US Army Corps of Engineers

Kissimmee River Restoration Project
Report of the Plug and Abandonment of Artesian Well OKF-42 and a Surficial Aquifer Well
Okeechobee and Highlands Counties, FL

USACE CONTRACT NO. W912EP17F0018 TASK ORDER FOR KRR C-38 REACH 2 BACKFILL CNT 10

JUNE 2017
CARDNO FILE NO.: E217012200

PREPARED BY

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PG # 2628

Cardno
Shaping the Future

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Table of Contents

SECTION 1.0

Introduction

This report summarizes the efforts to plug and abandon monitor well OKF-42 and a shallow surficial aquifer production well. The wells are located at the S-65C lock structure, which is being abandoned as part of the Kissimmee River C-38 Reach 2 Backfill project. The well plugging and abandonment are required due to the restoration activities on site.

Well OKF-42 is a Floridan Aquifer monitor well and the shallow production well is a 3-inch diameter surficial aquifer supply well for the former pump house. Well plugging operations were conducted per the U.S. Army Corps of Engineers (USACE) May 8, 2017 Scope of Work. The site work was conducted by Applied Drilling Engineering with a survey conducted by Morgan and Eklund, Inc. under their subcontract. Cardno, Inc. (Cardno) provided the project coordination and oversight of the field activities. The project location is shown on Figure 1 and details of the site and well locations are include in the survey documents. Photographs of work progress are included in Attachment A. Daily drilling reports were prepared by the drilling contractor and are presented in Attachment B.

Cardno was contracted by the USACE to complete the Plug and Abandonment of Artesian Well OKF-42 and a Surficial Aquifer Well under the W912EP17F0018 Task Order. The scope of work required seven tasks. This report includes a description of the following work elements:

- Permits and Mobilizations
- Well Preparation (Wellhead Modification)
- Borehole Characterizations
- Well Plugging
- Wellhead Abandonments
- Surveys of Abandoned Wells
- Site Cleanup

Summaries of the work items, which were conducted from June 5 through June 9, 2017, are provided in the following sections.

SECTION 2.0

Permits and Mobilizations

The drilling contractor obtained well abandonment permits through the Okeechobee County Health Department. Copies of the permits and well abandonment documents are provided as Attachment C.

The equipment and materials required for the well plugging operations were mobilized to the site on June 5, 2017. A crane truck and a trailer with cementing tubing, pump, hoses, fittings, and other required equipment were brought on site.

SECTION 3.0

Well Preparation (Wellhead Modification)

Recording equipment, controls, electrical panels, and other monitoring devices had been removed from the OKF-42 wellhead by others prior to mobilization to the site. The remaining wellhead fittings were removed, by the drilling contractor, to the lower 6-inch diameter flange. Photos 1 and 2 (Attachment A) show the wellhead prior to commencement of well plugging operations.

Well OKF-42 is an artesian well (Photo 3) and a 6-inch diameter tee was installed on the wellhead with a hose installed to divert the water away from the site (Photo 4). Fittings necessary for the geophysical logging and cementing operations were installed on the top flange of the tee.

The wellhead of the surficial aquifer well had been destroyed during the demolition of the pump house. The top of the well casing was buried and had to be located prior to plugging. No modifications were required to the existing well with the exception of clearing debris from the well casing.

SECTION 4.0

Borehole Characterizations

MV Geophysical Logging performed a 4-arm caliper log (Photos 5 and 6) on Monday June 5 to determine the dimensions of the well and to define the volume of the well for use in calculating cement volumes needed to plug the well.

The total depth of the well was determined to be 1153 feet below land surface (bls) with the six inch diameter casing completed to 370 feet bls. The six-inch diameter casing extended up to 38 feet bls and a 12-inch casing extended up to land surface. A small section of 6-inch casing was encountered at approximately four feet bls and extended up through the well pad and was completed with a flange on which the aboveground wellhead fittings were attached. The total volume of the well, determined by the log, was calculated to be 401 cubic feet. The caliper log is provided as Attachment D.

SECTION 5.0

Well Plugging

5.1 OKF-42 PLUGGING

Well plugging for OKF-42 was completed in four separate stages from Tuesday June 6 through Friday June 9, 2017

Stage 1

Thirty-seven joints of cementing tubing were installed in the well (Photos 7 and 8) to a depth of 1139 feet on Tuesday June 6. Table 1 presents a tally of the 2 3/8-inch diameter cementing tubing. Prior to the initial stage of cementing conducted on Tuesday June 6, one joint of tubing was removed for a string length of 1108 feet. Neat Portland cement grout was delivered to the site by the Maschmeyer Concrete Company of Florida. The first stage of cementing was 6 cubic yards (162 cubic feet). Cement delivery tickets are provided in Attachment E.

Pumping began with the cementing tubing at 1108 feet. Refer to Photos 9 and 10 for views of the cementing procedure. Approximately 1.5 yards were pumped and four joints of tubing were removed before resuming pumpage. This process was repeated as cementing progressed until the entire 6 cubic yards were pumped and 11 joints of tubing were removed. Following the completion of the cementing, additional tubing was removed above the top of the cement and the tubing string was flushed with fresh water.

On Wednesday June 7, the top of Stage 1 cement was tagged at 732 feet bls. The borehole volume from the base of the well to 732 feet bls, determined from the caliper log, is 125 cubic feet. As calculated from the volume pumped (162 cubic feet) and the volume of the cemented interval, the fill from Stage 1 cementing yielded approximately 77 percent of the expected (theoretical) value.

Stage 2

Stage 2 cementing was performed on Wednesday June 7 (Photos 11 and 12). The second cementing stage was the same volume pumped during Stage 1. Six cubic yards (162 cubic feet) of neat Portland cement were provided by Maschmeyer Concrete. Pumping began with the cementing tubing set to a depth of 678 feet bls. Approximately 1.5 yards were pumped at a time and 3 to 4 joints of tubing were removed before resuming pumpage. This process was repeated and progressed until the full 6 cubic yards were pumped and 10 joints of tubing were removed.

On Thursday June 8, the top of Stage 2 cement was tagged at 498 feet bls. Based on the hole volume determined from the caliper log, the filled borehole volume from Stage 2 was 106 cubic feet. As calculated from the volume pumped (162 cubic feet) and the volume of the cemented interval (106 cubic feet), the fill from Stage 2 cementing yielded approximately 65 percent of the expected (theoretical) value.

Stage 3

Seven cubic yards (189 cubic feet) of neat Portland cement grout were delivered to the site by Maschmeyer Concrete on June 8 for the third cementing stage. Refer to Photos 13, 14, 15, and 16. Pumping began with the cementing tubing set to a depth of 432 feet bls. Approximately 1.5 yards were pumped and three joints of tubing were removed before resuming pumpage. This process was repeated a second time and prior to

completing the pumping of the full delivered volume of grout, cement returns were noted at the surface. It is not known how much cement was remaining in the ready mix truck at the time returns were noted; however, the truck was nearly empty.

On Friday June 9, the top of Stage 3 cement was tagged at 9.9 feet bls. Based on the borehole volume determined from the caliper log, the filled borehole volume from Stage 3 was 170 cubic feet. As calculated from the volume pumped (189 cubic feet) and the volume of the cemented interval (170 cubic feet), the fill from Stage 3 cementing yielded approximately 90 percent of the expected (theoretical) value

Stage 4

The cementing performed on Stage 3 had brought the grout up to land surface. Overnight, the top of the Stage 3 grout had declined to 9.9 feet below the top of the flange. Four sacks of neat Portland cement grout were hand mixed at land surface and placed up to the top of the flange.

The included Figure 2 presents a schematic drawing of the well with depth and dimensions determined from the caliper log. Figure 2 also provides details of the completed cementing stage intervals.

5.2 SURFICIAL AQUIFER WELL

The pump house next to the surficial aquifer well had been demolished and the area around the 3-inch diameter well had been disturbed, which covered the well with debris. After probing to find the well, it was determined that the casing was filled with sand and small rocks. The drilling contractor was able to clear the well casing to approximately 14 feet bls. However, they were unable to clear the well any deeper. Water was pumped in to the well and flow was established indicating that the producing zone of the well was not completely blocked.

On Wednesday June 7, neat Portland cement grout was hand mixed and placed in the well from land surface. A total of 13.8 gallons of grout (approximately 1.8 cubic feet) was placed in the well (Photos 17 and 18). The grout was added until the grout was brought to the top of the casing. The volume of grout placed in the 3-inch well would theoretically fill an interval of 36 feet, which indicates that the well was adequately plugged and abandoned.

SECTION 6.0

Wellhead Abandonments

The surficial aquifer well wellhead had been damaged during prior demolition work and only the top of the well casing had remained (Photo 19). The OKF-42 wellhead was abandoned with the well pad and 6-inch flange intact (Photo 20). All other items were removed.

The wellheads elevations at the completion of abandonment and the land surface surrounding each well are above the final restoration elevations by approximately eight feet. The casing remaining above the restoration elevation will be removed by the site contractor when the area surrounding the wells is removed and re-graded. As required by the specifications, a marker flag was installed at each of the wellheads (shown on Photos 19 and 20) to mark their position for further reference during construction activities.

SECTION 7.0

Survey of Abandoned Wells

The site was surveyed to determine the well locations and to provide documentation for future reference. The survey was conducted by Morgan and Eklund, Inc. A copy of the survey report with site maps showing the identified locations of the wells is provided as Attachment F. Well OKF-42 is identified as Well #1 and the surficial aquifer well is identified as Well #2 in the survey documents.

SECTION 8.0

Site Cleanup

Following the completion of the Stage 3 cementing on Thursday June 8, the crane and equipment trailer were removed from the well OKF-42 site and temporally staged in the parking area near the job site trailers. At the completion of the Stage 4 grouting on Friday June 9, the remaining materials were removed from OKF-42. The site was then cleaned of accumulated grout and all job related materials were removed from the project site (Photo 21).

Figures 1 and 2

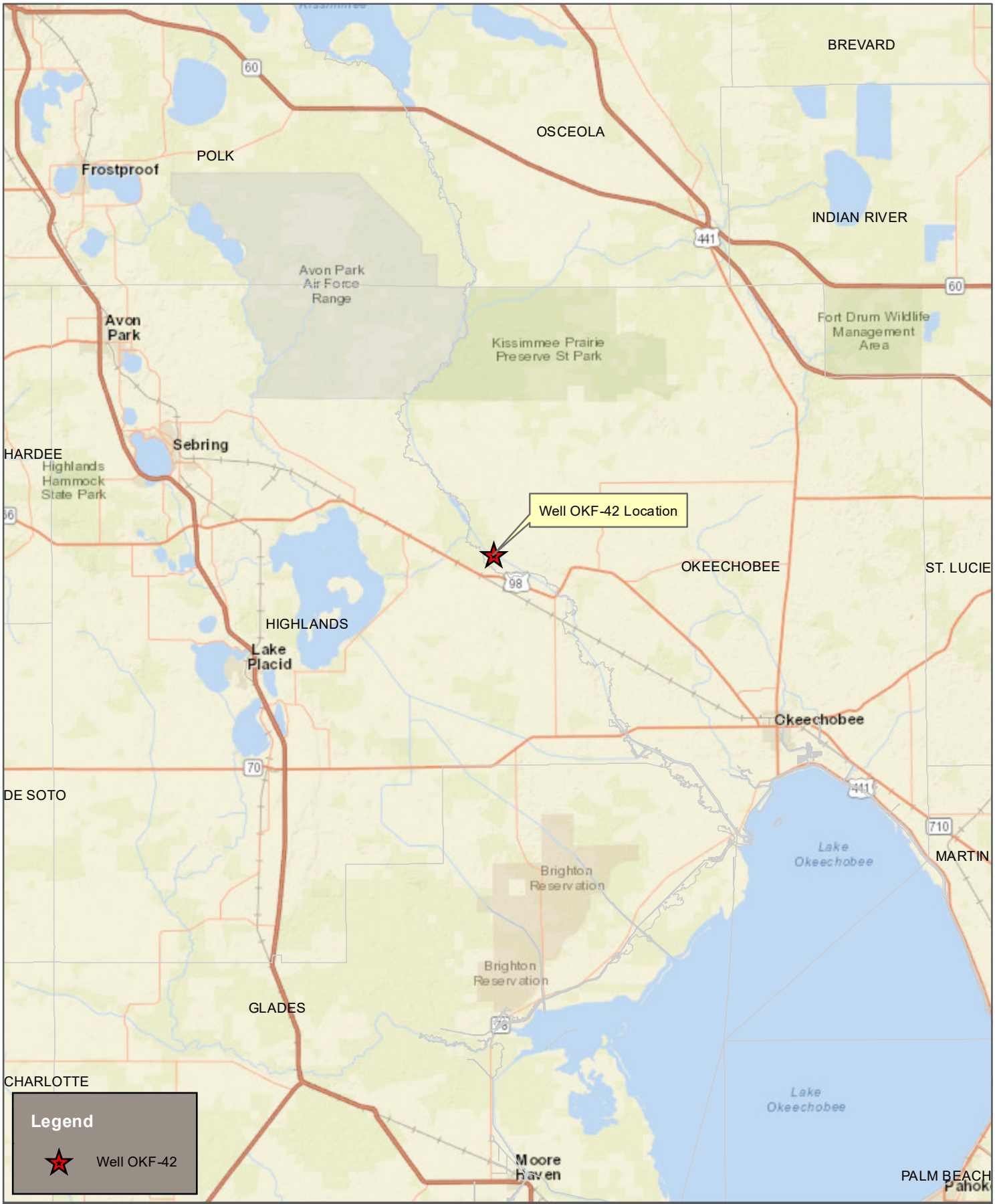

Image:ESRI

Data Source:

Sec 27
Twp 35 S
Rng 32 E

Figure 1 - Location Map

Well OKF-42
Okeechobee County, Florida

0 8 16 Miles

0 12,878 25,756 Meters

Cardno
Shaping the Future

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www.cardno.com

Date Created: 6/22/2017 Date Revised: 6/22/2017 File Path: Q:\UnitedStates\Florida\Fort_Myers\Well_OKF42_Plugging\working\arcmap\Fig1_Well_Location_Map_A_1_20170621.mxd
GIS Analyst: James.Bottiger

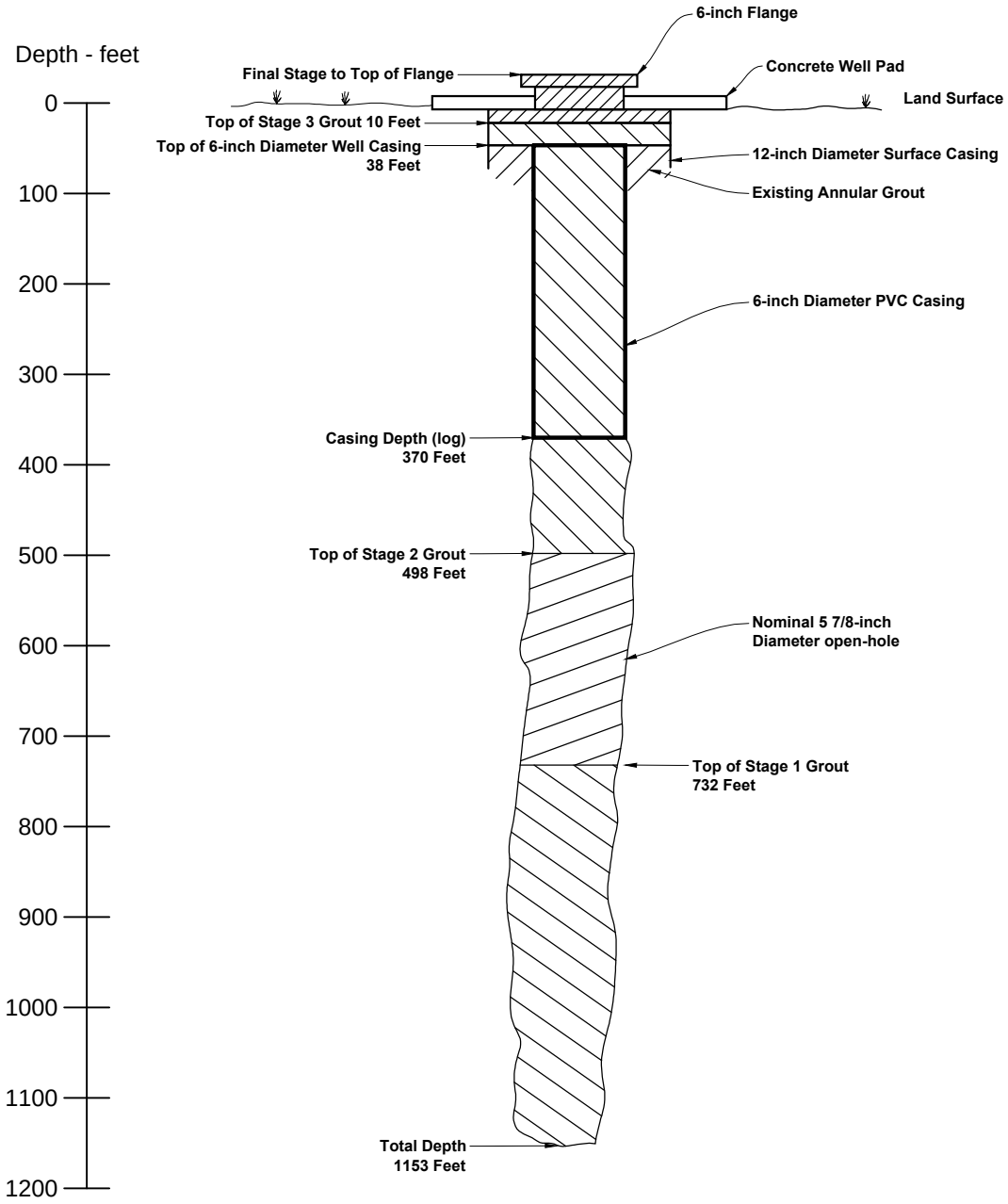

Figure - 2

Sec 27
Twn 35 S
Rng 32 E

Schematic Detail of OKF-42 Well Plugging

Well OKL-42
Okeechobee County, FL

Cardno
Shaping the Future®
3905 Crescent Park Drive Riverview, FL 33578 USA
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PM: GS CAD Operator: JMB Creation Date: 6/20/2017 Rev. Date: 6/21/2017 Revised By: James.Bottiger File Location:Q:\UnitedStates\Florida\Fort_Myers\Well_OKF42_Plugging\working\cad\Schmatic Detail of OKF-42 Well Plugging.dwg

Table 1

TABLE 1

WELL OKF-42
CEMENTING TUBING TALLY

Joint Number	Length (feet)	Cumulative String Length (feet)
1	33.3	33.30
2	31.4	64.70
3	30.7	95.40
4	31.4	126.80
5	31.4	158.20
6	28.9	187.10
7	30.65	217.75
8	31.4	249.15
9	31.2	280.35
10	29.3	309.65
11	31.3	340.95
12	29.3	370.25
13	31.2	401.45
14	31.4	432.85
15	31.4	464.25
16	30.7	494.95
17	30.6	525.55
18	31.4	556.95
19	31.4	588.35
20	27.7	616.05
21	30.7	646.75
22	29.9	676.65
23	30.1	706.75
24	30.7	737.45
25	31.4	768.85
26	31.4	800.25
27	30.6	830.85
28	30.7	861.55
29	31.4	892.95
30	30.7	923.65
31	30.4	954.05
32	31.4	985.45
33	30.6	1016.05
34	30.6	1046.65
35	30.7	1077.35
36	30.8	1108.15
37	30.9	1139.05

Attachments A – F

Attachment A

Attachment A **SITE PHOTOGRAPHS**

WELL OKF-42 AND SURFICIAL AQUIFER WELL PLUGGING

Photo 1. OKF-42 Wellhead Prior To Well Plugging

Photo 2. OKF-42 Wellhead Close Up

Attachment A **SITE PHOTOGRAPHS**

WELL OKF-42 AND SURFICIAL AQUIFER WELL PLUGGING

Photo 3. Artesian Flow at OKF-42 Wellhead

Photo 4. Discharge Line for OKF-42 Wellhead Flow

Attachment A **SITE PHOTOGRAPHS**

WELL OKF-42 AND SURFICIAL AQUIFER WELL PLUGGING

Photo 5. Installing 4-Arm Caliper Tool in Well OKF-42

Photo 6. Caliper Tool Close Up With Logging Unit in Background

Attachment A **SITE PHOTOGRAPHS**

WELL OKF-42 AND SURFICIAL AQUIFER WELL PLUGGING

Photo 7. Setting Cementing Tubing in Well OKF-42

Photo 8. OKF-42 Cementing Header

Attachment A **SITE PHOTOGRAPHS**

WELL OKF-42 AND SURFICIAL AQUIFER WELL PLUGGING

Photo 9. Discharging Grout for Stage 1

Photo 10. Cement Pump and Discharge to OKF-42 Wellhead

Attachment A **SITE PHOTOGRAPHS**

WELL OKF-42 AND SURFICIAL AQUIFER WELL PLUGGING

Photo 11. Discharging Grout for Stage 2

Photo 12. Stage 2 Cementing At OKF-42 Wellhead

Attachment A **SITE PHOTOGRAPHS**

WELL OKF-42 AND SURFICIAL AQUIFER WELL PLUGGING

Photo 13. Discharging Grout for Stage 3

Photo 14. Stage 3 Cementing At OKF-42 Wellhead

Attachment A **SITE PHOTOGRAPHS**

WELL OKF-42 AND SURFICIAL AQUIFER WELL PLUGGING

Photo 15. Dismantling OKF-42 Wellhead Following Stage 3

Photo 16. OKF-42 Wellhead at Completion of Stage 3

Attachment A **SITE PHOTOGRAPHS**

WELL OKF-42 AND SURFICIAL AQUIFER WELL PLUGGING

Photo 17. Placing Neat Portland Cement Grout in 3-Inch Diameter Surficial Aquifer Well

Photo 18. Cement at Completion of 3-Inch Diameter Surficial Aquifer Well Grouting

Attachment A **SITE PHOTOGRAPHS**

WELL OKF-42 AND SURFICIAL AQUIFER WELL PLUGGING

Photo 19. Wellhead and Marker Flag at 3-Inch Diameter Surficial Aquifer Well

Photo 20. OKF-42 Wellhead at Completion of Stage 4

Attachment A **SITE PHOTOGRAPHS**

WELL OKF-42 AND SURFICIAL AQUIFER WELL PLUGGING

Photo 21. OKF-42 Wellhead and Site at Completion of Well Plugging and Demobilization, 3-Inch Diameter Surficial Aquifer Well in Background (view obscured by demolition equipment)

Attachment B

Applied DRILLING Engineering, Inc.

