:00	17060-07-0	
2150B Threshold Odor Number									
Analytical Method: SM 2150B									
Temperature, Water (C)	40.2	deg C			1		12/07/12 18:00		
Threshold Odor Number	1.0U	TON	1.0	1.0	1		12/07/12 18:00		

ANALYTICAL RESULTS

Project: Burma #25
Pace Project No.: 3576618

Sample: Burma #25 Lab ID: 3576618001 Collected: 12/07/12 08:00 Received: 12/07/12 14:55 Matrix: Water									
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids Analytical Method: SM 2540C									
Total Dissolved Solids	330	mg/L	5.0	5.0	1		12/11/12 14:49		
2120B Apparent Color Analytical Method: SM 2120B									
Apparent Color	25.0	units	5.0	5.0	1		12/08/12 10:35		
4500H+ pH, Electrometric Analytical Method: SM 4500-H+B									
Temperature, Water (C)	28.0	deg C	0.010	0.010	1		12/11/12 09:15		Q
pH at 25 Degrees C	7.5	Std. Units	0.10	0.10	1		12/11/12 09:15		Q
5540C MBAS Surfactants Analytical Method: SM 5540C									
Surfactants	0.060 I	mg/L	0.20	0.059	1		12/08/12 14:54		
300.0 IC Anions Analytical Method: EPA 300.0									
Nitrate as N	0.025U	mg/L	0.050	0.025	1		12/08/12 16:34	14797-55-8	
Nitrite as N	0.025U	mg/L	0.050	0.025	1		12/08/12 16:34	14797-65-0	
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	40.3	mg/L	5.0	2.5	1		12/08/12 16:34	16887-00-6	
Fluoride	0.32	mg/L	0.050	0.025	1		12/08/12 16:34	16984-48-8	
Sulfate	6.1	mg/L	5.0	2.5	1		12/08/12 16:34	14808-79-8	
300.1 Oxihalide IC Anions 14d Analytical Method: EPA 300.1									
Chlorite	1.1U	ug/L	10.0	1.1	2		12/14/12 11:09		D3
Surrogates									
Dichloroacetate (S)	95 %		90-115		2		12/14/12 11:09	79-43-6	
300.1 Oxihalide IC Anions 28d Analytical Method: EPA 300.1									
Bromate	1.0U	ug/L	5.0	1.0	2		12/14/12 11:09	15541-45-4	D3
Surrogates									
Dichloroacetate (S)	95 %		90-115		2		12/14/12 11:09	79-43-6	
335.4 Cyanide, Total Analytical Method: EPA 335.4 Preparation Method: EPA 335.4									
Cyanide	0.0050U	mg/L	0.010	0.0050	1	12/13/12 14:15	12/14/12 11:46	57-12-5	

ANALYTICAL RESULTS

Project: Burma #25

Pace Project No.: 3576618

Sample: Trip Blank **Lab ID: 3576618002** Collected: 12/07/12 08:00 Received: 12/07/12 14:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV		Analytical Method: EPA 524.2							
Benzene	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	71-43-2	
Carbon tetrachloride	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	56-23-5	
Chlorobenzene	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	108-90-7	
1,2-Dichlorobenzene	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	95-50-1	
1,4-Dichlorobenzene	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	106-46-7	
1,2-Dichloroethane	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	107-06-2	
1,1-Dichloroethene	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	75-35-4	
cis-1,2-Dichloroethene	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	156-59-2	
trans-1,2-Dichloroethene	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	156-60-5	
1,2-Dichloropropane	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	78-87-5	
Ethylbenzene	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	100-41-4	
Methylene Chloride	0.44U	ug/L	0.50	0.44	1		12/11/12 11:35	75-09-2	L3
Styrene	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	100-42-5	
Tetrachloroethene	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	127-18-4	
Toluene	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	108-88-3	
1,2,4-Trichlorobenzene	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	120-82-1	
1,1,1-Trichloroethane	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	71-55-6	
1,1,2-Trichloroethane	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	79-00-5	
Trichloroethene	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	79-01-6	
Vinyl chloride	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	75-01-4	
Xylene (Total)	0.25U	ug/L	0.50	0.25	1		12/11/12 11:35	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	79 %		70-130		1		12/11/12 11:35	460-00-4	
Dibromofluoromethane (S)	105 %		70-130		1		12/11/12 11:35	1868-53-7	
Toluene-d8 (S)	99 %		70-130		1		12/11/12 11:35	2037-26-5	
1,2-Dichloroethane-d4 (S)	109 %		70-130		1		12/11/12 11:35	17060-07-0	

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: GCSV/7479 Analysis Method: EPA 531.1
QC Batch Method: EPA 531.1 Analysis Description: 531.1 HPLC Carbamate
Associated Lab Samples: 3576618001

METHOD BLANK: 523673 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Carbofuran	ug/L	0.32U	2.0	12/11/12 14:40	
Oxamyl	ug/L	0.41U	2.0	12/11/12 14:40	
Propoxur (S)	%	84	80-120	12/11/12 14:40	

LABORATORY CONTROL SAMPLE: 523674

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbofuran	ug/L	10	12.4	124	80-120	J(L0)
Oxamyl	ug/L	10	9.9	99	80-120	
Propoxur (S)	%			101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523675 523676

Parameter	Units	3576826001 Result	MS Spike Conc.	MSD Spike Conc.	523675		523676		% Rec Limits	Max RPD	Qual
					MS Result	MSD Result	MS % Rec	MSD % Rec			
Carbofuran	ug/L	0.32U	10	10	10	10.2	100	102	80-120	3	20
Oxamyl	ug/L	0.41U	10	10	8.6	8.7	86	87	80-120	.5	20
Propoxur (S)	%						98	101	80-120		

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: GCSV/7480 Analysis Method: EPA 547
QC Batch Method: EPA 547 Analysis Description: 547 HPLC Glyphosate
Associated Lab Samples: 3576618001

METHOD BLANK: 523691 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Glyphosate	ug/L	2.1U	6.0	12/13/12 12:29	

LABORATORY CONTROL SAMPLE: 523692

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Glyphosate	ug/L	50	45.9	92	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523693 523694

Parameter	Units	3576826001		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
		Result	Conc.								RPD	RPD	
Glyphosate	ug/L	2.1U	50	50	48.7	34.0	97	68	70-130	36	30	J(D6), J(M1)	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524495 524496

Parameter	Units	201044702		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
		Result	Conc.								RPD	RPD	
Glyphosate	ug/L	<2.1	50	50	46.5	46.3	93	93	70-130	.5	30		

QUALITY CONTROL DATA

Project: Burma #25

Pace Project No.: 3576618

QC Batch: MERP/3363

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Associated Lab Samples: 3576618001

METHOD BLANK: 522923

Matrix: Water

Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	0.00010U	0.00020	12/11/12 10:44	

LABORATORY CONTROL SAMPLE: 522924

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.002	0.0018	92	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 522925

522926

Parameter	Units	3576544001		522925		522926		% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
Mercury	mg/L	0.10U ug/L	.002	.002	0.0019	0.0019	96	95	70-130	2	20

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: MPRP/11486 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 MET
Associated Lab Samples: 3576618001

