PUBLIC WATER SUPPLY WELL UFA-2
CONSTRUCTION REPORT
CITY OF LABELLE
LABELLE, FLORIDA

Prepared for

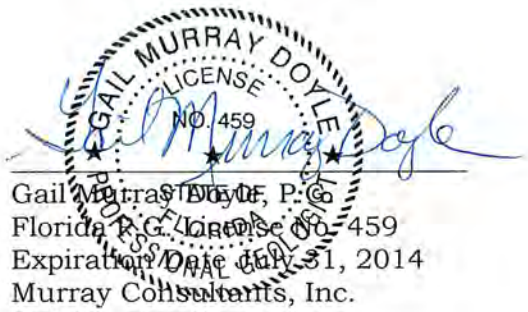
Applied Technology & Management, Inc.

December 2013

Murray Consultants, Inc.
769 Skyview Dr
Hayesville, FL 28904
828/389-2476

PROFESSIONAL GEOLOGIST CERTIFICATION AND APPROVAL

I, Gail Murray Doyle, P.G. No. 459, certify that I currently hold an active Professional Geologist license in the State of Florida. I further certify that the April 2013 document titled "Public Water Supply Well UFA-2 Construction Report, City of LaBelle" was prepared by me. Moreover, I certify that Murray Consultants Inc. holds an active certification of authorization No. GB174.



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Date: December 19, 2013

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INTRODUCTION

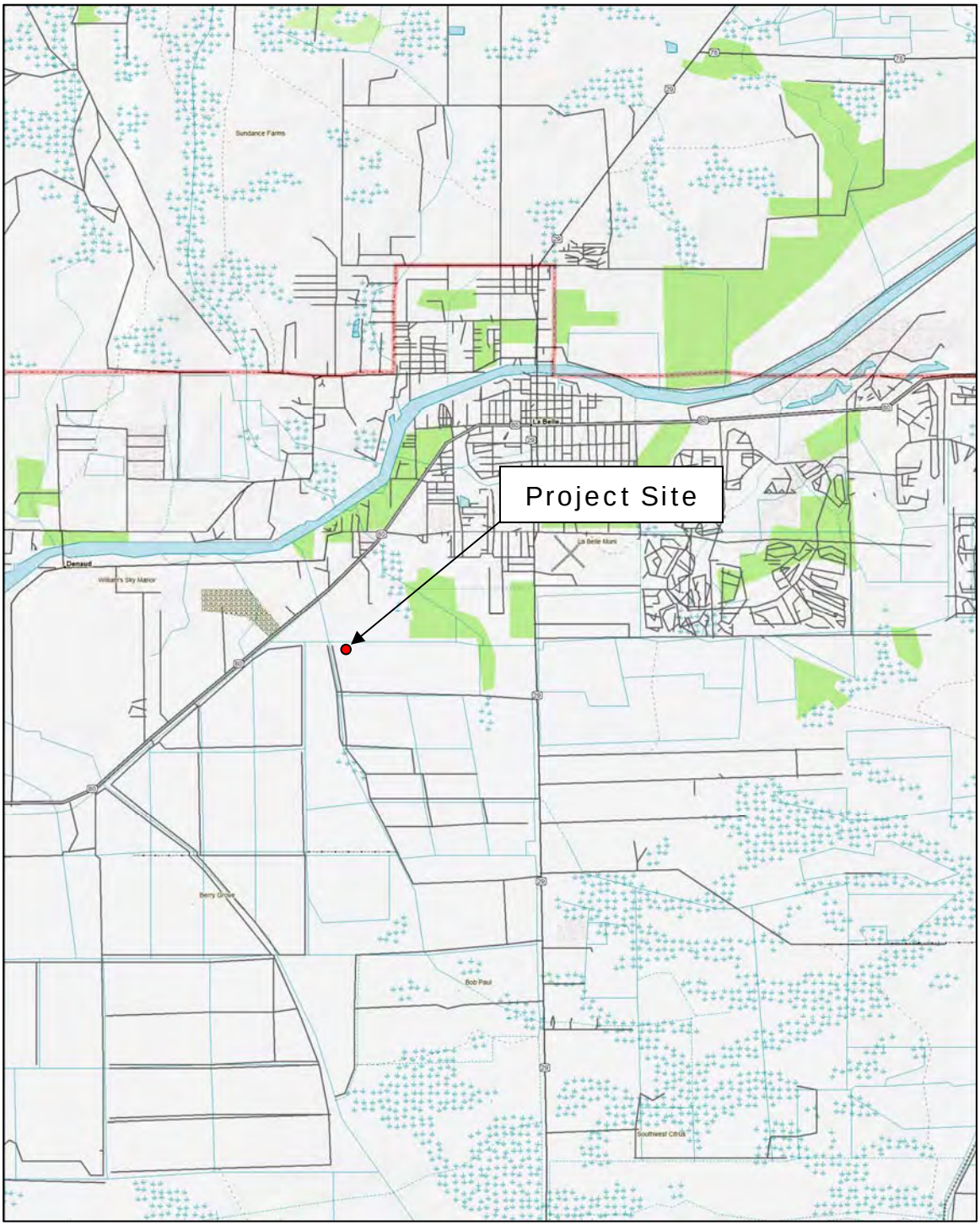
The City of LaBelle (City) is constructing a Reverse Osmosis (RO) Water Treatment Plant, just south of the city on part of what was the Bob Paul Grove. The non-potable source of water will be from the Upper Floridan Aquifer. Murray Consultants Inc was retained by Applied Technology & Management to provide hydrogeologic consulting services to design, oversee the construction, run geophysical logging, and pump test two RO production wells. This report covers the construction of the second well, UFA-2.

Well UFA-2 was constructed with 600 feet of casing and open borehole to 697 feet. Wells & Water Systems Inc constructed the well. The well site is located in Section 19, Township 43 South, Range 29 East. The location of the well UFA-2 is shown in **Figures 1 and 2**.

This report describes the hydrogeology, well construction, data collected, pump testing, and discussion of the test results.

HYDROGEOLOGY

There are three major aquifer systems in the LaBelle area: Surficial Aquifer System (SAS), Intermediate Aquifer System (IAS) or Confining Beds, and Floridan Aquifer System (FAS). The SAS can be divided into two broad zones: the water table aquifer consisting of sand and shell and a confining zone that consists of sandy clay. The IAS consists mainly of clay, mudstone, and interbedded limestone units. Some of these limestone units in the LaBelle area provide water, especially near the top of the system, which is known as the Sandstone Aquifer. The FAS is a very thick sequence of limestone and dolostones that occurs from about 600 to 3,700 feet. This system has three aquifers: Upper Floridan, Middle Floridan and Lower Floridan. The Upper Floridan Aquifer is expected to be between about 600 and 900 feet below land surface.



N

1 IN = 8,000 FT
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FIGURE 1
SITE LOCATION MAP
CITY OF LABELLE
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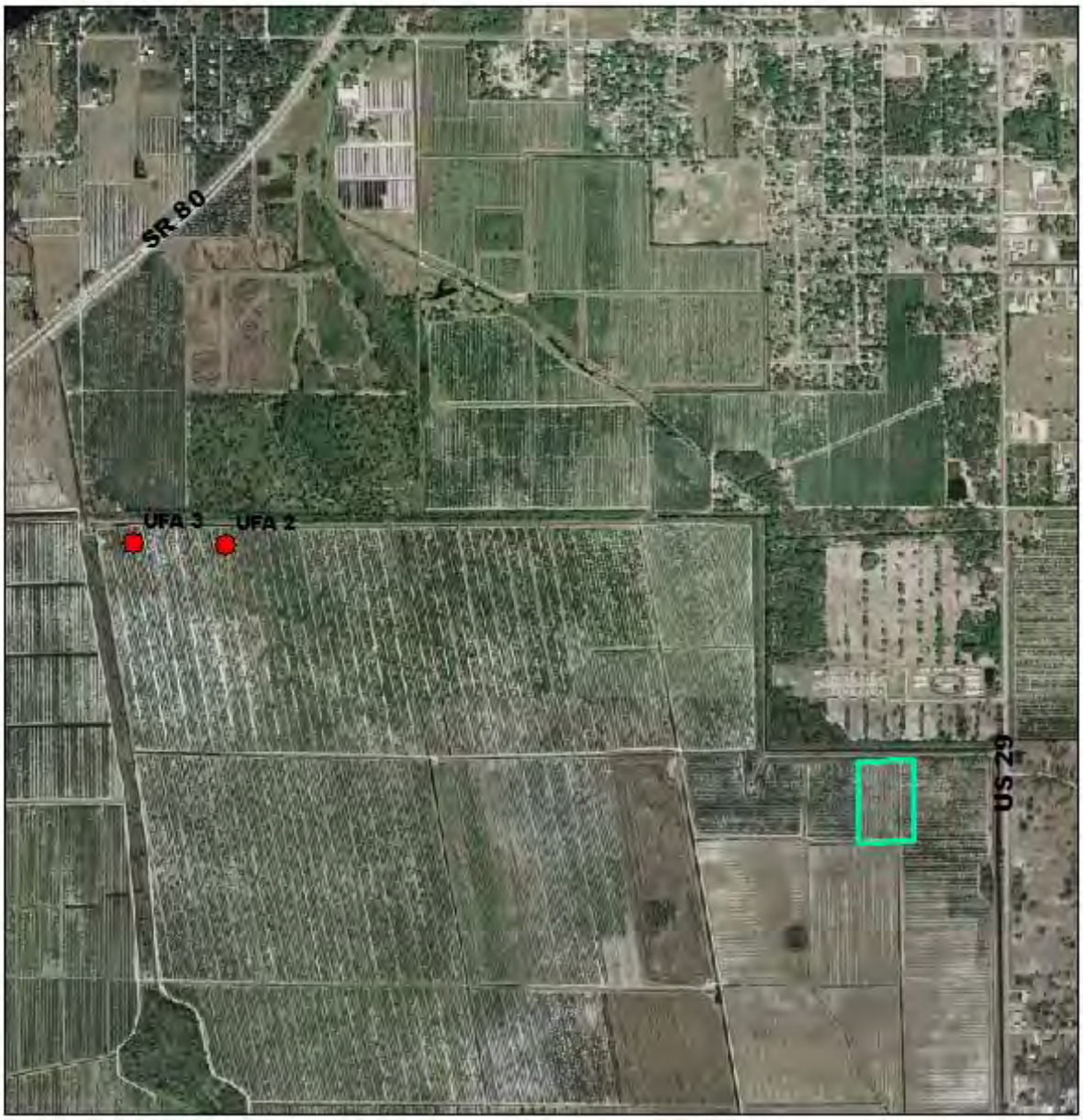

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FIGURE 2
UFA WELL LOCATION MAP
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WELL CONSTRUCTION

From March 21 to March 24, 2013, Wells & Water Systems mobilized and set up at the site, **Figure 3**. Mud rotary was used to drill the well.

FIGURE 3: WELL DRILLING SET-UP

On March 25th, a 30-inch hole to 40 ft was drilled and surface casing set and grouted. The surface casing is 24-inch steel pipe, set to 40 feet below land surface. Eighty bags of neat cement were used to grout the casing. See **Figure 4** for the surface casing setting picture and **Figure 5** for the grouting.

After the installation of the surface casing, a 7⅞-inch pilot hole was drilled to 206 ft. Based on the geology, it was determined to install 204 ft of intermediate casing. A 23-inch bit was used to ream the pilot hole to 206 ft. Centralizers were placed on the casing at 5 ft from the bottom, than every 40 ft.

The casing is 18-inch Schedule 80 PVC, which has an 18-inch outer diameter (OD) and a 16-inch inner diameter (ID).

FIGURE 4: 24-INCH SURFACE CASING INSTALLATION

FIGURE 5: 24-INCH SURFACE CASING GROUTING

On April 3rd, the intermediate casing was set. The casing was grouted in two stages with neat cement. The first stage was pressure grouted to 145 ft below land surface, with the second stage to land surface with a tremie pipe. The bottom of the casing took a lot of cement in an area where there was lost circulation during drilling. A total of 345 bags of neat cement were used for the grouting. Pictures of the setting and grouting of the intermediate casing are shown in **Figures 6 and 7**.

FIGURE 6: 18-INCH INTERMEDIATE CASING INSTALLATION

FIGURE 7: INTERMEDIATE CASING GROUTING SET-UP

After the cement cured, a 9⅞ pilot hole was drilled to 716 feet. Drill cutting samples were collected during the drilling of all of the pilot holes and described. The lithologic description for the total depth drilled is included in **Appendix A**. On April 18, 2013, geophysical logging was performed for gamma ray, caliper, and dual induction by Steve Miller of MV Geophysical Surveys, Inc.

The pilot hole was reamed to 15 inches from 204 ft to 603 feet. On April, 2013, 10-inch CertainTeed Certa-Lok PVC casing was installed to 603 feet. Centralizers were placed on the bottom of the pipe, then every 40 feet to the top of the pipe. The top 180 feet was installed with a threaded coupling, so that it could be removed after grouting. This allows for the installation of a pump that will withdraw at least 1500 gpm. **Figure 8** shows the installation of the production casing.

FIGURE 8: PRODUCTION CASING INSTALLATION

The production casing was grouted from bottom to top (130 feet below land surface) with Portland neat cement. The first lift was pressure grouted from 603 feet to 270 feet, using 138 bags of cement. The balance of the grouting was performed with a tremie pipe within the annulus. Fifty-seven (57) bags of cement were installed for the second lift of grouting, which took the grout from 270 to 130 feet. The second lift took the cement 50 feet too high: the lift should have been to 180 feet. The driller constructed a tool to cut the Schedule 40 PCV at 130 feet. The casing was grouted with a total of 195 bags of neat cement. **Figure 9** shows the grouting of the production casing.

FIGURE 9: PRODUCTION CASING GROUTING

On May 3, 2013 the open borehole was drilled. A 7⅞-inch drill bit was used for mud rotary drilling from 600 to 723 feet. The well started free flowing once the drilling mud was thinned. The drill rods were removed to 100 feet and the well developed with air, see **Figure 10**. **Figure 11** is the free flow after 8 hours of air development and has a flow of 900 gpm. The flow was measured using a flow meter.

FIGURE 10: AIR DEVELOPMENT

FIGURE 11: FREE FLOW AFTER DEVELOPMENT AIR DEVELOPMENT

Steve Miller of MV Geophysical Surveys performed geophysical logs on May 7, 2013. The following geophysical logs were performed: video, caliper, gamma ray, temperature, dynamic flow and conductivity. The bottom of the hole was tagged at 697 ft below land surface. **Figure 12** is a picture of the open hole. The video of the well is included in **Appendix B.**

FIGURE 12: VIEW OF CAVITY FROM DOWNHOLE CAMERA

The logs show that the borehole depth is 697 feet, leaving 97 feet of open hole. The flow log indicates that the majority of the water is flowing into the hole between 670 and 680 feet below land surface. The caliper log also shows a small cavity between 670 and 674 feet below land surface. The conductivity log shows an average reading of 3320 µS/cm to 670 feet and an average of 3485 µS/cm below 670 feet to the bottom of the hole. The temperature was 85.1° F down to 670 feet, where there is a slight increase to 85.5° to the bottom of the hole. The geophysical results are shown in **Figure 13** and **Appendix B**.

Air development continued until May 10, 2013 with a total air development time of about 35 hours. Development continued with the test pump another 20 hours for a total development time of 55 hours.

A Silt Density Test (SDI) test was run upon completion of development and when the well was being pumped at 1500 gpm. The result of that test was 0.0 and the sand content measured about 0.2 mg/l.

A water sample was collected and field-tested right after development. **Table 1** shows the results of the testing.

TABLE 1: WATER QUALITY

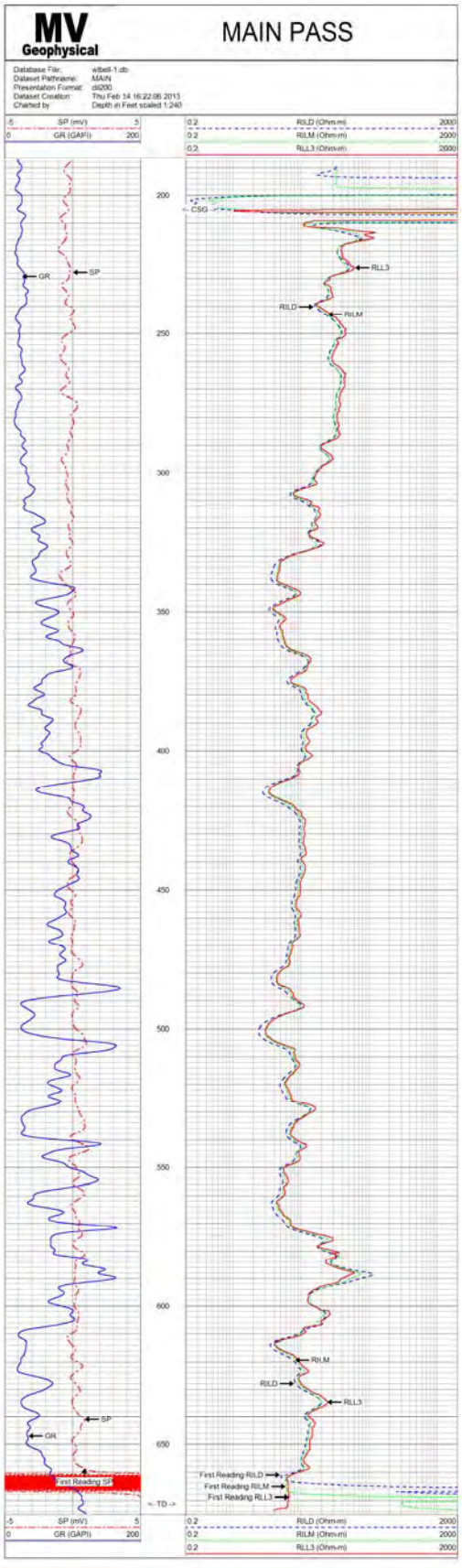
Specific Conductance (μS/cm)	TDS (mg/l)	Chloride (mg/l)	Temp (°F)	Sulfur smell
3,290	1,650	880	85.3	Mild

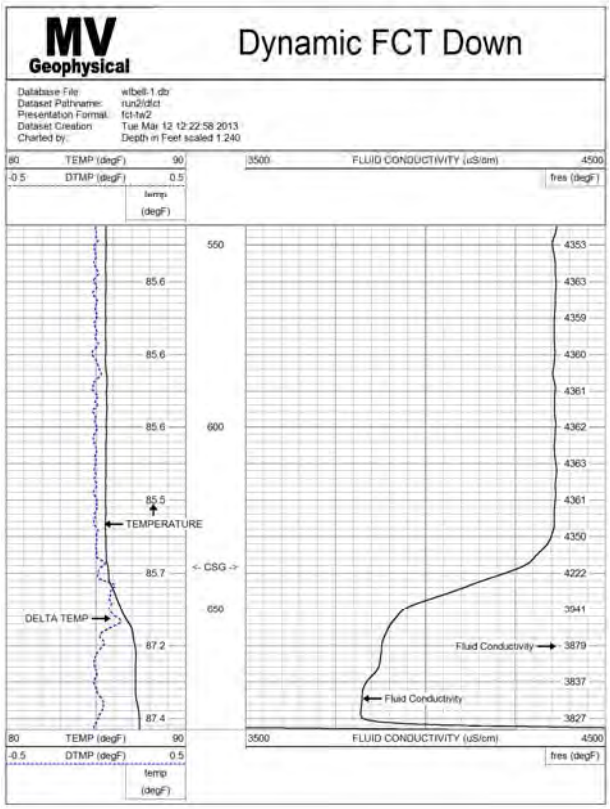
DATA COLLECTED

Figure 14 depicts the 'As-Built' drawing, lithologic description, and hydrogeologic units of UFA-3. **Table 2** details the final well construction.

TABLE 2: WELL CONSTRUCTION DETAILS

	Surface Casing	Intermediate Casing	Well Casing
Diameter (in)	24	18	10
Depth (ft)	40	204	600
Open Borehole Depth (ft)			696
Construction Material	Steel	PVC Schedule 80	PVC CertainTeed SDR 17 Certa-Lok





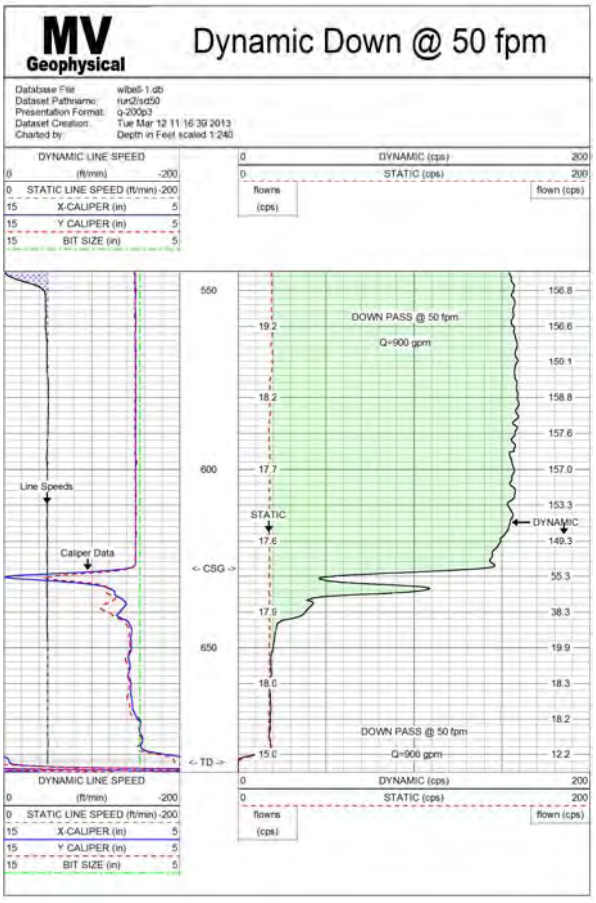


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FIGURE 13
GEOPHYSICAL LOGGINGS RESULTS
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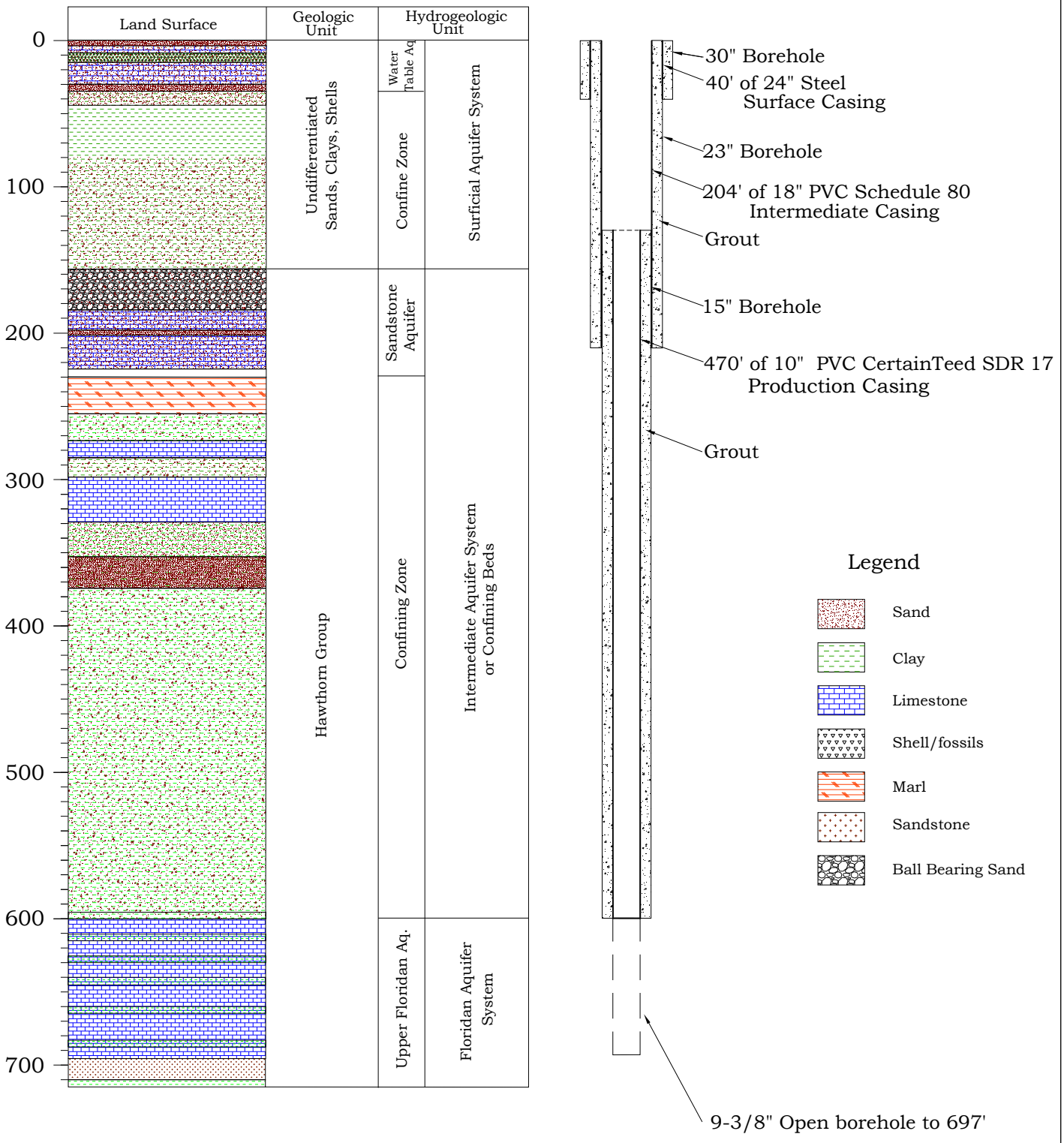

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FIGURE 14
UFA-2 'AS-BUILT' DRAWING
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PUMP TESTING

Set-Up

The same set-up was used for performing both the Step-Drawdown Test (SDT) and the Aquifer Performance Test (APT). A pressure transducer was installed in the well to measure the drawdown and the pumping rate was calculated using an orifice and manometer. The well is free flowing with a water level approximately 34 feet above land surface. Water was discharged about 20 feet from the well which flowed into a grove ditch. A 6-inch value was installed to regulate the flow rate. **Figure 15** is a picture of the SDT and APT set-up.

FIGURE 15: PUMP TEST SET-UP

Step-Drawdown Test

A Step-Drawdown Test (SDT) was performed on May 17, 2013 by Wells & Water Systems. The test included three steps, pumping about 50 minutes a step. **Table 3** lists the results of the SDT. The drawdown in this table represents the water level drop from the initial water level of 34.3 ft above measuring point (MP).

TABLE 3: SDT RESULTS

Q (gpm)	s (ft)	WL below MP	Q/s (gpm/ft)	s/Q (ft/gpm)
1370	33.0	3.0	41.52	0.0241
1760	47.5	17.5	37.05	0.0270
1980	55.1	25.1	35.93	0.0278

Aquifer Performance Test

An Aquifer Performance Test was performed on May 21, 2013 after the SDT was completed and the aquifer had stabilized. The well was pumped at a starting rate of 1560 gpm and dropped to 1440 after 24 hours and recovered for 24 hours. The average pumping rate was 1500 gpm. The initial water level at the start of the test was 34.3 feet above the measuring point. The measuring point elevation was surveyed at 16.63 ft NGVD. The maximum drawdown was 42.9 ft below starting head, or 8.6 feet below the measuring point.

Aquifer Performance Test Results

The drawdown and recovery data was analyzed using **AquiferTest**, a computer program developed by Waterloo Hydrogeologic Inc. has a suite of analytical solutions for determining aquifer properties from pumping tests. From the program, the Cooper-Jacob time-drawdown and Theis Recovery solution were used to analyze the data.

The Cooper-Jacob time-drawdown solution is a straight-line analysis that uses the following equations for confined aquifers:

$$T = 2.3Q/4\pi\Delta s \qquad S = 2.25Tt_0/r^2$$

The Walton solution equations are:

$$T = Q/4\pi s[W(u,r/L)] \qquad S = 4Ttu/r^2$$

The Theis Recovery equations are:

$$T = Q/4\pi s'[W(u,r/L-W(u',r/L)]$$

where,
T = transmissivity, ft^2/d
Q = pumping rate, ft^3/d
s = drawdown, ft
r = distance of observation well from pumped well, ft
t_0 = time at which the straight line fit intersects the time axis, days
S = storage coefficient, dimensionless

Leakance was determined by the following equation: $L = 1/c$
c = *hydraulic resistance, d*

The above equations assume the aquifer homogeneous, anisotropic, infinite in areal extent, of constant thickness, the production and observation wells having no storage capacity, the wells fully penetrating the aquifer, and the aquifer potentiometric surface initially being horizontal.

The results of the analysis are tabulated below in **Table 4**.

TABLE 4: AQUIFER PERFORMANCE TEST RESULTS

	Cooper-Jacob Time Drawdown		Walton			Recovery
	Transmissivity (ft^2/d)	Storage	Transmissivity (ft^2/d)	Storage	Leakance (/d)	Transmissivity (ft^2/d)
UFA-2	15,400					
UFA-3	12,500	7.50E-05	14,700	9.13E-05	1.50E-06	11,700

The data logger in UFA-2 did not function properly, so the manual drawdown data was used for the analysis. Manual recovery data could not be taken due to the water levels rising above the manual measuring point. The average transmissivity value calculated from the drawdown and recovery data is 13,600 ft^2/d or 101,700 gpd/ft. This value is consistent with the APT results for the test well installed in 2010, UFA-3, and for a SFWMD well LAB-PW (Bennett, 2003) that pumped the same zone. The data analysis is included in **Appendix C**.

The well was disinfected upon completion of the testing and withdrawal of the test pump. Water samples were collected for testing of the Drinking Water Standards. The results are included in **Appendix D**.

DISCUSSION

UFA-2 construction and testing was completed on May 23, 2013. The well is completed with 204 feet of 18-inch casing to accommodate the pump and 396 feet of 10-inch casing to a total depth of 600 ft. The static hydraulic head is about 34 feet above the measuring point during the testing. The well should pump at a rate of 1500 gpm with about 10 feet of drawdown inside the well casing. Due to additional off-site interference, it is recommended installing the pump at least 80 feet below the top of casing. The APT performed resulted in a calculated transmissivity of 13,600 ft^2/d or 101,700 gpd/ft.

The water table aquifer was encountered from land surface to about 40 feet. Beneath the water table is a confining unit to about 157 feet. Underlying the confining unit is the Sandstone Aquifer, which is the top of the Intermediate Aquifer System or Confining Beds and marks the top of the Hawthorn Group. The Hawthorn Group consists mainly of greenish gray to dark greenish gray sandy phosphatic clays. Interbedded with the clays are stringers of sandy phosphatic limestone. The Upper Floridan Aquifer, which resides in the basal part of the Hawthorn Group and the Suwannee Limestone Unit, starts at about 600 feet below land surface. The production water is coming from a limestone unit between 670 and 680 feet, which is the basal part of the Hawthorn Group included in the Upper Floridan Aquifer.

BIBLIOGRAPHY

Bennett, M.W., 2003. Hydrogeologic Investigation of the Floridan Aquifer System, LaBelle, Hendry County, Florida. Technical Publication WS-15. SFWMD. WPB, FL.

APPENDIX A

Murray Consultants, Inc.

Project Name: LaBelle RO Wells
Project No.: 12-2372
Well No.: UFA-2
Sampling Method: Continuous Grab
Described By: Gail Doyle

Depth ft bls	Description
0 - 2	**Sand**, pale yellowish brown (10YR 6/2), fine grained, subangular to subrounded
2 - 8	Sandy **Limestone**, pale yellowish brown (10YR 6/2) , hard, slow drilling
8 - 13	Sandy Shelly **Clay**, light greenish gray (5Y 8/1), fragments to whole shells, fine grained quartz sand
13 - 15	**Shell**, very pale orange (10YR 8/2)
15 - 30	Sandy Fossiliferous **Limestone**, light gray (N7), hard drilling
30 - 33	Clayey Shelly **Sand,** yellowish gray (5Y 8/1), fine grained, subangular, limestone pieces, phosphatic
33 - 35	Same as above, except semi-consolidated
35 - 43	Sandy **Clay,** light greenish gray (5GY 8/1), fine grained quartz, phosphate and calcium sand
43 - 79	**Clay**, dark greenish gray (5GY 4/1), sticky, minor quartz and phosphate fine grained sand
79 - 90	Sandy Shelly **Clay**, dark greenish gray (5GY 4/1); shell fragments, fine grained quartz and phosphate sand
90 - 128	Sandy **Clay**, dark greenish gray (5GY 4/1); fine grained quartz and phosphate sand
128 -130	Clayey Shelly **Sand**, greenish gray (5GY 6/1), very fine grained, subangular to subrounded, quartz and phosphate; minor large grains
130 -157	Sandy **Clay,** greenish gray (5GY 6/1); fine to large gravel grained quartz and phosphate sand
157 - 185	**Sand** (Ball Bearing Sand), white (N9) to medium gray (N5) to black (N1), medium to pebble grained, rounded, quartz and phosphate; minor limestone
185 - 198	Sandy **Limestone**, yellowish gray (5Y8/1), solution
198 - 201	**Sand** (Ball Bearing Sand), white (N9) to medium gray (N5) to black (N1), fine to small gravel grained, rounded, quartz and phosphate
201- 226	Sandy **Limestone**, yellowish gray (5Y8/1), solution
226 - 230	Sandy **Clay,** yellowish gray (5Y8/1); very fine grained phosphate sand
230 - 256	**Marl**, light greenish gray (5G 8/1), phosphatic
256 - 273	Sandy **Clay**, light greenish gray (5G 8/1); fine grained quartz and phosphate; stringers of semi-consolidated sandy clay
273 - 285	Fossiliferous **Limestone,** very pale orange (10YR 8/2); minor phosphatic sand
285 - 298	Sandy **Clay**, greenish gray (5G 6/1); fine grained quartz and phosphate; stringers of semi-consolidated sandy clay
298 - 316	Fossiliferous **Limestone**, yellowish gray (5Y8/1); minor phosphatic sand
316 - 318	**Clay**, greenish gray (5GY 6/1), soft, sticky; minor phosphatic sand
318 - 329	Fossiliferous **Limestone,** yellowish gray (5Y8/1); minor phosphatic sand
329 - 353	Sandy **Clay**, dark greenish gray (5GY 4/1), phosphatic
353 - 375	Clayey silty **Sand**, greenish gray (5GY 6/1), phosphate and quartz, very fine grained, subangular to subrounded; minor semi-consolidated stringers
375 - 394	Sandy Shelly **Clay**, light greenish gray (5G 8/1); very fine grained phosphate sand; minor semi-consolidated stringers
394 - 410	Clayey Shelly **Sand**, greenish gray (5GY 6/1), very fine grained, subangular to subrounded, quartz and phosphate; minor large grains
410 - 470	Sandy **Clay,** light greenish gray (5GY 8/1); very fine grained phosphate sand; stringers of fossiliferous limestone

Murray Consultants, Inc.

