PUBLIC WATER SUPPLY WELL UFA-3
CONSTRUCTION REPORT
CITY OF LABELLE
LABELLE, FLORIDA

Prepared for

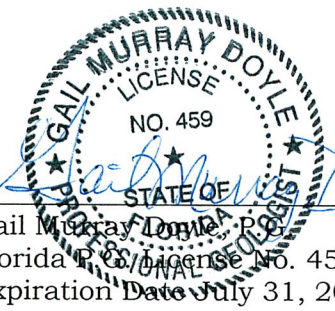
Applied Technology & Management, Inc.

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-3 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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INTRODUCTION

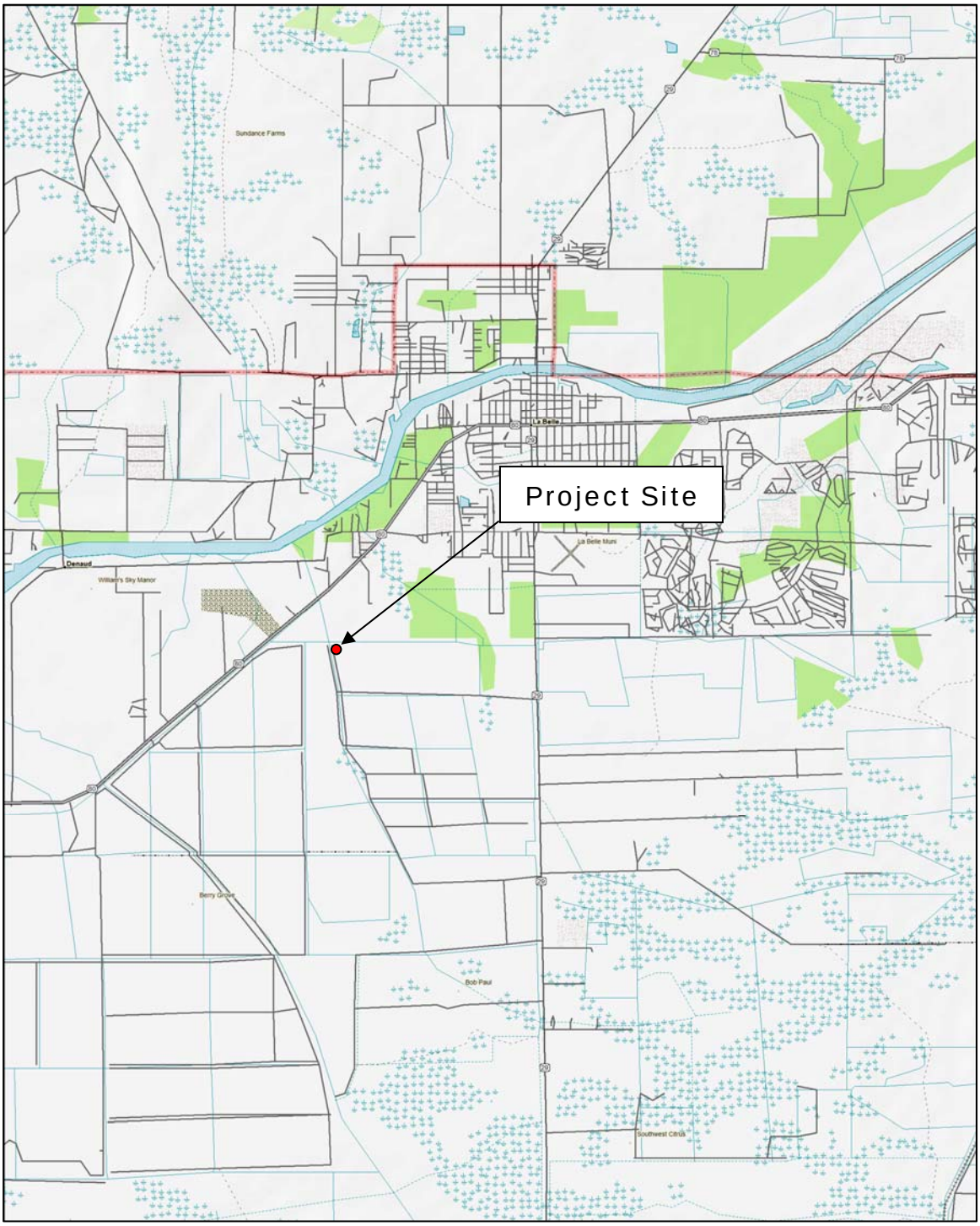
The City of LaBelle (City) is constructing a Reverse Osmosis (RO) Water Treatment Plant, just south of the city on part of what was the Bob Paul Grove. The non-potable source of water will be from the Upper Floridan Aquifer. Murray Consultants Inc was retained by Applied Technology & Management to provide 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 first well, UFA-3.

Well UFA-3 was constructed with 631 feet of casing and open borehole to 742 feet with a cave-in at 632 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-3 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 630 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 630 and 900 feet below land surface.



N

1 IN = 8,000 FT
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FIGURE 1
SITE LOCATION MAP
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FIGURE 2
UFA WELL LOCATION MAP
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WELL CONSTRUCTION

From January 15 to January 19, 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 January 21st, 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. Sixty-nine bags of neat cement were used to grout the casing. See **Figures 4 and 5** for the surface casing setting and grouting pictures.

After the installation of the surface casing, a 7⅞-inch pilot hole was drilled to 210 ft. Based on the geology, it was determined to install 205 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 16-inch Certain-Teed Certa-Lok SDR 17 PVC, which has a 16-inch outer diameter (OD) and a 14-inch inner diameter (ID). Originally, the well specifications

were for 16-inch steel, which has a 15.5-inch ID. Because of the smaller ID of the intermediate casing, 8-inch production casing had to be used.

FIGURE 4: 24-INCH SURFACE CASING INSTALLATION

FIGURE 5: SURFACE CASING PRESSURE GROUTING SET-UP

On February 5th, the intermediate casing was set. The casing was grouted in two

stages with neat cement. The first stage was pressure grouted to 84 ft below land surface, with the second stage to land surface with a tremie pipe. A total of 300 bags of 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: 16-INCH INTERMEDIATE CASING INSTALLATION

FIGURE 7: INTERMEDIATE CASING GROUTING SET-UP

After the cement cured, the pilot hole was drilled to 671 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 February 14, 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 14 inches from 205 ft to 632 feet. On February 28, 2013, Schedule 80 PVC casing was installed to 631 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. **Figures 8 and 9** show the installation of the production casing.

FIGURE 8: PRODUCTION CASING INSTALLATION

FIGURE 9: TOP 180 FEET CASING-REMOVE

The production casing was grouted from bottom to top (183 feet below land surface) with Portland neat cement. The first lift was pressure grouted from 631 feet to 340 feet, using 184 bags of cement. The balance of the grouting was performed with a tremie pipe within the annulus. Forty-two (42) bags of cement were installed for the second lift of grouting, which took the grout from 340 to 243 feet. The final grouting lift to 183 feet took nineteen bags of cement. The casing was grouted with a total of

245 bags of neat cement. **Figure 10** shows the grouting of the production casing.

FIGURE 10: PRODUCTION CASING GROUTING

On March 6, 2013 the open borehole was drilled. A 7¼-inch drill bit was used for mud rotary drilling from 631 to 742 feet. The well started free flowing once the drilling mud was thinned. The drill rods were removed and the well developed with air, see **Figure 11**. **Figure 12** is the free flow after air development. The flow started at 750 gpm and after about 15 hours of air lift development, the flow increased to 900 gpm. The flow was measured using a flow meter.

FIGURE 11: AIR DEVELOPMENT ONCE DRILLING MUD THINNED

FIGURE 12: FREE FLOW AFTER DEVELOPMENT AIR DEVELOPMENT

Steve Miller of MV Geophysical Surveys performed geophysical logs on March 11, 2013. The first log to be attempted was the caliper. The instrument would not lower past 632 feet (video log indicates 630 feet, difference due to measuring point), see **Figures 13 and 14** for pictures of the open hole and the blockage, which is cement from the bottom of the casing. Because of the blockage no other logs were done that day. The drillers re-installed the bit and drill rods and knocked the cement pieces to the bottom, which was at 680 feet. It had caved-in from 742 feet to 680 feet. Re-drilling to 742 feet was not attempted. The video of the well is included in **Appendix B**.

FIGURE 13: VIEW OF CAVITY FROM DOWNHOLE CAMERA

FIGURE 14: OPEN HOLE BLOCKAGE (CEMENT PIECES)

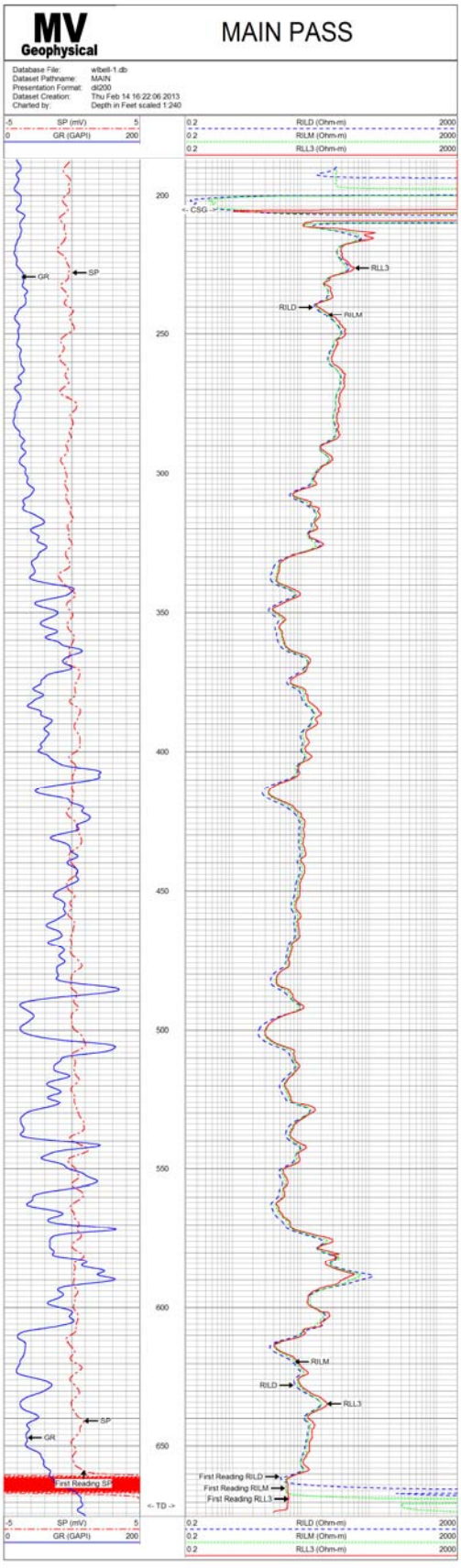
On March 12, 2013, the geophysical logging was re-attempted by Steve Miller of MV Geophysical Surveys. The following logs were run to 680 feet:

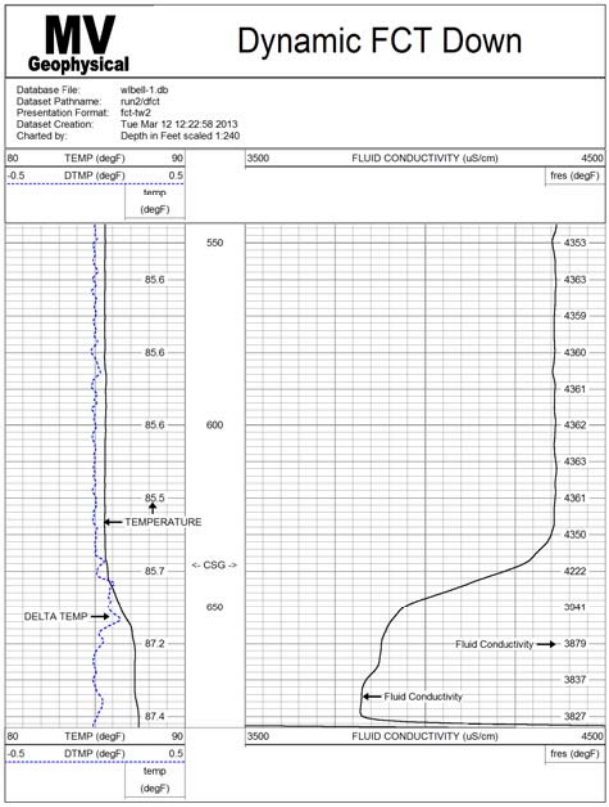
X & Y Caliper
Gamma Ray
Fluid Conductivity
Temperature
Dynamic Flow

The last log was the caliper and as the tool was being raised for a calibration pass, the tool arms knocked off more cement from the bottom of the casing and the open hole became blocked again at 632 feet.

The initial logs show that the borehole closed at a depth of 680 feet, leaving 49 feet of open borehole. The caliper log shows a small cavity just below the casing between 631 and 640 feet. The conductivity log shows an average reading of 4360 µS/cm within the casing and an average of 3850 µS/cm in the open borehole. The difference in conductivity could be a function of the meter measuring within a casing versus in an open borehole. The temperature was 85.5° F in the casing and 87.3° in the open borehole. The dynamic flow log indicates that at least 95% of the flow is coming from the small cavity just below the casing. The geophysical results are shown in **Figure 15** and included in **Appendix B**.

After the geophysical logging was completed, a submersible pump with 80 feet of pipe was installed into the well. Development continued with the test pump another 27 hours.





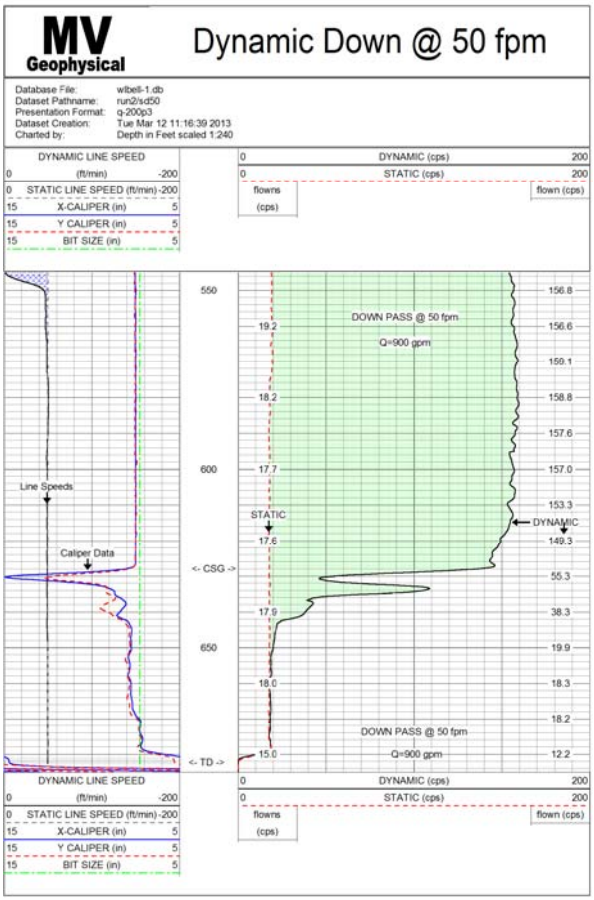


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FIGURE 15
GEOPHYSICAL LOGGINGS RESULTS
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At the beginning of the pump development, a Silt Density Index (SDI) test was run on the water. At the time of the test, the well was being pump developed at a rate of 1900 gpm. The results of the test were 3.33. A second 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
4,440	2,230	1,070	84.4	Mild

DATA COLLECTED

Figure 16 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	16	8
Depth (ft)	40	205	631
Open Borehole Depth (ft)			742/632*
Construction Material	Steel	PVC CertainTeed SDR 17 Certa-Lok	PVC Schedule 80

* Final open borehole depth after the borehole closed.

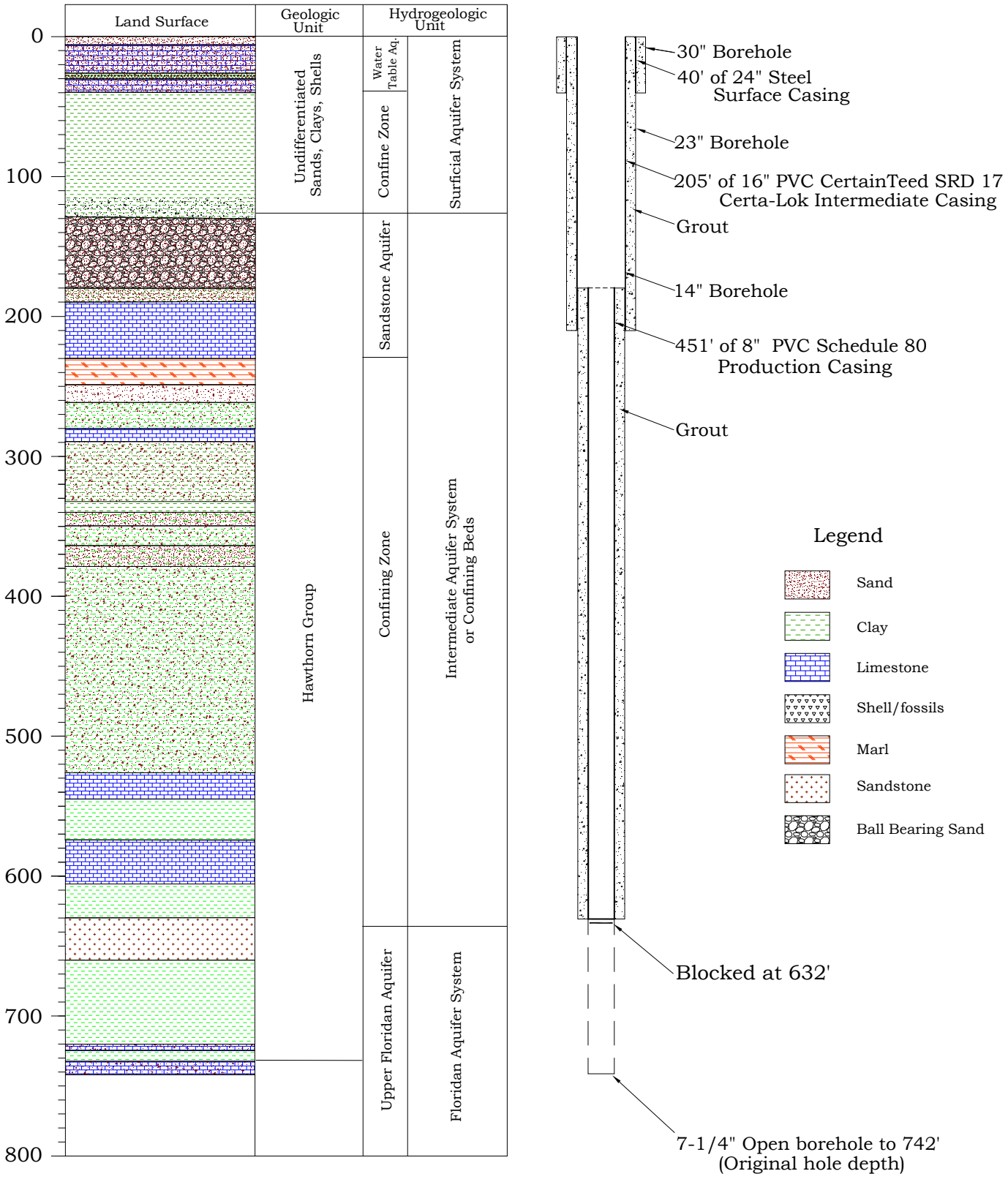

FIGURE 16
UFA-3 'AS-BUILT' DRAWING
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PUMP TESTING

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 orifice was 8-inch attached at the end of a 10-inch PVC pipe. 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 17** is a picture of the SDT and APT set-up.

FIGURE 17: PUMP TEST SET-UP

Step-Drawdown Test

A Step-Drawdown Test (SDT) was performed on March 18, 2013 by Wells & Water Systems. The test included three steps, pumping 30 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 31.1 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	36.9	5.8	37.13	0.0269
1530	44.8	13.7	34.15	0.0293
1865	58.3	27.2	31.99	0.0313

Aquifer Performance Test

An Aquifer Performance Test was performed on March 19, 2013 after the SDT was completed and the aquifer had stabilized. The well was pumped at a rate of 1500 gpm for 24 hours and recovered for about 17 hours. The initial water level at the start of the test was 32.66 feet above the measuring point. The measuring point elevation was surveyed at 16.85 ft NGVD. The maximum drawdown was 49.1 ft below starting head, or 16.44 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 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

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.

Well #	Time-Drawdown	Recovery
	Transmissivity (ft^2/d)	Transmissivity (ft^2/d)
UFA-3	12,170	8,750

The average transmissivity value calculated from the drawdown and recovery data is 10,460 ft^2/d or 78,200 gpd/ft. This value is consistent with the APT results for the test well installed in 2010 and for a SFWMD well LAB-PW (Bennett, 2003) that pumped the same zone. The data analysis is included in **Appendix C**. A graph of all the data collected, referenced to feet NGVD, is presented in **Figure 18**.

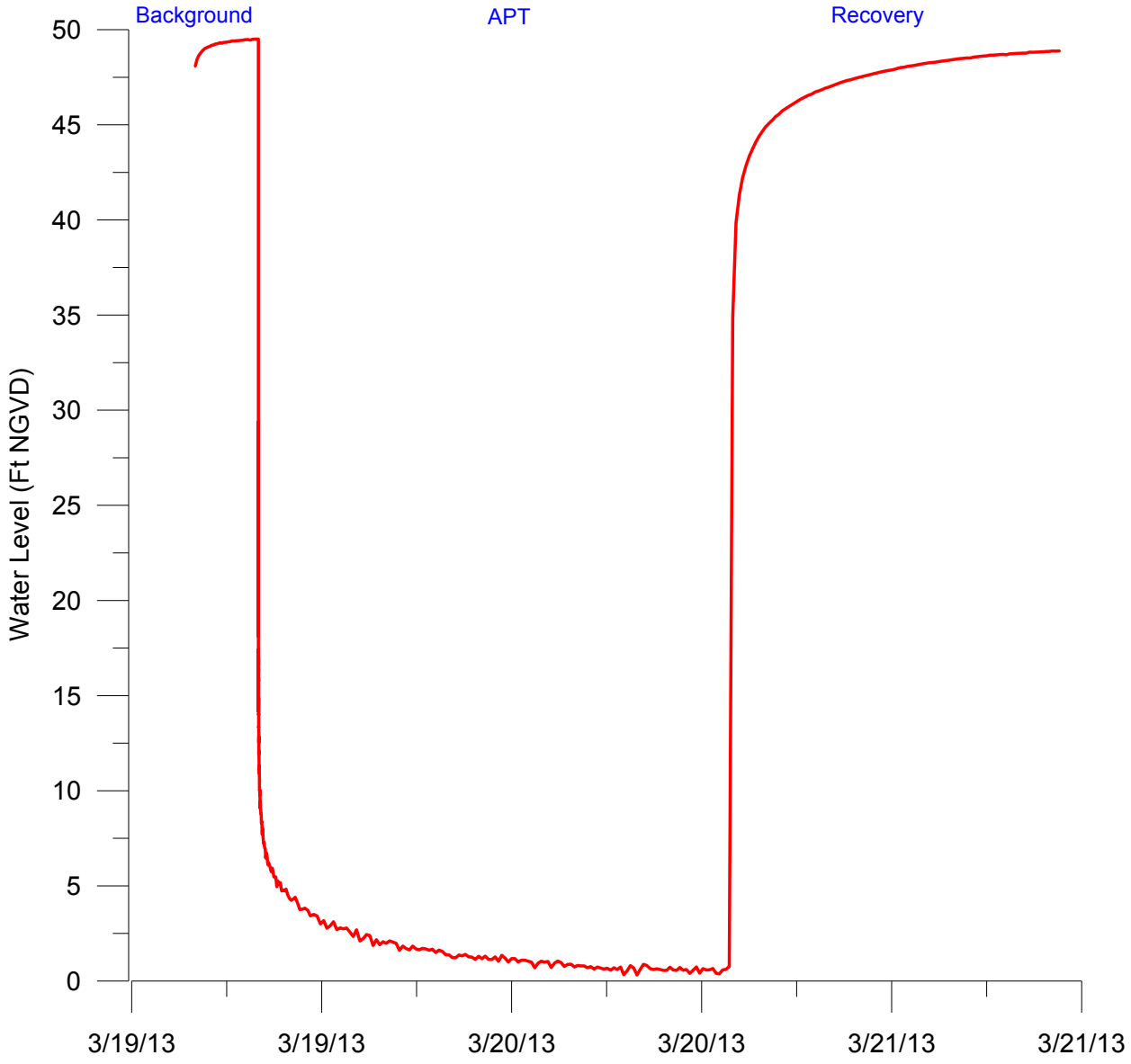

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FIGURE 18
UFA-3 AQUIFER PERFORMANCE TEST WATER LEVEL DATA
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The well was disinfected upon completion of the testing and withdrawal of the test pump. Water samples were collected for testing of the Drinking Water Standards. The results are included in **Appendix D**.

DISCUSSION

UFA-3 construction and testing was completed on March 25, 2013. The well is completed with 205 feet of 16-inch casing to accommodate the pump and 426 feet of 8-inch casing to a total depth of 631 ft. The well borehole is blocked at 632 feet, however, this blockage has not diminished the flow rate even after development. If the flow significantly diminishes in the future, the well will have to be re-drilled through the open hole. The static hydraulic head was about 32 feet above the measuring point during the testing. The well should pump at a rate of 1500 gpm with about 20 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 10,460 ft^2/d (78.240 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 130 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 630 feet below land surface. The production water is coming from the a calcareous sandstone unit of the basal part of the Hawthorn Group which is 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-3
Sampling Method: Continuous Grab
Described By: Gail Doyle

Depth ft bls	Description
0 - 3	Clayey shelly **Sand**, grayish orange (10YR 7/4), fine grained, subangular to subrounded
3 - 4	Sandy **Limestone**, pale yellowish brown (10YR 6/2) to grayish orange (10YR 7/4), hard, slow drilling
4 - 6	Sandy **Shell**, very pale orange (10YR 8/2)
6 - 8	Fossiliferous **Limestone**, very pale orange (10YR 8/2), very hard drilling
8 - 11	Sandy shelly **Clay**, pale yellowish green (10GY 7/2), fine grained quartz sand
11 - 24	Sandy **Limestone**, medium light gray (N6), hard, slow drilling
24 - 25	Sandy **Clay**, pale yellowish green (10GY 7/2); fine grained quartz sand
25 - 26	Fossiliferous **Limestone**, very pale orange (10YR 8/2)
26 - 30	Sandy shelly **Clay**, light greenish gray (5GY 8/1), fine grained quartz sand
30 - 35	Sandy fossiliferous **Limestone**, light greenish gray (5GY 8/1), soft; fine to medium grained quartz and phosphatic sand
35 - 40	Same as above but softer and with minor clay
40 - 42	Sandy shelly **Clay**, light greenish gray (5GY 8/1); fine grained phosphatic sand
42 - 45	Sandy shelly **Clay**, greenish gray (5GY 6/1), unconsolidated to semi-consolidated; fine grained phosphatic sand
45 - 55	**Clay**, greenish gray (5GY 6/1), soft, sticky, minor phosphatic sand
55 - 75	**Clay**, dark greenish gray (5GY 4/1), soft, sticky
75 - 128	Sandy **Clay**, dark greenish gray (5GY 4/1); fine to medium grained phosphatic sand
128 - 135	**Shell and Sand** (Ball Bearing Sand), shell-grayish orange (10YR 7/4), sand-white (N9) to medium gray (N5) to black (N1), quartz, phosphate, and limestone, medium to pebble grained, rounded
135 - 178	**Sand** (Ball Bearing Sand), white (N9) to medium gray (N5) to black (N1), medium to pebble grained, rounded, minor limestone
178 - 180	Sandy **Shell**, grayish orange (10Y 7/4); coarse grained quartz and phosphate sand
180 - 182	Clayey **Sand**, light gray (N7), quartz, phosphate, limestone, coarse grained, subrounded
182- 190	Sandy **Clay**, light gray (N7) to very light gray (N8); fine grained phosphate sand; minor semi-consolidated stringers
190 - 195	**Limestone**, yellowish gray (5Y8/1), solution
195 - 198	Sandy **Clay**, yellowish gray (5Y8/1); very fine grained phosphate sand
198 - 210	**Limestone**, yellowish gray (5Y8/1), solution, drank mud
210 - 212	**Sand** (Ball Bearing Sand), white (N9) to medium gray (N5) to black (N1), coarse to pebble grained, rounded
212 - 230	**Limestone**, very pale orange (10YR 8/2), clay matrix, minor vogues and fossils, medium hardness; clay stringers
230 - 233	Sandy **Clay**, greenish gray (5G 6/1); fine grained quartz and phosphate sand
233 - 248	**Marl**, light greenish gray (5G 8/1), phosphatic
248 - 255	Clayey **Sand**, light greenish gray (5G 8/1), quartz and phosphate, fine to coarse grained, subangular to subrounded
255 - 261	**Sand**, greenish gray (5G 6/1), quartz, fine to coarse grained, subangular to subrounded, minor phosphate, minor clay and silt
261 - 280	Sandy **Clay**, light greenish gray (5G 8/1); fine grained quartz and phosphate; stringers of semi-consolidated sandy clay

Murray Consultants, Inc.