METHOD BLANK: 523633 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	mg/L	0.0050U	0.010	12/12/12 03:48	
Beryllium	mg/L	0.00050U	0.0010	12/12/12 03:48	
Cadmium	mg/L	0.00050U	0.0010	12/12/12 03:48	
Chromium	mg/L	0.0025U	0.0050	12/12/12 03:48	
Iron	mg/L	0.020U	0.040	12/12/12 03:48	
Manganese	mg/L	0.0025U	0.0050	12/12/12 03:48	
Nickel	mg/L	0.0025U	0.0050	12/12/12 03:48	
Silver	mg/L	0.0025U	0.0050	12/12/12 03:48	
Sodium	mg/L	0.50U	1.0	12/12/12 03:48	
Zinc	mg/L	0.010U	0.020	12/12/12 03:48	

LABORATORY CONTROL SAMPLE: 523634

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	.25	0.25	100	85-115	
Beryllium	mg/L	.025	0.026	105	85-115	
Cadmium	mg/L	.025	0.027	107	85-115	
Chromium	mg/L	.25	0.27	107	85-115	
Iron	mg/L	2.5	2.6	103	85-115	
Manganese	mg/L	.25	0.26	106	85-115	
Nickel	mg/L	.25	0.27	107	85-115	
Silver	mg/L	.025	0.027	109	85-115	
Sodium	mg/L	12.5	13.4	107	85-115	
Zinc	mg/L	1.2	1.3	106	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523635 523636

Parameter	Units	3576618001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Barium	mg/L	0.0050 U	.25	.25	0.24	0.26	95	100	70-130	5	20		
Beryllium	mg/L	0.00050 U	.025	.025	0.026	0.027	102	108	70-130	6	20		
Cadmium	mg/L	0.00050 U	.025	.025	0.026	0.027	103	107	70-130	4	20		
Chromium	mg/L	0.0025 U	.25	.25	0.26	0.27	103	108	70-130	4	20		
Iron	mg/L	0.035 I	2.5	2.5	2.5	2.6	97	102	70-130	5	20		
Manganese	mg/L	0.0039 I	.25	.25	0.25	0.27	100	106	70-130	5	20		
Nickel	mg/L	0.0025 U	.25	.25	0.26	0.27	103	108	70-130	5	20		

QUALITY CONTROL DATA

Project: Burma #25

Pace Project No.: 3576618

Parameter	Units	3576618001		523635		523636		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Silver	mg/L	0.0025 U	.025	.025	0.027	0.028	108	112	70-130	4	20			
Sodium	mg/L	27.7	12.5	12.5	38.4	40.6	86	103	70-130	6	20			
Zinc	mg/L	0.010U	1.2	1.2	1.3	1.3	102	106	70-130	5	20			

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: MPRP/11487 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET
Associated Lab Samples: 3576618001

METHOD BLANK: 523637 Matrix: Water

Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	mg/L	0.0058U	0.010	12/12/12 12:00	
Antimony	mg/L	0.00050U	0.0010	12/12/12 12:00	
Arsenic	mg/L	0.00050U	0.0010	12/12/12 12:00	
Copper	mg/L	0.00093U	0.0010	12/12/12 12:00	
Lead	mg/L	0.00050U	0.0010	12/12/12 12:00	
Selenium	mg/L	0.00050U	0.0010	12/12/12 12:00	
Thallium	mg/L	0.00050U	0.0010	12/12/12 12:00	

LABORATORY CONTROL SAMPLE: 523638

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	.5	0.48	97	85-115	
Antimony	mg/L	.05	0.049	99	85-115	
Arsenic	mg/L	.05	0.051	102	85-115	
Copper	mg/L	.05	0.053	106	85-115	
Lead	mg/L	.05	0.049	98	85-115	
Selenium	mg/L	.05	0.052	104	85-115	
Thallium	mg/L	.05	0.048	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523639 523640

Parameter	Units	3576692008		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Aluminum	mg/L	253 ug/L	.5	.5	0.75	0.76	100	101	70-130	.6	20		
Antimony	mg/L	0.50U ug/L	.05	.05	0.052	0.052	103	104	70-130	1	20		
Arsenic	mg/L	0.50U ug/L	.05	.05	0.053	0.053	105	105	70-130	.08	20		
Copper	mg/L	3.3 ug/L	.05	.05	0.056	0.056	106	106	70-130	.09	20		
Lead	mg/L	0.50U ug/L	.05	.05	0.052	0.052	104	104	70-130	.3	20		
Selenium	mg/L	0.50U ug/L	.05	.05	0.051	0.051	102	101	70-130	.2	20		
Thallium	mg/L	0.50U ug/L	.05	.05	0.053	0.053	105	105	70-130	.2	20		

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: MSV/7240 Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2 Analysis Description: 524.2 MSV
Associated Lab Samples: 3576618001, 3576618002

METHOD BLANK: 523006 Matrix: Water
Associated Lab Samples: 3576618001, 3576618002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	0.25U	0.50	12/11/12 10:46	
1,1,2-Trichloroethane	ug/L	0.25U	0.50	12/11/12 10:46	
1,1-Dichloroethene	ug/L	0.25U	0.50	12/11/12 10:46	
1,2,4-Trichlorobenzene	ug/L	0.25U	0.50	12/11/12 10:46	
1,2-Dichlorobenzene	ug/L	0.25U	0.50	12/11/12 10:46	
1,2-Dichloroethane	ug/L	0.25U	0.50	12/11/12 10:46	
1,2-Dichloropropane	ug/L	0.25U	0.50	12/11/12 10:46	
1,4-Dichlorobenzene	ug/L	0.25U	0.50	12/11/12 10:46	
Benzene	ug/L	0.25U	0.50	12/11/12 10:46	
Carbon tetrachloride	ug/L	0.25U	0.50	12/11/12 10:46	
Chlorobenzene	ug/L	0.25U	0.50	12/11/12 10:46	
cis-1,2-Dichloroethene	ug/L	0.25U	0.50	12/11/12 10:46	
Ethylbenzene	ug/L	0.25U	0.50	12/11/12 10:46	
Methylene Chloride	ug/L	11.9	0.50	12/11/12 10:46	
Styrene	ug/L	0.25U	0.50	12/11/12 10:46	
Tetrachloroethene	ug/L	0.25U	0.50	12/11/12 10:46	
Toluene	ug/L	0.25U	0.50	12/11/12 10:46	
trans-1,2-Dichloroethene	ug/L	0.25U	0.50	12/11/12 10:46	
Trichloroethene	ug/L	0.25U	0.50	12/11/12 10:46	
Vinyl chloride	ug/L	0.25U	0.50	12/11/12 10:46	
Xylene (Total)	ug/L	0.25U	0.50	12/11/12 10:46	
1,2-Dichloroethane-d4 (S)	%	109	70-130	12/11/12 10:46	
4-Bromofluorobenzene (S)	%	80	70-130	12/11/12 10:46	
Dibromofluoromethane (S)	%	103	70-130	12/11/12 10:46	
Toluene-d8 (S)	%	99	70-130	12/11/12 10:46	

