



Contract # CN60744/3600000504
Work Order #5



VERTICAL CONTROL SURVEY REPORT

**SOUTH FLORIDA WATER
MANAGEMENT DISTRICT**

FINAL

February, 2008

VERTICAL CONTROL SURVEY REPORT

Monitoring Well Reference Elevations

for:

South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406

by:

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Overview of the Project

This survey consisted of establishing or verifying elevations to third-order National Geodetic Survey (NGS) Standards at District Recorder Well Sites. This survey request is associated with the District's Vertical Datum Upgrade Project (VDUP).

There were two main tasks to this survey.

1. Set reference elevations and tags at each well using a local site benchmark (BM) referenced to the National Geodetic Vertical Datum of 1929 (NGVD29).
2. For those sites that did not have a local benchmark, set a concrete monument and establish elevations referencing the North American Vertical Datum of 1988 (NAVD88), and then compute a conversion NGVD29 elevation.

The following list of 25 well sites were included within this Work-Order #5.

BOGAFB	LCYP19	LKISSP	S65A-SCA	TIGER
KENAN	LHAT11	MARIC	S-65GW	TURLAK
KUB009	LHATCH3	ORF61	SEBRING	WR11
KUB012	LJACK	RATHAM	SKYLAK	WR15
LAKWEO	LKIS5B	S63A-SCA	SNIVLY	WR16

Also a part of this report, and the delivery of Work-Order #5 are the following sites: BFARM, KISSFS, WRLGTE. These sites could not be completed during Work-Order #4 for various reasons, so their information is being delivered along with Work-Order #5.

List of Project Deliverables

In addition to four signed and sealed hard copies of this survey report, the following deliverables were also a part of this project.

1. The survey report in Adobe Acrobat format.
2. Digital photos named by sites.
3. Scanned copies of field notes.
4. Any other digital files associated with the survey.
5. Completed District benchmark description sheet for all set marks.

These digital deliverables will be delivered on CD along with the final signed and sealed copy of this report.

Date of Survey

All site field operations took place between December 3, 2007 and January 22, 2008.

Equipment Used

Wild NA2002 digital levels were used for all leveling. Latitude and Longitudes were determined for each site using Trimble Pro-XR sub-meter GPS equipment. These Latitudes and Longitudes were then converted to Florida State Plane Coordinates, East Zone, using the United States Army Corps of Engineers software CORPSCON version 6.0.1.

Project Location

All well site locations were in Orange, Osceola, Highlands and Polk Counties, Florida.



Survey Methodology

Woolpert began by setting concrete monuments at each of the locations that did not have a benchmark on site. Monuments consisted of an 8 inch PVC pipe, 40 inches long, filled with poured concrete with an aluminum South Florida Water Management District survey cap.

Following building the concrete monuments, reconnaissance was done to find existing NGS control stations. Once found, elevation were established by using two NGS stations, performing closed level loops ensuring that NGS monument published elevations matched.

At each site, Woolpert used the local site benchmark to set reference elevations for each found well. Woolpert used the local benchmark to perform a closed loop level run from the benchmark to the reference mark to establish a NGVD29 elevation on the well reference point. If the local benchmark did not have a published NGVD29 elevation, Woolpert used the latitude, longitude, and NAVD88 elevation to find a NGVD29 elevation using the United States Army Corps of

Engineers software CORPSCON version 6.0.1. To determine the sites benchmark latitude and longitude, Woolpert used a Trimble Pro-XR GPS receiver. This GPS receiver obtains differential GPS corrections from Coast Guard stations, resulting in horizontal accuracies of approximately 1 meter, at one sigma.

If a staff gauge existed at the site, Woolpert obtained the water level, the staff gauge reading, and recorded the time and date of those measurements.

Following all leveling and positioning, Woolpert then attached metal tags to each found well. Each tag was stamped with: Site name, well designation, elevation, date, firm name, and reference datum (NGVD29 in all cases).

Summary of Leveling Results

BFARM was set using NGS station G354, a First-Order Class II benchmark with published elevation of 66.85 feet (NAVD88), and NGS station OSF WELLS BM1, a South Florida Water Management District benchmark with published elevation of 67.514 feet (NAVD88). Leveling began at station G354, passed through BFARM, and ended on OSF WELLS BM1 with a leveled elevation of 67.472. Total leveling distance was 6.63 miles resulting in a closure of 0.042 (0.077 allowable). Resulting elevation for BFARM was 64.09 feet NAVD88. This was converted using the United States Army Corps of Engineers software CORPSCON version 6.0.1 to derive a NGVD29 elevation of 65.02 feet.

WR11 was set using NGS station OS134, a Second-Order Class I benchmark with published elevation of 70.65 feet (NAVD88), and NGS station OS135, a Second-Order Class I benchmark with published elevation of 64.75 feet (NAVD88). Leveling began at station OS134, passed through WR11, and ended on OS135 with a leveled elevation of 64.65. Total leveling distance was 18.99 miles resulting in a closure of 0.10 (0.13 allowable). Resulting elevation for WR11 was 67.59 feet NAVD88. This was converted using the United States Army Corps of Engineers software CORPSCON version 6.0.1 to derive a NGVD29 elevation of 68.66 feet.

WR15 was set using NGS station OS134, a Second-Order Class I benchmark with published elevation of 70.65 feet (NAVD88), and NGS station OS135, a Second-Order Class I benchmark with published elevation of 64.75 feet (NAVD88). Leveling began at station OS134, passed through WR15, and ended on OS135 with a leveled elevation of 64.65. Total leveling distance was 18.99 miles resulting in a closure of 0.10 (0.13 allowable). Resulting elevation for WR15 was 62.01 feet NAVD88. This was converted using the United States Army Corps of Engineers software CORPSCON version 6.0.1 to derive a NGVD29 elevation of 63.09 feet.

For Well Site WR16, there existed a BM “WR11 1996” but it only had a published NGVD29 elevation of 66.19 feet. It did not have a published NAVD88 elevation. To establish an NAVD88 elevation, Woolpert used NGS station OS134, a Second-Order Class I benchmark with published elevation of 70.65 feet (NAVD88), and NGS station OS135, a Second-Order Class I benchmark with published elevation of 64.75 feet (NAVD88). Leveling began at station OS134, passed through “WR11 1996”, and ended on OS135 with a leveled elevation of 64.65. Total leveling distance was 18.99 miles resulting in a closure of 0.10 (0.13 allowable). Resulting elevation for “WR11 1996” was 65.14 feet NAVD88. As a check, the NAVD88 elevation was converted to NGVD29 using CORPSCON which yielded a value of 66.23 feet.

WRLGTE was set using NGS station L-715-003, a Second-Order Class I benchmark with published elevation of 91.44 feet (NAVD88), and NGS station L-659-024, a Second-Order Class I benchmark with published elevation of 102.44 feet (NAVD88). Leveling began at station L-715-003, passed through WRLGTE, and ended on L-659-024 with a leveled elevation of 102.43. Total leveling distance was 3.91 miles resulting in a closure of 0.01 (0.06 allowable). Resulting elevation for WRLGTE was 93.14 feet NAVD88. This was converted using the United States Army Corps of Engineers software CORPSCON version 6.0.1 to derive a NGVD29 elevation of 94.03 feet.

TURLAK was set using NGS station GOTHA RESET, a Second-Order Class I benchmark with published elevation of 136.56 feet (NAVD88), and NGS station ORA30, a Second-Order Class I benchmark with published elevation of 110.95 feet (NAVD88). Leveling began at station GOTHA RESET, passed through TURLAK, and ended on ORA30 with a leveled elevation of 111.030. Total leveling distance was 10.0 miles resulting in a closure of 0.08 (0.09 allowable). Resulting elevation for TURLAK was 123.39 feet NAVD88. This was converted using the United States Army Corps of Engineers software CORPSCON version 6.0.1 to derive a NGVD29 elevation of 124.28 feet.

Well Site Notes and Changes

On January 9th, 2008 the District removed the following sites from the project. However, since four of the sites were already completed, Woolpert has included them within this report.

Well Designation	Notes
SKYLAK	
MARIC	~ had already been completed.
LHATCH3	~ had already been completed.
LHAT11	~ decommissioned.
SNIVLY	~ visited but not complete due to BM.
KUB009	~ visited but not complete. Tag existed, and BM was not at site.
KUB012	
LKISSP	~ visited to find BM, but not completed.
TIGER	~ had already been completed.
LKIS5B	
KENAN	~ had already been completed.

The following are project notes pertaining to specific well sites:

BOGAFB:

This site was completed however the well box was empty at the time of measurements.

LAKWEO:

The supplied BM from the District (P-13) did not have a published NAVD88 elevation, and could not be found in the field. According to a NGS BM search, the two nearest BM's with NAVD88 elevations would require approximately 20 miles of levels if they were found (BM's L64 and KR122 RESET). It would also require the construction of another concrete monument close to the LAKWEO site. These services could not be performed under this work-order since it would exceed the maximum fee allowed.

ORF61:

The BM provided by the District for this site was R627, and was not on-site. It required approximately 1.2 miles of leveling.

SEBRING:

Two NGS BM's with NAVD88 elevations could not be found within 5 miles of the SEBRING well site. Woolpert used the on-site BM (SEBRING MW2004) to verify the existing tag in NGVD29.