Project Name: LaBelle RO Wells
Project No.: 12-2372
Well No.: UFA-3
Sampling Method: Continuous Grab
Described By: Gail Doyle

Depth ft bls	Description
288 - 333	Sandy **Clay**, greenish gray (5G 6/1), fine grained quartz and phosphate sand, sandier from 313 ft to 316 ft: Interbedded with sandy **Limestone**, greenish gray (5G 6/1), fine grained quartz and phosphate sand
333 - 341	**Clay**, dark greenish gray (5GY 4/1), soft, sticky; minor phosphatic sand, slow drilling
341 - 345	Clayey **Sand**, dark greenish gray (5G 4/1), phosphate, very fine to medium grained, subrounded
345 - 364	Sandy **Clay**, dark greenish gray (5G 4/1); fine grained phosphate sand
364 - 378	Clayey silty **Sand**, greenish gray (5GY 6/1), phosphate and quartz, very fine grained, subangular to subrounded; minor semi-consolidated stringers
378 - 395	Sandy shelly **Clay**, yellowish gray (5Y 8/1) to white (N1); very fine grained phosphate sand; minor semi-consolidated stringers; more shell from 386 ft to 389 ft; sandy fossiliferous limestone stringer from 389 ft to 391 ft
395 - 411	Sandy **Clay**, greenish gray (5GY 6/1); fine grained phosphate sand
411 - 416	**Clay**, dark greenish gray (5GY 4/1), sticky, slow drilling
416 - 460	Sandy **Clay**, greenish gray (5GY 6/1) to light gray (N7) to white (N9); very fine grained phosphate sand, coarser with depth, shells with depth
460 - 499	Sandy **Clay**, very light gray (N8) to dark greenish gray (5GY 4/1); very fine grained phosphate sand; minor shell from 481 ft to 486 ft
499 - 510	**Clay**, dark greenish gray (5GY 4/1), sticky, slow drilling; minor phosphate sand
510 - 526	Sandy shelly **Clay**, light greenish gray (5GY 8/1); very fine grained phosphate sand
526 - 545	Sandy **Limestone**, very light gray (N8) to yellowish gray (5Y 8/1), soft; coarse grained phosphate sand
545 - 560	Sandy **Clay**, light greenish gray (5GY 8/1) to greenish gray (5GY 6/1); fine to coarse grained quartz and phosphate sand; minor limestone fragments
560 - 565	**Clay**, greenish gray (5GY 6/1), sticky, slow drilling; minor very fine grained quartz and phosphate sand
565 - 573	Sandy shelly **Clay**, light greenish gray (5GY 8/1); fine grained phosphate sand; minor limestone fragments
573 - 585	**Limestone**, pale yellowish brown (10YR 6/2), solution, hard
585 - 605	Sandy **Limestone**, very light gray (N8), soft; very fine to medium grained phosphate sand; minor shell: interbedded with sandy **Clay**, very light gray (N8); very fine to fine grained phosphate sand
605 - 615	**Clay**, greenish gray (5GY 6/1) to very light gray (N8), soft, slow drilling; minor fine grained phosphate sand
615 - 630	Sandy **Clay**, light greenish gray (5GY 8/1); fine grained phosphate sand; minor shell; calcareous sandstone stringer, light olive gray (5Y 6/1) from 621 ft to 623 ft
630 - 659	Calcareous **Sandstone**, very pale orange (10YR 8/2) to light gray (N7): clay matrix, very soft and friable; minor fossil fragments
659 - 671	Sandy **Clay**, greenish gray (5GY 6/1); fine grained phosphate sand; minor limestone fragments
671 - 719	Silty **Clay**, greenish gray (5G 4/1)
719 - 724	Sandy **Limestone**, yellowish gray (5Y 8/1), vogues, minor phosphate
724 - 733	**Clay**, dark greenish gray (5GY 4/1), dry, flakey
733 - 742	Sandy fossiliferous **Limestone**, lt greenish gray to tan: soft to hard

APPENDIX B

MV Geophysical

DUAL INDUCTION LL3 / SP LOG

Company	Wells & Water Systems, Inc.
Well	UFA-3
Field	LaBelle
County	Hendry
State	Florida
Country	

Company Wells & Water Systems, Inc.
Well UFA-3
Field LaBelle
County Hendry
State Florida Country

Location: API # :
City of LaBelle
N 871670.19 E 503488.04
Murray Consultants, Inc.
SEC TWP RGE

Other Services
XY/GR
DIL/SP

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

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

Date	14-FEB-2013
Run Number	ONE
Depth Driller	671'
Depth Logger	671'
Bottom Logged Interval	669'
Top Log Interval	205'
Open Hole Size	7.875"
Type Fluid	MUD
Density / Viscosity	NA/NA
Max. Recorded Temp.	NA
Estimated Cement Top	SURFACE
Time Well Ready	14:00 2/14/2013
Time Logger on Bottom	15:00 2/14/2013
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller/C.Miller
Witnessed By	G.MurrayDoyle(MCI)

Borehole Record

Run Number	Bit	From	To
ONE	7.875"	205'	671'

Tubing Record

Size	Wgt/Ft	Size	Top	Weight	Bottom	From	To
16" PVC	14" ID	Toby (WWS)	SURFACE		205'		

Casing Record
Surface String
Prot. String
Production String
Liner

Invoice No. 2013027 P.O. #: 3x/0x/pdf/las Job No.: wlbell-1.db * FINAL PRINT *

<<< Fold Here >>>

Comments

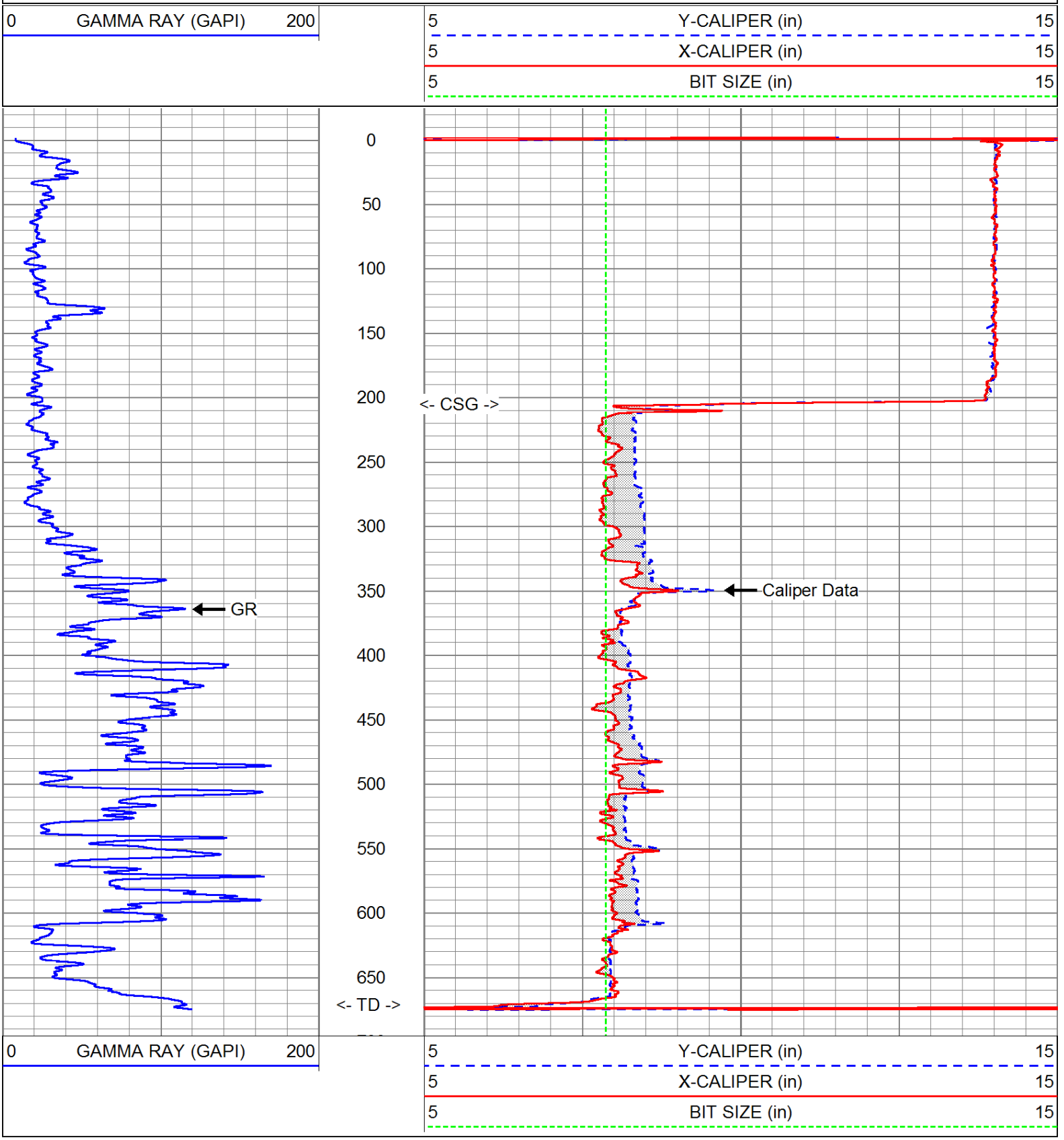
Rm=6.311 ohm-m @ 86.5 degF

MV Geophysical

MAIN PASS

Geophysical

Database File:	wlbell-1.db
Dataset Pathname:	MAIN
Presentation Format:	xy515-21
Dataset Creation:	Thu Feb 14 16:22:06 2013
Charted by:	Depth in Feet scaled 1:1200

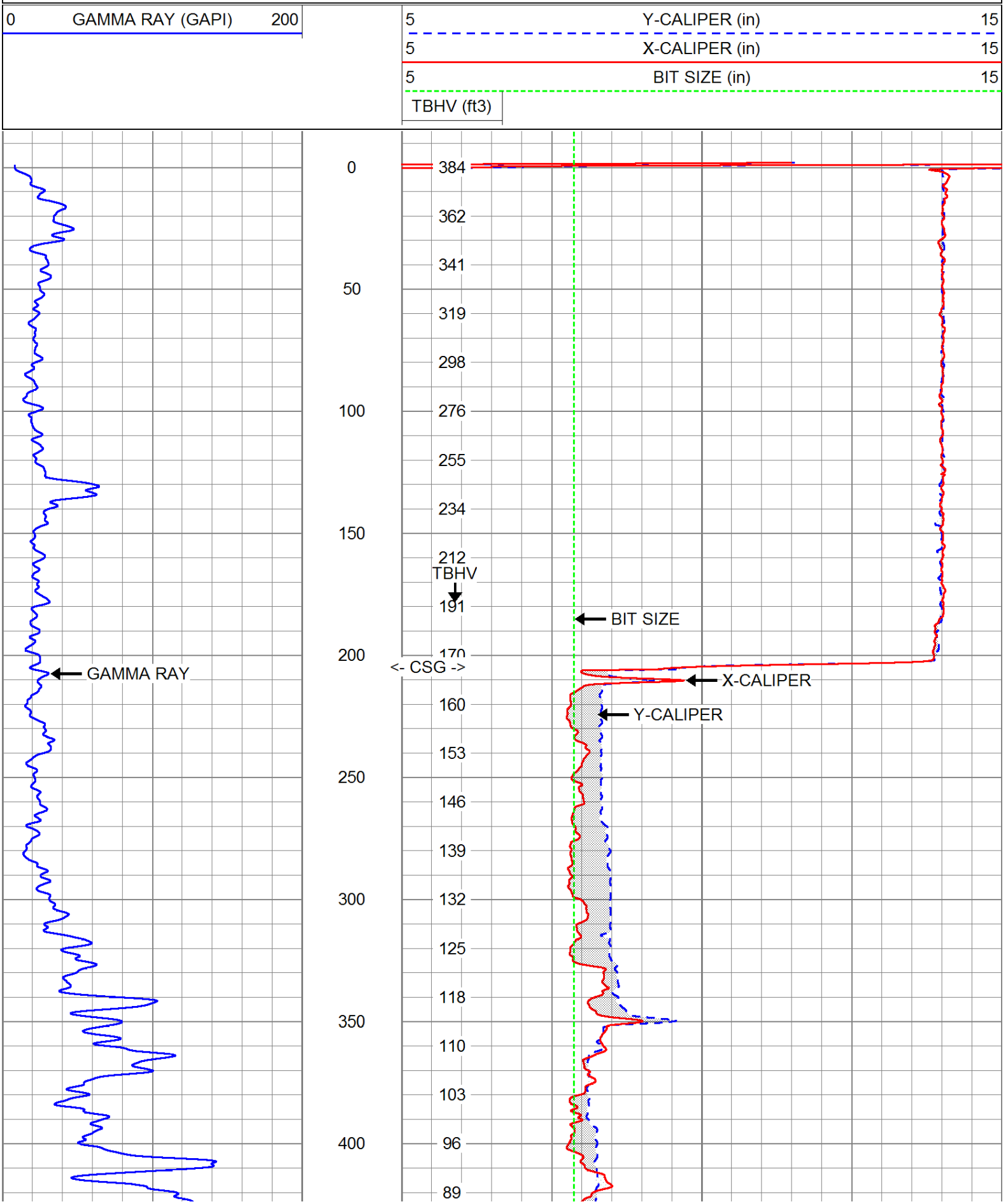


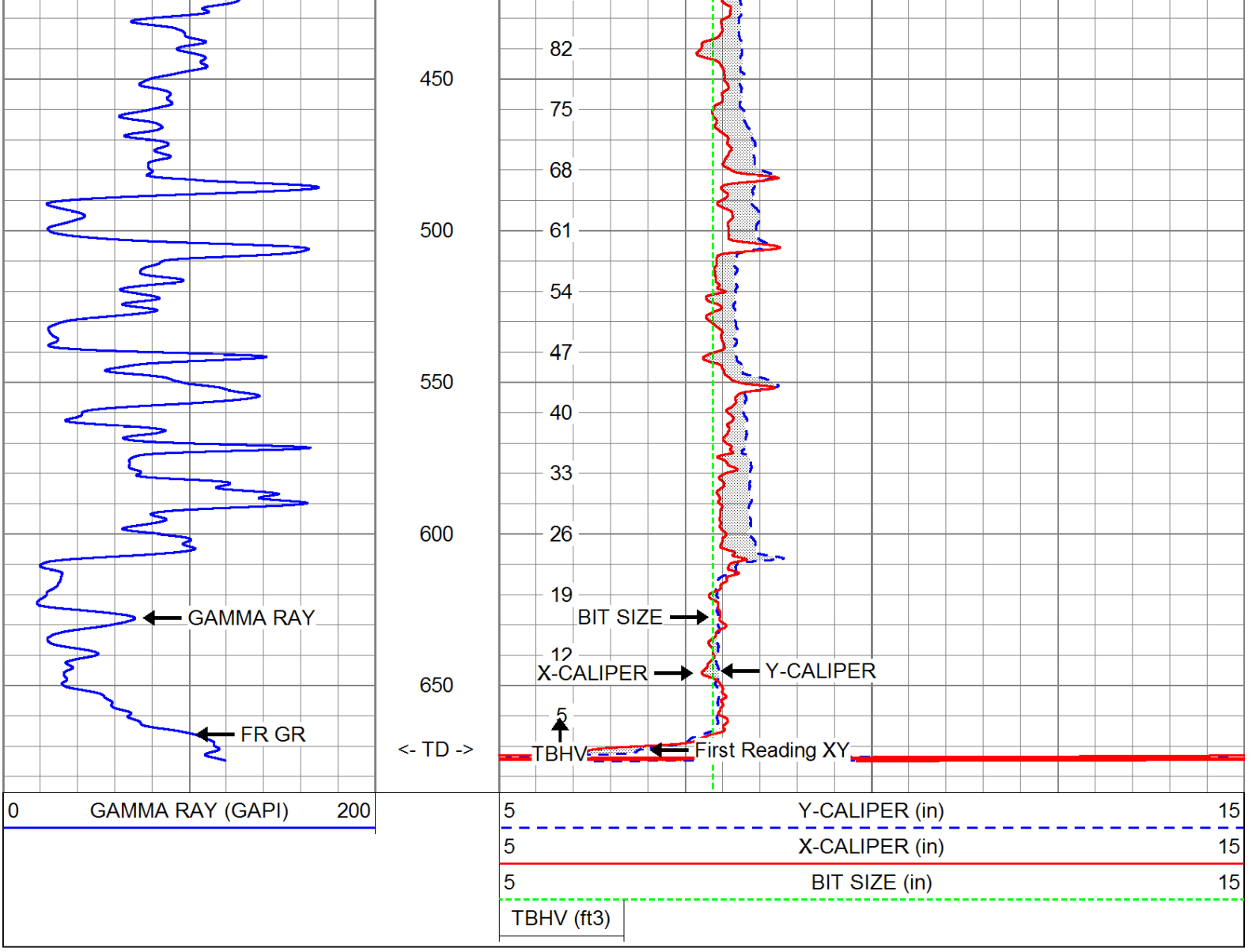
MV Geophysical

MAIN PASS

Geophysical

Database File: wlbell-1.db
Dataset Pathname: MAIN
Presentation Format: xy515-25
Dataset Creation: Thu Feb 14 16:22:06 2013
Charted by: Depth in Feet scaled 1:600