LABORATORY CONTROL SAMPLE & LCSD: 523007

523008

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	5	4.5	4.7	90	93	70-130	4	40	
1,1,2-Trichloroethane	ug/L	5	4.1	4.3	82	86	70-130	4	40	
1,1-Dichloroethene	ug/L	5	4.5	4.8	90	96	70-130	6	40	
1,2,4-Trichlorobenzene	ug/L	5	3.7	4.1	75	82	70-130	9	40	
1,2-Dichlorobenzene	ug/L	5	4.5	5.0	89	99	70-130	10	40	
1,2-Dichloroethane	ug/L	5	5.4	5.6	107	112	70-130	5	40	
1,2-Dichloropropane	ug/L	5	5.0	5.0	100	101	70-130	1	40	
1,4-Dichlorobenzene	ug/L	5	4.9	5.1	98	102	70-130	4	40	
Benzene	ug/L	5	4.5	4.7	90	95	70-130	5	40	
Carbon tetrachloride	ug/L	5	4.9	5.2	98	104	70-130	5	40	
Chlorobenzene	ug/L	5	4.4	4.4	88	88	70-130	.1	40	
cis-1,2-Dichloroethene	ug/L	5	4.8	5.1	96	101	70-130	5	40	

QUALITY CONTROL DATA

Project: Burma #25

Pace Project No.: 3576618

LABORATORY CONTROL SAMPLE & LCSD: 523007		523008								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Ethylbenzene	ug/L	5	4.7	4.8	93	95	70-130	2	40	
Methylene Chloride	ug/L	5	13.3	19.5	266	389	70-130	38	40	J(L0)
Styrene	ug/L	5	4.3	4.2	86	85	70-130	2	40	
Tetrachloroethene	ug/L	5	3.8	3.9	76	78	70-130	2	40	
Toluene	ug/L	5	4.5	4.8	90	95	70-130	6	40	
trans-1,2-Dichloroethene	ug/L	5	4.5	5.1	90	102	70-130	13	40	
Trichloroethene	ug/L	5	4.6	4.7	91	94	70-130	3	40	
Vinyl chloride	ug/L	5	5.5	6.0	109	121	70-130	10	40	
Xylene (Total)	ug/L	15	13.4	13.4	89	89	70-130	.2	40	
1,2-Dichloroethane-d4 (S)	%				104	103	70-130			
4-Bromofluorobenzene (S)	%				83	82	70-130			
Dibromofluoromethane (S)	%				98	102	70-130			
Toluene-d8 (S)	%				98	99	70-130			

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: MSV/7241 Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2 Analysis Description: 524.2 THM MSV
Associated Lab Samples: 3576618001

METHOD BLANK: 523009 Matrix: Water

Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromodichloromethane	ug/L	0.25U	0.50	12/11/12 10:46	
Bromoform	ug/L	0.25U	0.50	12/11/12 10:46	
Chloroform	ug/L	0.25U	0.50	12/11/12 10:46	
Dibromochloromethane	ug/L	0.25U	0.50	12/11/12 10:46	
Total Trihalomethanes (Calc.)	ug/L	0.25U	0.50	12/11/12 10:46	
1,2-Dichloroethane-d4 (S)	%	109	70-130	12/11/12 10:46	
4-Bromofluorobenzene (S)	%	80	70-130	12/11/12 10:46	
Dibromofluoromethane (S)	%	103	70-130	12/11/12 10:46	
Toluene-d8 (S)	%	99	70-130	12/11/12 10:46	

LABORATORY CONTROL SAMPLE & LCSD: 523010 523011

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Bromodichloromethane	ug/L	5	4.6	4.7	92	94	70-130	2	40	
Bromoform	ug/L	5	4.7	4.5	95	90	70-130	5	40	
Chloroform	ug/L	5	5.3	5.8	107	116	70-130	8	40	
Dibromochloromethane	ug/L	5	4.1	4.0	81	80	70-130	2	40	
Total Trihalomethanes (Calc.)	ug/L	20	18.7	18.9	94	95	70-130	1	40	
1,2-Dichloroethane-d4 (S)	%				104	103	70-130			
4-Bromofluorobenzene (S)	%				83	82	70-130			
Dibromofluoromethane (S)	%				98	102	70-130			
Toluene-d8 (S)	%				98	99	70-130			

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: OEXT/10906 Analysis Method: EPA 504.1
QC Batch Method: EPA 504.1 Analysis Description: 504 EDB DBCP
Associated Lab Samples: 3576618001

METHOD BLANK: 524774 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	0.0049U	0.020	12/13/12 16:57	
1,2-Dibromoethane (EDB)	ug/L	0.0062U	0.010	12/13/12 16:57	

LABORATORY CONTROL SAMPLE & LCSD: 524775 524776

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromo-3-chloropropane	ug/L	.25	0.21	0.20	83	82	70-130	1	40	
1,2-Dibromoethane (EDB)	ug/L	.25	0.21	0.21	85	83	70-130	2	40	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524777 524778

Parameter	Units	3576525001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3-chloropropane	ug/L	0.0049 U	.44	.44	0.40	0.43	92	98	65-135	6	40	
1,2-Dibromoethane (EDB)	ug/L	0.0062 U	.44	.44	0.46	0.59	106	134	65-135	23	40	

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: OEXT/10930 Analysis Method: EPA 508.1
QC Batch Method: EPA 508.1 Analysis Description: 508 GCS Pesticide
Associated Lab Samples: 3576618001

METHOD BLANK: 525843 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alachlor	ug/L	0.034U	0.20	12/18/12 13:53	
Atrazine	ug/L	0.021U	0.10	12/18/12 13:53	
Chlordane (Technical)	ug/L	0.047U	0.20	12/18/12 13:53	
Endrin	ug/L	0.0020U	0.010	12/18/12 13:53	
gamma-BHC (Lindane)	ug/L	0.0030U	0.020	12/18/12 13:53	
Heptachlor	ug/L	0.0060U	0.040	12/18/12 13:53	
Heptachlor epoxide	ug/L	0.0030U	0.020	12/18/12 13:53	
Hexachlorobenzene	ug/L	0.011U	0.10	12/18/12 13:53	
Hexachlorocyclopentadiene	ug/L	0.012U	0.10	12/18/12 13:53	
Methoxychlor	ug/L	0.014U	0.10	12/18/12 13:53	
PCB, Total	ug/L	0.080U	0.10	12/18/12 13:53	
PCB-1016 (Aroclor 1016)	ug/L	0.080U	0.10	12/18/12 13:53	
PCB-1221 (Aroclor 1221)	ug/L	0.029U	0.10	12/18/12 13:53	
PCB-1232 (Aroclor 1232)	ug/L	0.029U	0.10	12/18/12 13:53	
PCB-1242 (Aroclor 1242)	ug/L	0.051U	0.10	12/18/12 13:53	
PCB-1248 (Aroclor 1248)	ug/L	0.062U	0.10	12/18/12 13:53	
PCB-1254 (Aroclor 1254)	ug/L	0.023U	0.10	12/18/12 13:53	
PCB-1260 (Aroclor 1260)	ug/L	0.066U	0.10	12/18/12 13:53	
Simazine	ug/L	0.044U	0.070	12/18/12 13:53	
Toxaphene	ug/L	0.61U	1.0	12/18/12 13:53	
Decachlorobiphenyl (S)	%	99	70-130	12/18/12 13:53	

LABORATORY CONTROL SAMPLE: 525844

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alachlor	ug/L	1	1.0	102	70-130	
Atrazine	ug/L	.5	1.5	300	70-130	J(L0)
Endrin	ug/L	.05	0.050	100	70-130	
gamma-BHC (Lindane)	ug/L	.1	0.098	98	70-130	
Heptachlor	ug/L	.2	0.17	85	70-130	
Heptachlor epoxide	ug/L	.1	0.10	102	70-130	
Hexachlorobenzene	ug/L	.5	0.48	95	70-130	
Hexachlorocyclopentadiene	ug/L	.5	0.41	81	70-130	
Methoxychlor	ug/L	.5	0.60	119	70-130	
Simazine	ug/L	.35	0.96	274	70-130	J(L0)
Decachlorobiphenyl (S)	%			100	70-130	