Daily Drilling Report

Report No: 1

Date: June 5, 2017	Project: USACE ABANDONMENTS
Well Number: OKF. 42	Job Number : 1713

Well Depth - Start of Shift : 1153 End of Shift : _____

Water Level - Start of Shift: Flowing End of Shift: _____

Activities	From	To
ARRIVE ON SITE AND SET UP FOR LOGGING		
LOG WELL WITH MV TOTAL DEPTH 1153'		
RIG UP AND RUN 2 3/8" TUBING FOR GROUTING		
MODIFY WELLHEAD FOR FLOW CONTROL		

Formations from:	From	To

Safety Meeting ? Yes ___ No X	Weather Conditions: RAIN ON AND OFF
Daily Topic _____	
Accident on Site ? Yes ___ No X	Drilling Mud Properties — In / Out
Describe: _____	Mud Weight (ppg)
	Mud Viscosity
Driller: MIKE McCauley	Drilling Assembly _____
Helpers: TOM PETERS	
Eng.Rep.: JEFF BUTLER DAVID HOLT	Available WOB ___ lbs

Applied DRILLING Engineering, Inc.

Daily Drilling Report

Report No: 2

Date: June 6, 2017	Project: USACE Abandonments
Well Number: okf. 42	Job Number : 1713

Well Depth - Start of Shift : 1153' Water Level - Start of Shift: flowing
End of Shift : End of Shift:

Activities	From	To
Pump bypass of Current in Well 42		
Meet with Surveyor. Survey Well okf. 42		
Try and locate 3" well		
NOTE – Had to Build New Road to Site because of the Muddy Conditions.		

Formations from:	From	To

Safety Meeting ? Yes ___ No X
Daily Topic

Accident on Site ? Yes ___ No X
Describe:

Driller: Mac McCarty
Helpers: Ron & Jeff
Eng.Rep.: David Hinz

Weather Conditions: Raining

Drilling Mud Properties	In	Out
Mud Weight (ppg)		
Mud Viscosity		

Drilling Assembly

Available WOB lbs

Applied DRILLING Engineering, Inc.

Daily Drilling Report

Report No: 3

Date: June 7, 2017	Project: USACE ABANDONMENTS
Well Number:	Job Number : 1713

Well Depth - Start of Shift : 732'
End of Shift :

Water Level - Start of Shift: Flowing
End of Shift:

Activities	From	To
TAG CEMENT @ 732'		
PUMP 6 YARDS OF NEAT CEMENT		
FIND 3" WELL — SURVEY HEAD ABANDON		
WITH 13.8 FEET OF CEMENT		
INSTALL FLAG POLE AND PINK FLAG		

Formations from:	From	To

Safety Meeting ? Yes ___ No X
Daily Topic

Accident on Site ? Yes ___ No X
Describe:

Driller: MIKE MCCARTY
Helpers: PAM & JEFF
Eng.Rep.: DAVID BURKE

Weather Conditions: RAINING

Drilling Mud Properties	In	Out
Mud Weight (ppg)		
Mud Viscosity		

Drilling Assembly

Available WOB ___ lbs

Applied DRILLING Engineering, Inc.

Daily Drilling Report

Report No: 4

Date: JUNE 8, 2017	Project: USACE ABANDONMENTS
Well Number: OKT. 42	Job Number : 1713

Well Depth - Start of Shift : 498 End of Shift : 0'

Water Level - Start of Shift: flowing End of Shift: Killed

Activities	From	To
TAG CEMENT @ 498'		
INSTALL flowpath & PUMP flow		
WORK on ROAD then pump 3 yards &		
NEAT CEMENT — full RETURNS to surface		
CLEAN SITE / REMOVE WELLHEAD.		

Formations from:	From	To

Safety Meeting ? Yes ___ No X
Daily Topic

Accident on Site ? Yes ___ No X
Describe:

Driller: Mac McCurdy
Helpers: Tom ; Jeff
Eng.Rep.: Greg

Weather Conditions:

Drilling Mud Properties	In	Out
Mud Weight (ppg)		
Mud Viscosity		

Drilling Assembly

Available WOB ___ lbs

Applied DRILLING Engineering, Inc.

Daily Drilling Report

Report No: 5

Date: June 9, 2017	Project: USACE ABANDONMENT 2
Well Number: OWS-12	Job Number :

Well Depth - Start of Shift : 9½'
End of Shift : 0'

Water Level - Start of Shift: NA KILLED
End of Shift:

Activities	From	To
TOP CEMENT @ 9½' MIXED 5 BAGS.		
CEMENT AT PAD LEVEL		
CLEAN SITE AND DEMOBILIZE		

Formations from:	From	To

Safety Meeting ? Yes ___ No X		Weather Conditions:	NICE
Daily Topic			
		Drilling Mud Properties	In / Out
Accident on Site ? Yes ___ No X		Mud Weight (ppg)	
Describe:		Mud Viscosity	
Driller:	MAC MCCARTY	Drilling Assembly	
Helpers:	JEFF		
Eng.Rep.:	GARY	Available WOB	lbs

Attachment C

STATE OF FLORIDA PERMIT APPLICATION TO CONSTRUCT, REPAIR, MODIFY, OR ABANDON A WELL

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

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

The water well contractor is responsible for completing this form and forwarding the permit application to the appropriate delegated authority where applicable.

Permit No.
Florida Unique ID 47-59-1765607
Permit Stipulations Required (See Attached)
62-524 Quad No. _____ Delineation No. _____
CUP/WUP Application No. _____
ABOVE THIS LINE - FOR OFFICIAL USE ONLY

1. SFWMD | 3301 Gun Club Road | West Palm Beach | FL | 33406 | 561-686-8800
*Owner, Legal Name if Corporation | *Address | *City | *State | *ZIP | Telephone Number

2. S-65C Structure on the C-38 Canal, Okeechobee, Florida Well OKF-42
*Well Location - Address, Road Name or Number, City

3. NA
*Parcel ID No. (PIN) or Alternate Key (Circle One) | Lot | Block | Unit

4. 27 | 35S | 32E | Okeechobee | _____ | Check if 62-524: ☐ Yes ☐ No
*Section or Land Grant | *Township | *Range | *County | Subdivision

5. Paul Petrey | 9340 | 813-695-4358 | paul@applieddrillingengineering.com
*Water Well Contractor | *License Number | *Telephone Number | E-mail Address

6. 10014 North Dale Mabry Hwy, Suit 205 | Tampa | Florida | 33618
*Water Well Contractor's Address | City | State | ZIP

7. *Type of Work: ☐ Construction ☐ Repair ☐ Modification ☑ Abandonment Lock structure s being removed by the USACE
*Reason for Repair, Modification, or Abandonment

8. *Number of Proposed Wells 1

9. *Specify Intended Use(s) of Well(s):

☐ Domestic	☐ Landscape Irrigation	☐ Agricultural Irrigation	☐ Site Investigations
☐ Bottled Water Supply	☐ Recreation Area Irrigation	☐ Livestock	☑ Monitoring
☐ Public Water Supply (Limited Use/DOH)		☐ Nursery Irrigation	☐ Test
☐ Public Water Supply (Community or Non-Community/DEP)		☐ Commercial/Industrial	☐ Earth-Coupled Geothermal
☐ Class I Injection		☐ Golf Course Irrigation	☐ HVAC Supply
			☐ HVAC Return

Class V Injection: ☐ Recharge ☐ Commercial/Industrial Disposal ☐ Aquifer Storage and Recovery ☐ Drainage
Remediation: ☐ Recovery ☐ Air Sparge ☐ Other (Describe) _____
☐ Other (Describe) _____

Date Stamp
Official Use Only

10. *Distance from Septic System if ≤ 200 ft. _____ 11. Facility Description S-65C Structure 12. Estimated Start Date 5/30/2017

13. *Estimated Well Depth 1152 ft. *Estimated Casing Depth 370 ft. Primary Casing Diameter 6 in. Open Hole: From 370 To 1152 ft.

14. Estimated Screen Interval: From _____ To _____ ft.

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

16. Secondary Casing: Telescope Casing | Liner | Surface Casing | Diameter _____ in.

17. Secondary Casing Material: Black Steel | Galvanized | PVC | Stainless Steel | Other _____

18. *Method of Construction, Repair, or Abandonment: Auger | Cable Tool | Jetted | Rotary | Sonic | Combination (Two or More Methods) | Hand Driven (Well Point, Sand Point) | Hydraulic Point (Direct Push) | Horizontal Drilling | ✓ Plugged by Approved Method | Other (Describe) _____

19. Proposed Grouting Interval for the Primary, Secondary, and Additional Casing:

From 1152 To 0	Seal Material (	Bentonite	✓ Neat Cement	Other _____)
From _____ To _____	Seal Material (	Bentonite	Neat Cement	Other _____)
From _____ To _____	Seal Material (	Bentonite	Neat Cement	Other _____)
From _____ To _____	Seal Material (	Bentonite	Neat Cement	Other _____)

20. Indicate total number of existing wells on site _____ List number of existing unused wells on site _____

21. *Is this well or any existing well or water withdrawal on the owner's contiguous property covered under a Consumptive/Water Use Permit (CUP/WUP) or CUP/WUP Application? Yes ✓ No If yes, complete the following: CUP/WUP No. _____ District Well ID No. OKF-42

22. Latitude 27.4008222 Longitude -81.1155388

23. Data Obtained From: GPS | Map | Survey Datum: _____ NAD 27 X NAD 83 _____ WGS 84

I hereby certify that I will comply with the applicable rules of Title 40, Florida Administrative Code, and that a water use permit or artificial recharge permit, if needed, has been or will be obtained prior to commencement of well construction. I further certify that all information provided in this application is accurate and that I will obtain necessary approval from other federal, state, or local governments, if applicable. I agree to provide a well completion report to the District within 30 days after completion of the construction, repair, modification, or abandonment authorized by this permit or the permit expiration, whichever occurs first.

I certify that I am the owner of the property, that the information provided is accurate, and that I am aware of my responsibilities under Chapter 373, Florida Statutes, to maintain or properly abandon this well; or, I certify that I am the agent for the owner, that the information provided is accurate, and that I have informed the owner of their responsibilities as stated above. Owner consents to allowing personnel of this WMD or Delegated Authority access to the well site during the construction, repair, modification, or abandonment authorized by this permit.

_____ | 9340 | _____ | 5/24/2017
*Signature of Contractor | *License No. | *Signature of Owner or Agent | *Date

BELOW THIS LINE - FOR OFFICIAL USE ONLY

Approval Granted By _____ Issue Date 5/24/17 Expiration Date 11/24/17 Hydrologist Approval _____ Initials
Fee Received $ 55.00 Receipt No. _____ Check No. _____

THIS PERMIT IS NOT VALID UNTIL PROPERLY SIGNED BY AN AUTHORIZED OFFICER OR REPRESENTATIVE OF THE WMD OR DELEGATED AUTHORITY. THE PERMIT SHALL BE AVAILABLE AT THE WELL SITE DURING ALL CONSTRUCTION, REPAIR, MODIFICATION, OR ABANDONMENT ACTIVITIES.

Permit No. _____

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

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

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

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

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

Comments:

This abandonment is part of the Kissimmee River Restoration Project C-38 Reach 2 Backfill Contract 10 Plug and Abandonment of Artesian Well OKF-42 and a Surficial Aquifer Well project.

See Attached Maps

***General Site Map of Proposed Well Location**

Identify known roads and landmarks. Give distances from all reference points or structures, septic systems, sanitary hazards, and contamination sources, if applicable.

Florida HEALTH

Okeechobee County Health Department
1728 NW 9th Ave Okeechobee, FL 34972

PAYING ON: PERMIT #: 47-59-1765607 BILL DOC #:47-BID-3437212

RECEIVED FROM: Paul Petrey AMOUNT PAID: $ 55.00

PAYMENT FORM: CREDIT CARD PAYMENT DATE: 05/24/2017

MAIL TO: **Paul Petrey**
10014 N Dale Mabry Hwy
Ste 205
Tampa, FL 33618

FACILITY NAME : SFWMD

PROPERTY LOCATION:

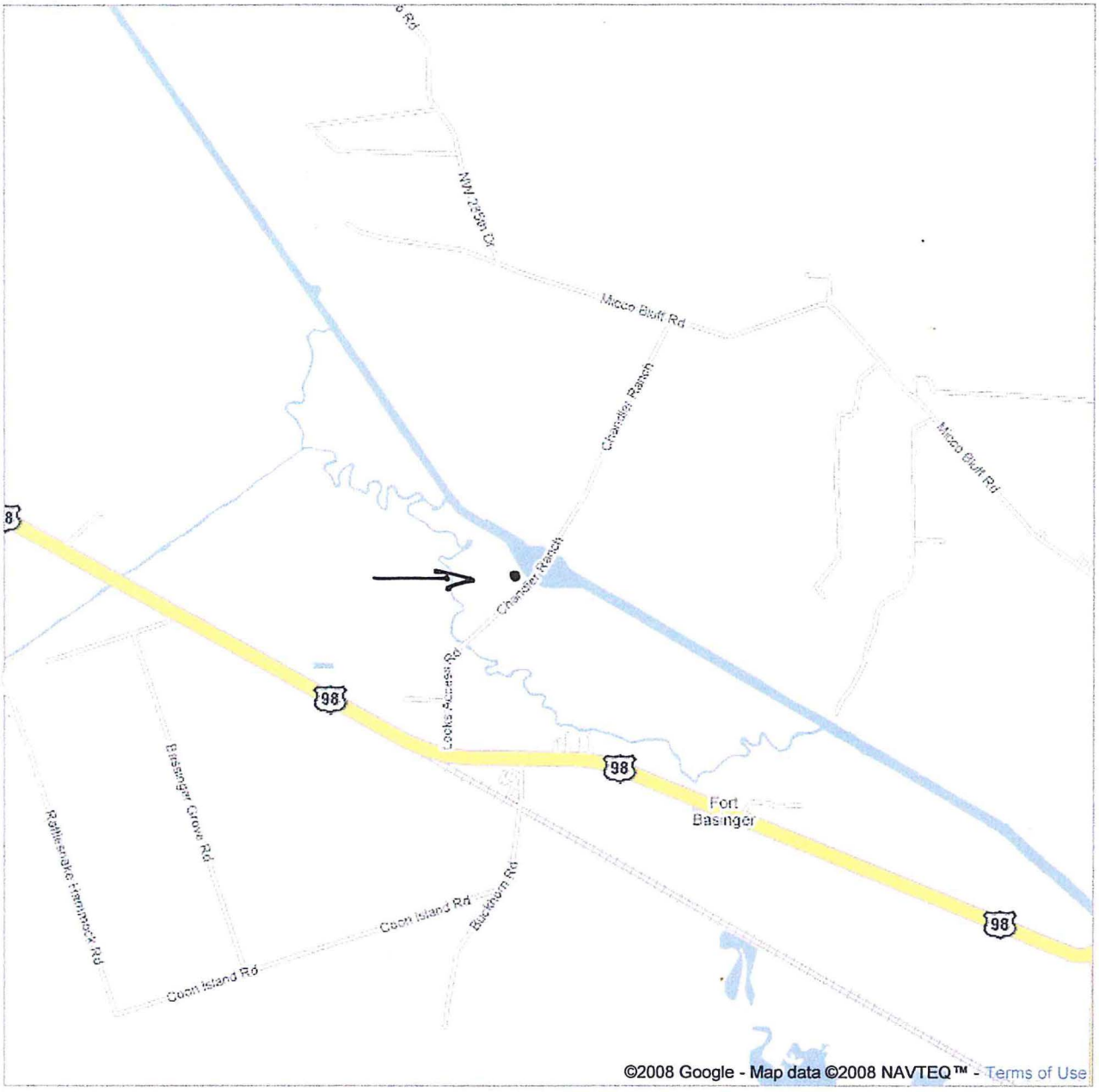
S-65C Structure on the C-38 Canal
Okeechobee, FL 34972

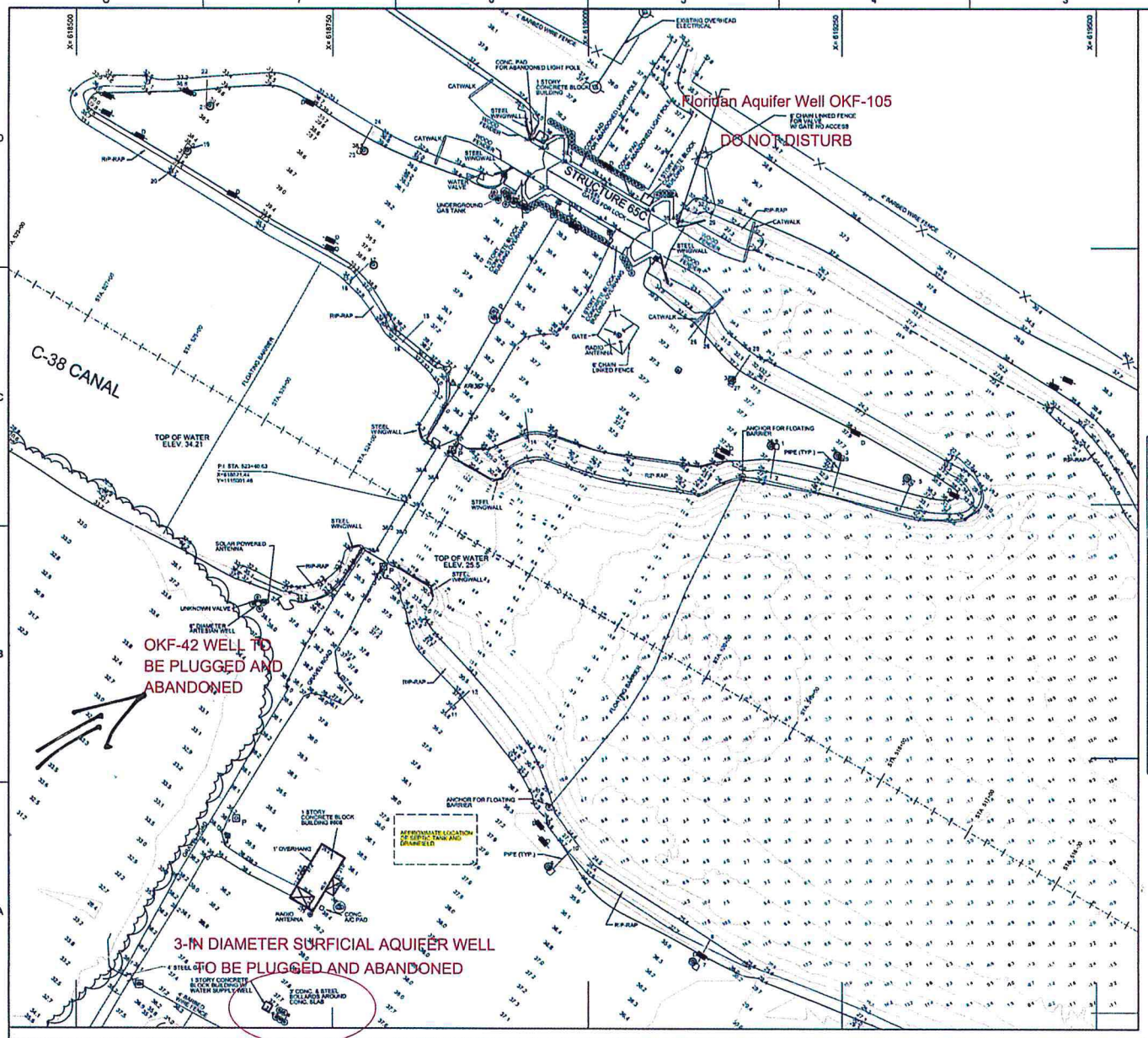
Lot: _____ Block: _____

Property ID: _____

EXPLANATION or DESCRIPTION:	QUANTITY	FEE
-1 - Well Abandonment	1	$ 55.00

RECEIVED BY: HollandVN AUDIT CONTROL NO. **47-PID-3249099**


NW 225th Ct
Mocco Bluff Rd
Chandler Ranch
Mocco Bluff Rd
Chandler Ranch
98
Locks Access Rd
98
Fort
Basinger
98
Basinger Grove Rd
Rattlesnake Hammock Rd
Coon Island Rd
Coon Island Rd
Blackwater Rd
©2008 Google - Map data ©2008 NAVTEQ™ - Terms of Use



SAFETY ON THIS JOB DEPENDS ON YOU

NOTES:

1. REFER TO SURVEY No. 2011-178 (GRW, ARC)
2. ALL EXISTING STRUCTURES SHOWN ARE TO BE DEMOLISHED. REFER TO SPECIFICATION SECTION 02 41 00 DEMOLITION AND TO STRUCTURE 65C AS-BUILT DRAWINGS.
3. REFER TO DRAWING G-11 FOR LIMITS OF DEMOLITION.