KISSFS:

Woolpert used the on-site BM (KISSFS 1983) supplied by the District to set a reference tag in NGVD29. Using the two nearest NGS BM's with NAVD88, if found (Q512 and P512), would require approximately six miles of levels and could not be completed under this work-order since it would exceed the maximum fee allowed.

WR11:

Only GW1 was measured at this site, not GW2. GW2 was missed because both wells share the same box and the field crews did not notice the second well.

WR15:

Only GW1 was measured at this site, not GW2. GW2 was missed because both wells share the same box and the field crews did not notice the second well.

WR16:

Only GW1 was measured at this site, not GW2. GW2 was missed because both wells share the same box and the field crews did not notice the second well.

Therefore, a final list of the Well Sites included within this report are:

BOGAFB	MARIC	S-65GW	WR15
KENAN1	ORF61	SEBRING (no NAVD88)	WR16
LCYP19	RATHAM	TIGER	BFARM
LHATCH3	S63A-SCA	TURLAK	KISSFS (no NAVD88)
LJACK	S65A-SCA	WR11	WRLGTE

Monitoring Well Site Information Summary

In Section 2, all well site information is presented in the same format.

EXAMPLE:

Site Name		Sensor		
Example		GW1		
Latitude	Longitude	Northing	Easting	
28° 23' 31.937"	81° 22' 31.937"	1472251	538267	
Section	Township	Range	County	Quad
13	24	29	Orange	Lake Jessamine
Benchmark Information:				
Name	Existing / Set	NAVD88	NGVD29	
BOG527	Set	80.851	81.876	
Reference Point Information:				
Stamped Elevation (NGVD29)		Stamped Date	By Firm	
87.50		9-21-07	Woolpert, Inc.	
Note: Reference mark at edge of wood as marked.				
Staff Gauge Information:				
Water Elevation (NGVD29)	Gauge Reading	Time of Reading	Date of Reading	
79.928	80.05	09:25	9-21-07	

NOTES:

1. Latitude and longitude were derived at the benchmark location, and is given to assist in locating the site. It is not meant to accurately locate each well.
2. The Northing and Easting were obtained by using CORPSCON to convert the latitude and longitude to Florida State Plane Coordinates, East Zone, Adjustment of 1990 (NAD83/90) HARN.
3. All measurements and elevations are in feet unless otherwise noted.
4. Reference point elevations were determined by using the stated NGVD29 elevation.
5. The site bench mark NGVD29 elevations were calculated using CORPSCON to convert the published NAVD88 elevation if a published NGVD29 elevation was not available.
6. In some cases the local benchmark only had a NGVD29 elevation, so it was used and no NAVD88 elevation is stated.
7. For some well sites an existing tag was found with a stamped elevation from another source. For these sites, Woolpert verified the tag elevation by leveling from the local site bench mark to the reference point. If the stamped tag elevation was accurate based on the leveling, the tag was left alone.

Surveyor's Notes:

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

THIS REPORT OF SURVEY CONSISTS OF FOUR SECTIONS AS OUTLINED WITHIN THE SUMMARY OF CONTENTS AND IS NOT VALID UNLESS ATTACHED TO THE OTHERS IN THEIR ENTIRETY.

ADDITIONS OR DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.

Surveyor and Mapper in Responsible Charge:

John A. Cestnick

Professional Surveyor and Mapper,

License Number: 5994

Signed: _____
(For, and on behalf of the firm Woolpert, Inc.)

Seal:

Section 2: Monitoring Well Site Information

Site Name		Sensor		
BOGAFB		None		

Latitude	Longitude	Northing	Easting	
28° 27' 05.30"	81° 18' 36.09"	1497078	556344	
Section	Township	Range	County	Quad
33	23	30	Orange	Pine Castle

Benchmark Information:

Name	Existing / Set	NAVD88	NGVD29
GODWIN1	Existing	88.48	89.45

Reference Point Information:

Stamped Elevation (NGVD29)	Stamped Date	By Firm
92.14	12-21-07	Woolpert, Inc.

Note: Reference mark at edge of wood as marked. Well box was empty.

Staff Gauge Information: Water level was below staff gauge so reading was not available (NA).

Water Elevation (NGVD29)	Gauge Reading	Time of Reading	Date of Reading
NA	NA	NA	NA

To Reach Description:

From the intersection of US441/S. Orange Blossom Trail & SR482/Sand Lake road in the city of Orlando, Florida, proceed south along US441/Orange Blossom Trail for 1mile to CR527A/Landstreet Rd. Turn left (east) on CR527A/Landstreet Rd. Proceed east for 0.25mile to the east SR528 entrance ramp. Once on SR528 east proceed for 5.2miles to the off ramp to South SR436 (also entrance to Orlando International airport). Travel along ramp for 0.37mile. Well is on left side of road next to headwall at canal.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Staff Gauge:



DEC 21, 07	JOB# 67411		W. MILLER			
Run	ELEV	TO	BOGGY AFB	A. ANTONO		
#	+	HI	DIST	- ELEV	DESC.	
1	Bm	7.801	96.281	322.19	Bm	
1			287.11	9.297	86.984	
2	Ref Mark	7.233	94.218	128.08		
			112.28	3.051	91.167	REF MARK
		5.212	94.379	112.48		
3			128.44	7.395	86.983	
		7.35	96.348	285.49		
4	Bm			7.950	Bm	
1		3.141	94.388	111.64	91.167	REF MARK
1				165.05	7.539	86.769
2	Bm	9.343	96.112	263.88		
				7.620	86.492	Bm

LAST TURN LEVEL
 WOULD NOT SHOOT
 READ MANUALLY

ERROR = 0.012

BM GIS 0150 JAMES GODWIN 1 01/52
 ELEV = 88.48 ← NAVD 88

→ NGVD 29 CONVERTED
 ELEV = 92.138

ELEV = 88.48 ← NAVD 88

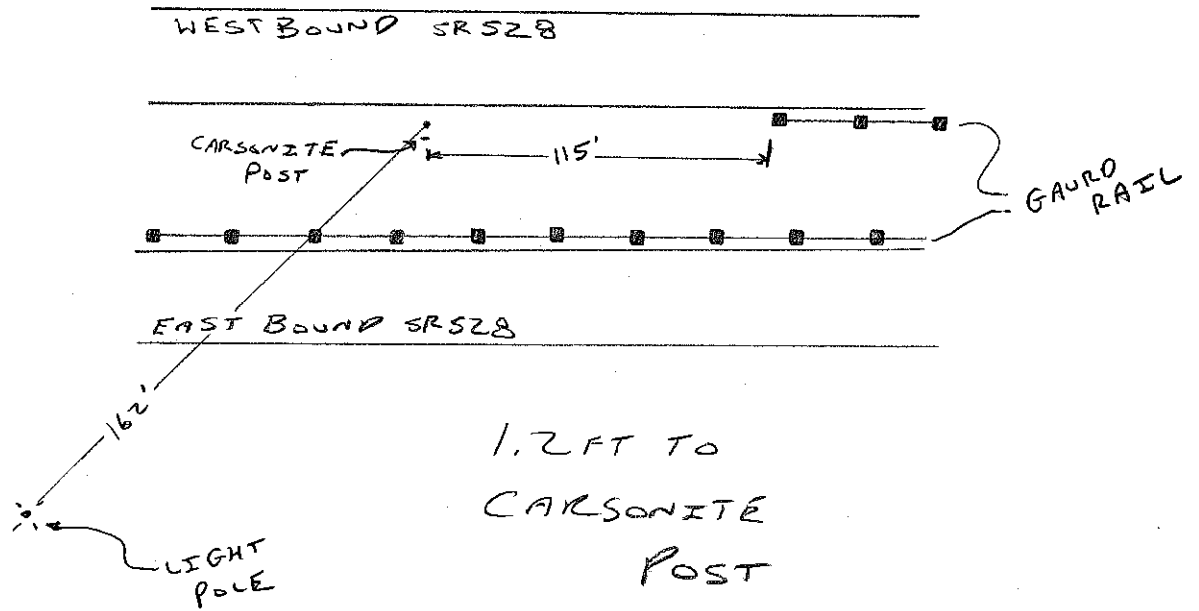
Run #	ELEV	TO	BOGGY AFB	A. ANTONO	HI	DIST	-	ELEV	DESC.
A1 Bm	7.801	96.281	322.19						Bm
1			287.11	9.297	86.984				
	7.233	94.218	128.08						
2 Ref mark			112.28	3.051	91.167				Ref mark
	5.212	94.379	112.48						
3			128.44	7.395	86.983				
	9.335	96.340	285.49						
4 Bm			7.950						Bm
A1	3.141	94.308	111.64		91.167				Ref mark
1			165.05	7.539	86.769				
	9.343	96.112	263.88						
2 Bm			7.620	86.492					Bm

LAST TURN LEVEL
WOULD NOT SHOOT
READ MANUALLY

ERROR = 0.012

→ NAVD 29 CONVERTED
ELEV = 92.138

BM GIS DISD JAMES GODWIN 1



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: BOGGY AFB

Date: DEC 21, 07

Crew: W. MILLER / A. ANTONIO

Bench Mark Used:

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
<u>GODWIN 1</u>	<u>1980</u>	<u>88.48</u>		<u>Y</u>

(if needed) Conversion factor = 0.971 Converted NGVD29 = 89.451

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>SEE BOOK OL 1 PAGE 52</u>				<u>92.138</u>	<u>REFMARK</u>
<u>FOR LEVEL INFO</u>					

NGVD 29 Ground Elev. @ Well Site: (IN WATER)

Tag Check List:

- Stamp Site/Station Designation
- Stamp Elevation in NGVD 29
- Stamp Date
- Stamp By Woolpert
- Stamp Datum (NGVD 29)
- Scratch Elev / Remove Tag

Photo Check List:

- | | |
|--|--------------------|
| <input checked="" type="checkbox"/> Bench Mark close Up | Picture # <u>6</u> |
| <input checked="" type="checkbox"/> Bench Mark standing | Picture # <u>5</u> |
| <input checked="" type="checkbox"/> M. Well tag close Up | Picture # <u>4</u> |
| <input checked="" type="checkbox"/> M. Well standing | Picture # <u>3</u> |
| <input checked="" type="checkbox"/> M. Well Area | Picture # <u>2</u> |
| <input checked="" type="checkbox"/> Staff Gauge | Picture # <u>1</u> |

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
<u>BOGGY AFB</u>	<u>NONE</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

Latitude and Longitude Of Local Bench Mark:

<u>28 27 05.30</u>	<u>81 18 36.09</u>
--------------------	--------------------

Site Description, Comments, or Remarks:

BM 528.2A FOUND AT WELL SITE ON WEST END OF HEADWALL, ON THE HEADWALL

The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

DATABASE = ,PROGRAM = datasheet, VERSION = 7.60
1 National Geodetic Survey, Retrieval Date = MAY 21, 2008
AK7135 *****
AK7135 DESIGNATION - GIS 0150 JAMES GODWIN 1
AK7135 PID - AK7135
AK7135 STATE/COUNTY- FL/ORANGE
AK7135 USGS QUAD - PINE CASTLE (1980)
AK7135
AK7135 *CURRENT SURVEY CONTROL
AK7135
AK7135 * NAD 83(2007)- 28 27 05.29594(N) 081 18 36.08801(W) ADJUSTED
AK7135 * NAVD 88 - 26.968 (meters) 88.48 (feet) ADJUSTED
AK7135
AK7135 EPOCH DATE - 2002.00
AK7135 X - 847,913.601 (meters) COMP
AK7135 Y - -5,547,631.520 (meters) COMP
AK7135 Z - 3,020,588.746 (meters) COMP
AK7135 LAPLACE CORR- -1.68 (seconds) DEFLEC99
AK7135 ELLIP HEIGHT- -0.892 (meters) (02/10/07) ADJUSTED
AK7135 GEOID HEIGHT- -27.81 (meters) GEOID03
AK7135 DYNAMIC HT - 26.929 (meters) 88.35 (feet) COMP
AK7135
AK7135 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
AK7135 Type PID Designation North East Ellip
AK7135 -----
AK7135 NETWORK AK7135 GIS 0150 JAMES GODWIN 1 1.33 1.39 1.90
AK7135 -----
AK7135 MODELED GRAV- 979,189.1 (mgal) NAVD 88
AK7135
AK7135 VERT ORDER - SECOND CLASS I
AK7135
AK7135 The horizontal coordinates were established by GPS observations
AK7135 and adjusted by the National Geodetic Survey in February 2007.
AK7135
AK7135 The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
AK7135 See National Readjustment for more information.
AK7135 The horizontal coordinates are valid at the epoch date displayed above.
AK7135 The epoch date for horizontal control is a decimal equivalence
AK7135 of Year/Month/Day.
AK7135
AK7135 The orthometric height was determined by differential leveling
AK7135 and adjusted in December 1995.
AK7135
AK7135 The X, Y, and Z were computed from the position and the ellipsoidal ht.
AK7135
AK7135 The Laplace correction was computed from DEFLEC99 derived deflections.
AK7135
AK7135 The ellipsoidal height was determined by GPS observations
AK7135 and is referenced to NAD 83.
AK7135
AK7135 The geoid height was determined by GEOID03.
AK7135
AK7135 The dynamic height is computed by dividing the NAVD 88
AK7135 geopotential number by the normal gravity value computed on the
AK7135 Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AK7135 degrees latitude (g = 980.6199 gals.).
AK7135
AK7135 The modeled gravity was interpolated from observed gravity values.
AK7135
AK7135; North East Units Scale Factor Converg.
AK7135;SPC FL E - 456,278.609 169,635.161 MT 0.99995255 -0 08 51.7
AK7135;SPC FL E - 1,496,974.07 556,544.69 sFT 0.99995255 -0 08 51.7
AK7135;UTM 17 - 3,147,254.910 469,645.521 MT 0.99961137 -0 08 51.7
AK7135
AK7135! - Elev Factor x Scale Factor = Combined Factor
AK7135!SPC FL E - 1.00000014 x 0.99995255 = 0.99995269
AK7135!UTM 17 - 1.00000014 x 0.99961137 = 0.99961151
AK7135
AK7135 SUPERSEDED SURVEY CONTROL

```

AK7135
 AK7135 NAD 83(1999)- 28 27 05.29593(N) 081 18 36.08792(W) AD() 1
 AK7135 ELLIP H (07/06/01) -0.862 (m) GP() 4 2
 AK7135 NAD 83(1990)- 28 27 05.29526(N) 081 18 36.08749(W) AD() 1
 AK7135 NAD 83(1990)- 28 27 05.29530(N) 081 18 36.08749(W) AD() 1
 AK7135 ELLIP H (06/24/93) -0.882 (m) GP() 4 2
 AK7135 NGVD 29 (06/24/93) 27.30 (m) 89.6 (f) LEVELING 3

AK7135.Superseded values are not recommended for survey control.

AK7135.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AK7135.[See file dsdata.txt](#) to determine how the superseded data were derived.

AK7135
 AK7135_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMM6964647255(NAD 83)

AK7135_MARKER: DD = SURVEY DISK

AK7135_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AK7135_SP_SET: CONCRETE POST

AK7135_STAMPING: GIS-0150 JAMES GODWIN-1

AK7135_MARK LOGO: FL-095

AK7135_MAGNETIC: S = STEEL SPIKE IMBEDDED IN MONUMENT

AK7135_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

AK7135+STABILITY: SURFACE MOTION

AK7135_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AK7135+SATELLITE: SATELLITE OBSERVATIONS - May 02, 1991

HISTORY	- Date	Condition	Report By
AK7135 HISTORY	- 1985	MONUMENTED	FL-095
AK7135 HISTORY	- 19890628	GOOD	FL-095
AK7135 HISTORY	- 19910502	GOOD	FL-095
AK7135 HISTORY	- 19980530	GOOD	USPSQD

AK7135
 AK7135 STATION DESCRIPTION

AK7135'DESCRIBED BY ORANGE COUNTY FLORIDA 1989

AK7135'THE STATION IS ABOUT 1 MI (1.6 KM) NORTH OF THE ORLANDO INTERNATIONAL

AK7135'AIRPORT AND ABOUT 0.05 MI (0.08 KM) WEST OF COUNTY ROAD 436 IN THE

AK7135'SOUTHEAST QUARTER OF SECTION 28, TOWNSHIP 23 SOUTH, RANGE 30 EAST,

AK7135'ORANGE COUNTY, FLORIDA, IN THE CENTERLINE OF THE GRASS MEDIAN OF THE

AK7135'BEE LINE EXPRESSWAY (STATE ROAD 528).

AK7135'TO REACH THE STATION FROM THE BEE LINE EXPRESSWAY (STATE ROAD 528) AND

AK7135'COUNTY ROAD 436, GO WEST ON STATE ROAD 528 FOR 0.05 MI (0.08 KM) TO

AK7135'THE STATION AS DESCRIBED.

AK7135'THE STATION IS 26 FT (7.9 M) SOUTH OF THE CENTERLINE OF THE WESTBOUND

AK7135'LANE OF THE BEE LINE EXPRESSWAY, 38.4 FT (11.7 M) NORTH OF THE

AK7135'CENTERLINE OF THE EASTBOUND LANE OF THE BEE LINE EXPRESSWAY, 115 FT

AK7135'(35.1 M) WEST OF THE WESTERLY END OF A MEDIAN GUARDRAIL, AND 161.8

AK7135'FT (49.3 M) NORTHEAST OF AN X-CUT IN THE EAST BOLT IN A LIGHT POLE

AK7135'BASE.

AK7135
 AK7135 STATION RECOVERY (1991)

AK7135'RECOVERY NOTE BY ORANGE COUNTY FLORIDA 1991

AK7135'THE STATION IS ABOUT 1 MI (1.6 KM) NORTH OF THE ORLANDO INTERNATIONAL

AK7135'AIRPORT AND ABOUT 0.05 MI (0.08 KM) WEST OF COUNTY ROAD 436 IN THE

AK7135'SOUTHEAST QUARTER OF SECTION 28, TOWNSHIP 23 SOUTH, RANGE 30 EAST,

AK7135'ORANGE COUNTY, FLORIDA, IN THE CENTERLINE OF THE GRASS MEDIAN OF THE

AK7135'BEE LINE EXPRESSWAY (STATE ROAD 528).

AK7135'TO REACH THE STATION FROM THE BEE LINE EXPRESSWAY (STATE ROAD 528) AND

AK7135'COUNTY ROAD 436, GO WEST ON STATE ROAD 528 FOR 0.05 MI (0.08 KM) TO

AK7135'THE STATION AS DESCRIBED.

AK7135'THE STATION IS 26 FT (7.9 M) SOUTH OF THE CENTERLINE OF THE WEST BOUND

AK7135'LANE OF THE BEE LINE EXPRESSWAY, 38.4 FT (11.7 M) NORTH OF THE

AK7135'CENTERLINE OF THE EAST BOUND LANE OF THE BEE LINE EXPRESSWAY, 115 FT

AK7135'(35.1 M) WEST OF THE WESTERLY END OF A MEDIAN GUARD RAIL, AND 161.8

AK7135'FT (49.3 M) NORTHEAST OF AN X CUT IN THE EAST BOLT IN A LIGHT POLE

AK7135'BASE.

AK7135'THE AZIMUTH MARK IS A 3.5 INCH BRASS DISK, STAMPED ORANGE COUNTY

AK7135'GEODETIC INFORMATION SYSTEM, GIS-151 RESET 5-4-90, AND IS SET IN THE

AK7135'TOP OF A CIRCULAR CONCRETE MONUMENT THAT IS SET FLUSH WITH THE GROUND

AK7135'SURFACE.

AK7135'TO REACH THE AZIMUTH FROM THE STATION GO ON A GEODETIC AZIMUTH OF 270

AK7135'DEGREES 00 MINUTES 06.03 SECONDS FOR A DISTANCE OF 2125.561 M

AK7135'(6973.611 FT)

AK7135'THE AZIMUTH MARK IS 36.65 FT (11.17 M) SOUTHWEST OF A ORANGE COUNTY

AK7135'P.K. NAIL AND WASHER. 32.21 FT (9.82 M) NORTHWEST OF A ORANGE COUNTY

AK7135'P.K. NAIL AND WASHER. 42.45 FT (12.94 M) NORTHEAST OF A ORANGE COUNTY

AK7135'P.K. NAIL AND WASHER.

AK7135
 AK7135 STATION RECOVERY (1998)

AK7135'RECOVERY NOTE BY US POWER SQUADRON 1998

AK7135'RECOVERED IN GOOD CONDITION.

*** retrieval complete.
Elapsed Time = 00:00:00

Site Name		Sensor	
KENAN1		GW1	

Latitude 27° 53' 19.06"	Longitude 81° 01' 05.93"	Northing 1292324	Easting 650320
Section 10	Township 30	Range 33	County Osceola
			Quad Lake Marin NE

Benchmark Information:

Name KEEN 5	Existing / Set Existing	NAVD88 74.61	NGVD29 75.83
-----------------------	-----------------------------------	------------------------	------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 79.32	Stamped Date 1-07-08	By Firm Woolpert, Inc.
--	--------------------------------	----------------------------------

Note: Reference mark at top of PVC pipe.

Staff Gauge Information:

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:

From the intersection of US441 and CR523 in the town of Kenansville, FL., travel west for 1.75 miles to a private paved driveway at address #705. Turn right (north) onto driveway and travel for about 0.85 miles. Well is to the west about 500ft. Travel south of retention pond and through cattle gate.

Sensor Well Area:



Sensor Well:



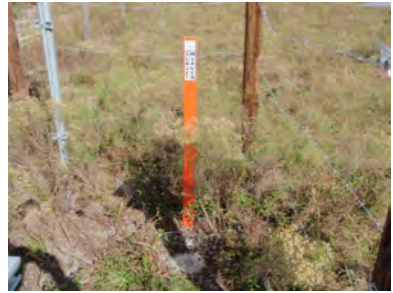
Tag Close-up:



Bench Mark:



Bench Mark:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: KEENS

Date: JAN 7, 08

Crew: W. MILLER / A. ANTONIO

Bench Mark Used:

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
<u>KEENS</u>	<u>2005</u>	<u>74.610</u>	<u>75.83</u>	<u>Y</u>

(if needed) Conversion factor = _____ Converted NGVD29 = _____

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>A1 Bm</u>	<u>5.433</u>	<u>81.263</u>			<u>21.65</u>
<u>GROUND</u>			<u>5.398</u>	<u>75.865</u>	<u>21.83</u>
<u>1 well</u>			<u>1.944</u>	<u>79.319</u>	<u>22.86</u>
	<u>1.788</u>	<u>81.107</u>			<u>22.80</u>