QUALITY CONTROL DATA

Project: Burma #25

Pace Project No.: 3576618

Parameter	Units	3576993001		527574		527575		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Alachlor	ug/L	<0.033	2	2	2.1	2.1	106	106	70-130	.4	40			
Atrazine	ug/L	<0.020	1	1	3.0	2.9	296	292	70-130	1	40	J(M0)		
Endrin	ug/L	<0.0019	.1	.1	0.11	0.11	113	108	70-130	5	40			
gamma-BHC (Lindane)	ug/L	<0.0029	.2	.2	0.21	0.20	106	101	70-130	5	40			
Heptachlor	ug/L	<0.0058	.4	.4	0.34	0.34	85	86	70-130	.8	40			
Heptachlor epoxide	ug/L	<0.0029	.2	.2	0.21	0.21	107	106	70-130	.6	40			
Hexachlorobenzene	ug/L	<0.011	1	1	0.93	0.94	93	94	70-130	.9	40			
Hexachlorocyclopentadiene	ug/L	<0.012	1	1	0.87	0.87	87	87	70-130	.2	40			
Methoxychlor	ug/L	<0.013	1	1	1.4	1.3	136	132	70-130	3	40	J(M1)		
Simazine	ug/L	<0.042	.7	.7	2.4	2.0	347	283	70-130	20	40	J(M0)		
Decachlorobiphenyl (S)	%						104	104	70-130		40			

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: OEXT/10853 Analysis Method: EPA 515.3
QC Batch Method: EPA 515.3 Analysis Description: 5153 GCS Herbicides
Associated Lab Samples: 3576618001

METHOD BLANK: 521305 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4,5-TP (Silvex)	ug/L	0.16U	0.20	12/14/12 02:51	
2,4-D	ug/L	0.081U	0.10	12/14/12 02:51	
Dalapon	ug/L	0.89U	1.0	12/14/12 02:51	
Dinoseb	ug/L	0.16U	0.20	12/12/12 03:57	
Pentachlorophenol	ug/L	0.030U	0.040	12/14/12 02:51	
Picloram	ug/L	0.094U	0.10	12/14/12 02:51	
2,4-DCAA (S)	%	101	70-130	12/14/12 02:51	

LABORATORY CONTROL SAMPLE: 521306

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-TP (Silvex)	ug/L	1	1.1	106	70-130	
2,4-D	ug/L	.5	0.46	92	70-130	
Dalapon	ug/L	5	4.5	90	70-130	
Dinoseb	ug/L	1	0.89	89	70-130	
Pentachlorophenol	ug/L	.2	0.21	107	70-130	
Picloram	ug/L	.5	0.36	72	70-130	
2,4-DCAA (S)	%			106	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523608 523609

Parameter	Units	3576066001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
2,4,5-TP (Silvex)	ug/L	0.16U	1	1	0.90	0.84	90	84	70-130	7	40	
2,4-D	ug/L	0.081U	.5	.5	0.48	0.49	96	98	70-130	1	40	
Dalapon	ug/L	0.89U	5	5	5.6	5.1	112	101	70-130	10	40	
Dinoseb	ug/L	0.16U	1	1	0.77	0.69	77	69	70-130	11	40	J(M1)
Pentachlorophenol	ug/L	0.030U	.2	.2	0.12	0.097	61	48	70-130	23	40	J(M1)
Picloram	ug/L	0.094U	.5	.5	0.094U	3.2	3	645	70-130	40	40	J(M1)
2,4-DCAA (S)	%						15	12	70-130			J(S0)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523610 523611

Parameter	Units	3576598001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
2,4,5-TP (Silvex)	ug/L	0.16U	1	1	0.95	0.93	95	93	70-130	2	40	
2,4-D	ug/L	0.081U	.5	.5	0.61	0.41	122	81	70-130	40	40	
Dalapon	ug/L	0.89U	5	5	6.9	6.8	137	135	70-130	1	40	J(M1)

Date: 12/21/2012 05:36 AM

REPORT OF LABORATORY ANALYSIS

Page 22 of 46

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QUALITY CONTROL DATA

Project: Burma #25

Pace Project No.: 3576618

Parameter	Units	3576598001		523610		523611		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Dinoseb	ug/L	0.16U	1	1	1.2	0.96	118	96	70-130	21	40			
Pentachlorophenol	ug/L	0.030U	.2	.2	0.23	0.23	116	115	70-130	.5	40			
Picloram	ug/L	0.094U	.5	.5	0.63	0.68	127	136	70-130	7	40	J(M1)		
2,4-DCAA (S)	%						108	104	70-130					

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: OEXT/10882 Analysis Method: EPA 525.2
QC Batch Method: EPA 525.2 Analysis Description: 525.2 Base Neutral Extractables
Associated Lab Samples: 3576618001

METHOD BLANK: 523275 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzo(a)pyrene	ug/L	0.019U	0.10	12/13/12 17:04	
bis(2-Ethylhexyl)adipate	ug/L	0.38U	1.6	12/13/12 17:04	
bis(2-Ethylhexyl)phthalate	ug/L	0.50U	2.0	12/13/12 17:04	
1,3-Dimethyl-2-nitrobenzene(S)	%	95	70-130	12/13/12 17:04	
Perylene-d12 (S)	%	124	70-130	12/13/12 17:04	
Triphenylphosphate (S)	%	115	70-130	12/13/12 17:04	

LABORATORY CONTROL SAMPLE: 523276

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzo(a)pyrene	ug/L	.4	0.55	137	70-130	J(L0)
bis(2-Ethylhexyl)adipate	ug/L	6.4	7.1	112	70-130	
bis(2-Ethylhexyl)phthalate	ug/L	8	7.9	99	70-130	
1,3-Dimethyl-2-nitrobenzene(S)	%			89	70-130	
Perylene-d12 (S)	%			126	70-130	
Triphenylphosphate (S)	%			118	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524795 524796

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		3576525001 Result	Spike Conc.	Spike Conc.	Result							Result
Benzo(a)pyrene	ug/L	0.018U	.8	.8	0.34	0.39	43	48	70-130	13	40	J(M0)
bis(2-Ethylhexyl)adipate	ug/L	0.36U	12.8	12.8	13.6	13.7	106	107	70-130	1	40	
bis(2-Ethylhexyl)phthalate	ug/L	0.47U	16	16	15.6	15.7	96	96	70-130	.5	40	
1,3-Dimethyl-2-nitrobenzene(S)	%						93	94	70-130			
Perylene-d12 (S)	%						112	111	70-130			
Triphenylphosphate (S)	%						114	113	70-130			

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: OEXT/10892 Analysis Method: EPA 548.1
QC Batch Method: EPA 548.1 Analysis Description: 548 GCS Endothall
Associated Lab Samples: 3576618001

METHOD BLANK: 523997 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Endothall	ug/L	2.7U	9.0	12/14/12 12:38	

LABORATORY CONTROL SAMPLE: 523998

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endothall	ug/L	50	54.6	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 524713 524714