Project Name: LaBelle RO Wells
Project No.: 12-2372
Well No.: UFA-2
Sampling Method: Continuous Grab
Described By: Gail Doyle

Depth ft bls	Description
470 - 483	Sandy **Clay**, dark greenish gray (5GY 4/1) fine grained quartz and phosphate sand
483 - 490	Silty **Clay**, greenish gray (5GY 6/1)
490 - 506	Clayey Shelly **Sand,** greenish gray (5GY 6/1), very fine to coarse grained, subangular to subrounded, quartz and phosphate; minor large grains
506 - 546	Sandy Shelly **Clay**, greenish gray (5GY 8/1); fine to coarse grained quartz and phosphate sand: interbedded with sandy **Limestone**, yellowish gray (5Y 8/1)
546 - 600	Sandy **Clay**, light olive gray (5Y 6/1); fine to coarse grained phosphate, quartz and calcite sand; minor limestone stringers
600 - 636	Sandy **Limestone,** yellowish gray (5Y 8/1) to light olive gray (5Y 6/1) to pale yellowish brown (10YR 6/2); sand is very fine phosphate INTERBEDDED with : Sandy **Clay**, (N7); very fine quartz and phosphate sand
636 - 656	Sandy **Limestone**, light gray (N7) to pale yellowish brown (10YR 6/2); fine grained quartz and phosphate sand, fossil molds: minor clay stringers
656 - 696	Sandy **Limestone**, light gray (N7) to pale yellowish brown (10YR 6/2); fine grained quartz and phosphate sand, fossil molds: INTERBEDDED with Sandy **Clay**, light greenish gray (5GY 8/1); fine to coarse grained phosphate and quartz sand
696 - 710	Calcareous **Sandstone**, very pale orange (10YR 8/2) to light gray (N7): clay matrix, very soft and friable; minor fossil fragments
710 - 715	Sandy **Clay,** light greenish gray (5GY 8/1); fine to coarse grained phosphate and quartz sand

APPENDIX B

MV Geophysical

X-Y CALIPER GAMMA RAY LOG

Company	Wells & Water Systems, Inc.
Well	UFA-2
Field	LaBelle
County	Hendry
State	Florida
Country	USA

Company Wells & Water Systems, Inc.
Well UFA-2
Field LaBelle
County Hendry
State Florida Country USA

Location: API # :
City of LaBelle
N 871669.65 E 504488.27
Murray Consultants, Inc.
SEC TWP RGE

Other Services
XY/GR
DIL/SP

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

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

Date	18-APR-2013								
Run Number	ONE								
Depth Driller	716'								
Depth Logger	709'								
Bottom Logged Interval	709'								
Top Log Interval	SURFACE								
Open Hole Size	9.875"								
Type Fluid	MUD								
Density / Viscosity	NA/NA								
Max. Recorded Temp.	NA								
Estimated Cement Top	SURFACE								
Time Well Ready	11:00 4/18/2013								
Time Logger on Bottom	11:30 4/18/2013								
Equipment Number	MVGS-1								
Location	Fort Myers								
Recorded By	S.Miller/C.Miller								
Witnessed By	G.MurrayDoyle (MCI)	T.Rosenkranz (WWS)							

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	9.875"	204'	716'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	18" PVC	16" ID	SURFACE	204'
Prot. String				
Production String				
Liner				

Invoice No.	2013057	3x/pdf/las	wlbell-2.db

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Comments

MAXIMUM ARM EXTENSION: 33"

MV Geophysical

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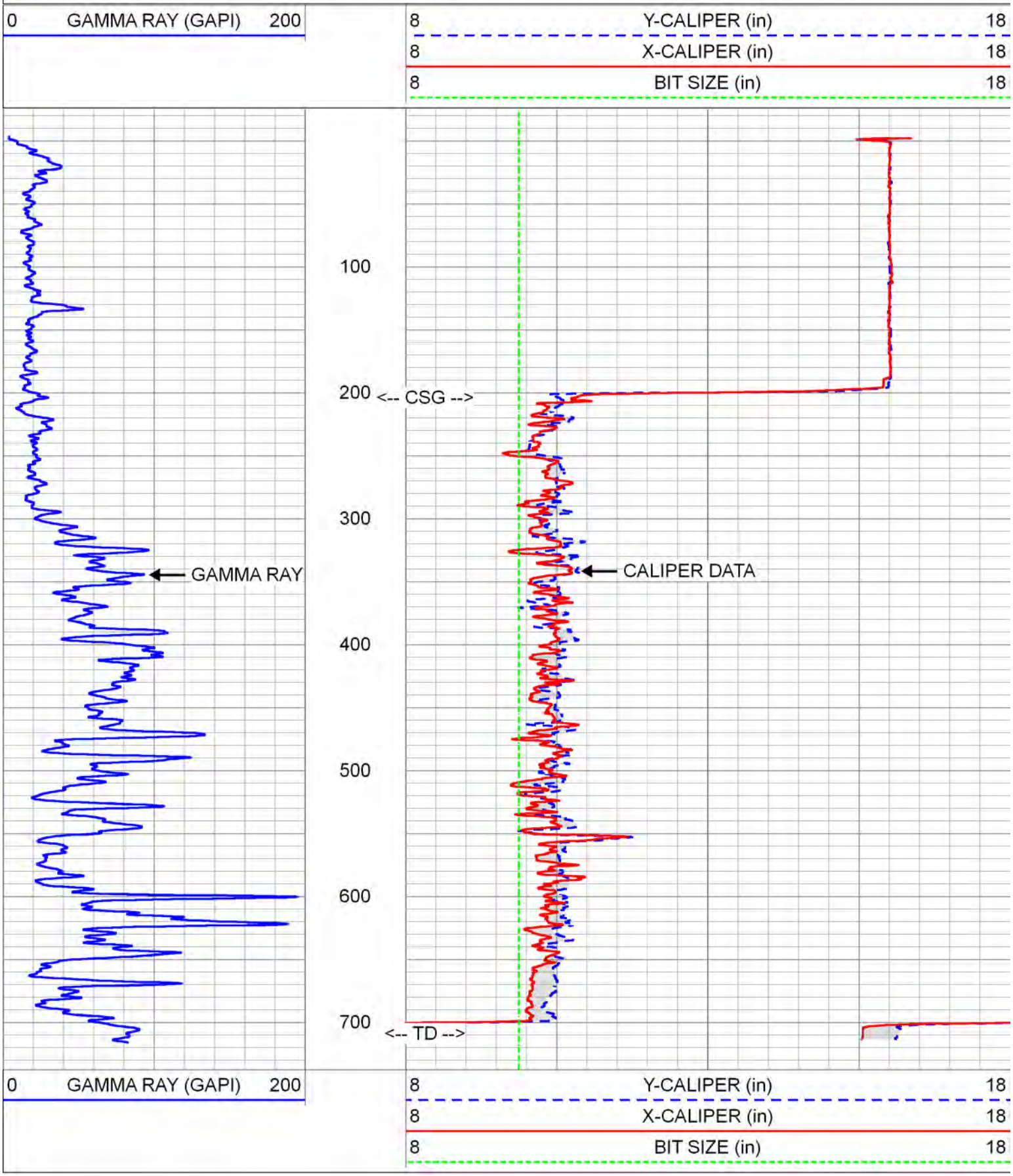

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MAIN PASS

MV Geophysical

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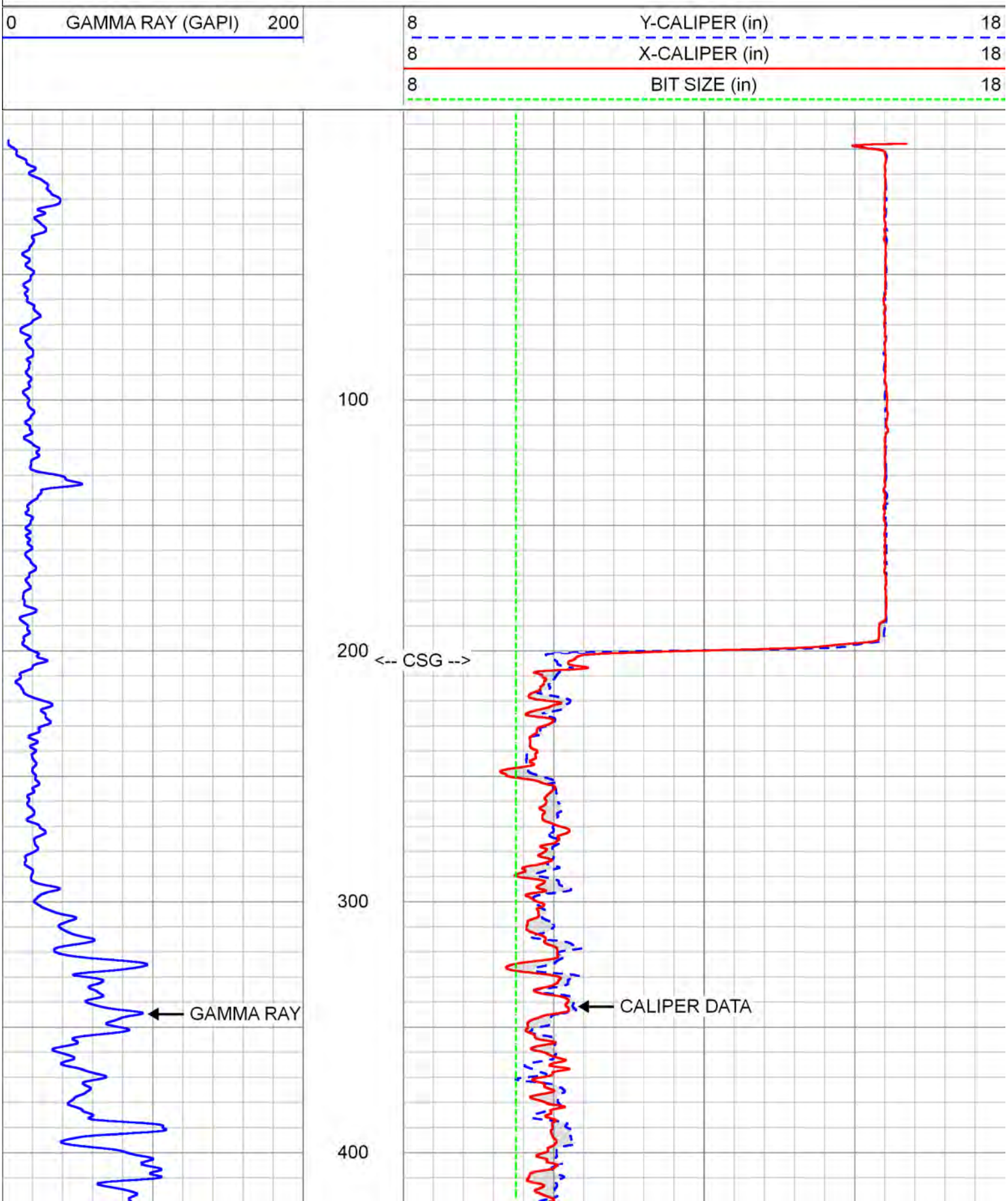

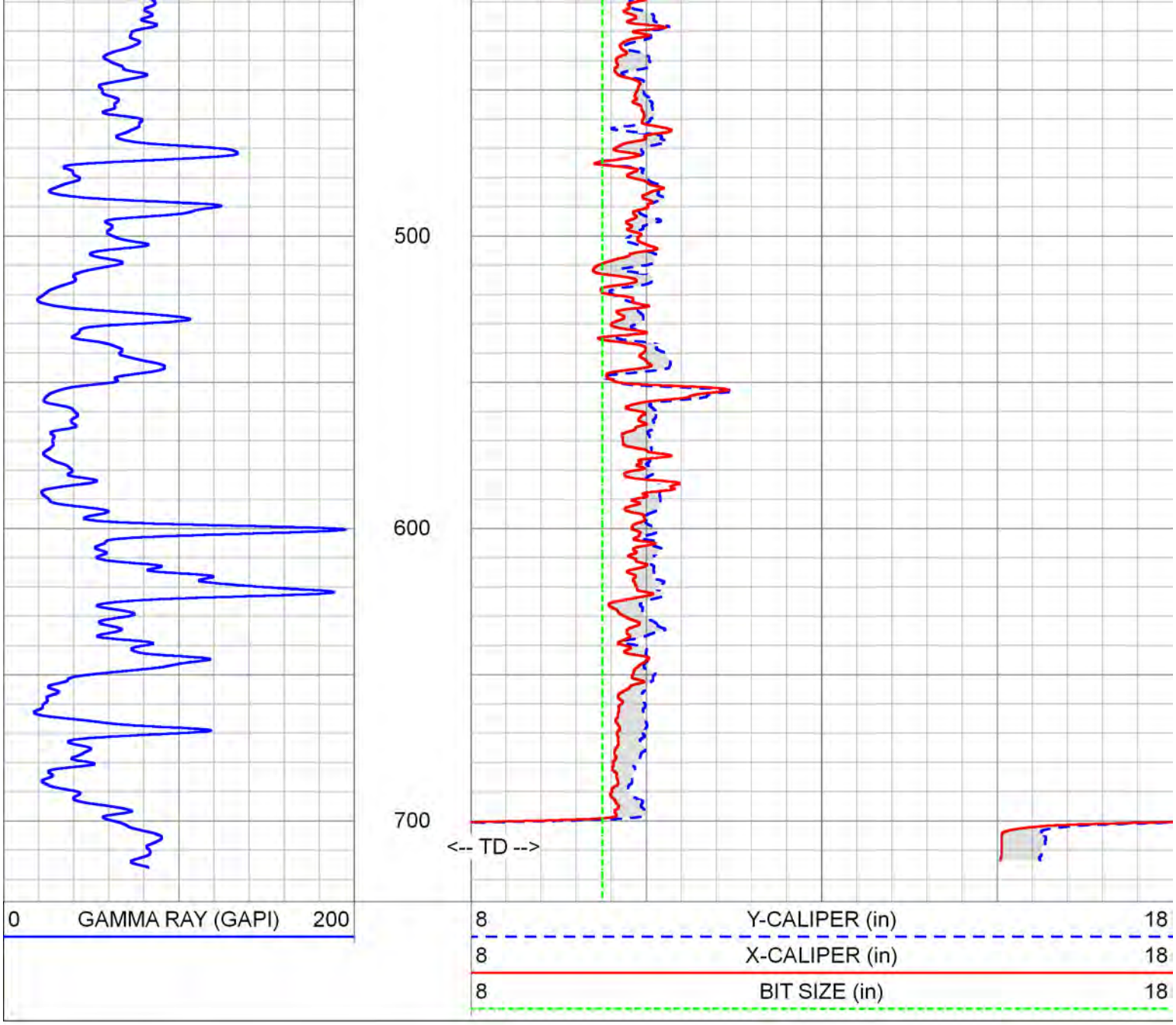

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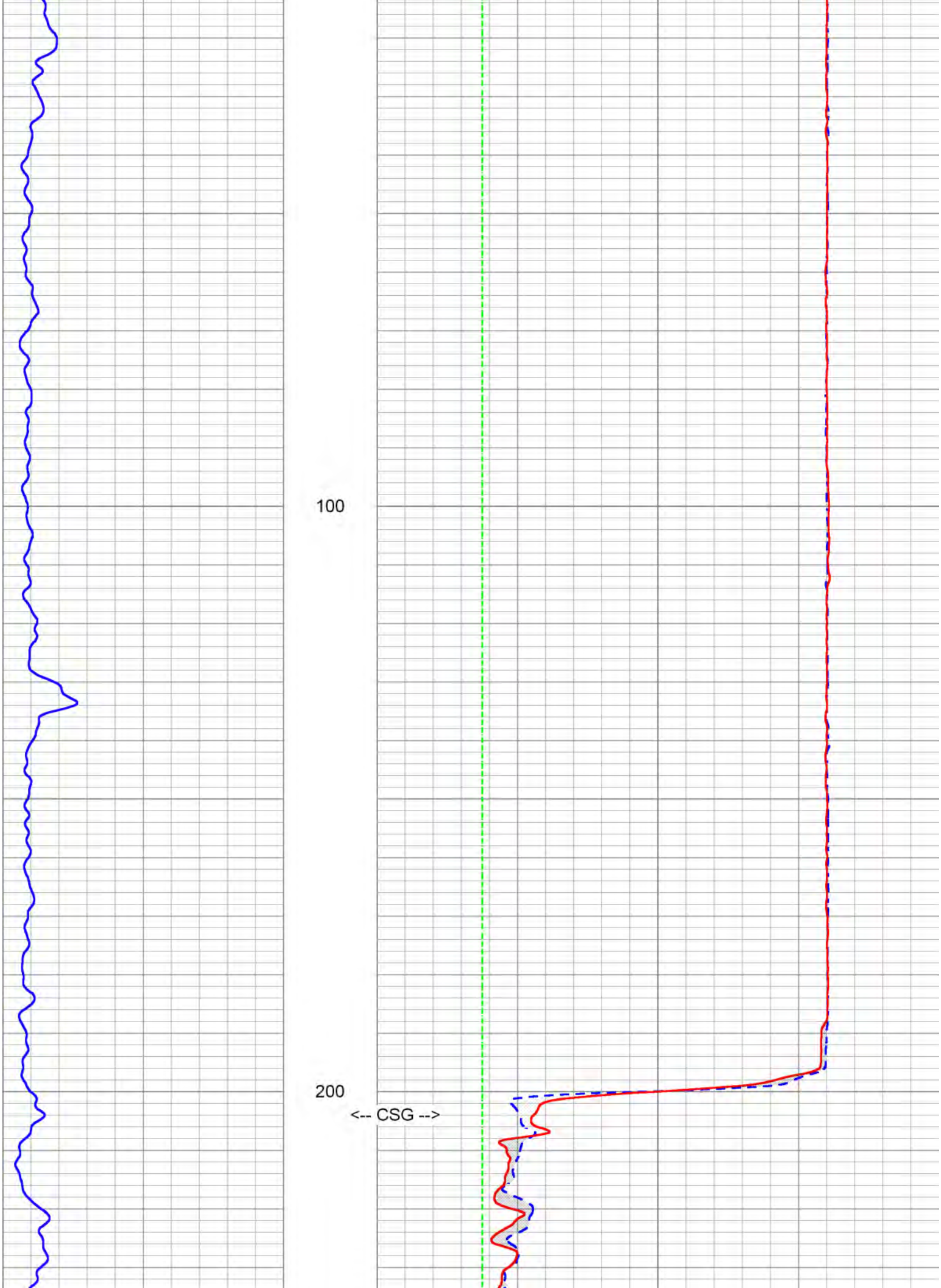
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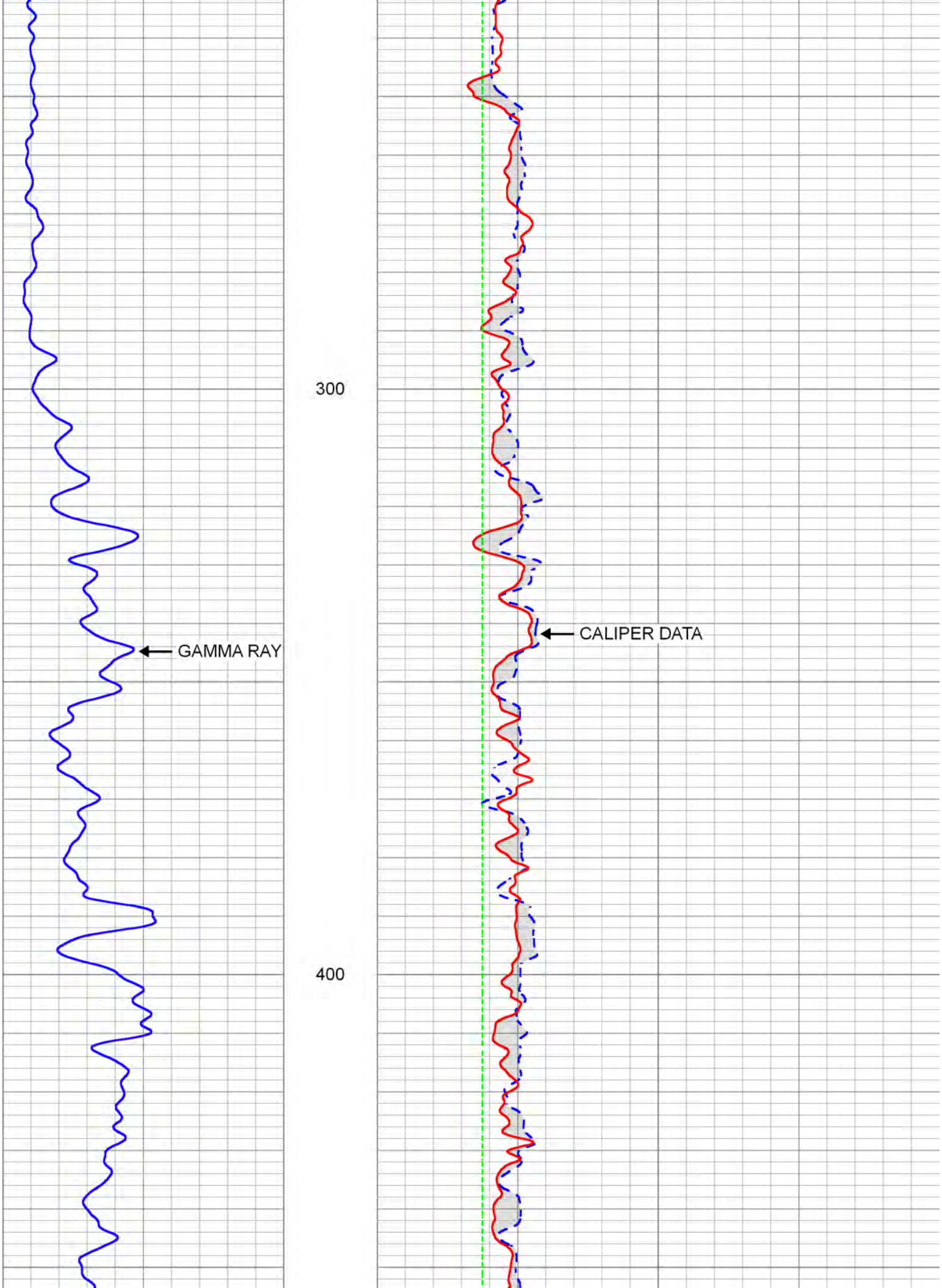
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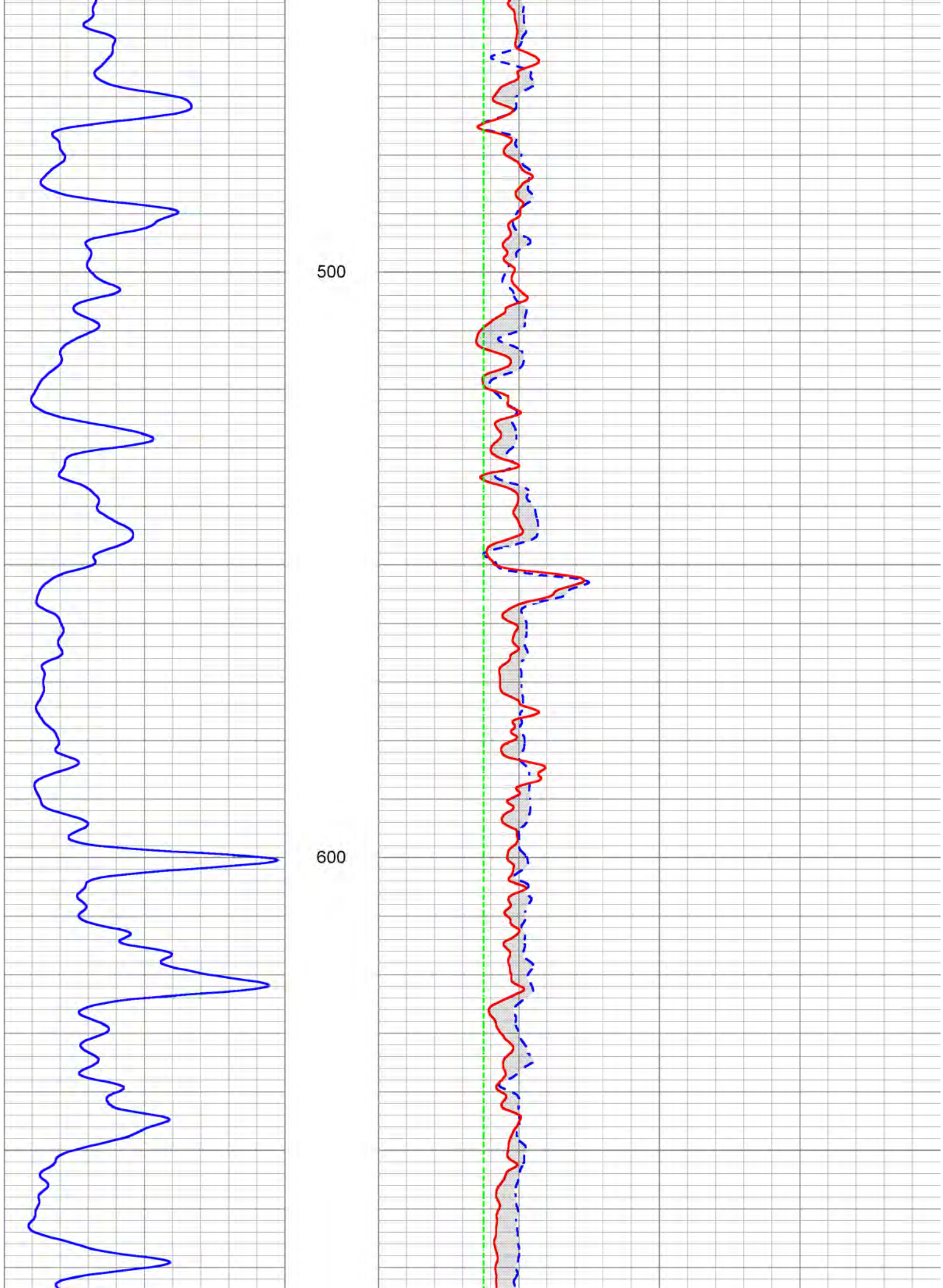
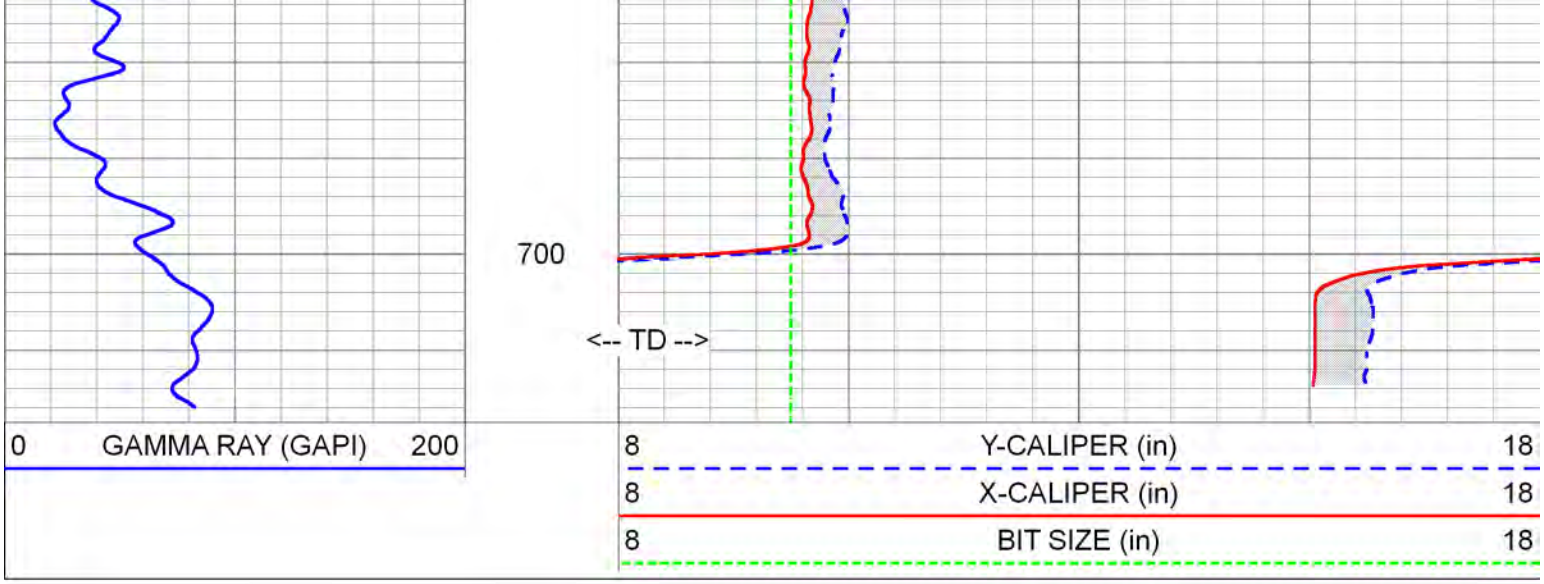
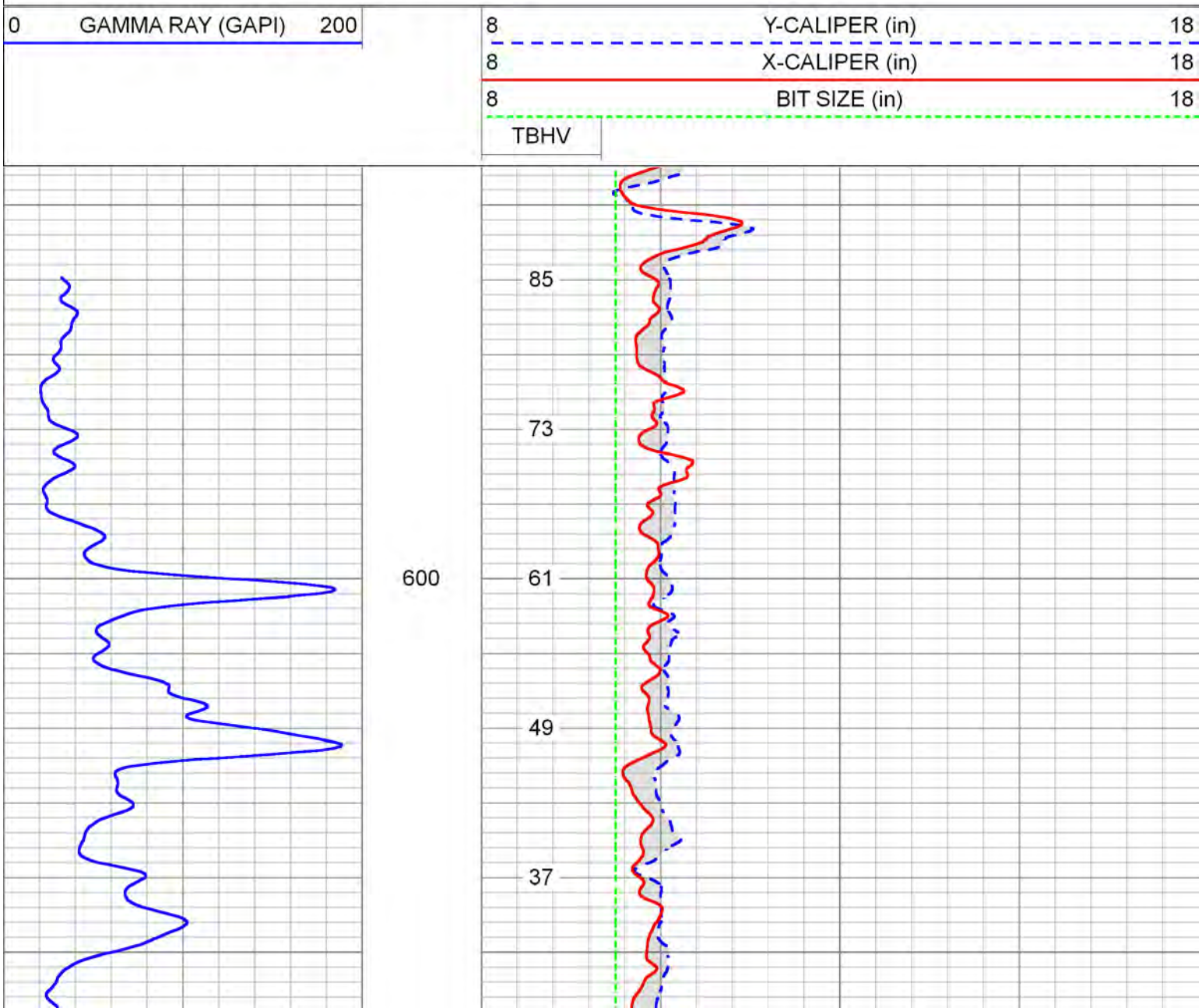
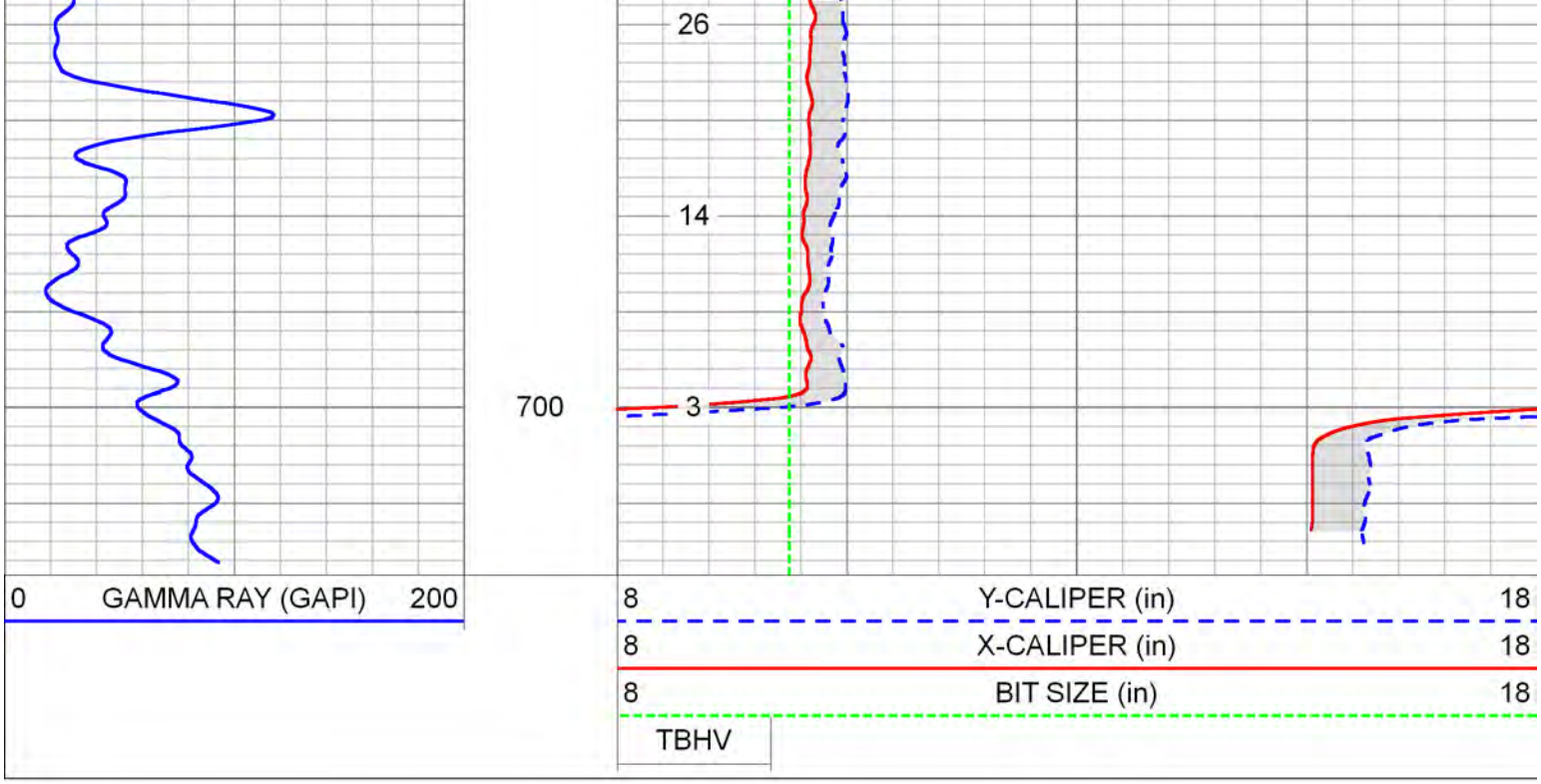
GAMMA RAY
CALIPER DATA


500
600



Database File	wlbell-2.db
Dataset Pathname	REPEAT
Presentation Format	xy81825
Dataset Creation	Thu Apr 18 13:10:45 2013
Charted by	Depth in Feet scaled 1:240





Calibration Report

Database File	wlbell-2.db
Dataset Pathname	pass6
Dataset Creation	Thu Apr 18 13:51:53 2013

XY Caliper Calibration Report

Serial Number:	01S		
Tool Model:	XYCS		
Performed:	Thu Apr 18 13:53:41 2013		
Small Ring:	10	in	
Large Ring:	33	in	
	X Caliper	Y Caliper	
Reading with Small Ring:	636	640	cps
Reading with Large Ring:	1133.3	1080.7	cps
Gain:	0.0462497	0.0521897	
Offset:	-19.4148	-23.4014	

Gamma Ray Calibration Report

Serial Number:	01	
Tool Model:	GROH	
Performed:	Thu Apr 18 13:44:49 2013	
Calibrator Value:	120.0	GAPI
Background Reading:	15.4	cps
Calibrator Reading:	133.1	cps
Sensitivity:	1.0188	GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb

		GR-GROH (01)	2.75	3.50	40.00
GR	5.00				
		XYC-XYCS (01S)	6.60	3.50	110.00
YCAL	0.50				
XCAL	0.50				

Dataset:	wlbell-2.db: field/well/run1/pass6
Total length:	9.35 ft
Total weight:	150.00 lb
O.D.:	3.50 in

Company Wells & Water Systems, Inc.