PIPE TABULATION

PIPE NO.	TOP ELEV.	INV. ELEV.	DESCRIPTION	PIPE NO.	TOP ELEV.	INV. ELEV.	DESCRIPTION
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7	35.32	34.32	12" HDP PIPE	23	39.39	37.39	12" HDP PIPE
8	30.07	29.07	12" HDP PIPE	24	35.39	34.39	12" HDP PIPE
9	36.01	35.01	12" HDP PIPE	24	38.21	37.21	12" HDP PIPE
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12	32.40	31.70	8" CMP PIPE	28	29.51	28.51	12" HDP PIPE
13	37.49	36.49	12" CMP PIPE	29	31.65	31.15	6" PVC
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LEGEND & ABBREVIATIONS

P.T. POINT OF TANGENCY	UTILITY BOX
P.C. POINT OF CURVATURE	BOLLARD
P.I. POINT OF INTERSECTION	CONCRETE CULVERT W/ ID
PVC POLYVINYL CHLORIDE PIPE	INFO SIGN
HDP HIGH DENSITY PLASTIC PIPE	DANGER SIGN
CMP CORRUGATED METAL PIPE	REFLECTOR POST
CONC CONCRETE	FENCE
ELEV. ELEVATION	EDGE OF VEGETATION
INV. INVERT	TOP OF BANK
MONUMENT FOUND	TOE OF BANK
OVERHEAD ELECTRIC POLE	RIPRAP AREA
ANTENNA GUY SUPPORT	MAJ. CONTOUR W/ ANNOTATION
STREETLIGHT	MINOR CONTOUR
FIBER OPTIC CABLE WARNING SIGN	WATERS EDGE
ABANDONED MONITORING WELL	BUILDING OVERHANG
STREET LIGHT	STRUCTURES
FLAG POLE	STORM PIPE W/ ID
MANHOLE	EDGE OF GRAVEL ROAD
SANITARY CLEAN OUT	EDGE OF UNPAVED ROAD
VALVE	ASPHALT
ANTENNA	
ELECTRIC PULL BOX	
WATER METER	

GRAPHIC SCALES

50' 0 50' 100'

US Army Corps of Engineers, Jacksonville District

NO.	BY	ZONE	DESCRIPTION	DATE

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
JACKSONVILLE DISTRICT
JACKSONVILLE, FLORIDA

DESIGNED BY: CVH	DRAWN BY: CVH	CHD BY: GG	SUBMITTED BY:
PLOT SCALE: AS SHOWN	PLOT DATE: N/A	FILE NUMBER: N/A	CONTRACT NO.: W912EP-16-R-0007
FILE NAME: 11-520C-CNT109F-GC115.DGN			DATE: SEPTEMBER 2015

KISSIMMEE RIVER RESTORATION PROJECT
OKEECHOBEE AND HIGHLANDS COUNTIES FLORIDA

C-38 REACH 2 BACKFILL

GENERAL

EXISTING S-65C FEATURES

DRAWING NO.

G-15

STATE OF FLORIDA WELL COMPLETION REPORT

Date Stamp

Official Use Only

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

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

1.*Permit Number 1765607 *CUP/WUP Number NA *DID Number OKF-42 62-524 Delineation No. _____

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

3.*Owner's Name SFWMD 4.*Completion Date 6/8/17 5. Florida Unique ID OKF-42

6. S-65C Structure on the C38 Canal, Okeechobee, Florida
*Well Location - Address, Road Name or Number, City, ZIP

7. *County Okeechobee *Section 27 Land Grant _____ *Township 35S *Range 32E

8. Latitude 27.4008222 Longitude -81.1155388

9. Data Obtained From: ____GPS ____Map ____Survey Datum: X NAD 27 ____NAD 83 ____WGS 84

10.*Type of Work: ____Construction ____Repair ____Modification X Abandonment

11.*Specify Intended Use(s) of Well(s):
____Domestic
____Bottled Water Supply
____Public Water Supply (Limited Use/DOH)
____Public Water Supply (Community or Non-Community/DEP)
____Class I Injection
____Landscape Irrigation
____Recreation Area Irrigation
____Agricultural Irrigation
____Livestock
____Nursery Irrigation
____Commercial/Industrial
____Golf Course Irrigation
____Site Investigation
X Monitoring
____Test
____Earth-Coupled Geothermal
____HVAC Supply
____HVAC Return

Class V Injection: ____Recharge ____ Commercial/Industrial Disposal ____Aquifer Storage and Recovery ____Drainage

Remediation: ____Recovery ____Air Sparge ____Other (Describe) _____

____Other (Describe) _____

12.*Drill Method: ____Auger ____Cable Tool ____Rotary ____Combination (Two or More Methods) ____Jetted ____Sonic
____Horizontal Drilling ____Hydraulic Point (Direct Push) ____Other Abandoned

13.*Measured Static Water Level +2' ft. Measured Pumping Water Level _____ ft. After _____ Hours at _____ GPM

14.*Measuring Point (Describe) _____ Which is ____ft. ____Above ____Below Land Surface *Flowing: ____Yes ____No

15.*Casing Material: ____Black Steel ____Galvanized X PVC ____Stainless Steel ____Not Cased ____Other _____

16.*Total Well Depth 1153 ft. Cased Depth 370 ft. *Open Hole: From TD To 370 ft. *Screen: From ____To____ft. Slot Size____

17.*Abandonment: ____Other (Explain) _____

From TD ft.	To 0 ft.	No. of Bags 418	Seal Material (Check One):	X	Neat Cement	____	Bentonite	____ Other ____
From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____
From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____
From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____
From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____

18.*Surface Casing Diameter and Depth:

Dia ____ in. From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____
Dia ____ in. From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____

19.*Primary Casing Diameter and Depth:

Dia ____ in. From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____
Dia ____ in. From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____
Dia ____ in. From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____
Dia ____ in. From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____
Dia ____ in. From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____

20.*Liner Casing Diameter and Depth:

Dia ____ in. From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____
Dia ____ in. From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____
Dia ____ in. From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____

21.*Telescope Casing Diameter and Depth:

Dia ____ in. From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____
Dia ____ in. From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____
Dia ____ in. From ____ ft.	To ____ ft.	No. of Bags ____	Seal Material (Check One):	____	Neat Cement	____	Bentonite	____ Other ____

22. Pump Type (If Known):
____Centrifugal ____Jet ____Submersible ____Turbine
Horsepower _____ Pump Capacity (GPM) _____
Pump Depth _____ft. Intake Depth _____ft.

23. Chemical Analysis (When Required):
Iron _____ppm Sulfate _____ppm Chloride _____ppm
____Laboratory Test ____Field Test Kit

24. Water Well Contractor:

*Contractor Name Paul Petrey *License Number 9340 E-mail Address paul@applieddrillingengineering.com

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

FORM LEG-R.005.02 (6/10)

Rule 40D-3.411 (1) (a), F.A.C.

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

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

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

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

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

***DRILL CUTTINGS LOG** (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zone. Grain Size: F=Fine, M=Medium, and C=Coarse)

From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	

Comments:

_____

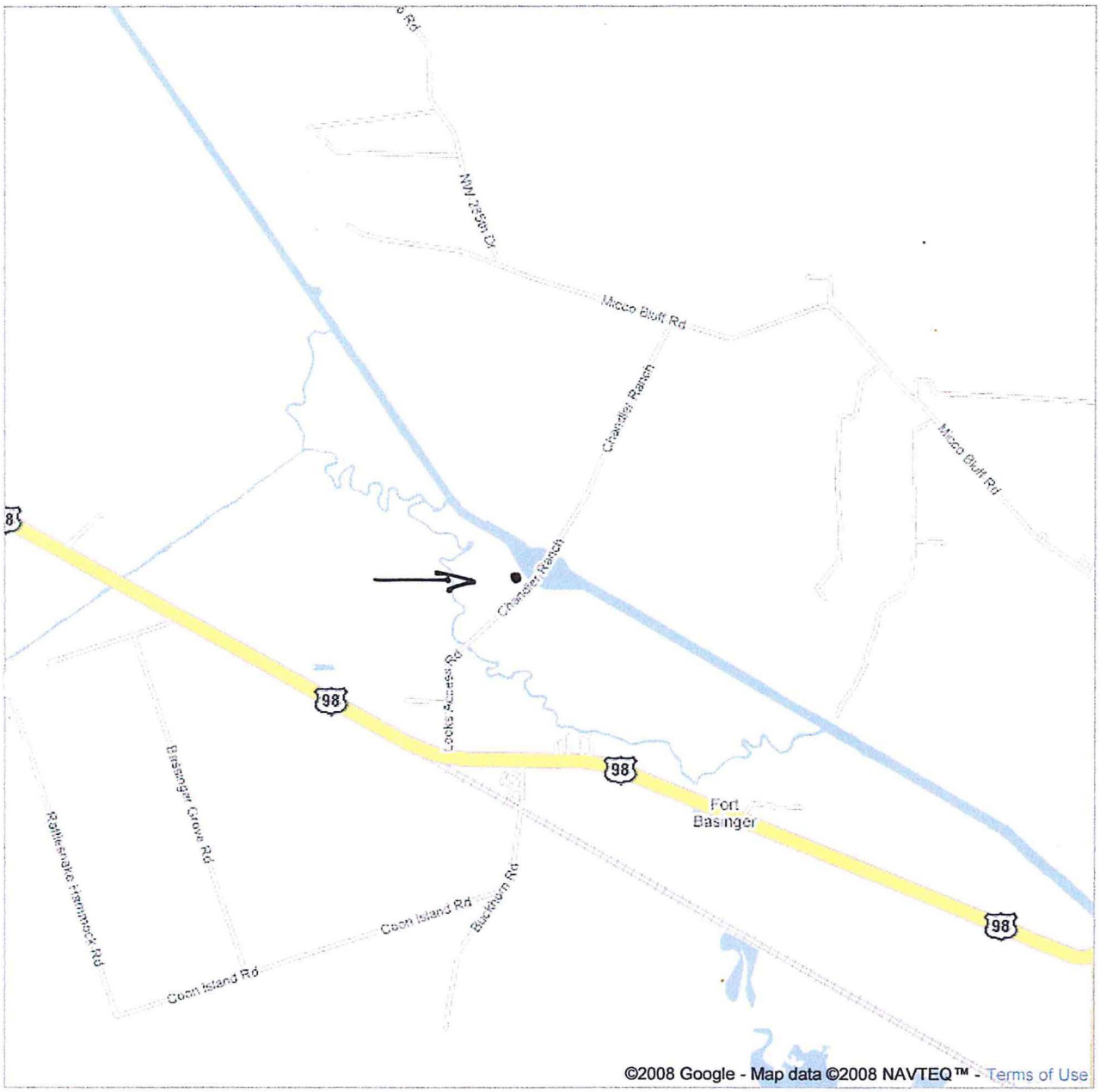
_____

***Detailed Site Map of Well Location**

See attached Maps.

N

Give distances from all reference points or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well.


NW 125th Dr
Micco Bluff Rd
Chandler Ranch
Micco Bluff Rd
Chandler Ranch
98
Locks Access Rd
98
98
Fort
Basinger
Rattlesnake Hammock Rd
Basinger Grove Rd
Coon Island Rd
Blackhorn Rd
Coon Island Rd
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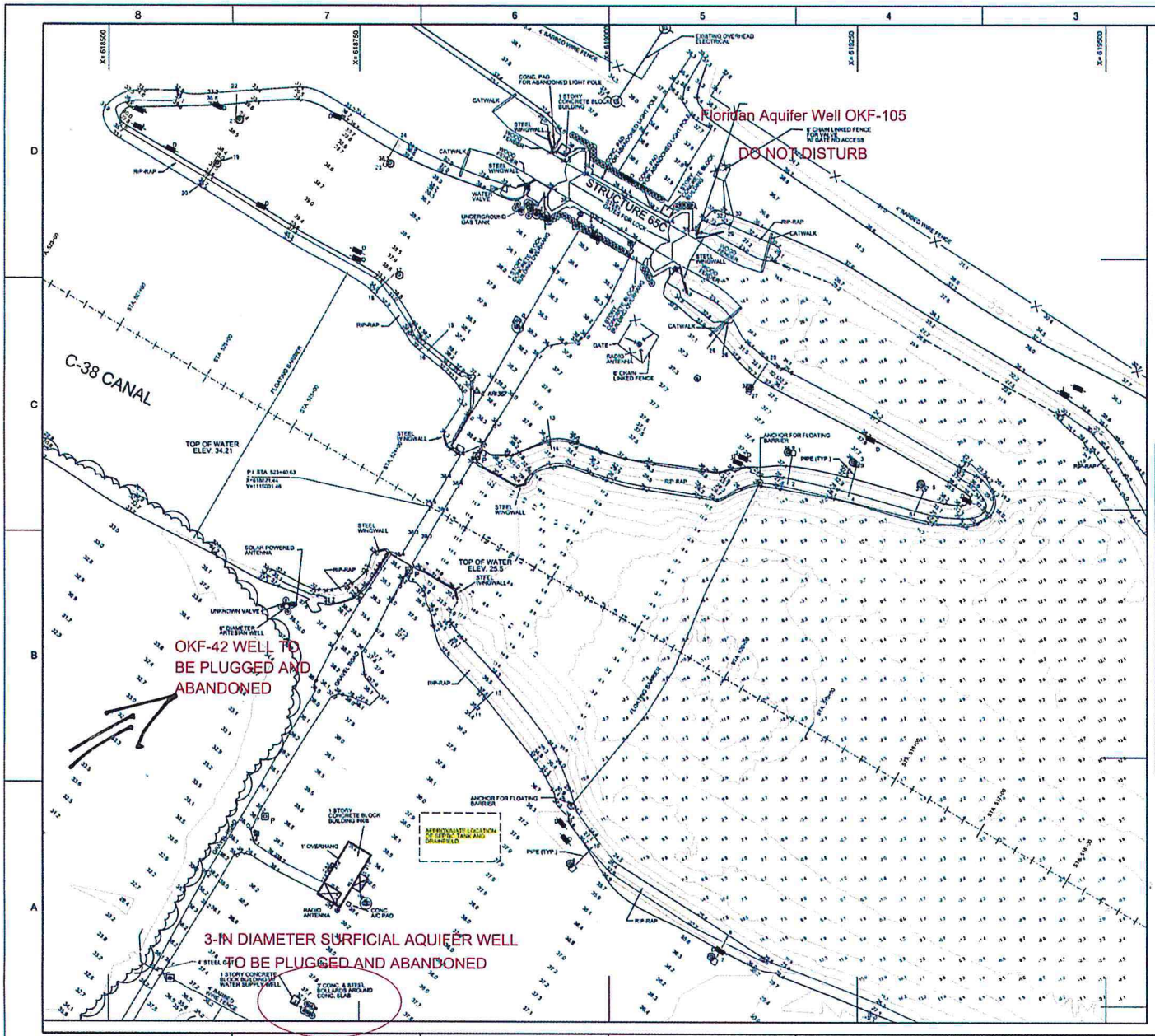

SAFETY ON THIS JOB DEPENDS ON YOU

NOTES:

1. REFER TO SURVEY No. 2011-178 (GRW, ARC)
2. ALL EXISTING STRUCTURES SHOWN ARE TO BE DEMOLISHED. REFER TO SPECIFICATION SECTION 02 41 00 DEMOLITION AND TO STRUCTURE 65C AS-BUILT DRAWINGS.
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ANTENNA GUY SUPPORT	MAJ. CONTOUR W/ ANNOTATION
STREETLIGHT	MINOR CONTOUR
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ABANDONED MONITORING WELL	BUILDING OVERHANG
STREET LIGHT	STRUCTURES
FLAG POLE	STORM PIPE W/ ID
MANHOLE	EDGE OF GRAVEL ROAD
SANITARY CLEAN OUT	EDGE OF UNPAVED ROAD
VALVE	ASPHALT
ANTENNA	
ELECTRIC PULL BOX	
WATER METER	

N

GRAPHIC SCALES

50' 0 50' 100'

US Army Corps of Engineers, Jacksonville District

NO.	DESCRIPTION	DATE	ZONE

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT
JACKSONVILLE, FLORIDA

DESIGNED BY: CDR
DRAWN BY: DGD
CHECKED BY: DGD
SUBMITTED BY:

DATE: SEPTEMBER 2015
SOLICITATION NO.: W912EP-15-R-0007
CONTRACT NO.:
PLOT SCALE: 1
PLOT DATE: N/A
FILE MARKER: N/A
FILE NAME: 114200-CMT10BF-GC115.DGN

KISSIMMEE RIVER RESTORATION PROJECT
OKEECHOBEE AND HIGHLANDS COUNTIES FLORIDA

C-38 REACH 2 BACKFILL

GENERAL
EXISTING S-65C FEATURES

DRAWING NO.
G-15

STATE OF FLORIDA PERMIT APPLICATION TO CONSTRUCT, REPAIR, MODIFY, OR ABANDON A WELL

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

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

The water well contractor is responsible for completing this form and forwarding the permit application to the appropriate delegated authority where applicable.

Permit No.
Florida Unique ID 47-59-1765645
Permit Stipulations Required (See Attached)
62-524 Quad No. _____ Delineation No. _____
CUP/WUP Application No. _____
ABOVE THIS LINE - FOR OFFICIAL USE ONLY

1. SFWMD | 3301 Gun Club Road | West Palm Beach | FL | 33406 | 561-686-8800
*Owner, Legal Name if Corporation | *Address | *City | *State | *ZIP | Telephone Number

2. S-65C Structure on the C-38 Canal, Okeechobee, Florida | Shallow Surficial Aquifer Well
*Well Location - Address, Road Name or Number, City

3. NA | Lot | Block | Unit
*Parcel ID No. (PIN) or Alternate Key (Circle One)

4. 27 | 35S | 32E | Okeechobee | Subdivision | Check if 62-524: ☐ Yes ☐ No
*Section or Land Grant | *Township | *Range | *County

5. Paul Petrey | 9340 | 813-695-4358 | paul@applieddrillingengineering.com
*Water Well Contractor | *License Number | *Telephone Number | E-mail Address

6. 10014 North Dale Mabry Hwy, Suit 205 | Tampa | Florida | 33618
*Water Well Contractor's Address | City | State | ZIP

7. *Type of Work: ☐ Construction ☐ Repair ☐ Modification ☑ Abandonment Lock structure s being removed by the USACE
*Reason for Repair, Modification, or Abandonment

8. *Number of Proposed Wells 1

9. *Specify Intended Use(s) of Well(s):

☐ Domestic	☐ Landscape Irrigation	☐ Agricultural Irrigation	☐ Site Investigations
☐ Bottled Water Supply	☐ Recreation Area Irrigation	☐ Livestock	☑ Monitoring
☐ Public Water Supply (Limited Use/DOH)		☐ Nursery Irrigation	☐ Test
☐ Public Water Supply (Community or Non-Community/DEP)		☐ Commercial/Industrial	☐ Earth-Coupled Geothermal
☐ Class I Injection		☐ Golf Course Irrigation	☐ HVAC Supply
			☐ HVAC Return

Class V Injection: ☐ Recharge ☐ Commercial/Industrial Disposal ☐ Aquifer Storage and Recovery ☐ Drainage
Remediation: ☐ Recovery ☐ Air Sparge ☐ Other (Describe) _____
☐ Other (Describe) _____

Date Stamp
Official Use Only

10. *Distance from Septic System if ≤ 200 ft. _____ 11. Facility Description S-65C Structure 12. Estimated Start Date 5/30/2017

13. *Estimated Well Depth 40 ft. *Estimated Casing Depth 40 ft. Primary Casing Diameter 3 in. Open Hole: From _____ To _____ ft.