Parameter	Units	3576544001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Endothall	ug/L	2.7U	50	50	50	33.2	26.9	66	54	80-120	21	40	J(M1)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525873 525874

Parameter	Units	3576898002		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Endothall	ug/L	<2.7	50	50	50	20.1	29.9	40	60	80-120	39	40	J(M1)

QUALITY CONTROL DATA

Project: Burma #25

Pace Project No.: 3576618

QC Batch: OEXT/10895

Analysis Method: EPA 549.2

QC Batch Method: EPA 549.2

Analysis Description: 549 HPLC Paraquat Diquat

Associated Lab Samples: 3576618001

METHOD BLANK: 524020

Matrix: Water

Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diquat	ug/L	0.15U	0.40	12/17/12 21:41	

LABORATORY CONTROL SAMPLE: 524021

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diquat	ug/L	2	2.3	116	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525839

525840

Parameter	Units	3576857001		525840		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Diquat	ug/L	<0.15	2	2	3.1	3.4	154	171	70-130	11	40 J(M1)

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: OEXT/10890 Analysis Method: EPA 552.2
QC Batch Method: EPA 552.2 Analysis Description: 5522 Haloacetic Acids
Associated Lab Samples: 3576618001

METHOD BLANK: 523929 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromoacetic Acid	ug/L	0.61U	1.0	12/14/12 12:54	
Dichloroacetic Acid	ug/L	0.61U	1.0	12/14/12 12:54	
Haloacetic Acids (Total)	ug/L	0.61U	1.0	12/14/12 12:54	
Monobromoacetic Acid	ug/L	0.61U	1.0	12/14/12 12:54	
Monochloroacetic Acid	ug/L	0.61U	1.0	12/14/12 12:54	
Trichloroacetic Acid	ug/L	0.61U	1.0	12/14/12 12:54	
2,3-Dibromopropanoic Acid (S)	%	108	70-130	12/14/12 12:54	

LABORATORY CONTROL SAMPLE: 523930

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dibromoacetic Acid	ug/L	10	9.1	91	70-130	
Dichloroacetic Acid	ug/L	10	7.9	79	70-130	
Haloacetic Acids (Total)	ug/L	50	40.7	81		
Monobromoacetic Acid	ug/L	10	8.1	81	70-130	
Monochloroacetic Acid	ug/L	10	8.1	81	70-130	
Trichloroacetic Acid	ug/L	10	7.6	76	70-130	
2,3-Dibromopropanoic Acid (S)	%			108	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523931 523932

Parameter	Units	3576719001		MSD		MSD		% Rec		Max		Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Dibromoacetic Acid	ug/L	0.77	10	10	11.6	10.7	109	99	70-130	8	30	
Dichloroacetic Acid	ug/L	8.9	10	10	17.0	16.2	81	73	70-130	5	30	
Haloacetic Acids (Total)	ug/L	20.7	50	50	71.7	65.8	102	90		9		
Monobromoacetic Acid	ug/L	0.61U	10	10	10.2	10.0	102	100	70-130	1	30	
Monochloroacetic Acid	ug/L	1.0	10	10	10.5	9.6	95	86	70-130	9	30	
Trichloroacetic Acid	ug/L	10.0	10	10	22.3	19.2	122	91	70-130	15	30	
2,3-Dibromopropanoic Acid (S)	%						130	113	70-130			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523933 523934

Parameter	Units	3576720003		MSD		MSD		% Rec		Max		Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Dibromoacetic Acid	ug/L	6.6	10	10	17.6	15.4	110	89	70-130	13	30	
Dichloroacetic Acid	ug/L	14.2	10	10	19.6	16.6	54	24	70-130	17	30	J(M1)
Haloacetic Acids (Total)	ug/L	34.2	50	50	74.3	67.1	80	66		10		

Date: 12/21/2012 05:36 AM

REPORT OF LABORATORY ANALYSIS

Page 27 of 46

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QUALITY CONTROL DATA

Project: Burma #25

Pace Project No.: 3576618

Parameter	Units	3576720003		523933		523934		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Monobromoacetic Acid	ug/L	0.61U	10	10	9.9	9.9	99	99	70-130	.6	30			
Monochloroacetic Acid	ug/L	2.7	10	10	8.8	7.6	61	49	70-130	15	30	J(M1)		
Trichloroacetic Acid	ug/L	10.8	10	10	18.4	17.6	76	69	70-130	4	30	J(M1)		
2,3-Dibromopropanoic Acid (S)	%						115	118	70-130					



QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: SFL/6833 Analysis Method: SM 2150B
QC Batch Method: SM 2150B Analysis Description: Threshold Odor Number
Associated Lab Samples: 3576618001

METHOD BLANK: 522369 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Temperature, Water (C)	deg C	40.1		12/07/12 18:00	
Threshold Odor Number	TON	1.0U	1.0	12/07/12 18:00	

SAMPLE DUPLICATE: 522370

Parameter	Units	3576618001 Result	Dup Result	RPD	Max RPD	Qualifiers
Temperature, Water (C)	deg C	40.2	40.5	.7	20	
Threshold Odor Number	TON	1.0U	1.0U		20	

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: SFL/6847 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 3576618001

METHOD BLANK: 523700 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	5.0U	5.0	12/11/12 14:33	

LABORATORY CONTROL SAMPLE: 523701

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	308	103	90-110	

SAMPLE DUPLICATE: 523702

Parameter	Units	3576334001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2630	2670	1	20	

SAMPLE DUPLICATE: 523703

Parameter	Units	3576658001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	32900	32500	1	20	

QUALITY CONTROL DATA

Project: Burma #25

Pace Project No.: 3576618

QC Batch: WET/16559

Analysis Method: SM 2120B

QC Batch Method: SM 2120B

Analysis Description: 2120B Color

Associated Lab Samples: 3576618001

METHOD BLANK: 522733

Matrix: Water

Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Apparent Color	units	5.0U	5.0	12/08/12 10:35	

LABORATORY CONTROL SAMPLE: 522734

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Apparent Color	units	20	20.0	100	90-110	

SAMPLE DUPLICATE: 522735

Parameter	Units	3576618001 Result	Dup Result	RPD	Max RPD	Qualifiers
Apparent Color	units	25.0	25.0	0	20	

QUALITY CONTROL DATA

Project: Burma #25

Pace Project No.: 3576618

QC Batch: WET/16577

Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B

Analysis Description: 4500H+B pH

Associated Lab Samples: 3576618001

SAMPLE DUPLICATE: 523669

Parameter	Units	3576332001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.9	6.9	0	20	Q
Temperature, Water (C)	deg C	26.0	26.0	0	20	Q

SAMPLE DUPLICATE: 523670

Parameter	Units	3576626003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.1	0	20	Q
Temperature, Water (C)	deg C	29.0	29.0	0	20	Q

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: WET/16549 Analysis Method: SM 5540C
QC Batch Method: SM 5540C Analysis Description: 5540C MBAS Surfactants
Associated Lab Samples: 3576618001

METHOD BLANK: 522282 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Surfactants	mg/L	0.059U	0.20	12/07/12 16:12	

LABORATORY CONTROL SAMPLE: 522283

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Surfactants	mg/L	.3	0.29	97	90-110	

MATRIX SPIKE SAMPLE: 522285

Parameter	Units	3576410001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Surfactants	mg/L	0.14	.3	0.41	90	80-120	