MV Geophysical

Well	UFA-2		
Field	LaBelle		
County	Hendry		
State	Florida	Country	USA

MV Geophysical

DUAL INDUCTION LL3 / SP LOG

Company	Wells & Water Systems, Inc.
Well	UFA-2
Field	LaBelle
County	Hendry
State	Florida
Country	USA

Company Wells & Water Systems, Inc.
Well UFA-2
Field LaBelle
County Hendry
State Florida Country USA

Location: API # :
City of LaBelle
N 871669.65 E 504488.27
Murray Consultants, Inc.
SEC TWP RGE

Other Services
XY/GR
DIL/SP

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

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

Date	18-APR-2013								
Run Number	ONE								
Depth Driller	716'								
Depth Logger	709'								
Bottom Logged Interval	709'								
Top Log Interval	204'								
Open Hole Size	9.875"								
Type Fluid	MUD								
Density / Viscosity	NA/NA								
Max. Recorded Temp.	NA								
Estimated Cement Top	SURFACE								
Time Well Ready	11:00 4/18/2013								
Time Logger on Bottom	12:30 4/18/2013								
Equipment Number	MVGS-1								
Location	Fort Myers								
Recorded By	S.Miller/C.Miller								
Witnessed By	G.MurrayDoyle (MCI)	T.Rosenkranz (WWS)							

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	9.875"	204'	716'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	18" PVC	16" ID	SURFACE	204'
Prot. String				
Production String				
Liner				

Invoice No.	2013057	3x/pdf/las	wlbell-2.db

* FIELD PRINT *

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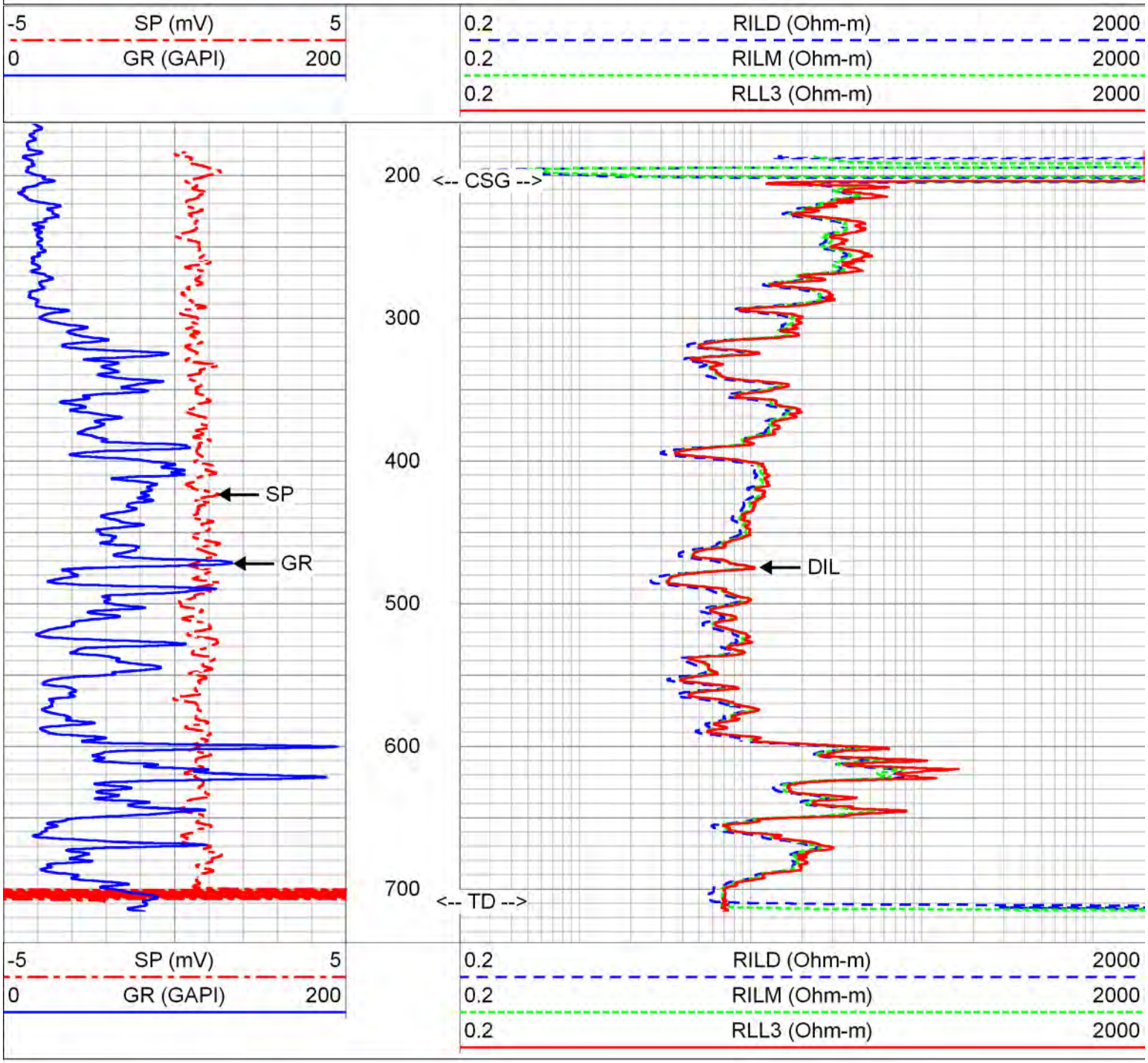
Comments

Rm=6.012 ohm-m @ 91.2 degF

MV Geophysical

MAIN PASS

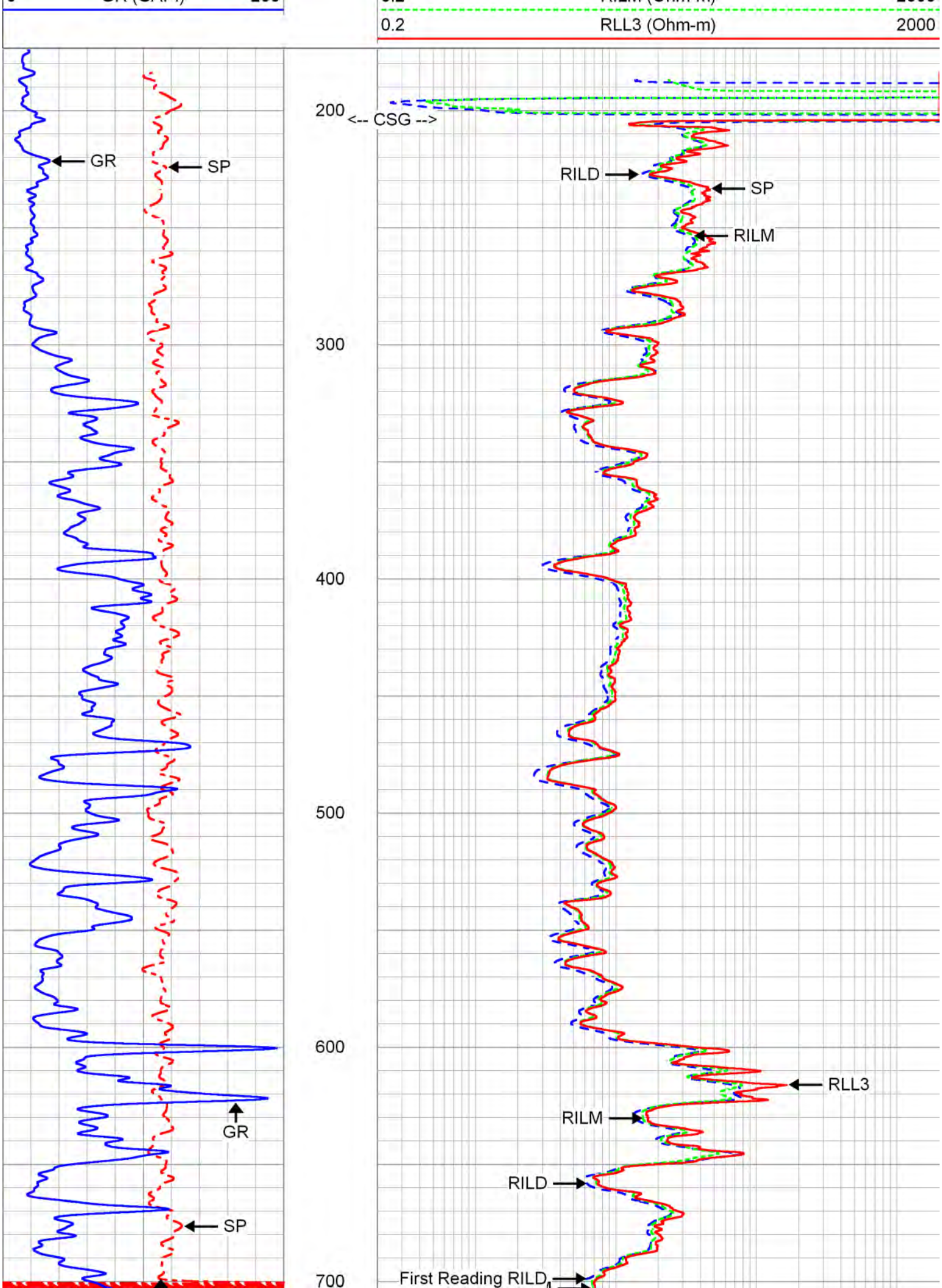
Database File	wlbell-2.db
Dataset Pathname	main
Presentation Format	dil1200
Dataset Creation	Thu Apr 18 14:38:29 2013
Charted by	Depth in Feet scaled 1:1200

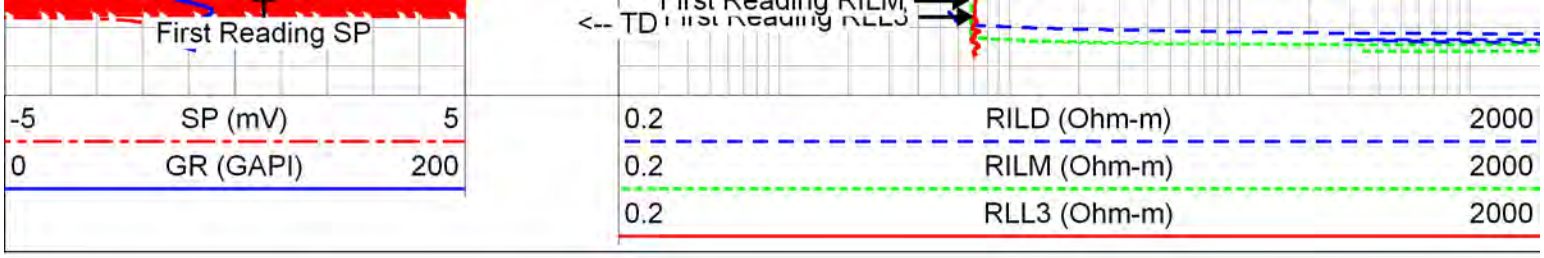


MV Geophysical

MAIN PASS

Database File	wlbell-2.db
Dataset Pathname	main
Presentation Format	dil200
Dataset Creation	Thu Apr 18 14:38:29 2013
Charted by	Depth in Feet scaled 1:600

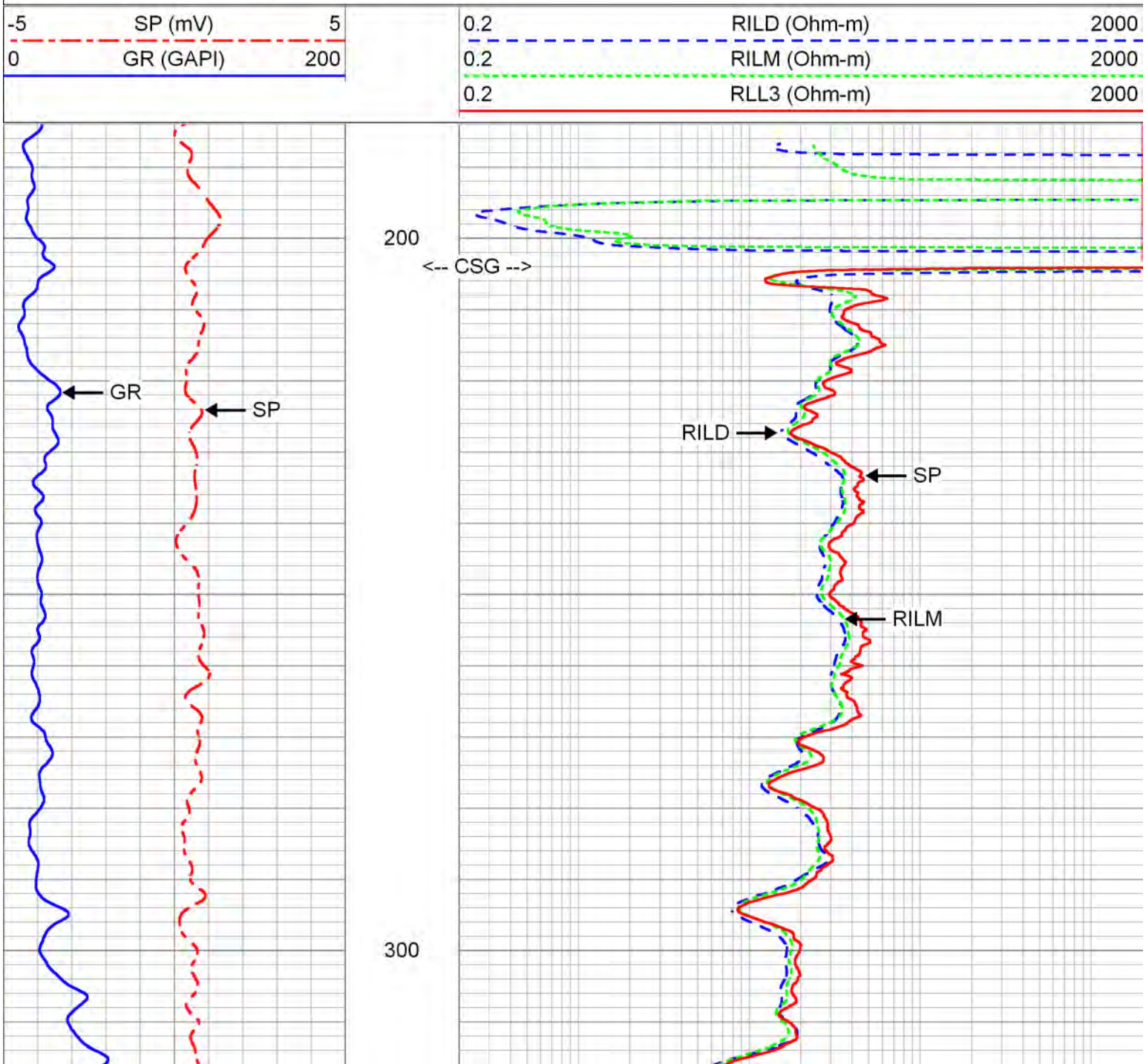

0.2
RLL3 (Ohm-m)
2000
200
<-- CSG -->
300
400
500
600
700
GR
SP
GR
SP
RILD
SP
RILM
RLL3
RILM
RILD
First Reading RILD

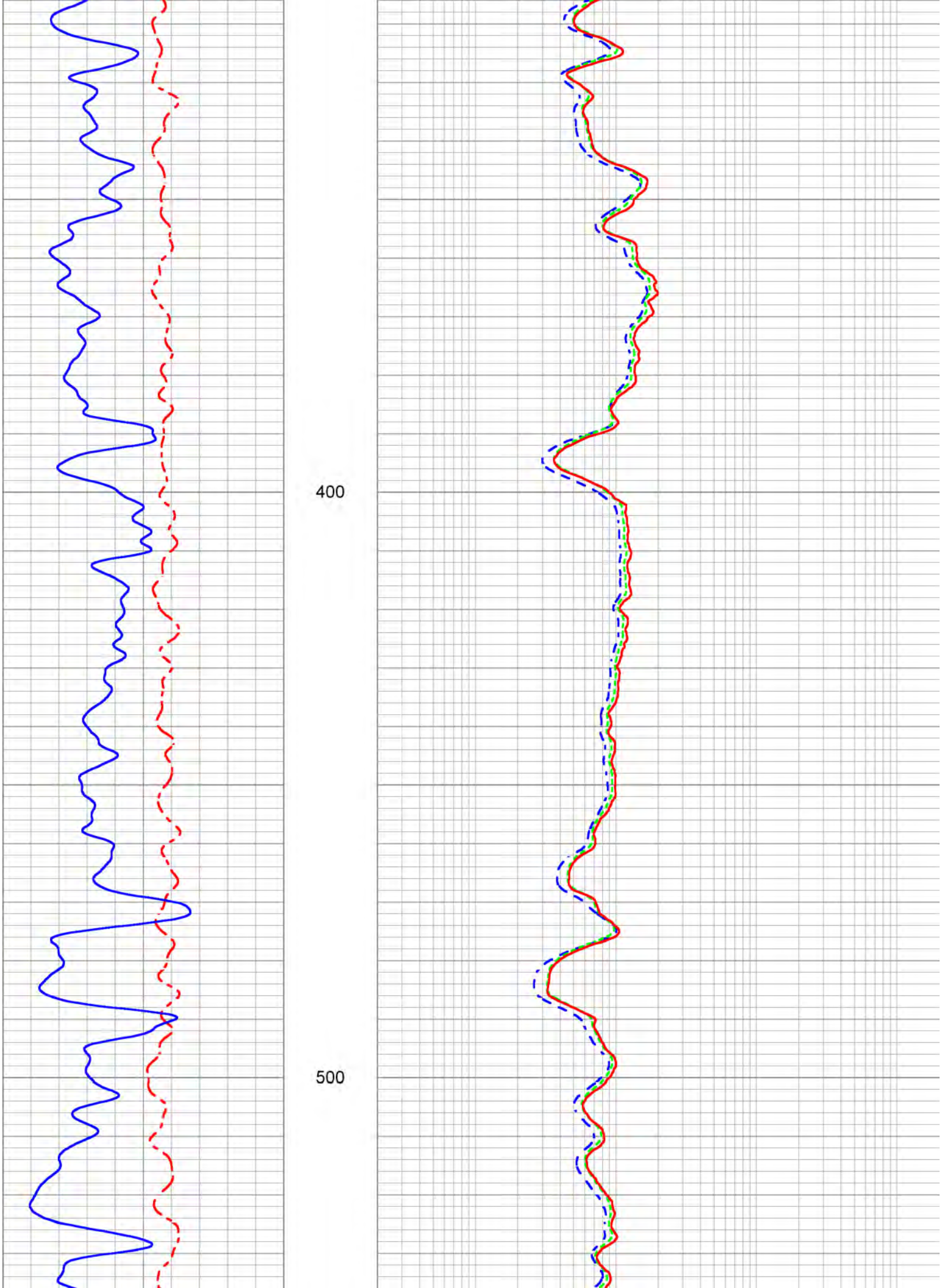


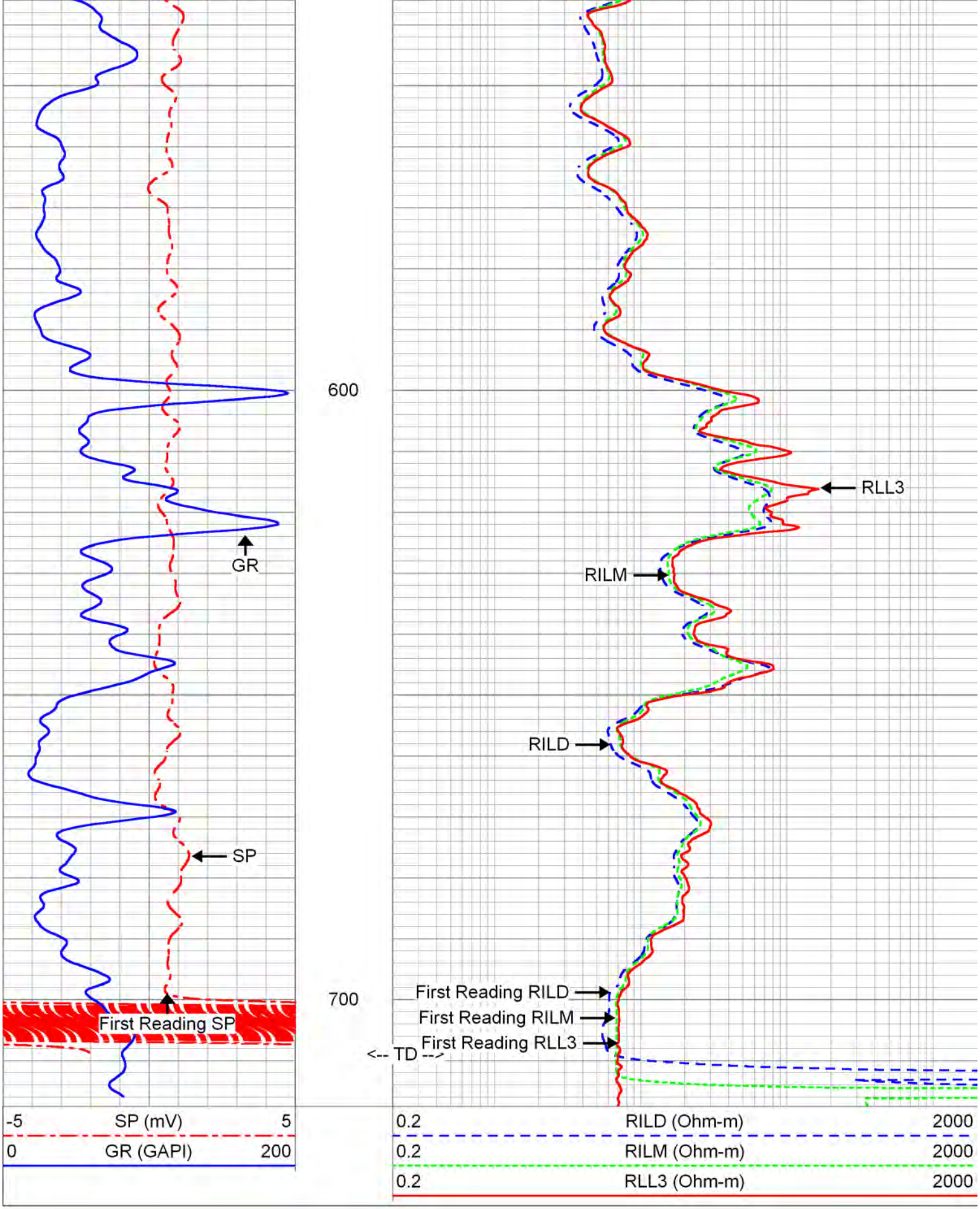
MV Geophysical

MAIN PASS

Database File	wlbell-2.db
Dataset Pathname	main
Presentation Format	dil200
Dataset Creation	Thu Apr 18 14:38:29 2013
Charted by	Depth in Feet scaled 1:240

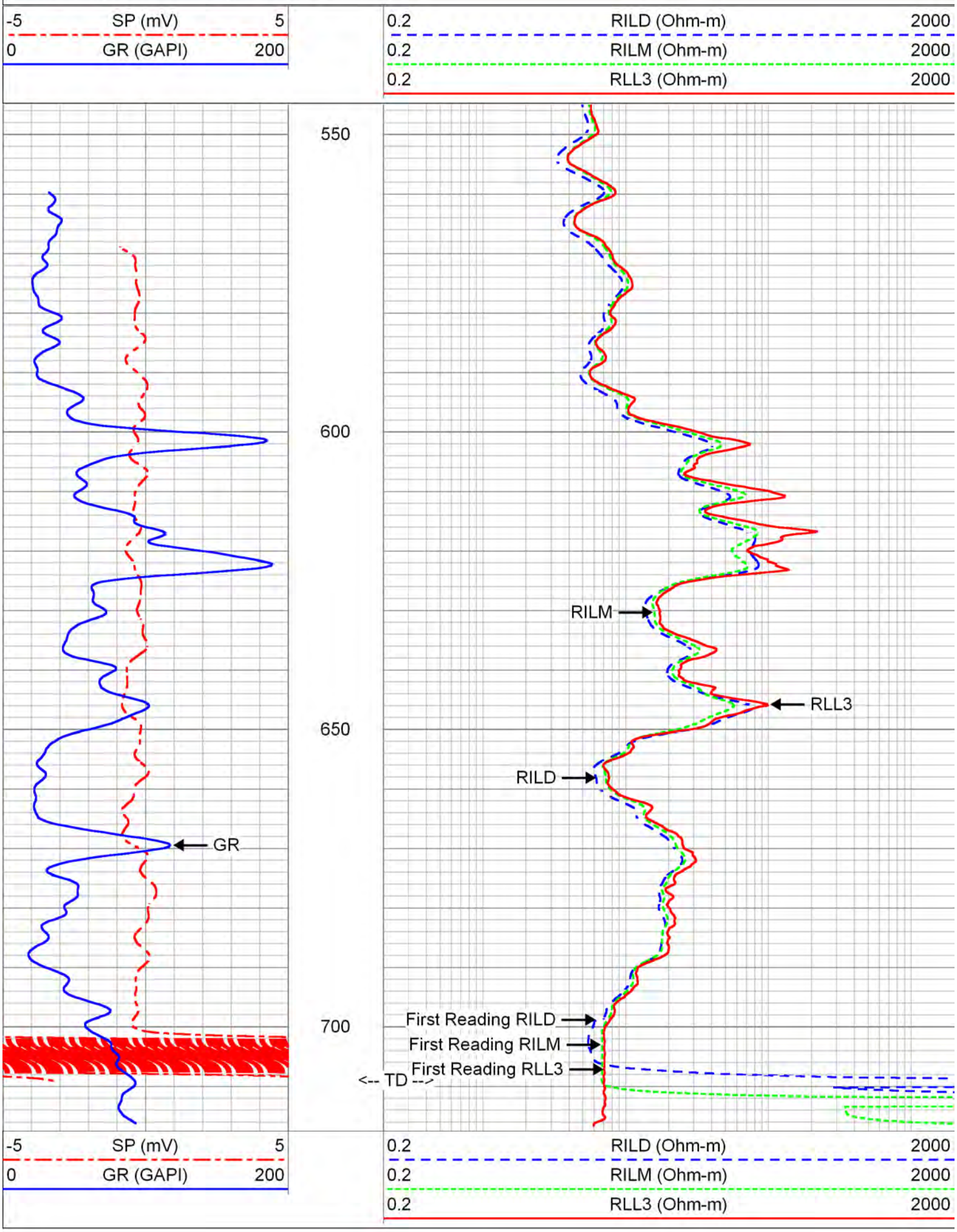



400
500



Database File	wlbell-2.db
Dataset Pathname	REPEAT
Presentation Format	dil200
Dataset Creation	Thu Apr 18 13:10:45 2013
Charted by	Depth in Feet scaled 1:240

Charted by Depth in Feet scaled 1:240



Calibration Report

Database File	wlbell-2.db
Dataset Pathname	pass5
Dataset Creation	Thu Apr 18 13:34:22 2013

Dual Induction Calibration Report

Serial-Model:	5390-R
Surface Cal Performed:	Wed Apr 21 11:17:23 2010
Downhole Cal Performed:	Wed Apr 21 11:04:55 2010
After Survey Verification Performed:	Wed Apr 21 11:04:55 2010

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.050	0.645	V	0.000	400.000	mmho/m	672.269	-33.613
Medium	0.018	0.735	V	0.000	464.000	mmho/m	647.120	-11.545
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.641	V	0.000	400.000	mmho/m	634.921	-6.984
Medium	0.005	0.739	V	0.000	464.000	mmho/m	632.408	-3.370

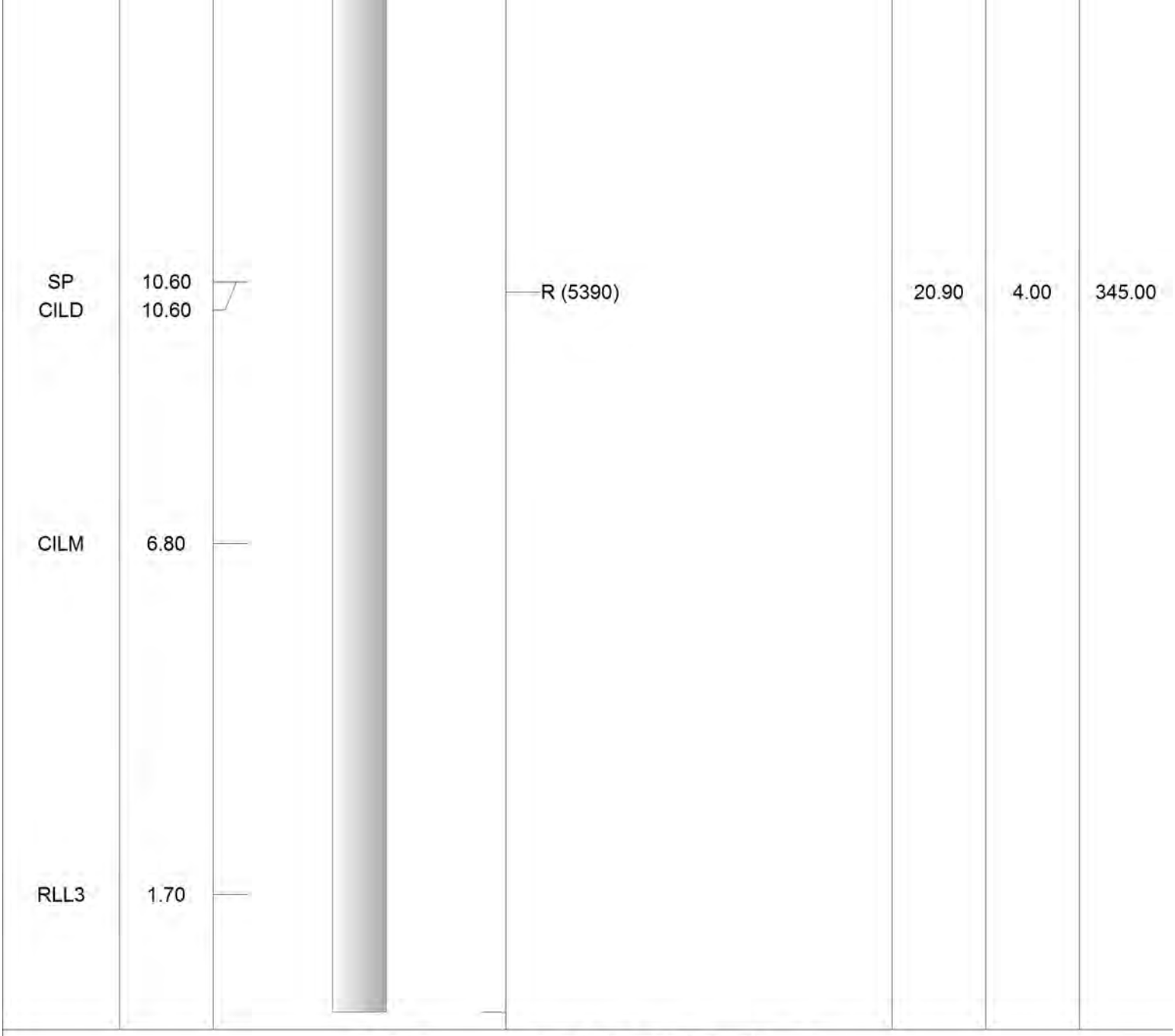
Downhole Calibration

	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-43.158	78.288	mmho/m	-42.562	77.983	mmho/m	0.993	0.275
Medium	-9.475	466.701	mmho/m	-8.097	466.698	mmho/m	0.997	1.351
Shallow	2.516	0.025	V	494.500	2.000	Ohm-m	197.690	-2.966

After Survey Verification

	Readings			Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-43.158	78.288	mmho/m	0.993	0.275
Medium	0.000	0.000	mmho/m	-9.475	466.701	mmho/m	0.997	1.351
Shallow	0.000	0.000	Ohm-m	494.500	2.000	Ohm-m	1.000	0.000

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
						



Dataset:	wlbell-2.db: field/well/run1/pass5
Total length:	20.90 ft
Total weight:	345.00 lb
O.D.:	4.00 in

MV Geophysical

Company	Wells & Water Systems, Inc.		
Well	UFA-2		
Field	LaBelle		
County	Hendry		
State	Florida	Country	USA

MV Geophysical

X-Y CALIPER GAMMA RAY LOG

Company	Wells & Water Systems, Inc.
Well	UFA-2
Field	LaBelle
County	Hendry
State	Florida
Country	USA

Company Wells & Water Systems, Inc.
Well UFA-2
Field LaBelle
County Hendry
State Florida Country USA

Location: API # :
City of LaBelle
N 871669.65 E 504488.27
Murray Consultants, Inc.
SEC TWP RGE

Other Services
XY/GR
DHTV
FLO,FCT

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

Date	7-MAY-2013
Run Number	TWO
Depth Driller	720'
Depth Logger	697'
Bottom Logged Interval	697'
Top Log Interval	145'
Open Hole Size	7.875"
Type Fluid	H2O
Density / Viscosity	NA/NA
Max. Recorded Temp.	NA
Estimated Cement Top	SURFACE
Time Well Ready	08:00 5/7/2013
Time Logger on Bottom	10:00 5/7/2013
Equipment Number	MVGS-1
Location	Fort Myers
Recorded By	S.Miller/C.Miller
Witnessed By	G.MurrayDoyle (MCI)

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

Borehole Record

Run Number	Bit From	To	Size
ONE	9.875" 204'	716'	
TWO	7.875" 600'	720'	

Tubing Record

Size	Wgt/Ft	Top	Bottom
18" PVC	16" ID	SURFACE	204'
10.5" PVC	9.375" ID	130'	600'

Casing Record	
Surface String	
Prot. String	
Production String	
Liner	
Invoice No.	2013061

Weight	
From	
To	
	3x/pdf/las

	wlbell-2.db

* FIELD PRINT *

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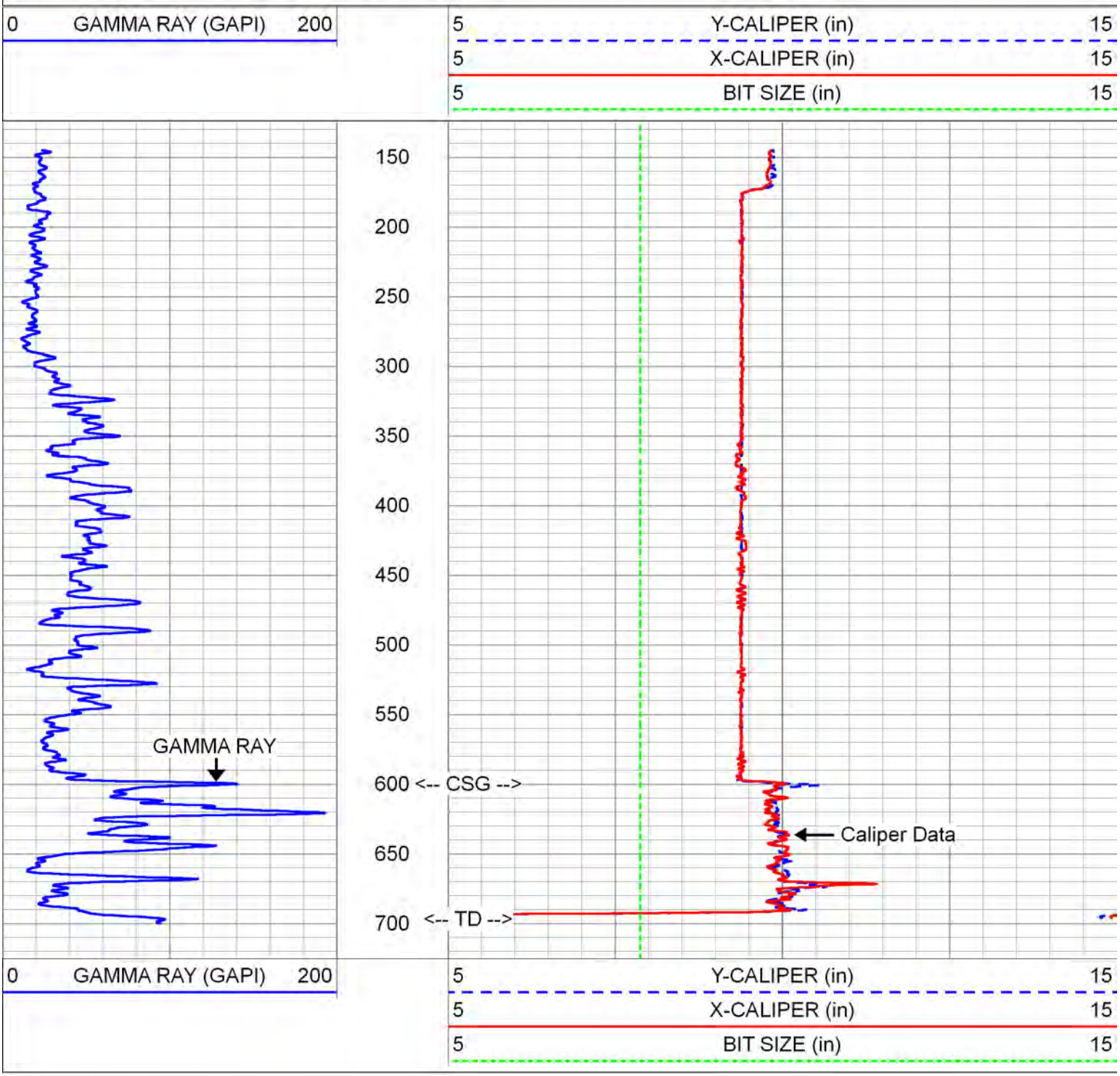
Comments

MAXIMUM ARM EXTENSION: 33"