<u>2 Bm</u>			<u>5.276</u>	<u>75.830</u>	<u>21.64</u>

NGVD 29 Ground Elev. @ Well Site: 75.865

Tag Check List:

Photo Check List:

- | | | | |
|--|----------|----------------------|--------------------|
| <input checked="" type="checkbox"/> Stamp Site/Station Designation | <u>✓</u> | Bench Mark close Up | Picture # <u>1</u> |
| <input checked="" type="checkbox"/> Stamp Elevation in NGVD 29 | <u>✓</u> | Bench Mark standing | Picture # <u>2</u> |
| <input checked="" type="checkbox"/> Stamp Date | <u>✓</u> | M. Well tag close Up | Picture # <u>3</u> |
| <input checked="" type="checkbox"/> Stamp By Woolpert | <u>✓</u> | M. Well standing | Picture # <u>4</u> |
| <input checked="" type="checkbox"/> Stamp Datum (NGVD 29) | <u>✓</u> | M. Well Area | Picture # <u>5</u> |
| <input checked="" type="checkbox"/> Scratch Elev / Remove Tag | <u>✓</u> | Staff Gauge | Picture # _____ |

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.

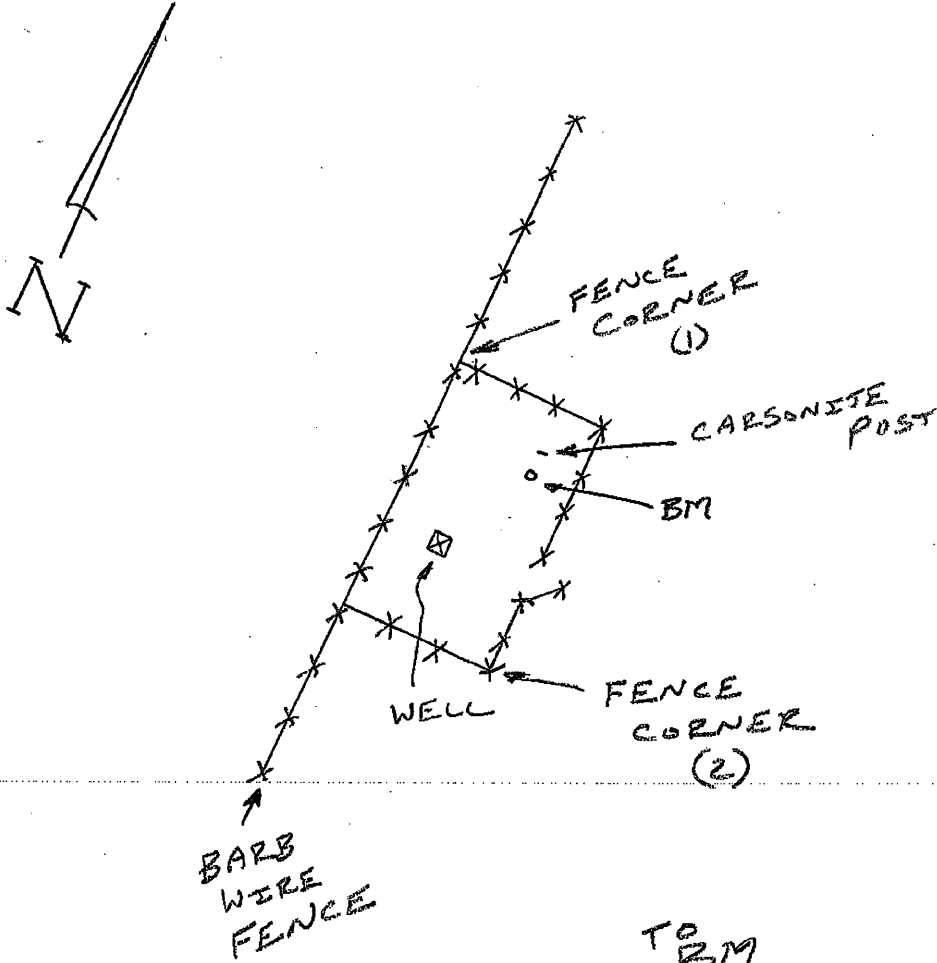
Latitude and Longitude Of Local Bench Mark:

<u>27 53 19.06</u>	<u>81 01 05.93</u>
--------------------	--------------------

Site Description, Comments, or Remarks:

KEEN 5

LAT 27 53 19.06
 LONG 81 01 05.93



	AZ	DIST
FENCE CORNER (1)	120°	6'
FENCE CORNER (2)	0°	10.30
CARSONITE POST	180°	1'
WELL	231°	6'



South Florida Water Management District Benchmark Database

Report run on: May 21, 2008 7:00 AM

Designation: KEEN5
County: OSCEOLA
USGS Quad: KENANSVILLE
Project: KENAN1 WELL SITE
Sec: 10 Twp: 30 Rge: 33
Status: GOOD

Latitude: 275319.100 Scaled values only
Longitude: 810105.900
Monument By: COONER & ASSOCIATES, INC
Year: 2005
Type: V
Stamping: KEEN 5
Party Chief:
Field Book 81
Page: 28

NAD 1927 Coordinates:

N =
E =

Adjustment:

NAD 1983 Coordinates:

X = 650254.770
Y = 1292213.750

Adjustment:

Order:
Class:

NGVD 1929
Elevation: 75.830
Order: 3
Class:

NAVD 1988
Elevation: 74.610
Order: 3
Class:

Description:

***** RECOVERY NOTE *****

1/7/08 MILLER WOOLPERT NO FIELD BOOK KEEN5 2005 EL. 74.61 NAVD 1988
EL. 75.83 NGVD 1929 (21-MAY-08 HJE)

TO REACH THE MARK FROM THE INTERSECTION OF US HIGHWAY 441 AND STATE ROAD 523, HEAD WEST
ALONG SR 523 FOR 1.6 MILES TO A STEEL GATE ON THE RIGHT. GO THROUGHT THE GATE, HEADING
NORTH ALONG AN ASPHALT ROAD. FOLLOW ROAD TAKING A LEFT AT A LARGE POND, HEADING WEST TO
THE MARK ON THE RIGHT, INSIDE A FENCED IN WELL ENCLOSURE.

MARK IS 23', BEARING 50?E, FROM A NORTH-SOUTH BARBED WIRE FENCE AND 10' BEARING N 41?E FROM
A MONITORING WELL.

KEEN5 IS A STANDARD SFWMD ALUMINUM DISK SET IN TOP OF A CLASS "C" CONCRETE MONUMENT,
FLUSH WITH THE GROUND. A MAGNET WAS SET ON THE SOUTH SIDE OF THE MARK.

CACLUATED USING 1.22' OFFSET VALUE BASED ON DIFFERENCE BETWEEN SUPERSEDED SURVEY
CONTROL NAVD88 AND NGVD29 ELEVATIONS AS POSTED ON EXISTING NGS DATA SHEET FOR
BENCHMARKS D198 AND G198.

KENSVL WELL DATA

HORIZONTAL LOCATION TAKEN AT APPROXIMATE CENTER OF WELL.

WELL KEENANSVILLE
LAT. +27?53'19.06"
LONG. -081?01'05.89"
N 1292209.96'
E 650254.77'

ELEVATION TAKEN ON TOP OF PIPE EXTENDING VERTICALLY ABOVE THE WELL PLATFORM AT THE TIP OF
A BLACK ARROW.

NEW LEVELED ELEVATIONS.

78.10' (NAVD 88)
79.32' (NGVD 29)

Site Name		Sensor		
LCYPR 19		GW1		

Latitude 28° 04' 28.3"	Longitude 81° 19' 49.1"	Northing 1360051	Easting 549721	
Section 4	Township 28	Range 30	County Osceola	Quad Cypress Lake

Benchmark Information:

Name LCYP 19	Existing / Set Existing	NAVD88 53.412	NGVD29 54.53
------------------------	-----------------------------------	-------------------------	------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 57.51	Stamped Date 1-14-08	By Firm Woolpert, Inc.
--	--------------------------------	----------------------------------

Note: Reference mark at edge of wood as marked.

Staff Gauge Information:

Water Elevation (NGVD29)	Gauge Reading	Time of Reading	Date of Reading
NA	NA	NA	NA

To Reach Description:
 From the intersection of US192 and CR523 in the town Saint Cloud, FL head south on CR 523 for 11.75 miles to Lake Cypress Rd. Turn right (west) on Lake Cypress Rd and travel 2.3 miles to the boat ramp. Well is +/-1.75 miles at a compass bearing of 249 degrees in Cypress Lake.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: LCYP19

Date: JAN 14, 08

Crew: W. MILLER/ALEX ANTONIO

Bench Mark Used:

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
<u>LCYP19</u>	<u>2003</u>	<u>53.412</u>	<u>54.53</u>	<u>N</u>

(if needed) Conversion factor = _____ Converted NGVD29 = _____

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>Bm</u>	<u>3.51</u>	<u>58.04</u>		<u>54.53</u>	
<u>well</u>			<u>.53</u>	<u>57.51</u>	
	<u>.42</u>	<u>57.93</u>			
<u>✓ IN</u>			<u>3.40</u>	<u>54.53</u>	

NGVD 29 Ground Elev. @ Well Site: N/A

Tag Check List:

Photo Check List:

- | | | | |
|---|-------------------------------------|----------------------|-----------------|
| <input type="checkbox"/> Stamp Site/Station Designation | <input checked="" type="checkbox"/> | Bench Mark close Up | Picture # _____ |
| <input type="checkbox"/> Stamp Elevation in NGVD 29 | <input checked="" type="checkbox"/> | Bench Mark standing | Picture # _____ |
| <input type="checkbox"/> Stamp Date | <input checked="" type="checkbox"/> | M. Well tag close Up | Picture # _____ |
| <input type="checkbox"/> Stamp By Woolpert | <input checked="" type="checkbox"/> | M. Well standing | Picture # _____ |
| <input type="checkbox"/> Stamp Datum (NGVD 29) | <input checked="" type="checkbox"/> | M. Well Area | Picture # _____ |
| <input type="checkbox"/> Scratch Elev / Remove Tag | <input checked="" type="checkbox"/> | Staff Gauge | Picture # _____ |

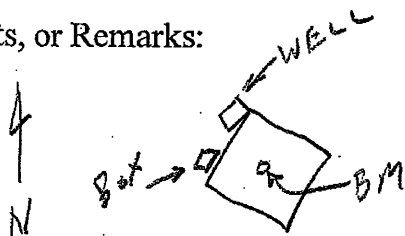
Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.

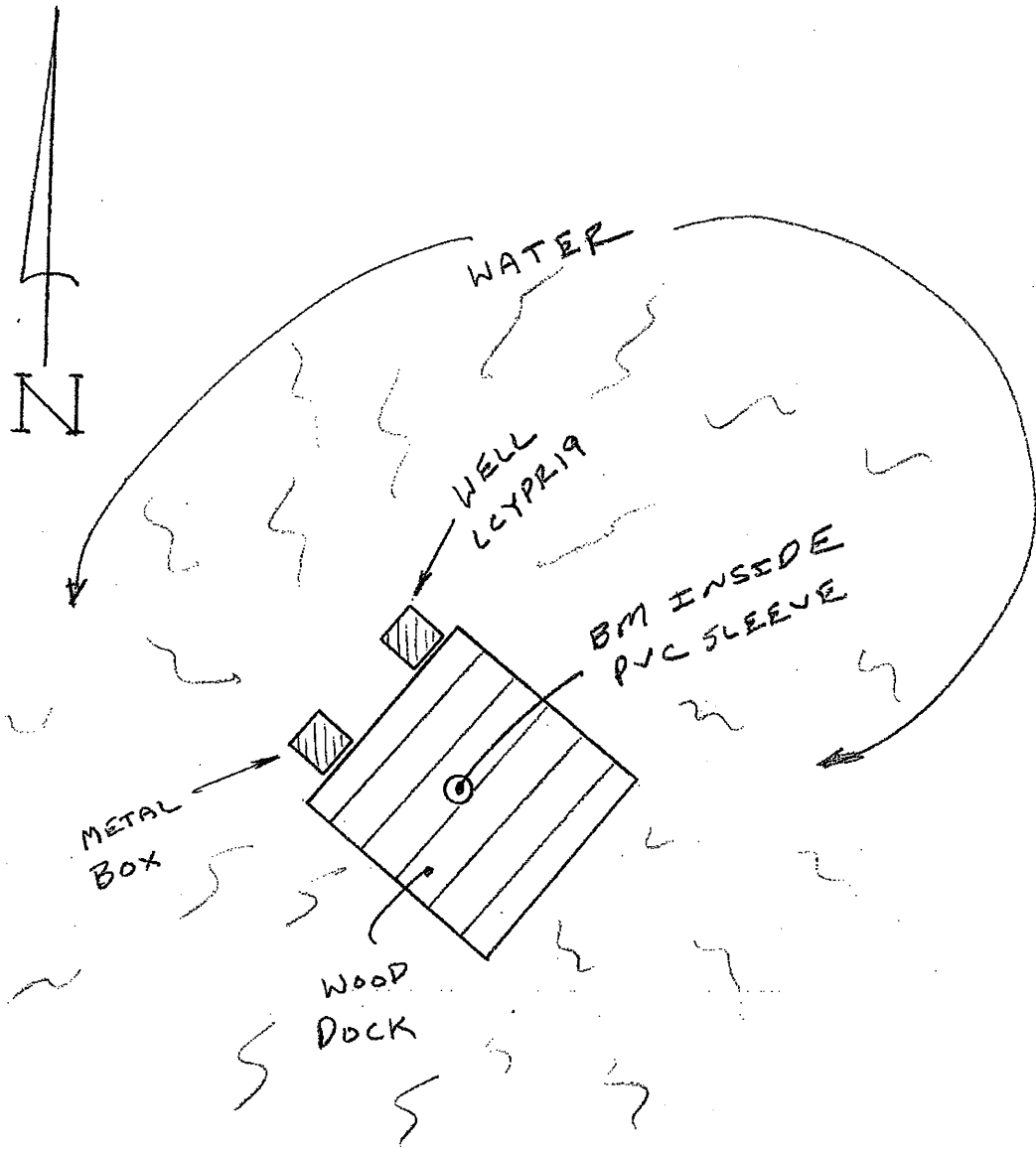
Latitude and Longitude Of Local Bench Mark:

<u>28 04 28.30</u>	<u>81 19 49.10</u>
--------------------	--------------------

Site Description, Comments, or Remarks:



LCYPI9



The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

DATABASE = ,PROGRAM = datasheet, VERSION = 7.60
1 National Geodetic Survey, Retrieval Date = MAY 21, 2008
DG4140 *****
DG4140 HT_MOD - This is a Height Modernization Survey Station.
DG4140 DESIGNATION - LCYP 19
DG4140 PID - DG4140
DG4140 STATE/COUNTY- FL/OSCEOLA
DG4140 USGS QUAD - CYPRESS LAKE (1987)
DG4140
DG4140 *CURRENT SURVEY CONTROL
DG4140
DG4140* NAD 83(2007)- 28 04 28.28218(N) 081 19 49.03526(W) ADJUSTED
DG4140* NAVD 88 - 16.28 (meters) 53.4 (feet) GPS OBS
DG4140
DG4140 EPOCH DATE - 2002.00
DG4140 X - 848,931.974 (meters) COMP
DG4140 Y - -5,567,477.089 (meters) COMP
DG4140 Z - 2,983,789.369 (meters) COMP
DG4140 LAPLACE CORR- -1.79 (seconds) DEFLEC99
DG4140 ELLIP HEIGHT- -11.298 (meters) (02/10/07) ADJUSTED
DG4140 GEOID HEIGHT- -27.61 (meters) GEOID03
DG4140
DG4140 ----- Accuracy Estimates (at 95% Confidence Level in cm) -----
DG4140 Type PID Designation North East Ellip
DG4140 -----
DG4140 NETWORK DG4140 LCYP 19 0.71 0.86 1.33
DG4140 -----
DG4140
DG4140.The horizontal coordinates were established by GPS observations
DG4140.and adjusted by the National Geodetic Survey in February 2007.
DG4140
DG4140.The datum tag of NAD 83(2007) is equivalent to NAD 83(NSRS2007).
DG4140.See National Readjustment for more information.
DG4140.The horizontal coordinates are valid at the epoch date displayed above.
DG4140.The epoch date for horizontal control is a decimal equivalence
DG4140.of Year/Month/Day.
DG4140
DG4140.The orthometric height was determined by GPS observations and a
DG4140.high-resolution geoid model using precise GPS observation and
DG4140.processing techniques.
DG4140
DG4140.The X, Y, and Z were computed from the position and the ellipsoidal ht.
DG4140
DG4140.The Laplace correction was computed from DEFLEC99 derived deflections.
DG4140
DG4140.The ellipsoidal height was determined by GPS observations
DG4140.and is referenced to NAD 83.
DG4140
DG4140.The geoid height was determined by GEOID03.
DG4140
DG4140; North East Units Scale Factor Converg.
DG4140;SPC FL E - 414,511.160 167,536.484 MT 0.99995418 -0 09 19.6
DG4140;SPC FL E - 1,359,942.03 549,659.28 sFT 0.99995418 -0 09 19.6
DG4140;UTM 17 - 3,105,501.712 467,547.561 MT 0.99961300 -0 09 19.6
DG4140
DG4140! Elev Factor x Scale Factor = Combined Factor
DG4140!SPC FL E - 1.00000177 x 0.99995418 = 0.99995595
DG4140!UTM 17 - 1.00000177 x 0.99961300 = 0.99961477
DG4140
DG4140 SUPERSEDED SURVEY CONTROL
DG4140
DG4140 NAD 83(1999)- 28 04 28.28214(N) 081 19 49.03488(W) AD( ) 1
DG4140 ELLIP H (01/28/04) -11.301 (m) GP( ) 3 1
DG4140
DG4140.Superseded values are not recommended for survey control.
DG4140.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DG4140.See file dsdata.txt to determine how the superseded data were derived.
DG4140
DG4140_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMM6754805502(NAD 83)