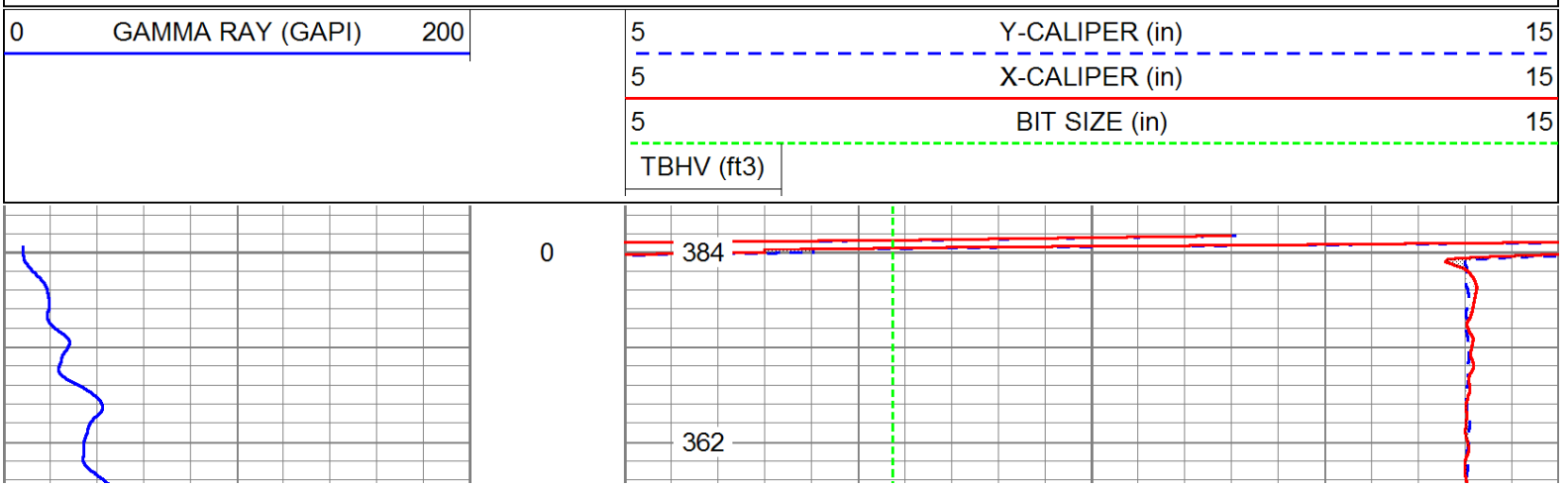


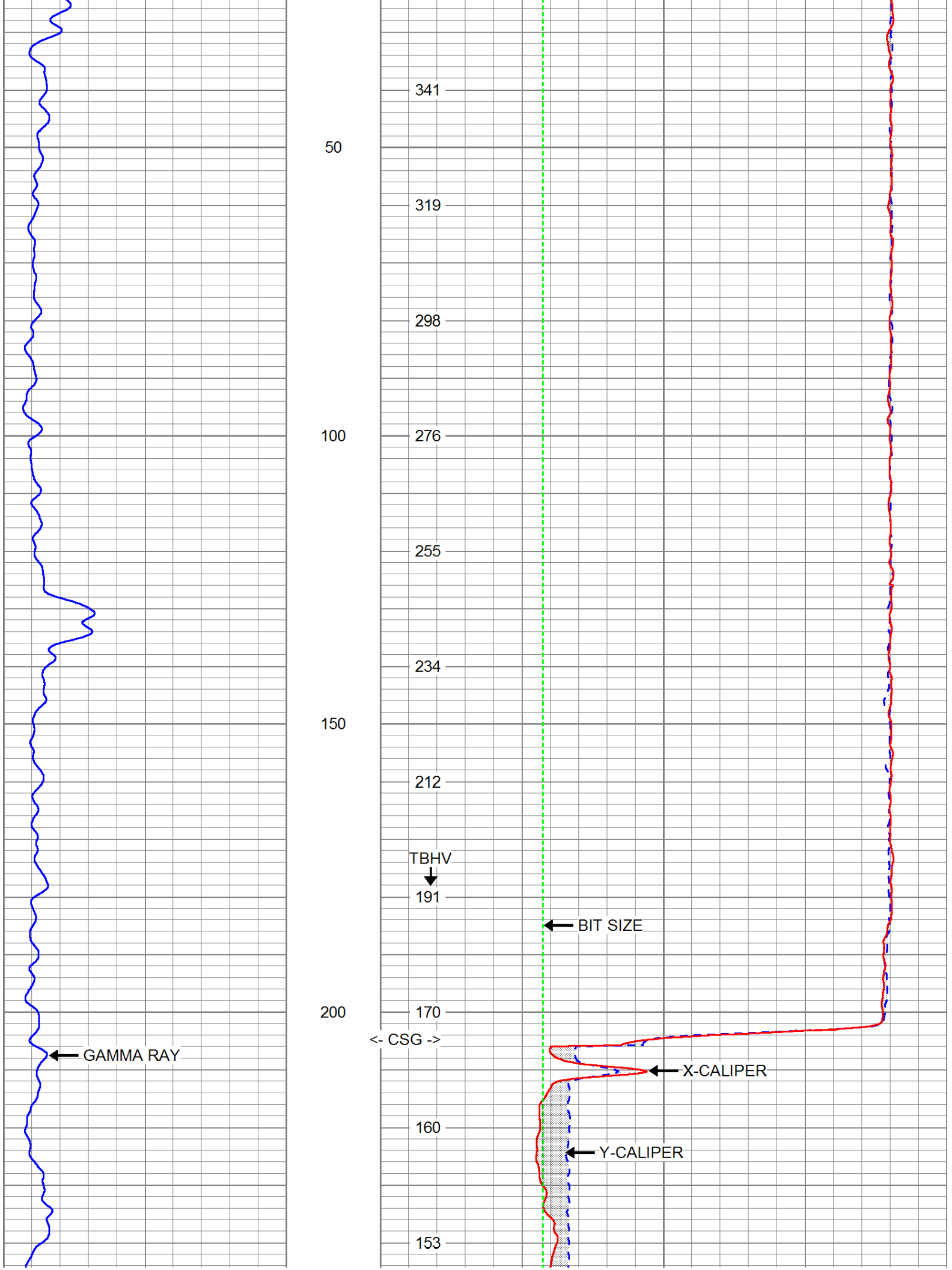


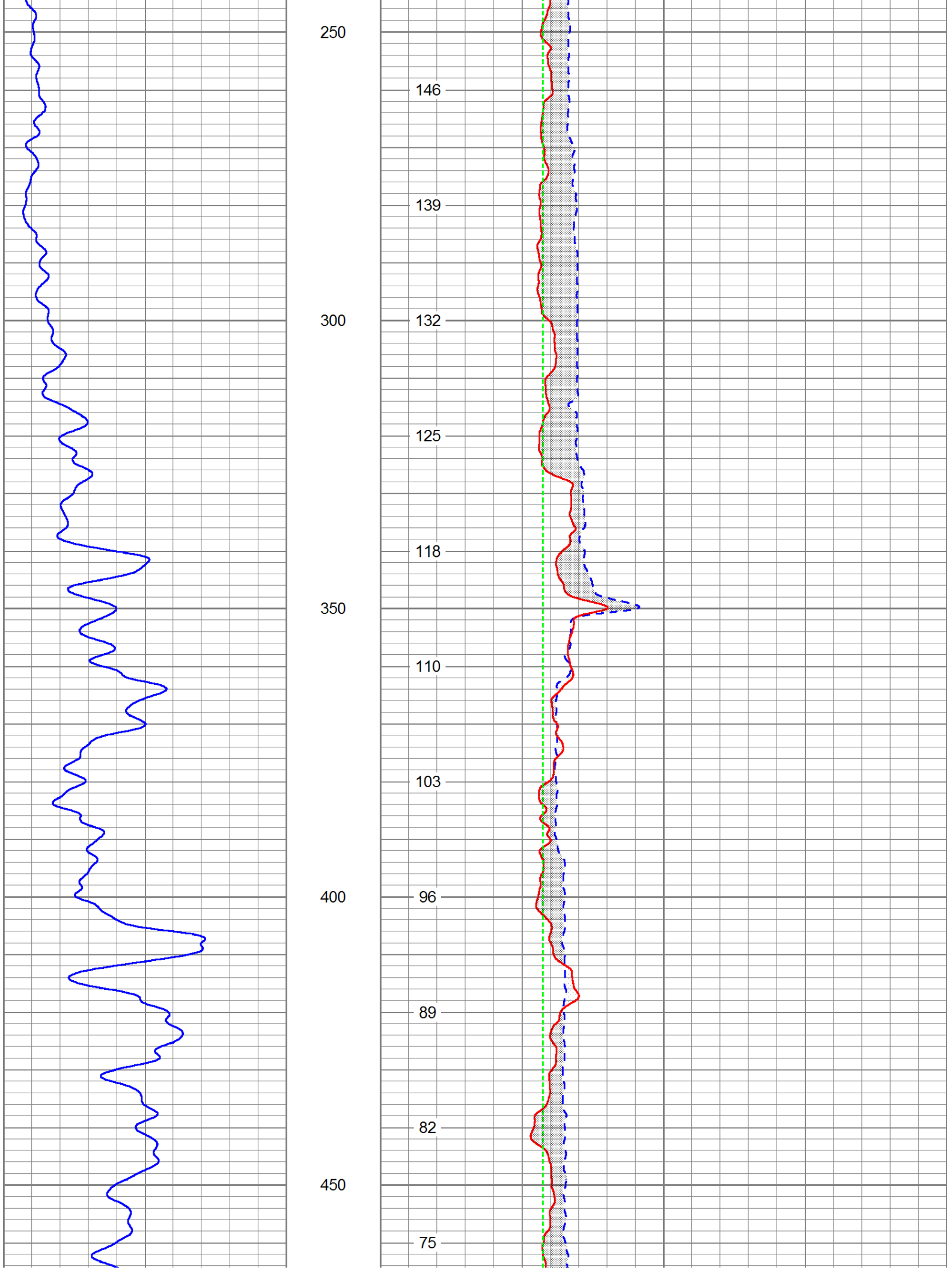
MV Geophysical

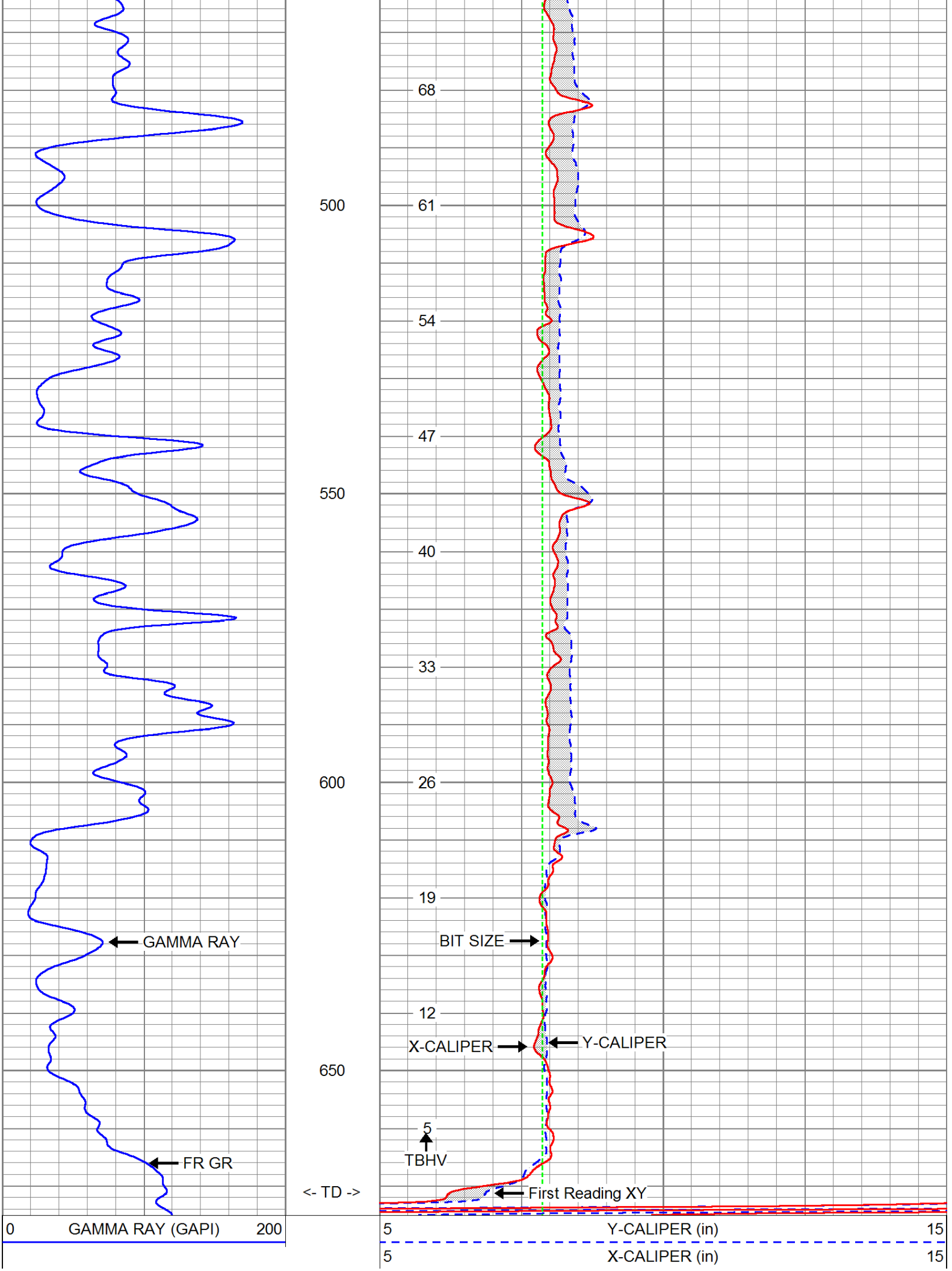
MAIN PASS

Database File:	wlbell-1.db
Dataset Pathname:	MAIN
Presentation Format:	xy515-25
Dataset Creation:	Thu Feb 14 16:22:06 2013
Charted by:	Depth in Feet scaled 1:240




341
50
319
298
100
276
255
234
150
212
TBHV
191
BIT SIZE
200
170
<- CSG ->
GAMMA RAY
X-CALIPER
160
Y-CALIPER
153


250
146
139
300
132
125
118
350
110
103
400
96
89
82
450
75


68
61
54
47
40
33
26
19
12
5
500
550
600
650
GAMMA RAY
FR GR
BIT SIZE
X-CALIPER
Y-CALIPER
TBHV
First Reading XY
<- TD ->
0
GAMMA RAY (GAPI)
200
5
Y-CALIPER (in)
15
5
X-CALIPER (in)
15

5	BIT SIZE (in)	15
TBHV (ft3)		

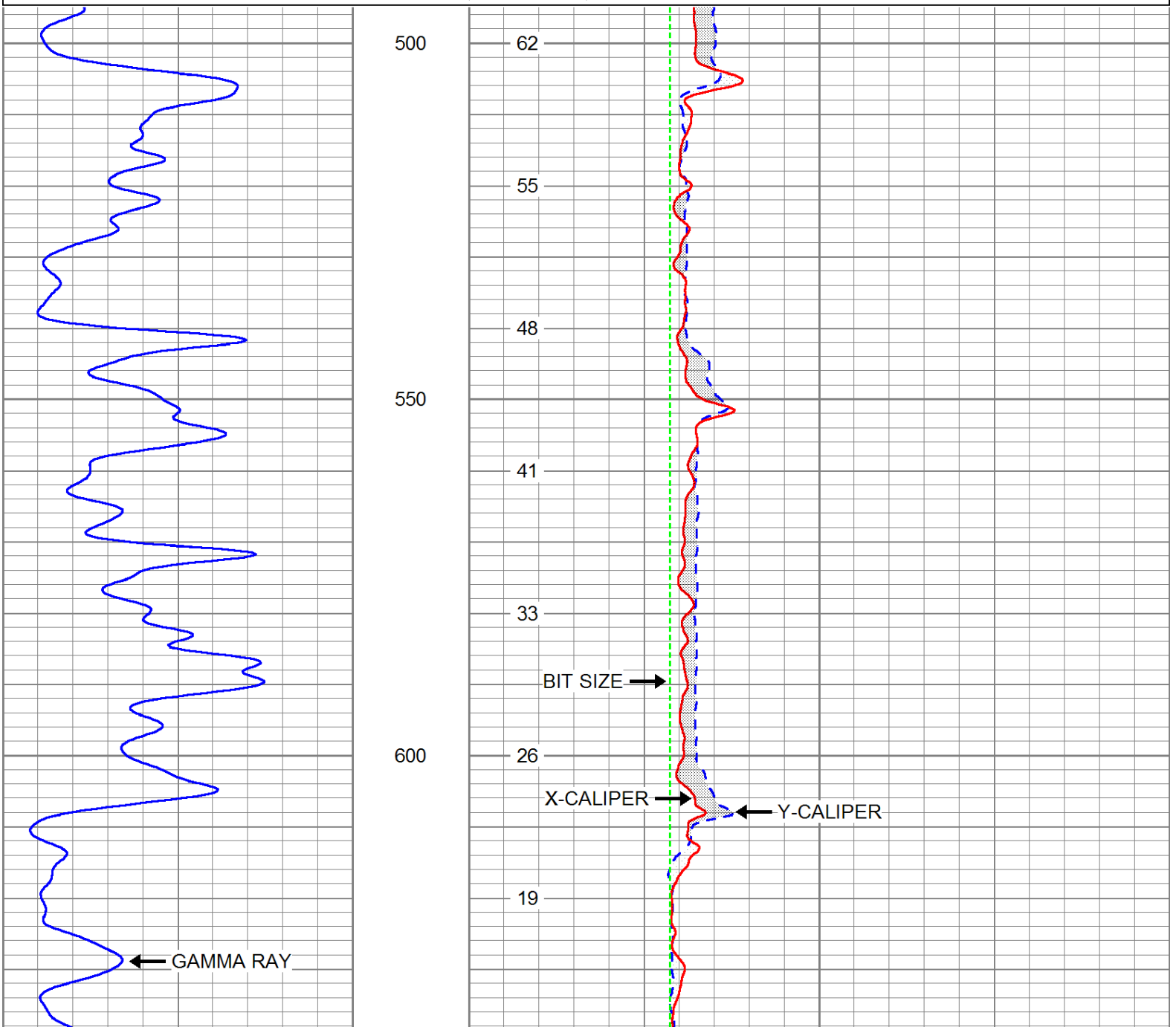
MV Geophysical

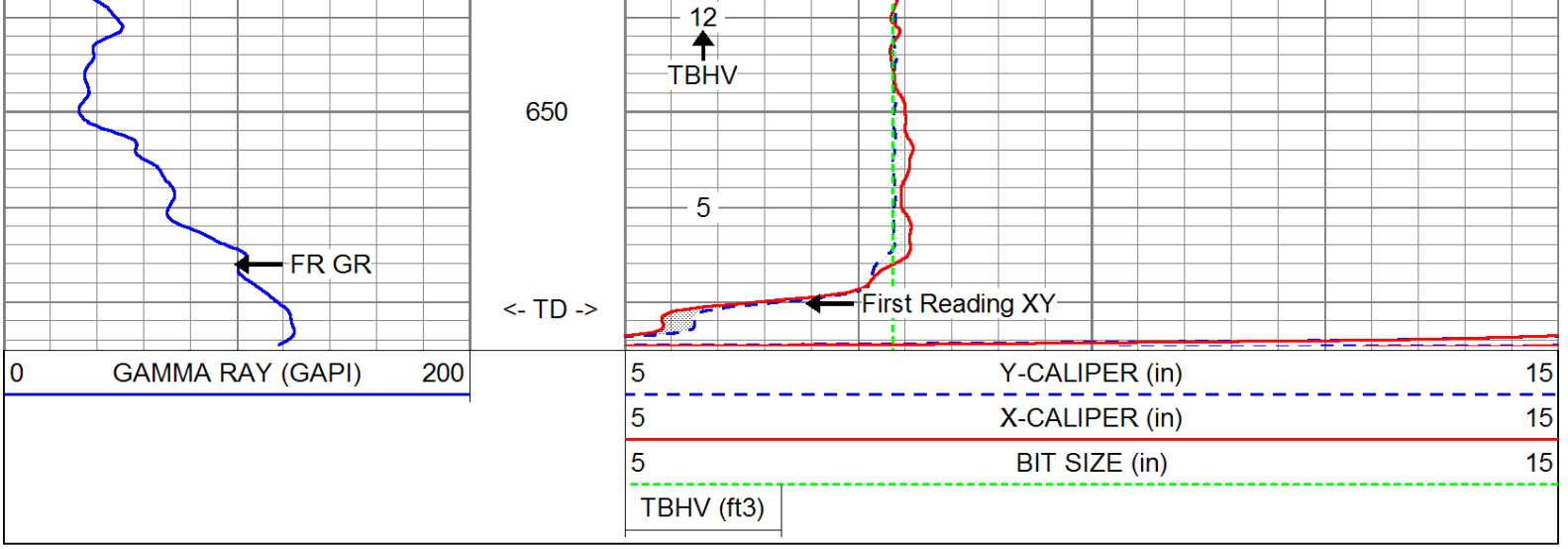
REPEAT SECTION

Database File:	wlbell-1.db
Dataset Pathname:	REPEAT
Presentation Format:	xy515-25
Dataset Creation:	Thu Feb 14 16:31:33 2013
Charted by:	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	200

5	Y-CALIPER (in)	15
5	X-CALIPER (in)	15
5	BIT SIZE (in)	15
TBHV (ft3)		





Calibration Report

Database File: wlbell-1.db
Dataset Pathname: pass5
Dataset Creation: Thu Feb 14 15:23:35 2013 by Log VER_5.3

Dual Induction Calibration Report

Serial-Model:	5390-R
Surface Cal Performed:	Tue Jan 17 16:39:01 2012
Downhole Cal Performed:	Tue Jan 17 16:39:14 2012
After Survey Verification Performed:	Wed Apr 21 11:04:55 2010

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.051	0.645	V	0.000	400.000	mmho-m	673.401	-34.343
Medium	0.018	0.735	V	0.000	464.000	mmho-m	647.121	-11.545
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.641	V	0.000	400.000	mmho-m	635.021	-7.049
Medium	0.005	0.739	V	0.000	464.000	mmho-m	632.408	-3.370

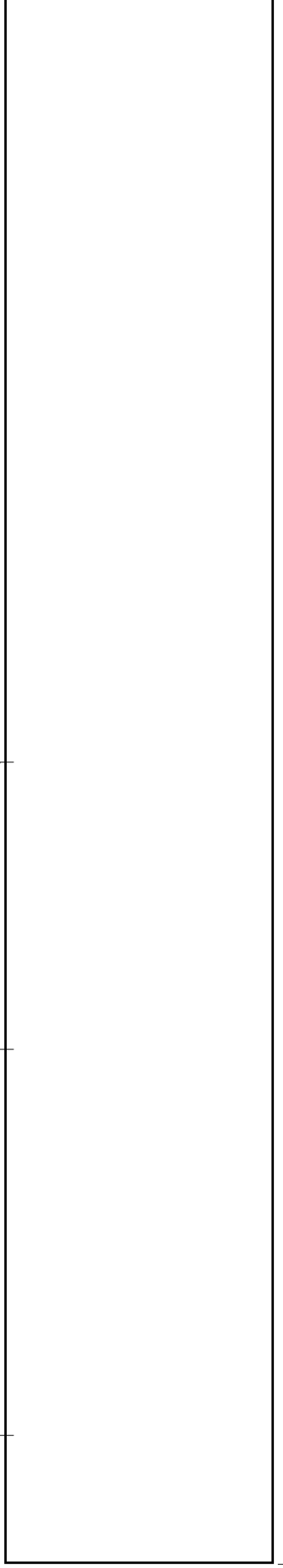
Downhole Calibration

	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-43.158	78.288	mmho-m	-42.562	77.982	mmho-m	0.993	0.275
Medium	-9.475	466.701	mmho-m	-8.097	466.698	mmho-m	0.997	1.351
Shallow	2.515	0.025	V	494.500	2.000	Ohm-m	197.829	-2.999

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	Len (ft)	OD (in)	Wt (lb)



CILD	10.60	DIL-R (5390)	20.90	4.00	345.00
SP	10.60				
CILM	6.80				
RLL3	1.70				

Dataset:	wlbell-1.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-3		
Field	LaBelle		
County	Hendry		
State	Florida	Country	USA

MV Geophysical

DUAL INDUCTION LL3 / SP LOG

Company	Wells & Water Systems, Inc.
Well	UFA-3
Field	LaBelle
County	Hendry
State	Florida
Country	

Company Wells & Water Systems, Inc.
Well UFA-3
Field LaBelle
County Hendry
State Florida Country

Location: API # :
City of LaBelle
N 871670.19 E 503488.04
Murray Consultants, Inc.
SEC TWP RGE

Other Services
XY/GR
DIL/SP

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

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

Date	14-FEB-2013
Run Number	ONE
Depth Driller	671'
Depth Logger	671'
Bottom Logged Interval	669'
Top Log Interval	205'
Open Hole Size	7.875"
Type Fluid	MUD
Density / Viscosity	NA/NA
Max. Recorded Temp.	NA
Estimated Cement Top	SURFACE
Time Well Ready	14:00 2/14/2013
Time Logger on Bottom	15:00 2/14/2013
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller/C.Miller
Witnessed By	G.MurrayDoyle(MCI)

Borehole Record

Run Number	Bit	From	To
ONE	7.875"	205'	671'

Tubing Record

Size	Wgt/Ft	Size	Top	Weight	Bottom	From	To
16" PVC	14" ID	Toby (WWS)	SURFACE		205'		

Casing Record
Surface String
Prot. String
Production String
Liner

Invoice No. 2013027 P.O. #: 3x/0x/pdf/las Job No.: wlbell-1.db * FINAL PRINT *

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Comments

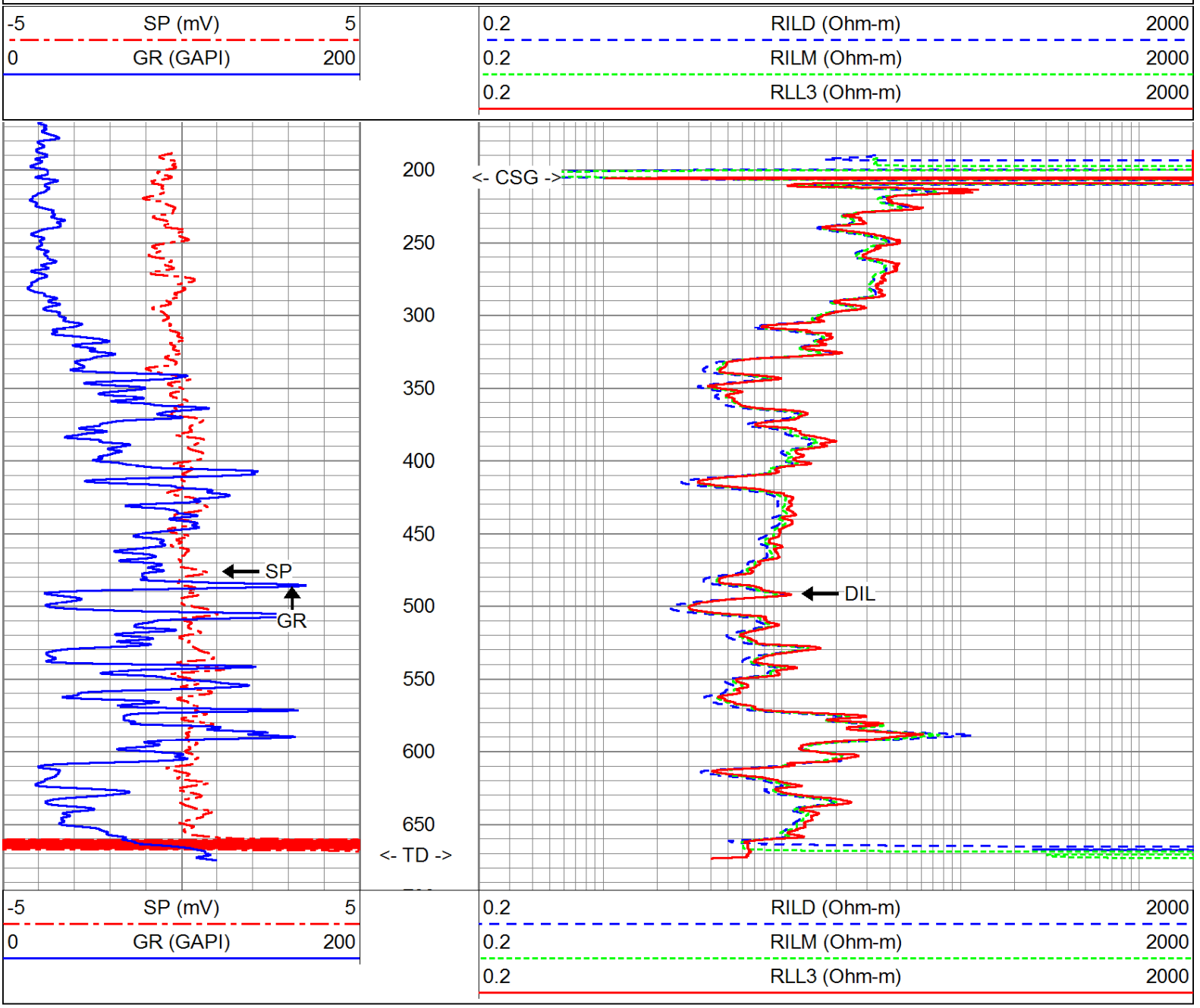
Rm=6.311 ohm-m @ 86.5 degF

MV Geophysical

MAIN PASS

Geophysical

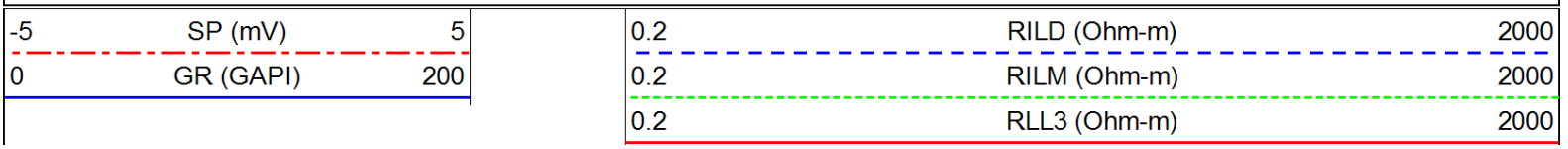
Database File: wlbell-1.db
Dataset Pathname: MAIN
Presentation Format: dil1200
Dataset Creation: Thu Feb 14 16:22:06 2013
Charted by: Depth in Feet scaled 1:1200

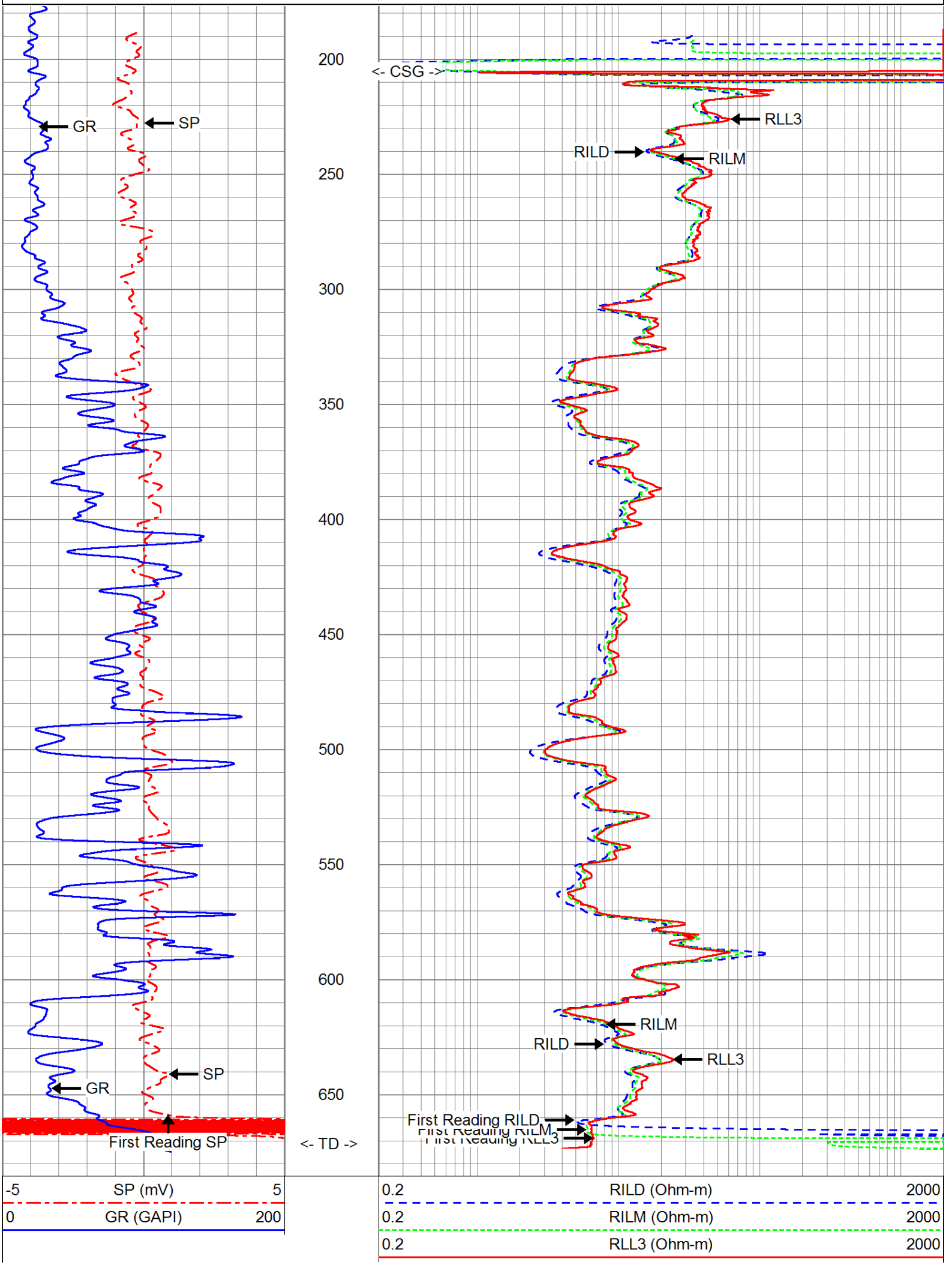


MV Geophysical

MAIN PASS

Database File: wlbell-1.db
Dataset Pathname: MAIN
Presentation Format: dil200
Dataset Creation: Thu Feb 14 16:22:06 2013
Charted by: Depth in Feet scaled 1:600