MV Geophysical

MAIN PASS

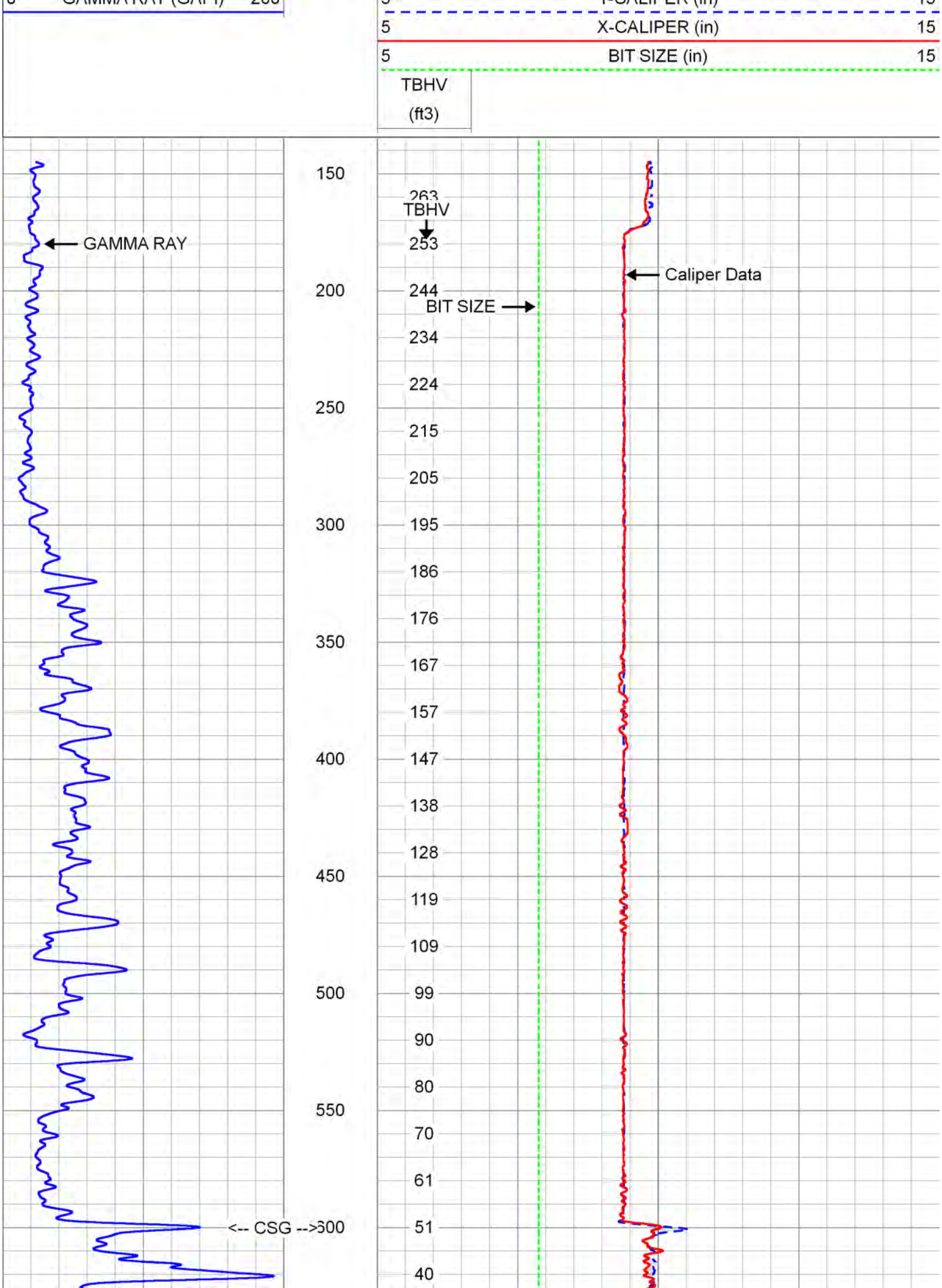
Database File	wlbell-2.db
Dataset Pathname	run2/MAIN
Presentation Format	xy515-21
Dataset Creation	Tue May 07 10:52:08 2013
Charted by	Depth in Feet scaled 1:1200

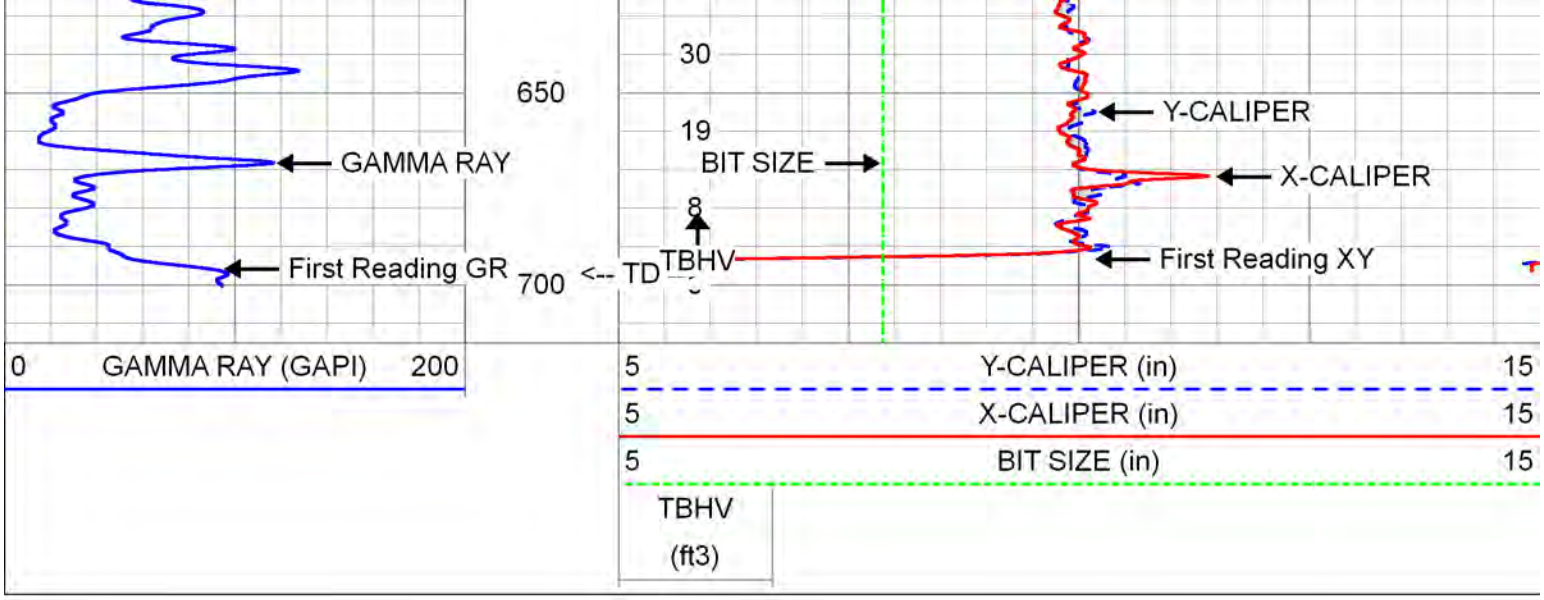


MV Geophysical

MAIN PASS

Database File	wlbell-2.db
Dataset Pathname	run2/MAIN
Presentation Format	xy515-25
Dataset Creation	Tue May 07 10:52:08 2013
Charted by	Depth in Feet scaled 1:600

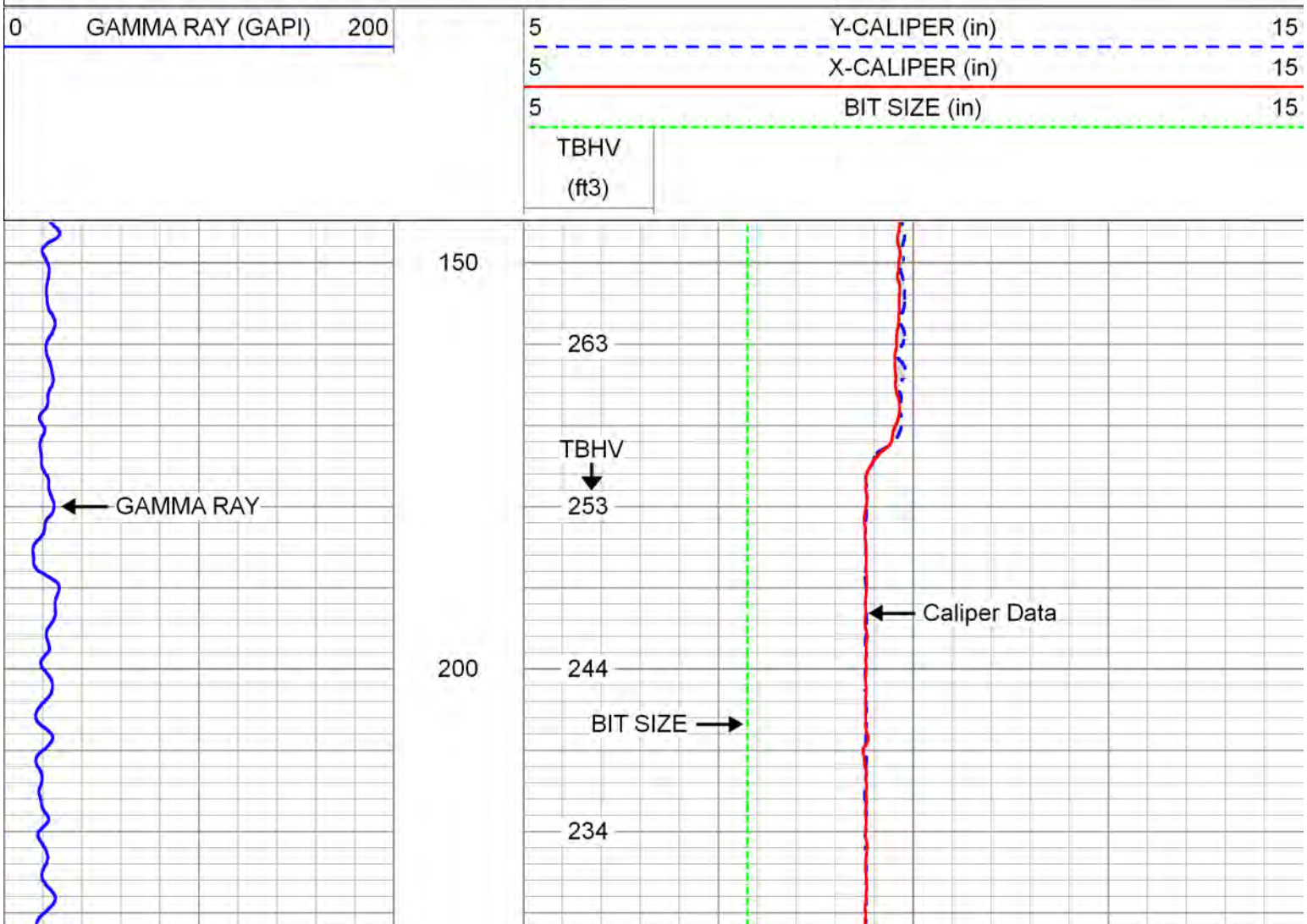

5 X-CALIPER (in) 15
5 BIT SIZE (in) 15
TBHV (ft3)
GAMMA RAY
<-- CSG -->
TBHV
BIT SIZE
Caliper Data
150
200
250
300
350
400
450
500
550
263
253
244
234
224
215
205
195
186
176
167
157
147
138
128
119
109
99
90
80
70
61
51
40

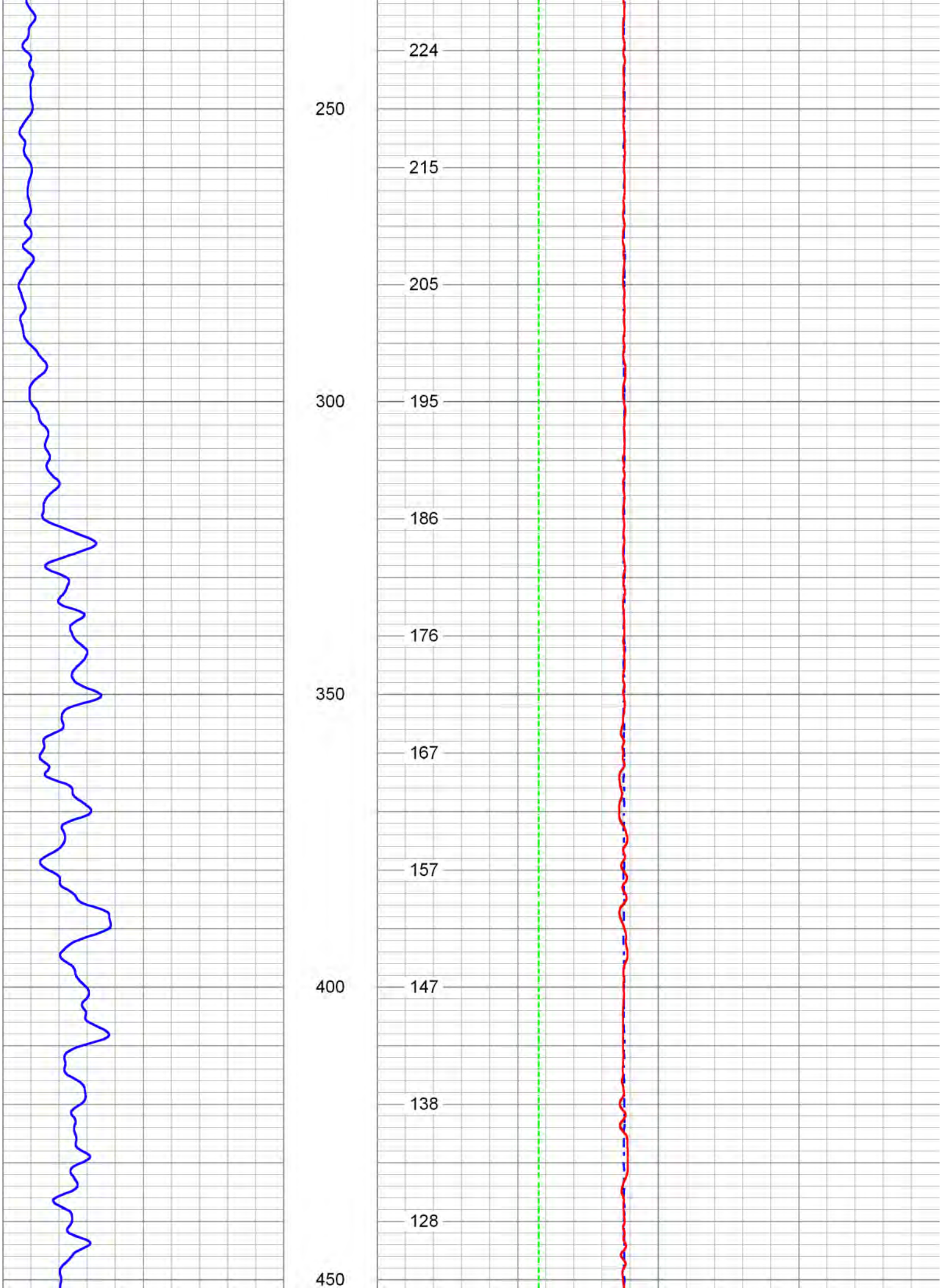


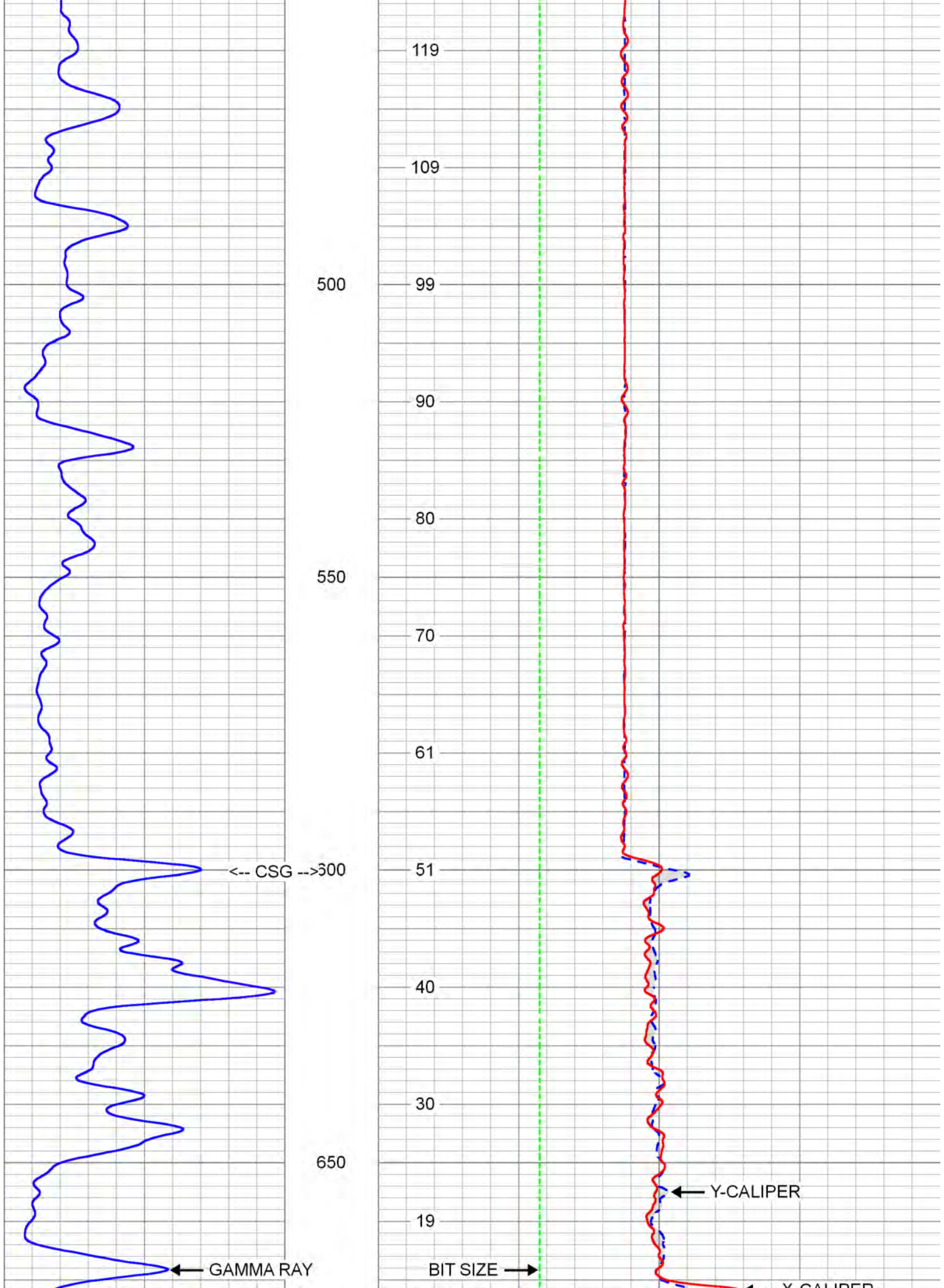
MV Geophysical

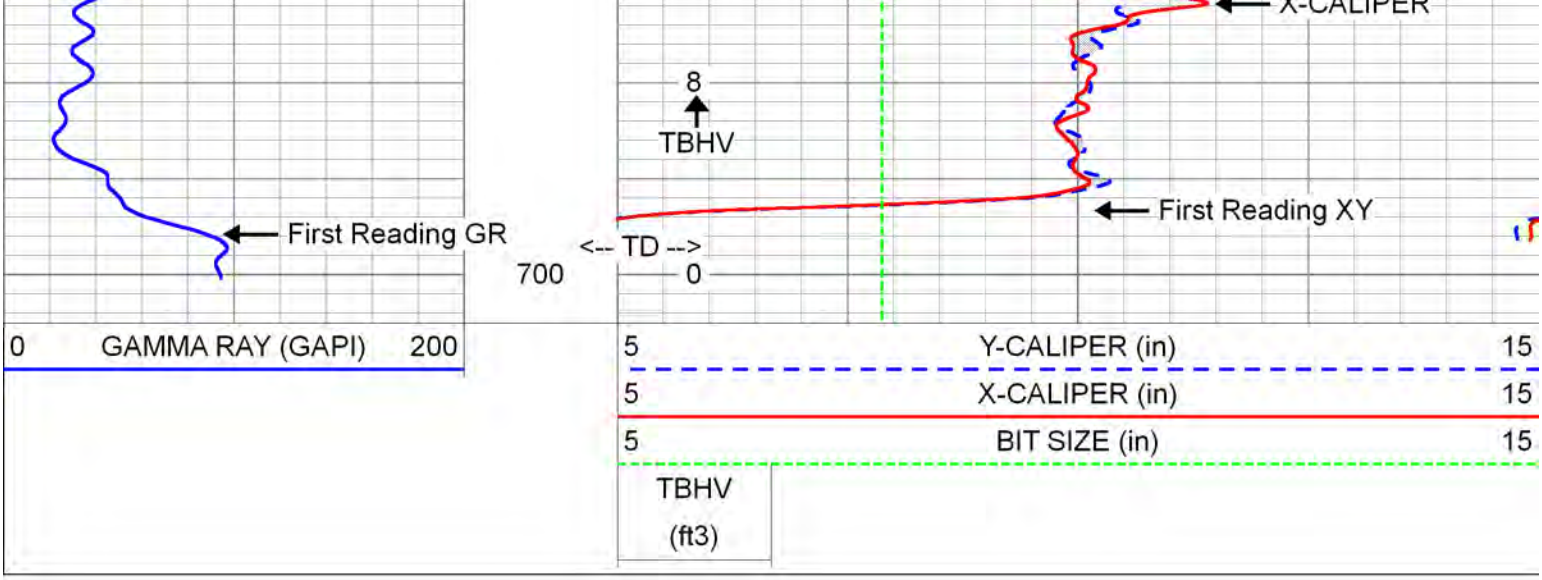
MAIN PASS

Database File	wlbell-2.db
Dataset Pathname	run2/MAIN
Presentation Format	xy515-25
Dataset Creation	Tue May 07 10:52:08 2013
Charted by	Depth in Feet scaled 1:240




224
250
215
205
300
195
186
176
350
167
157
400
147
138
128
450

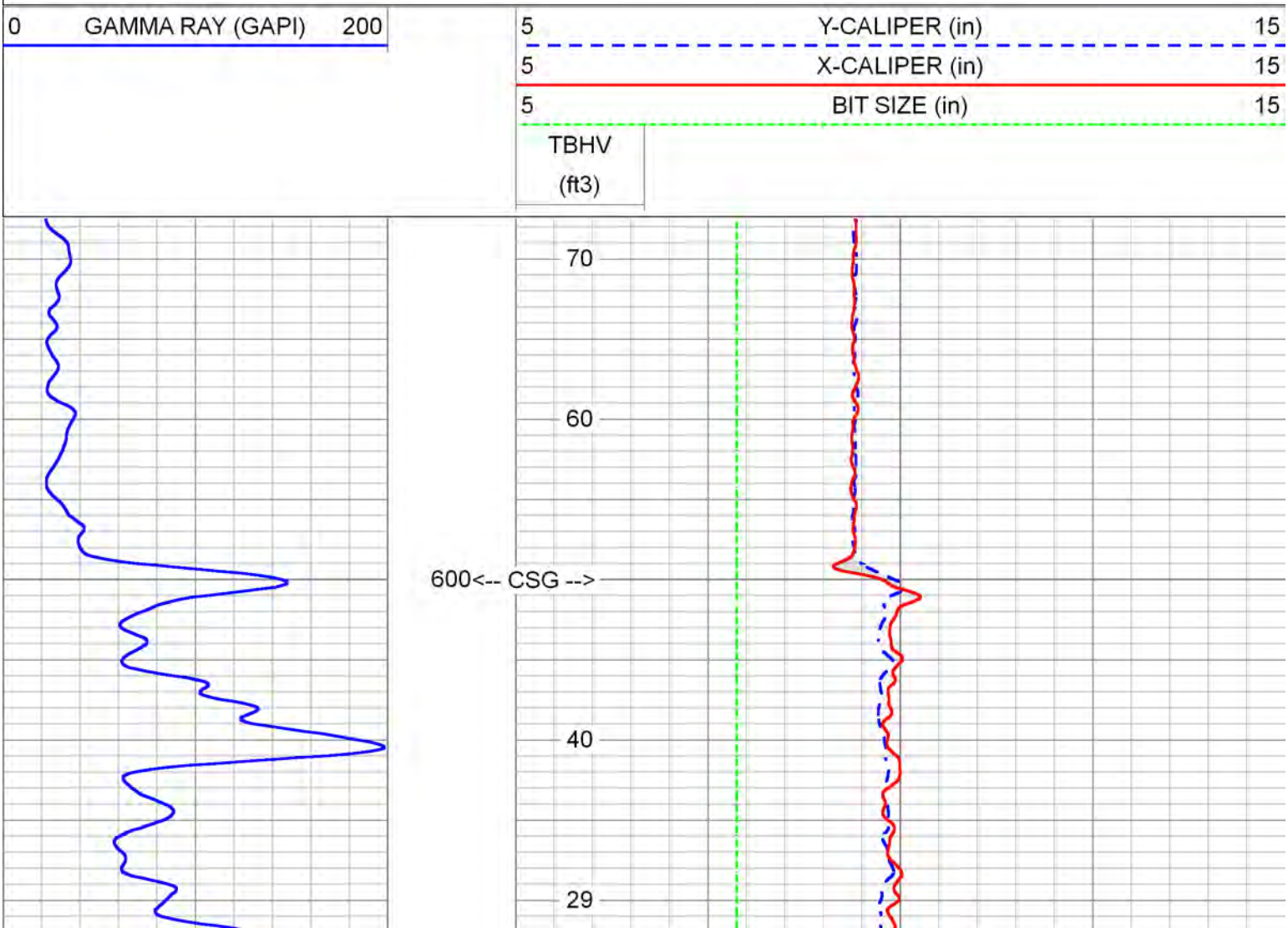

119
109
99
90
80
70
61
51
40
30
19
500
550
650
<-- CSG -->300
GAMMA RAY
BIT SIZE
Y-CALIPER

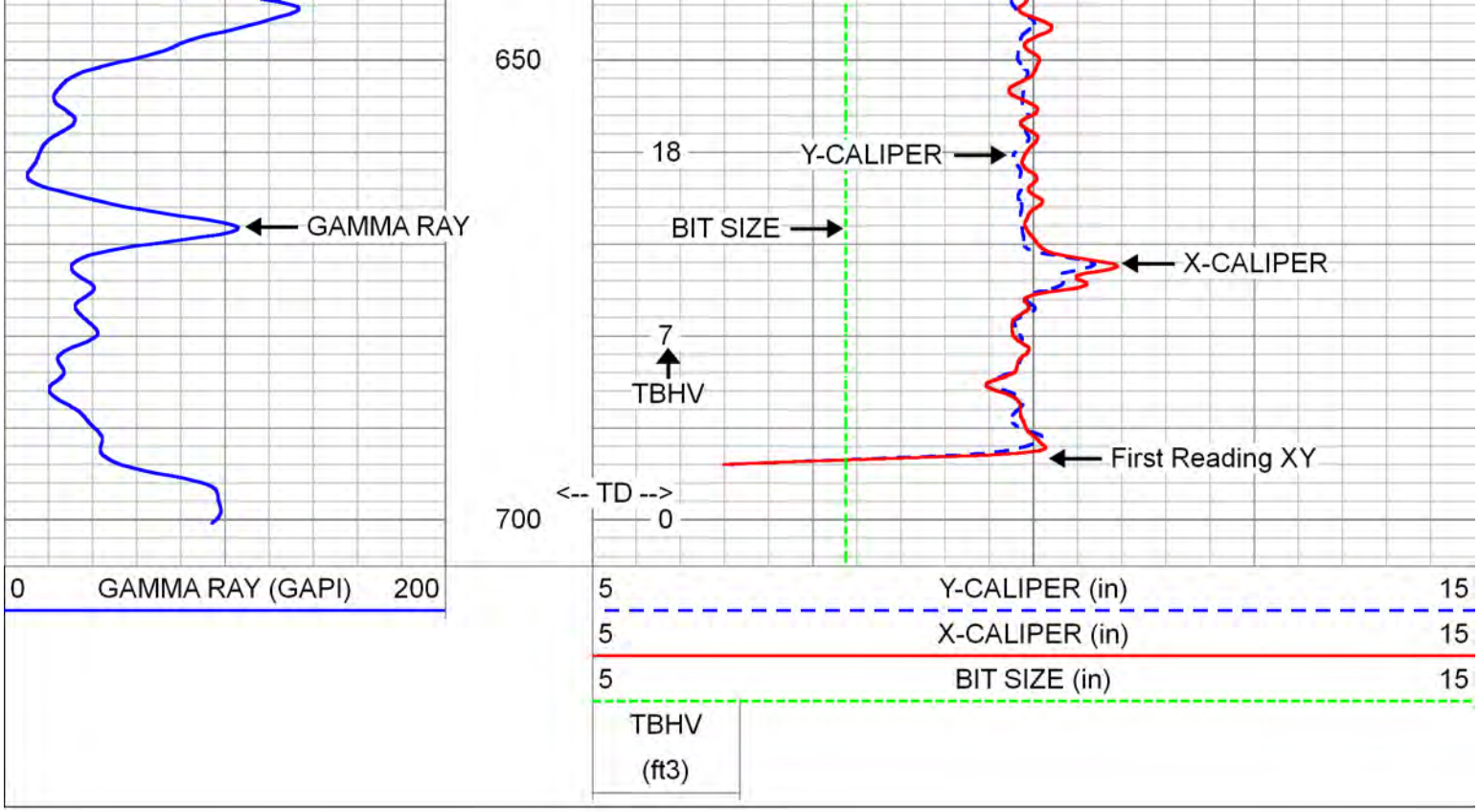


MV Geophysical

REPEAT SECTION

Database File	wlbell-2.db
Dataset Pathname	run2/REPEAT
Presentation Format	xy515-25
Dataset Creation	Tue May 07 10:34:34 2013
Charted by	Depth in Feet scaled 1:240





Calibration Report

Database File	wlbell-2.db
Dataset Pathname	run2/pass2
Dataset Creation	Tue May 07 10:21:18 2013

XY Caliper Calibration Report

Serial Number:	01S		
Tool Model:	XYCS		
Performed:	Tue May 07 10:28:03 2013		
Small Ring:	9.375	in	
Large Ring:	33	in	
	X Caliper	Y Caliper	
Reading with Small Ring:	634.7	665	cps
Reading with Large Ring:	1133.3	1080.7	cps
Gain:	0.0473827	0.0568318	
Offset:	-20.6988	-28.4182	

Gamma Ray Calibration Report

Serial Number:	01	
Tool Model:	GROH	
Performed:	Tue May 07 09:59:57 2013	
Calibrator Value:	120.0	GAPI
Background Reading:	14.2	cps
Calibrator Reading:	134.8	cps
Sensitivity:	0.9954	GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb

		GR-GROH (01)	2.75	3.50	40.00
GR	5.00				
		XYC-XYCS (01S)	6.60	3.50	110.00
YCAL	0.50				
XCAL	0.50				

Dataset:	wlbell-2.db: field/well/run2/pass2
Total length:	9.35 ft
Total weight:	150.00 lb
O.D.:	3.50 in

MV Geophysical

Company	Wells & Water Systems, Inc.		
Well	UFA-2		
Field	LaBelle		
County	Hendry		
State	Florida	Country	USA

MV Geophysical

FLUID CONDUCTIVITY TEMPERATURE LOG

Company	Wells & Water Systems, Inc.
Well	UFA-2
Field	LaBelle
County	Hendry
State	Florida
Country	USA

Company Wells & Water Systems, Inc.
Well UFA-2
Field LaBelle
County Hendry
State Florida Country USA

Location: API # :
City of LaBelle
N 871669.65 E 504488.27
Murray Consultants, Inc.
SEC TWP RGE

Other Services
XY/GR
DHTV
FLO,FCT

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

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

Date	7-MAY-2013								
Run Number	TWO								
Depth Driller	720'								
Depth Logger	697'								
Bottom Logged Interval	697'								
Top Log Interval	495'								
Open Hole Size	7.875"								
Type Fluid	H2O								
Density / Viscosity	NA/NA								
Max. Recorded Temp.	NA								
Estimated Cement Top	SURFACE								
Time Well Ready	08:00 5/7/2013								
Time Logger on Bottom	10:45 5/7/2013								
Equipment Number	MVGS-1								
Location	Fort Myers								
Recorded By	S.Miller/C.Miller								
Witnessed By	G.MurrayDoyle (MCI)	T.Rosenkranz (WWS)							

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	9.875"	204'	716'				
TWO	7.875"	600'	720'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	18" PVC	16" ID	SURFACE	204'
Prot. String	10.5" PVC	9.375" ID	130'	600'
Production String				
Liner				

Invoice No.	2013061	3x/pdf/las	wlbell-2.db

* FIELD PRINT *

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Comments

A DYNAMIC down pass was performed.
Cw=3310 uS/cm @ 85.2 degF @ Q=850 gpm.

FLUID CONDUCTIVITY CALIBRATION REPORT (Performed: 6-MAY-2013, 11:15)

uS/cm	CPS
1,205.3	2505.34
20,205.8	1895.44
120,555	1495.13

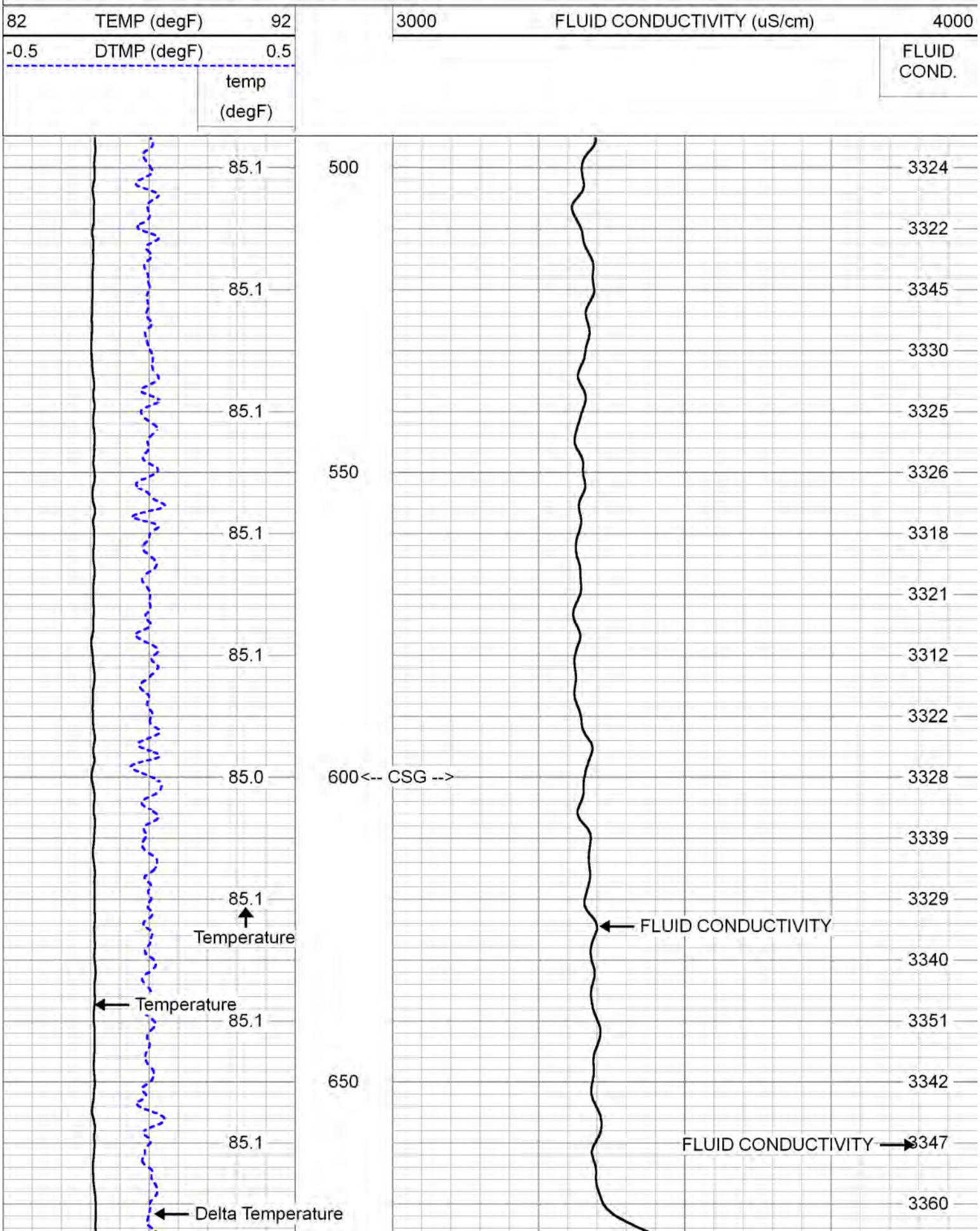
TEMPERATURE CALIBRATION REPORT (Performed: 6-MAY-2013, 11:45)

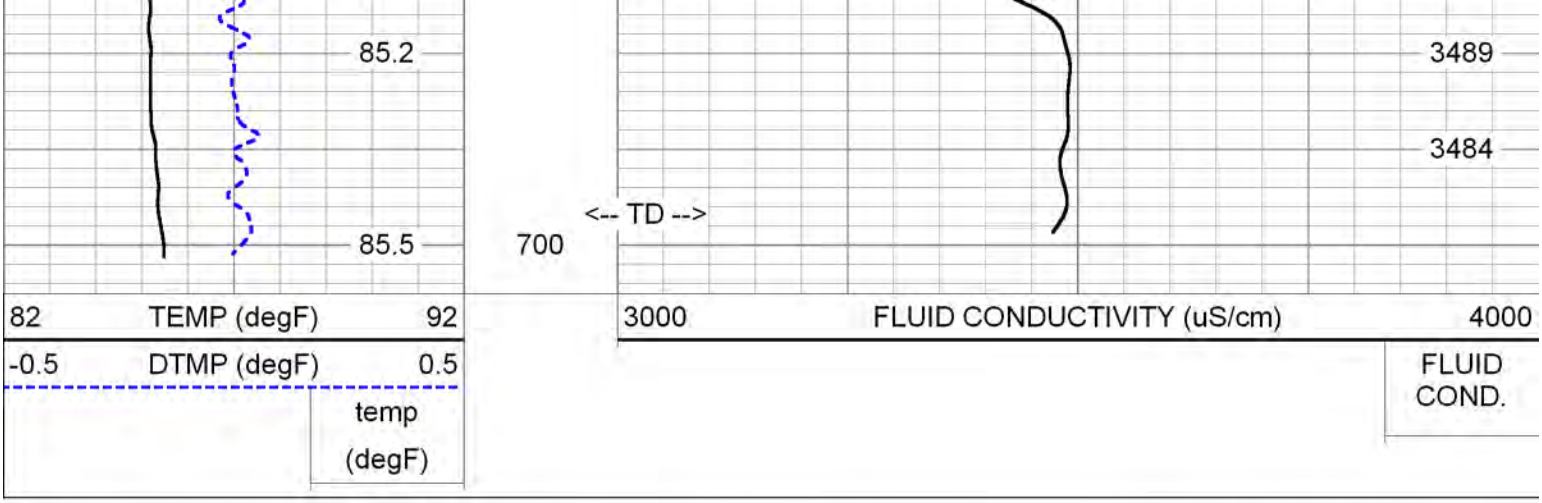
degF	CPS
37.3	145.34
147.3	2545.4
20,205.8	1895.44
120,555	1495.13