SAMPLE DUPLICATE: 522284

Parameter	Units	3576410001 Result	Dup Result	RPD	Max RPD	Qualifiers
Surfactants	mg/L	0.14	0.14		20	

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: WETA/22256 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 3576618001

METHOD BLANK: 522783 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate as N	mg/L	0.025U	0.050	12/08/12 15:33	
Nitrite as N	mg/L	0.025U	0.050	12/08/12 15:33	

LABORATORY CONTROL SAMPLE: 522784

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	5	5.0	100	90-110	
Nitrite as N	mg/L	5	4.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 522785 522786

Parameter	Units	3576595009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		
										RPD	RPD	Qual
Nitrate as N	mg/L	20.2	5	5	31.6	31.8	228	232	90-110	.5	20	J(M1)
Nitrite as N	mg/L	0.025U	5	5	4.2	4.3	85	85	90-110	.5	20	J(M1)

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 522787 522788

Parameter	Units	3576707001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		
										RPD	RPD	Qual
Nitrate as N	mg/L	<0.025	5	5	4.9	4.9	97	97	90-110	.4	20	
Nitrite as N	mg/L	<0.025	5	5	4.6	4.6	91	92	90-110	.7	20	

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: WETA/22267 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 3576618001

METHOD BLANK: 523067 Matrix: Water

Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	2.5U	5.0	12/08/12 15:33	
Fluoride	mg/L	0.025U	0.050	12/08/12 15:33	
Sulfate	mg/L	2.5U	5.0	12/08/12 15:33	

LABORATORY CONTROL SAMPLE: 523068

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.8	98	90-110	
Fluoride	mg/L	5	5.2	104	90-110	
Sulfate	mg/L	50	47.8	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523069 523070

Parameter	Units	3576595009		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Chloride	mg/L	161	50	50	210	211	97	99	90-110	.4	20	
Fluoride	mg/L	0.69	5	5	5.8	5.8	103	103	90-110	.2	20	
Sulfate	mg/L	38.8	50	50	93.6	91.6	110	106	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 523071 523072

Parameter	Units	3576707001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Chloride	mg/L	14.2	50	50	64.8	65.1	101	102	90-110	.6	20	
Fluoride	mg/L	0.41	5	5	5.2	5.3	96	98	90-110	2	20	
Sulfate	mg/L	<2.5	50	50	47.7	47.8	93	94	90-110	.3	20	

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: WETA/22412 Analysis Method: EPA 300.1
QC Batch Method: EPA 300.1 Analysis Description: 300.1 Oxihalides IC Anions
Associated Lab Samples: 3576618001

METHOD BLANK: 526108 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlorite	ug/L	0.55U	5.0	12/14/12 04:17	
Dichloroacetate (S)	%	92	90-115	12/14/12 04:17	

LABORATORY CONTROL SAMPLE: 526109

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorite	ug/L	40	39.1	98	85-115	
Dichloroacetate (S)	%			101	90-115	

MATRIX SPIKE SAMPLE: 526111

Parameter	Units	92140619001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chlorite	ug/L	128	200	306	89	75-125	
Dichloroacetate (S)	%				91	90-115	

SAMPLE DUPLICATE: 526110

Parameter	Units	92140619001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chlorite	ug/L	128	129	.9	20	
Dichloroacetate (S)	%	92	92	.03		

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: WETA/22411 Analysis Method: EPA 300.1
QC Batch Method: EPA 300.1 Analysis Description: 300.1 Oxihalides IC Anions
Associated Lab Samples: 3576618001

METHOD BLANK: 526098 Matrix: Water

Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromate	ug/L	0.52U	2.5	12/14/12 04:17	
Dichloroacetate (S)	%	92	90-115	12/14/12 04:17	

LABORATORY CONTROL SAMPLE: 526099

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromate	ug/L	20	19.4	97	85-115	
Dichloroacetate (S)	%			101	90-115	

MATRIX SPIKE SAMPLE: 526101

Parameter	Units	3576371001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromate	ug/L	0.52U	20	17.0	85	75-125	
Dichloroacetate (S)	%				98	90-115	

MATRIX SPIKE SAMPLE: 526103

Parameter	Units	3577076003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromate	ug/L	0.52U	20	16.1	81	75-125	
Dichloroacetate (S)	%				91	90-115	

MATRIX SPIKE SAMPLE: 527518

Parameter	Units	3576443002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromate	ug/L	2.6U	100	81.7	82	75-125	
Dichloroacetate (S)	%				92	90-115	

SAMPLE DUPLICATE: 526100

Parameter	Units	3576371001 Result	Dup Result	RPD	Max RPD	Qualifiers
Bromate	ug/L	0.52U	0.52U		20	
Dichloroacetate (S)	%	92	92	.06		

QUALITY CONTROL DATA

Project: Burma #25

Pace Project No.: 3576618

SAMPLE DUPLICATE: 526102

Parameter	Units	3577076003 Result	Dup Result	RPD	Max RPD	Qualifiers
Bromate	ug/L	0.52U	0.52U		20	
Dichloroacetate (S)	%	92	91	2		

SAMPLE DUPLICATE: 527517

Parameter	Units	3576443002 Result	Dup Result	RPD	Max RPD	Qualifiers
Bromate	ug/L	2.6U	2.6U		20	
Dichloroacetate (S)	%	93	94	.6		

QUALITY CONTROL DATA

Project: Burma #25
Pace Project No.: 3576618

QC Batch: WETA/22390 Analysis Method: EPA 335.4
QC Batch Method: EPA 335.4 Analysis Description: 335.4 Cyanide, Total
Associated Lab Samples: 3576618001

METHOD BLANK: 525771 Matrix: Water
Associated Lab Samples: 3576618001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	0.0050U	0.010	12/14/12 11:27	

LABORATORY CONTROL SAMPLE: 525772

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.05	0.054	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525773 525774

Parameter	Units	3576444001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Cyanide	mg/L	<0.0050	.05	.05	.05	0.053	0.055	106	110	90-110	4	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 525775 525776

Parameter	Units	3576618001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Cyanide	mg/L	0.0050 U	.05	.05	.05	0.055	0.049	108	97	90-110	10	20	

ANALYTICAL RESULTS

Project: Burma #25

Pace Project No.: 3576618

Sample: Burma #25 **Lab ID: 3576618001** Collected: 12/07/12 08:00 Received: 12/07/12 14:55 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC)	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0m	1.68 ± 0.824 (1.14)	pCi/L	12/14/12 07:12	12587-46-1	
Radium-226	EPA 903.1	0.592 ± 0.416 (0.201)	pCi/L	12/17/12 16:14	13982-63-3	
Radium-228	EPA 904.0	0.738U ± 0.344 (0.738)	pCi/L	12/17/12 14:29	15262-20-1	

QUALITY CONTROL DATA

Project: Burma #25

Pace Project No.: 3576618

QC Batch: RADC/14111

Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1

Analysis Description: 903.1 Radium-226

Associated Lab Samples: 3576618001

METHOD BLANK: 523382

Matrix: Water

Associated Lab Samples: 3576618001

Parameter	Act ± Unc (MDC)	Units	Analyzed	Qualifiers
Radium-226	0.170 ± 0.675 (0.934)	pCi/L	12/17/12 15:01	