14. Estimated Screen Interval: From 20 To 40 ft.

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

16. Secondary Casing: Telescope Casing | Liner | Surface Casing | Diameter _____ in.

17. Secondary Casing Material: Black Steel | Galvanized | PVC | Stainless Steel | Other _____

18. *Method of Construction, Repair, or Abandonment: Auger | Cable Tool | Jetted | Rotary | Sonic | Combination (Two or More Methods) | Hand Driven (Well Point, Sand Point) | Hydraulic Point (Direct Push) | Horizontal Drilling | ✓ Plugged by Approved Method | Other (Describe) _____

19. Proposed Grouting Interval for the Primary, Secondary, and Additional Casing:

From 40	To 0	Seal Material (	Bentonite	✓ Neat Cement	Other _____)
From _____	To _____	Seal Material (	Bentonite	Neat Cement	Other _____)
From _____	To _____	Seal Material (	Bentonite	Neat Cement	Other _____)
From _____	To _____	Seal Material (	Bentonite	Neat Cement	Other _____)

20. Indicate total number of existing wells on site _____ List number of existing unused wells on site _____

21. *Is this well or any existing well or water withdrawal on the owner's contiguous property covered under a Consumptive/Water Use Permit (CUP/WUP) or CUP/WUP Application? Yes ✓ No If yes, complete the following: CUP/WUP No. _____ District Well ID No. NA

22. Latitude 27.43997472 Longitude -81.1155277

23. Data Obtained From: GPS | Map | Survey Datum: _____ NAD 27 X NAD 83 _____ WGS 84

I hereby certify that I will comply with the applicable rules of Title 40, Florida Administrative Code, and that a water use permit or artificial recharge permit, if needed, has been or will be obtained prior to commencement of well construction. I further certify that all information provided in this application is accurate and that I will obtain necessary approval from other federal, state, or local governments, if applicable. I agree to provide a well completion report to the District within 30 days after completion of the construction, repair, modification, or abandonment authorized by this permit, or the permit expiration, whichever occurs first.

*Signature of Contractor | 9340 *License No.

I certify that I am the owner of the property, that the information provided is accurate, and that I am aware of my responsibilities under Chapter 373, Florida Statutes, to maintain or properly abandon this well; or, I certify that I am the agent for the owner, that the information provided is accurate, and that I have informed the owner of their responsibilities as stated above. Owner consents to allowing personnel of this WMD or Delegated Authority access to the well site during the construction, repair, modification, or abandonment authorized by this permit.

*Signature of Owner or Agent | 5/24/2017 *Date

BELOW THIS LINE - FOR OFFICIAL USE ONLY

Approval Granted By Diana May Issue Date 5/24/17 Expiration Date 11/24/17 Hydrologist Approval _____ Initials

Fee Received $ 55.00 Receipt No. _____ Check No. _____

THIS PERMIT IS NOT VALID UNTIL PROPERLY SIGNED BY AN AUTHORIZED OFFICER OR REPRESENTATIVE OF THE WMD OR DELEGATED AUTHORITY. THE PERMIT SHALL BE AVAILABLE AT THE WELL SITE DURING ALL CONSTRUCTION, REPAIR, MODIFICATION, OR ABANDONMENT ACTIVITIES.

Permit No. _____

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

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

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

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

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

Comments:

This abandonment is part of the Kissimmee River Restoration Project C-38 Reach 2 Backfill Contract 10 Plug and Abandonment of Artesian Well OKF-42 and a Surficial Aquifer Well project.

See Attached Maps

***General Site Map of Proposed Well Location**

Identify known roads and landmarks. Give distances from all reference points or structures, septic systems, sanitary hazards, and contamination sources, if applicable.

Florida HEALTH

Okeechobee County Health Department
1728 NW 9th Ave Okeechobee, FL 34972

PAYING ON: PERMIT #: 47-59-1765607 BILL DOC #:47-BID-3437226

RECEIVED FROM: Paul Petrey AMOUNT PAID: $ 55.00

PAYMENT FORM: CREDIT CARD PAYMENT DATE: 05/24/2017

MAIL TO: **Paul Petrey**
10014 N Dale Mabry Hwy
Ste 205
Tampa, FL 33618

FACILITY NAME : SFWMD

PROPERTY LOCATION:

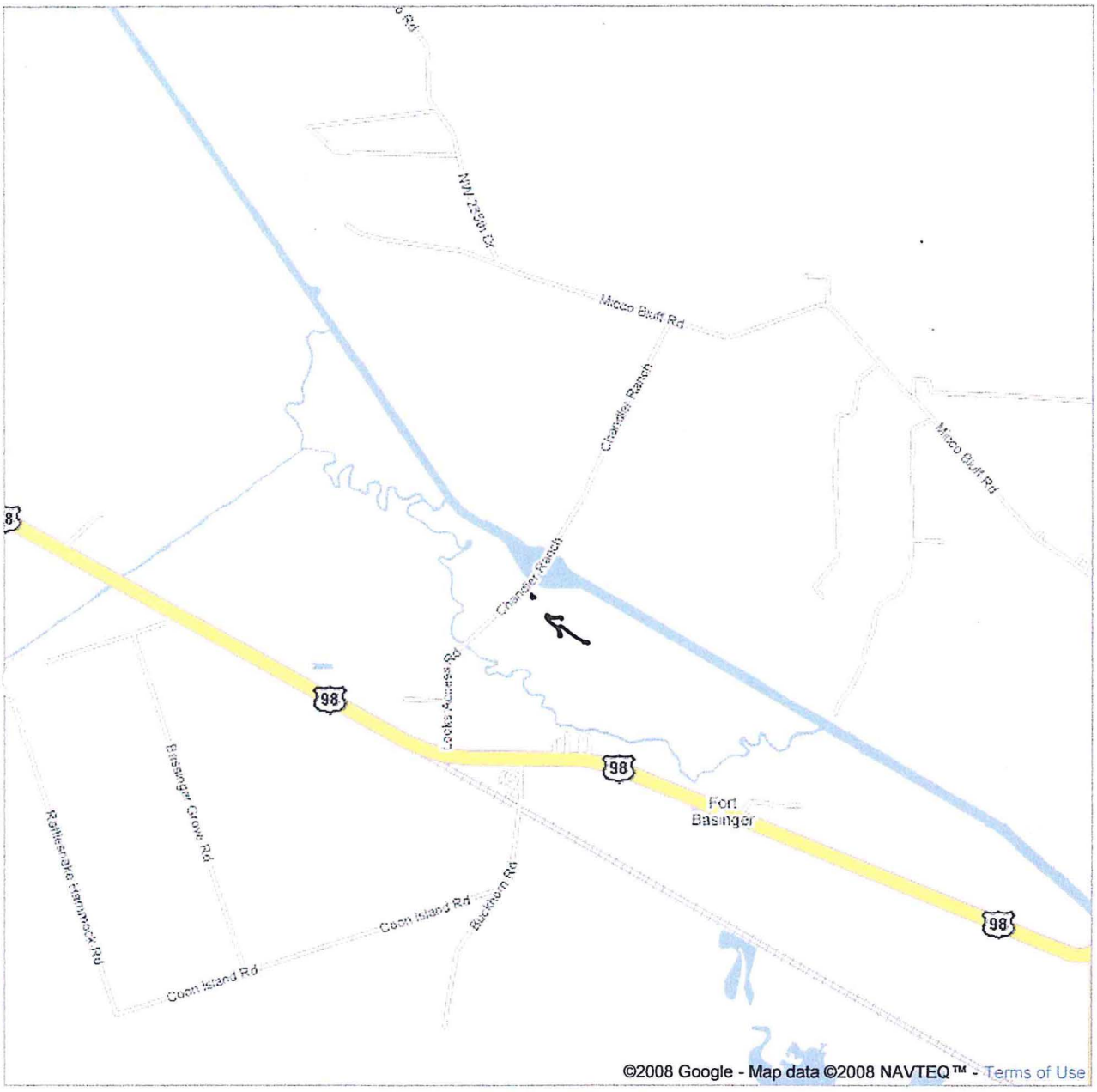
S-65C Structure on the C-38 Canal
Okeechobee, FL 34972

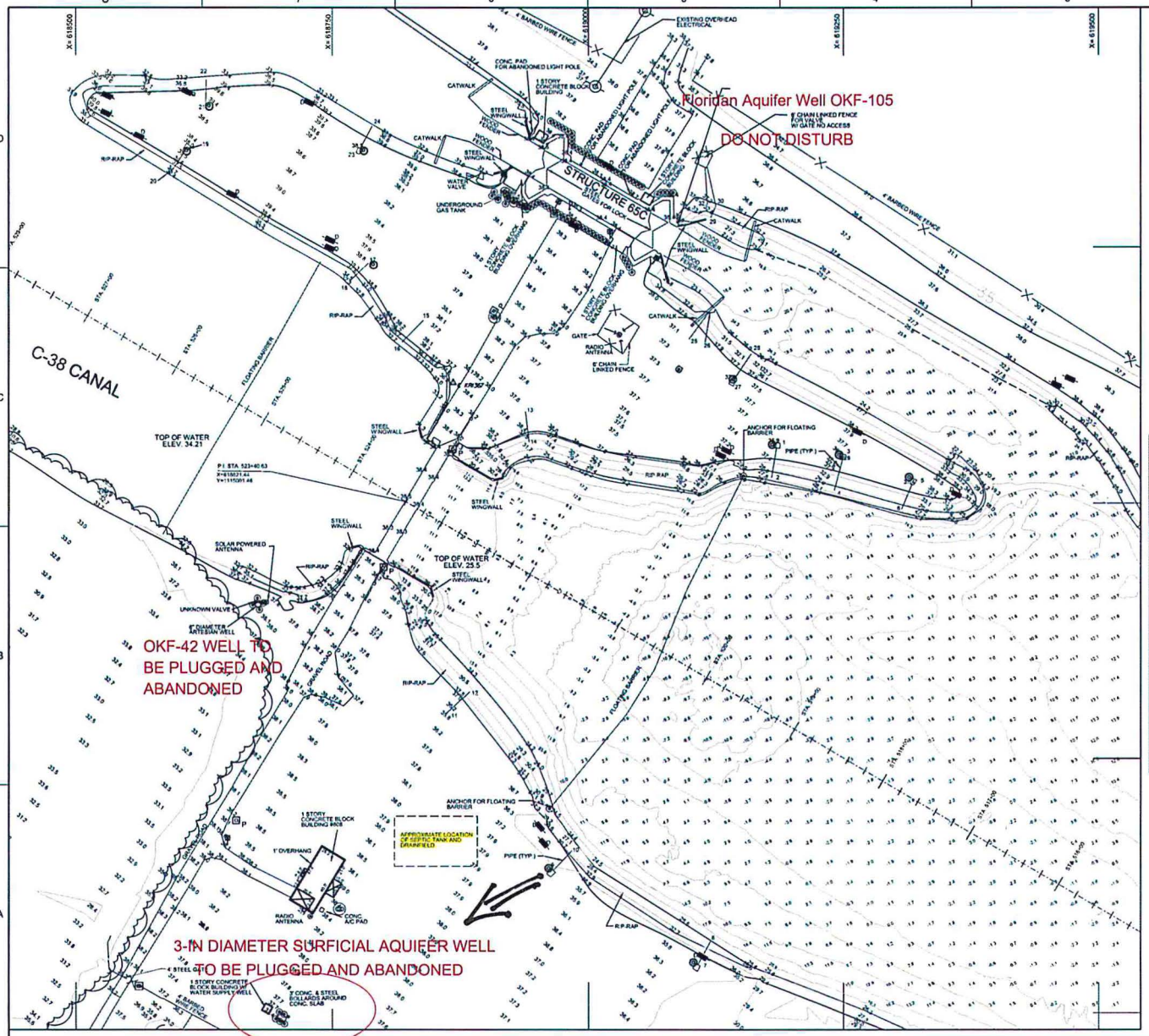
Lot: _____ Block: _____

Property ID: _____

EXPLANATION or DESCRIPTION:	QUANTITY	FEE
-1 - Well Abandonment	1	$ 55.00

RECEIVED BY: HollandVN AUDIT CONTROL NO. **47-PID-3249108**


NW 235th Dr
Mcco Bluff Rd
Chandler Ranch
Mcco Bluff Rd
Chandler Ranch
98
Locks Access Rd
98
Fort
Basinger
98
Basinger Grove Rd
Rattlesnake Hammock Rd
Coon Island Rd
Buckhorn Rd
Coon Island Rd
©2008 Google - Map data ©2008 NAVTEQ™ - Terms of Use



NOTES:

1. REFER TO SURVEY No. 2011-178 (GRW, ARC)
2. ALL EXISTING STRUCTURES SHOWN ARE TO BE DEMOLISHED. REFER TO SPECIFICATION SECTION 02 41 00 DEMOLITION AND TO STRUCTURE 65C AS-BUILT DRAWINGS.
3. REFER TO DRAWING G-11 FOR LIMITS OF DEMOLITION.

PIPE TABULATION

PIPE NO.	TOP ELEV.	INV. ELEV.	DESCRIPTION	PIPE NO.	TOP ELEV.	INV. ELEV.	DESCRIPTION
1	37.11	36.11	12" HDP PIPE	17	37.97	36.97	12" HDP PIPE
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3	37.13	36.13	12" HDP PIPE	19	38.47	37.47	12" HDP PIPE
4	30.37	29.37	12" HDP PIPE	20	37.07	36.07	12" HDP PIPE
5	37.02	36.02	12" HDP PIPE	21	38.71	37.71	12" HDP PIPE
6	30.89	29.89	12" HDP PIPE	22	36.86	35.86	12" HDP PIPE
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10	31.20	30.20	12" HDP PIPE	26	29.68	28.68	12" HDP PIPE
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12	32.40	31.70	8" CMP PIPE	28	29.51	28.51	12" HDP PIPE
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15	36.30	36.96	8" CMP PIPE	31	36.89	36.39	8" PVC
16	34.04	34.70	8" CMP PIPE				

LEGEND & ABBREVIATIONS

P.T. POINT OF TANGENCY	UTILITY BOX
P.C. POINT OF CURVATURE	BOLLARD
P.I. POINT OF INTERSECTION	CONCRETE CULVERT W/ ID
PVC POLYVINYL CHLORIDE PIPE	INFO SIGN
HDP HIGH DENSITY PLASTIC PIPE	DANGER SIGN
CMP CORRUGATED METAL PIPE	REFLECTOR POST
CONC CONCRETE	FENCE
ELEV. ELEVATION	EDGE OF VEGETATION
INV. INVERT	TOP OF BANK
MONUMENT FOUND	TOE OF BANK
OVERHEAD ELECTRIC POLE	RIPRAP AREA
ANTENNA GUY SUPPORT	MAJ. CONTOUR W/ ANNOTATION
STREETLIGHT	MINOR CONTOUR
FIBER OPTIC CABLE WARNING SIGN	WATERS EDGE
ABANDONED MONITORING WELL	BUILDING OVERHANG
STREET LIGHT	STRUCTURES
FLAG POLE	STORM PIPE W/ ID
MANHOLE	EDGE OF GRAVEL ROAD
SANITARY CLEAN OUT	EDGE OF UNPAVED ROAD
VALVE	ASPHALT
ANTENNA	
ELECTRIC PULL BOX	
WATER METER	

N

GRAPHIC SCALES

50' 0 50' 100'

US Army Corps of Engineers, Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

NO.	DATE	DESCRIPTION

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT
JACKSONVILLE, FLORIDA

DESIGNED BY: CDR
DRAWN BY: DCD
CHECKED BY: DCD
SUBMITTED BY:

DATE: SEPTEMBER 2015
SOLICITATION NO. W912EP-15-B-0007
CONTRACT NO.
PLOT SCALE: AS SHOWN
PLOT DATE: N/A
FILE NAME: 114SSCAT15BF-GC115.DGN
H & L MARKER: N/A

KISSIMMEE RIVER RESTORATION PROJECT
OKEECHOBEE AND HIGHLANDS COUNTIES FLORIDA

C-38 REACH 2 BACKFILL

GENERAL
EXISTING S-65C FEATURES

DRAWING NO.
G-15

STATE OF FLORIDA WELL COMPLETION REPORT

Date Stamp

Official Use Only

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

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

1.*Permit Number 1765645 *CUP/WUP Number NA *DID Number NA 62-524 Delineation No. NA

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

3.*Owner's Name SFWMD 4.*Completion Date 6/7/17 5. Florida Unique ID NA

6. S-65C Structure on the C-38 Canal, Okeechobee Florida
*Well Location - Address, Road Name or Number, City, ZIP

7. *County Okeechobee *Section 27 Land Grant _____ *Township 35S *Range 32E

8. Latitude 27.43997472 Longitude -81.11.55277

9. Data Obtained From: ____GPS ____Map ____Survey Datum: X NAD 27 ____NAD 83 ____WGS 84

10.*Type of Work: ____Construction ____Repair ____Modification X Abandonment

11.*Specify Intended Use(s) of Well(s):
____Domestic
____Bottled Water Supply
____Public Water Supply (Limited Use/DOH)
____Public Water Supply (Community or Non-Community/DEP)
____Class I Injection
____Landscape Irrigation
____Recreation Area Irrigation
____Agricultural Irrigation
____Livestock
____Nursery Irrigation
____Commercial/Industrial
____Golf Course Irrigation
____Site Investigation
X Monitoring
____Test
____Earth-Coupled Geothermal
____HVAC Supply
____HVAC Return

Class V Injection: ____Recharge ____ Commercial/Industrial Disposal ____Aquifer Storage and Recovery ____Drainage

Remediation: ____Recovery ____Air Sparge ____Other (Describe) _____

____Other (Describe) _____

12.*Drill Method: ____Auger ____Cable Tool ____Rotary ____Combination (Two or More Methods) ____Jetted ____Sonic
____Horizontal Drilling ____Hydraulic Point (Direct Push) ____Other Abandoned

13.*Measured Static Water Level 2 ft. Measured Pumping Water Level ____ ft. After ____Hours at ____GPM

14.*Measuring Point (Describe) _____ Which is ____ft. ____Above ____Below Land Surface *Flowing: ____Yes ____No

15.*Casing Material: X Black Steel ___Galvanized ____PVC ____Stainless Steel ____Not Cased ____Other _____

16.*Total Well Depth 38 ft. Cased Depth NA ft. *Open Hole: From ____To____ft. *Screen: From ____To____ft. Slot Size____

17.*Abandonment: ____Other (Explain) _____
From 38 ft. To 0 ft. No. of Bags 2 Seal Material (Check One): X Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

18.*Surface Casing Diameter and Depth:
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

19.*Primary Casing Diameter and Depth:
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

20.*Liner Casing Diameter and Depth:
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

21.*Telescope Casing Diameter and Depth:
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____
Dia____in. From____ft. To____ft. No. of Bags____ Seal Material (Check One): ____Neat Cement ____Bentonite ____Other____

22. Pump Type (If Known):
____Centrifugal ____Jet ____Submersible ____Turbine
Horsepower ____ Pump Capacity (GPM) ____
Pump Depth ____ft. Intake Depth ____ft.