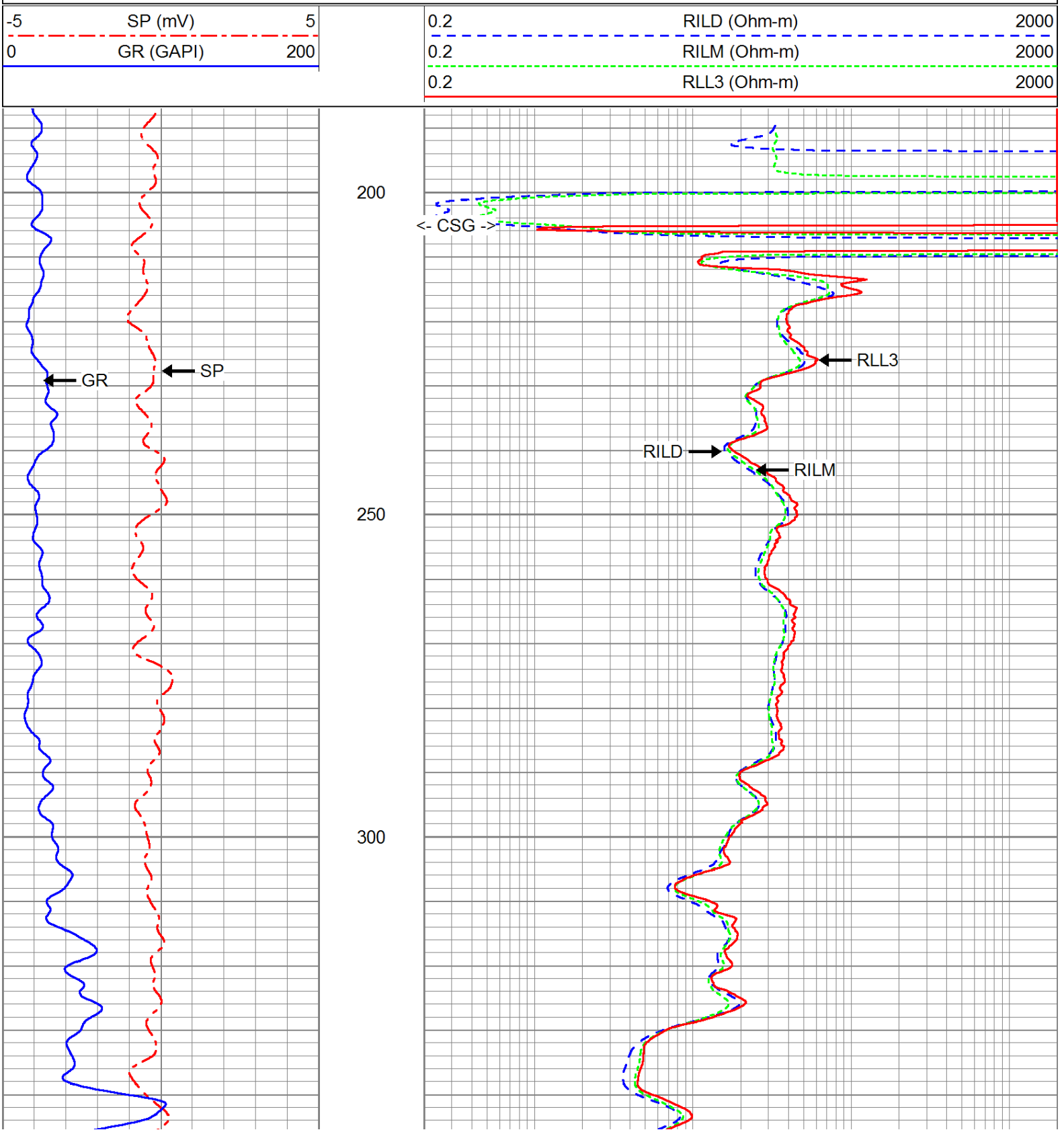


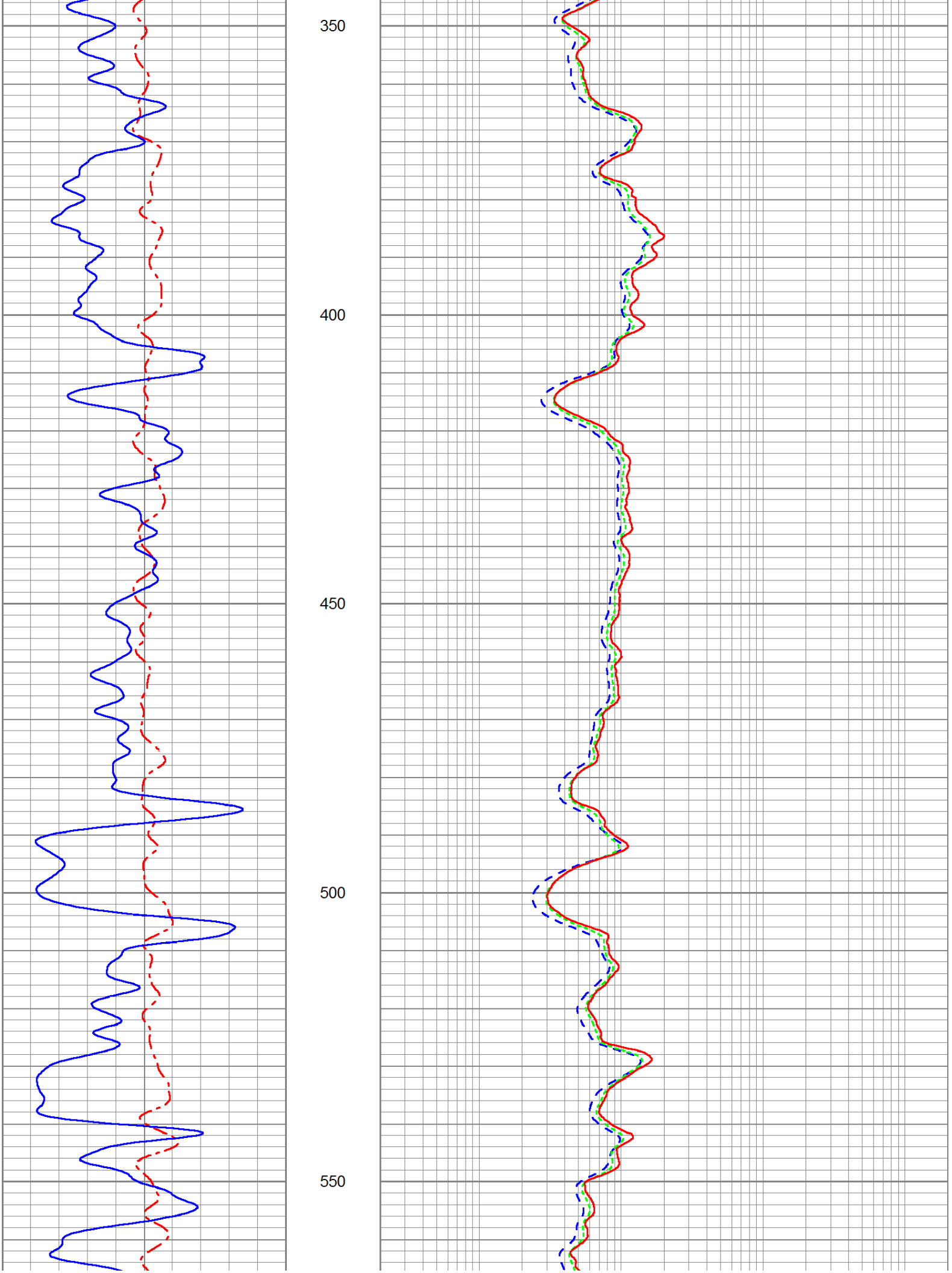

GR
SP
SP
GR
First Reading SP
200
250
300
350
400
450
500
550
600
650
<- TD ->
<- CSG ->
RLL3
RILD
RILM
RILM
RILD
RLL3
First Reading RILD
First Reading RILM
First Reading RLL3
-5
SP (mV)
5
0
GR (GAPI)
200
0.2
RILD (Ohm-m)
2000
0.2
RILM (Ohm-m)
2000
0.2
RLL3 (Ohm-m)
2000

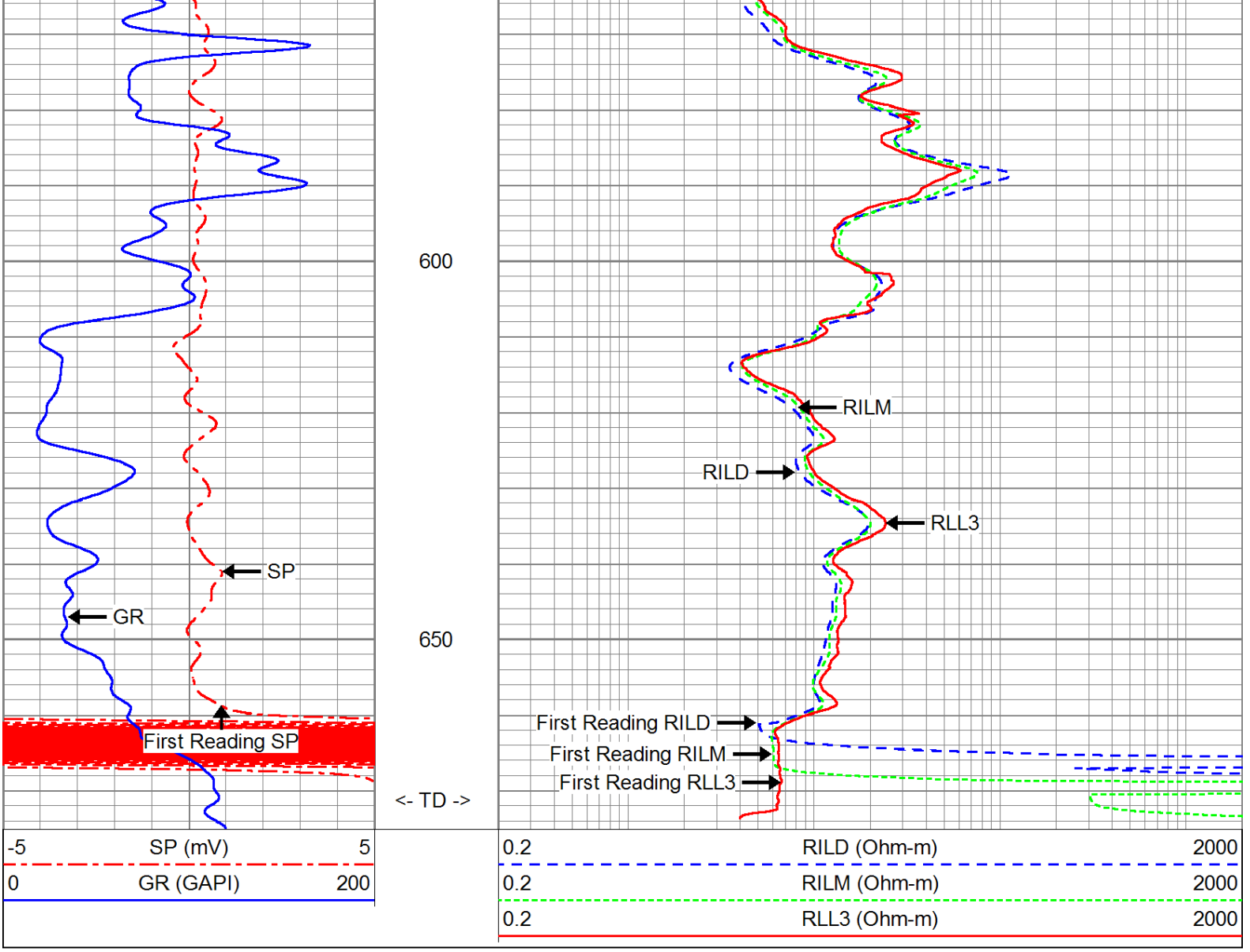
MV Geophysical

MAIN PASS

Database File:	wlbell-1.db
Dataset Pathname:	MAIN
Presentation Format:	dil200
Dataset Creation:	Thu Feb 14 16:22:06 2013
Charted by:	Depth in Feet scaled 1:240



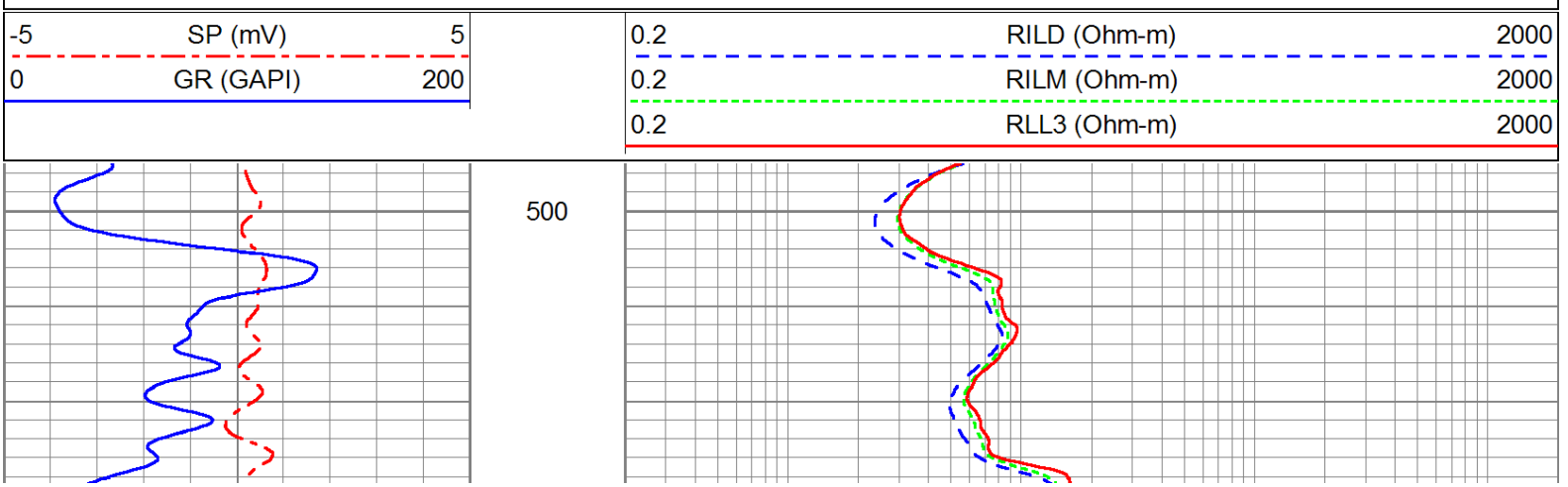

350
400
450
500
550

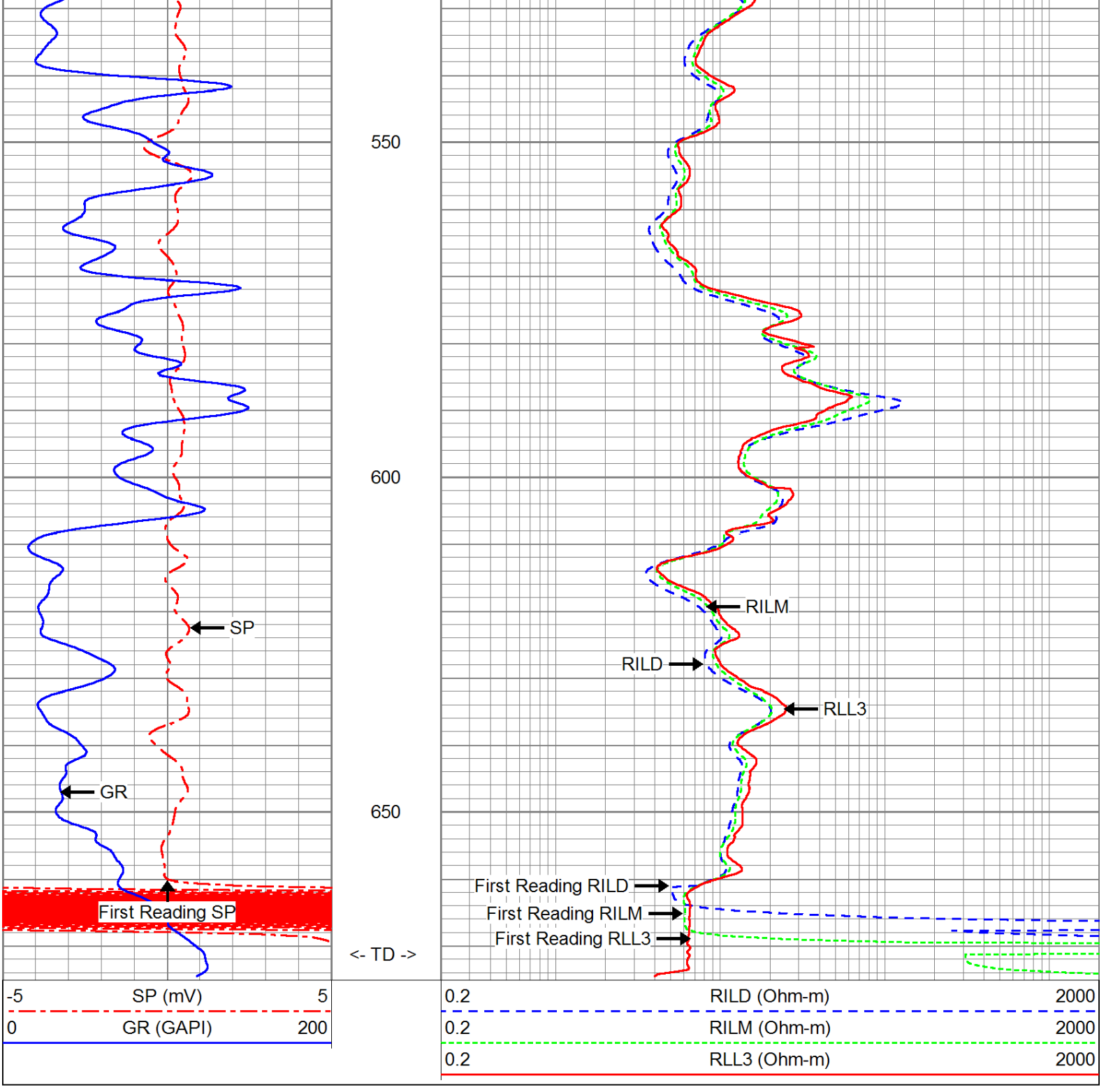


MV Geophysical

REPEAT SECTION

Database File: wlbell-1.db
Dataset Pathname: REPEAT
Presentation Format: dil200
Dataset Creation: Thu Feb 14 16:31:33 2013
Charted by: Depth in Feet scaled 1:240





Calibration Report

Database File: wlbell-1.db
Dataset Pathname: pass5
Dataset Creation: Thu Feb 14 15:23:35 2013 by Log VER_5.3

Dual Induction Calibration Report

Serial-Model:	5390-R
Surface Cal Performed:	Tue Jan 17 16:39:01 2012
Downhole Cal Performed:	Tue Jan 17 16:39:14 2012
After Survey Verification Performed:	Wed Apr 21 11:04:55 2010

Surface Calibration

Readings	References	Results

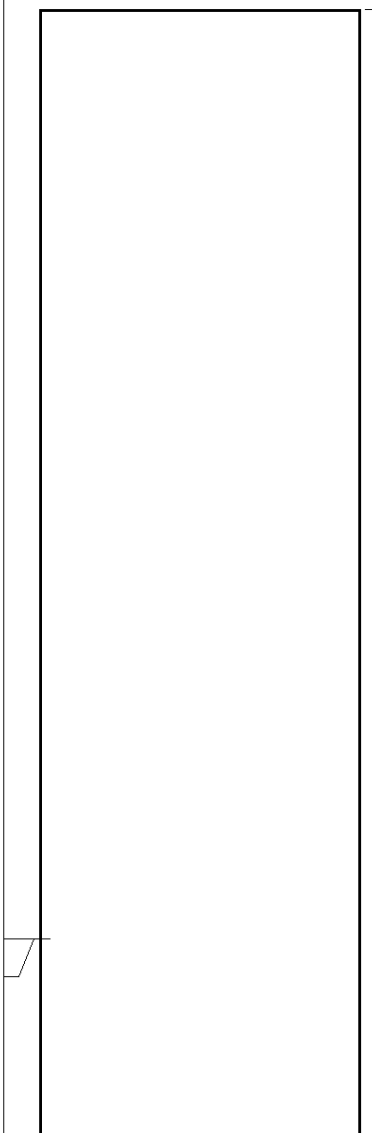
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.051	0.645	V	0.000	400.000	mmho-m	673.401	-34.343
Medium	0.018	0.735	V	0.000	464.000	mmho-m	647.121	-11.545
Internal:	**Zero**	**Cal**		**Zero**	**Cal**		**m**	**b**
Deep	0.011	0.641	V	0.000	400.000	mmho-m	635.021	-7.049
Medium	0.005	0.739	V	0.000	464.000	mmho-m	632.408	-3.370

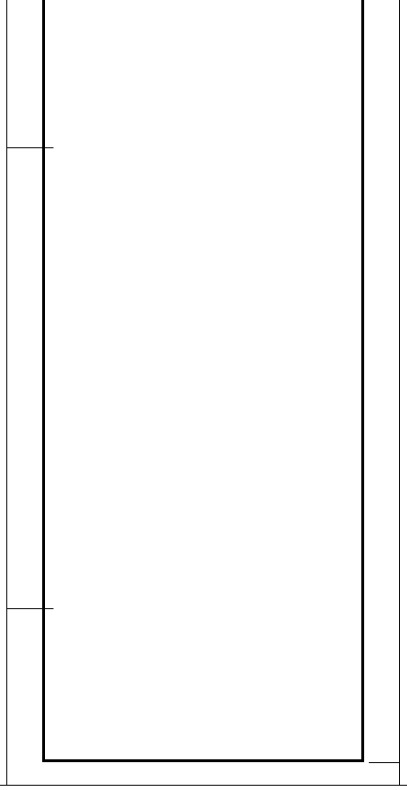
Downhole Calibration

	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-43.158	78.288	mmho-m	-42.562	77.982	mmho-m	0.993	0.275
Medium	-9.475	466.701	mmho-m	-8.097	466.698	mmho-m	0.997	1.351
Shallow	2.515	0.025	V	494.500	2.000	Ohm-m	197.829	-2.999

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	Len (ft)	OD (in)	Wt (lb)
CILD	10.60		DIL-R (5390)	20.90	4.00	345.00
SP	10.60					



CILM	6.80					
RLL3	1.70					

Dataset:	wlbell-1.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-3		
Field	LaBelle		
County	Hendry		
State	Florida	Country	USA

MV Geophysical

FLUID CONDUCTIVITY TEMPERATURE LOG

Company Wells & Water Systems, Inc.
Well UFA-3
Field LaBelle
County Hendry
State/Prv Florida

Company Wells & Water Systems, Inc.
Well UFA-3
Field LaBelle
County Hendry State/Prv Florida
Location City of LaBelle
N 871670.19 E 503488.04
Murray Consultants, Inc.

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

Other Services: XY/GR, FCT,FLO, DHTV

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

Date	12-MAR-2013
Run Number	TWO-b
Depth Driller	741'
Depth Logger	682'
Bottom Logged Interval	682'
Top Log Interval	550'
Open Hole Size	7.25"
Type Fluid	H2O
Density / Viscosity	NA/NA
Max. Recorded Temp.	NA
Estimated Cement Top	SURFACE
Time Well Ready	08:00 3/12/2013
Time Logger on Bottom	08:30 3/12/2013
Equipment Number	MVGS-1
Location	Ft. Myers
Recorded By	S.Miller/C.Miller
Witnessed By	G.MurrayDoyle(MCI)

Borehole Record

Run Number	Bit	From	To
ONE	7.875"	205'	671'
TWO	7.25"	631'	741'

Casing Record

	Size	Wgt/Ft	Size	Top	Bottom
Surface String	16" PVC	14" ID		SURFACE	205'
Prot. String	8" PVC	7.5" ID		180'	631'
Production String					628' Logger
Liner					wlbell-1.db

Tubing Record

Weight	From	To

Invoice No.	2013039
P.O. #:	
	3x/0x/pdf/las
Job No.:	* FINAL PRINT *

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Comments

A DYNAMIC down pass was performed.
Cw =4360 uS/cm @ 85.6 degF @ Q=900 gpm.
FLUID RESISTIVITY CALIBRATION REPORT (Performed: 18-JAN-13 07:15)

uS/cm	CPS
1,222.5	2513.55
20,310	1899.22
149,390	1541.55

TEMPERATURE CALIBRATION REPORT (Performed: 18-JAN-13 07:45)

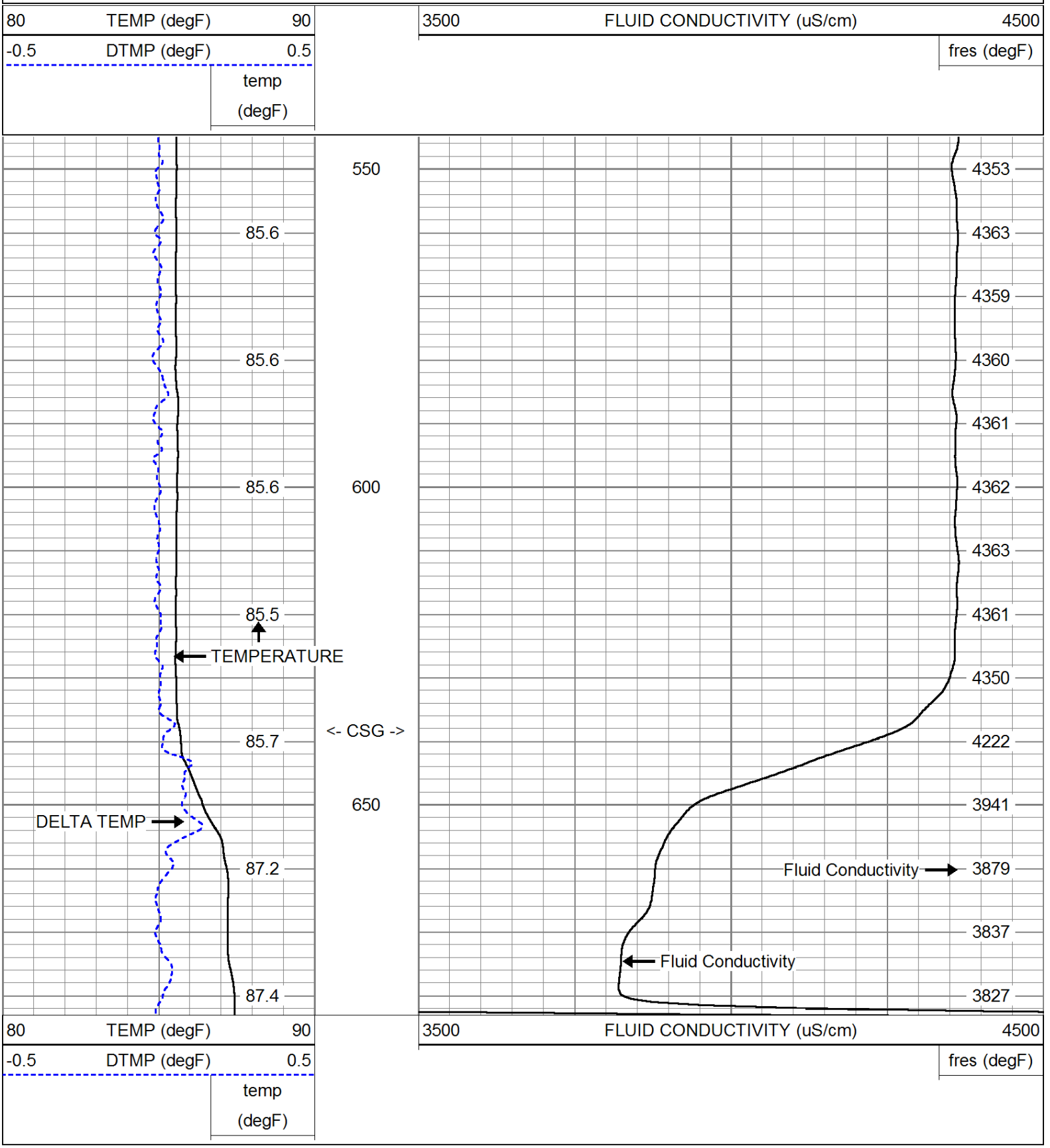
DEG-F	CPS
38.2	145.221
148.1	2689.114

MV Geophysical

Dynamic FCT Down

Geophysical

Database File: wlbell-1.db
Dataset Pathname: run2/dfct
Presentation Format: fct-tw2
Dataset Creation: Tue Mar 12 12:22:58 2013
Charted by: Depth in Feet scaled 1:240



Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (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	0.10		TEMP-RTS (MV01)	0.46	1.90	2.00

Dataset:	wlbell-1.db: field/well/run2/pass1
Total Length:	5.12 ft
Total Weight:	20.00 lb
O.D.	1.90 in

MV Geophysical

Company	Wells & Water Systems, Inc.		
Well	UFA-3		
Field	LaBelle		
County	Hendry		
State	Florida	Country	USA

MV Geophysical

X-Y CALIPER GAMMA RAY LOG

Company	Wells & Water Systems, Inc.
Well	UFA-3
Field	LaBelle
County	Hendry
State/Prv	Florida

Company Wells & Water Systems, Inc.
Well UFA-3
Field LaBelle
County Hendry State/Prv Florida

Location
City of LaBelle
N 871670.19 E 503488.04
Murray Consultants, Inc.