MV Geophysical

Dynamic FCT Down

Database File	wlbell-2.db
Dataset Pathname	run2/DFCT
Presentation Format	fct-tw2
Dataset Creation	Tue May 07 13:57:23 2013
Charted by	Depth in Feet scaled 1:240





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
CCL	4.46		CCL-MVGS 1.9 (MV01)	1.33	1.90	8.00
			GR #2 -RTSB (MV01B)	3.33	1.90	10.00
GR#2	1.15					
			TEMP-RTS (MV01)	0.46	1.90	2.00
TEMP	0.10					

Dataset: wlbell-2.db: field/well/run2/pass3
Total length: 5.12 ft
Total weight: 20.00 lb
O.D.: 1.90 in

MV Geophysical

Company	Wells & Water Systems, Inc.
Well	UFA-2
Field	LaBelle
County	Hendry
State	Florida
Country	USA

State	Florida	Country	USA

MV Geophysical

FLOWMETER LOG

Company	Wells & Water Systems, Inc.
Well	UFA-2
Field	LaBelle
County	Hendry
State	Florida
Country	USA

Company Wells & Water Systems, Inc.
Well UFA-2
Field LaBelle
County Hendry
State Florida Country USA

Location: API # :
City of LaBelle
N 871669.65 E 504488.27
Murray Consultants, Inc.
SEC TWP RGE

Other Services
XY/GR
DHTV
FLO,FCT

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

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

Date	7-MAY-2013								
Run Number	TWO								
Depth Driller	720'								
Depth Logger	697'								
Bottom Logged Interval	697'								
Top Log Interval	495'								
Open Hole Size	7.875"								
Type Fluid	H2O								
Density / Viscosity	NA/NA								
Max. Recorded Temp.	NA								
Estimated Cement Top	SURFACE								
Time Well Ready	08:00 5/7/2013								
Time Logger on Bottom	11:30 5/7/2013								
Equipment Number	MVGS-1								
Location	Fort Myers								
Recorded By	S.Miller/C.Miller								
Witnessed By	G.MurrayDoyle (MCI)	T.Rosenkranz (WWS)							

Borehole Record

Run Number	Bit	From	To
ONE	9.875"	204'	716'
TWO	7.875"	600'	720'

Tubing Record

Size	Wgt/Ft	Top	Bottom
18" PVC	16" ID	SURFACE	204'
10.5" PVC	9.375" ID	130'	600'

Casing Record	Size	Wgt/Ft	Top
Surface String	18" PVC	16" ID	SURFACE
Prot. String	10.5" PVC	9.375" ID	130'
Production String			
Liner			
Invoice No.	2013061	3x/pdf/las	wlbell-2.db

Bottom: 204' / 600'

* FIELD PRINT *

<<< Fold Here >>>

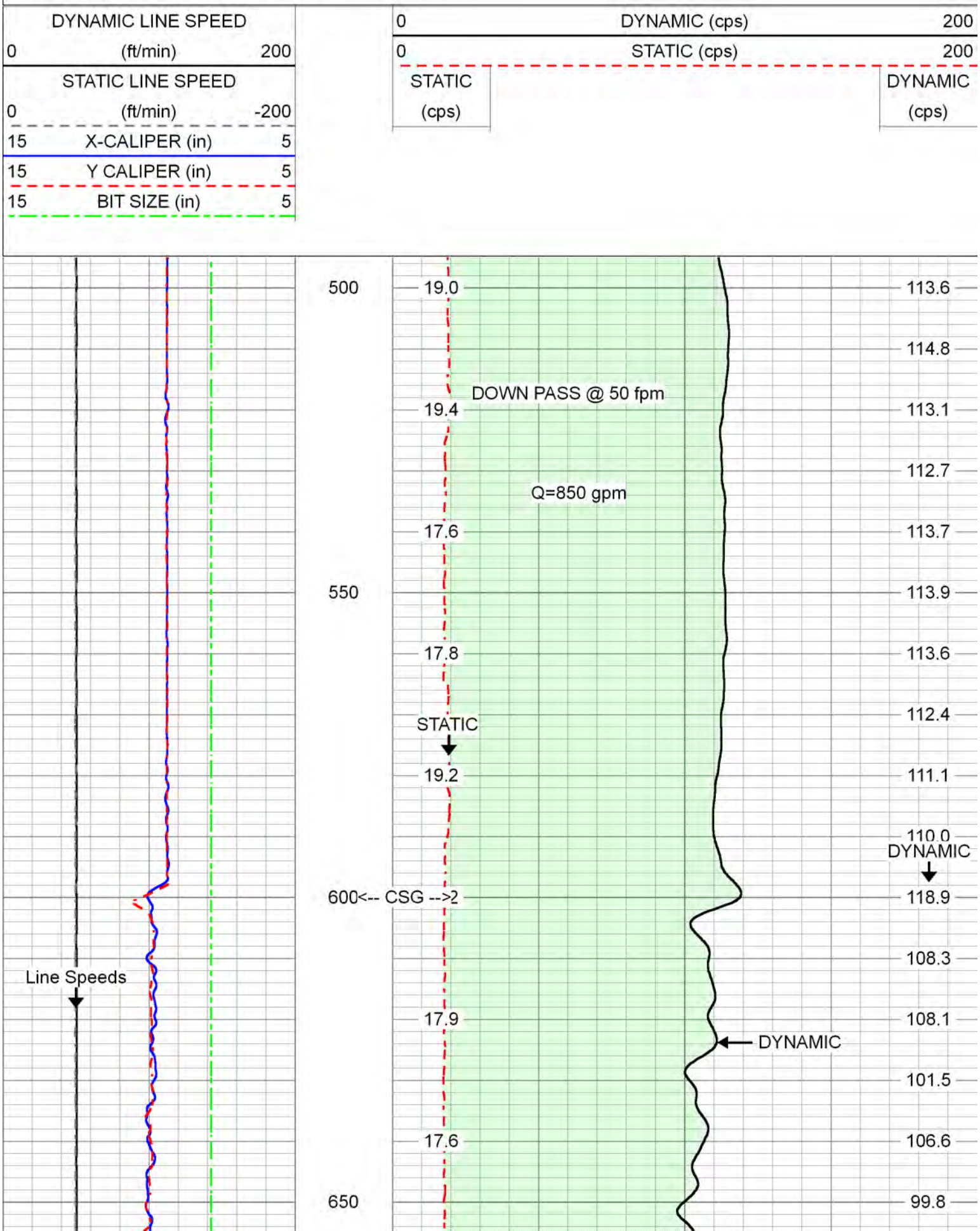
Comments

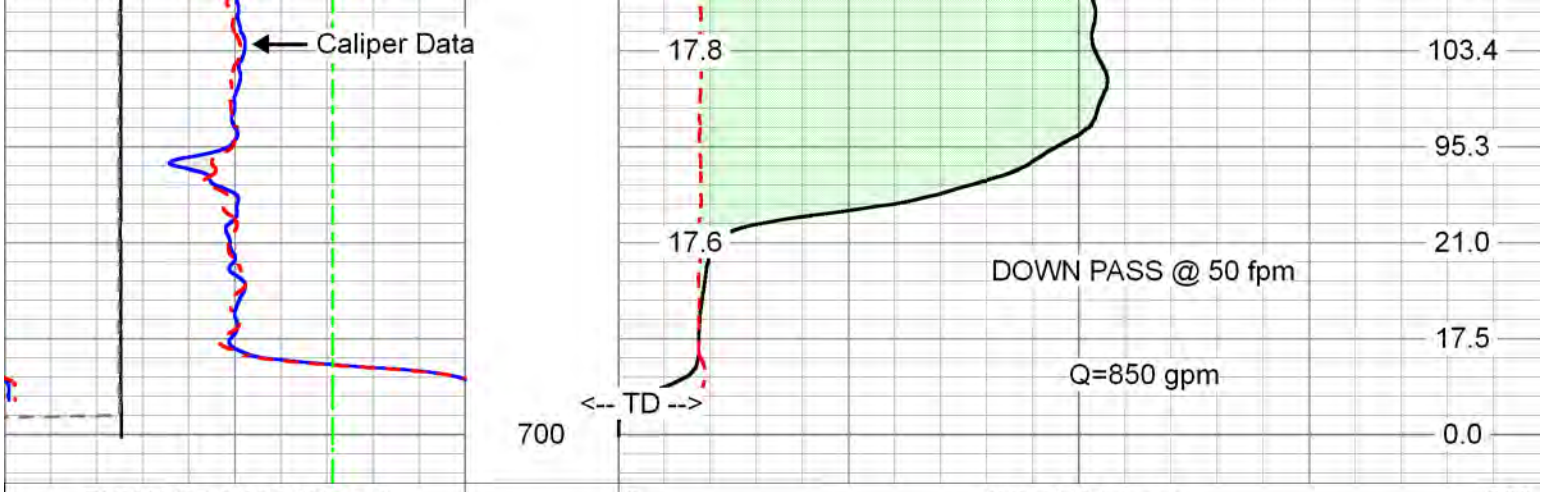
MAXIMUM ARM EXTENSION: 33"

MV Geophysical

Dynamic Down @ 50 fpm

Database File	wlbell-2.db
Dataset Pathname	run2/SD50-2
Presentation Format	q-200p3
Dataset Creation	Tue May 07 13:18:15 2013
Charted by	Depth in Feet scaled 1:240





DYNAMIC LINE SPEED
0 (ft/min) 200

STATIC LINE SPEED
0 (ft/min) -200

15 X-CALIPER (in) 5

15 Y CALIPER (in) 5

15 BIT SIZE (in) 5

0 DYNAMIC (cps) 200

0 STATIC (cps) 200

STATIC (cps)

DYNAMIC (cps)

MV Geophysical

Station #9: 550'

Database File	wlbell-2.db
Dataset Pathname	run2/pass14
Presentation Format	flow
Dataset Creation	Tue May 07 12:34:05 2013
Charted by	Depth in Feet scaled 1:240

-200 LINE SPEED (ft/min) 200

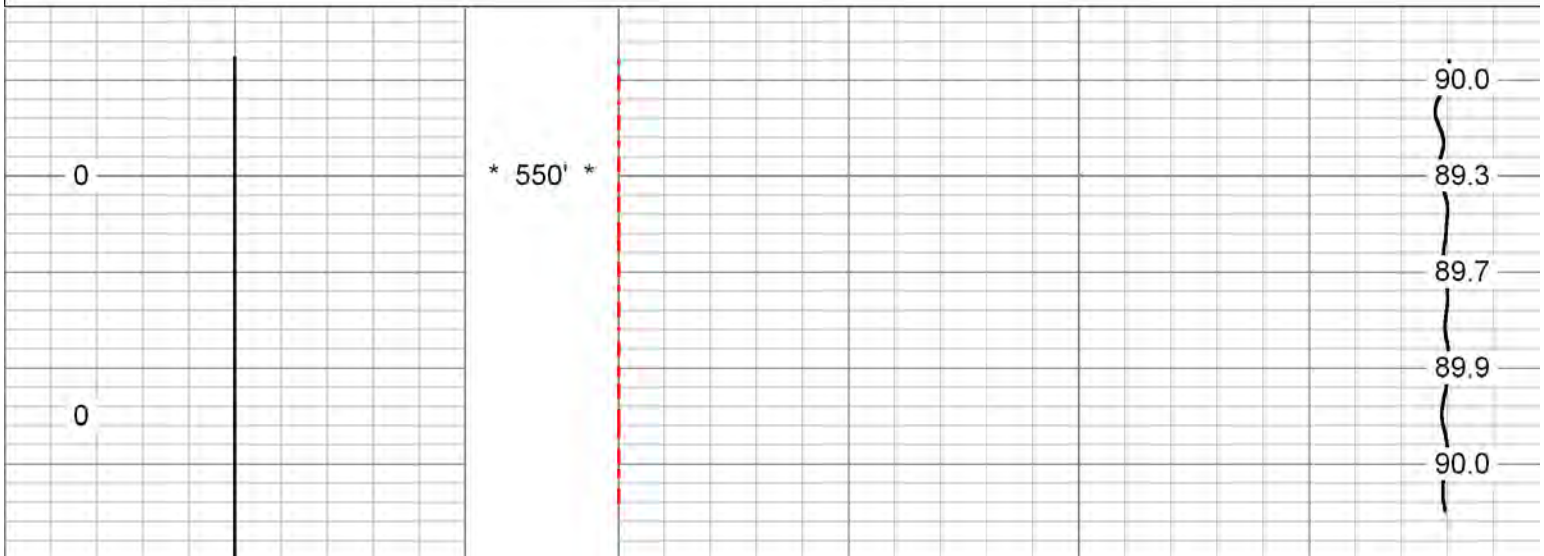
30 BOREID (in) 100

LSPD (ft/min)

0 flown (cps) 100

0 flowp (cps) 100

flowp (cps)



-200 LINE SPEED (ft/min) 200
30 BOREID (in) 100
LSPD (ft/min)

0 flown (cps) 100
0 flowp (cps) 100
flowp (cps)

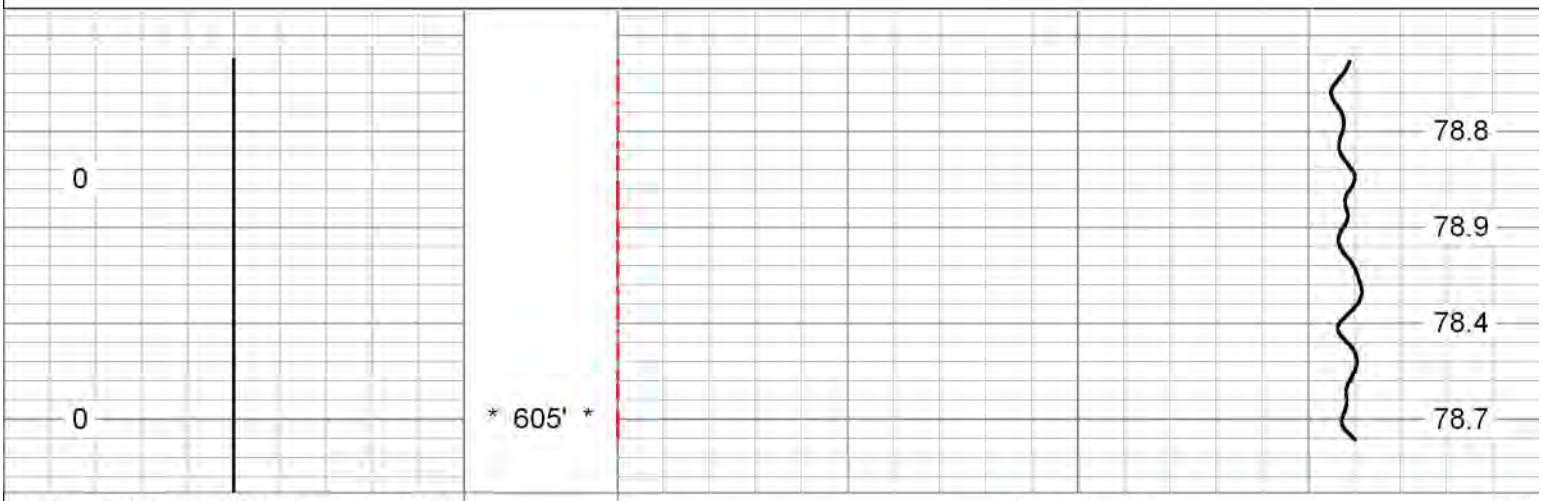
MV Geophysical

Station #8: 605'

Database File wlbell-2.db
Dataset Pathname run2/pass13
Presentation Format flow
Dataset Creation Tue May 07 12:31:44 2013
Charted by Depth in Feet scaled 1:240

-200 LINE SPEED (ft/min) 200
30 BOREID (in) 100
LSPD (ft/min)

0 flown (cps) 100
0 flowp (cps) 100
flowp (cps)



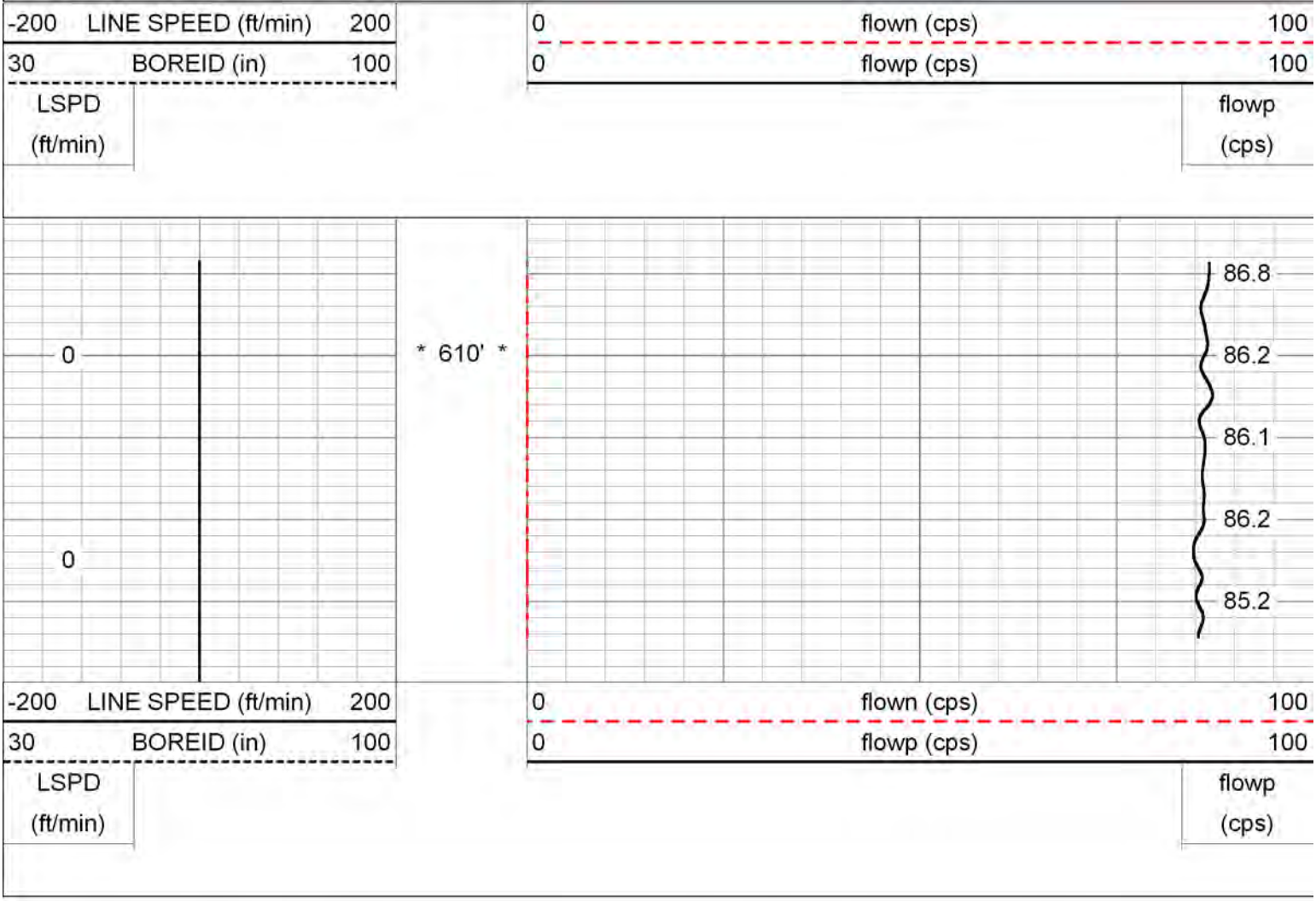
-200 LINE SPEED (ft/min) 200
30 BOREID (in) 100
LSPD (ft/min)

0 flown (cps) 100
0 flowp (cps) 100
flowp (cps)

MV Geophysical

Station #7: 610'

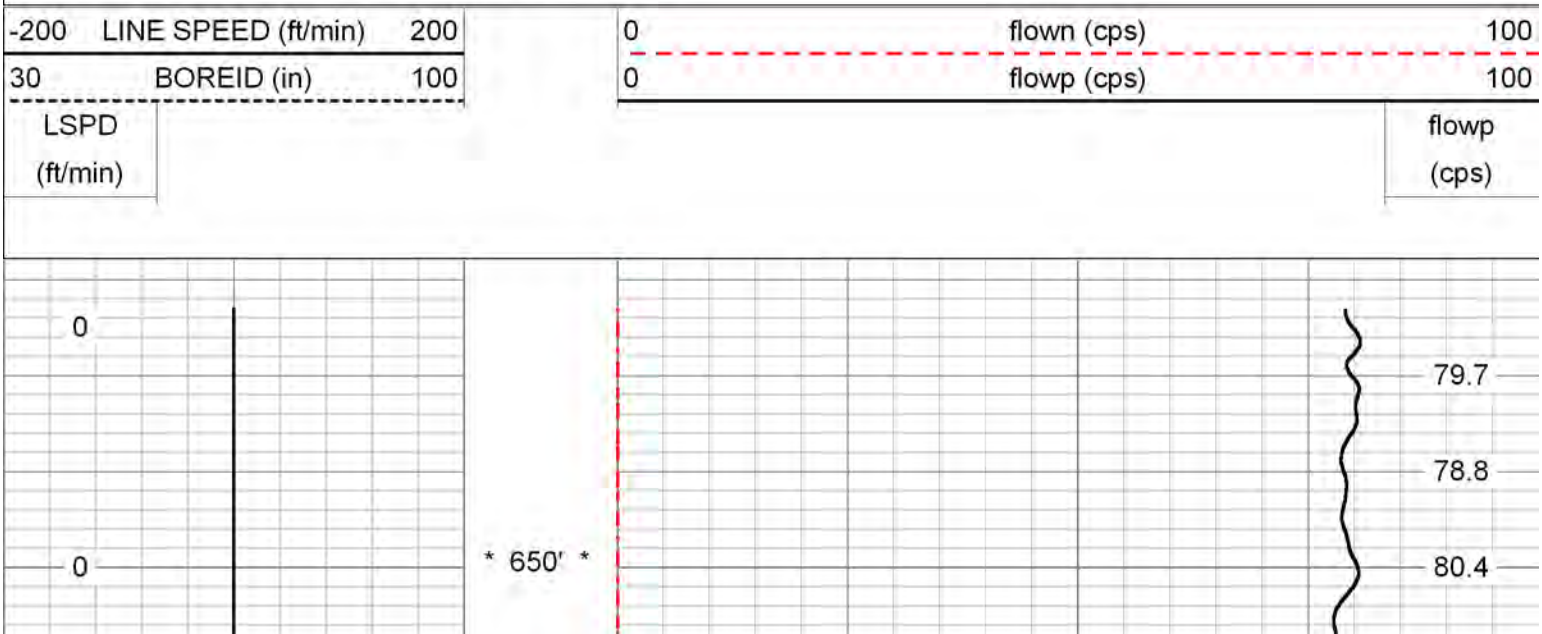
Database File wlbell-2.db
Dataset Pathname run2/pass12
Presentation Format flow
Dataset Creation Tue May 07 12:30:05 2013
Charted by Depth in Feet scaled 1:240



MV Geophysical

Station #6: 650'

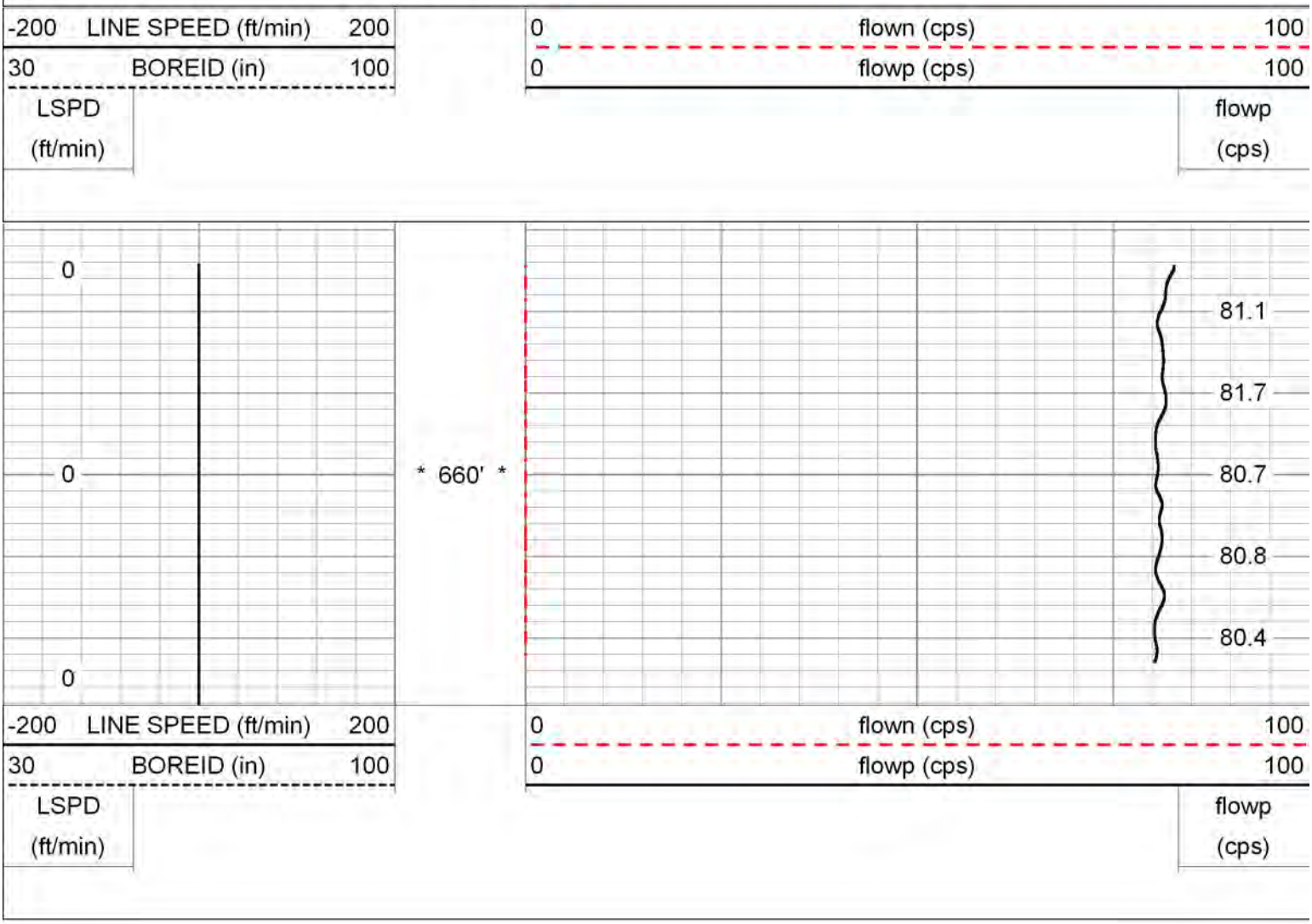
Database File	wlbell-2.db
Dataset Pathname	run2/pass11
Presentation Format	flow
Dataset Creation	Tue May 07 12:27:24 2013
Charted by	Depth in Feet scaled 1:240



MV Geophysical

Station #5: 660'

Database File	wlbell-2.db
Dataset Pathname	run2/pass10
Presentation Format	flow
Dataset Creation	Tue May 07 12:25:19 2013
Charted by	Depth in Feet scaled 1:240



MV Geophysical

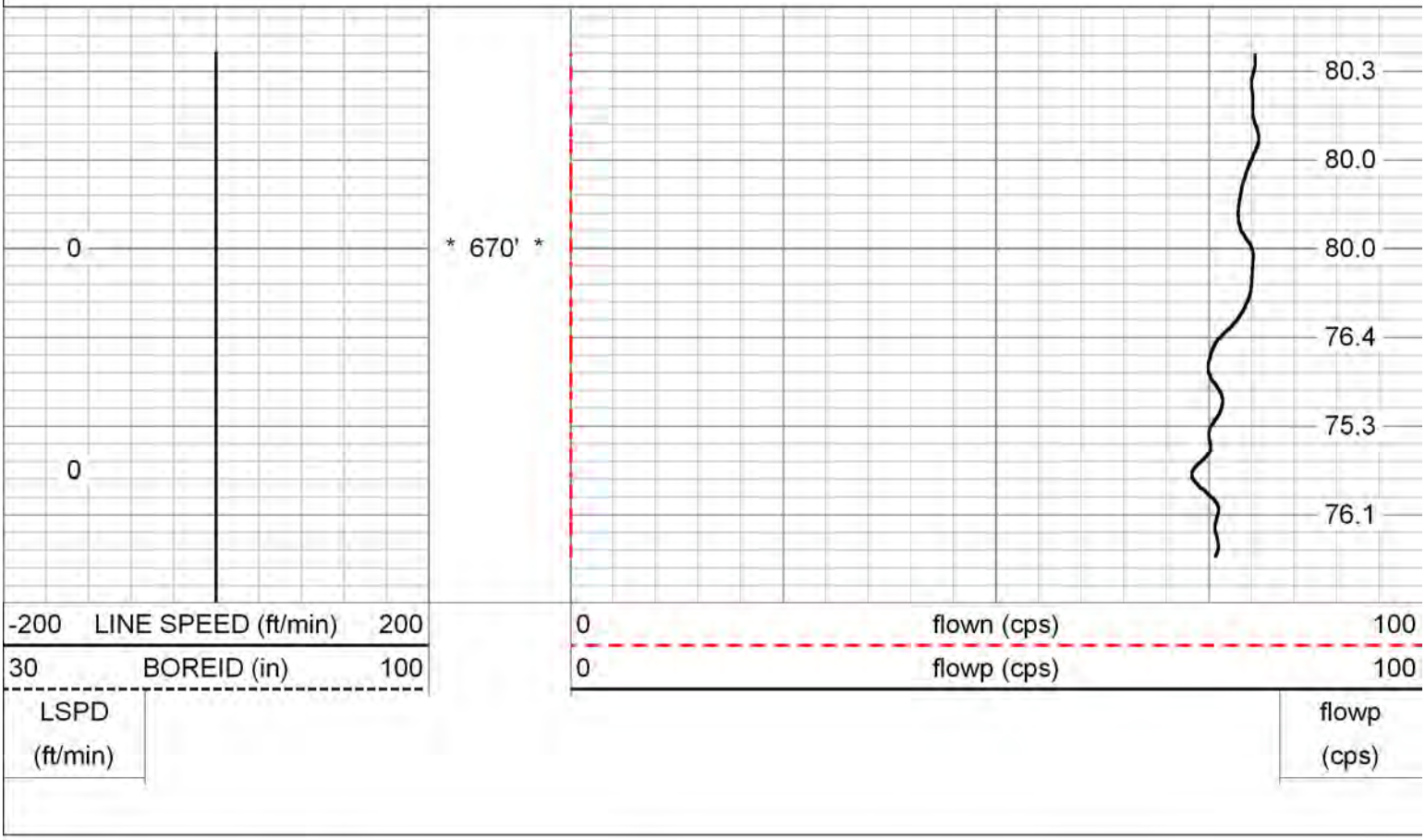
Station #4: 670'

MV Geophysical

Database File	wlbell-2.db
Dataset Pathname	run2/pass9
Presentation Format	flow
Dataset Creation	Tue May 07 12:23:05 2013
Charted by	Depth in Feet scaled 1:240

-200 LINE SPEED (ft/min) 200
30 BOREID (in) 100
LSPD (ft/min)

0 flown (cps) 100
0 flowp (cps) 100
flowp (cps)



-200 LINE SPEED (ft/min) 200
30 BOREID (in) 100
LSPD (ft/min)

0 flown (cps) 100
0 flowp (cps) 100
flowp (cps)

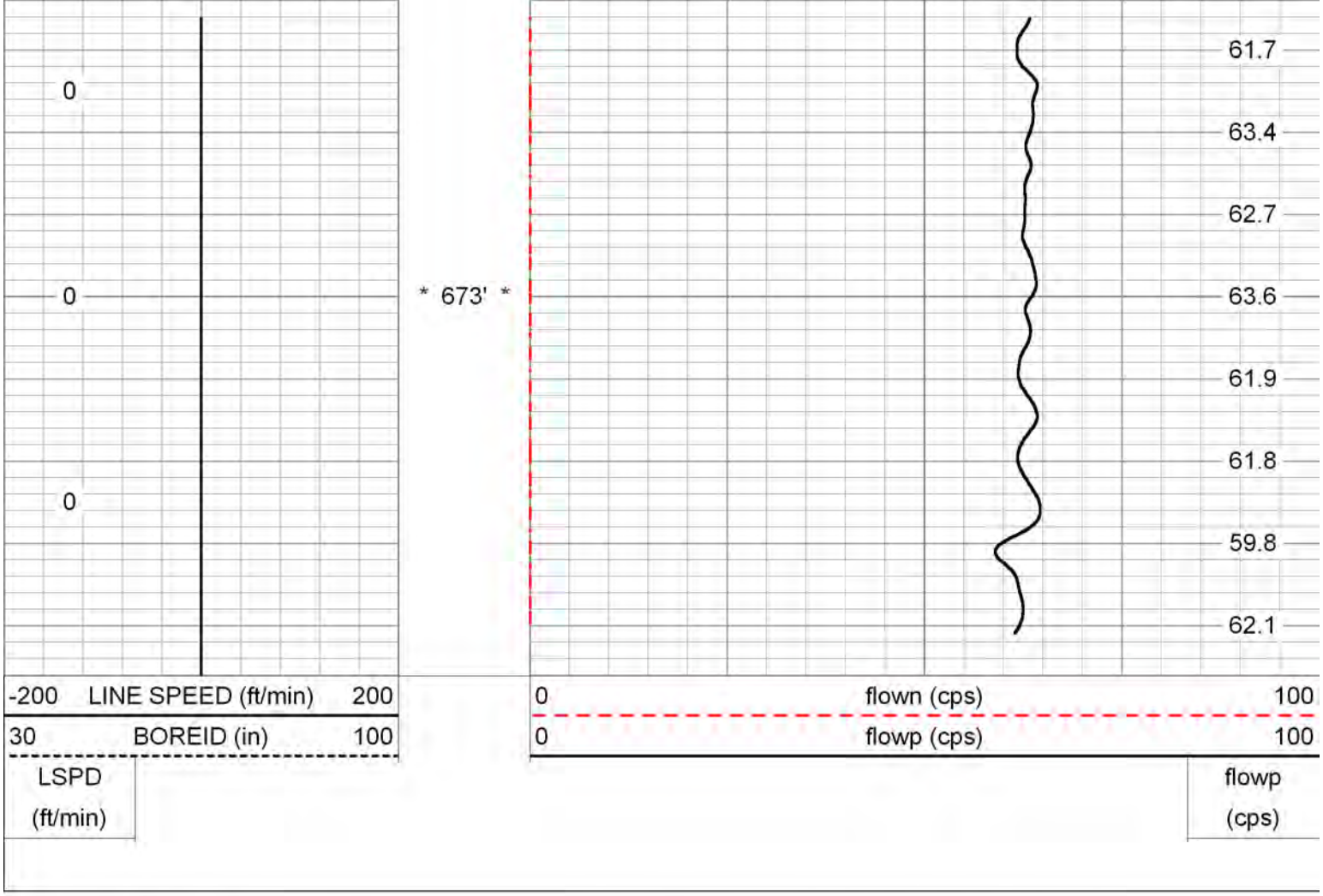
MV Geophysical

Station #3: 673'

Database File	wlbell-2.db
Dataset Pathname	run2/pass8
Presentation Format	flow
Dataset Creation	Tue May 07 12:20:58 2013
Charted by	Depth in Feet scaled 1:240

-200 LINE SPEED (ft/min) 200
30 BOREID (in) 100
LSPD (ft/min)