QUALITY CONTROL DATA

Project: Burma #25

Pace Project No.: 3576618

QC Batch: RADC/14102

Analysis Method: EPA 900.0m

QC Batch Method: EPA 900.0m

Analysis Description: 900.0 Gross Alpha/Beta

Associated Lab Samples: 3576618001

METHOD BLANK: 523373

Matrix: Water

Associated Lab Samples: 3576618001

Parameter	Act ± Unc (MDC)	Units	Analyzed	Qualifiers
Gross Alpha	0.058 ± 0.523 (1.47)	pCi/L	12/14/12 06:44	

QUALITY CONTROL DATA

Project: Burma #25

Pace Project No.: 3576618

QC Batch: RADC/14113

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Associated Lab Samples: 3576618001

METHOD BLANK: 523384

Matrix: Water

Associated Lab Samples: 3576618001

Parameter	Act ± Unc (MDC)	Units	Analyzed	Qualifiers
Radium-228	0.511 ± 0.369 (0.713)	pCi/L	12/17/12 11:29	

QUALIFIERS

Project: Burma #25
Pace Project No.: 3576618

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty

(MDC) - Minimum Detectable Concentration

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

PASI-PA Pace Analytical Services - Greensburg

PASI-SF Pace Analytical Services - South Florida

ANALYTE QUALIFIERS

I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

J(D6) Estimated Value. The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

J(HS) Estimated Value. Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

J(L0) Estimated Value. Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

J(M0) Estimated Value. Matrix spike recovery was outside laboratory control limits.

J(M1) Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

J(S0) Estimated Value. Surrogate recovery outside laboratory control limits.

L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

Q Sample held beyond the accepted holding time.

Q Sample held beyond the accepted holding time. Analysis initiated more than 15 minutes after sample collection.

QUALIFIERS

Project: Burma #25
Pace Project No.: 3576618

ANALYTE QUALIFIERS

S3 Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples.
Results unaffected by high bias.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Burma #25
Pace Project No.: 3576618

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
3576618001	Burma #25	EPA 504.1	OEXT/10906	EPA 504.1	GCSV/7502
3576618001	Burma #25	EPA 508.1	OEXT/10930	EPA 508.1	GCSV/7522
3576618001	Burma #25	EPA 515.3	OEXT/10853	EPA 515.3	GCSV/7484
3576618001	Burma #25	EPA 531.1	GCSV/7479		
3576618001	Burma #25	EPA 547	GCSV/7480		
3576618001	Burma #25	EPA 549.2	OEXT/10895	EPA 549.2	GCSV/7526
3576618001	Burma #25	EPA 552.2	OEXT/10890	EPA 552.2	GCSV/7495
3576618001	Burma #25	EPA 200.7	MPRP/11486	EPA 200.7	ICP/7435
3576618001	Burma #25	EPA 200.8	MPRP/11487	EPA 200.8	ICPM/4676
3576618001	Burma #25	EPA 245.1	MERP/3363	EPA 245.1	MERC/3365
3576618001	Burma #25	EPA 525.2	OEXT/10882	EPA 525.2	MSSV/4110
3576618001	Burma #25	EPA 548.1	OEXT/10892	EPA 548.1	MSSV/4105
3576618001	Burma #25	EPA 524.2	MSV/7240		
3576618002	Trip Blank	EPA 524.2	MSV/7240		
3576618001	Burma #25	EPA 524.2	MSV/7241		
3576618001	Burma #25	EPA 900.0m	RADC/14102		
3576618001	Burma #25	EPA 903.1	RADC/14111		
3576618001	Burma #25	EPA 904.0	RADC/14113		
3576618001	Burma #25	SM 2150B	SFL/6833		
3576618001	Burma #25	SM 2540C	SFL/6847		
3576618001	Burma #25	SM 2120B	WET/16559		
3576618001	Burma #25	SM 4500-H+B	WET/16577		
3576618001	Burma #25	SM 5540C	WET/16549		
3576618001	Burma #25	EPA 300.0	WETA/22256		
3576618001	Burma #25	EPA 300.0	WETA/22267		
3576618001	Burma #25	EPA 300.1	WETA/22412		
3576618001	Burma #25	EPA 300.1	WETA/22411		
3576618001	Burma #25	EPA 335.4	WETA/22390	EPA 335.4	WETA/22440

**APPENDIX F
PROJECT PHOTOGRAPHS &
ELECTRONIC COPY OF WELL COMPLETION
REPORT**

BR-22B Photos











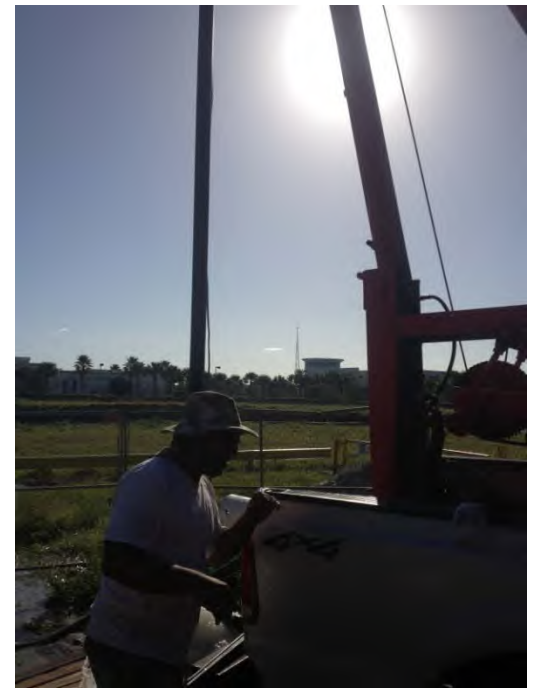


BR-25B Photos










NPB-5C Photos





CERTAINTED 16" SDR17 CLASS 250  CERTA-LOK WELL CASING IC- PV; (ASTM F4801) NSF-wc-G B 09-12-12 08:53 AM BM05 MADE IN USA 654718

CERTAINTEED "DR17S 250" CERTA-LOK WELL CASING IC-1 PVC (ASTM F4801 NSF-WC-G B 09-12-12 08: AM BM05 MADE IN USA 654718

CERTIFIED 16" SDR17 CLAS 250 CERTA-LOK WELL CASING IC- PVC (ASTM F4801 NSF-W 09-12-12 08: AM BM05 MADE IN USA 654718

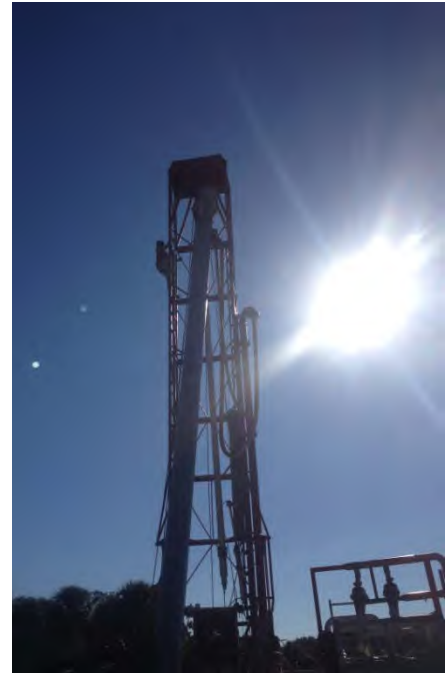
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Certa-Lok™ Well Casing CPLG
16 INCH PVC
NSF-61-G