```

DATASHEETS

DG4140_MARKER: F = FLANGE-ENCASED ROD
 DG4140_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)

DG4140_STAMPING: LCYP 19 2003
 DG4140_MARK LOGO: FLDEP
 DG4140_PROJECTION: RECESSED 8 CENTIMETERS
 DG4140_MAGNETIC: N = NO MAGNETIC MATERIAL
 DG4140_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
 DG4140_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 DG4140+SATELLITE: SATELLITE OBSERVATIONS - February 09, 2003
 DG4140_ROD/PIPE-DEPTH: 17.6 meters

DG4140	HISTORY	- Date	Condition	Report By
DG4140	HISTORY	- 20030209	MONUMENTED	FLDEP

DG4140

STATION DESCRIPTION

DG4140

DG4140'DESCRIBED BY FL DEPT OF ENV PRO 2003 (BPJ)
 DG4140'THE MARK IS AT A WATER GAUGE PLATFORM ON CYPRESS LAKE ABOUT 12.0 MI
 DG4140'SOUTH OF ST. CLOUD IN
 DG4140'ESTIMATED SECTION 4, TOWNSHIP 28 SOUTH, RANGE 30 EAST.
 DG4140'
 DG4140'TO REACH THE MARK FROM THE INTERSECTION OF THE FLORIDA TURNPIKE
 DG4140'OVERPASS AND COUNTY ROAD 523 (CANOE CREEK ROAD) ABOUT 11.0 MI SOUTH OF
 DG4140'ST. CLOUD, GO SOUTH ON COUNTY ROAD 523 FOR 0.15 MI TO THE JUNCTION OF
 DG4140'LAKE CYPRESS ROAD ON THE RIGHT, TURN RIGHT AND GO WEST ON LAKE CYPRESS
 DG4140'ROAD FOR 2.4 MI TO A BOAT LANDING AT CYPRESS LAKE, GO WEST-SOUTHWEST
 DG4140'BY BOAT TO NAD 27 COORDINATE NORTH 28-04-28.4 BY WEST 081-19-48.9 AT
 DG4140'CHANNEL MARKER NUMBER 19 AND THE MARK, A STAINLESS STEEL ROD DRIVEN TO
 DG4140'REFUSAL AT A DEPTH OF 57.8 FT ENCASED IN A 5-INCH PVC PIPE AND
 DG4140'THREADED CAP FLUSH WITH THE PLATFORM DECKING AND ABOUT 2.7 FT ABOVE
 DG4140'THE WATER LEVEL, THE DATUM POINT IS RECESSED 4 INCHES BELOW THE PVC
 DG4140'THREADED PIPE CAP.
 DG4140'
 DG4140'LOCATED 3.2 FT NORTHEAST OF THE SOUTHWEST PLATFORM CORNER, 3.0 FT
 DG4140'NORTHWEST OF THE SOUTHWEST PLATFORM CORNER, 2.5 FT SOUTHWEST OF THE
 DG4140'NORTHWEST PLATFORM CORNER AND 2.5 FT SOUTHWEST OF THE NORTHEAST
 DG4140'PLATFORM CORNER.
 DG4140'
 DG4140'
 DG4140'

*** retrieval complete.
 Elapsed Time = 00:00:00

Site Name		Sensor		
LHATCH3		STG1		

Latitude 27° 59' 02"	Longitude 81° 22' 37"	Northing 1327143	Easting 534579
--------------------------------	---------------------------------	----------------------------	--------------------------

Section 1	Township 29	Range 29	County Polk	Quad Hesperides
---------------------	-----------------------	--------------------	-----------------------	---------------------------

Benchmark Information:

Name LHATCH3	Existing / Set Existing	NAVD88 53.29	NGVD29 54.50
------------------------	-----------------------------------	------------------------	------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 59.27	Stamped Date 1-03-08	By Firm Woolpert, Inc.
--	--------------------------------	----------------------------------

Note: Reference point at marked "X" above tag.