23. Chemical Analysis (When Required):
Iron ____ppm Sulfate ____ppm Chloride ____ppm
____Laboratory Test ____Field Test Kit

24. Water Well Contractor:
*Contractor Name Paul Petrey *License Number 9340 E-mail Address paul@applieddrillingengineering.com

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

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
PHONE: (352) 796-7211 or (800) 423-1476
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ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
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NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT
152 WATER MANAGEMENT DR., HAVANA, FL 32333-4712
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P.O. BOX 24680
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WEST PALM BEACH, FL 33416-4680
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LIVE OAK, FL 32060
PHONE: (386) 362-1001 or (800) 226-1066 (Florida only)
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***DRILL CUTTINGS LOG** (Examine cuttings every 20 ft. or at formation changes. Note cavities and depth to producing zone. Grain Size: F=Fine, M=Medium, and C=Coarse)

From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	
From	ft.	To	ft.	Color		Grain Size (F, M, C)		Material	

Comments:

_____

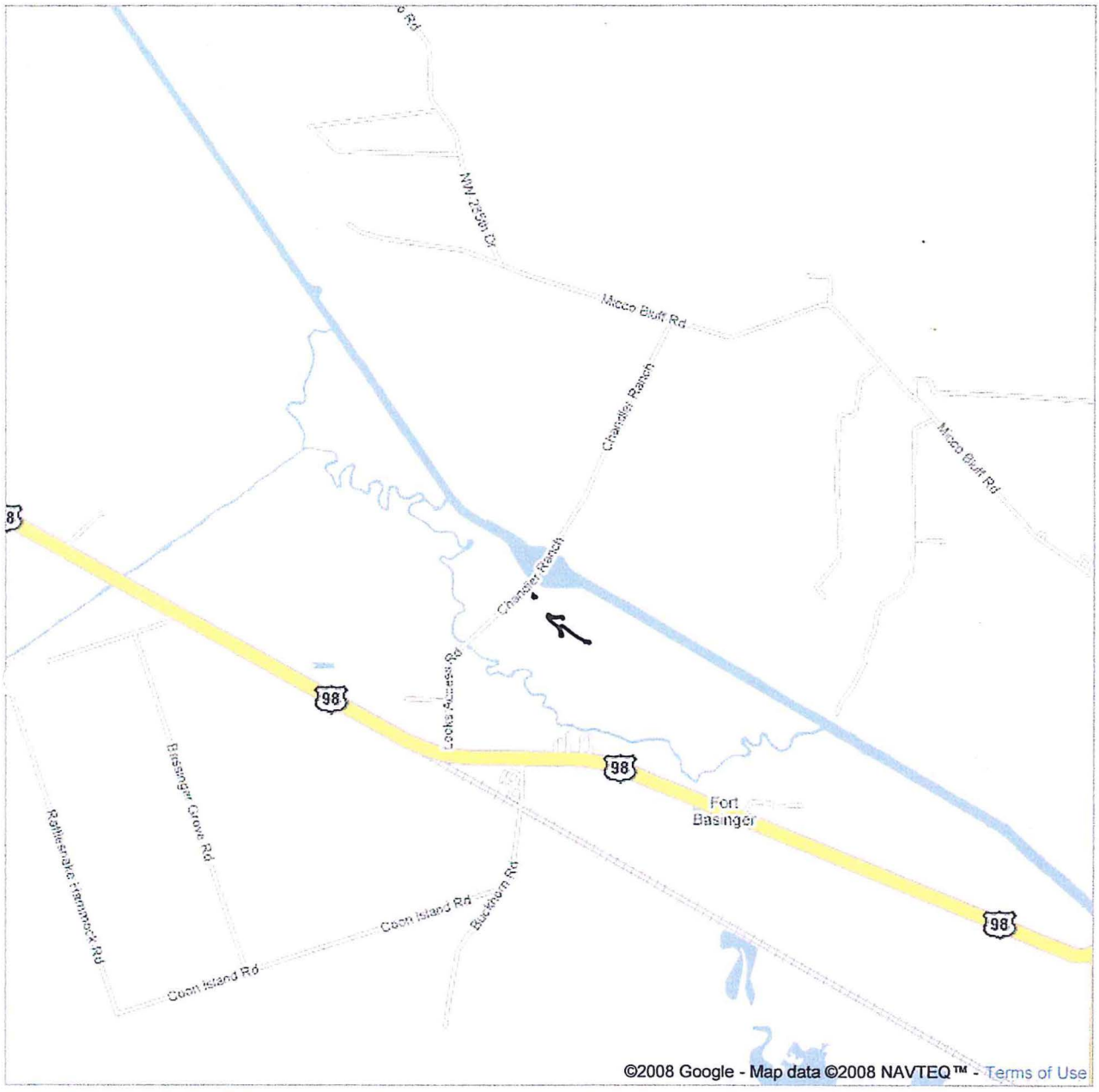
_____

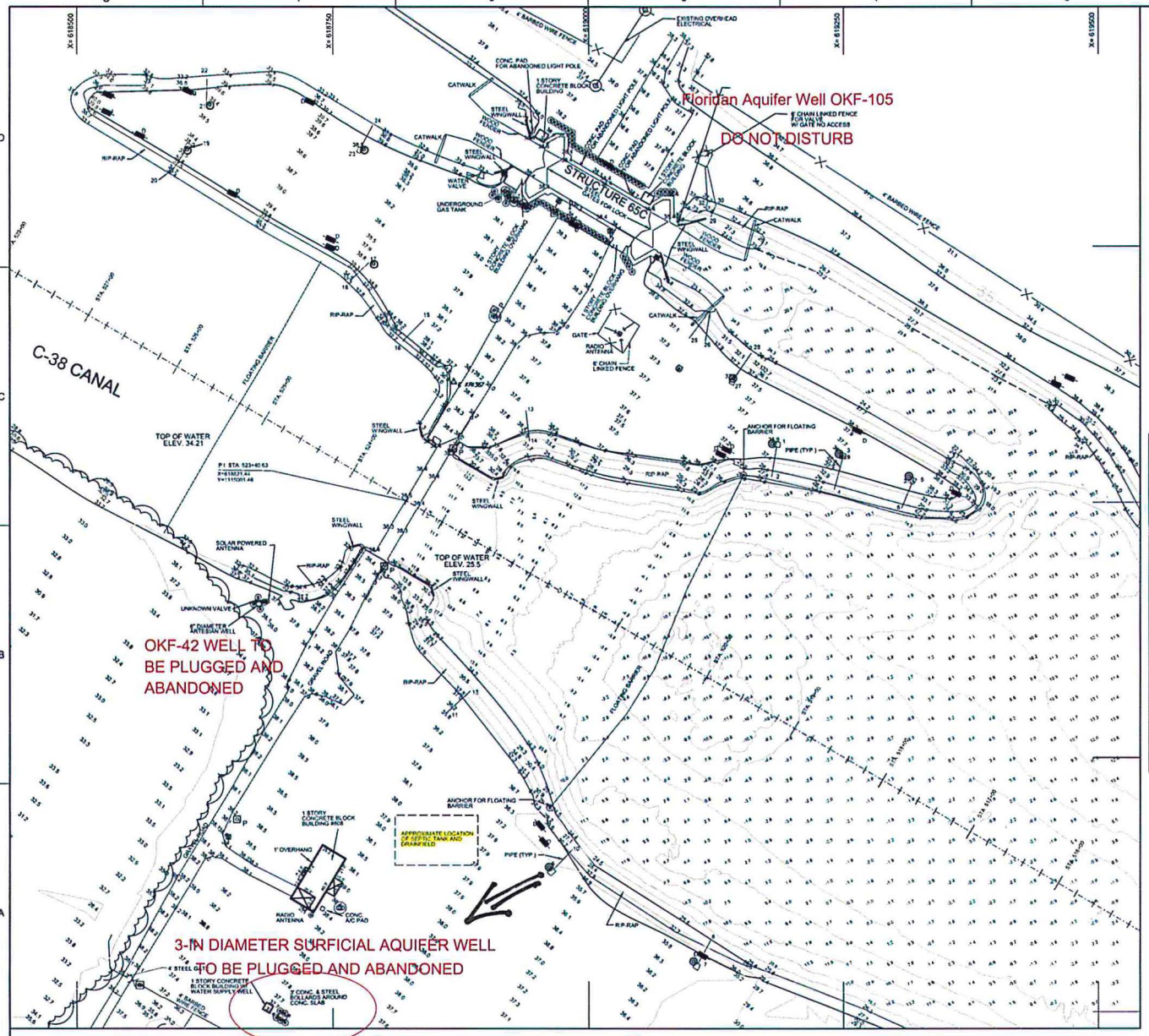
***Detailed Site Map of Well Location**

See attached Maps.

N

Give distances from all reference points or structures, septic systems, sanitary hazards, and contamination sources within 500 ft. of well.


NW 295th Ct
Mocc Bluff Rd
Chandler Ranch
Mocc Bluff Rd
Chandler Ranch
98
Cooks Access Rd
98
Fort
Basinger
98
Basinger Grove Rd
Rattlesnake Hammock Rd
Coon Island Rd
Blackburn Rd
Coon Island Rd
©2008 Google - Map data ©2008 NAVTEQ™ - Terms of Use



NOTES:

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2. ALL EXISTING STRUCTURES SHOWN ARE TO BE DEMOLISHED. REFER TO SPECIFICATION SECTION 02 41 00 DEMOLITION AND TO STRUCTURE 65C AS-BUILT DRAWINGS.
3. REFER TO DRAWING G-11 FOR LIMITS OF DEMOLITION.

PIPE TABULATION

PIPE NO.	TOP ELEV.	INV. ELEV.	DESCRIPTION	PIPE NO.	TOP ELEV.	INV. ELEV.	DESCRIPTION
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LEGEND & ABBREVIATIONS

P.T.	POINT OF TANGENCY		UTILITY BOX
P.C.	POINT OF CURVATURE		BOLLARD
P.I.	POINT OF INTERSECTION	1	CONCRETE CULVERT W/ ID
PVC	POLYVINYL CHLORIDE PIPE	I	INFO SIGN
HDP	HIGH DENSITY PLASTIC PIPE	D	DANGER SIGN
CMP	CORRUGATED METAL PIPE		REFLECTOR POST
CONC	CONCRETE		FENCE
ELEV.	ELEVATION		EDGE OF VEGETATION
INV.	INVERT		TOP OF BANK
	MONUMENT FOUND		TOE OF BANK
	OVERHEAD ELECTRIC POLE		RIPRAP AREA
	ANTENNA GUY SUPPORT		MAJ. CONTOUR W/ ANNOTATION
	STREETLIGHT		MINOR CONTOUR
	FIBER OPTIC CABLE WARNING SIGN		WATERS EDGE
	ABANDONED MONITORING WELL		BUILDING OVERHANG
	STREET LIGHT		STRUCTURES
	FLAG POLE	1	STORM PIPE W/ ID
	MANHOLE		EDGE OF GRAVEL ROAD
	SANITARY CLEAN OUT		EDGE OF UNPAVED ROAD
	VALVE		ASPHALT
	ANTENNA		
	ELECTRIC PULL BOX		
	WATER METER		

N

GRAPHIC SCALES

50' 0 50' 100'

US Army Corps of Engineers, Jacksonville District

SAFETY ON THIS JOB DEPENDS ON YOU

NO.	STR	ZONE	DESCRIPTION	DATE

DESIGNED BY: CDR
DRAWN BY: CDR
CHECKED BY: CDR
SUBMITTED BY:
DATE: SEPTEMBER 2015
SOLICITATION NO.: W912EP-15-B-0007
CONTRACT NO.:
F.S.I. MARKER: N/A
PLOT SCALE AS SHOWN
PLOT DATE: N/A
FILE NAME: 11-SCD-CVT10BF-GC115.DGN

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT
CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

KISSIMMEE RIVER RESTORATION PROJECT
OKEECHOBEE AND HIGHLANDS COUNTIES FLORIDA

C-38 REACH 2 BACKFILL

GENERAL
EXISTING S-65C FEATURES

DRAWING NO.
G-15

Attachment D

MV Geophysical

X-Y CALIPER LOG

Company	Applied Drilling & Engineering, Inc.
Well	OKF-42
Field	Basinger
County	Okeechobee
State	Florida
Country	USA

Location: API # :
Kissimmee River Restoration Project C-38
Plug & Abandonment of Artesian Well
Lat.: N 27.4008222 Long.: W-81.1155388
SEC TWP RGE

Other Services
NONE

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

Date	5-JUN-2017
Run Number	ONE
Depth Driller	1153'
Depth Logger	1153'
Bottom Logged Interval	1153'
Top Log Interval	SURFACE
Open Hole Size	5.875"
Type Fluid	H2O
Density / Viscosity	NA/NA
Max. Recorded Temp.	NA
Estimated Cement Top	NA
Time Well Ready	12:00 6/5/2017
Time Logger on Bottom	13:00 6/5/2017
Equipment Number	MVGS-1
Location	Fort Myers
Recorded By	S.Miller/C.Miller
Witnessed By	D.Hire (Cardno) P.Petrey (ADE)

Borehole Record

Run Number	Bit	From	To
ONE	5.875"	370'	1153'

Tubing Record

Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	6"	6" ID	SURFACE	370'
Prot. String				
Production String				
Liner				

Invoice No.	2017066	5x/pdf/las	adeokf42.db	* FIELD PRINT *

<<< Fold Here >>>

Comments

MAXIMUM ARM EXTENSION: 33"

BOREHOLE VOLUMES IN CUBIC FEET

U.S. Army Corp of Engineers / Cardno

MV Geophysical

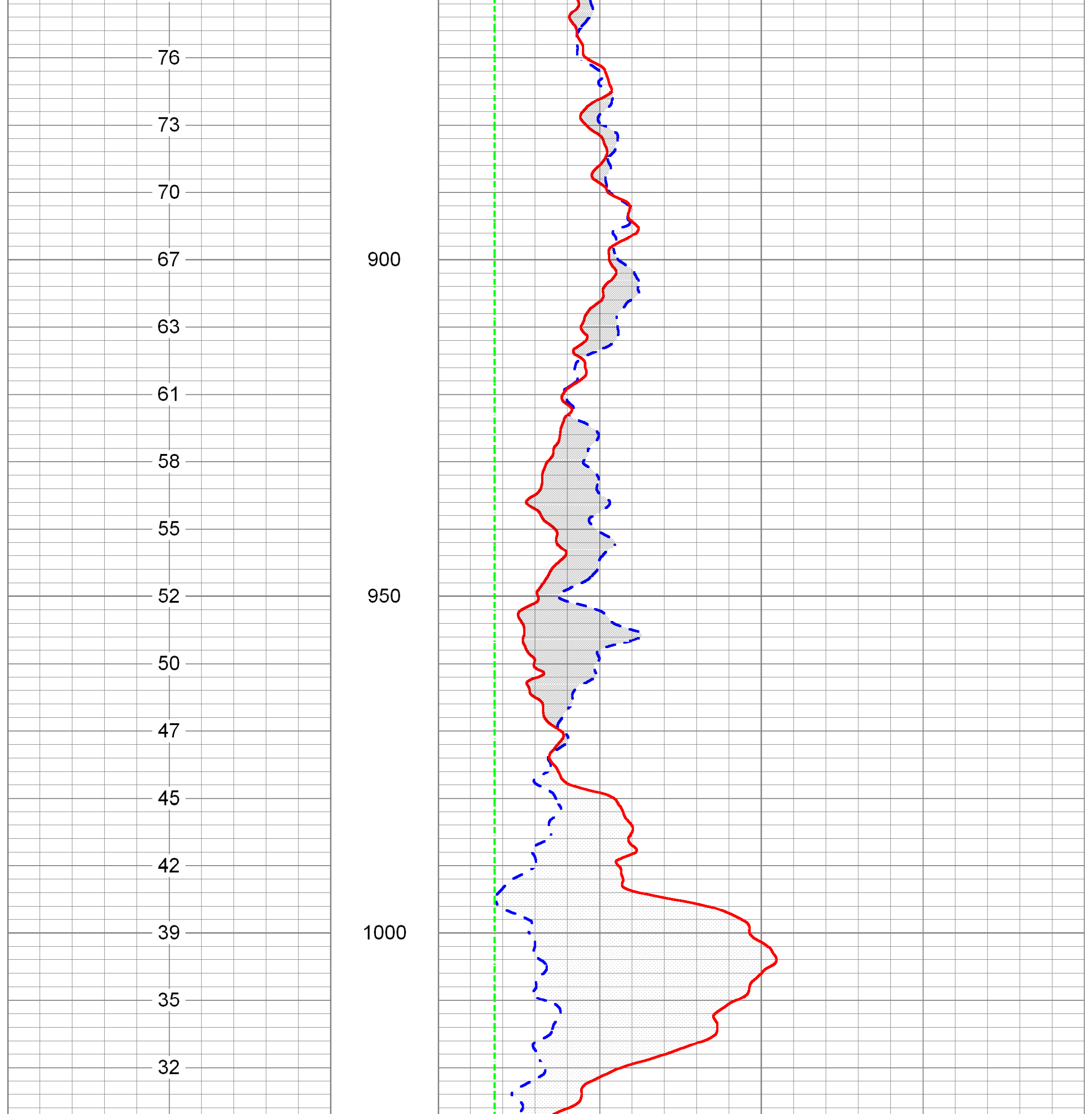
MAIN PASS

Database File	adeokf42.db
Dataset Pathname	MAIN
Presentation Format	xy515-5
Dataset Creation	Mon Jun 05 14:31:34 2017
Charted by	Depth in Feet scaled 1:240

MV Geophysical

REPEAT SECTION

Database File	adeokf42.db
Dataset Pathname	REPEAT
Presentation Format	xy515-5
Dataset Creation	Mon Jun 05 14:37:23 2017
Charted by	Depth in Feet scaled 1:240



Calibration Report

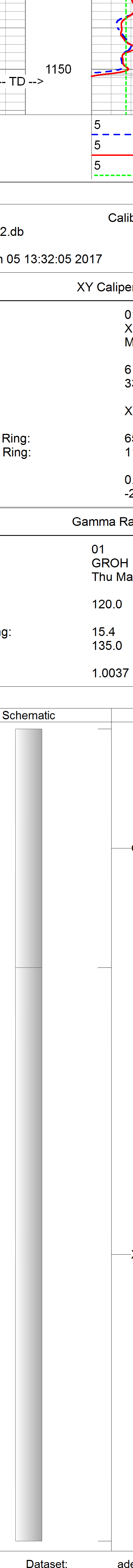
Database File	adeokf42.db
Dataset Pathname	pass2
Dataset Creation	Mon Jun 05 13:32:05 2017

XY Caliper Calibration Report

Serial Number:	01S		
Tool Model:	XYCS		
Performed:	Mon Jun 05 13:59:54 2017		
Small Ring:	6	in	
Large Ring:	33	in	
	X Caliper	Y Caliper	
Reading with Small Ring:	654.7	709.5	cps
Reading with Large Ring:	1158	1079	cps
Gain:	0.0536459	0.0730717	
Offset:	-29.122	-45.8444	

Gamma Ray Calibration Report

Serial Number:	01	
Tool Model:	GROH	
Performed:	Thu May 25 07:49:22 2017	
Calibrator Value:	120.0	GAPI
Background Reading:	15.4	cps
Calibrator Reading:	135.0	cps
Sensitivity:	1.0037	GAPI/cps



Sensor	Offset (ft)	Description	Length (ft)	O.D. (in)	Weight (lb
		GR-GROH (01)	2.75	3.50	40.00
GR	5.90				
		XYC-XYCS (01S)	6.60	3.50	110.00
YCAL	0.50				
XCAL	0.50				

Dataset:	adeokf42.db: field/well/run1/pass2
Total length:	9.35 ft
Total weight:	150.00 lb
O.D.:	3.50 in

MV Geophysical

Company	Applied Drilling & Engineering, Inc.
Well	OKF-42
Field	Basinger
County	Okeechobee
State	Florida
Country	USA

Attachment E

MASCHMEYER
CONCRETE COMPANY OF FLORIDA, INC.

1142 Water Tower Road, Lake Park FL 33403
Office: 1-877-484-9994 / Fax: 561-844-7102
South East Florida Division Dispatch: 561-844-9994 / Central Florida Division Dispatch:

867532

Concrete Tested ☐ Yes ☒ No
Cylinders Taken ☐ Yes ☒ No

LOT #

Comments

Added at Customer's Request
0 gals. to full load
gals. to 2/3 load
gals. to 1/3 load
Customer's Rep - Water Added

NOT RESPONSIBLE FOR VARIATION IN COLOR OR SURFACE DISCOLORATION

WARNING IRRITATION TO THE SKIN AND EYES
Cement polymer or freshly mixed concrete may cause skin injury. Avoid contact with skin and wash exposed skin areas promptly with water. If any cement powder or mixture gets into eyes, rinse immediately and repeatedly with water and get prompt medical attention. Keep children away from cement powder and all freshly mixed cement products.

ADDITIONAL WATER ADDED TO THIS CONCRETE WILL REDUCE ITS STRENGTH AND DURABILITY. ANY WATER ADDED IS AT CUSTOMER'S OWN RISK.