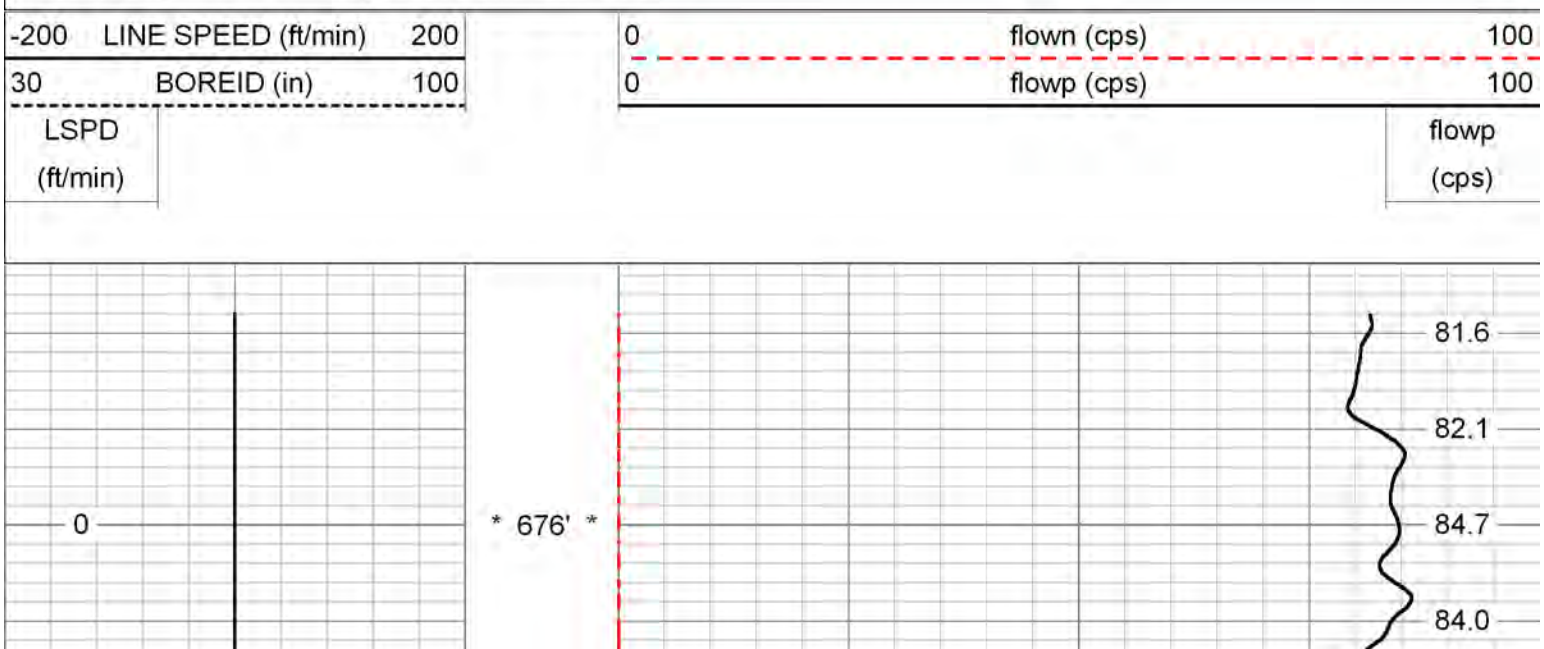
0 flown (cps) 100
0 flowp (cps) 100
flowp (cps)

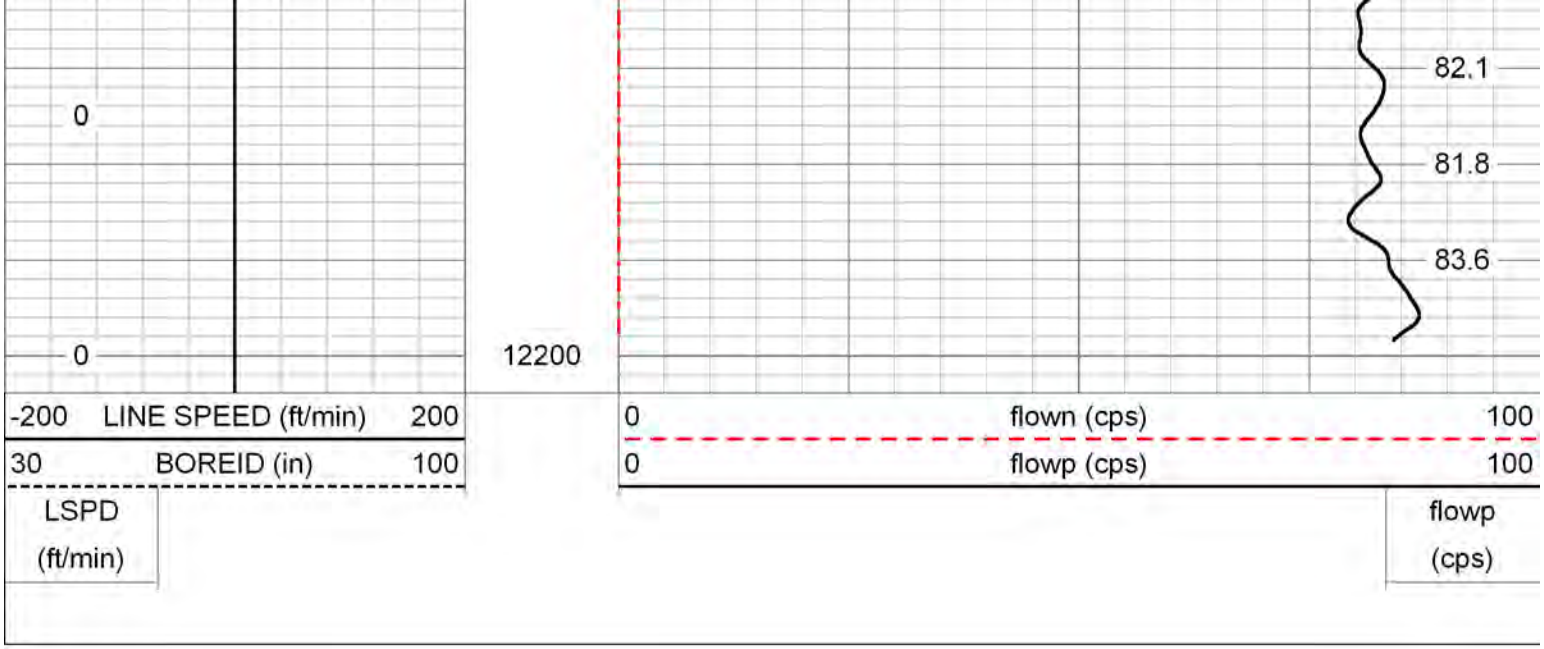


MV Geophysical

Station #2: 676'

Database File	wlbell-2.db
Dataset Pathname	run2/pass7
Presentation Format	flow
Dataset Creation	Tue May 07 12:18:49 2013
Charted by	Depth in Feet scaled 1:240

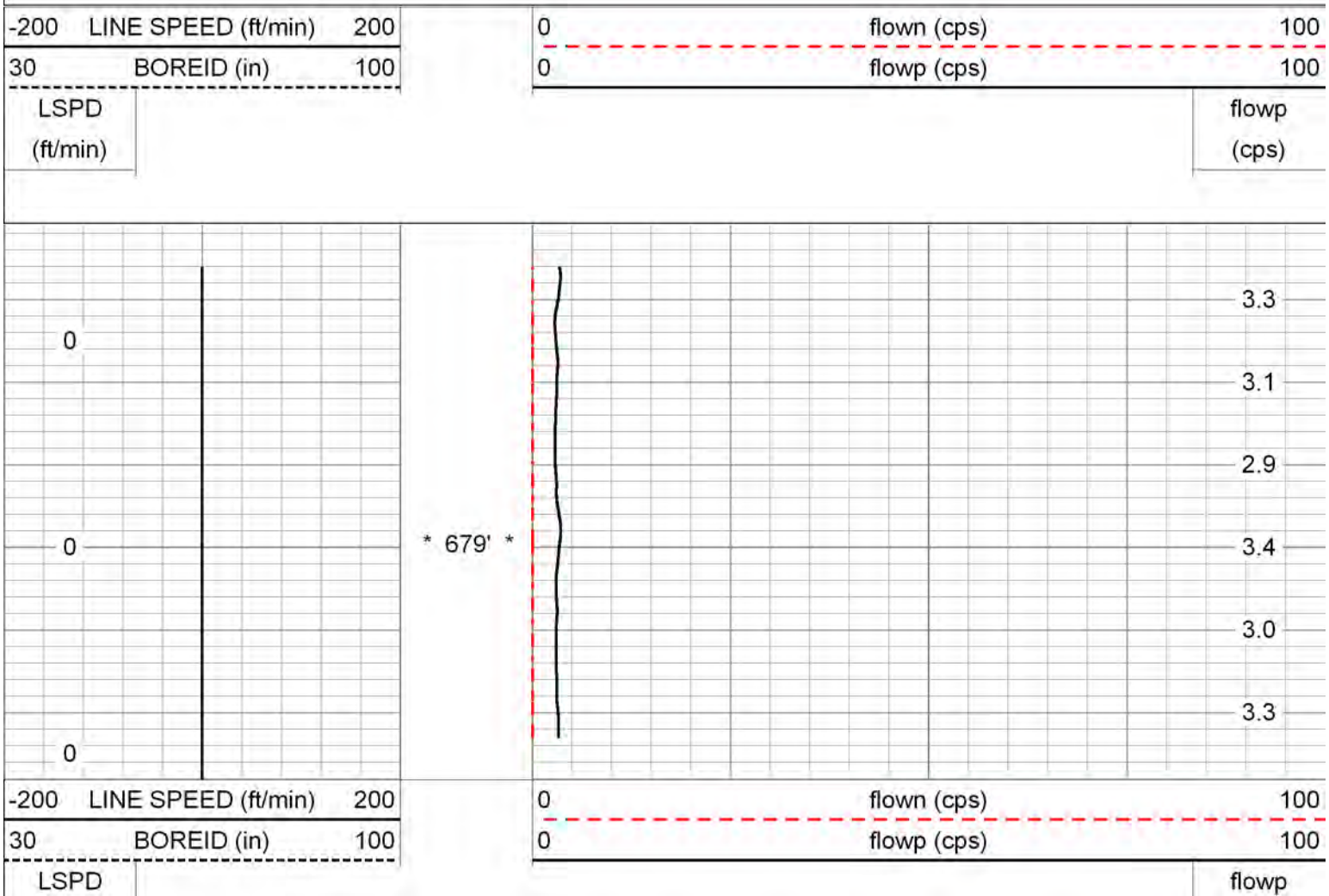




MV Geophysical

Station #1: 679'

Database File	wlbell-2.db
Dataset Pathname	run2/pass6
Presentation Format	flow
Dataset Creation	Tue May 07 12:16:19 2013
Charted by	Depth in Feet scaled 1:240



(ft/min) (cps)

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
			FLOW-LARGE (65)	4.80	3.75	35.00
FLOWN	0.00					
FLOWP	0.00					

Dataset: wlbell-2.db: field/well/run2/pass14
Total length: 4.80 ft
Total weight: 35.00 lb
O.D.: 3.75 in

MV Geophysical

Company	Wells & Water Systems, Inc.		
Well	UFA-2		
Field	LaBelle		
County	Hendry		
State	Florida	Country	USA

MV Geophysical

FLOWMETER INTERPRETATION

Company	Wells & Water Systems, Inc.
Well	UFA-2
Field	LaBelle
County	Hendry
State	Florida
Country	USA

Company Wells & Water Systems, Inc.
Well UFA-2
Field LaBelle
County Hendry
State Florida Country USA

Location: API # :
City of LaBelle
N 871669.65 E 504488.27
Murray Consultants, Inc.
SEC TWP RGE

Other Services
XY/GR
DHTV
FLO,FCT

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

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

Date	7-MAY-2013
Run Number	TWO
Depth Driller	720'
Depth Logger	697'
Bottom Logged Interval	697'
Top Log Interval	495'
Open Hole Size	7.875"
Type Fluid	H2O
Density / Viscosity	NA/NA
Max. Recorded Temp.	NA
Estimated Cement Top	SURFACE
Time Well Ready	08:00 5/7/2013
Time Logger on Bottom	11:30 5/7/2013
Equipment Number	MVGS-1
Location	Fort Myers
Recorded By	S.Miller/C.Miller
Witnessed By	G.MurrayDoyle (MCI)

Borehole Record

Run Number	Bit	From	To
ONE	9.875"	204'	716'
TWO	7.875"	600'	720'

Tubing Record

Size	Wgt/Ft	Top	Bottom
16" ID	SURFACE	204'	
9.375" ID	130'	600'	

	Size	From	To
Casing Record	18" PVC	204'	
Surface String	10.5" PVC	600'	
Prod. String			
Production String			
Liner			

T.Rosenkranz (WWS)

Invoice No. 2013061 | 3x/pdf/las | wlbell-2.db | * FIELD PRINT *

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Comments

Q, %Q & Fluid Velocity presentations include a regular Line Speed and Caliper corrected "RAW" and an interpretative "LOGICAL" format. The "LOGICAL" Q, %Q and Fluid Velocity interpretation assumes no thief zones (i.e., Q & %Q can only increase).

A DYNAMIC down pass was performed @ 50 fpm.

9 stations performed.

Q=850 gpm.

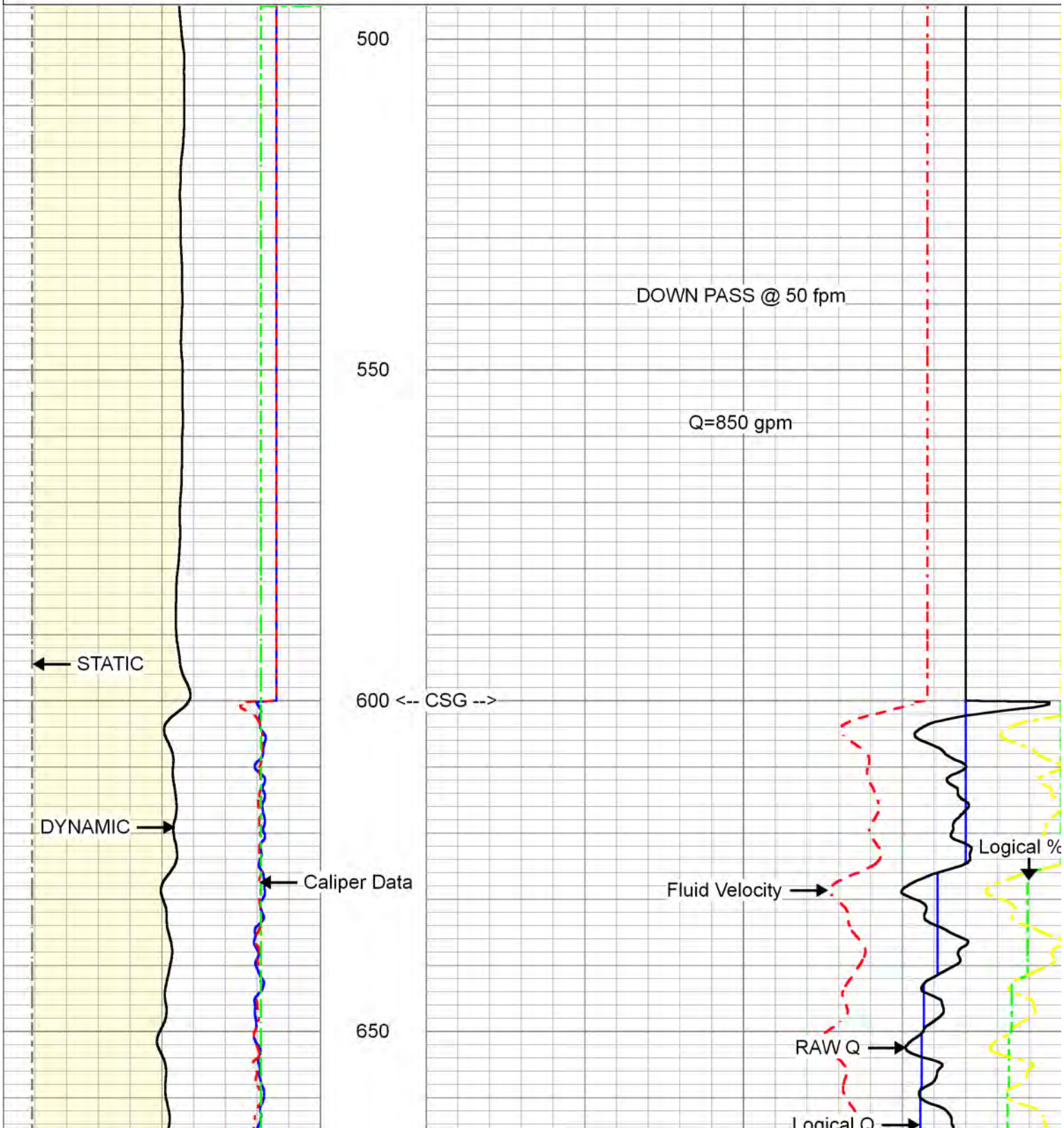
MV Geophysical

Logical/Raw F.Vel., Q & %Q

Database File	wlbell-2.db
Dataset Pathname	run2/lrq50
Presentation Format	flointlb
Dataset Creation	Fri May 10 10:59:13 2013
Charted by	Depth in Feet scaled 1:240

18	XCAL (in)	8
18	YCAL (in)	8
0	STATIC (cps)	200
0	DYNAMIC (cps)	200
18	BIT SIZE (in)	8

0	Fluid Velocity (ft/min)	300
0	Logical Q, gpm	1000
0	Logical Percent Q	100
0	RAW Percent Q	100
0	RAW Q, gpm	1000



18	XCAL (in)	8
18	YCAL (in)	8
0	STATIC (cps)	200
0	DYNAMIC (cps)	200
18	BIT SIZE (in)	8

0	Fluid Velocity (ft/min)	300
0	Logical Q, gpm	1000
0	Logical Percent Q	100
0	RAW Percent Q	100
0	RAW Q, gpm	1000

MV Geophysical

Company	Wells & Water Systems, Inc.		
Well	UFA-2		
Field	LaBelle		
County	Hendry		
State	Florida	Country	USA

APPENDIX C

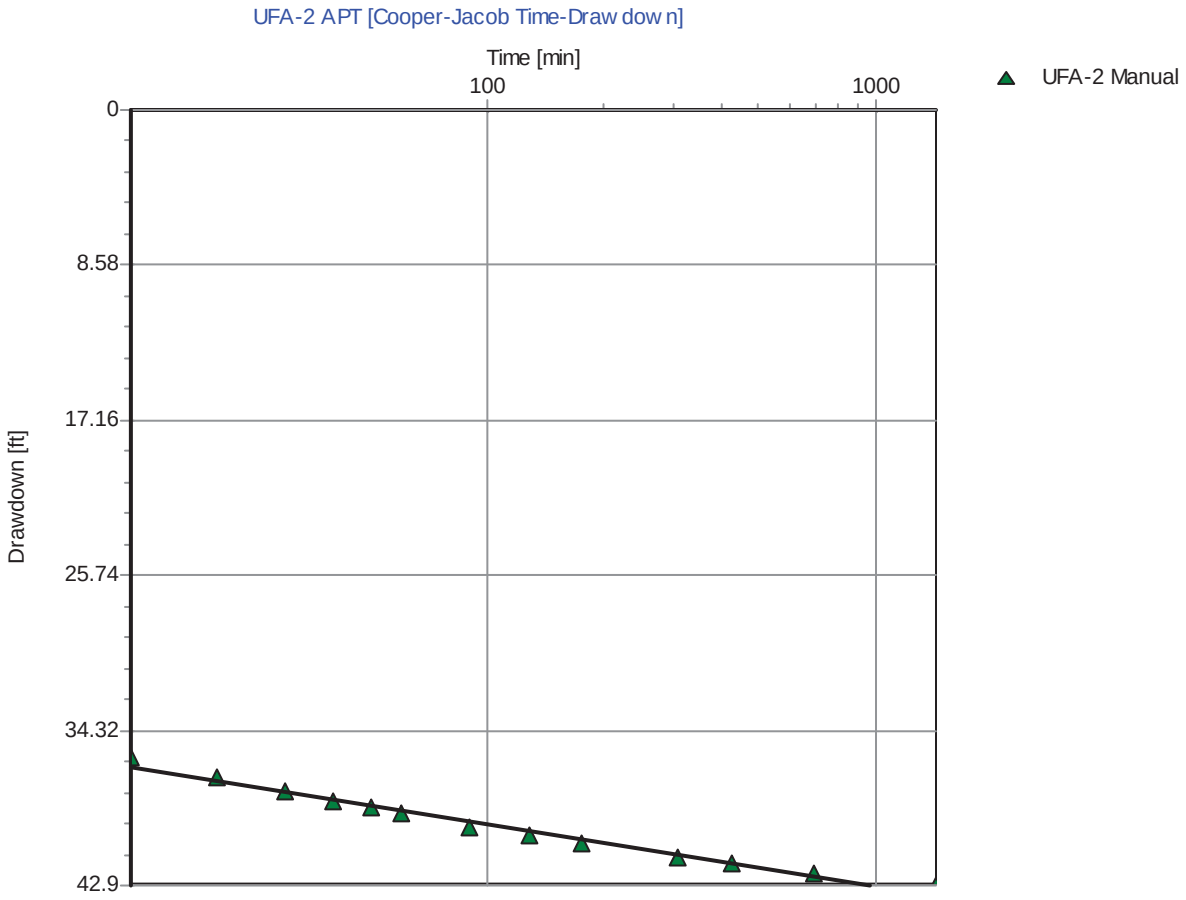
Murray Consultants Inc
769 Skyview Dr
Hayesville, NC 28904
828-389-2476

Pumping Test Analysis Report

Project: City of LaBelle RO Wells

Number: 12-2372

Client: ATM



Pumping Test: **UFA-2 APT**

Analysis Method: **Cooper-Jacob Time-Drawdown**

Analysis Results:				
	Transmissivity:	1.54E+4 [ft²/d]	Conductivity:	1.54E+2 [ft/d]

Test parameters:				
	Pumping Well:	UFA-2	Aquifer Thickness:	100 [ft]
	Casing radius:	0.42 [ft]	Confined Aquifer	
	Screen length:	100 [ft]		
	Boring radius:	0.63 [ft]		
	Discharge Rate:	1500 [U.S. gal/min]		

Comments:

Evaluated by: Gail Doyle

Evaluation Date: 5/23/2013

Murray Consultants Inc
769 Skyview Dr
Hayesville, NC 28904
828-389-2476

Pumping Test Data Report

Project: City of LaBelle RO Wells

Number: 12-2372

Client: ATM

Data observed at:	**UFA-2 Manual**	**Pumping Test:**	**UFA-2 APT**
Distance from PW:	0 [ft]	Pumping Well:	UFA-2
Depth to Static WL:	0 [ft]	Casing radius:	0.42 [ft]
Location:	City of LaBelle WTP 2 Wellfield	Boring radius:	0.63 [ft]
Recorded by:	Gail Doyle	Screen length:	100 [ft]
Date:	5/21/2013	Aquifer Thickness:	100 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
1	12	35.79	35.79
2	20	36.91	36.91
3	30	37.74	37.74
4	40	38.24	38.24
5	50	38.63	38.63
6	60	38.96	38.96
7	90	39.64	39.64
8	128	40.18	40.18
9	175	40.62	40.62
10	308	41.34	41.34
11	424	41.69	41.69
12	696	42.24	42.24
13	1434	42.90	42.90

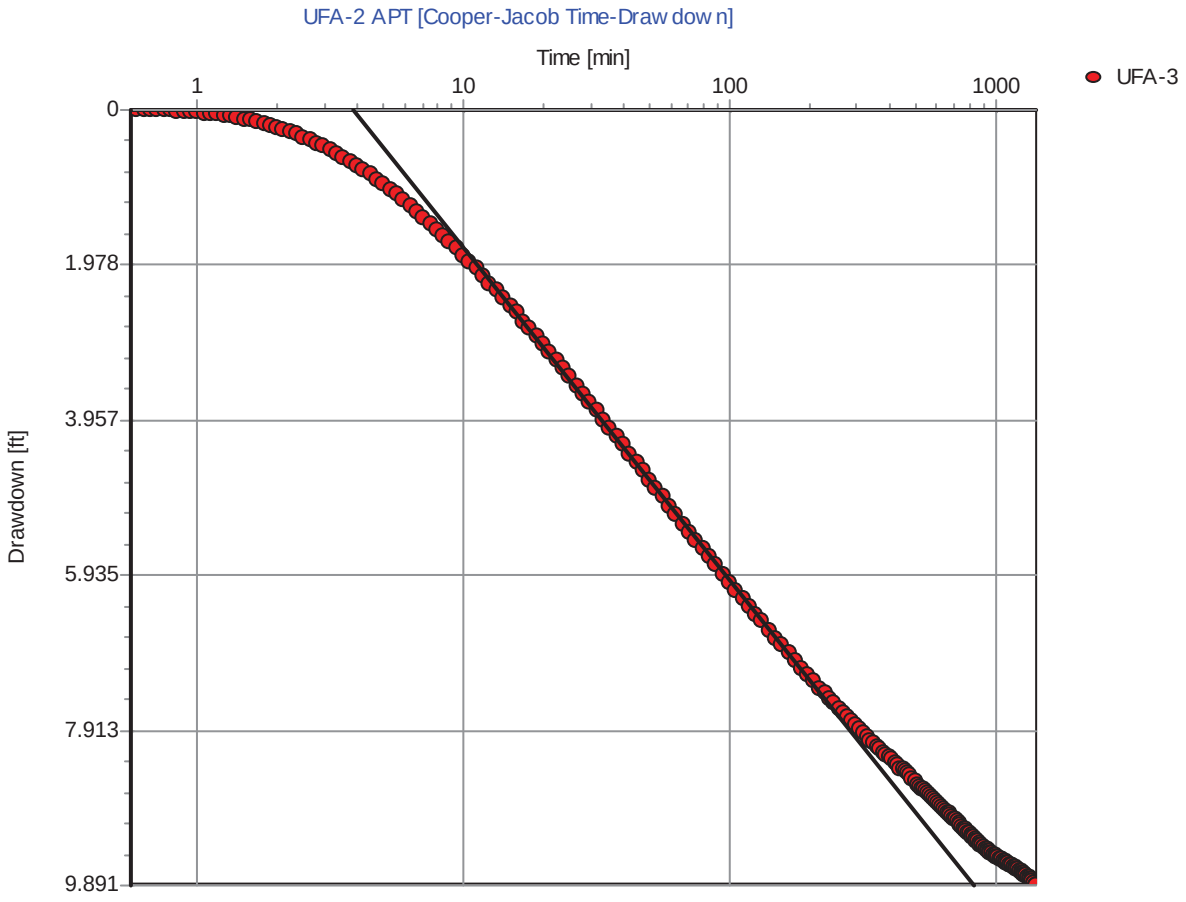
Murray Consultants Inc
769 Skyview Dr
Hayesville, NC 28904
828-389-2476

Pumping Test Analysis Report

Project: City of LaBelle RO Wells

Number: 12-2372

Client: ATM



Pumping Test: **UFA-2 APT**

Analysis Method: **Cooper-Jacob Time-Drawdown**

Analysis Results:	Transmissivity:	1.25E+4 [ft²/d]	Conductivity:	1.25E+2 [ft/d]
	Storativity:	7.50E-5		
Test parameters:	Pumping Well:	UFA-2	Aquifer Thickness:	100 [ft]
	Casing radius:	0.42 [ft]	Confined Aquifer	
	Screen length:	100 [ft]		
	Boring radius:	0.63 [ft]		
	Discharge Rate:	1500 [U.S. gal/min]		

Comments:

Evaluated by: Gail Doyle

Evaluation Date: 5/22/2013

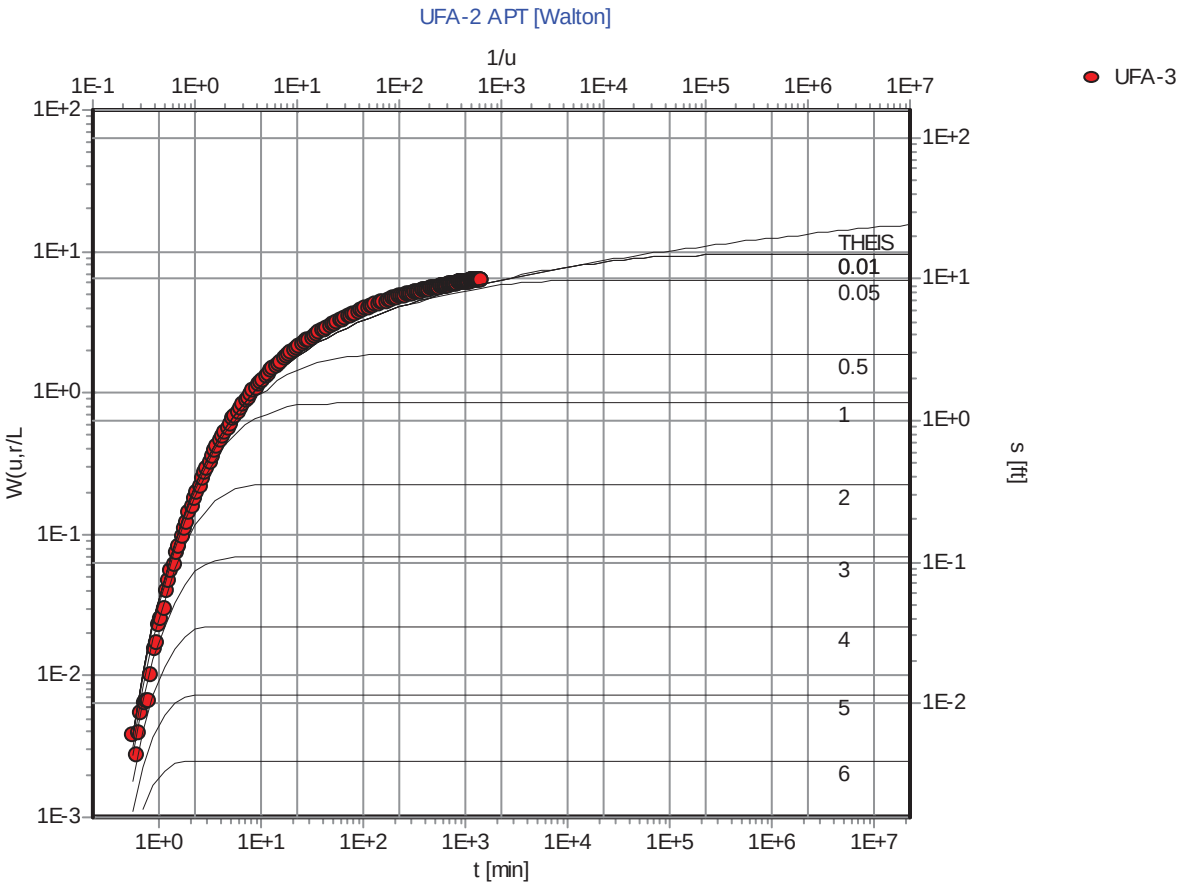
Murray Consultants Inc
769 Skyview Dr
Hayesville, NC 28904
828-389-2476

Pumping Test Analysis Report

Project: City of LaBelle RO Wells

Number: 12-2372

Client: ATM



Pumping Test: **UFA-2 APT**

Analysis Method: **Walton**

Analysis Results:				
	Transmissivity:	1.47E+4 [ft²/d]	Conductivity:	1.47E+2 [ft/d]
	Storativity:	9.13E-5	c:	9.80E+8 [min]

Test parameters:				
	Pumping Well:	UFA-2	Aquifer Thickness:	100 [ft]
	Casing radius:	0.42 [ft]	r/L:	0.01
	Screen length:	100 [ft]		
	Boring radius:	0.63 [ft]		
	Discharge Rate:	1500 [U.S. gal/min]		

Comments:

Evaluated by: Gail Doyle

Evaluation Date: 5/22/2013

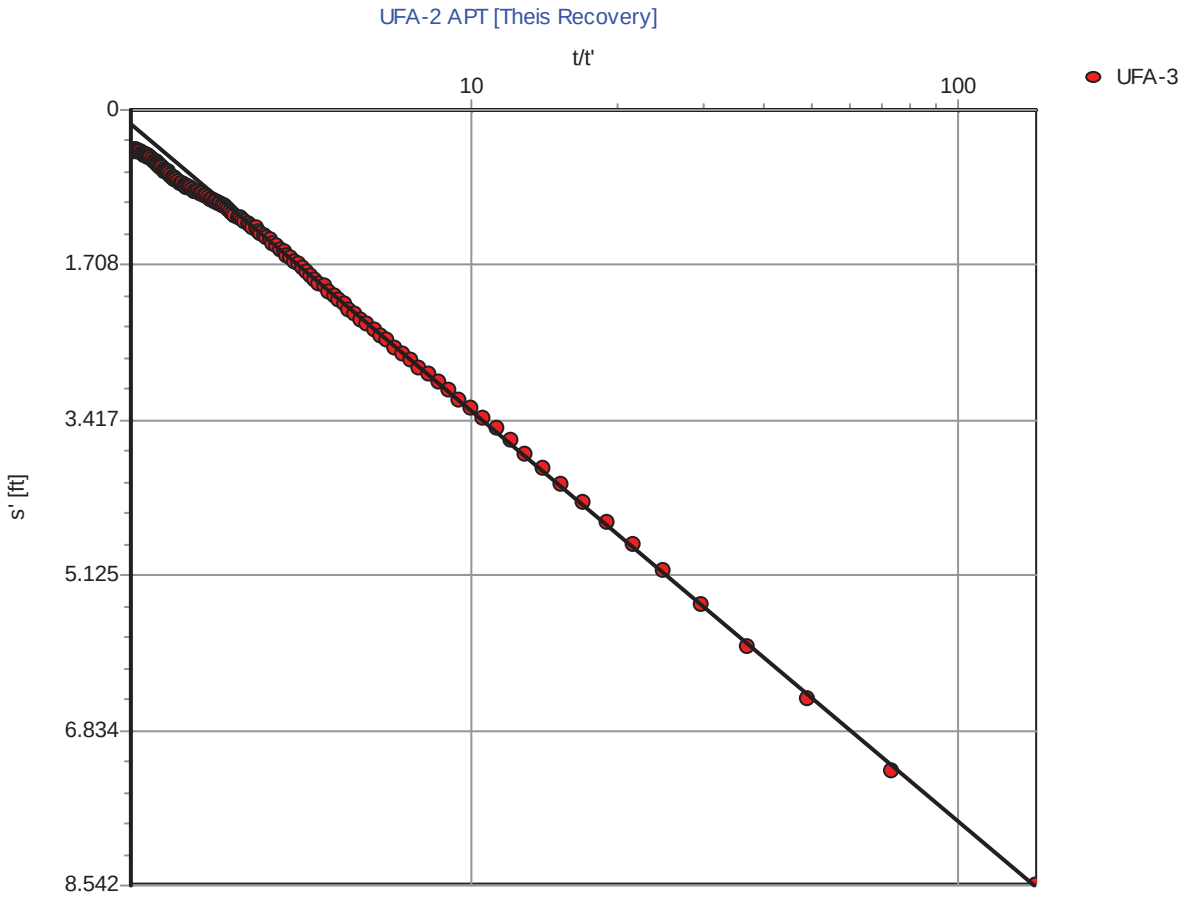
Murray Consultants Inc
769 Skyview Dr
Hayesville, NC 28904
828-389-2476

Pumping Test Analysis Report

Project: City of LaBelle RO Wells

Number: 12-2372

Client: ATM



Pumping Test: **UFA-2 APT**

Analysis Method: **Theis Recovery**

Analysis Results:	Transmissivity:	1.17E+4 [ft²/d]	Conductivity:	1.17E+2 [ft/d]

Test parameters:	Pumping Well:	UFA-2	Aquifer Thickness:	100 [ft]
	Casing radius:	0.42 [ft]	Confined Aquifer	
	Screen length:	100 [ft]		
	Boring radius:	0.63 [ft]		
	Discharge Rate:	1500 [U.S. gal/min]		
	Pumping Time	1438 [min]		

Comments:

Evaluated by: Gail Doyle

Evaluation Date: 5/23/2013

Murray Consultants Inc
769 Skyview Dr
Hayesville, NC 28904
828-389-2476

Pumping Test Data Report

Project: City of LaBelle RO Wells

Number: 12-2372

Client: ATM

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-2 APT**
Distance from PW:	1000 [ft]	Pumping Well:	UFA-2
Depth to Static WL:	0 [ft]	Casing radius:	0.42 [ft]
Location:	City of LaBelle WTP 2 Wellfield	Boring radius:	0.63 [ft]
Recorded by:	Gail Doyle	Screen length:	100 [ft]
Date:	5/21/2013	Aquifer Thickness:	100 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
1	0.562	0.01	0.01
2	0.596	0.00	0.00
3	0.631	0.01	0.01
4	0.668	0.01	0.01
5	0.708	0.01	0.01
6	0.75	0.01	0.01
7	0.794	0.01	0.01
8	0.841	0.02	0.02
9	0.891	0.02	0.02
10	0.944	0.03	0.03
11	1	0.04	0.04
12	1.06	0.04	0.04
13	1.12	0.05	0.05
14	1.19	0.06	0.06
15	1.26	0.07	0.07
16	1.33	0.09	0.09
17	1.41	0.09	0.09
18	1.5	0.12	0.12
19	1.58	0.13	0.13
20	1.68	0.15	0.15
21	1.78	0.17	0.17
22	1.88	0.19	0.19
23	1.99	0.22	0.22
24	2.11	0.25	0.25
25	2.24	0.28	0.28
26	2.37	0.31	0.31
27	2.51	0.35	0.35
28	2.66	0.39	0.39
29	2.82	0.43	0.43
30	2.98	0.46	0.46
31	3.16	0.51	0.51