Other Services
XY/GR
FCT,FLO
DHTV

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

Date	12-MAR-2013		
Run Number	TWO-b		
Depth Driller	741'		
Depth Logger	682'		
Bottom Logged Interval	682'		
Top Log Interval	SURFACE		
Open Hole Size	7.25"		
Type Fluid	H2O		
Density / Viscosity	NA/NA		
Max. Recorded Temp.	NA		
Estimated Cement Top	SURFACE		
Time Well Ready	08:00 3/12/2013		
Time Logger on Bottom	09:45 3/12/2013		
Equipment Number	MVGS-1		
Location	Ft. Myers		
Recorded By	S.Miller/C.Miller		
Witnessed By	G.MurrayDoyle(MCI)	Toby (WWS)	

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	205'	671'				
TWO	7.25"	631'	741'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	16" PVC	14" ID	SURFACE	205'
Prot. String	8" PVC	7.5" ID	180'	631'
Production String				628' Logger
Liner			3x/0x/pdf/las	wlbell-1.db
Invoice No.	2013039	P.O. #:	Job No.:	* FINAL PRINT *

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Comments

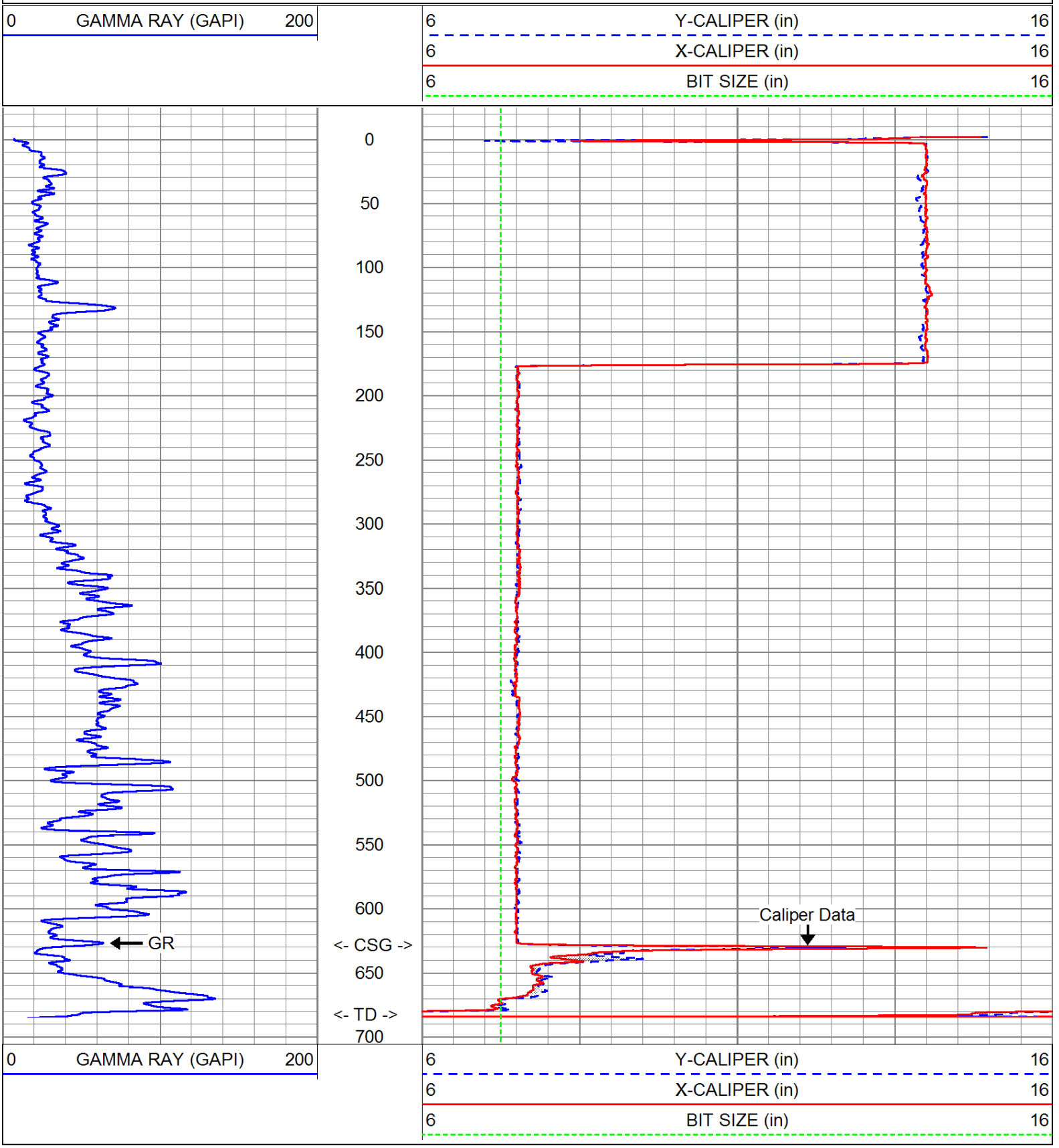
MAXIMUM Caliper Arm Extensions: 33"

MV Geophysical

MAIN PASS

Geophysical

Database File: wlbell-1.db
Dataset Pathname: run2/MAIN
Presentation Format: xy61621
Dataset Creation: Tue Mar 12 11:37:29 2013
Charted by: Depth in Feet scaled 1:1200

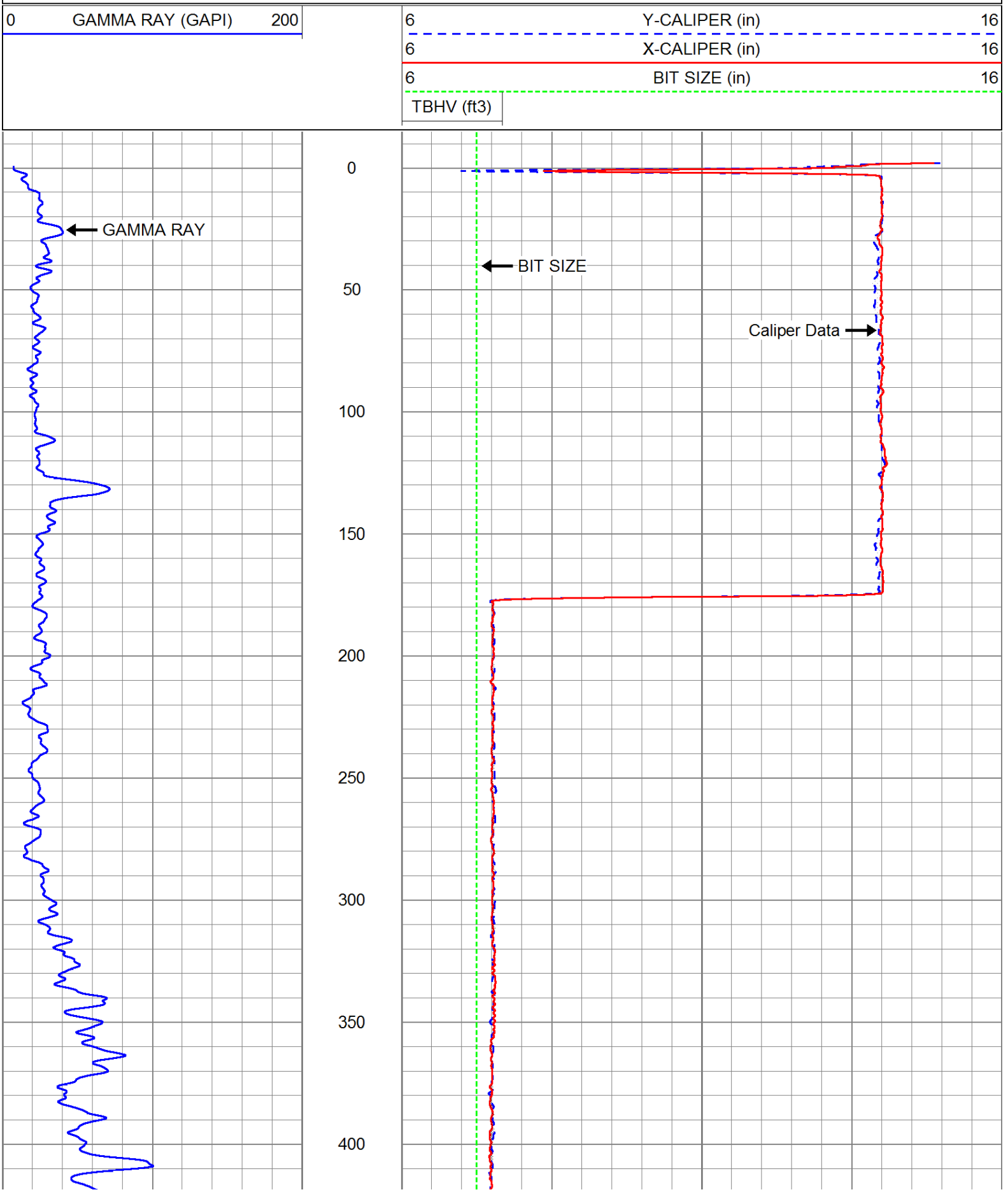


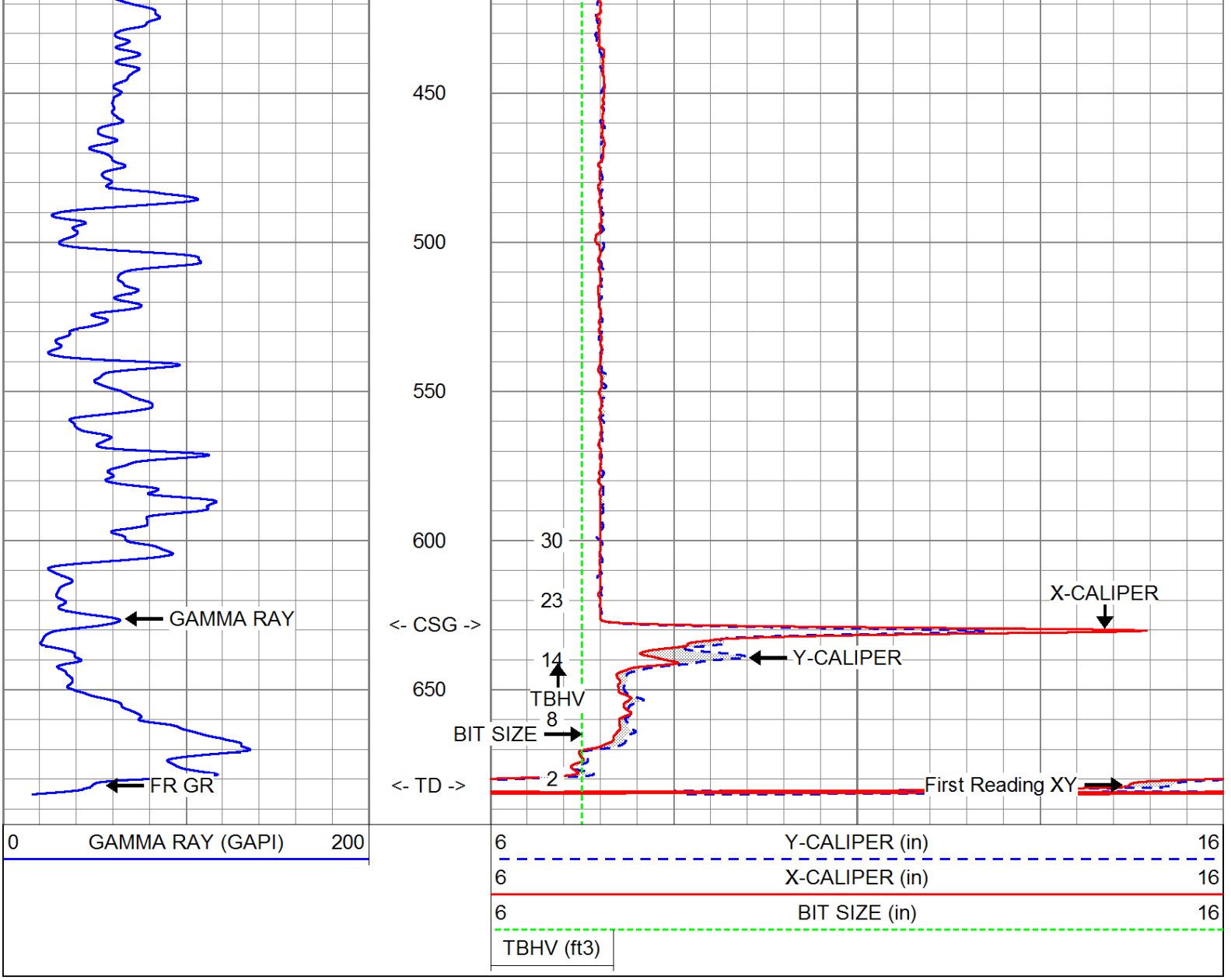
MV

MAIN PASS

Geophysical

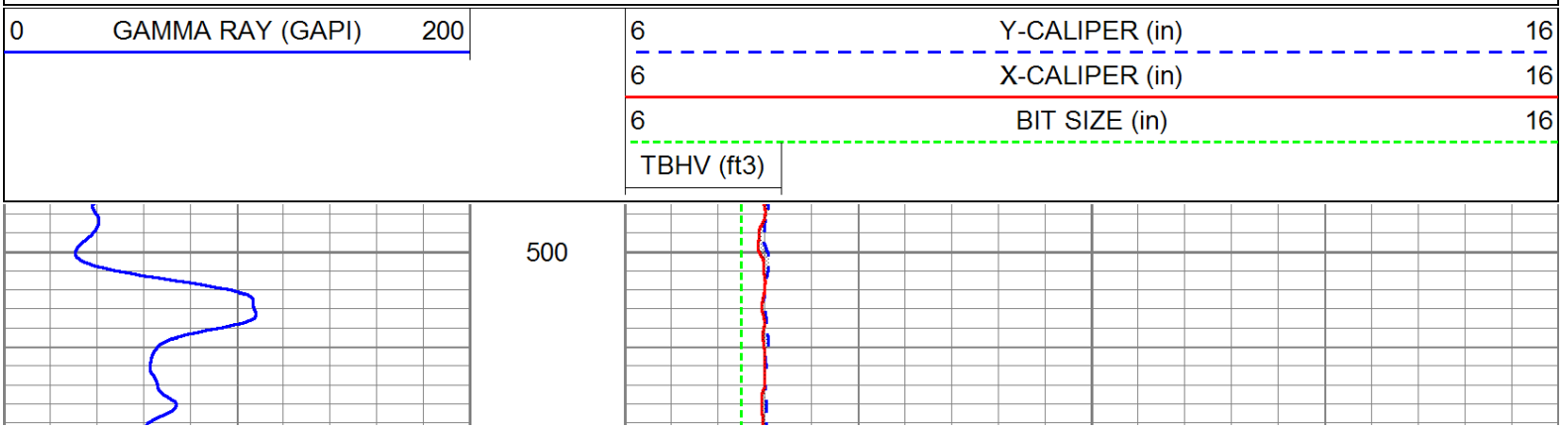
Database File:	wlbell-1.db
Dataset Pathname:	run2/MAIN
Presentation Format:	xy61625
Dataset Creation:	Tue Mar 12 11:37:29 2013
Charted by:	Depth in Feet scaled 1:600

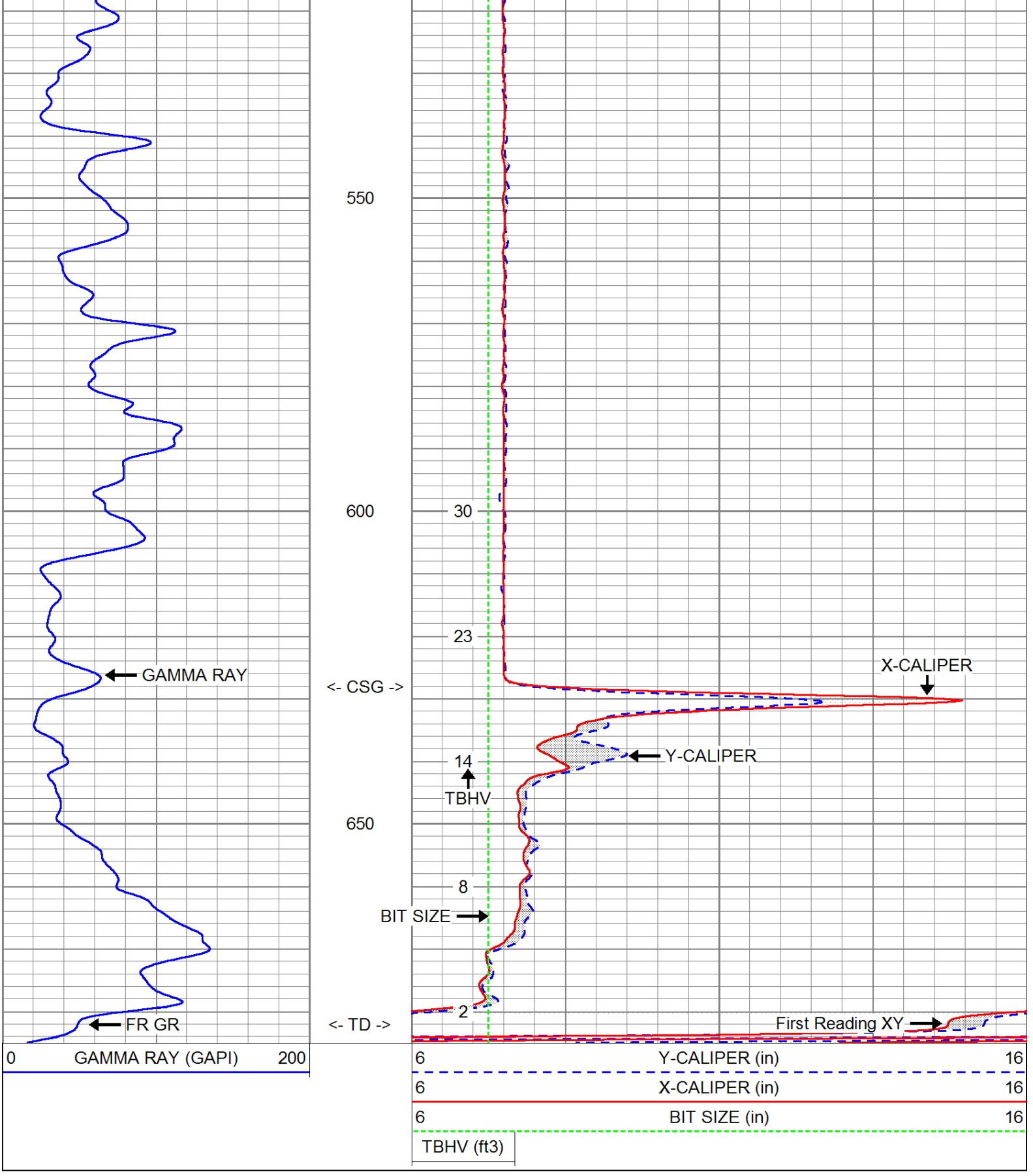




MAIN PASS

Database File: wlbell-1.db
Dataset Pathname: run2/MAIN
Presentation Format: xy61625
Dataset Creation: Tue Mar 12 11:37:29 2013
Charted by: Depth in Feet scaled 1:240



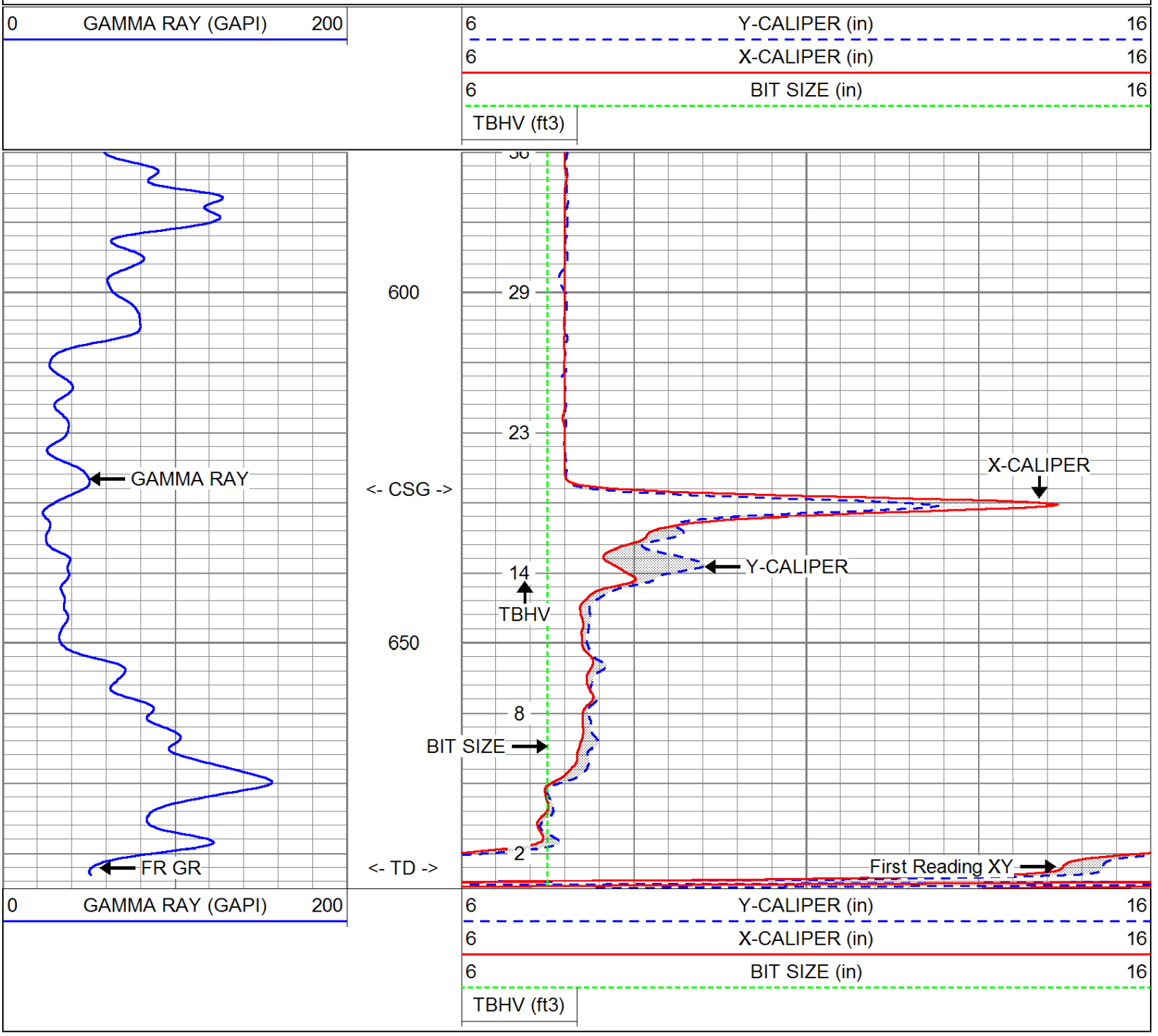


MV Geophysical

REPEAT SECTION

Database File: wlbell-1.db
Dataset Pathname: run2/REPEAT

Presentation Format: xy61625
Dataset Creation: Tue Mar 12 11:45:57 2013
Charted by: Depth in Feet scaled 1:240



Calibration Report

Database File: wlbell-1.db
Dataset Pathname: run2/pass14
Dataset Creation: Tue Mar 12 11:04:41 2013 by Log VER_5.3

XY Caliper Calibration Report

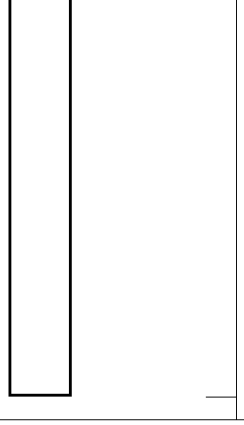
Serial Number:	01S		
Tool Model:	XYCS		
Performed:	Tue Mar 12 10:05:27 2013		
Small Ring:	7.5	in	
Large Ring:	31.25	in	
	X Caliper	Y Caliper	
Reading with Small Ring:	598.5	594.3	cps

Reading with Large Ring:	1098	1008.5	cps
Gain:	0.0475475	0.0573394	
Offset:	-20.9572	-26.5768	

Gamma Ray Calibration Report

Serial Number:	01	
Tool Model:	GROH	
Performed:	Tue Mar 12 09:49:19 2013	
Calibrator Value:	120	GAPI
Background Reading:	15.364	cps
Calibrator Reading:	136.442	cps
Sensitivity:	0.991097	GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			GR-GROH (01)	2.75	3.50	40.00
GR	5.00					
			XYC-XYCS (01S)	6.60	3.50	110.00



XCAL	0.50
YCAL	0.50

Dataset:	wlbell-1.db: field/well/run2/pass14
Total Length:	9.35 ft
Total Weight:	150.00 lb
O.D.	3.50 in

MV Geophysical

Company	Wells & Water Systems, Inc.		
Well	UFA-3		
Field	LaBelle		
County	Hendry		
State	Florida	Country	USA

MV Geophysical

FLOWMETER LOG

Company Wells & Water Systems, Inc.
Well UFA-3
Field LaBelle
County Hendry
State/Prv Florida

Company Wells & Water Systems, Inc.
Well UFA-3
Field LaBelle
County Hendry State/Prv Florida
Location City of LaBelle
N 871670.19 E 503488.04
Murray Consultants, Inc.

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

Other Services: XY/GR, FCT,FLO, DHTV

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

Date	12-MAR-2013							
Run Number	TWO-b							
Depth Driller	741'							
Depth Logger	682'							
Bottom Logged Interval	682'							
Top Log Interval	550'							
Open Hole Size	7.25"							
Type Fluid	H2O							
Density / Viscosity	NA/NA							
Max. Recorded Temp.	NA							
Estimated Cement Top	SURFACE							
Time Well Ready	08:00 3/12/2013							
Time Logger on Bottom	09:00 3/12/2013							
Equipment Number	MVGS-1							
Location	Ft. Myers							
Recorded By	S.Miller/C.Miller							
Witnessed By	G.MurrayDoyle(MCI)							

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	205'	671'				
TWO	7.25"	631'	741'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	16" PVC	14" ID	SURFACE	205'
Prot. String	8" PVC	7.5" ID	180'	631'
Production String				628' Logger
Liner			3x/0x/pdf/las	wlbell-1.db
Invoice No.	2013039	P.O. #:	Job No.:	* FINAL PRINT *

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Comments

A DYNAMIC down pass was made at 50 fpm.

6 stations performed.