BATCH TIME
JUN 6 11:30AM

Load	To Job	On Job	Begin Pour	Begin [illegible]	To Plant	At Plant
11:47	11:50	12:25	12:32	1340	1345	14:30

PLANT	TICKET #	ORDER #	TRUCK #	LOAD SIZE	MIX	SLUMP	DATE
04	1024746	11	408	6	SLURRY MIX C+F	10in	06/06/2017

CUSTOMER #	SOLD TO	P.O. #	PROJECT #
1552	APPLIED DRILLING ENGINEERING	Paul	

DELIVERY ADDRESS	ZONE #	USE	DRIVER
20 Lock Access Rd - Micco Bluff	OKEE		Chris Jenness

INSTRUCTIONS
3.4 past 68 Off SR98 North

TIME DUE
12:14

LOAD QUANTITY	CUMULATIVE QUANTITY	ORDERED QUANTITY	PRODUCT CODE	PRODUCT DESCRIPTION	U.O.M.	UNIT PRICE	AMOUNT
6.00	6.00	6.00	30AF0530	30AF0530	YD		
1.00		0.00	ENVIRO	ENVIRONMENTAL DISPO	EA		
1.00		0.00	2	FUEL SURCHARGE	EA		

SIGNATURE OR RECEIPT - CONCRETE AND ACKNOWLEDGEMENT OF HAZARD WARNING

LIABILITY WAIVER Maschmeyer Concrete Company is not responsible for any property damage or any equipment damage for any deliveries beyond the curb line.

AUTHORIZED BY

SHIPMENT SUBJECT TO CONDITIONS ON REVERSE SIDE.

SUB-TOTAL	
TAX	
TOTAL	

MASCHMEYER
CONCRETE COMPANY OF FLORIDA, INC.

7142 Water Tower Road, Lake Park FL 33403
Office: 1-877-484-9994 / Fax: 561-844-7102
South East Florida Division Dispatch: 561-844-9994 / Central Florida Division Dispatch:

867534

Concrete Tested ☐ Yes ☐ No
Cylinders Taken ☐ Yes ☐ No

LOT #

Added at Customer's Request
_____ gals. to full load
_____ gals. to 2/3 load
_____ gals. to 1/3 load
0
Customer's Rep - Water Added

Comments

NOT RESPONSIBLE FOR VARIATION IN COLOR OR SURFACE DISCOLORATION

BATCH TIME: JUN 7 9:39AM

WARNING IRRITATION TO THE SKIN AND EYES
Cement polymer or freshly mixed concrete may cause skin injury. Avoid contact with skin and wash exposed skin areas promptly with water. If any cement powder or mixture gets into eyes, rinse immediately and repeatedly with water and get prompt medical attention. Keep children away from cement powder and all freshly mixed cement products.

ADDITIONAL WATER ADDED TO THIS CONCRETE WILL REDUCE ITS STRENGTH AND DURABILITY. ANY WATER ADDED IS AT CUSTOMER'S OWN RISK.

Load	To Job	On Job	Begin Pour	Begin Wash	To Plant	At Plant
9 44	9 52	10 25	10 31	11 07	11 14	12 22

PLANT	TICKET #	ORDER #	TRUCK #	LOAD SIZE	MIX	SLUMP	DATE
04	1024748	7	183	6	SLURRY MIX C+F	10in	06/07/2017

CUSTOMER #	SOLD TO	P.O. #	PROJECT #
1552	APPLIED DRILLING ENGINEERING	Need PO #	

DELIVERY ADDRESS	ZONE #	USE	DRIVER
MICCO BLUFFS 3.4MILES NORTH OF	OKEE		JEFF JONSEN

INSTRUCTIONS

TIME DUE 10:21

LOAD QUANTITY	CUMULATIVE QUANTITY	ORDERED QUANTITY	PRODUCT CODE	PRODUCT DESCRIPTION	U.O.M.	UNIT PRICE	AMOUNT
6.00	6.00	6.00	30AF0530	30AF0530	yd		
1.00		0.00	ENVIRO	ENVIRONMENTAL DISPO	ea		
1.00		0.00	2	FUEL SURCHARGE	ea		

SIGNATURE OF RECEIVER ACKNOWLEDGES RECEIPT OF HAZARD WARNING

...ing for any property damage or any ...ine.

AUTHORIZED BY

SUB-TOTAL
TAX
TOTAL

SHIPMENT SUBJECT TO CONDITIONS ON REVERSE SIDE.

MASCHMEYER
CONCRETE COMPANY OF FLORIDA, INC.

1142 Water Tower Road, Lake Park FL 33403
Office: 1-877-484-9994 / Fax: 561-844-7102
South East Florida Division Dispatch: 561-844-9994 / Central Florida Division Dispatch:

867553

Concrete Tested ☐ Yes ☐ No
Cylinders Taken ☐ Yes ☐ No

LOT #

Comments

Water Added at Customer's Request
_____ gals. to full load
_____ gals. to 2/3 load
_____ gals. to 1/3 load

Customer's Rep - Water Added

NOT RESPONSIBLE FOR VARIATION IN COLOR OR SURFACE DISCOLORATION

JUN 8 12:37PM

WARNING IRRITATION TO THE SKIN AND EYES
Cement polymer or freshly mixed concrete may cause skin injury. Avoid contact with skin and wash exposed skin areas promptly with water. If any cement powder or mixture gets into eyes, rinse immediately and repeatedly with water and get prompt medical attention. Keep children away from cement powder and all freshly mixed cement products.

ADDITIONAL WATER ADDED TO THIS CONCRETE WILL REDUCE ITS STRENGTH AND DURABILITY. ANY WATER ADDED IS AT CUSTOMER'S OWN RISK.

Load	To Job	On Job	Begin Pour	Begin Wash	To Plant	At Plant
		130	133	222	230	345

PLANT 1 TICKET 4024755 DRIVER # TRUCK # LOAD SIZE SLURRY MIX C+F SLUMP 10in DATE 06/08/2017

CUSTOMER # 4552 CUSTOMER APPLIED DRILLING ENGINEERING P.O. # No Pe Per Pe JOB # 800755

DELIVERY ADDRESS Mirco Bluffs off Us98 Okeechobe ZONE # OKEE USE DRIVER Kevin Freeman

INSTRUCTIONS TIME DUE 13:01

LOAD QUANTITY	CUMULATIVE QUANTITY	ORDERED QUANTITY	PRODUCT CODE	PRODUCT DESCRIPTION	U.O.M.	UNIT PRICE	AMOUNT
7.00	7.00	7.00	30AF0330	30AF0330	yd		
1.00		0.00	ENVIRO	ENVIRONMENTAL DISPO	ea		
1.00		0.00	2	FUEL SURCHARGE	ea		

SIGNATURE OR RECEIPT - CONCRETE AND ACKNOWLEDGEMENT OF HAZARD WARNING

LIABILITY WAIVER Maschmeyer Concrete Company will not assume liability for any property damage or any equipment damaged for any deliveries beyond the curb line.

AUTHORIZED BY

SHIPMENT SUBJECT TO CONDITIONS ON REVERSE SIDE.

SUB-TOTAL
TAX
TOTAL

Attachment F

SURVEYOR'S REPORT

Specific Purpose Survey to Locate Two Wells near
Water Management Structure S-65-C
Kissimmee River Restoration Project
C-38 Reach 2 Backfill Contract 10

Prepared for:

Applied Drilling Engineering, Inc.

Prepared by:

Morgan & Eklund, Inc.
Professional Survey Consultants

8745 U.S. Highway 1, P.O. Box 701420
Wabasso, Florida 32970
Phone: (772) 388-5364
Fax: (772) 388-3165
Licensed Business (L.B.) 4298

USACE IDIQ Contract: IDIQ W91278-16-D-0058

Morgan & Eklund, Inc. Project Number 5653.00

Report Date: June 8, 2017

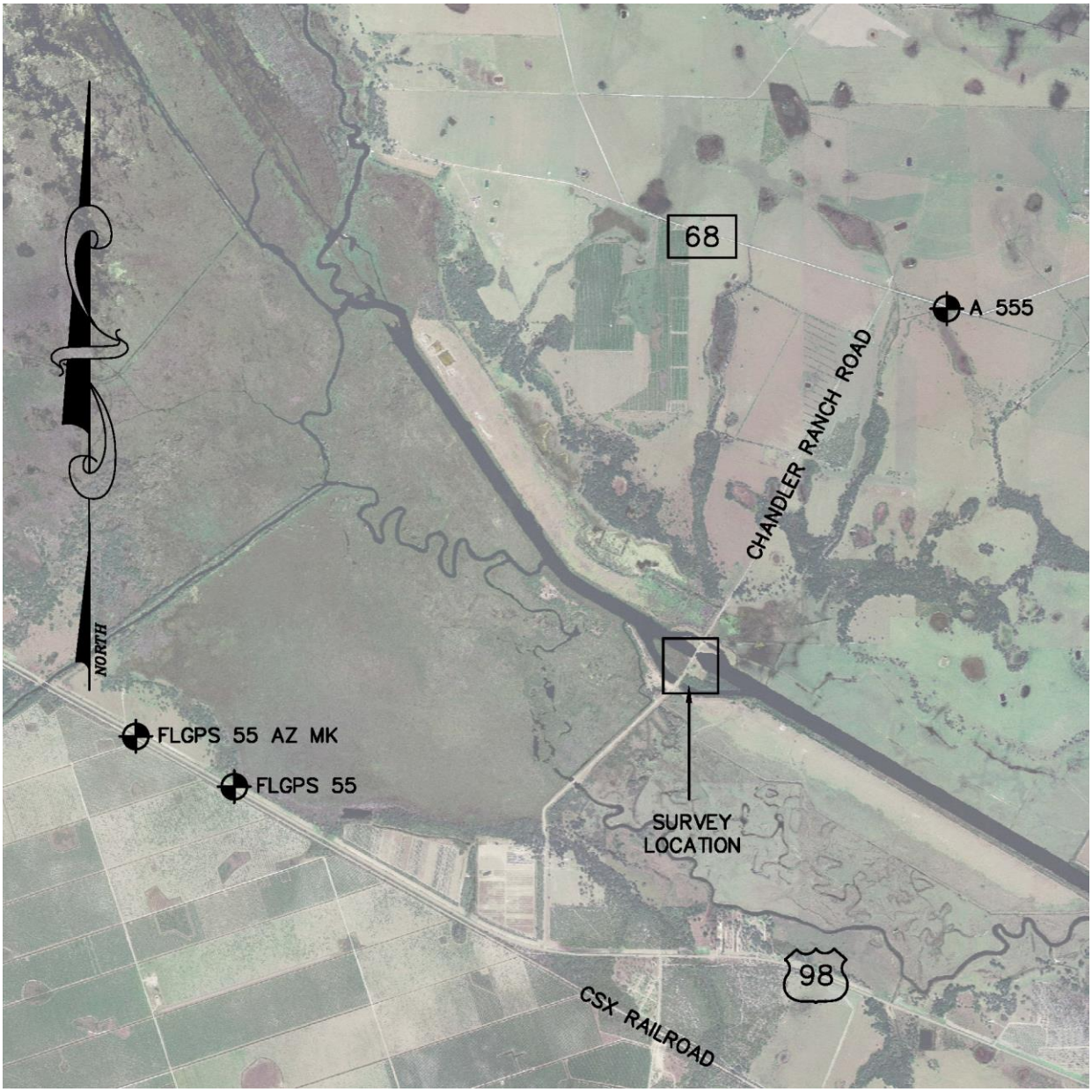
TABLE OF CONTENTS

Purpose

The specific purpose of this control survey is to establish horizontal and vertical positions of the top of the casings of two wells near the water management structure S-65-C.

Project Location

The water management structure S-65-C is located on the C-38 canal in Okeechobee County, as shown in the image below:



Project Datum

The horizontal datum for this survey is the North American Datum of 1983, NGS adjustment of 2011 (NAD 83/11). The vertical datum for this survey is the North American Vertical Datum of 1988 (NAVD 88). The positions and elevations for the NGS survey control monuments "FLGPS 55 1989" and "FLGPS 55 AZ MK 1989" were obtained through the NGS database.

Surveying Methods

Redundant RTK GPS measurements from two NGS control points were used to establish horizontal and vertical positions on the two wells. RTK base stations were set on NGS deep rod monuments FLGPS 55 (PID AF7416) and FLGPS 55 AZ MK (PID AF7446), and both wells were measured from each control monument using one minute (60 measurement) observations.

Raw GPS data was processed using Trimble Business Center software, and a weighted mean solution from the two vectors was determined. NGS deep rod monument "A 555 2001" was also tied in, as it was used in a previous USACE survey shown on the plans for construction of the C-38 reach 2 backfill, dated 2016.

Position adjustment for the two vectors to each well are as follows:

Well #1	ΔNorth	ΔEast	Distance (Horiz)	ΔElevation
101 → 1001	-0.11'	-0.01'	0.11'	-0.12'
102 → 1001	0.07'	0.01'	0.07'	0.07'

Well #2	ΔNorth	ΔEast	Distance (Horiz)	ΔElevation
102 → 1007	0.03'	-0.05'	0.05'	-0.06'
101 → 1007	-0.03'	0.06'	0.07'	0.08'

Survey Control

	NAD 83/11 SPCS 0901		NAVD 88	US SURVEY FEET		
POINT	NORTHING	EASTING	ELEVATION	AGENCY	STAMPING	DESCRIPTION
FLGPS 55	1111853.29	607934.04	40.12	NGS	FLGPS 55 1989	FLANGE-ENCASED ROD
FLGPS 55 AZ MK	1113042.81	605604.32	43.02	NGS	FLGPS 55 AZ MK 1989	FLANGE-ENCASED ROD
A 555	1123161.13	624792.62	48.20	NGS	A 555 2001	FLANGE-ENCASED ROD

```
AF7416 ************************************************************************
AF7416  CBN         -  This is a Cooperative Base Network Control Station.
AF7416  DESIGNATION -  FLGPS 55
AF7416  PID         -  AF7416
AF7416  STATE/COUNTY-  FL/HIGHLANDS
AF7416  COUNTRY     -  US
AF7416  USGS QUAD   -  BASINGER NW (1972)
AF7416
AF7416                        *CURRENT SURVEY CONTROL
AF7416 ______________________________________________________________________
AF7416* NAD 83(2011) POSITION- 27 23 32.73026(N) 081 08 55.12222(W)   ADJUSTED
AF7416* NAD 83(2011) ELLIP HT-   -13.844 (meters)        (06/27/12)   ADJUSTED
AF7416* NAD 83(2011) EPOCH   -  2010.00
AF7416* NAVD 88 ORTHO HEIGHT -    12.228 (meters)       40.12  (feet) ADJUSTED
AF7416 ______________________________________________________________________
AF7416  GEOID HEIGHT    -        -26.063 (meters)                     GEOID12B
AF7416  NAD 83(2011) X  -    871,990.071 (meters)                     COMP
AF7416  NAD 83(2011) Y  - -5,599,511.390 (meters)                     COMP
AF7416  NAD 83(2011) Z  -  2,916,885.199 (meters)                     COMP
AF7416  LAPLACE CORR    -         -1.77  (seconds)                    DEFLEC12B
AF7416  DYNAMIC HEIGHT  -         12.209 (meters)       40.06  (feet) COMP
AF7416  MODELED GRAVITY -    979,122.1   (mgal)                       NAVD 88
AF7416
AF7416  VERT ORDER      -  SECOND    CLASS I
AF7416
AF7416  Network accuracy estimates per FGDC Geospatial Positioning Accuracy
AF7416  Standards:
AF7416         FGDC (95% conf, cm)     Standard deviation (cm)      CorrNE
AF7416            Horiz  Ellip           SD_N   SD_E   SD_h      (unitless)
AF7416  ---------------------------------------------------------------------
AF7416  NETWORK    1.16   1.45           0.48   0.47   0.74      0.12295630
AF7416  ---------------------------------------------------------------------
AF7416
AF7416.The horizontal coordinates were established by GPS observations
AF7416.and adjusted by the National Geodetic Survey in June 2012.
AF7416
AF7416.NAD 83(2011) refers to NAD 83 coordinates where the reference frame has
AF7416.been affixed to the stable North American tectonic plate. See
AF7416.NA2011 for more information.
AF7416
AF7416.The horizontal coordinates are valid at the epoch date displayed above
AF7416.which is a decimal equivalence of Year/Month/Day.
AF7416
AF7416.The orthometric height was determined by differential leveling and
AF7416.adjusted by the NATIONAL GEODETIC SURVEY
AF7416.in July 1999.
AF7416
AF7416.No vertical observational check was made to the station.
AF7416
AF7416.Significant digits in the geoid height do not necessarily reflect accuracy.
AF7416.GEOID12B height accuracy estimate available here.
AF7416
AF7416.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AF7416
AF7416.The Laplace correction was computed from DEFLEC12B derived deflections.
AF7416
AF7416.The ellipsoidal height was determined by GPS observations
AF7416.and is referenced to NAD 83.
AF7416
AF7416.The dynamic height is computed by dividing the NAVD 88
AF7416.geopotential number by the normal gravity value computed on the
AF7416.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AF7416.degrees latitude (g = 980.6199 gals.).
```

```
AF7416
AF7416.The modeled gravity was interpolated from observed gravity values.
AF7416
AF7416. The following values were computed from the NAD 83(2011) position.
AF7416
AF7416;                    North         East     Units Scale Factor Converg.
AF7416;SPC FL E     -   338,893.562   185,298.665   MT  0.99994384   -0 04 06.2
AF7416;SPC FL E     - 1,111,853.29    607,934.04   sFT  0.99994384   -0 04 06.2
AF7416;UTM  17      - 3,029,909.915   485,303.681   MT  0.99960267   -0 04 06.2
AF7416
AF7416!             -  Elev Factor  x  Scale Factor =   Combined Factor
AF7416!SPC FL E     -   1.00000217  x   0.99994384  =   0.99994601
AF7416!UTM  17      -   1.00000217  x   0.99960267  =   0.99960484
AF7416
AF7416:                Primary Azimuth Mark                    Grid Az
AF7416:SPC FL E     -  FLGPS 55 AZ MK                         297 02 52.9
AF7416:UTM  17      -  FLGPS 55 AZ MK                         297 02 52.9
AF7416
AF7416_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML8530329909(NAD 83)
AF7416
AF7416|-----------------------------------------------------------------------|
AF7416| PID    Reference Object                    Distance      Geod. Az  |
AF7416|                                                          dddmmss.s |
AF7416| AF7446 FLGPS 55 AZ MK                    APPROX. 0.8 KM 2965846.7 |
AF7416|-----------------------------------------------------------------------|
AF7416
AF7416                          SUPERSEDED SURVEY CONTROL
AF7416
AF7416  NAD 83(2007)-  27 23 32.73079(N)    081 08 55.12332(W) AD(2002.00) 0
AF7416  ELLIP H (02/10/07)  -13.834  (m)                       GP(2002.00)
AF7416  NAD 83(1999)-  27 23 32.73045(N)    081 08 55.12285(W) AD(       ) B
AF7416  ELLIP H (05/31/01)  -13.788  (m)                       GP(       ) 5 1
AF7416  NAD 83(1990)-  27 23 32.72943(N)    081 08 55.12247(W) AD(       ) B
AF7416  ELLIP H (09/13/90)  -13.796  (m)                       GP(       ) 4 1
AF7416  NAVD 88              12.23   (m)          40.1    (f) LEVELING    3
AF7416  NAVD 88              12.27   (m)          40.3    (f) LEVELING    3
AF7416  NAVD 88 (11/23/93)   12.3    (m)  GEOID93 model used   GPS OBS
AF7416  NGVD 29 (09/13/90)   12.7    (m)  FFT MET model used   GPS OBS
AF7416
AF7416.Superseded values are not recommended for survey control.
AF7416
AF7416.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AF7416.See file dsdata.pdf to determine how the superseded data were derived.
AF7416
AF7416_MARKER: F = FLANGE-ENCASED ROD
AF7416_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AF7416_STAMPING: FLGPS 55 1989
AF7416_MARK LOGO: NGS
AF7416_PROJECTION: FLUSH
AF7416_MAGNETIC: N = NO MAGNETIC MATERIAL
AF7416_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
AF7416_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AF7416+SATELLITE: SATELLITE OBSERVATIONS - June 28, 2005
AF7416_ROD/PIPE-DEPTH: 21.8 meters
AF7416_SLEEVE-DEPTH  : 0.91 meters
AF7416
AF7416  HISTORY     - Date     Condition        Report By
AF7416  HISTORY     - 1989     MONUMENTED       NGS
AF7416  HISTORY     - 19930219 GOOD             KEISCH
AF7416  HISTORY     - 19970806 GOOD             FLDEP
AF7416  HISTORY     - 19981128 GOOD             DENI
AF7416  HISTORY     - 19990713 GOOD             BAH
AF7416  HISTORY     - 20010909 GOOD             FLDEP
```