082157707117

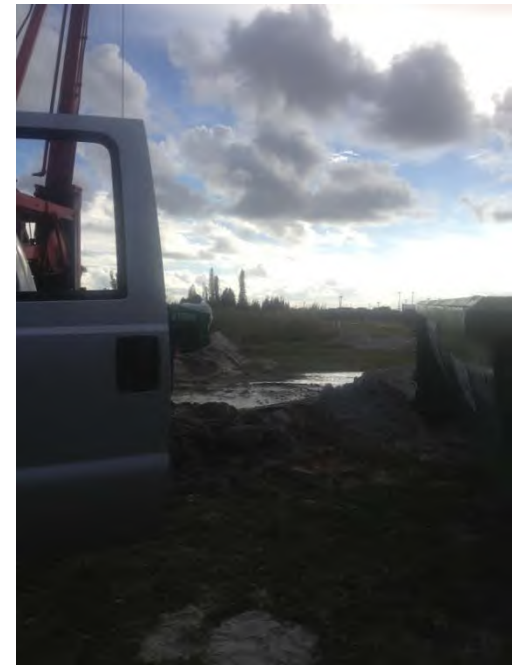






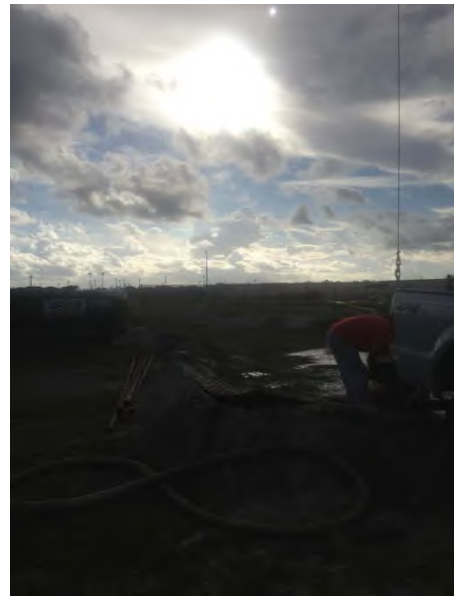






















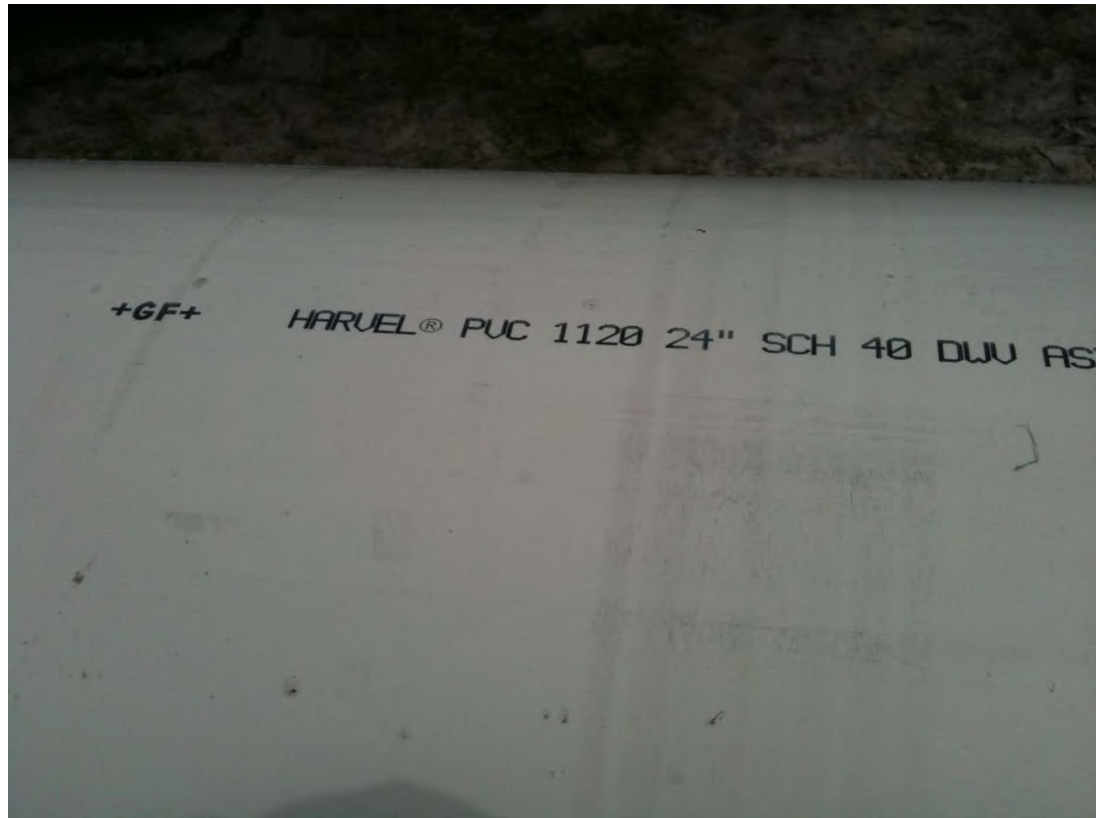








NPB-6B Photos

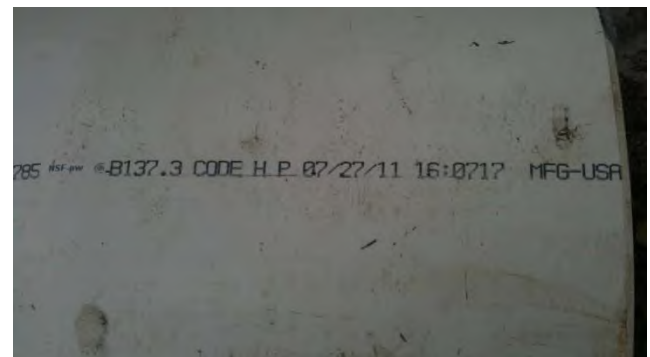
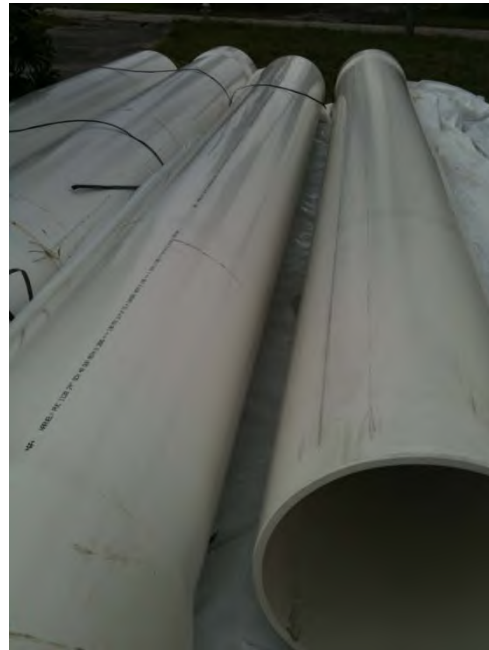


DUJ ASTM D 2665 NSF-dwv 130 PSI U.P.@ 73.4 (

U.P.@ 73.4 (WATER) ASTM D 1785 NSF-pw ® B7

TM D 1785 NSF-pw ® B137.3 CODE H P 04/14/

DE H P 04/14/12 22:05 17 MFG-USA







Piece #1 sitting over hole,
(on pallet over borehole)
picking up ~~piece~~ piece #
2 (19.95')