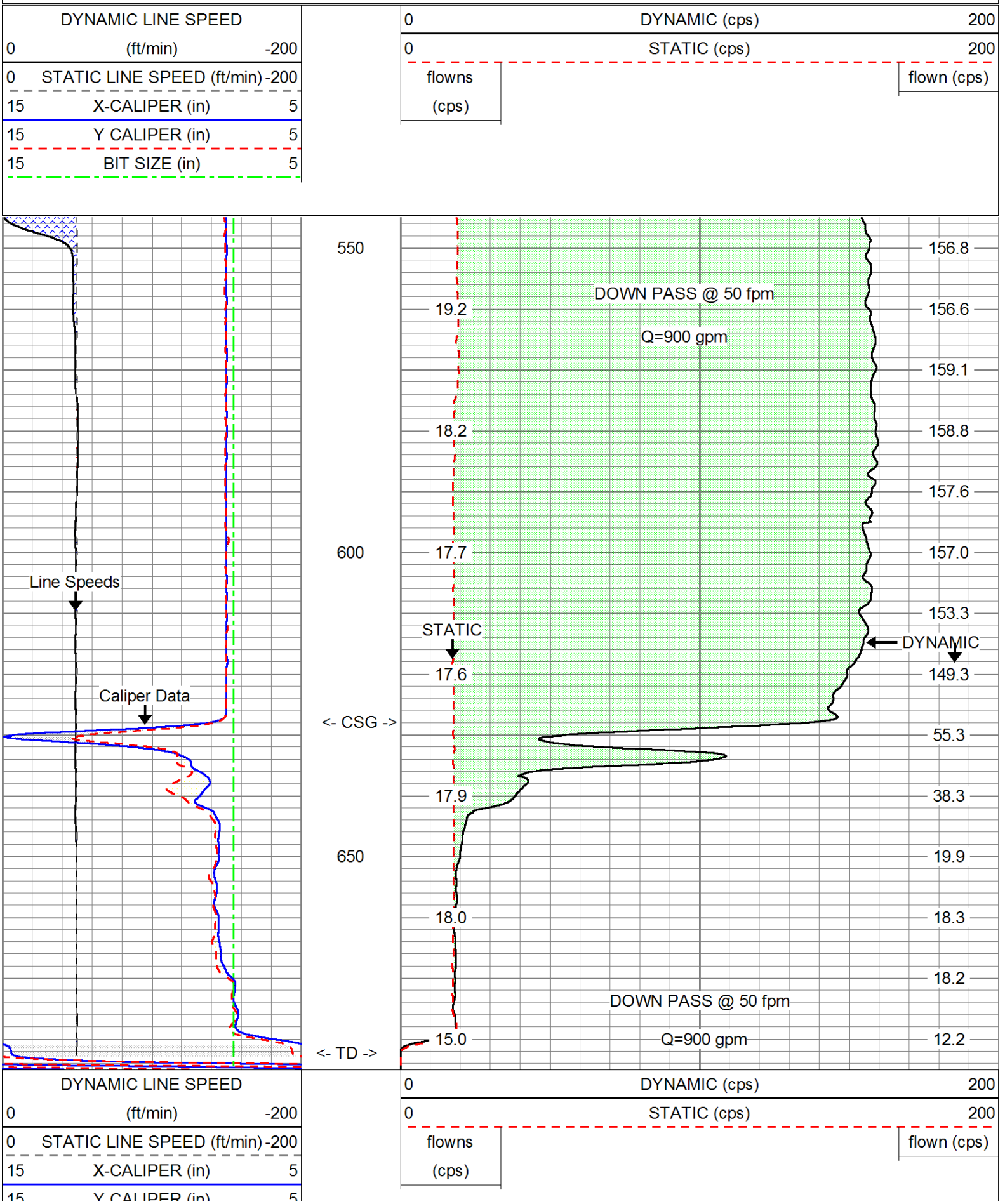
Q =900 gpm

MV Geophysical

Dynamic Down @ 50 fpm

Geophysical

Database File: wlbell-1.db
Dataset Pathname: run2/sd50
Presentation Format: q-200p3
Dataset Creation: Tue Mar 12 11:16:39 2013
Charted by: Depth in Feet scaled 1:240



15	BIT SIZE (in)	5

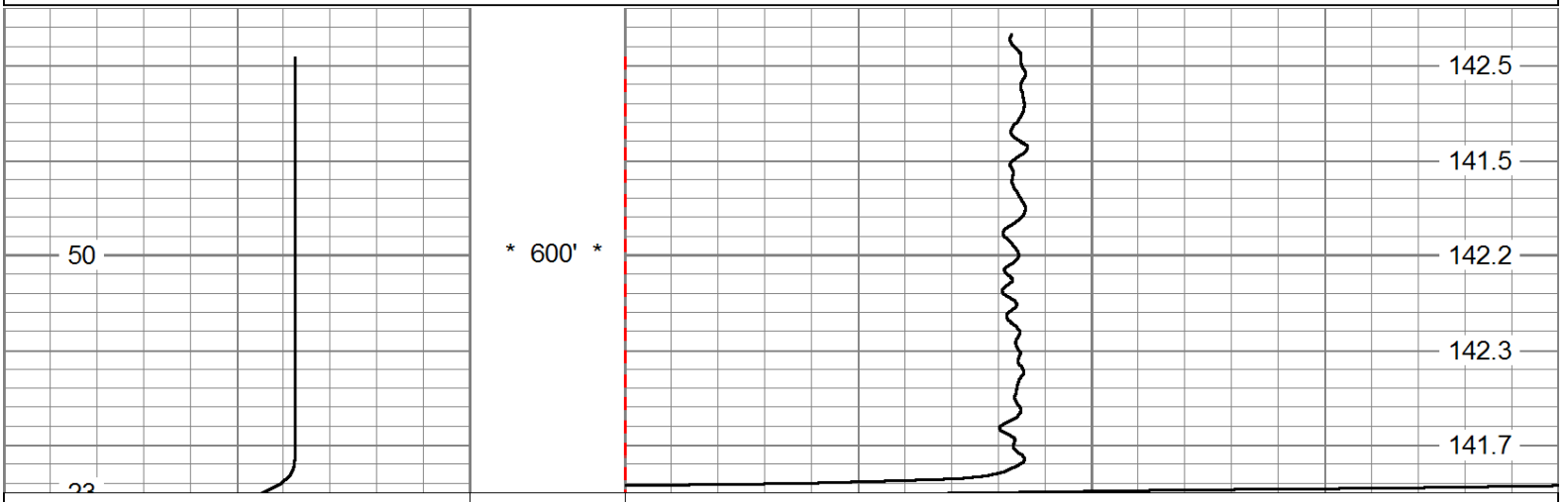
MV Geophysical

Station #6: 600'

Database File: wlbell-1.db
Dataset Pathname: run2/pass12
Presentation Format: flow
Dataset Creation: Tue Mar 12 10:36:36 2013 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240

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

0	CCW Spin (cps)	100
0	CW Spin (cps)	100
flown (cps)		



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

0	CCW Spin (cps)	100
0	CW Spin (cps)	100
flown (cps)		

MV Geophysical

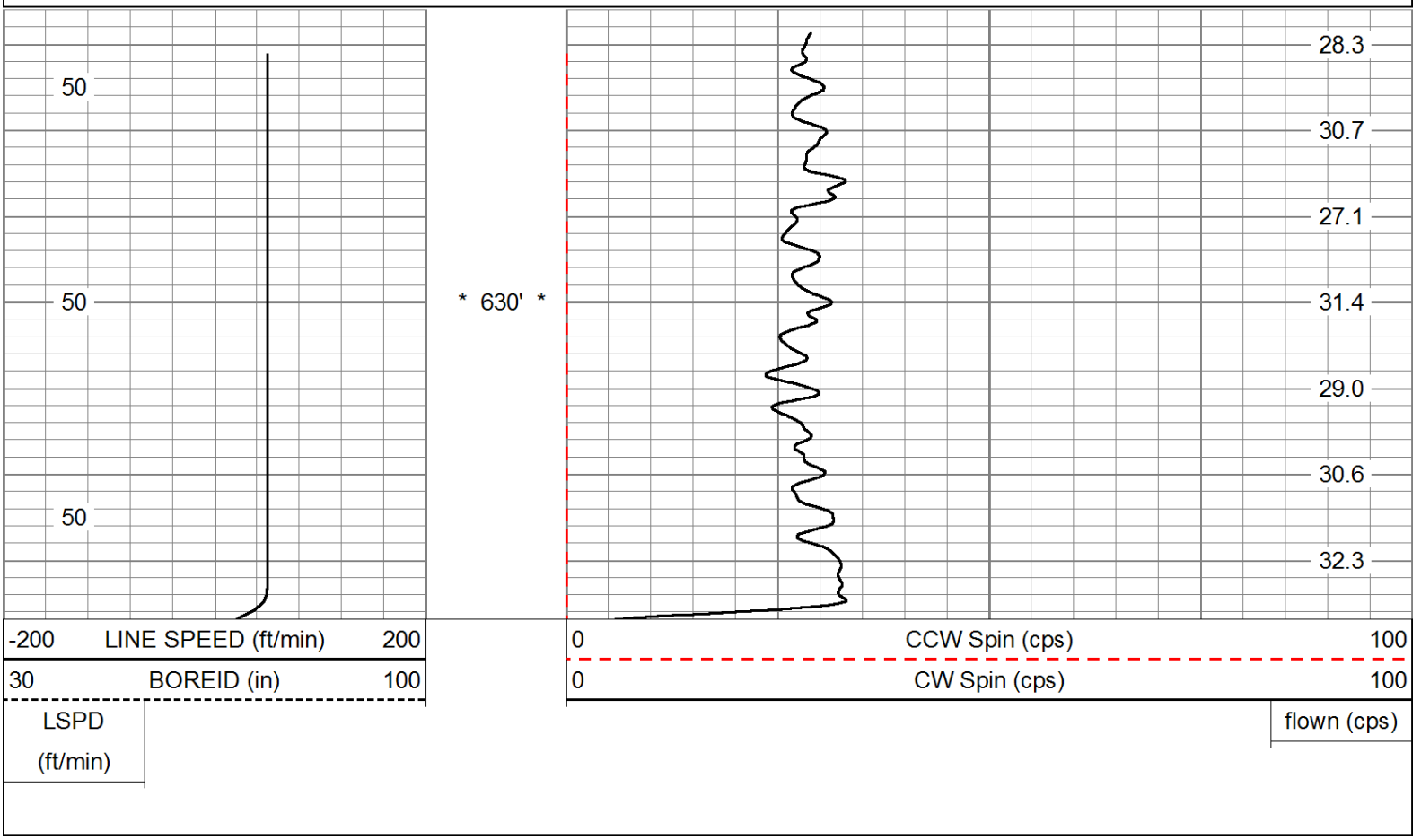
Station #5: 630'

Database File: wlbell-1.db
Dataset Pathname: run2/pass11
Presentation Format: flow
Dataset Creation: Tue Mar 12 10:34:22 2013 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240

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

0	CCW Spin (cps)	100
0	CW Spin (cps)	100
flown (cps)		

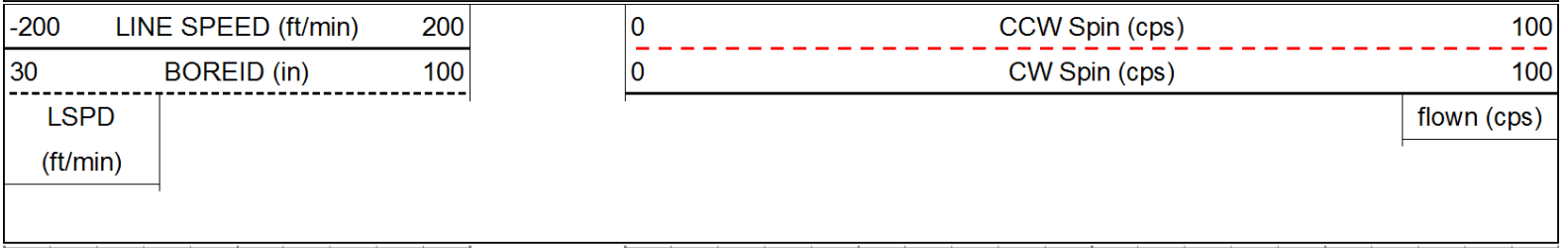
(ft/min)

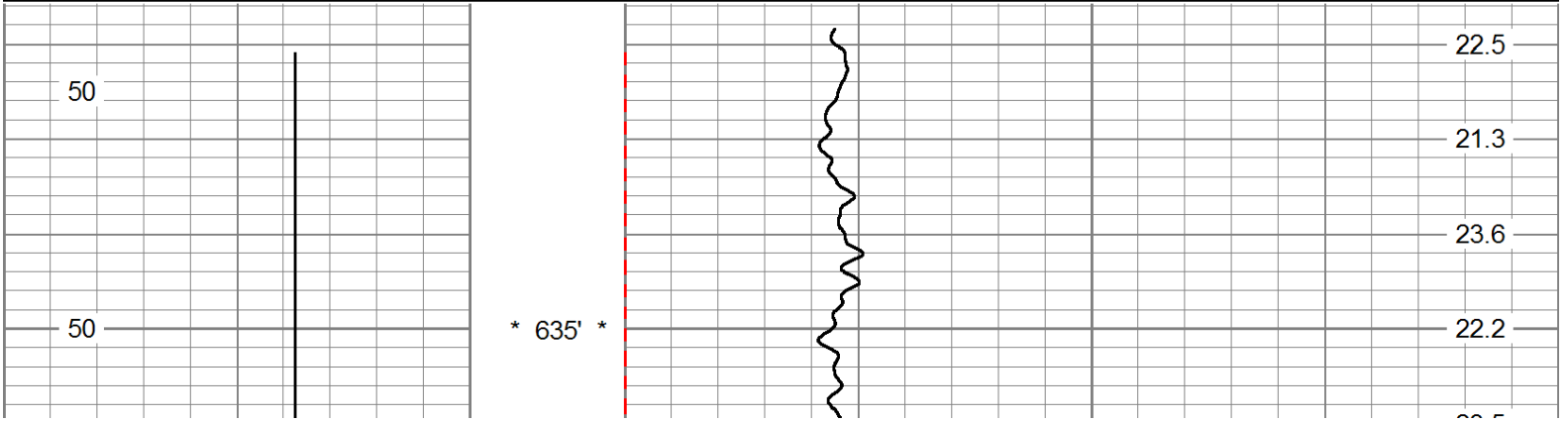


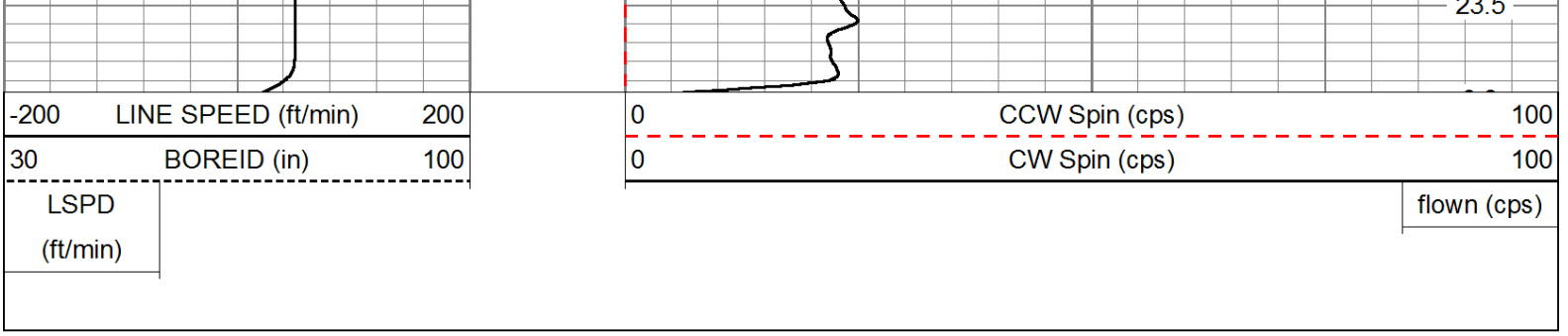
MV Geophysical

Station #4: 635'

Database File: wlbell-1.db
Dataset Pathname: run2/pass10
Presentation Format: flow
Dataset Creation: Tue Mar 12 10:32:43 2013 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240

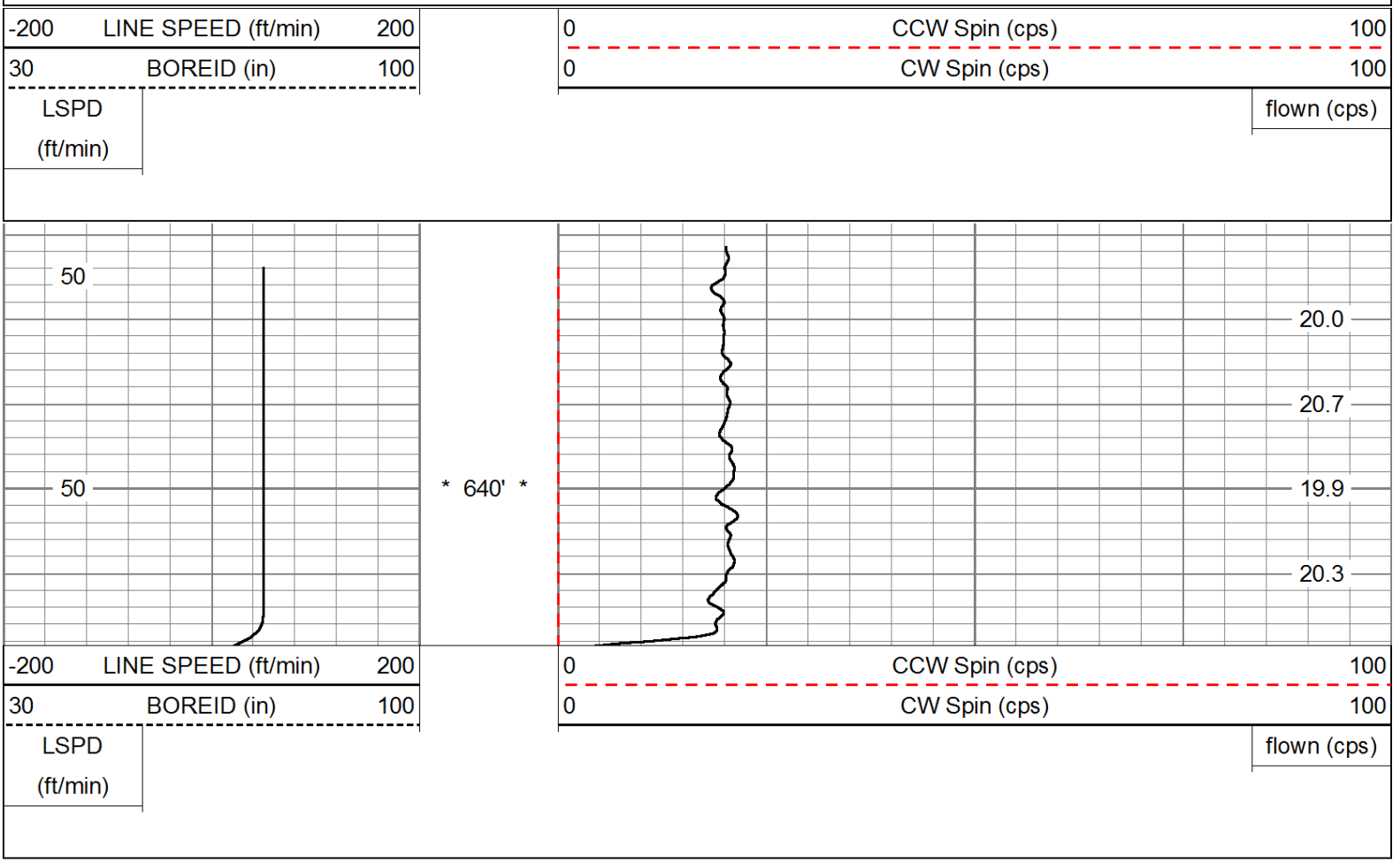






Station #3: 640'

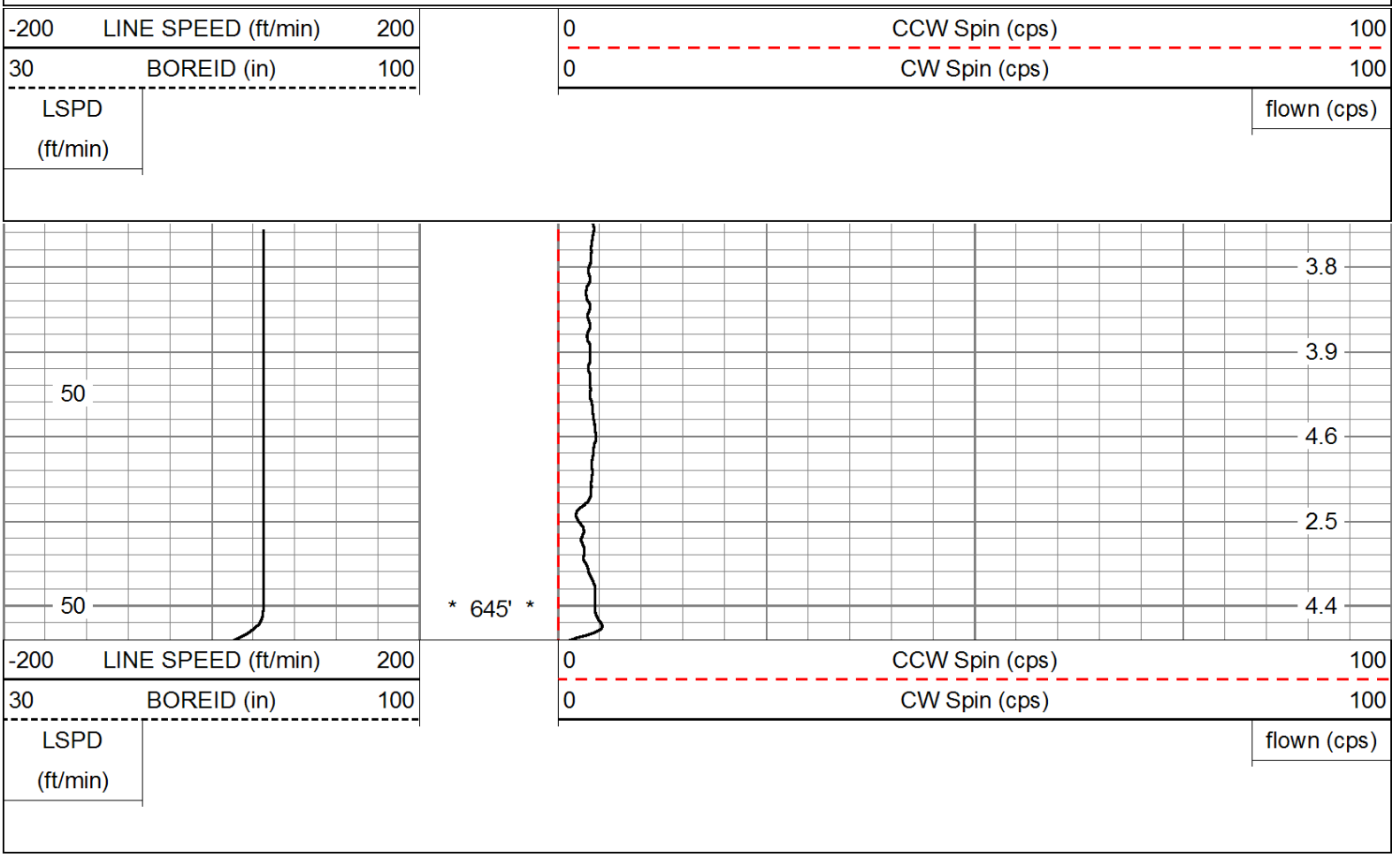
Database File: wlbell-1.db
Dataset Pathname: run2/pass9
Presentation Format: flow
Dataset Creation: Tue Mar 12 10:30:44 2013 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240



Station #2: 645'

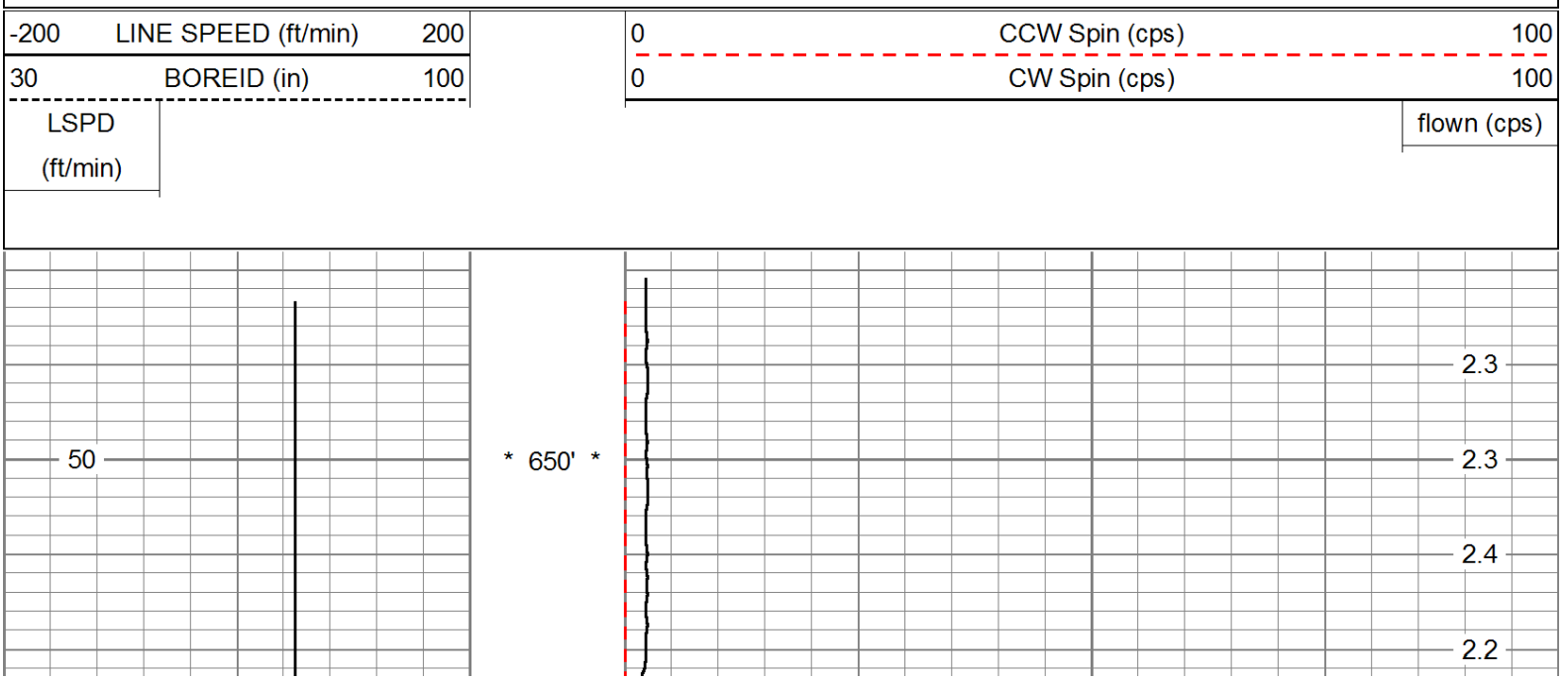
Database File: wlbell-1.db
Dataset Pathname: run2/pass8
Presentation Format: flow
Dataset Creation: Tue Mar 12 10:29:01 2013 by Log VER_5.3

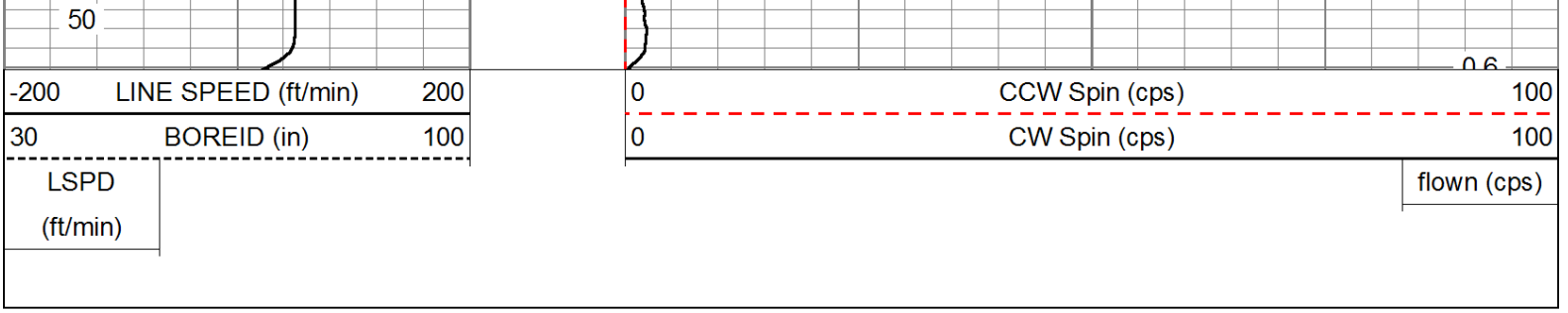
Charted by: Depth in Feet scaled 1:240



Station #1: 650'

Database File: wlbell-1.db
Dataset Pathname: run2/pass7
Presentation Format: flow
Dataset Creation: Tue Mar 12 10:27:29 2013 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240