AF7416 HISTORY   - 20050628 GOOD   MACTEC
AF7416
AF7416   STATION DESCRIPTION
AF7416
AF7416'DESCRIBED BY NATIONAL GEODETIC SURVEY 1989
AF7416'THE STATION IS LOCATED ABOUT 32.99 KM (20.50 MI) SOUTHEAST OF SEBRING,
AF7416'9.81 KM (6.10 MI) NORTHWEST OF FORT BASINGER, IN SECTION 32, T 35 S, R
AF7416'32 E. OWNERSHIP--HIGHWAY RIGHT-OF-WAY.
AF7416'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 98 AND COUNTY
AF7416'ROAD 721 IN FORT BASINGER, GO WESTERLY FOR 7.64 KM (4.75 MI) ON
AF7416'HIGHWAY 98 TO A PAVED ROAD RIGHT, S-65C ACCESS ROAD. CONTINUE
AF7416'STRAIGHT AHEAD AND GO WESTERLY FOR 2.57 KM (1.60 MI) ON HIGHWAY 98 TO
AF7416'THE STATION ON RIGHT.
AF7416'THE STATION IS RECESSED 9 CM BELOW GROUND. LOCATED 21.52 M (70.6 FT)
AF7416'WEST-NORTHWEST FROM A UTILITY POLE, 13.86 M (45.5 FT) NORTH-NORTHEAST
AF7416'FROM THE APPROXIMATE CENTER OF HIGHWAY 98, 2.29 M (7.5 FT)
AF7416'SOUTH-SOUTHWEST FROM A FENCE LINE AND 1.80 M (5.9 FT) SOUTH FROM A
AF7416'CARSONITE WITNESS POST. NOTE--ACCESS TO DATUM POINT IS HAD THROUGH A
AF7416'5-INCH LOGO CAP.
AF7416'DESCRIBED BY R.L. MALLOY.
AF7416
AF7416   STATION RECOVERY (1993)
AF7416
AF7416'RECOVERY NOTE BY KEITH AND SCHNARS - LAKELAND 1993
AF7416'RECOVERED IN GOOD CONDITION.
AF7416
AF7416   STATION RECOVERY (1997)
AF7416
AF7416'RECOVERY NOTE BY FL DEPT OF ENV PRO 1997 (JLM)
AF7416'THE STATION IS ABOUT 25.5 MI (41.0 KM) NORTHWEST OF OKEECHOBEE, 7.5 MI
AF7416'(12.1 KM) SOUTHEAST OF LORIDA, 2.2 MI (3.5 KM) WEST OF THE KISSIMMEE
AF7416'RIVER IN SECTION 32, TOWNSHIP 35 SOUTH, RANGE 32 EAST. TO REACH THE
AF7416'STATION FROM THE POST OFFICE IN LORIDA, GO SOUTHEAST ON U.S. HIGHWAY
AF7416'98 FOR 3.4 MI (5.5 KM) TO THE JUNCTION OF COUNTY ROAD 621 ON THE
AF7416'RIGHT, CONTINUE SOUTHEAST ON U.S. HIGHWAY 98 FOR 4.15 MI (6.68 KM) TO
AF7416'THE STATION ON THE LEFT, A STAINLESS STEEL ROD DRIVEN INTO THE GROUND
AF7416'WITH A LOGO CAP FLUSH WITH THE GROUND AND 1.0 FT (0.3 M) BELOW THE
AF7416'LEVEL OF U.S. HIGHWAY 98, DATUM POINT IS RECESSED 0.3 FT (9.1 CM)
AF7416'BELOW THE LEVEL OF THE LOGO CAP. LOCATED 70.6 FT (21.5 M)
AF7416'WEST-NORTHWEST OF A POWER POLE, 45.5 FT (13.9 M) NORTH-NORTHEAST OF
AF7416'THE CENTERLINE OF U.S HIGHWAY 98, 7.5 FT (2.3 M) SOUTH-SOUTHWEST OF A
AF7416'FENCE AND 5.9 FT (1.8 M) SOUTH OF A CARSONITE WITNESS POST. NOTE
AF7416'ACCESS TO DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP.
AF7416
AF7416   STATION RECOVERY (1998)
AF7416
AF7416'RECOVERY NOTE BY DENI ASSOCIATES INCORPORATED 1998 (RLW)
AF7416'RECOVERED AS DESCRIBED.
AF7416
AF7416   STATION RECOVERY (1999)
AF7416
AF7416'RECOVERY NOTE BY BERRYMAN & HENIGAR 1999 (BH)
AF7416'RECOVERED AS DESCRIBED.
AF7416
AF7416   STATION RECOVERY (2001)
AF7416
AF7416'RECOVERY NOTE BY FL DEPT OF ENV PRO 2001 (JLM)
AF7416'RECOVERED IN GOOD CONDITION.
AF7416
AF7416   STATION RECOVERY (2005)
AF7416
AF7416'RECOVERY NOTE BY MACTEC ENGINEERING AND CONSULTING 2005 (CGB)
AF7416'RECOVERED AS DESCRIBED

AF7446 **
AF7446 DESIGNATION - FLGPS 55 AZ MK
AF7446 PID   - AF7446
AF7446 STATE/COUNTY- FL/HIGHLANDS
AF7446 COUNTRY   - US
AF7446 USGS QUAD   - BASINGER NW (1972)
AF7446
AF7446   *CURRENT SURVEY CONTROL
AF7446 ____
AF7446* NAD 83(2011) POSITION- 27 23 44.48171(N) 081 09 20.98595(W)   ADJUSTED
AF7446* NAD 83(2011) ELLIP HT-   -12.948 (meters)   (06/27/12)   ADJUSTED
AF7446* NAD 83(2011) EPOCH   - 2010.00
AF7446* NAVD 88 ORTHO HEIGHT -   13.114 (meters)   43.02 (feet) ADJUSTED
AF7446 ____
AF7446 GEOID HEIGHT   -   -26.056 (meters)   GEOID12B
AF7446 NAD 83(2011) X -   871,262.471 (meters)   COMP
AF7446 NAD 83(2011) Y - -5,599,457.022 (meters)   COMP
AF7446 NAD 83(2011) Z - 2,917,206.764 (meters)   COMP
AF7446 LAPLACE CORR   -   -1.74 (seconds)   DEFLEC12B
AF7446 DYNAMIC HEIGHT -   13.094 (meters)   42.96 (feet) COMP
AF7446 MODELED GRAVITY -   979,122.9   (mgal)   NAVD 88
AF7446
AF7446 VERT ORDER   - SECOND   CLASS I
AF7446
AF7446 Network accuracy estimates per FGDC Geospatial Positioning Accuracy
AF7446 Standards:
AF7446   FGDC (95% conf, cm)   Standard deviation (cm)   CorrNE
AF7446   Horiz Ellip   SD_N   SD_E   SD_h   (unitless)
AF7446 --
AF7446 NETWORK   1.18   1.53   0.49   0.47   0.78   0.11955138
AF7446 --
AF7446 Click here for local accuracies and other accuracy information.
AF7446
AF7446
AF7446.The horizontal coordinates were established by GPS observations
AF7446.and adjusted by the National Geodetic Survey in June 2012.
AF7446
AF7446.NAD 83(2011) refers to NAD 83 coordinates where the reference frame has
AF7446.been affixed to the stable North American tectonic plate. See
AF7446.NA2011 for more information.
AF7446
AF7446.The horizontal coordinates are valid at the epoch date displayed above
AF7446.which is a decimal equivalence of Year/Month/Day.
AF7446
AF7446.The orthometric height was determined by differential leveling and
AF7446.adjusted by the NATIONAL GEODETIC SURVEY
AF7446.in May 2004.
AF7446
AF7446.Significant digits in the geoid height do not necessarily reflect accuracy.
AF7446.GEOID12B height accuracy estimate available here.
AF7446
AF7446.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AF7446
AF7446.The Laplace correction was computed from DEFLEC12B derived deflections.
AF7446
AF7446.The ellipsoidal height was determined by GPS observations
AF7446.and is referenced to NAD 83.
AF7446
AF7446.The dynamic height is computed by dividing the NAVD 88
AF7446.geopotential number by the normal gravity value computed on the
AF7446.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AF7446.degrees latitude (g = 980.6199 gals.).

AF7446
AF7446.The modeled gravity was interpolated from observed gravity values.
AF7446
AF7446. The following values were computed from the NAD 83(2011) position.
AF7446
AF7446;   North   East   Units Scale Factor Converg.
AF7446;SPC FL E   -   339,256.126   184,588.566   MT 0.99994411   -0 04 18.1
AF7446;SPC FL E   - 1,113,042.81   605,604.32   sFT 0.99994411   -0 04 18.1
AF7446;UTM 17   - 3,030,272.355   484,593.824   MT 0.99960293   -0 04 18.1
AF7446
AF7446!   - Elev Factor x Scale Factor =   Combined Factor
AF7446!SPC FL E   -   1.00000203 x   0.99994411 =   0.99994614
AF7446!UTM 17   -   1.00000203 x   0.99960293 =   0.99960496
AF7446
AF7446:   Primary Azimuth Mark   Grid Az
AF7446:SPC FL E   - FLGPS 55   117 02 52.9
AF7446:UTM 17   - FLGPS 55   117 02 52.9
AF7446
AF7446_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML8459330272(NAD 83)
AF7446
AF7446|---|
AF7446| PID   Reference Object   Distance   Geod. Az |
AF7446| dddmmss.s |
AF7446| AF7416 FLGPS 55   APPROX. 0.8 KM 1165834.8 |
AF7446|---|
AF7446
AF7446   SUPERSEDED SURVEY CONTROL
AF7446
AF7446 NAD 83(2007)- 27 23 44.48224(N)   081 09 20.98712(W) AD(2002.00) 0
AF7446 ELLIP H (02/10/07) -12.941 (m)   GP(2002.00)
AF7446 NAD 83(1999)- 27 23 44.48192(N)   081 09 20.98667(W) AD(   ) 1
AF7446 ELLIP H (05/31/01) -12.897 (m)   GP(   ) 4 1
AF7446 ELLIP H (06/01/99) -12.907 (m)   GP(   ) 4 1
AF7446 NAD 83(1990)- 27 23 44.48100(N)   081 09 20.98641(W) AD(   ) 1
AF7446 NAVD 88 (06/01/99)   13.2   (m) GEOID96 model used   GPS OBS
AF7446 NGVD 29 (02/04/91)   13.6   (m) RAPSU86 model used   GPS OBS
AF7446
AF7446.Superseded values are not recommended for survey control.
AF7446
AF7446.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AF7446.See file dsdata.pdf to determine how the superseded data were derived.
AF7446
AF7446_MARKER: F = FLANGE-ENCASED ROD
AF7446_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AF7446_STAMPING: FLGPS 55 AZ MK 1989
AF7446_MARK LOGO: NGS
AF7446_PROJECTION: FLUSH
AF7446_MAGNETIC: N = NO MAGNETIC MATERIAL
AF7446_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
AF7446_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AF7446+SATELLITE: SATELLITE OBSERVATIONS - September 09, 2001
AF7446_ROD/PIPE-DEPTH: 18.2 meters
AF7446_SLEEVE-DEPTH : 0.91 meters
AF7446
AF7446 HISTORY   - Date   Condition   Report By
AF7446 HISTORY   - 1989   MONUMENTED   NGS
AF7446 HISTORY   - 19971007 MARK NOT FOUND   FLDEP
AF7446 HISTORY   - 19981128 GOOD   DENI
AF7446 HISTORY   - 20010909 GOOD   FLDEP
AF7446
AF7446   STATION DESCRIPTION
AF7446
AF7446'DESCRIBED BY NATIONAL GEODETIC SURVEY 1989

AF7446'THE STATION IS LOCATED ABOUT 32.99 KM (20.50 MI) SOUTHEAST OF SEBRING,
AF7446'10.62 KM (6.60 MI) NORTHWEST OF FORT BASINGER, IN SECTION 32, T 35 S,
AF7446'R 32 E. OWNERSHIP--HIGHWAY RIGHT-OF-WAY.
AF7446'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 98 AND COUNTY
AF7446'ROAD 721 IN FORT BASINGER, GO WEST FOR 7.64 KM (4.75 MI) ON HIGHWAY 98
AF7446'TO A PAVED ROAD RIGHT, S-65C ACCESS ROAD. CONTINUE STRAIGHT AHEAD AND
AF7446'GO WESTERLY FOR 3.38 KM (2.10 MI) ON HIGHWAY 98 TO THE STATION ON
AF7446'LEFT.
AF7446'THE STATION IS RECESSED 10 CM BELOW GROUND. LOCATED 80.77 M
AF7446'(265.0 FT) EAST-NORTHEAST FROM THE APPROXIMATE CENTER OF A DIM TRACK
AF7446'ROAD THAT CROSSES RAILROAD, 18.29 M (60.0 FT) SOUTH-SOUTHWEST FROM THE
AF7446'APPROXIMATE CENTER OF HIGHWAY 98, 16.06 M (52.7 FT) NORTH-NORTHEAST
AF7446'FROM THE NORTH RAIL OF RAILROAD AND 1.83 M (6.0 FT) NORTH FROM A
AF7446'CARSONITE WITNESS POST. NOTE--ACCESS TO DATUM POINT IS HAD THROUGH A
AF7446'5-INCH LOGO CAP.
AF7446'DESCRIBED BY R.L. MALLOY.
AF7446
AF7446   STATION RECOVERY (1997)
AF7446
AF7446'RECOVERY NOTE BY FL DEPT OF ENV PRO 1997 (JLM)
AF7446'NOT FOUND.
AF7446
AF7446   STATION RECOVERY (1998)
AF7446
AF7446'RECOVERY NOTE BY DENI ASSOCIATES INCORPORATED 1998 (RLW)
AF7446'RECOVERED AS DESCRIBED, 10.8 FT (3.3 M) NORTHEAST OF CARSONITE WITNESS
AF7446'POST.
AF7446
AF7446   STATION RECOVERY (2001)
AF7446
AF7446'RECOVERY NOTE BY FL DEPT OF ENV PRO 2001 (JLM)
AF7446'RECOVERED IN GOOD CONDITION.