Murray Consultants Inc
769 Skyview Dr
Hayesville, NC 28904
828-389-2476

Pumping Test Data Report

Project: City of LaBelle RO Wells

Number: 12-2372

Client: ATM

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-2 APT**
Distance from PW:	1000 [ft]	Pumping Well:	UFA-2
Depth to Static WL:	0 [ft]	Casing radius:	0.42 [ft]
Location:	City of LaBelle WTP 2 Wellfield	Boring radius:	0.63 [ft]
Recorded by:	Gail Doyle	Screen length:	100 [ft]
Date:	5/21/2013	Aquifer Thickness:	100 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
32	3.35	0.56	0.56
33	3.55	0.61	0.61
34	3.76	0.65	0.65
35	3.98	0.71	0.71
36	4.22	0.77	0.77
37	4.47	0.83	0.83
38	4.73	0.89	0.89
39	5.01	0.95	0.95
40	5.31	1.02	1.02
41	5.62	1.08	1.08
42	5.96	1.15	1.15
43	6.31	1.22	1.22
44	6.68	1.29	1.29
45	7.08	1.37	1.37
46	7.5	1.45	1.45
47	7.94	1.52	1.52
48	8.41	1.60	1.60
49	8.91	1.69	1.69
50	9.44	1.77	1.77
51	10	1.86	1.86
52	10.6	1.94	1.94
53	11.2	2.02	2.02
54	11.9	2.13	2.13
55	12.6	2.22	2.22
56	13.3	2.31	2.31
57	14.1	2.40	2.40
58	15	2.50	2.50
59	15.8	2.59	2.59
60	16.8	2.70	2.70
61	17.8	2.79	2.79
62	18.8	2.88	2.88

Murray Consultants Inc
769 Skyview Dr
Hayesville, NC 28904
828-389-2476

Pumping Test Data Report

Project: City of LaBelle RO Wells

Number: 12-2372

Client: ATM

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-2 APT**
Distance from PW:	1000 [ft]	Pumping Well:	UFA-2
Depth to Static WL:	0 [ft]	Casing radius:	0.42 [ft]
Location:	City of LaBelle WTP 2 Wellfield	Boring radius:	0.63 [ft]
Recorded by:	Gail Doyle	Screen length:	100 [ft]
Date:	5/21/2013	Aquifer Thickness:	100 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
63	19.9	2.99	2.99
64	21.1	3.09	3.09
65	22.4	3.20	3.20
66	23.7	3.30	3.30
67	25.1	3.41	3.41
68	26.6	3.52	3.52
69	28.2	3.62	3.62
70	29.8	3.73	3.73
71	31.6	3.84	3.84
72	33.5	3.95	3.95
73	35.5	4.06	4.06
74	37.6	4.17	4.17
75	39.8	4.28	4.28
76	42.2	4.39	4.39
77	44.7	4.50	4.50
78	47.3	4.61	4.61
79	50.1	4.72	4.72
80	53.1	4.84	4.84
81	56.2	4.94	4.94
82	59.6	5.06	5.06
83	63.1	5.16	5.16
84	66.8	5.28	5.28
85	70.8	5.38	5.38
86	75	5.49	5.49
87	79.4	5.60	5.60
88	84.1	5.70	5.70
89	89.1	5.81	5.81
90	94.4	5.92	5.92
91	100	6.02	6.02
92	106	6.13	6.13
93	112	6.23	6.23

Murray Consultants Inc
769 Skyview Dr
Hayesville, NC 28904
828-389-2476

Pumping Test Data Report

Project: City of LaBelle RO Wells

Number: 12-2372

Client: ATM

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-2 APT**
Distance from PW:	1000 [ft]	Pumping Well:	UFA-2
Depth to Static WL:	0 [ft]	Casing radius:	0.42 [ft]
Location:	City of LaBelle WTP 2 Wellfield	Boring radius:	0.63 [ft]
Recorded by:	Gail Doyle	Screen length:	100 [ft]
Date:	5/21/2013	Aquifer Thickness:	100 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
94	119	6.33	6.33
95	126	6.43	6.43
96	133	6.53	6.53
97	141	6.63	6.63
98	150	6.74	6.74
99	158	6.83	6.83
100	168	6.94	6.94
101	178	7.03	7.03
102	188	7.13	7.13
103	198	7.21	7.21
104	208	7.29	7.29
105	218	7.37	7.37
106	228	7.45	7.45
107	238	7.51	7.51
108	248	7.57	7.57
109	258	7.64	7.64
110	268	7.70	7.70
111	278	7.75	7.75
112	288	7.80	7.80
113	298	7.85	7.85
114	308	7.90	7.90
115	318	7.95	7.95
116	328	7.99	7.99
117	338	8.04	8.04
118	348	8.08	8.08
119	358	8.12	8.12
120	368	8.15	8.15
121	378	8.20	8.20
122	388	8.23	8.23
123	398	8.26	8.26
124	408	8.29	8.29

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Depth to Static WL:	0 [ft]	Casing radius:	0.42 [ft]
Location:	City of LaBelle WTP 2 Wellfield	Boring radius:	0.63 [ft]
Recorded by:	Gail Doyle	Screen length:	100 [ft]
Date:	5/21/2013	Aquifer Thickness:	100 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
125	418	8.32	8.32
126	428	8.36	8.36
127	438	8.40	8.40
128	448	8.42	8.42
129	458	8.45	8.45
130	468	8.47	8.47
131	478	8.50	8.50
132	488	8.53	8.53
133	498	8.57	8.57
134	508	8.61	8.61
135	518	8.63	8.63
136	528	8.67	8.67
137	538	8.67	8.67
138	548	8.69	8.69
139	558	8.71	8.71
140	568	8.75	8.75
141	578	8.77	8.77
142	588	8.80	8.80
143	598	8.82	8.82
144	608	8.85	8.85
145	618	8.87	8.87
146	628	8.89	8.89
147	638	8.91	8.91
148	648	8.94	8.94
149	658	8.96	8.96
150	668	8.98	8.98
151	678	9.00	9.00
152	688	9.02	9.02
153	698	9.04	9.04
154	708	9.06	9.06
155	718	9.08	9.08

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Pumping Test Data Report

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Number: 12-2372

Client: ATM

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-2 APT**
Distance from PW:	1000 [ft]	Pumping Well:	UFA-2
Depth to Static WL:	0 [ft]	Casing radius:	0.42 [ft]
Location:	City of LaBelle WTP 2 Wellfield	Boring radius:	0.63 [ft]
Recorded by:	Gail Doyle	Screen length:	100 [ft]
Date:	5/21/2013	Aquifer Thickness:	100 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
156	728	9.10	9.10
157	738	9.12	9.12
158	748	9.14	9.14
159	758	9.16	9.16
160	768	9.18	9.18
161	778	9.20	9.20
162	788	9.22	9.22
163	798	9.24	9.24
164	808	9.26	9.26
165	818	9.27	9.27
166	828	9.29	9.29
167	838	9.31	9.31
168	848	9.32	9.32
169	858	9.33	9.33
170	868	9.35	9.35
171	878	9.37	9.37
172	888	9.38	9.38
173	898	9.40	9.40
174	908	9.41	9.41
175	918	9.43	9.43
176	928	9.43	9.43
177	938	9.45	9.45
178	948	9.46	9.46
179	958	9.47	9.47
180	968	9.48	9.48
181	978	9.50	9.50
182	988	9.51	9.51
183	998	9.52	9.52
184	1008	9.52	9.52
185	1018	9.53	9.53
186	1028	9.54	9.54

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Pumping Test Data Report

Project: City of LaBelle RO Wells

Number: 12-2372

Client: ATM

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-2 APT**
Distance from PW:	1000 [ft]	Pumping Well:	UFA-2
Depth to Static WL:	0 [ft]	Casing radius:	0.42 [ft]
Location:	City of LaBelle WTP 2 Wellfield	Boring radius:	0.63 [ft]
Recorded by:	Gail Doyle	Screen length:	100 [ft]
Date:	5/21/2013	Aquifer Thickness:	100 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
187	1038	9.55	9.55
188	1048	9.56	9.56
189	1058	9.56	9.56
190	1068	9.58	9.58
191	1078	9.58	9.58
192	1088	9.59	9.59
193	1098	9.60	9.60
194	1108	9.61	9.61
195	1118	9.62	9.62
196	1128	9.62	9.62
197	1138	9.63	9.63
198	1148	9.64	9.64
199	1158	9.65	9.65
200	1168	9.66	9.66
201	1178	9.66	9.66
202	1188	9.67	9.67
203	1198	9.68	9.68
204	1208	9.69	9.69
205	1218	9.69	9.69
206	1228	9.70	9.70
207	1238	9.71	9.71
208	1248	9.72	9.72
209	1258	9.73	9.73
210	1268	9.73	9.73
211	1278	9.75	9.75
212	1288	9.75	9.75
213	1298	9.76	9.76
214	1308	9.77	9.77
215	1318	9.78	9.78
216	1328	9.79	9.79
217	1338	9.80	9.80

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Pumping Test Data Report

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Number: 12-2372

Client: ATM

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-2 APT**
Distance from PW:	1000 [ft]	Pumping Well:	UFA-2
Depth to Static WL:	0 [ft]	Casing radius:	0.42 [ft]
Location:	City of LaBelle WTP 2 Wellfield	Boring radius:	0.63 [ft]
Recorded by:	Gail Doyle	Screen length:	100 [ft]
Date:	5/21/2013	Aquifer Thickness:	100 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
218	1348	9.81	9.81
219	1358	9.82	9.82
220	1368	9.84	9.84
221	1378	9.85	9.85
222	1388	9.86	9.86
223	1398	9.87	9.87
224	1408	9.88	9.88
225	1418	9.89	9.89
226	1428	9.90	9.90
227	1438	9.91	9.91
228	1448	8.54	8.54
229	1458	7.28	7.28
230	1468	6.48	6.48
231	1478	5.91	5.91
232	1488	5.45	5.45
233	1498	5.09	5.09
234	1508	4.79	4.79
235	1518	4.54	4.54
236	1528	4.32	4.32
237	1538	4.12	4.12
238	1548	3.94	3.94
239	1558	3.79	3.79
240	1568	3.65	3.65
241	1578	3.52	3.52
242	1588	3.40	3.40
243	1598	3.29	3.29
244	1608	3.19	3.19
245	1618	3.10	3.10
246	1628	3.00	3.00
247	1638	2.91	2.91
248	1648	2.84	2.84

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Pumping Test Data Report

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Number: 12-2372

Client: ATM

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-2 APT**
Distance from PW:	1000 [ft]	Pumping Well:	UFA-2
Depth to Static WL:	0 [ft]	Casing radius:	0.42 [ft]
Location:	City of LaBelle WTP 2 Wellfield	Boring radius:	0.63 [ft]
Recorded by:	Gail Doyle	Screen length:	100 [ft]
Date:	5/21/2013	Aquifer Thickness:	100 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
249	1658	2.76	2.76
250	1668	2.69	2.69
251	1678	2.62	2.62
252	1688	2.55	2.55
253	1698	2.49	2.49
254	1708	2.43	2.43
255	1718	2.37	2.37
256	1728	2.31	2.31
257	1738	2.25	2.25
258	1748	2.20	2.20
259	1758	2.15	2.15
260	1768	2.09	2.09
261	1778	2.04	2.04
262	1788	2.00	2.00
263	1798	1.95	1.95
264	1808	1.92	1.92
265	1818	1.87	1.87
266	1828	1.83	1.83
267	1838	1.79	1.79
268	1848	1.75	1.75
269	1858	1.71	1.71
270	1868	1.67	1.67
271	1878	1.63	1.63
272	1888	1.60	1.60
273	1898	1.57	1.57
274	1908	1.54	1.54
275	1918	1.50	1.50
276	1928	1.47	1.47
277	1938	1.44	1.44
278	1948	1.42	1.42
279	1958	1.39	1.39

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Pumping Test Data Report

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Client: ATM

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-2 APT**
Distance from PW:	1000 [ft]	Pumping Well:	UFA-2
Depth to Static WL:	0 [ft]	Casing radius:	0.42 [ft]
Location:	City of LaBelle WTP 2 Wellfield	Boring radius:	0.63 [ft]
Recorded by:	Gail Doyle	Screen length:	100 [ft]
Date:	5/21/2013	Aquifer Thickness:	100 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
280	1968	1.36	1.36
281	1978	1.34	1.34
282	1988	1.31	1.31
283	1998	1.29	1.29
284	2008	1.28	1.28
285	2018	1.27	1.27
286	2028	1.24	1.24
287	2038	1.22	1.22
288	2048	1.20	1.20
289	2058	1.18	1.18
290	2068	1.17	1.17
291	2078	1.14	1.14
292	2088	1.12	1.12
293	2098	1.11	1.11
294	2108	1.08	1.08
295	2118	1.07	1.07
296	2128	1.07	1.07
297	2138	1.05	1.05
298	2148	1.03	1.03
299	2158	1.02	1.02
300	2168	1.01	1.01
301	2178	1.00	1.00
302	2188	0.98	0.98
303	2198	0.98	0.98
304	2208	0.96	0.96
305	2218	0.95	0.95
306	2228	0.94	0.94
307	2238	0.93	0.93
308	2248	0.92	0.92
309	2258	0.91	0.91
310	2268	0.90	0.90

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Pumping Test Data Report

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Client: ATM

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-2 APT**
Distance from PW:	1000 [ft]	Pumping Well:	UFA-2
Depth to Static WL:	0 [ft]	Casing radius:	0.42 [ft]
Location:	City of LaBelle WTP 2 Wellfield	Boring radius:	0.63 [ft]
Recorded by:	Gail Doyle	Screen length:	100 [ft]
Date:	5/21/2013	Aquifer Thickness:	100 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
311	2278	0.90	0.90
312	2288	0.88	0.88
313	2298	0.88	0.88
314	2308	0.87	0.87
315	2318	0.86	0.86
316	2328	0.85	0.85
317	2338	0.84	0.84
318	2348	0.84	0.84
319	2358	0.83	0.83
320	2368	0.81	0.81
321	2378	0.81	0.81
322	2388	0.80	0.80
323	2398	0.78	0.78
324	2408	0.77	0.77
325	2418	0.77	0.77
326	2428	0.75	0.75
327	2438	0.74	0.74
328	2448	0.73	0.73
329	2458	0.72	0.72
330	2468	0.71	0.71
331	2478	0.69	0.69
332	2488	0.68	0.68
333	2498	0.68	0.68
334	2508	0.66	0.66
335	2518	0.65	0.65
336	2528	0.64	0.64
337	2538	0.63	0.63
338	2548	0.62	0.62
339	2558	0.61	0.61
340	2568	0.60	0.60
341	2578	0.59	0.59

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Pumping Test Data Report

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Client: ATM

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-2 APT**
Distance from PW:	1000 [ft]	Pumping Well:	UFA-2
Depth to Static WL:	0 [ft]	Casing radius:	0.42 [ft]
Location:	City of LaBelle WTP 2 Wellfield	Boring radius:	0.63 [ft]
Recorded by:	Gail Doyle	Screen length:	100 [ft]
Date:	5/21/2013	Aquifer Thickness:	100 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
342	2588	0.58	0.58
343	2598	0.57	0.57
344	2608	0.57	0.57
345	2618	0.56	0.56
346	2628	0.55	0.55
347	2638	0.54	0.54
348	2648	0.53	0.53
349	2658	0.52	0.52
350	2668	0.51	0.51
351	2678	0.51	0.51
352	2688	0.50	0.50
353	2698	0.50	0.50
354	2708	0.49	0.49
355	2718	0.49	0.49
356	2728	0.48	0.48
357	2738	0.48	0.48
358	2748	0.47	0.47
359	2758	0.46	0.46
360	2768	0.47	0.47
361	2778	0.46	0.46
362	2788	0.46	0.46
363	2798	0.46	0.46
364	2808	0.45	0.45
365	2818	0.45	0.45
366	2828	0.45	0.45
367	2838	0.46	0.46
368	2848	0.46	0.46
369	2858	0.46	0.46
370	2868	0.46	0.46
371	2878	0.46	0.46

APPENDIX D

BENCHMARK

EnviroAnalytical Inc.

FDOH Certification #E84167

Wells & Water Systems Inc.

4696 Elevation Way
Fort Myers , Fl 33905

ANALYTICAL TEST REPORT
THESE RESULTS MEET NELAC STANDARDS

I.D.	Parameter NAME	(MCL)	UNITS	ANALYSIS RESULT	QUALIFIER	METHOD	MDL	DATE ANALYZED	TIME ANALYZED	LAB ID
	CALCIUM		MG/L	86.1		200.7	0.030	05/20/2013	15:06	E84167
	IRON, DISSOLVED		MG/L	0.029	U	200.7	0.029	05/20/2013	15:01	E84167
	MAGNESIUM		MG/L	75.6		200.7	0.006	05/20/2013	15:06	E84167
	POTASSIUM		MG/L	19.7		200.7	0.169	05/20/2013	15:06	E84167
	SILICA, TOTAL		MG/L	12.2		200.7	0.004	05/20/2013	15:06	E84167
	STRONTIUM		MG/L	23.6		200.7	0.001	05/20/2013	15:06	E84167
	TOTAL PHOSPHORUS AS P		MG/L	0.008	U	365.3	0.008	05/13/2013	12:27	E84167
	BICARBONATE ALKALINITY (CACO3)		MG/L	90.5		SM2320B	0.594	05/13/2013	10:50	E84167
	CARBONATE ALKALINITY (CACO3)		MG/L	0.594	U	SM2320B	0.594	05/13/2013	10:50	E84167
	IRON (FERROUS)		MG/L	0.05	U	SM3500FE-B	0.05	05/09/2013	16:30	E84167
	CARBON DIOXIDE (CO2)		MG/L	83.2		SM4500-CO2		05/28/2013	14:14	E84167
	SILICA, DISSOLVED		MG/L	13.7		SM4500SIO2-C	0.044	05/30/2013	11:00	E84167
	TOTAL ORGANIC CARBON		MG/L	0.684	I	SM5310B	0.271	05/10/2013	22:47	E84167
	ALUMINUM, DISSOLVED	0.2	MG/L	0.040	I	200.7	0.023	05/20/2013	15:01	E84167
	MANGANESE, DISSOLVED	0.05	MG/L	0.001	I	200.7	0.00098	05/20/2013	15:01	E84167
	HYDROGEN SULFIDE, UNIONIZED		MG/L	0.397		SM4500-SH	0.003	05/23/2013	15:00	E84167
	SULFIDE, TOTAL		MG/L	3.25		SM4500S2D	0.028	05/13/2013	14:00	E84167

DATA QUALIFIERS THAT MAY APPLY:

I = Reported value is between the laboratory MDL and the PQL. (PQL = 4 x MDL).
J = Estimated value.
J3 = Est. value quality control criteria for precision or accuracy not met.
J4 = Est. value. Sample matrix interference suspected.
Q = Sample held beyond accepted holdtime.
U = Analyte analyzed but not detected at the value indicated.

NOTES:

V = Analyte detected in sample and method blank.Results for this analyte in associated samples may be biased high. Standard , Duplicate and Spike values are within control limits. Reported data are usable

MBAS calculated as LAS; molecular weight = 348.

X = Value exceeds MCL.

ND = Not Detected at or above adjusted reporting limit.

C = The lab does not hold TNI accreditation for this parameter.

For questions and comments regarding these results, please contact Bettina Beilfuss at (941) 723-9986

Results relate only to the samples.

INORGANIC ANALYSIS

62-550.310 (1)

REPORT NUMBER: 13050374 001
SYSTEM NAME: Labelle Well PW2 - Pri & Sec
SYSTEM ID:

I.D.	Parameter NAME	(MCL)	UNITS	ANALYSIS RESULT	QUALIFIER	METHOD	MDL	DATE ANALYZED	TIME ANALYZED	LAB ID
	AMMONIA NITROGEN		MG/L	0.234		350.1	0.008	05/13/2013	13:14	E84167
	TOTAL KJELDAHL NITROGEN		MG/L	0.305		351.2	0.05	05/17/2013	12:11	E84167
1040	NITRATE NITROGEN	10	MG/L	0.060	U	300.0	0.060	05/09/2013	19:35	E84167
1041	NITRITE NITROGEN	1.0	MG/L	0.041	U	300.0	0.041	05/09/2013	19:35	E84167
1038	NITRATE+NITRITE AS N	10	MG/L	0.060	U	300.0	0.060	05/09/2013	19:35	E84167
1005	ARSENIC	0.010	MG/L	0.00069	U	SM3113B	0.00069	05/23/2013	15:11	E84167
1010	BARIUM	2	MG/L	0.024	I	200.7	0.002	05/20/2013	15:06	E84167
1015	CADMIUM	0.005	MG/L	0.0009	U	200.7	0.0009	05/20/2013	15:06	E84167
1020	CHROMIUM	0.1	MG/L	0.002	U	200.7	0.002	05/20/2013	15:06	E84167
1024	CYANIDE	0.2	MG/L	0.005	U	335.4	0.005	05/17/2013	12:34	E84167
1025	FLUORIDE	4.0	MG/L	0.030	U	300.0	0.030	05/11/2013	02:54	E84167
1030	LEAD	0.015	MG/L	0.00067	U	SM3113B	0.00067	05/22/2013	11:15	E84167
1035	MERCURY	0.002	MG/L	0.000198	U	245.1	0.000198	05/16/2013	14:14	E84167
1036	NICKEL	0.1	MG/L	0.008		200.7	0.00118	05/20/2013	15:06	E84167
1045	SELENIUM	0.05	MG/L	0.00157	U	SM3113B	0.00157	05/24/2013	14:32	E84167
1052	SODIUM	160	MG/L	478	X	200.7	0.034	05/20/2013	15:06	E84167
1074	ANTIMONY	0.006	MG/L	0.00226	U	SM3113B	0.00226	05/24/2013	11:12	E84167
1075	BERYLLIUM	0.004	MG/L	0.0005		200.7	0.000078	05/20/2013	15:06	E84167
1085	THALLIUM	0.002	MG/L	0.00169	U	200.9	0.00169	05/21/2013	16:36	E84167

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Results relate only to the samples.

VOLATILE ORGANICS

62-550.310 (4) (A)

REPORT NUMBER: 13050374 001
SYSTEM NAME: Labelle Well PW2 - Pri & Sec
SYSTEM ID:

I.D.	Parameter NAME	(MCL)	UNITS	ANALYSIS RESULT	QUALIFIER	METHOD	MDL	DATE ANALYZED	TIME ANALYZED	LAB ID
2378	1,2,4-TRICHLOROBENZENE	70	UG/L	0.15	U	524.2	0.15	05/14/2013	22:46	E84167
2380	CIS-1,2-DICHLOROETHYLENE	70	UG/L	0.11	U	524.2	0.11	05/14/2013	22:46	E84167
2955	XYLENES, TOTAL	10000	UG/L	0.13	U	524.2	0.13	05/14/2013	22:46	E84167
2964	DICHLOROMETHANE	5	UG/L	0.20	U	524.2	0.20	05/14/2013	22:46	E84167
2968	O-DICHLOROBENZENE	600	UG/L	0.11	U	524.2	0.11	05/14/2013	22:46	E84167
2969	P-DICHLOROBENZENE	75	UG/L	0.10	U	524.2	0.10	05/14/2013	22:46	E84167
2976	VINYL CHLORIDE	1	UG/L	0.15	U	524.2	0.15	05/14/2013	22:46	E84167
2977	1,1-DICHLOROETHENE	7	UG/L	0.11	U	524.2	0.11	05/14/2013	22:46	E84167
2979	TRANS-1,2-DICHLOROETHENE	100	UG/L	0.12	U	524.2	0.12	05/14/2013	22:46	E84167
2980	1,2-DICHLOROETHANE	3	UG/L	0.16	U	524.2	0.16	05/14/2013	22:46	E84167
2981	1,1,1-TRICHLOROETHANE	200	UG/L	0.10	U	524.2	0.10	05/14/2013	22:46	E84167
2982	CARBON TETRACHLORIDE	3	UG/L	0.20	U	524.2	0.20	05/14/2013	22:46	E84167
2983	1,2-DICHLOROPROPANE	5	UG/L	0.15	U	524.2	0.15	05/14/2013	22:46	E84167
2984	TRICHLOROETHENE	3	UG/L	0.12	U	524.2	0.12	05/14/2013	22:46	E84167
2985	1,1,2-TRICHLOROETHANE	5	UG/L	0.14	U	524.2	0.14	05/14/2013	22:46	E84167
2987	TETRACHLOROETHENE	3	UG/L	0.20	U	524.2	0.20	05/14/2013	22:46	E84167
2989	MONOCHLOROBENZENE	100	UG/L	0.10	U	524.2	0.10	05/14/2013	22:46	E84167
2990	BENZENE	1	UG/L	0.12	U	524.2	0.12	05/14/2013	22:46	E84167
2991	TOLUENE	1000	UG/L	0.11	U	524.2	0.11	05/14/2013	22:46	E84167
2992	ETHYLBENZENE	700	UG/L	0.11	U	524.2	0.11	05/14/2013	22:46	E84167
2996	STYRENE	100	UG/L	0.10	U	524.2	0.10	05/14/2013	22:46	E84167

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Results relate only to the samples.

SYNTHETIC ORGANICS

62-550.310 (4) (b)

REPORT NUMBER: 13050374 001
SYSTEM NAME: Labelle Well PW2 - Pri & Sec
SYSTEM ID:

I.D.	Parameter NAME	(MCL)	UNITS	ANALYSIS RESULT	QUALIFIER	METHOD	MDL	DATE ANALYZED	TIME ANALYZED	LAB ID
2005	ENDRIN	2.0	UG/L	0.0020	U	508.1	0.0020	05/15/2013	18:33	E83079
2010	GAMMA-BHC (LINDANE)	0.2	UG/L	0.0031	U	508.1	0.0031	05/15/2013	18:33	E83079
2015	METHOXYCHLOR	40	UG/L	0.0140	U	508.1	0.0140	05/15/2013	18:33	E83079
2020	TOXAPHENE	3.0	UG/L	0.6200	U	508.1	0.6200	05/15/2013	18:33	E83079
2031	DALAPON	200	UG/L	0.8900	U	515.3	0.8900	05/17/2013	14:26	E83079
2032	DIQUAT	20	UG/L	0.1500	U	549.2	0.1500	05/16/2013	12:33	E83079
2033	ENDOTHALL	100	UG/L	2.7000	U	548.1	2.7000	05/14/2013	12:41	E83079
2034	GLYPHOSATE	700	UG/L	2.1000	U	547	2.1000	05/13/2013	21:01	E83079
2035	DI(2-ETHYLHEXYL)ADIPATE	400	UG/L	0.3900	U	525.2	0.3900	05/15/2013	19:56	E83079
2036	OXAMYL	200	UG/L	0.4100	U	531.1	0.4100	05/17/2013	07:40	E83079
2037	SIMAZINE	4.0	UG/L	0.0450	U	508.1	0.0450	05/15/2013	18:33	E83079
2039	DI(2-ETHYLHEXYL)PHTHALATE	6.0	UG/L	0.5100	U	525.2	0.5100	05/15/2013	19:56	E83079
2040	PICLORAM	500	UG/L	0.0940	U	515.3	0.0940	05/17/2013	14:26	E83079
2041	DINOSEB	7.0	UG/L	0.1600	U	515.3	0.1600	05/17/2013	14:26	E83079
2042	HEXACHLOROCYCLOPENTADIENE	50	UG/L	0.0120	U	508.1	0.0120	05/15/2013	18:33	E83079
2046	CARBOFURAN	40	UG/L	0.3200	U	531.1	0.3200	05/17/2013	07:40	E83079
2050	ATRAZINE	3.0	UG/L	0.0210	U	508.1	0.0210	05/15/2013	18:33	E83079
2051	ALACHLOR	2	UG/L	0.0350	U	508.1	0.0350	05/15/2013	18:33	E83079
2063	DIOXIN SCREEN		UG/L	ND	C	525.2	0.0000	05/15/2013	19:56	E83079
2065	HEPTACHLOR	0.4	UG/L	0.0061	U	508.1	0.0061	05/15/2013	18:33	E83079
2067	HEPTACHLOR EPOXIDE	0.2	UG/L	0.0031	U	508.1	0.0031	05/15/2013	18:33	E83079
2105	2,4-D	70	UG/L	0.0810	U	515.3	0.0810	05/17/2013	14:26	E83079
2110	2,4,5-TP (SILVEX)	50	UG/L	0.1600	U	515.3	0.1600	05/17/2013	14:26	E83079
2274	HEXACHLOROBENZENE	1.0	UG/L	0.0110	U	508.1	0.0110	05/15/2013	18:33	E83079
2306	BENZO(A)PYRENE	0.2	UG/L	0.0190	U	525.2	0.0190	05/15/2013	19:56	E83079
2326	PENTACHLOROPHENOL	1.0	UG/L	0.0300	U	515.3	0.0300	05/17/2013	14:26	E83079
2383	PCB	0.5	UG/L	0.0810	U	508.1	0.0810	05/15/2013	18:33	E83079
2931	1,2-DIBROMO-3-CHLOROPROPANE	0.20	UG/L	0.014	U	504.1	0.014	05/10/2013	20:09	E84167
2946	ETHYLENE DIBROMIDE	0.02	UG/L	0.01	U	504.1	0.01	05/10/2013	20:09	E84167
2959	CHLORDANE	2.0	UG/L	0.0480	U	508.1	0.0480	05/15/2013	18:33	E83079

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Results relate only to the samples.

RADIONUCLIDES

62-550.310 (6)

REPORT NUMBER: 13050374 001
SYSTEM NAME: Labelle Well PW2 - Pri & Sec
SYSTEM ID:

Parameter I.D.	NAME	(MCL)	UNITS	ANALYSIS RESULT	QUALIFIER	METHOD	MDL	DATE ANALYZED	TIME ANALYZED	LAB ID
4000	GROSS ALPHA	15	PCI/L	10.3+/-3.9		900.0	5.0	05/21/2013	10:02	E83033
4020	RADIUM-226	5	PCI/L	2.9+/-0.5		903.1	0.1	05/23/2013	14:57	E83033
4030	RADIUM-228		PCI/L	1.4+/-0.5		904.0	0.7	05/22/2013	13:08	E83033

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SECONDARY CONTAMINANTS

62-550.320

REPORT NUMBER: 13050374 001
SYSTEM NAME: Labelle Well PW2 - Pri & Sec
SYSTEM ID:

I.D.	Parameter NAME	(MCL)	UNITS	ANALYSIS RESULT	QUALIFIER	METHOD	MDL	DATE ANALYZED	TIME ANALYZED	LAB ID
	COLOR PH		UNITS	7.67		SM4500H+B		05/10/2013	09:00	E84167
1002	ALUMINUM	0.2	MG/L	0.046	I	200.7	0.023	05/20/2013	15:06	E84167
1017	CHLORIDE	250	MG/L	893	X	300.0	0.353	05/11/2013	02:54	E84167
1022	COPPER	1.00	MG/L	0.004	U	200.7	0.004	05/20/2013	15:06	E84167
1025	FLUORIDE.	4.0	MG/L	0.030	U	300.0	0.030	05/11/2013	02:54	E84167
1028	IRON	0.3	MG/L	0.029	U	200.7	0.029	05/20/2013	15:06	E84167
1032	MANGANESE	0.05	MG/L	0.00098	U	200.7	0.00098	05/20/2013	15:06	E84167
1050	SILVER	0.1	MG/L	0.0005	U	200.7	0.0005	05/20/2013	15:06	E84167
1055	SULFATE	250	MG/L	355	X	300.0	0.339	05/11/2013	02:54	E84167
1095	ZINC	5	MG/L	0.0014	U	200.7	0.0014	05/20/2013	15:06	E84167
1905	COLOR, APPARENT	15	PCU	2.5	U	SM2120B	2.5	05/10/2013	09:00	E84167
1920	ODOR	3	TON	128	X	140.1	1	05/09/2013	15:10	E84167
1925	PH	6.5-8.!	UNITS	.7.67		SM4500H+B		05/09/2013	16:30	E84167
1930	TOTAL DISSOLVED SOLIDS	500	MG/L	1992	X	SM2540C	7.26	05/15/2013	10:47	E84167
2905	SURFACTANTS	0.5	MG/L	0.129		SM5540C	0.03	05/10/2013	11:00	E84167

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Benchmark EnviroAnalytical, Inc.
1711 Twelfth Street East
Palmetto, FL 34221
(941) 723-9986
(941) 723-6061 fax
WWW.Benchmarkea.com

Client: **Wells & Water Systems**
4694 Elevation Way
Ft. Myers Fl 33905
239-872-5955 / Fax: 239-277-0842
Bobby Kohlmeier rjk@watersystemsflorida.com

13050374

Chain of Custody Form: Labelle Well Primary & Secondary Analysis
Method of Discharge: Sample Type[1]: G Sample Matrix[2]: DW

Laboratory Submission #: ~~1303~~ CG 5/9/13

Sample ID	Sb, As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Na, Tl Al, Cu, Fe, Mn, Ag, Zn Ca Mg K Sr Total Silica	Dissolved Al Fe Mn (Lab Filtered)	Ferrous Iron	CN	Gross α, Radium-226 & 228	VOCs	SOC's (Pesticides and PCB's)								MBAS (Foaming Agents)	Dissolved Silica (Lab Filtered)	Odor	TP NH_3 TKN	Cl SO_4 TDS Color/pH pH*** NO_2 (300.0) NO_3 (300.0) NO_3-NO_2 (Calc.) Fluoride B/C-Alkalinity Carbon Dioxide	TOC	Total/Hydrogen Sulfide
							Carabamates 531.1	Pesticides 508, 608	EDB/DBCP 504.1	Herbicides 515.3	Semivolatiales 525.2	Glyphosate 547	Endothall 548.1	Diquat 549.2							
	1:4 HNO_3 pH<2 □	Plain	Plain	NaOH pH>9 □	1:4 HNO_3 pH<2 □	NaThio 1:1 HCl*	MCAA ~~NaS_2O_3~~	NaS_2O_3 1:1 HCl*	NaS_2O_3	NaS_2O_3	NaS_2O_3 1:1 HCl*	NaS_2O_3	NaS_2O_3	NaS_2O_3 H_2SO_4*	Plain	Plain	Plain	1:4 H_2SO_4 pH<2□	Plain	1:1 HCl	ZnOAC NaOH pH>9□
	1 x 1 Quart Plastic	1 x ½ Pint Plastic	1 x 500mL Opaque Plastic	1 x 250mL Plastic	1 x 2 Quart Plastic	3 x 40mL Glass Vials**	2 x 40mL Glass Vials	2 x 1 Liter Glass	2 x 40mL Glass Vials	1 x 250mL Glass	2 x 1 Liter Glass	2 x 40mL Glass Vials	1 x 500mL Amber Glass	1 x 1 Liter Plastic	1 x 1 Quart Plastic	1 x ½ Pint Plastic	1 x 250mL Amber Glass	1 x ½ Pint Plastic	1 x 1 Quart Plastic	1 x 40mL Glass Vial	1 x ½ Pint Plastic
PW 2	Date: 0943 0941 Time: 5/9/13 →		0941	0952	0943	0953	0956	0945	0956	0950	0945	0959	0951	0942	0940	0940	0952	0942	0940	0959	0952

****Dioxin Screen****

* Add 3 drops of HCl to each bottle. Add H_2SO_4 to sample. **Fill all 3 vials COMPLETELY, there can be NO AIR BUBBLES.
***pH Received after 15 minute hold time, ok to run.

Station ID: PW2	Field Parameters					
Date: 5/9/13	Temperature (°C)	Conductivity (µmho/cm)	D.O. (mg/L)	pH (s.u.)	Cl_2 (mg/L)	Turbidity (ntu)
Time: 0940	29.2	3270	0.32	7.7	0.0	0.4

Instrument ID: 32, 33

1 "Sample Type" is used to indicate whether the sample was a grab (G) or whether it was a composite (C).
2 "Sample Matrix" is used to indicate whether the sample is being discharged to drinking water (DW), groundwater (GW), surface water (SW), soil, sediment (SDMNT), or sludge (SLDG).
3 "Container Type" is used to indicate whether the container is plastic (P) or glass (G).
4 **Sample must be refrigerated or stored in wet ice after collection. The temperature during storage should be less than or equal to 6°C (42.8°F).**
Under "Preservative," list any preservatives that were added to the sample container.

Instructions:
1. Each bottle has a label identifying sample ID, premeasured preservative contained in the bottle, sample type, client ID, and parameters for analysis.
2. The following information should be added to each bottle label after collection with permanent black ink: date and time of collection, sampler's name or initials, and any field number or ID.
3. All bottles not containing preservative may be rinsed with appropriate sample prior to collection.