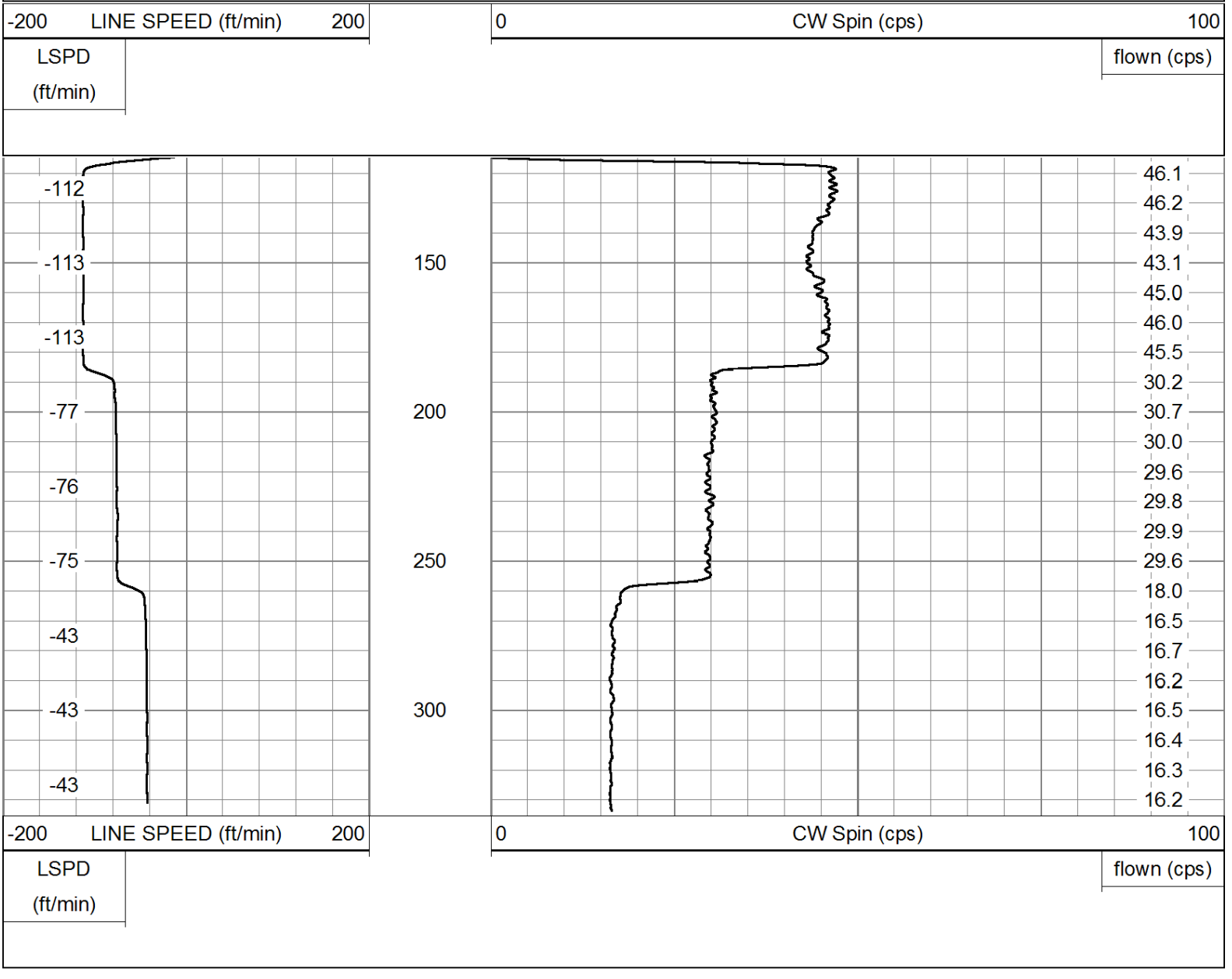




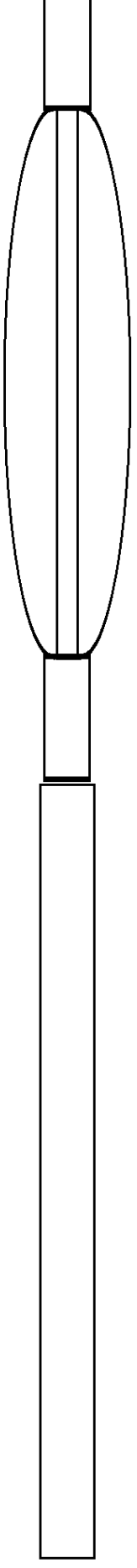
MV Geophysical

Q Calibration Down

Database File: wlbell-1.db
Dataset Pathname: run2/qcali
Presentation Format: flow
Dataset Creation: Tue Mar 12 10:14:19 2013
Charted by: Depth in Feet scaled 1:600



Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)



		CENT-5FOOTSB (5FTSB)	5.00	1.69	50.00
		FLOW-LARGE (65)	4.80	3.75	35.00
FLOWP	0.00				
FLOWN	0.00				

Dataset:	wlbell-1.db: field/well/run2/pass12
Total Length:	9.80 ft
Total Weight:	85.00 lb
O.D.	3.75 in

MV Geophysical

Company	Wells & Water Systems, Inc.		
Well	UFA-3		
Field	LaBelle		
County	Hendry		
State	Florida	Country	USA

MV Geophysical

FLOWMETER INTERPRETATION

Company	Wells & Water Systems, Inc.
Well	UFA-3
Field	LaBelle
County	Hendry
State	Florida Country USA

Company Wells & Water Systems, Inc.
Well UFA-3
Field LaBelle
County Hendry
State Florida Country USA

Location: API # :
City of LaBelle
N 871670.19 E 503488.04
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	12-MAR-2013							
Run Number	TWO-b							
Depth Driller	741'							
Depth Logger	682'							
Bottom Logged Interval	682'							
Top Log Interval	550'							
Open Hole Size	7.25"							
Type Fluid	H2O							
Density / Viscosity	NA/NA							
Max. Recorded Temp.	NA							
Estimated Cement Top	SURFACE							
Time Well Ready	08:00 3/12/2013							
Time Logger on Bottom	09:00 3/12/2013							
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	7.875"	205'	671'				
TWO	7.25"	631'	741'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	16" PVC	14" ID	SURFACE	205'
Prot. String	8" PVC	7.5" ID	180'	631'
Production String				
Liner				

Invoice No.	2013039	3x/pdf/las	wlbell-1.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.

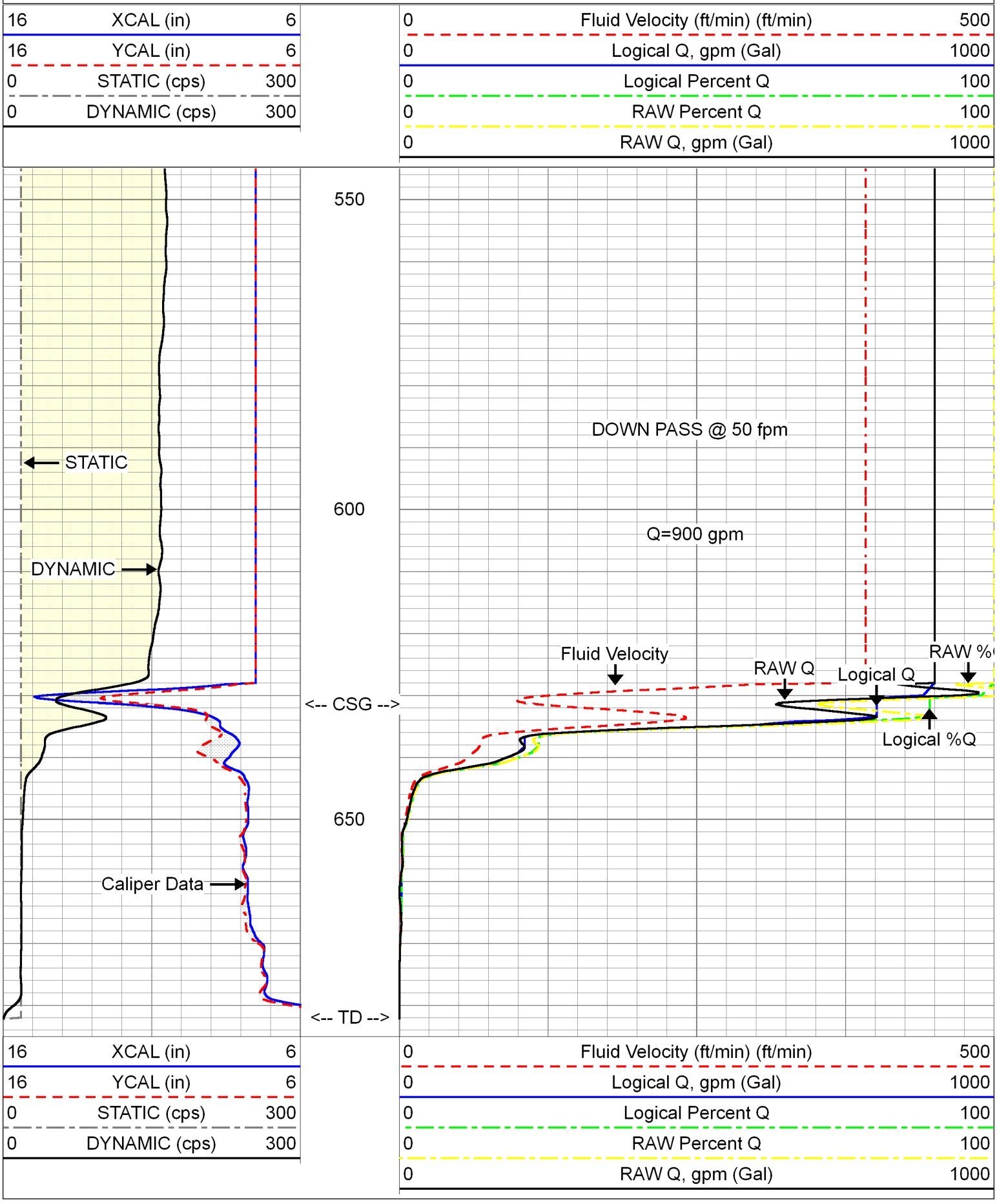
6 stations performed.

Q=900 gpm.

MV Geophysical

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

Database File	wlbell-2.db
Dataset Pathname	run2/lrq50b
Presentation Format	flointl3
Dataset Creation	Fri May 10 12:18:55 2013
Charted by	Depth in Feet scaled 1:240



MV Geophysical

Company	Wells & Water Systems, Inc.		
Well	UFA-3		
Field	LaBelle		
County	Hendry		
State	Florida	Country	USA

APPENDIX C

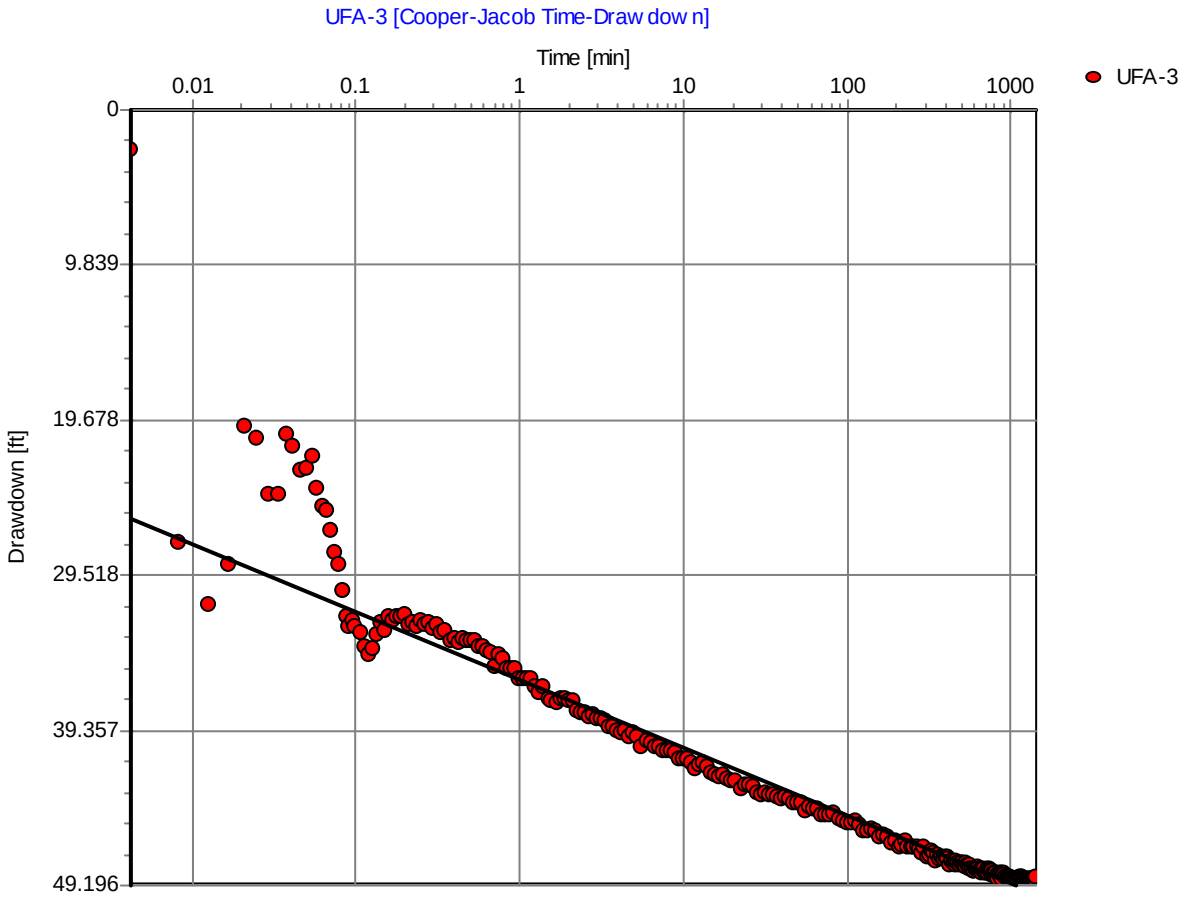
Murray Consultants Inc
769 Skyview Dr
Hayesville, NC 28904
828-389-2476

Pumping Test Analysis Report

Project: UFA-3

Number: 12-2372

Client: City of LaBelle



Pumping Test: **UFA-3**

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

Analysis Results:	Transmissivity:	1.27E+4 [ft²/d]	Conductivity:	4.25E+2 [ft/d]

Test parameters:	Pumping Well:	UFA-3	Aquifer Thickness:	30 [ft]
	Casing radius:	0.33 [ft]	Confined Aquifer	
	Screen length:	30 [ft]		
	Boring radius:	0.33 [ft]		
	Discharge Rate:	1560 [U.S. gal/min]		

Comments:

Evaluated by: G Doyle

Evaluation Date: 4/12/2013

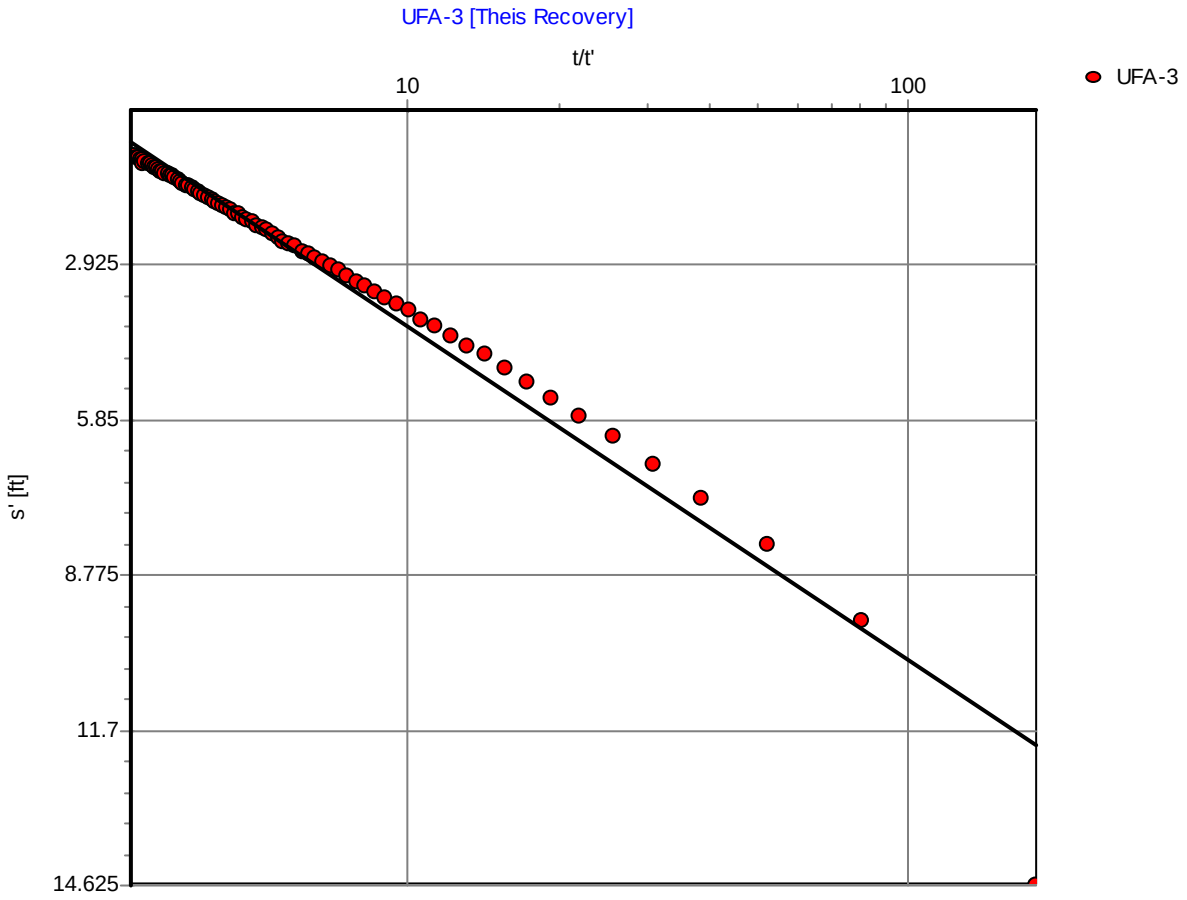
Murray Consultants Inc
769 Skyview Dr
Hayesville, NC 28904
828-389-2476

Pumping Test Analysis Report

Project: UFA-3

Number: 12-2372

Client: City of LaBelle



Pumping Test: **UFA-3**

Analysis Method: **Theis Recovery**

Analysis Results:	Transmissivity:	8.75E+3 [ft²/d]	Conductivity:	2.92E+2 [ft/d]

Test parameters:	Pumping Well:	UFA-3	Aquifer Thickness:	30 [ft]
	Casing radius:	0.33 [ft]	Confined Aquifer	
	Screen length:	30 [ft]		
	Boring radius:	0.33 [ft]		
	Discharge Rate:	1560 [U.S. gal/min]		
	Pumping Time	1430 [min]		

Comments:

Evaluated by: G Doyle

Evaluation Date: 4/12/2013

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

Pumping Test Data Report

Project: UFA-3

Number: 12-2372

Client: City of LaBelle

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-3**
Distance from PW:	0 [ft]	Pumping Well:	UFA-3
Depth to Static WL:	0 [ft]	Casing radius:	0.33 [ft]
Location:	RO Wellfield, LaBelle, FL	Boring radius:	0.33 [ft]
Recorded by:	G Doyle	Screen length:	30 [ft]
Date:	3/19/2013	Aquifer Thickness:	30 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
1	0.004	2.53	2.53
2	0.008	27.52	27.52
3	0.013	31.38	31.38
4	0.017	28.86	28.86
5	0.021	20.13	20.13
6	0.025	20.89	20.89
7	0.029	24.44	24.44
8	0.033	24.36	24.36
9	0.038	20.58	20.58
10	0.042	21.36	21.36
11	0.046	22.94	22.94
12	0.05	22.77	22.77
13	0.054	22.01	22.01
14	0.058	23.99	23.99
15	0.063	25.17	25.17
16	0.067	25.46	25.46
17	0.071	26.67	26.67
18	0.075	28.05	28.05
19	0.079	28.81	28.81
20	0.083	30.54	30.54
21	0.088	32.18	32.18
22	0.092	32.76	32.76
23	0.096	32.45	32.45
24	0.1	32.76	32.76
25	0.106	33.18	33.18
26	0.112	34.04	34.04
27	0.119	34.64	34.64
28	0.126	34.14	34.14
29	0.133	33.37	33.37
30	0.141	32.55	32.55
31	0.15	33.04	33.04

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

Pumping Test Data Report

Project: UFA-3

Number: 12-2372

Client: City of LaBelle

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-3**
Distance from PW:	0 [ft]	Pumping Well:	UFA-3
Depth to Static WL:	0 [ft]	Casing radius:	0.33 [ft]
Location:	RO Wellfield, LaBelle, FL	Boring radius:	0.33 [ft]
Recorded by:	G Doyle	Screen length:	30 [ft]
Date:	3/19/2013	Aquifer Thickness:	30 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
32	0.158	32.22	32.22
33	0.168	32.48	32.48
34	0.178	32.15	32.15
35	0.188	32.15	32.15
36	0.199	32.08	32.08
37	0.211	32.71	32.71
38	0.224	32.53	32.53
39	0.237	32.77	32.77
40	0.251	32.44	32.44
41	0.266	32.71	32.71
42	0.282	32.56	32.56
43	0.298	32.89	32.89
44	0.316	32.73	32.73
45	0.335	33.22	33.22
46	0.355	33.09	33.09
47	0.376	33.71	33.71
48	0.398	33.59	33.59
49	0.422	33.76	33.76
50	0.447	33.55	33.55
51	0.473	33.74	33.74
52	0.501	33.71	33.71
53	0.531	33.68	33.68
54	0.562	34.10	34.10
55	0.596	34.06	34.06
56	0.631	34.28	34.28
57	0.668	34.44	34.44
58	0.708	35.38	35.38
59	0.75	34.63	34.63
60	0.794	34.78	34.78
61	0.841	35.48	35.48
62	0.891	35.51	35.51

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

Pumping Test Data Report

Project: UFA-3

Number: 12-2372

Client: City of LaBelle

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-3**
Distance from PW:	0 [ft]	Pumping Well:	UFA-3
Depth to Static WL:	0 [ft]	Casing radius:	0.33 [ft]
Location:	RO Wellfield, LaBelle, FL	Boring radius:	0.33 [ft]
Recorded by:	G Doyle	Screen length:	30 [ft]
Date:	3/19/2013	Aquifer Thickness:	30 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
63	0.944	35.47	35.47
64	1	36.13	36.13
65	1.06	36.16	36.16
66	1.12	36.16	36.16
67	1.19	36.16	36.16
68	1.26	36.58	36.58
69	1.33	36.99	36.99
70	1.41	36.66	36.66
71	1.5	37.32	37.32
72	1.58	37.46	37.46
73	1.68	37.60	37.60
74	1.78	37.42	37.42
75	1.88	37.40	37.40
76	1.99	37.45	37.45
77	2.11	37.52	37.52
78	2.24	38.18	38.18
79	2.37	38.24	38.24
80	2.51	38.20	38.20
81	2.66	38.58	38.58
82	2.82	38.34	38.34
83	2.98	38.59	38.59
84	3.16	38.71	38.71
85	3.35	38.72	38.72
86	3.55	39.14	39.14
87	3.76	39.20	39.20
88	3.98	39.47	39.47
89	4.22	39.48	39.48
90	4.47	39.45	39.45
91	4.73	39.75	39.75
92	5.01	39.49	39.49
93	5.31	39.78	39.78

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

Pumping Test Data Report

Project: UFA-3

Number: 12-2372

Client: City of LaBelle

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-3**
Distance from PW:	0 [ft]	Pumping Well:	UFA-3
Depth to Static WL:	0 [ft]	Casing radius:	0.33 [ft]
Location:	RO Wellfield, LaBelle, FL	Boring radius:	0.33 [ft]
Recorded by:	G Doyle	Screen length:	30 [ft]
Date:	3/19/2013	Aquifer Thickness:	30 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
94	5.62	40.45	40.45
95	5.96	40.07	40.07
96	6.31	40.17	40.17
97	6.68	40.43	40.43
98	7.08	40.46	40.46
99	7.5	40.70	40.70
100	7.94	40.70	40.70
101	8.41	40.70	40.70
102	8.91	40.82	40.82
103	9.44	41.20	41.20
104	10	41.13	41.13
105	10.6	41.15	41.15
106	11.2	41.41	41.41
107	11.9	41.79	41.79
108	12.6	41.60	41.60
109	13.3	41.48	41.48
110	14.1	41.76	41.76
111	15	42.11	42.11
112	15.8	42.21	42.21
113	16.8	42.32	42.32
114	17.8	42.22	42.22
115	18.8	42.42	42.42
116	19.9	42.54	42.54
117	21.1	42.55	42.55
118	22.4	43.04	43.04
119	23.7	42.90	42.90
120	25.1	42.78	42.78
121	26.6	42.91	42.91
122	28.2	43.28	43.28
123	29.8	43.42	43.42
124	31.6	43.29	43.29

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Pumping Test Data Report

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Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-3**
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Depth to Static WL:	0 [ft]	Casing radius:	0.33 [ft]
Location:	RO Wellfield, LaBelle, FL	Boring radius:	0.33 [ft]
Recorded by:	G Doyle	Screen length:	30 [ft]
Date:	3/19/2013	Aquifer Thickness:	30 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
125	33.5	43.43	43.43
126	35.5	43.50	43.50
127	37.6	43.65	43.65
128	39.8	43.78	43.78
129	42.2	43.58	43.58
130	44.7	43.77	43.77
131	47.3	44.04	44.04
132	50.1	44.03	44.03
133	53.1	44.05	44.05
134	56.2	44.55	44.55
135	59.6	44.25	44.25
136	63.1	44.42	44.42
137	66.8	44.33	44.33
138	70.8	44.78	44.78
139	75	44.72	44.72
140	79.4	44.77	44.77
141	84.1	44.67	44.67
142	89.1	44.97	44.97
143	94.4	45.17	45.17
144	100	45.27	45.27
145	106	45.21	45.21
146	112	45.11	45.11
147	119	45.40	45.40
148	126	45.76	45.76
149	133	45.74	45.74
150	141	45.69	45.69
151	150	45.80	45.80
152	158	46.08	46.08
153	168	46.01	46.01
154	178	46.09	46.09
155	188	46.51	46.51

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Pumping Test Data Report

Project: UFA-3

Number: 12-2372

Client: City of LaBelle

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-3**
Distance from PW:	0 [ft]	Pumping Well:	UFA-3
Depth to Static WL:	0 [ft]	Casing radius:	0.33 [ft]
Location:	RO Wellfield, LaBelle, FL	Boring radius:	0.33 [ft]
Recorded by:	G Doyle	Screen length:	30 [ft]
Date:	3/19/2013	Aquifer Thickness:	30 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
156	198	46.34	46.34
157	208	46.74	46.74
158	218	46.60	46.60
159	228	46.39	46.39
160	238	46.81	46.81
161	248	46.72	46.72
162	258	46.77	46.77
163	268	46.72	46.72
164	278	46.94	46.94
165	288	47.17	47.17
166	298	46.81	46.81
167	308	47.40	47.40
168	318	47.28	47.28
169	328	47.07	47.07
170	338	47.12	47.12
171	348	47.64	47.64
172	358	47.33	47.33
173	368	47.60	47.60
174	378	47.45	47.45
175	388	47.53	47.53
176	398	47.40	47.40
177	408	47.46	47.46
178	418	47.52	47.52
179	428	47.90	47.90
180	438	47.67	47.67
181	448	47.80	47.80
182	458	47.88	47.88
183	468	47.67	47.67
184	478	47.83	47.83
185	488	47.87	47.87
186	498	47.79	47.79

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Pumping Test Data Report

Project: UFA-3

Number: 12-2372

Client: City of LaBelle

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-3**
Distance from PW:	0 [ft]	Pumping Well:	UFA-3
Depth to Static WL:	0 [ft]	Casing radius:	0.33 [ft]
Location:	RO Wellfield, LaBelle, FL	Boring radius:	0.33 [ft]
Recorded by:	G Doyle	Screen length:	30 [ft]
Date:	3/19/2013	Aquifer Thickness:	30 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
187	508	47.83	47.83
188	518	47.90	47.90
189	528	47.83	47.83
190	538	48.01	48.01
191	548	47.88	47.88
192	558	47.96	47.96
193	568	48.13	48.13
194	578	48.14	48.14
195	588	48.28	48.28
196	598	48.29	48.29
197	608	48.14	48.14
198	618	48.18	48.18
199	628	48.11	48.11
200	638	48.24	48.24
201	648	48.25	48.25
202	658	48.38	48.38
203	668	48.21	48.21
204	678	48.33	48.33
205	688	48.20	48.20
206	698	48.37	48.37
207	708	48.38	48.38
208	718	48.24	48.24
209	728	48.48	48.48
210	738	48.15	48.15
211	748	48.30	48.30
212	758	48.51	48.51
213	768	48.33	48.33
214	778	48.32	48.32
215	788	48.51	48.51
216	798	48.41	48.41
217	808	48.41	48.41