Staff Gauge Information:

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:

From the intersection of SR 27 and SR 60 in Lake Wales City travel east-southeast on SR 60 for 7.3 miles to the junction of Mammoth Grove Road on the left. Turn left and go north on Mammoth Grove Road for 2.05 miles to the junction of Camp Mack Rd and go north for 0.25 mi to a curve east, continue east on Camp Mack Rd. for 2.3 miles to the junction of Barney Keen Rd. on the right, continue northeast on Camp Mack Rd. for 5.2 miles to the junction of Camp Lester Rd. on the left. Turn left and go north on Camp Lester Rd. for 0.30 miles to the junction of Reese Dr. on the right. Turn right and go east on the Reese Dr. for 0.20 miles to the junction of Bruce Rd. on the left. Turn left and go north on Bruce Rd. for 0.20 miles to the entrance of the Kissimmee River Park and marina. Continue north for 0.10 mi to the intersection of a paved road, turn right and go east for 0.20 mi to a locked chain linked fence gate at lot #128. Continue east through the gate for 0.05 mi to the west bank of the Kissimmee River and the site.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: LHATCH 3

Date: JAN 3, 08

Crew: W. MELLER / A. ANTONIO

Bench Mark Used:

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
<u>LHATCH 3</u>	<u>2003</u>	<u>53.287</u>	<u>54.497</u>	<u>Y</u>

(if needed) Conversion factor = _____ Converted NGVD29 = _____

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>A1</u>	<u>7.606</u>	<u>62.103</u>			<u>34.84</u>
<u>1</u>			<u>2.838</u>	<u>59.265</u>	<u>68.22</u>
	<u>2.276</u>	<u>61.542</u>			<u>68.27</u>
<u>2</u>			<u>7.047</u>	<u>54.495</u>	<u>33.88</u>

NGVD 29 ~~Ground~~ Elev. @ Well Site: 49.978 WATER ELEV.

Tag Check List:

- Stamp Site/Station Designation
- Stamp Elevation in NGVD 29
- Stamp Date
- Stamp By Woolpert
- Stamp Datum (NGVD 29)
- Scratch Elev / Remove Tag

EXISTING Photo Check List:

TAG (ELEV GOOD)

- _____ Bench Mark close Up
- _____ Bench Mark standing
- _____ M. Well tag close Up
- _____ M. Well standing
- _____ M. Well Area
- _____ Staff Gauge

- Picture # ✓ 14
- Picture # ✓ 13
- Picture # ✓ 10
- Picture # ✓ 11
- Picture # ✓ 12
- Picture # N/A

Staff Gauge:

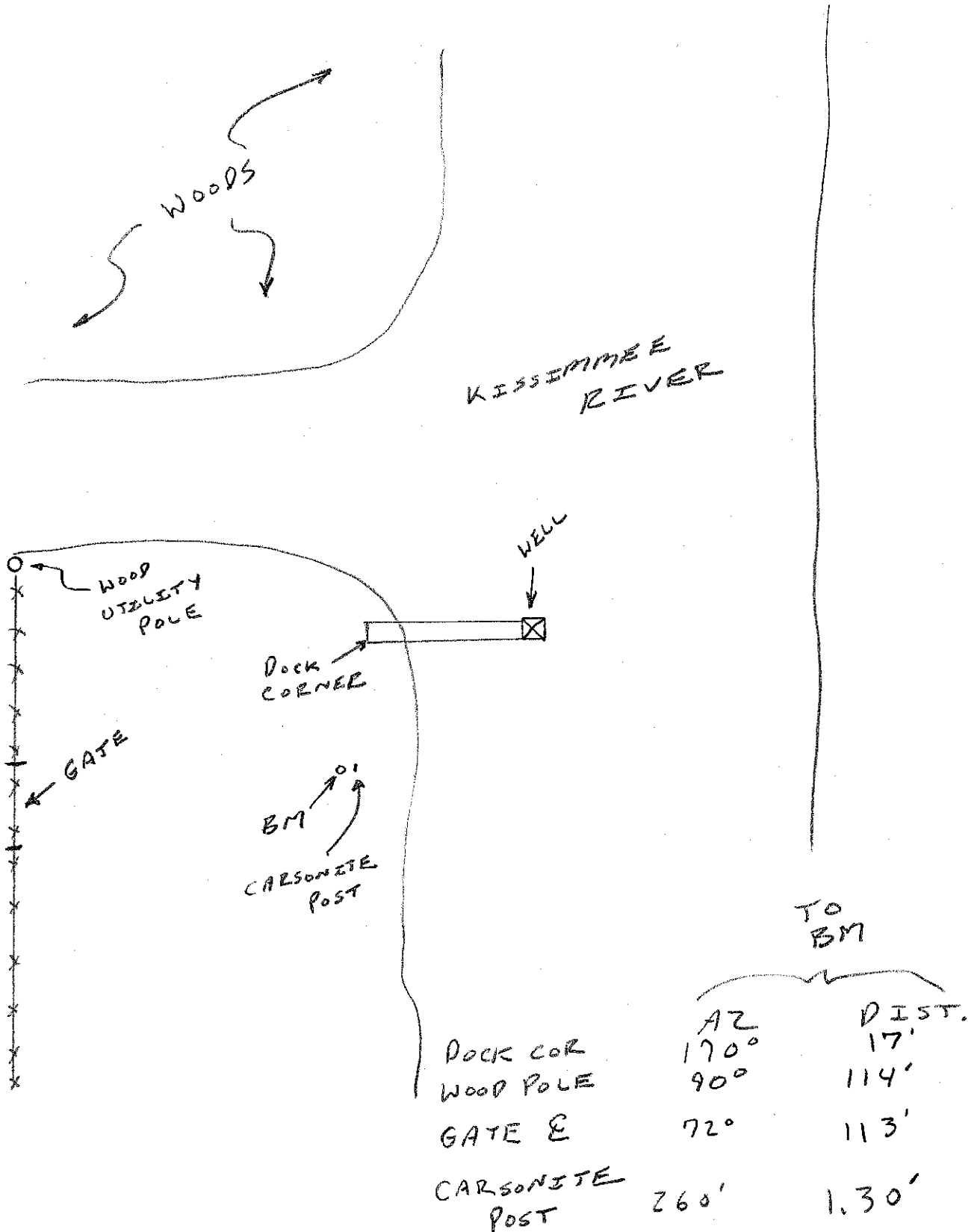
Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
<u>N/A</u>	_____	_____	_____	_____

Latitude and Longitude Of Local Bench Mark:

<u>27 59 02</u>	<u>81 22 37</u>
-----------------	-----------------

Site Description, Comments, or Remarks:

L HATCH 3



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: L HATCH 3

Date: JAN 3, 08

Crew: W. MILLER / A. ANTONIO

Bench Mark Used:

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
<u>LHATCH 3</u>	<u>2003</u>	<u>53.287</u>	<u>54.497</u>	<u>Y</u>

(if needed) Conversion factor = _____ Converted NGVD29 = _____

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>A1</u>	<u>7.606</u>	<u>62.103</u>			<u>34.84</u>
<u>1</u>			<u>2.838</u>	<u>59.265</u>	<u>68.22</u>
	<u>2.276</u>	<u>61.542</u>			<u>68.27</u>
<u>2</u>			<u>7.047</u>	<u>54.495</u>	<u>33.88</u>

NGVD 29 ~~Ground~~ Elev. @ Well Site: 49.978 WATER ELEV.

Tag Check List:

- Stamp Site/Station Designation
- Stamp Elevation in NGVD 29
- Stamp Date
- Stamp By Woolpert
- Stamp Datum (NGVD 29)
- Scratch Elev / Remove Tag

EXISTING Photo Check List:

TAG (ELEV GOOD)

↓

- _____ Bench Mark close Up
- _____ Bench Mark standing
- _____ M. Well tag close Up
- _____ M. Well standing
- _____ M. Well Area
- _____ Staff Gauge

- Picture # ✓ 14
- Picture # ✓ 13
- Picture # ✓ 10
- Picture # ✓ 11
- Picture # ✓ 12
- Picture # N/A

Staff Gauge:

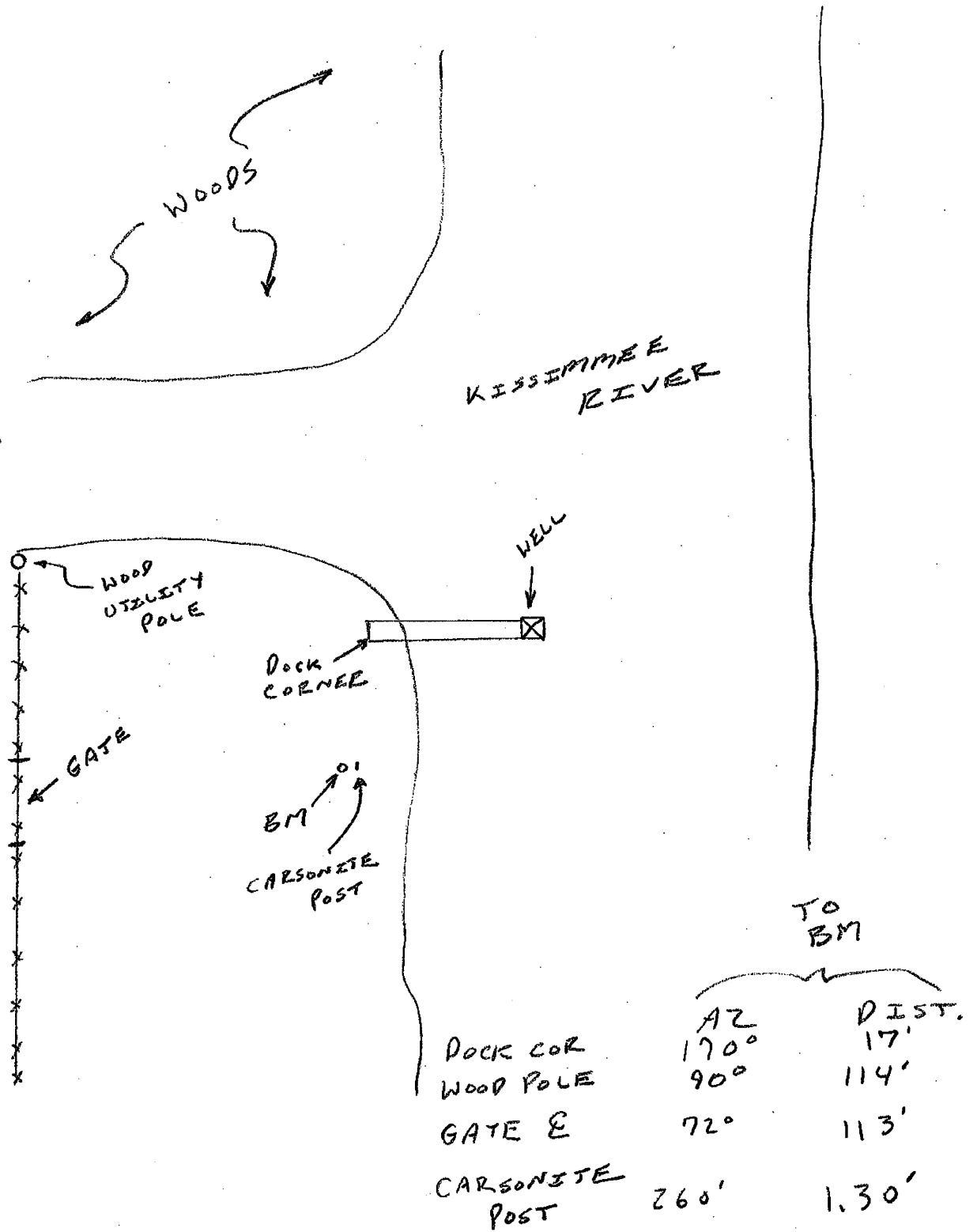
Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
<u>N/A</u>	_____	_____	_____	_____