Laboratory Sample Acceptability
pH<2 ☒
Temperature: 3.4°C

1	Collector: Rick Kohlmeier	Date: 5/9/13	Time: 1158	Received By: Wayne Vanderpool	5-9-13	1158
2	Relinquished by: Wayne Vanderpool	Date: 5-9-13	Time: 1455	Received By:	Date: 5/9/13	Time: 1455

INTERLABORATORY SAMPLE TRANSMITTAL FORM

Benchmark EnviroAnalytical, Inc.
1711 12th Street East
Palmetto, FL 34221
(941) 723-9986
(941) 723-6061 fax

Office QC Check: 5/08/13 JH
Bottle Check:

10 BUSINESS DAY T.A.T. PLEASE

Date:	5/15/13 ~~WEL WAT~~ *		
Project Name:	WELL WATER ~~Labelle Well Primary and Secondary Analysis~~ *		
# of Samples:	1	Total # of Bottles:	1
Method of Shipment:	Courier		
Subcontract Laboratory:	Florida Radiochemistry 5456 Hoffner Ave. #201 Orlando, FL 32812 Phone: 407-382-7733 Fax: 407-382-7744		
Page	1	of	1

Laboratory Submission #	Collection Date	Collection Time	Sample Matrix*	Collection Method**	Preservative	Container Qty	Container Capacity	Container Type***	Parameters	Field Conductivity µs/cm
13050374-1	05/09/13	0943	DW	Grab	1:4 HNO3	1	2 Qt	P	Gross Alpha, Radium 226 & 228	2870

* Sample Matrix abbreviations: Groundwater (GW), Surface Water (SW), Saline Surface Water (SSW), Fresh Surface Water (FSW), Drinking Water (DW), Sludge (Sldg), Solid (Sol), Soil (Soil), Domestic Effluent (Dom Eff), Industrial Effluent (Ind Eff).
** Sample Method abbreviations: Grab (G), Composite (C), 24 Hour Composite (24HR Comp.)
*** Container Type abbreviations: Plastic (P), Glass (G).

Relinquished By: (Benchmark)	Sign Name:		Date:	Received By:	Date:	5/15/13
	Print Name:	Christopher Girvin	Time:	S. VANN ANN	Time:	12:30
Relinquished By:	Sign Name:		Date:	Received By:	Date:	
	Print Name:		Time:		Time:	

INTERLABORATORY SAMPLE TRANSMITTAL FORM

Benchmark EnviroAnalytical, Inc.
1711 12th Street East
Palmetto, FL 34221
(941) 723-9986
(941) 723-6061 fax
www.Benchmarkea.com
Office QC Check: 05/09/13 JH
Bottle Check: _____

WO#: 3592803
3592803

Date:	05/09/13 ~~WEL WAT~~ *		
	WEL WAT ~~Labelle Well Primary and Secondary Analysis~~ *		
	1	Total # of Bottles:	11
	Hand Delivery		
	E83079 - Pace Analytical Service Inc; 8 East Tower Circle; Ormond Beach, Fl 32175 Joe Vodrik; 1-800-966-5668		
Page	1	of	1

Laboratory Submission #	Collection Date	Collection Time	Sample Matrix*	Collection Method**	Preservative	Container Qty	Container Capacity	Container Type***	Parameters SOC's (Pesticides and PCB's)	Comments
13050374-1	05/09/13	956	DW	Grab	MCAA ~~NaS_2O_3~~ JH 5/9/13	2	40 mL	G	Carabamates (531.1)	
		945			NaS_2O_3 HCl	2	1 L	G	Pesticides (508/608)	
		950			NaS_2O_3	1	250mL	G	Herbicides (515.3)	
		945			NaS_2O_3 HCl	2	1 L	G	Semivolatiles (525.2)	**Dioxin Screen**
		959			NaS_2O_3	2	40 mL	G	Glyphosate (547)	
		951			NaS_2O_3	1	500 mL	G	Endothall (548.1)	
		942			NaS_2O_3 H_2SO_4	1	1 L	P	Diquat (549.2)	

* Sample Matrix abbreviations: Groundwater (GW), Surface Water (SW), Saline Surface Water (SSW), Fresh Surface Water(FSW), Drinking Water (DW), Sludge (Sldg), Solid (Sol), Soil (Soil), Domestic Effluent (Dom Eff), Industrial Effluent (Ind Eff).
** Sample Method abbreviations: Grab (G), Composite (C), 24 Hour Composite (24HR Comp.).
*** Container Type abbreviations: Plastic (P), Glass (G).

* JH 05/09/13

Relinquished By: (Benchmark)	Sign Name:		Date:	5-10-13	Received By:	BoPSDQ PIKE	Date:	5-10-13
	Print Name:	Christopher Girvin	Time:	0900			Time:	0820
Relinquished By:	Sign Name:		Date:	5-10-13	Received By:		Date:	5/11
	Print Name:		Time:	2000			Time:	0120

5.2 °C
CF=0
TP-14

0.3
5/13

10 of 10

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: Benchmark EnviroAnalytical , Inc Florida DOH Certification #: E84167 Certification Expiration Date: 06/30/2013

ATTACH CURRENT DOH ANALYTE SHEET*

Address: 1711 12th Street East, Palmetto, FL 34221 Phone #: 941-723-9986

Were any analyses subcontracted? ☒Yes ☐No If yes, please provide DOH certification number(s): E83079, E83033

ATTACH DOH ANALYTE SHEET FOR EACH SUBCONTRACTED LAB*

ANALYSIS INFORMATION (to be completed by lab) Date Sample(s) Received: 05/09/13

PWS ID (From Page 1): _____ Sample Number (From Page 1): _____ Lab Assigned Report # or Job ID: 13050374

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

Inorganics	Synthetic Organics	Volatile Organics	Disinfection Byproducts	Radionuclides	Secondaries
☒All Except Asbestos	☐All 30	☒All 21	☐Trihalomethanes	☒Single Sample	☒All 14
☐Partial	☒All Except Dioxin	☐Partial	☐Haloacetic Acids	☐Qtrly Composite**	☐Partial
☐Nitrate	☐Partial		☐Chlorite		
☐Nitrite	☐Dioxin Only		☐Bromate		
☐Asbestos					

LAB CERTIFICATION

I, Dale D. Dixon / Tülay Tanrisever / Jennifer Jordan (Print Name), Lab Director / QC Officer / QC Officer (Print Title), do HEREBY CERTIFY that all attached analytical data are correct and unless noted meet all requirements of the National Environmental Laboratory Accreditation Conference (NELAC).

Signature: Tülay Dixon Date: 5/31/2013

* 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: _____

Rick Scott
Governor

John H. Armstrong, MD
State Surgeon General

Laboratory Scope of Accreditation

Attachment to Certificate #: E84167-25, expiration date June 30, 2013. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E84167 EPA Lab Code: FL00289 (941) 723-9986

E84167
Benchmark EnviroAnalytical, Inc.
1711 12th Street East
Palmetto, FL 34221

Matrix: Drinking Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
1,1,1,2-Tetrachloroethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
1,1,1-Trichloroethane	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
1,1,2,2-Tetrachloroethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
1,1,2-Trichloroethane	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
1,1-Dichloroethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
1,1-Dichloroethylene	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
1,1-Dichloropropene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
1,2,3-Trichlorobenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/2/2011
1,2,4-Trichlorobenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
1,2,4-Trimethylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
1,2-Dibromo-3-chloropropane (DBCP)	EPA 504.1	Synthetic Organic Contaminants	NELAP	4/20/2009
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 504.1	Synthetic Organic Contaminants	NELAP	4/20/2009
1,2-Dichlorobenzene	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
1,2-Dichloroethane	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
1,2-Dichloropropane	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
1,3,5-Trimethylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
1,3-Dichlorobenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
1,3-Dichloropropane	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
1,4-Dichlorobenzene	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
2,2-Dichloropropane	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
2-Chlorotoluene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
4-Chlorotoluene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
4-Isopropyltoluene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Alkalinity as CaCO3	SM 2320 B	Primary Inorganic Contaminants	NELAP	5/25/2004
Aluminum	EPA 200.7	Secondary Inorganic Contaminants	NELAP	5/25/2004
Amenable cyanide	SM 4500-CN G	Primary Inorganic Contaminants	NELAP	3/7/2011
Ammonia as N	EPA 350.1	Primary Inorganic Contaminants	NELAP	3/7/2011
Antimony	SM 3113 B	Primary Inorganic Contaminants	NELAP	1/3/2002
Arsenic	SM 3113 B	Primary Inorganic Contaminants	NELAP	1/3/2002
Barium	EPA 200.7	Primary Inorganic Contaminants	NELAP	5/25/2004
Benzene	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
Beryllium	EPA 200.7	Primary Inorganic Contaminants	NELAP	5/25/2004
Boron	EPA 200.7	Secondary Inorganic Contaminants	NELAP	3/7/2011
Bromate	EPA 300.1	Primary Inorganic Contaminants	NELAP	11/21/2008
Bromide	EPA 300.0	Primary Inorganic Contaminants	NELAP	5/25/2004
Bromoacetic acid	EPA 552.2	Group I Unregulated Contaminants	NELAP	4/20/2009

Laboratory Scope of Accreditation

Attachment to Certificate #: E84167-25, expiration date June 30, 2013. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E84167 EPA Lab Code: FL00289 (941) 723-9986

E84167
Benchmark EnviroAnalytical, Inc.
1711 12th Street East
Palmetto, FL 34221

Matrix: Drinking Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Bromobenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Bromochloromethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Bromodichloromethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Bromoform	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Cadmium	EPA 200.7	Primary Inorganic Contaminants	NELAP	5/25/2004
Calcium	EPA 200.7	Primary Inorganic Contaminants	NELAP	5/25/2004
Carbon tetrachloride	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
Chlorate	EPA 300.1	Secondary Inorganic Contaminants	NELAP	11/21/2008
Chloride	EPA 300.0	Secondary Inorganic Contaminants	NELAP	5/25/2004
Chlorine	SM 4500-Cl G	Primary Inorganic Contaminants	NELAP	3/7/2011
Chlorine dioxide, res. disinfectant	SM 4500-ClO2 D	Primary Inorganic Contaminants	NELAP	3/7/2011
Chlorite	EPA 300.1	Primary Inorganic Contaminants	NELAP	11/21/2008
Chloroacetic acid	EPA 552.2	Group I Unregulated Contaminants	NELAP	4/20/2009
Chlorobenzene	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
Chloroethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Chloroform	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Chromium	EPA 200.7	Primary Inorganic Contaminants	NELAP	5/25/2004
cis-1,2-Dichloroethylene	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
cis-1,3-Dichloropropene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Color	SM 2120 B	Secondary Inorganic Contaminants	NELAP	7/31/2007
Conductivity	SM 2510 B	Primary Inorganic Contaminants	NELAP	5/25/2004
Copper	EPA 200.7	Primary Inorganic Contaminants,Secondary Inorganic Contaminants	NELAP	5/25/2004
Corrosivity (langlier index)	SM 2330 B	Secondary Inorganic Contaminants	NELAP	3/7/2011
Cyanide	EPA 335.4	Primary Inorganic Contaminants	NELAP	3/7/2011
Dibromoacetic acid	EPA 552.2	Group I Unregulated Contaminants	NELAP	4/20/2009
Dibromochloromethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Dibromomethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Dichloroacetic acid	EPA 552.2	Group I Unregulated Contaminants	NELAP	4/20/2009
Dichlorodifluoromethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Dichloromethane (DCM, Methylene chloride)	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
Dissolved organic carbon (DOC)	SM 5310 B	Primary Inorganic Contaminants	NELAP	11/21/2008
Escherichia coli	READYCULT	Microbiology	NELAP	5/25/2004
Escherichia coli	SM 9223 B	Microbiology	NELAP	1/3/2002
Escherichia coli	SM 9223 B /QUANTI-TRAY	Microbiology	NELAP	3/7/2011
Ethylbenzene	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005

Laboratory Scope of Accreditation

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State Laboratory ID: E84167 EPA Lab Code: FL00289 (941) 723-9986

E84167
Benchmark EnviroAnalytical, Inc.
1711 12th Street East
Palmetto, FL 34221

Matrix: Drinking Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Fluoride	EPA 300.0	Primary Inorganic Contaminants,Secondary Inorganic Contaminants	NELAP	5/25/2004
Hardness	SM 2340 B	Secondary Inorganic Contaminants	NELAP	3/7/2011
Heterotrophic plate count	SM 9215 B	Microbiology	NELAP	5/25/2004
Hexachlorobutadiene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Hydrogen sulfide, un-ionized (calculation)	SM 4500-S H (21st Ed.)	Primary Inorganic Contaminants	NELAP	3/7/2011
Iron	EPA 200.7	Secondary Inorganic Contaminants	NELAP	5/25/2004
Isopropylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Lead	SM 3113 B	Primary Inorganic Contaminants	NELAP	1/3/2002
Magnesium	EPA 200.7	Primary Inorganic Contaminants	NELAP	5/25/2004
Manganese	EPA 200.7	Secondary Inorganic Contaminants	NELAP	5/25/2004
Mercury	EPA 245.1	Primary Inorganic Contaminants	NELAP	1/3/2002
Methyl bromide (Bromomethane)	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Methyl chloride (Chloromethane)	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Methyl tert-butyl ether (MTBE)	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Molybdenum	EPA 200.7	Secondary Inorganic Contaminants	NELAP	3/7/2011
Naphthalene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
n-Butylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Nickel	EPA 200.7	Primary Inorganic Contaminants	NELAP	5/25/2004
Nitrate	EPA 353.2	Primary Inorganic Contaminants	NELAP	1/3/2002
Nitrate as N	EPA 300.0	Primary Inorganic Contaminants	NELAP	5/25/2004
Nitrite as N	EPA 300.0	Primary Inorganic Contaminants	NELAP	5/25/2004
Nitrite as N	EPA 353.2	Primary Inorganic Contaminants	NELAP	5/25/2004
Nitrobenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
n-Propylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Odor	EPA 140.1	Secondary Inorganic Contaminants	NELAP	1/3/2002
Orthophosphate as P	EPA 300.0	Primary Inorganic Contaminants	NELAP	3/7/2011
pH	SM 4500-H+-B	Secondary Inorganic Contaminants	NELAP	7/31/2007
Potassium	EPA 200.7	Secondary Inorganic Contaminants	NELAP	5/25/2004
sec-Butylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Selenium	SM 3113 B	Primary Inorganic Contaminants	NELAP	1/3/2002
Silica as SiO2	EPA 200.7	Primary Inorganic Contaminants	NELAP	5/25/2004
Silver	EPA 200.7	Secondary Inorganic Contaminants	NELAP	5/25/2004
Sodium	EPA 200.7	Primary Inorganic Contaminants	NELAP	5/25/2004
Styrene	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005

Laboratory Scope of Accreditation

Attachment to Certificate #: E84167-25, expiration date June 30, 2013. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E84167 EPA Lab Code: FL00289 (941) 723-9986

E84167
Benchmark EnviroAnalytical, Inc.
1711 12th Street East
Palmetto, FL 34221

Matrix: Drinking Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Sulfate	EPA 300.0	Primary Inorganic Contaminants,Secondary Inorganic Contaminants	NELAP	5/25/2004
Sulfide	SM 4500-S D/UV-VIS	Primary Inorganic Contaminants	NELAP	3/7/2011
Surfactants-- MBAS	SM 5540 C	Secondary Inorganic Contaminants	NELAP	1/3/2002
tert-Butylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Tetrachloroethylene (Perchloroethylene)	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
Thallium	EPA 200.9	Primary Inorganic Contaminants	NELAP	1/3/2002
Toluene	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
Total coliforms	READYCULT	Microbiology	NELAP	5/25/2004
Total coliforms	SM 9222 B	Microbiology	NELAP	1/3/2002
Total coliforms	SM 9223 B	Microbiology	NELAP	1/3/2002
Total coliforms	SM 9223 B /QUANTI-TRAY	Microbiology	NELAP	3/7/2011
Total dissolved solids	SM 2540 C	Secondary Inorganic Contaminants	NELAP	7/31/2007
Total haloacetic acids (HAA5)	EPA 552.2	Synthetic Organic Contaminants	NELAP	4/20/2009
Total nitrate-nitrite	EPA 300.0	Primary Inorganic Contaminants	NELAP	5/25/2004
Total nitrate-nitrite	EPA 353.2	Primary Inorganic Contaminants	NELAP	1/3/2002
Total organic carbon	SM 5310 B	Primary Inorganic Contaminants	NELAP	5/25/2004
Total trihalomethanes	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
trans-1,2-Dichloroethylene	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
trans-1,3-Dichloropropene	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Trichloroacetic acid	EPA 552.2	Group I Unregulated Contaminants	NELAP	10/14/2010
Trichloroethene (Trichloroethylene)	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
Trichlorofluoromethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	9/28/2005
Turbidity	EPA 180.1	Secondary Inorganic Contaminants	NELAP	3/7/2011
UV 254	SM 5910 B	Primary Inorganic Contaminants	NELAP	11/21/2008
Vanadium	EPA 200.7	Secondary Inorganic Contaminants	NELAP	3/7/2011
Vinyl chloride	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
Xylene (total)	EPA 524.2	Other Regulated Contaminants	NELAP	9/28/2005
Zinc	EPA 200.7	Secondary Inorganic Contaminants	NELAP	5/25/2004

Rick Scott
Governor

Joan H. Armstrong, MD
State Surgeon General

Laboratory Scope of Accreditation

Attachment to Certificate #: E83033-08, expiration date June 30, 2013. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E83033 EPA Lab Code: FL01113 (407) 382-7733

E83033
Florida Radiochemistry Services, Inc.
5456 Hoffner Rd. Suite 207
Orlando, FL 32812

Matrix: Drinking Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Gross Alpha	EPA 900.0	Radiochemistry	NELAP	6/28/2001
Gross Beta	EPA 900.0	Radiochemistry	NELAP	6/28/2001
Radium-226	EPA 903.0	Radiochemistry	NELAP	12/15/2003
Radium-226	EPA 903.1	Radiochemistry	NELAP	6/28/2001
Radium-228	EPA Ra-05	Radiochemistry	NELAP	6/28/2001
Uranium	EPA 908.0	Radiochemistry	NELAP	6/28/2001

Clients and Customers are urged to verify the laboratory's current certification status with the Environmental Laboratory Certification Program.

Issue Date: 7/1/2012 Expiration Date: 6/30/2013

Laboratory Scope of Accreditation

Attachment to Certificate #: E83079-40, expiration date June 30, 2013. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E83079 EPA Lab Code: FL01264 (386) 672-5668

E83079
Pace Analytical Services-Florida
8 East Tower Circle
Ormond Beach, FL 32174

Matrix: Drinking Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
1,1,1,2-Tetrachloroethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
1,1,1-Trichloroethane	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
1,1,2,2-Tetrachloroethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
1,1,2-Trichloroethane	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
1,1-Dichloroethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
1,1-Dichloroethylene	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
1,1-Dichloropropene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
1,2,3-Trichlorobenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
1,2,3-Trichloropropane	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
1,2,4-Trichlorobenzene	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
1,2,4-Trimethylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
1,2-Dibromo-3-chloropropane (DBCP)	EPA 504.1	Synthetic Organic Contaminants	NELAP	1/8/2002
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 504.1	Synthetic Organic Contaminants	NELAP	1/8/2002
1,2-Dichlorobenzene	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
1,2-Dichloroethane	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
1,2-Dichloropropane	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
1,3,5-Trimethylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
1,3-Dichlorobenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
1,3-Dichloropropane	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
1,4-Dichlorobenzene	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ 201)	EPA 525.2	Group I Unregulated Contaminants	NELAP	1/8/2002
2,2',3',4,6-Pentachlorobiphenyl (525.2 typo for 2,2',3,4',6'-Pentachlorobiphenyl)	EPA 525.2	Group I Unregulated Contaminants	NELAP	1/8/2002
2,2',4,4'-Tetrachlorobiphenyl (BZ 47)	EPA 525.2	Group I Unregulated Contaminants	NELAP	1/8/2002
2,2-Dichloropropane	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
2,4,5-T	EPA 515.3	Synthetic Organic Contaminants	NELAP	10/14/2004
2,4-D	EPA 515.3	Synthetic Organic Contaminants	NELAP	5/11/2004
2,4-DB	EPA 515.3	Synthetic Organic Contaminants	NELAP	10/14/2004
2-Chlorobiphenyl (BZ 1)	EPA 525.2	Group I Unregulated Contaminants	NELAP	1/8/2002
2-Chlorotoluene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
3-Hydroxycarbofuran	EPA 531.1	Group I Unregulated Contaminants	NELAP	1/8/2002
4-Chlorotoluene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
4-Isopropyltoluene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Acetone	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/3/2012
Acifluorfen	EPA 515.3	Group I Unregulated Contaminants	NELAP	5/11/2004
Alachlor	EPA 508.1	Synthetic Organic Contaminants	NELAP	1/8/2002
Aldicarb (Temik)	EPA 531.1	Group I Unregulated Contaminants	NELAP	1/8/2002

Laboratory Scope of Accreditation

Attachment to Certificate #: E83079-40, expiration date June 30, 2013. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: E83079 EPA Lab Code: FL01264 (386) 672-5668

E83079
Pace Analytical Services-Florida
8 East Tower Circle
Ormond Beach, FL 32174

Matrix: Drinking Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Aldicarb sulfone	EPA 531.1	Group I Unregulated Contaminants	NELAP	1/8/2002
Aldicarb sulfoxide	EPA 531.1	Group I Unregulated Contaminants	NELAP	1/8/2002
Aldrin	EPA 525.2	Group I Unregulated Contaminants	NELAP	1/8/2002
Alkalinity as CaCO3	SM 2320 B	Primary Inorganic Contaminants	NELAP	1/8/2002
Aluminum	EPA 200.7	Secondary Inorganic Contaminants	NELAP	1/8/2002
Aluminum	EPA 200.8	Secondary Inorganic Contaminants	NELAP	5/11/2004
Antimony	EPA 200.8	Primary Inorganic Contaminants	NELAP	5/11/2004
Aroclor-1016 (PCB-1016)	EPA 508.1	Synthetic Organic Contaminants	NELAP	3/10/2010
Aroclor-1221 (PCB-1221)	EPA 508.1	Synthetic Organic Contaminants	NELAP	3/10/2010
Aroclor-1232 (PCB-1232)	EPA 508.1	Synthetic Organic Contaminants	NELAP	3/10/2010
Aroclor-1242 (PCB-1242)	EPA 508.1	Synthetic Organic Contaminants	NELAP	3/10/2010
Aroclor-1248 (PCB-1248)	EPA 508.1	Synthetic Organic Contaminants	NELAP	3/10/2010
Aroclor-1254 (PCB-1254)	EPA 508.1	Synthetic Organic Contaminants	NELAP	3/10/2010
Aroclor-1260 (PCB-1260)	EPA 508.1	Synthetic Organic Contaminants	NELAP	3/10/2010
Arsenic	EPA 200.7	Primary Inorganic Contaminants	NELAP	1/8/2002
Arsenic	EPA 200.8	Primary Inorganic Contaminants	NELAP	5/11/2004
Atrazine	EPA 508.1	Synthetic Organic Contaminants	NELAP	1/8/2002
Barium	EPA 200.7	Primary Inorganic Contaminants	NELAP	1/8/2002
Barium	EPA 200.8	Primary Inorganic Contaminants	NELAP	5/11/2004
Bentazon	EPA 515.3	Synthetic Organic Contaminants	NELAP	10/14/2004
Benzene	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
Benzo(a)pyrene	EPA 525.2	Synthetic Organic Contaminants	NELAP	1/8/2002
Beryllium	EPA 200.7	Primary Inorganic Contaminants	NELAP	1/8/2002
Beryllium	EPA 200.8	Primary Inorganic Contaminants	NELAP	5/11/2004
bis(2-Ethylhexyl) phthalate (DEHP)	EPA 525.2	Synthetic Organic Contaminants	NELAP	1/8/2002
Bromate	EPA 300.1	Primary Inorganic Contaminants	NELAP	5/11/2004
Bromide	EPA 300.0	Primary Inorganic Contaminants	NELAP	1/8/2002
Bromide	EPA 300.1	Primary Inorganic Contaminants	NELAP	5/11/2004
Bromoacetic acid	EPA 552.2	Group I Unregulated Contaminants	NELAP	8/14/2006
Bromobenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Bromochloroacetic acid	EPA 552.2	Group I Unregulated Contaminants	NELAP	9/14/2010
Bromochloromethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Bromodichloromethane	EPA 524.2	Group II Unregulated Contaminants,Other Regulated Contaminants	NELAP	1/8/2002
Bromoform	EPA 524.2	Group II Unregulated Contaminants,Other Regulated Contaminants	NELAP	1/8/2002

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State Laboratory ID: E83079 EPA Lab Code: FL01264 (386) 672-5668

E83079
Pace Analytical Services-Florida
8 East Tower Circle
Ormond Beach, FL 32174

Matrix: Drinking Water

Analyte	Method/Tech	Category	Certification Type	Effective Date
Butachlor	EPA 508.1	Group I Unregulated Contaminants	NELAP	1/8/2002
Butachlor	EPA 525.2	Group I Unregulated Contaminants	NELAP	1/8/2002
Butyl benzyl phthalate	EPA 525.2	Group III Unregulated Contaminants	NELAP	1/8/2002
Cadmium	EPA 200.7	Primary Inorganic Contaminants	NELAP	1/8/2002
Cadmium	EPA 200.8	Primary Inorganic Contaminants	NELAP	5/11/2004
Calcium	EPA 200.7	Primary Inorganic Contaminants	NELAP	1/8/2002
Carbaryl (Sevin)	EPA 531.1	Group I Unregulated Contaminants	NELAP	1/8/2002
Carbofuran (Furadan)	EPA 531.1	Synthetic Organic Contaminants	NELAP	1/8/2002
Carbon tetrachloride	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
Chlorate	EPA 300.1	Primary Inorganic Contaminants	NELAP	5/11/2004
Chlordane (tech.)	EPA 508.1	Synthetic Organic Contaminants	NELAP	1/8/2002
Chloride	EPA 300.0	Secondary Inorganic Contaminants	NELAP	1/8/2002
Chlorine	SM 4500-Cl D	Primary Inorganic Contaminants	NELAP	1/8/2002
Chlorine dioxide, res. disinfectant	SM 4500-ClO2 D	Primary Inorganic Contaminants	NELAP	10/14/2004
Chlorite	EPA 300.1	Primary Inorganic Contaminants	NELAP	5/11/2004
Chloroacetic acid	EPA 552.2	Group I Unregulated Contaminants	NELAP	8/14/2006
Chlorobenzene	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
Chloroethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Chloroform	EPA 524.2	Other Regulated Contaminants,Group II Unregulated Contaminants	NELAP	1/8/2002
Chromium	EPA 200.7	Primary Inorganic Contaminants	NELAP	1/8/2002
Chromium	EPA 200.8	Primary Inorganic Contaminants	NELAP	5/11/2004
cis-1,2-Dichloroethylene	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
cis-1,3-Dichloropropene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Color	SM 2120 B	Secondary Inorganic Contaminants	NELAP	1/8/2002
Conductivity	SM 2510 B	Primary Inorganic Contaminants	NELAP	1/8/2002
Copper	EPA 200.7	Primary Inorganic Contaminants,Secondary Inorganic Contaminants	NELAP	1/8/2002
Copper	EPA 200.8	Primary Inorganic Contaminants,Secondary Inorganic Contaminants	NELAP	5/11/2004
Corrosivity (langlier index)	SM 2330 B	Secondary Inorganic Contaminants	NELAP	1/8/2002
Cyanide	EPA 335.4	Primary Inorganic Contaminants	NELAP	1/8/2002
Dalapon	EPA 515.3	Synthetic Organic Contaminants	NELAP	5/11/2004
Dalapon	EPA 552.2	Synthetic Organic Contaminants	NELAP	9/14/2010
Di(2-ethylhexyl)adipate	EPA 525.2	Synthetic Organic Contaminants	NELAP	1/8/2002
Dibromoacetic acid	EPA 552.2	Group I Unregulated Contaminants	NELAP	8/14/2006

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Dibromochloromethane	EPA 524.2	Other Regulated Contaminants,Group II Unregulated Contaminants	NELAP	1/8/2002
Dibromomethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Dicamba	EPA 515.3	Group I Unregulated Contaminants	NELAP	5/11/2004
Dichloroacetic acid	EPA 552.2	Group I Unregulated Contaminants	NELAP	8/14/2006
Dichlorodifluoromethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Dichloromethane (DCM, Methylene chloride)	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
Dichloroprop (Dichlorprop)	EPA 515.3	Synthetic Organic Contaminants	NELAP	10/14/2004
Dieldrin	EPA 508.1	Group I Unregulated Contaminants	NELAP	1/8/2002
Dieldrin	EPA 525.2	Group I Unregulated Contaminants	NELAP	1/8/2002
Diethyl phthalate	EPA 525.2	Group III Unregulated Contaminants	NELAP	1/8/2002
Dimethyl phthalate	EPA 525.2	Group III Unregulated Contaminants	NELAP	1/8/2002
Di-n-butyl phthalate	EPA 525.2	Group III Unregulated Contaminants	NELAP	1/8/2002
Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	EPA 515.3	Synthetic Organic Contaminants	NELAP	5/11/2004
Diquat	EPA 549.2	Synthetic Organic Contaminants	NELAP	1/8/2002
Dissolved organic carbon (DOC)	SM 5310 B	Primary Inorganic Contaminants	NELAP	1/3/2012
Endothall	EPA 548.1	Synthetic Organic Contaminants	NELAP	1/8/2002
Endrin	EPA 508.1	Synthetic Organic Contaminants	NELAP	1/8/2002
Escherichia coli	COLISURE	Microbiology	NELAP	11/1/2011
Escherichia coli	SM 9223 B	Microbiology	NELAP	11/1/2011
Ethylbenzene	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
Fluorene	EPA 525.2	Group III Unregulated Contaminants	NELAP	1/8/2002
Fluoride	EPA 300.0	Primary Inorganic Contaminants,Secondary Inorganic Contaminants	NELAP	1/8/2002
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	EPA 508.1	Synthetic Organic Contaminants	NELAP	1/8/2002
Glyphosate	EPA 547	Synthetic Organic Contaminants	NELAP	1/8/2002
Hardness	SM 2340 B	Secondary Inorganic Contaminants	NELAP	8/14/2006
Hardness (calc.)	EPA 200.7	Secondary Inorganic Contaminants	NELAP	8/14/2006
Heptachlor	EPA 508.1	Synthetic Organic Contaminants	NELAP	1/8/2002
Heptachlor epoxide	EPA 508.1	Synthetic Organic Contaminants	NELAP	1/8/2002
Heterotrophic plate count	SM 9215 B	Microbiology	NELAP	1/8/2002
Hexachlorobenzene	EPA 508.1	Synthetic Organic Contaminants	NELAP	1/8/2002
Hexachlorobutadiene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Hexachlorocyclopentadiene	EPA 508.1	Synthetic Organic Contaminants	NELAP	1/8/2002
Indeno(1,2,3-cd)pyrene	EPA 525.2	Group III Unregulated Contaminants	NELAP	1/8/2002

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Analyte	Method/Tech	Category	Certification Type	Effective Date
Iron	EPA 200.7	Secondary Inorganic Contaminants	NELAP	1/8/2002
Isopropylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Lead	EPA 200.8	Primary Inorganic Contaminants	NELAP	5/11/2004
m/p-Xylenes	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/3/2012
Magnesium	EPA 200.7	Primary Inorganic Contaminants	NELAP	1/8/2002
Manganese	EPA 200.7	Secondary Inorganic Contaminants	NELAP	1/8/2002
Manganese	EPA 200.8	Secondary Inorganic Contaminants	NELAP	5/11/2004
Mercury	EPA 200.8	Primary Inorganic Contaminants	NELAP	1/3/2012
Mercury	EPA 245.1	Primary Inorganic Contaminants	NELAP	1/8/2002
Methiocarb (Mesurol)	EPA 531.1	Group I Unregulated Contaminants	NELAP	1/8/2002
Methomyl (Lannate)	EPA 531.1	Group I Unregulated Contaminants	NELAP	1/8/2002
Methoxychlor	EPA 508.1	Synthetic Organic Contaminants	NELAP	1/8/2002
Methyl bromide (Bromomethane)	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Methyl chloride (Chloromethane)	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Methyl tert-butyl ether (MTBE)	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Metolachlor	EPA 508.1	Group I Unregulated Contaminants	NELAP	1/8/2002
Metolachlor	EPA 525.2	Group I Unregulated Contaminants	NELAP	1/8/2002
Metribuzin	EPA 508.1	Group I Unregulated Contaminants	NELAP	1/8/2002
Metribuzin	EPA 525.2	Group I Unregulated Contaminants	NELAP	1/8/2002
Naphthalene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
n-Butylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Nickel	EPA 200.7	Primary Inorganic Contaminants	NELAP	1/8/2002
Nickel	EPA 200.8	Primary Inorganic Contaminants	NELAP	5/11/2004
Nitrate	EPA 300.0	Primary Inorganic Contaminants	NELAP	1/8/2002
Nitrate	EPA 353.2	Primary Inorganic Contaminants	NELAP	1/8/2002
Nitrite	EPA 300.0	Primary Inorganic Contaminants	NELAP	1/8/2002
Nitrite	EPA 353.2	Primary Inorganic Contaminants	NELAP	1/8/2002
n-Propylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Odor	SM 2150 B	Secondary Inorganic Contaminants	NELAP	1/8/2002
Orthophosphate as P	EPA 300.0	Primary Inorganic Contaminants	NELAP	1/8/2002
Orthophosphate as P	EPA 365.1	Primary Inorganic Contaminants	NELAP	1/8/2002
Oxamyl	EPA 531.1	Synthetic Organic Contaminants	NELAP	1/8/2002
o-Xylene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/3/2012
Paraquat	EPA 549.2	Synthetic Organic Contaminants	NELAP	3/10/2010
PCBs	EPA 508.1	Synthetic Organic Contaminants	NELAP	1/8/2002
Pentachlorophenol	EPA 515.3	Synthetic Organic Contaminants	NELAP	5/11/2004

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Perchlorate	EPA 314.0	Secondary Inorganic Contaminants	NELAP	1/8/2002
pH	SM 4500-H+-B	Secondary Inorganic Contaminants	NELAP	2/19/2008
Picloram	EPA 515.3	Synthetic Organic Contaminants	NELAP	5/11/2004
Potassium	EPA 200.7	Secondary Inorganic Contaminants	NELAP	10/18/2004
Propachlor (Ramrod)	EPA 508.1	Group I Unregulated Contaminants	NELAP	1/8/2002
Propachlor (Ramrod)	EPA 525.2	Group I Unregulated Contaminants	NELAP	1/8/2002
Pyrene	EPA 525.2	Group III Unregulated Contaminants	NELAP	1/8/2002
sec-Butylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Selenium	EPA 200.8	Primary Inorganic Contaminants	NELAP	5/11/2004
Silica as SiO2	SM 4500-Si D (18th/19th Ed.)/UV-VIS	Primary Inorganic Contaminants	NELAP	1/8/2002
Silica as SiO2	SM 4500-SiO2 F (20th/21st Ed.)	Primary Inorganic Contaminants	NELAP	3/10/2010
Silver	EPA 200.7	Secondary Inorganic Contaminants	NELAP	1/8/2002
Silver	EPA 200.8	Secondary Inorganic Contaminants	NELAP	5/11/2004
Silvex (2,4,5-TP)	EPA 515.3	Synthetic Organic Contaminants	NELAP	5/11/2004
Simazine	EPA 508.1	Synthetic Organic Contaminants	NELAP	1/8/2002
Sodium	EPA 200.7	Primary Inorganic Contaminants	NELAP	1/8/2002
Styrene	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
Sulfate	EPA 300.0	Primary Inorganic Contaminants,Secondary Inorganic Contaminants	NELAP	1/8/2002
Surfactants - MBAS	SM 5540 C	Secondary Inorganic Contaminants	NELAP	1/8/2002
tert-Butylbenzene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Tetrachloroethylene (Perchloroethylene)	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
Thallium	EPA 200.8	Primary Inorganic Contaminants	NELAP	5/11/2004
Toluene	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
Total coliforms	COLISURE	Microbiology	NELAP	11/1/2011
Total coliforms	SM 9223 B	Microbiology	NELAP	11/1/2011
Total dissolved solids	SM 2540 C	Secondary Inorganic Contaminants	NELAP	1/8/2002
Total haloacetic acids (HAA5)	EPA 552.2	Synthetic Organic Contaminants	NELAP	8/14/2006
Total nitrate-nitrite	EPA 300.0	Primary Inorganic Contaminants	NELAP	1/8/2002
Total nitrate-nitrite	EPA 353.2	Primary Inorganic Contaminants	NELAP	1/8/2002
Total organic carbon	SM 5310 B	Primary Inorganic Contaminants	NELAP	1/8/2002
Total trihalomethanes	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
Toxaphene (Chlorinated camphene)	EPA 508.1	Synthetic Organic Contaminants	NELAP	1/8/2002
trans-1,2-Dichloroethylene	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
trans-1,3-Dichloropropene	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002

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Trichloroacetic acid	EPA 552.2	Group I Unregulated Contaminants	NELAP	8/14/2006
Trichloroethene (Trichloroethylene)	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
Trichlorofluoromethane	EPA 524.2	Group II Unregulated Contaminants	NELAP	1/8/2002
Turbidity	EPA 180.1	Secondary Inorganic Contaminants	NELAP	1/8/2002
Turbidity	SM 2130 B	Secondary Inorganic Contaminants	NELAP	1/3/2012
UV 254	SM 5910 B	Primary Inorganic Contaminants	NELAP	1/8/2002
Vinyl chloride	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
Xylene (total)	EPA 524.2	Other Regulated Contaminants	NELAP	1/8/2002
Zinc	EPA 200.7	Secondary Inorganic Contaminants	NELAP	1/8/2002
Zinc	EPA 200.8	Secondary Inorganic Contaminants	NELAP	5/11/2004