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Pumping Test Data Report

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Number: 12-2372

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Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-3**
Distance from PW:	0 [ft]	Pumping Well:	UFA-3
Depth to Static WL:	0 [ft]	Casing radius:	0.33 [ft]
Location:	RO Wellfield, LaBelle, FL	Boring radius:	0.33 [ft]
Recorded by:	G Doyle	Screen length:	30 [ft]
Date:	3/19/2013	Aquifer Thickness:	30 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
218	818	48.47	48.47
219	828	48.52	48.52
220	838	48.81	48.81
221	848	48.57	48.57
222	858	48.46	48.46
223	868	48.52	48.52
224	878	48.49	48.49
225	888	48.80	48.80
226	898	48.57	48.57
227	908	48.46	48.46
228	918	48.55	48.55
229	928	48.74	48.74
230	938	48.64	48.64
231	948	48.63	48.63
232	958	48.77	48.77
233	968	48.69	48.69
234	978	48.72	48.72
235	988	48.72	48.72
236	998	48.81	48.81
237	1008	48.75	48.75
238	1018	48.89	48.89
239	1028	48.78	48.78
240	1038	48.82	48.82
241	1048	48.88	48.88
242	1058	48.83	48.83
243	1068	48.94	48.94
244	1078	48.81	48.81
245	1088	48.90	48.90
246	1098	48.78	48.78
247	1108	49.18	49.18
248	1118	48.98	48.98

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Client: City of LaBelle

Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-3**
Distance from PW:	0 [ft]	Pumping Well:	UFA-3
Depth to Static WL:	0 [ft]	Casing radius:	0.33 [ft]
Location:	RO Wellfield, LaBelle, FL	Boring radius:	0.33 [ft]
Recorded by:	G Doyle	Screen length:	30 [ft]
Date:	3/19/2013	Aquifer Thickness:	30 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
249	1128	48.70	48.70
250	1138	48.82	48.82
251	1148	49.20	49.20
252	1158	48.90	48.90
253	1168	48.63	48.63
254	1178	48.69	48.69
255	1188	48.86	48.86
256	1198	48.90	48.90
257	1208	48.86	48.86
258	1218	48.90	48.90
259	1228	48.95	48.95
260	1238	48.95	48.95
261	1248	48.79	48.79
262	1258	48.93	48.93
263	1268	48.95	48.95
264	1278	48.80	48.80
265	1288	48.94	48.94
266	1298	48.90	48.90
267	1308	49.11	49.11
268	1318	48.94	48.94
269	1328	48.77	48.77
270	1338	49.09	49.09
271	1348	48.86	48.86
272	1358	48.93	48.93
273	1368	48.92	48.92
274	1378	48.85	48.85
275	1388	49.11	49.11
276	1398	49.13	49.13
277	1408	48.92	48.92
278	1418	48.90	48.90
279	1428	48.74	48.74

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Pumping Test Data Report

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Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-3**
Distance from PW:	0 [ft]	Pumping Well:	UFA-3
Depth to Static WL:	0 [ft]	Casing radius:	0.33 [ft]
Location:	RO Wellfield, LaBelle, FL	Boring radius:	0.33 [ft]
Recorded by:	G Doyle	Screen length:	30 [ft]
Date:	3/19/2013	Aquifer Thickness:	30 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
280	1438	14.62	14.62
281	1448	9.64	9.64
282	1458	8.21	8.21
283	1468	7.32	7.32
284	1478	6.68	6.68
285	1488	6.18	6.18
286	1498	5.78	5.78
287	1508	5.43	5.43
288	1518	5.12	5.12
289	1528	4.87	4.87
290	1538	4.63	4.63
291	1548	4.44	4.44
292	1558	4.27	4.27
293	1568	4.08	4.08
294	1578	3.96	3.96
295	1588	3.79	3.79
296	1598	3.67	3.67
297	1608	3.54	3.54
298	1618	3.45	3.45
299	1628	3.33	3.33
300	1638	3.24	3.24
301	1648	3.13	3.13
302	1658	3.03	3.03
303	1668	2.96	2.96
304	1678	2.89	2.89
305	1688	2.78	2.78
306	1698	2.73	2.73
307	1708	2.67	2.67
308	1718	2.59	2.59
309	1728	2.54	2.54
310	1738	2.48	2.48

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Data observed at:	**UFA-3**	**Pumping Test:**	**UFA-3**
Distance from PW:	0 [ft]	Pumping Well:	UFA-3
Depth to Static WL:	0 [ft]	Casing radius:	0.33 [ft]
Location:	RO Wellfield, LaBelle, FL	Boring radius:	0.33 [ft]
Recorded by:	G Doyle	Screen length:	30 [ft]
Date:	3/19/2013	Aquifer Thickness:	30 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
311	1748	2.41	2.41
312	1758	2.34	2.34
313	1768	2.27	2.27
314	1778	2.22	2.22
315	1788	2.18	2.18
316	1798	2.14	2.14
317	1808	2.08	2.08
318	1818	2.03	2.03
319	1828	1.98	1.98
320	1838	1.95	1.95
321	1848	1.90	1.90
322	1858	1.85	1.85
323	1868	1.81	1.81
324	1878	1.77	1.77
325	1888	1.73	1.73
326	1898	1.69	1.69
327	1908	1.66	1.66
328	1918	1.64	1.64
329	1928	1.60	1.60
330	1938	1.54	1.54
331	1948	1.51	1.51
332	1958	1.49	1.49
333	1968	1.44	1.44
334	1978	1.42	1.42
335	1988	1.39	1.39
336	1998	1.36	1.36
337	2008	1.32	1.32
338	2018	1.30	1.30
339	2028	1.26	1.26
340	2038	1.25	1.25
341	2048	1.22	1.22

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Distance from PW:	0 [ft]	Pumping Well:	UFA-3
Depth to Static WL:	0 [ft]	Casing radius:	0.33 [ft]
Location:	RO Wellfield, LaBelle, FL	Boring radius:	0.33 [ft]
Recorded by:	G Doyle	Screen length:	30 [ft]
Date:	3/19/2013	Aquifer Thickness:	30 [ft]

	Time [min]	Depth to WL [ft]	Drawdown [ft]
342	2058	1.20	1.20
343	2068	1.17	1.17
344	2078	1.16	1.16
345	2088	1.12	1.12
346	2098	1.10	1.10
347	2108	1.08	1.08
348	2118	1.05	1.05
349	2128	1.03	1.03
350	2138	1.01	1.01
351	2148	0.99	0.99
352	2158	1.00	1.00
353	2168	0.95	0.95
354	2178	0.94	0.94
355	2188	0.92	0.92
356	2198	0.89	0.89
357	2208	0.89	0.89
358	2218	0.85	0.85
359	2228	0.85	0.85

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	85.3		200.7	0.03	03/25/2013	15:16	E84167
	IRON, DISSOLVED		MG/L	0.029	U	200.7	0.029	03/25/2013	15:11	E84167
	MAGNESIUM		MG/L	83.2		200.7	0.006	03/25/2013	15:16	E84167
	POTASSIUM		MG/L	28.8		200.7	0.169	03/25/2013	15:16	E84167
	STRONTIUM		MG/L	24.8		200.7	0.001	03/25/2013	15:16	E84167
	TOTAL PHOSPHORUS AS P		MG/L	0.016	I	365.3	0.008	03/22/2013	11:38	E84167
	FERRIC IRON		MG/L	29	U	CALC	29	03/20/2013	15:30	E84167
	BICARBONATE ALKALINITY (CACO3)		MG/L	117		SM2320B	0.594	03/25/2013	11:10	E84167
	CARBONATE ALKALINITY (CACO3)		MG/L	0.594	U	SM2320B	0.594	03/25/2013	11:10	E84167
	TOTAL ALKALINITY (CACO3)		MG/L	117		SM2320B	0.594	03/25/2013	11:10	E84167
	FERROUS IRON		MG/L	0.016	U	SM3500-FE B	0.016	03/20/2013	15:30	E84167
	CARBON DIOXIDE (CO2)		MG/L	108		SM4500-CO2		04/03/2013	16:05	E84167
	HYDROGEN SULFIDE, UNIONIZED		MG/L	0.540		SM4500-SH	0.004	04/03/2013	16:00	E84167
	SULFIDE, TOTAL		MG/L	3.73		SM4500S2D	0.028	03/20/2013	16:03	E84167
	SILICA, DISSOLVED		MG/L	16.1	C2	SM4500SIO2-C	0.044	03/27/2013	09:25	E84167
	TOTAL ORGANIC CARBON		MG/L	1.27		SM5310B	0.271	03/23/2013	04:00	E84167
	SILICA, TOTAL		MG/L	13.8		200.7	0.004	03/25/2013	15:16	E84167
	ALUMINUM, DISSOLVED	0.2	MG/L	0.042	I	200.7	0.023	03/25/2013	15:11	E84167
	MANGANESE, DISSOLVED	0.05	MG/L	0.001	I	200.7	0.00098	03/25/2013	15:11	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.

J = Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
C1 = The lab does not hold TNI accreditation for this parameter.
C2 = dissolved silica exceeds total silica but is within the acceptance range difference of 10.8% RSD.

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: 13030761 001
SYSTEM NAME: Well #3 Primary & Secondary
SYSTEM ID:

I.D.	Parameter NAME	(MCL)	UNITS	ANALYSIS RESULT	QUALIFIER	METHOD	MDL	DATE ANALYZED	TIME ANALYZED	LAB ID
	AMMONIA NITROGEN		MG/L	0.486		350.1	0.008	03/22/2013	12:47	E84167
	TOTAL KJELDAHL NITROGEN		MG/L	0.519		351.2	0.05	03/28/2013	09:00	E84167
1040	NITRATE NITROGEN	10	MG/L	0.073	I	353.2	0.05	03/20/2013	16:57	E84167
1041	NITRITE NITROGEN	1	MG/L	0.003	U	353.2	0.003	03/20/2013	16:57	E84167
1038	NITRATE+NITRITE AS N	10	MG/L	0.073	I	353.2	0.05	03/21/2013	11:15	E84167
1005	ARSENIC	0.010	MG/L	0.00069	U	SM3113B	0.00069	03/28/2013	11:15	E84167
1010	BARIUM	2	MG/L	0.026		200.7	0.002	03/25/2013	15:16	E84167
1015	CADMIUM	0.005	MG/L	0.001	I	200.7	0.0009	03/25/2013	15:16	E84167
1020	CHROMIUM	0.1	MG/L	0.009		200.7	0.002	03/25/2013	15:16	E84167
1024	CYANIDE	0.2	MG/L	0.005	U	335.4	0.005	03/27/2013	11:36	E84167
1025	FLUORIDE	4.0	MG/L	1.02		300.0	0.030	03/26/2013	23:02	E84167
1030	LEAD	0.015	MG/L	0.00067	U	SM3113B	0.00067	03/25/2013	12:19	E84167
1035	MERCURY	0.002	MG/L	0.000198	U	245.1	0.000198	03/28/2013	13:50	E84167
1036	NICKEL	0.1	MG/L	0.00118	U	200.7	0.00118	03/25/2013	15:16	E84167
1045	SELENIUM	0.05	MG/L	0.00157	U	SM3113B	0.00157	03/22/2013	12:30	E84167
1052	SODIUM	160	MG/L	695	X	200.7	0.034	03/25/2013	15:16	E84167
1074	ANTIMONY	0.006	MG/L	0.00226	U	SM3113B	0.00226	03/26/2013	14:45	E84167
1075	BERYLLIUM	0.004	MG/L	0.000078	U	200.7	0.000078	03/25/2013	15:16	E84167
1085	THALLIUM	0.002	MG/L	0.000981	U	200.9	0.000981	03/27/2013	16:26	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.

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C1 = The lab does not hold TNI accreditation for this parameter.
C2 = dissolved silica exceeds total silica but is within the acceptance range difference of 10.8% RSD.

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

Results relate only to the samples.

VOLATILE ORGANICS

62-550.310 (4) (A)

REPORT NUMBER: 13030761 001
SYSTEM NAME: Well #3 Primary & Secondary
SYSTEM ID:

Parameter I.D.	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	03/22/2013	03:58	E84167
2380	CIS-1,2-DICHLOROETHYLENE	70	UG/L	0.11	U	524.2	0.11	03/22/2013	03:58	E84167
2955	XYLENES, TOTAL	10000	UG/L	0.13	U	524.2	0.13	03/22/2013	03:58	E84167
2964	DICHLOROMETHANE	5	UG/L	0.20	U	524.2	0.20	03/22/2013	03:58	E84167
2968	O-DICHLOROBENZENE	600	UG/L	0.11	U	524.2	0.11	03/22/2013	03:58	E84167
2969	P-DICHLOROBENZENE	75	UG/L	0.10	U	524.2	0.10	03/22/2013	03:58	E84167
2976	VINYL CHLORIDE	1	UG/L	0.15	U	524.2	0.15	03/22/2013	03:58	E84167
2977	1,1-DICHLOROETHENE	7	UG/L	0.11	U	524.2	0.11	03/22/2013	03:58	E84167
2979	TRANS-1,2-DICHLOROETHENE	100	UG/L	0.12	U	524.2	0.12	03/22/2013	03:58	E84167
2980	1,2-DICHLOROETHANE	3	UG/L	0.16	U	524.2	0.16	03/22/2013	03:58	E84167
2981	1,1,1-TRICHLOROETHANE	200	UG/L	0.10	U	524.2	0.10	03/22/2013	03:58	E84167
2982	CARBON TETRACHLORIDE	3	UG/L	0.20	U	524.2	0.20	03/22/2013	03:58	E84167
2983	1,2-DICHLOROPROPANE	5	UG/L	0.15	U	524.2	0.15	03/22/2013	03:58	E84167
2984	TRICHLOROETHENE	3	UG/L	0.12	U	524.2	0.12	03/22/2013	03:58	E84167
2985	1,1,2-TRICHLOROETHANE	5	UG/L	0.14	U	524.2	0.14	03/22/2013	03:58	E84167
2987	TETRACHLOROETHENE	3	UG/L	0.20	U	524.2	0.20	03/22/2013	03:58	E84167
2989	MONOCHLOROBENZENE	100	UG/L	0.10	U	524.2	0.10	03/22/2013	03:58	E84167
2990	BENZENE	1	UG/L	0.12	U	524.2	0.12	03/22/2013	03:58	E84167
2991	TOLUENE	1000	UG/L	0.11	U	524.2	0.11	03/22/2013	03:58	E84167
2992	ETHYLBENZENE	700	UG/L	0.11	U	524.2	0.11	03/22/2013	03:58	E84167
2996	STYRENE	100	UG/L	0.10	U	524.2	0.10	03/22/2013	03:58	E84167

DATA QUALIFIERS THAT MAY APPLY:

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NOTES:

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MBAS calculated as LAS; molecular weight = 348.

X = Value exceeds MCL.

ND = Not Detected at or above adjusted reporting limit.

J = Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
C1 = The lab does not hold TNI accreditation for this parameter.
C2 = dissolved silica exceeds total silica but is within the acceptance range difference of 10.8% RSD.

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Results relate only to the samples.

SYNTHETIC ORGANICS

62-550.310 (4) (b)

REPORT NUMBER: 13030761 001
SYSTEM NAME: Well #3 Primary & Secondary
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	04/01/2013	23:08	E83079
2010	GAMMA-BHC (LINDANE)	0.2	UG/L	0.0030	U	508.1	0.0030	04/01/2013	23:08	E83079
2015	METHOXYCHLOR	40	UG/L	0.0140	U	508.1	0.0140	04/01/2013	23:08	E83079
2020	TOXAPHENE	3.0	UG/L	0.6100	U	508.1	0.6100	04/01/2013	23:08	E83079
2031	DALAPON	200	UG/L	0.8900	U	515.3	0.8900	03/29/2013	02:02	E83079
2032	DIQUAT	20	UG/L	0.1500	U	549.2	0.1500	03/27/2013	00:21	E83079
2033	ENDOTHALL	100	UG/L	2.7000	U	548.1	2.7000	04/01/2013	11:28	E83079
2034	GLYPHOSATE	700	UG/L	2.1000	JU	547	2.1000	03/27/2013	18:33	E83079
2035	DI(2-ETHYLHEXYL)ADIPATE	400	UG/L	0.3800	U	525.2	0.3800	03/26/2013	20:00	E83079
2036	OXAMYL	200	UG/L	0.4100	U	531.1	0.4100	03/27/2013	23:19	E83079
2037	SIMAZINE	4.0	UG/L	0.0440	U	508.1	0.0440	04/01/2013	23:08	E83079
2039	DI(2-ETHYLHEXYL)PHTHALATE	6.0	UG/L	0.4900	U	525.2	0.4900	03/26/2013	20:00	E83079
2040	PICLORAM	500	UG/L	0.0940	U	515.3	0.0940	03/29/2013	02:02	E83079
2041	DINOSEB	7.0	UG/L	0.1600	U	515.3	0.1600	03/29/2013	02:02	E83079
2042	HEXACHLOROCYCLOPENTADIENE	50	UG/L	0.0120	U	508.1	0.0120	04/01/2013	23:08	E83079
2046	CARBOFURAN	40	UG/L	0.3200	U	531.1	0.3200	03/27/2013	23:19	E83079
2050	ATRAZINE	3.0	UG/L	0.0210	U	508.1	0.0210	04/01/2013	23:08	E83079
2051	ALACHLOR	2	UG/L	0.0340	U	508.1	0.0340	04/01/2013	23:08	E83079
2063	DIOXIN SCREEN		UG/L	ND	C1	525.2		03/26/2013	20:00	E83079
2065	HEPTACHLOR	0.4	UG/L	0.0060	U	508.1	0.0060	04/01/2013	23:08	E83079
2067	HEPTACHLOR EPOXIDE	0.2	UG/L	0.0030	U	508.1	0.0030	04/01/2013	23:08	E83079
2105	2,4-D	70	UG/L	0.0810	U	515.3	0.0810	03/29/2013	02:02	E83079
2110	2,4,5-TP (SILVEX)	50	UG/L	0.1600	U	515.3	0.1600	03/29/2013	02:02	E83079
2274	HEXACHLOROBENZENE	1.0	UG/L	0.0110	U	508.1	0.0110	04/01/2013	23:08	E83079
2306	BENZO(A)PYRENE	0.2	UG/L	0.0190	U	525.2	0.0190	03/26/2013	20:00	E83079
2326	PENTACHLOROPHENOL	1.0	UG/L	0.0300	U	515.3	0.0300	03/29/2013	02:02	E83079
2383	PCB	0.5	UG/L	0.0800	U	508.1	0.0800	04/01/2013	23:08	E83079
2931	1,2-DIBROMO-3-CHLOROPROPANE	0.20	UG/L	0.014	U	504.1	0.014	03/27/2013	00:47	E84167
2946	ETHYLENE DIBROMIDE	0.02	UG/L	0.01	U	504.1	0.01	03/27/2013	00:47	E84167
2959	CHLORDANE	2.0	UG/L	0.0470	U	508.1	0.0470	04/01/2013	23:08	E83079

DATA QUALIFIERS THAT MAY APPLY:

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MBAS calculated as LAS; molecular weight = 348.

X = Value exceeds MCL.

ND = Not Detected at or above adjusted reporting limit.

J = Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
C1 = The lab does not hold TNI accreditation for this parameter.
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Results relate only to the samples.

RADIONUCLIDES

62-550.310 (6)

REPORT NUMBER: 13030761 001
SYSTEM NAME: Well #3 Primary & Secondary
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	15.4+/-2.7	X	900.0	3.6	03/29/2013	10:30	E83033
4020	RADIUM-226	5	PCI/L	4.3+/-0.5		903.1	0.1	04/08/2013	12:58	E83033
4030	RADIUM-228	5	PCI/L	0.8	U	Ra-05	0.8	04/05/2013	14:00	E83033

DATA QUALIFIERS THAT MAY APPLY:

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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.

J = Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
C1 = The lab does not hold TNI accreditation for this parameter.
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SECONDARY CONTAMINANTS

62-550.320

REPORT NUMBER: 13030761 001
SYSTEM NAME: Well #3 Primary & Secondary
SYSTEM ID:

I.D.	Parameter NAME	(MCL)	UNITS	ANALYSIS RESULT	QUALIFIER	METHOD	MDL	DATE ANALYZED	TIME ANALYZED	LAB ID
	COLOR PH		UNITS	7.71		SM4500H+B		03/20/2013	16:10	E84167
1002	ALUMINUM	0.2	MG/L	0.050	I	200.7	0.023	03/25/2013	15:16	E84167
1017	CHLORIDE	250	MG/L	1169	X	300.0	0.353	03/26/2013	23:21	E84167
1022	COPPER	1	MG/L	0.017		200.7	0.004	03/25/2013	15:16	E84167
1025	FLUORIDE.	2.0	MG/L	1.02		300.0	0.030	03/26/2013	23:02	E84167
1028	IRON	0.3	MG/L	0.029	U	200.7	0.029	03/25/2013	15:16	E84167
1032	MANGANESE	0.05	MG/L	0.001	I	200.7	0.00098	03/25/2013	15:16	E84167
1050	SILVER	0.1	MG/L	0.002		200.7	0.0005	03/25/2013	15:16	E84167
1055	SULFATE	250	MG/L	360	X	300.0	0.339	03/26/2013	23:21	E84167
1095	ZINC	5	MG/L	0.008		200.7	0.0014	03/25/2013	15:16	E84167
1905	COLOR, APPARENT	15	PCU	2.5	U	SM2120B	2.5	03/20/2013	16:10	E84167
1920	ODOR	3	TON	32	X	140.1	1	03/20/2013	14:20	E84167
1925	PH	6.5-8.5	UNITS	7.71	Q	SM4500H+B		03/20/2013	16:50	E84167
1930	TOTAL DISSOLVED SOLIDS	500	MG/L	2592	X	SM2540C	7.26	03/25/2013	09:00	E84167
2905	SURFACTANTS	0.5	MG/L	0.277		SM5540C	0.03	03/20/2013	15:31	E84167

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Results relate only to the samples.

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

Client: Wells & Water Systems, Inc.
4696 Elevation Way
Ft. Myers, FL 33905
Phone: (239) 872-5955
Fax: (239) 277-0842
rjk@watersystemsflorida.com

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

Laboratory Submission #: 13030761

Sample ID	Ca, Mg, K, Sr, Sb, As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Si, Na, Tl Al, Cu, Fe, Mn, Ag, Zn	Dissolved Mn, Dissolved Fe, Dissolved Al	Ferrous Fe***	CN	T-Sulfide, Hydrogen Sulfide	Gross α, Radium-226 & 228	Odor	TOC	VOCs	SOC's (Pesticides and PCB's)								MBAS (Foaming Agents)	Cl SO4 TDS Color/pH pH*** NO2 Fluoride T/B/C Alkalinity Dissolved Silica - CO2 (CALC)	TKN, T-P, NOX, NO3, NH3	Lab ID #
										Carabamates 531.1	Pesticides 508, 608	EDB/DBCP 504.1	Herbicides 515.3	525.2 Semivolatiales	Glyphosate 547	Endothall 548.1	Diquat 549.2			
	1:4 HNO_3 pH<2 ☐	Plain	Plain	NaOH pH>9 ☐	ZnAc + NaOH pH>9 ☐	1:4 HNO_3 pH<2 ☐	Plain	1:1 HCl	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	1:4 H_2SO_4 pH<2 ☐	
	1 x 1 Quart Plastic	1 x 1 Quart Plastic	1 x 500mL Opaque Plastic	1 x 250mL Plastic	1 x ½ Pint Plastic	1 x 2 Quart Plastic	1 x 250mL Amber Glass	1 x 40mL Glass Vial	3 x 40mL Glass Vials**	2 x 40mL Glass Vials	2 x 1L Amber 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 1 Quart Plastic	1 x ½ Pint Plastic	
Well #3	Date: 3/20/13 Time: 1045	1039	1039	1045	1046	1050	1042	1054	1057	1055	1047	1051	*****DIOXIN SCREEN***** 1049	1046	1053	1047	1049	1040	1040	1044	1

* 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.
***Received after 15 minute hold time, ok to run.

	Field Parameters					
Date: 3/20/13	Temperature (°C)	Conductivity (µmho/cm)	Turbidity (ntu)	D.O. (mg/L)	pH (s.u.)	Cl_2 (mg/L)
Time: 1037	29.5	4620	0.2	0.26	7.6	0.0

Instrument ID: 32

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.

Laboratory Sample Acceptability
pH<2 ☑
Temperature: 1.4°c

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.

1	Collector: Rick Rich	Date: 3/20/13	Time: 1226	Received By: Wayne VanCammen	Date: 3-20-13	Time: 1226
2	Relinquished by: Wayne VanCammen	Date: 3-20-13	Time: 1430	Received By:	Date: 3/20/13	Time: 1430
3	Relinquished by:	Date:	Time:	Received By:	Date:	Time:
4	Relinquished by:	Date:	Time:	Received For Lab By:	Date:	Time:

INTERLABORATORY SAMPLE TRANSMITTAL FORM

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

Office QC Check: 03/20/13 JH
Bottle Check:_____

10 BUSINESS DAY T.A.T. PLEASE

Date: 03/20/13
Project Name: WEL WAT
# 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
13030761-1	03/20/13	1050	DW	Grab	1:4 HNO_3	1	2 Qt	P	Gross Alpha, Radium 226 & 228	4620

* 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: Annah Jensen	Date:	Received By: S. NAUMANN	Date:	3/27/13
	Print Name:	Time:		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: 03/20/13 JLJ
Bottle Check: _____

Date:	03/20/13		
Project Name:	WEL WAT		
# of Samples:	1	Total # of Bottles:	11
Method of Shipment:	Hand Delivery		
Subcontract Laboratory:	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
13030761-1	03/20/13	1055	DW	Grab	MCAA NaS_2O_3	2	40 mL	G	Carabamates (531.1)	
		1047			NaS_2O_3 HCl	2	1 L	G	Pesticides (508/608)	
		1049			NaS_2O_3	1	250mL	G	Herbicides (515.3)	
		1046			NaS_2O_3 HCl	2	1 L	G	Semivolatiles (525.2)	**Dioxin Screen**
		1053			NaS_2O_3	2	40 mL	G	Glyphosate (547)	
		1047			NaS_2O_3	1	500 mL	G	Endothall (548.1)	
		1049			NaS_2O_3 H_2SO_4	1	1 L	P	Diquat (549.2)	

WO#: 3587179

3587179

* 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:	3-21-13	Received By:		Date: 3-21-13
	Print Name:	Annah Jensen	Time:	1030			Time: 1030
Relinquished By:	Sign Name:		Date:	3-21-13	Received By:		Date: 3/22/13
	Print Name:		Time:	2pm			Time: 5:50

S20 °C
CF=0
TP-1F

N20
2-3

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: 03/20/13

PWS ID (From Page 1): _____ Sample Number (From Page 1): _____ Lab Assigned Report # or Job ID: 13030761

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: 4/9/13

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

** Please provide radiological sample dates & locations for each quarter.

CONFIRMATION & NOTIFICATION IS REQUIRED WITHIN 24 HRS FOR NITRATE OR NITRITE MCL EXCEEDANCES

NON-DETECTS ARE TO BE REPORTED AS THE MDL WITH A "U" QUALIFIER. (Non-detects reported as "BDL" or with a "<" are not acceptable.)

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

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

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

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

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

System Name: _____ PWS I.D. #: ☐☐☐☐☐☐☐

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

Address: _____

City: _____ ZIP Code: _____

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

SAMPLE INFORMATION (to be completed by sampler)

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

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

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

Sample Type (Check Only One)

☐Distribution
☐Entry Point (to Distribution)
☐Plant Tap (not for compliance with 62-550)
☐Raw (at well or intake)
☐Max Residence Time
☐Ave Residence Time
☐Near First Customer

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

☐Routine Compliance with 62-550
☐Confirmation of MCL Exceedance*
☐Composite of Multiple Sites**
☐Other: _____

☐Replacement (of Invalidated Sample)
☐Special (not for compliance with 62-550)
☐Clearance (permitting)

Sampling Procedure Used or Other Comments:

_____

*See 62-550.500(6) for requirements and restrictions. And 62-550.512(3) for nitrate or nitrite exceedances.

**See 62-550.550(4) for requirements and attach a results page for each site.

SAMPLER CERTIFICATION

I, _____ (Print Name), _____ (Print Title), do HEREBY CERTIFY that the above public water system and sample collection information is complete and correct.

Signature: _____ Date: _____

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

Sampler's E-mail: _____

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

FLORIDA DEPARTMENT OF HEALTH

John 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 201
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

Rick Scott
Governor

John H. Armstrong, MD
State Surgeon General

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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E83079
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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