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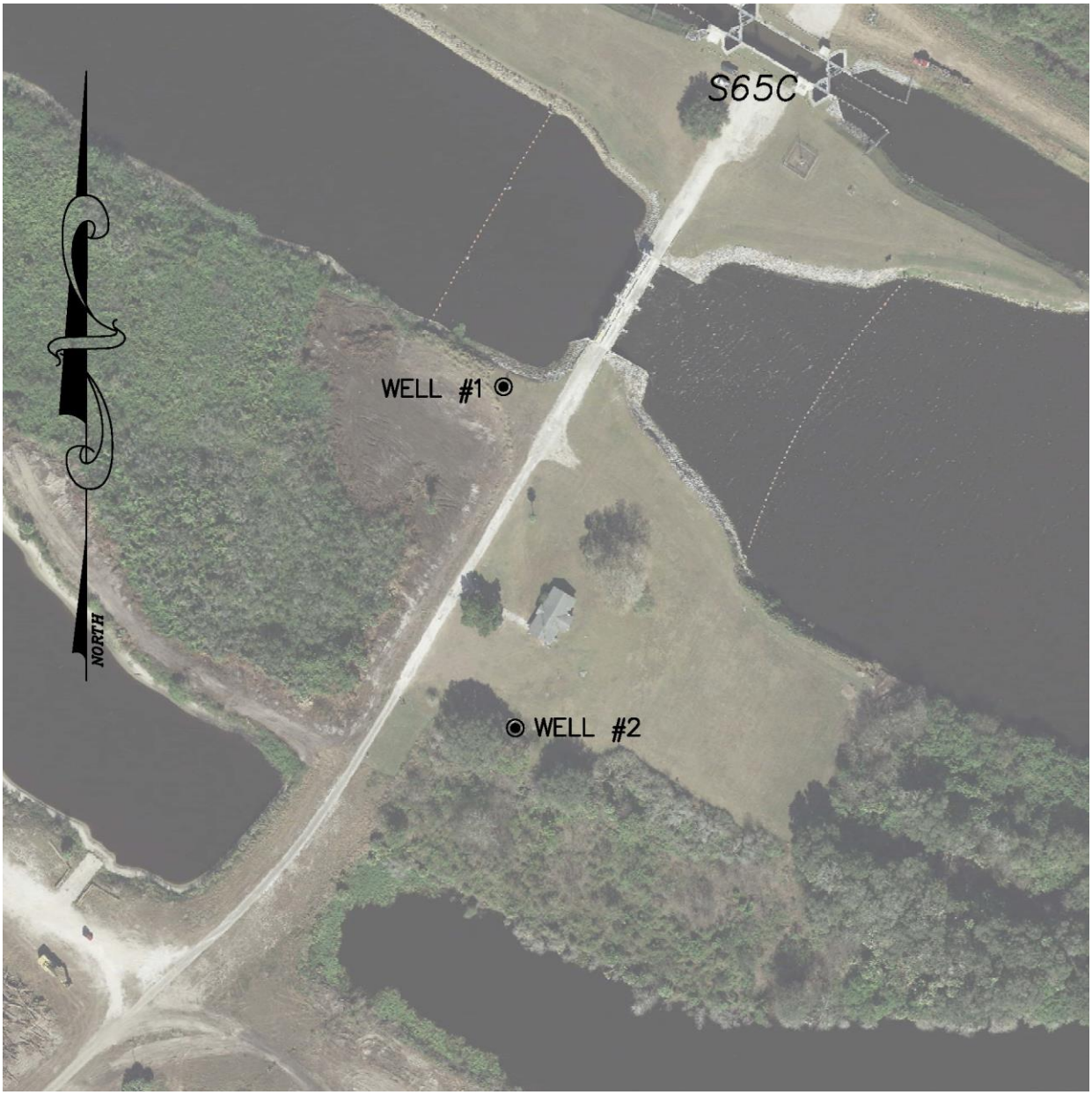
DF8355 ********************************************************************
DF8355  DESIGNATION -  A 555
DF8355  PID         -  DF8355
DF8355  STATE/COUNTY-  FL/OKEECHOBEE
DF8355  COUNTRY     -  US
DF8355  USGS QUAD   -  BASINGER (1972)
DF8355
DF8355                        *CURRENT SURVEY CONTROL
DF8355  ______________________________________________________________________
DF8355* NAD 83(1986) POSITION- 27 25 24.     (N) 081 05 48.     (W)   SCALED
DF8355* NAVD 88 ORTHO HEIGHT -    14.690 (meters)       48.20  (feet) ADJUSTED
DF8355  ______________________________________________________________________
DF8355  GEOID HEIGHT    -        -26.158 (meters)                     GEOID12B
DF8355  DYNAMIC HEIGHT  -         14.668 (meters)       48.12  (feet) COMP
DF8355  MODELED GRAVITY -    979,129.5   (mgal)                       NAVD 88
DF8355
DF8355  VERT ORDER      -  SECOND    CLASS I
DF8355
DF8355.The horizontal coordinates were scaled from a topographic map and have
DF8355.an estimated accuracy of +/- 6 seconds.
DF8355.
DF8355.The orthometric height was determined by differential leveling and
DF8355.adjusted by the NATIONAL GEODETIC SURVEY
DF8355.in May 2004.
DF8355
DF8355.Significant digits in the geoid height do not necessarily reflect accuracy.
DF8355.GEOID12B height accuracy estimate available here.
DF8355
DF8355.The dynamic height is computed by dividing the NAVD 88
DF8355.geopotential number by the normal gravity value computed on the
DF8355.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
DF8355.degrees latitude (g = 980.6199 gals.).
DF8355
DF8355.The modeled gravity was interpolated from observed gravity values.
DF8355
DF8355;                    North         East     Units  Estimated Accuracy
DF8355;SPC FL E     -   342,310.      190,440.      MT  (+/- 180 meters Scaled)
DF8355
DF8355_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML904333(NAD 83)
DF8355
DF8355                           SUPERSEDED SURVEY CONTROL
DF8355
DF8355.No superseded survey control is available for this station.
DF8355
DF8355_MARKER: F = FLANGE-ENCASED ROD
DF8355_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
DF8355_STAMPING: A 555 2001
DF8355_MARK LOGO: NGS
DF8355_PROJECTION: FLUSH
DF8355_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET
DF8355_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
DF8355_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DF8355+SATELLITE: SATELLITE OBSERVATIONS - November 21, 2012
DF8355_ROD/PIPE-DEPTH: 18.3 meters
DF8355
DF8355  HISTORY     - Date     Condition        Report By
DF8355  HISTORY     - 20011005 MONUMENTED       FLDEP
DF8355  HISTORY     - 20090401 GOOD             MOREKL
DF8355  HISTORY     - 20121121 GOOD             INDIV
DF8355
DF8355                           STATION DESCRIPTION
DF8355
DF8355'DESCRIBED BY FL DEPT OF ENV PRO 2001 (JLM)
```

DF8355'THE MARK IS ABOUT 22.4 MI NORTHWEST OF OKEECHOBEE, 4.8 MI NORTHWEST OF
DF8355'BASINGER, ON
DF8355'NORTHWEST 160TH DRIVE, IN SECTION 14, TOWNSHIP 35 SOUTH, RANGE 32
DF8355'EAST.
DF8355'
DF8355'TO REACH THE MARK FROM THE INTERSECTION OF U.S. HIGHWAY 441 (PARROTT
DF8355'STREET) AND U.S.
DF8355'HIGHWAY 98 (STATE HIGHWAY 70, PARK STREET) IN OKEECHOBEE, GO WEST ON
DF8355'U.S. HIGHWAY 98
DF8355'(STATE HIGHWAY 70, PARK STREET) FOR 1.15 MI TO THE JUNCTION OF U.S.
DF8355'HIGHWAY 98 NORTH ON
DF8355'THE RIGHT, TURN RIGHT ON U.S. HIGHWAY 98 AND GO NORTHWESTERLY FOR 0.65
DF8355'MI TO THE
DF8355'RAILROAD TRACKS, CONTINUE NORTHWESTERLY ON U.S. HIGHWAY 98 FOR 11.9 MI
DF8355'TO THE JUNCTION
DF8355'OF COUNTY ROAD 68 EAST ON THE RIGHT, CONTINUE NORTHWESTERLY ON U.S.
DF8355'HIGHWAY 98 FOR
DF8355'1.85 MI TO THE JUNCTION OF NORTHWEST 176TH AVENUE (COUNTY ROAD 700-A)
DF8355'ON THE RIGHT,
DF8355'CONTINUE NORTHWESTERLY ON U.S. HIGHWAY 98 FOR 1.7 MI TO THE JUNCTION
DF8355'OF NORTHWEST
DF8355'203RD AVENUE (MICCO BLUFF ROAD) ON THE RIGHT, TURN RIGHT ON NORTHWEST
DF8355'203RD AVENUE
DF8355'(MICCO BLUFF ROAD) AND GO NORTH-NORTHWESTERLY FOR 0.2 MI TO THE
DF8355'JUNCTION OF NORTHWEST
DF8355'160TH DRIVE (MICCO BLUFF ROAD, COUNTY ROAD 68), TURN LEFT ON NORTHWEST
DF8355'160TH DRIVE
DF8355'(MICCO BLUFF ROAD, COUNTY ROAD 68) AND GO WEST-NORTHWESTERLY FOR 4.65
DF8355'MI TO THE MARK
DF8355'ON THE LEFT, A STAINLESS STEEL ROD DRIVEN TO REFUSAL AT A DEPTH OF
DF8355'59.9 FT WITH A NGS LOGO
DF8355'CAP FLUSH WITH THE GROUND AND ABOUT 0.6 FT BELOW THE LEVEL OF
DF8355'NORTHWEST 160TH DRIVE,
DF8355'THE DATUM POINT IS RECESSED 0.8 FT BELOW THE LEVEL OF THE LOGO CAP.
DF8355'
DF8355'LOCATED 153.5 FT SOUTHEAST OF THE SOUTHEAST END OF A HEADWALL, 116.7
DF8355'FT
DF8355'WEST-NORTHWEST OF A CURVE SIGN, 35.0 FT SOUTH-SOUTHWEST OF THE
DF8355'APPROXIMATE
DF8355'CENTERLINE OF THE ROAD, 1.2 FT NORTH-NORTHEAST OF A BARBWIRE FENCE AND
DF8355'1.0 FT
DF8355'NORTH-NORTHEAST OF A CARSONITE WITNESS POST.
DF8355'
DF8355'NOTE A MAGNET WAS IMBEDDED IN THE GROUND ON THE SOUTH SIDE OF THE
DF8355'MONUMENT.
DF8355'
DF8355'NOTE ACCESS TO THE DATUM POINT IS HAD THROUGH A 5-INCH NGS LOGO CAP.
DF8355
DF8355   STATION RECOVERY (2009)
DF8355
DF8355'RECOVERY NOTE BY MORGAN AND EKLUND INC 2009 (PCV)
DF8355'RECOVERED AS DESCRIBED
DF8355
DF8355   STATION RECOVERY (2012)
DF8355
DF8355'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2012 (JH)
DF8355'RECOVERED IN GOOD CONDITION.

Survey Results

		NAD 83/11 SPCS 0901		NAVD 88	NAVD 88	US SURVEY FEET
WELL	DESIGNATION	NORTHING	EASTING	WELL ELEVATION	GROUND ELEVATION	DESCRIPTION
1	OKF-42	1114901.8	618677.8	39.4	38.0	6" CASING
2	NONE	1114498.4	618691.7	37.2	37.2	3" CASING

* WELL POSITIONS AND ELEVATIONS MEASURED AT THE TOP OF THE CASING



Surveying Notes

1. GRID COORDINATES SHOWN ARE IN FEET, AND ARE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983, NGS ADJUSTMENT OF 2011 (NAD 83/11).

2. GRID COORDINATES OF UPLAND DATA ARE BASED ON CONTROL MONUMENTS AS SHOWN IN THE CONTROL TABLE.

3. ELEVATIONS SHOWN ARE IN FEET AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

4. ELEVATIONS ARE BASED ON CONTROL MONUMENTS AS SHOWN IN THE CONTROL TABLE.

5. THE ACCURACY REQUIREMENT FOR THIS SURVEY IS ±0.1' RELATIVE TO THE CONTROL MONUMENTATION.

6. INFORMATION DEPICTED ON THIS SURVEY REPRESENTS THE EXISTING CONDITIONS ON THE DATE OF THE FIELD SURVEY.

7. AERIAL IMAGERY WAS TAKEN IN 2017 AND WAS PROVIDED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION.

8. AERIAL IMAGERY IS DISPLAYED HEREON FOR INFORMATION PURPOSES ONLY, NO PHOTOGRAPHIC ACCURACY IS IMPLIED BY THIS MAP.

9. NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

10. UNDERGROUND UTILITIES AND IMPROVEMENTS NOT LOCATED.

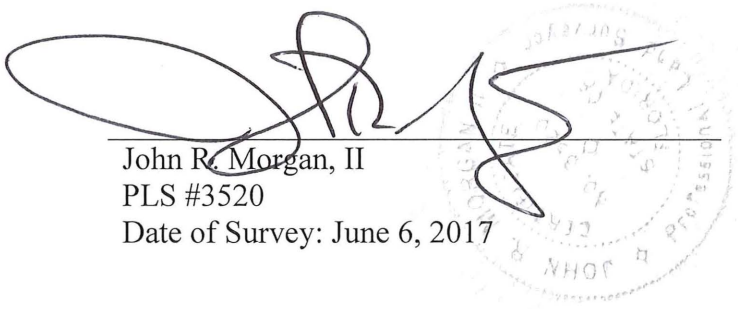
11. ADDITIONS OR DELETIONS TO THIS SURVEY MAP ARE PROHIBITED WITHOUT WRITTEN CONSENT.

12. THIS SURVEY MAP IS NOT FULL AND COMPLETE WITHOUT THE ACCOMPANYING MAP: " SPECIFIC PURPOSE SURVEY: LOCATION OF 2 WELLS S-65-C STRUCTURE; OKEECHOBEE COUNTY, FLORIDA FOR APPLIED DRILLING ENGINEERING, INC." DATED JUNE 8, 2017.

SURVEYOR'S CERTIFICATION

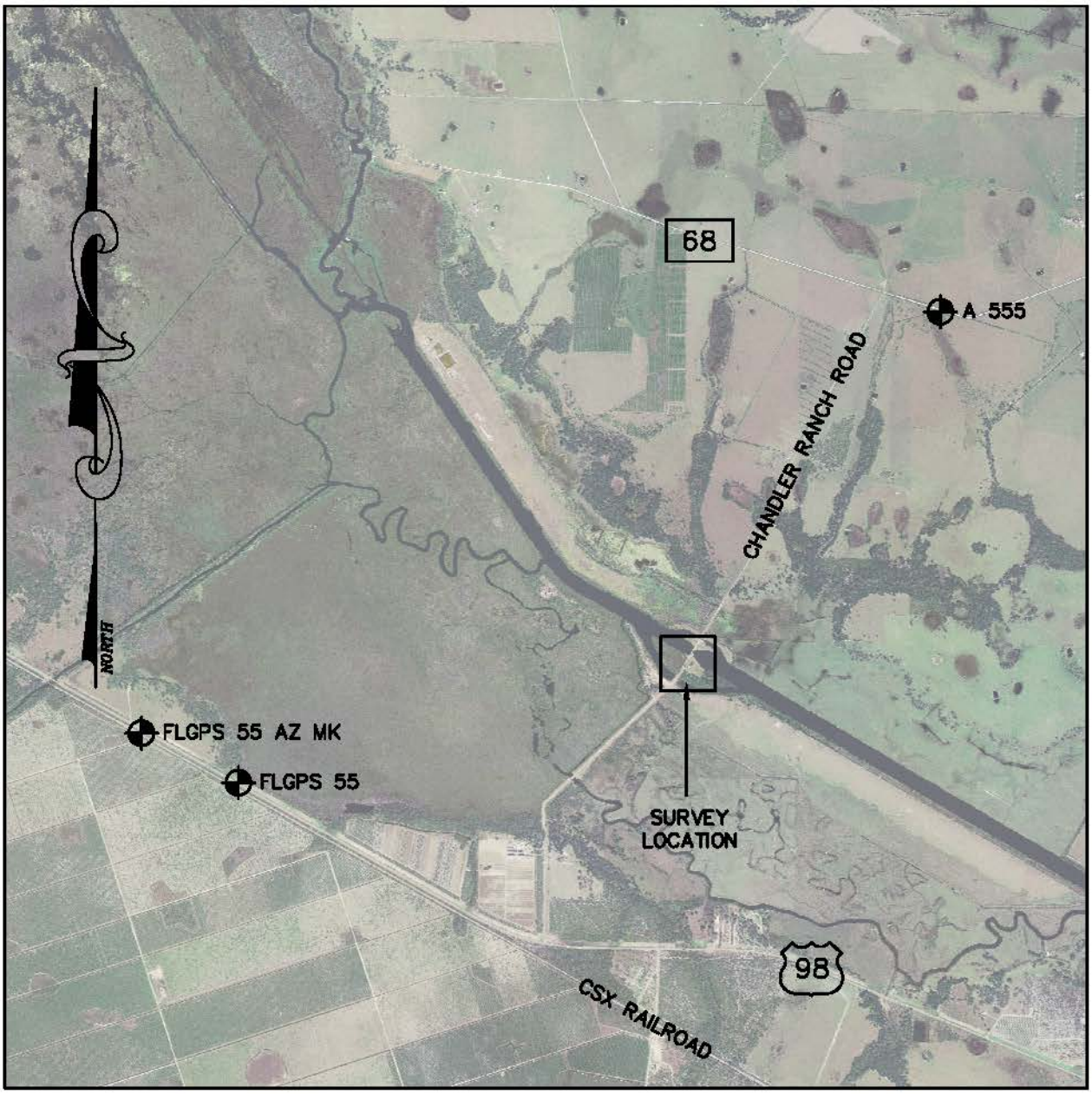
I hereby certify that this Specific Purpose Survey meets applicable portions of the Standards of Practice set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 5J-17, Florida Administrative Code, pursuant to section 472.027, Florida statutes.

Morgan & Eklund, Inc.
L.B. Number 4298



John R. Morgan, II
PLS #3520
Date of Survey: June 6, 2017

LOCATION MAP



0 4000' 8000'

GRAPHIC SCALE 4000'

CONTROL TABULATION

	NAD 83/11 SPCS 0901		NAVD 88	US SURVEY FEET		
POINT	NORTHING	EASTING	ELEVATION	AGENCY	STAMPING	DESCRIPTION
FLGPS 55	1111853.29	607934.04	40.12	NGS	FLGPS 55 1989	FLANGE-ENCASED ROD
FLGPS 55 AZ MK	1113042.81	605604.32	43.02	NGS	FLGPS 55 AZ MK 1989	FLANGE-ENCASED ROD
A 555	1123161.13	624792.62	48.20	NGS	A 555 2001	FLANGE-ENCASED ROD

Morgan & Eklund Inc.

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1158 SW 1ST WAY
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FAX: (954) 421-0425

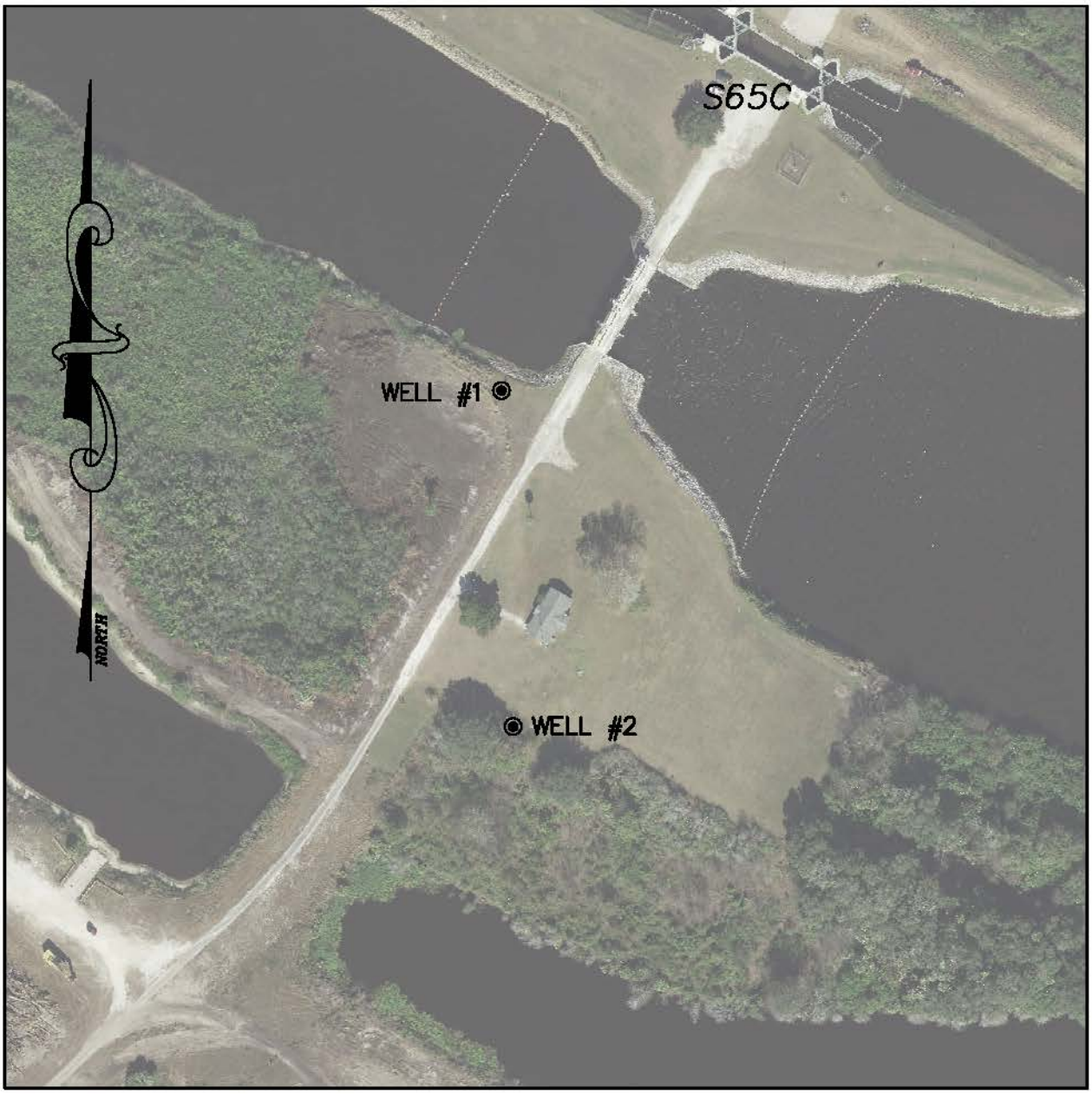
LB #4296

SPECIFIC PURPOSE SURVEY: LOCATION OF 2 WELLS
S-65-C STRUCTURE; OKEECHOBEE COUNTY, FLORIDA
- FOR -
APPLIED DRILLING ENGINEERING, INC.

DRAWING NO.	SCALE	DATE	DRAWN BY	CHECKED BY	FIELD BOOK	SHEET	DATE OF SURVEY	SHEET
5653.00	1" = 4,000'	8/8/17	CAG	JRM	PAGE NO.	2-10	8/8/17	1 of 3

H:\Sdskpro\5653-00\dwg\5653-00.dwg Chris Thu, 08 Jun 2017 - 10:24am

SURVEY MAP



0 200' 400'

GRAPHIC SCALE 200'

		NAD 83/11 SPCS 0901		NAVD 88	NAVD 88	US SURVEY FEET
WELL	DESIGNATION	NORTHING	EASTING	WELL ELEVATION	GROUND ELEVATION	DESCRIPTION
1	OKF-42	1114901.8	618677.8	39.4	38.0	6" CASING
2	NONE	1114498.4	618691.7	37.2	37.2	3" CASING

* WELL POSITIONS AND ELEVATIONS MEASURED AT THE TOP OF THE CASING

Morgan & Eklund Inc.
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PHONE: (954) 421-6662
FAX: (954) 421-0425
LB #4296

SPECIFIC PURPOSE SURVEY: LOCATION OF 2 WELLS
S-65-C STRUCTURE; OKEECHOBEE COUNTY, FLORIDA
- FOR -
APPLIED DRILLING ENGINEERING, INC.

DRAWN BY	CHECKED BY	FIELD BOOK / PAGE NO.	DATE OF SURVEY
CAG	JRM	SIZE 2 / 9-18	8/8/17

DRAWING NO.	5653.00
SCALE	1" = 200'
DATE	8/8/17
SHEET	2 of 3

H:\Sdskpro\5653-00\dwg\5653-00.dwg Chris Thu, 08 Jun 2017 - 10:24am

SURVEY MAP

1. GRID COORDINATES SHOWN ARE IN FEET, AND ARE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983, NGS ADJUSTMENT OF 2011 (NAD 83/11).

2. GRID COORDINATES OF UPLAND DATA ARE BASED ON CONTROL MONUMENTS AS SHOWN IN THE CONTROL TABLE.

3. ELEVATIONS SHOWN ARE IN FEET AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

4. ELEVATIONS ARE BASED ON CONTROL MONUMENTS AS SHOWN IN THE CONTROL TABLE.

5. THE ACCURACY REQUIREMENT FOR THIS SURVEY IS ±0.1' RELATIVE TO THE CONTROL MONUMENTATION.

6. INFORMATION DEPICTED ON THIS SURVEY REPRESENTS THE EXISTING CONDITIONS ON THE DATE OF THE FIELD SURVEY.

7. AERIAL IMAGERY WAS TAKEN IN 2017 AND WAS PROVIDED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION.

8. AERIAL IMAGERY IS DISPLAYED HEREON FOR INFORMATION PURPOSES ONLY, NO PHOTOGRAPHIC ACCURACY IS IMPLIED BY THIS MAP.

9. NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

10. UNDERGROUND UTILITIES AND IMPROVEMENTS NOT LOCATED.

11. ADDITIONS OR DELETIONS TO THIS SURVEY MAP ARE PROHIBITED WITHOUT WRITTEN CONSENT.

12. THIS SURVEY MAP IS NOT FULL AND COMPLETE WITHOUT THE ACCOMPANYING REPORT: "Specific Purpose Survey to Locate Two Wells near Water Management Structure S-65-C Kissimmee River Restoration Project C-38 Reach 2 Backfill Contract 10" DATED JUNE 8, 2017.

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LB #4296

SPECIFIC PURPOSE SURVEY: LOCATION OF 2 WELLS
S-65-C STRUCTURE; OKEECHOBEE COUNTY, FLORIDA
- FOR -
APPLIED DRILLING ENGINEERING, INC.

DRAWN BY: CAG	CHECKED BY: JRM	FIELD BOOK: PAGE NO.	SIZE: 2 / 9-10	DATE OF SURVEY: 6/6/17

COMMESSA NO. 5653.00
SCALE: -
DATE: 6/8/17
SHEET 3 OF 3