Latitude and Longitude Of Local Bench Mark:

<u>27 59 02</u>	<u>81 22 37</u>
-----------------	-----------------

Site Description, Comments, or Remarks:

L HATCH 3





South Florida Water Management District Benchmark Database

Report run on: May 21, 2008 8:39 AM

Designation: LHATCH3 Latitude: 275902.000 Scaled values only
 County: POLK Longitude: 812238.000
 USGS Quad: HESPERIDES Monument By: FL DEPT OF ENVIR PROT
 Project: LHATCH3 GAUGE SITE Year: 2003
 Sec: 1 Twp: 29 Rge: 29 Type: V
 Status: PRELIMINARY Stamping: L HATCH3 3004
 Party Chief:
 Field Book KR-MEC 06
 Page: 13

NAD 1927 Coordinates:
 N =
 E =
 Adjustment:

NAD 1983 Coordinates:
 X = 534512.000
 Y = 1327056.000
 Adjustment:
 Order:
 Class:

NGVD 1929
 Elevation: 54.497
 Order: 2
 Class:

NAVD 1988
 Elevation: 53.287
 Order: 2
 Class:

Description:

NOTE: THE NAVD 88 AND NGVD 29 ELEVATION WERE ESTABLISHED BY APPLING THE NGS PUBLISHED VALUES TO THE DATA BELOW.

***** RECOVERY NOTE *****
 1/3/08 MILLER WOOLPERT NO FIELD BOOK LHATCH3 EL. 53.287 NAVD 1988
 EL. 54.497 NGVD 1929 (21-MAY-08 HJE)

THE FLDEP PRELIMINARY DESCRIPTION SHEET

-*- FIELD ABSTRACT -*-
 920219-920220 HGZ L0 6.0 MM ORDER 2 CLASS 1 PAGE 1
 LEVELING IN POLK COUNTY, AREA.
 STARTING ELEVATION BASED ON PRELIMINARY NAVD 88 HEIGHTS FROM L 26221.
 NOTE COLLIMATION STORED IN ELECTRONIC INSTRUMENT.
 NOTE LATITUDE AND LONGITUDE WAS SCALED FROM TOPOGRAPHIC MAP.

FROM TO	START	F/B	DIST TOTAL (KM)	ELEV DIFF (MT)	-(F+B) TOTAL (MM)	MEAN DIFF FLD ELEV (MT)	I C
0102 PO 9						19.50711	
0102 PO 9	2191426 F	1.99	-0.53151	*	0.00	-0.53151	1
0103 R 505			1.99	0.00		18.97560	
0103 R 505	2200834 F	1.88	-2.73303	*	-1.09	-2.73358	1
0104 L HATCH3	2200940 B	1.88	2.73412				
		3.87	-1.09			16.24202	

=== DESCRIPTION =====
 === DESCRIPTION HEADER RECORD =====

KEYED-IN ORDER:0004 SSN:0104 CONDITION:S PID:
 DESIGNATION:L HATCH3
 ALIAS:



South Florida Water Management District Benchmark Database

Report run on: May 21, 2008 8:39 AM

QUADNAME:HESPERIDES
COUNTRY:US STATE:FL COUNTY:POLK 105

MONUMENT:F SETTING:49 SPECIFIC:
MAGNETISM:M STABILITY:B SATELLITE:Y APPLICATIONS:
FPR:F ROD/PIPE:79.9 SLEEVE:
STAMPING:L HATCH 2003
ESTAB BY:FLDEP SETTING DATE:20030208
LOGO:NGS
REPORT BY: REPORT DATE:
TRANSPORT:P PACK TIME:00: COP:BPJ

=== POSITION RECORDS =====

DATUM	EPOCH	LATITUDE	LONGITUDE	POSITION SOURCE	ADJUSTMENT ORDER	TECHNIQUE	DATE
83		N275902	W0812238	S	5		

=== DESCRIPTIVE TEXT RECORD =====

TEXT STATUS:
THE MARK IS LOCATED AT THE KISSIMMEE RIVER PARK AND MARINA IN SECTION 1,
TOWNSHIP 29
SOUTH, RANGE 29 EAST.

TO REACH THE MARK FROM THE INTERSECTION OF STATE ROAD 27 AND STATE ROAD 60 IN LAKE WALES, GO EAST-SOUTHEAST ON STATE ROAD 60 FOR 7.3 MI TO THE JUNCTION OF MAMMOTH GROVE ROAD ON THE LEFT, TURN LEFT AND GO NORTH ON MAMMOTH GROVE ROAD FOR 2.05 MI TO THE JUNCTION OF CAMP MACK ROAD AND GO NORTH FOR 0.25 MI TO A CURVE EAST, CONTINUE EAST ON CAMP MACK ROAD FOR 2.3 MI TO THE JUNCTION OF BARNEY KEEN ROAD ON THE RIGHT, CONTINUE NORTHEAST ON CAMP MACK ROAD FOR 5.2 MI TO THE JUNCTION OF CAMP LESTER ROAD ON THE LEFT, TURN LEFT AND GO NORTH ON CAMP LESTER ROAD FOR 0.3 MI TO THE JUNCTION OF REESE DRIVE ON THE RIGHT, TURN RIGHT AND GO EAST ON REESE DRIVE FOR 0.2 MI TO THE JUNCTION OF BRUCE ROAD ON THE LEFT, TURN LEFT AND GO NORTH ON BRUCE ROAD FOR 0.2 MI TO THE ENTRANCE OF THE KISSIMMEE RIVER PARK AND MARINA, CONTINUE NORTH FOR 0.1 MI TO THE INTERSECTION OF A PAVED ROAD, TURN RIGHT AND GO EAST FOR 0.2 MI TO A LOCKED CHAIN LINKED FENCE GATE AT LOT 128, CONTINUE EAST THROUGH THE GATE FOR 0.05 MI TO THE WEST BANK OF THE KISSIMMEE RIVER AND THE MARK, A STAINLESS STEEL ROD DRIVEN TO REFUSAL AT A DEPTH OF 79.9 FT WITH AN NGS LOGO CAP FLUSH WITH THE GROUND AND ABOUT 0.8 FT BELOW THE END OF THE ROAD, THE DATUM POINT IS RECESSED 2.5 INCHES BELOW THE LEVEL OF THE NGS LOGO CAP.

LOCATED 131.3 FT NORTHEAST OF THE NORTHEAST CORNER OF A HOUSE AT LOT 128, 123.2 FT EAST OF A WOODEN LIGHT POLE NUMBER 6-46141, 119.6 FT EAST-NORTHEAST OF THE APPROXIMATE CENTER OF A CHAIN LINKED FENCE GATE, 86.5 FT NORTHEAST OF THE SOUTHERNMOST OF 2 WATER OAK TREES, 78.2 FT NORTHEAST OF THE NORTHERNMOST OF 2 WATER OAK TREES, 51.0 FT SOUTHWEST OF A SOUTH FLORIDA WATER MANAGEMENT WATER GAUGE AND 1.2 FT WEST OF A CARSONITE WITNESS POST.

NOTE ACCESS TO THE DATUM POINT IS HAD THROUGH A 5-INCH NGS LOGO CAP.

NOTE A BAR MAGNET WAS BURIED ON THE SOUTH SIDE OF THE MARK.

NOTE FOR ACCESS TO PRIVATE PROPERTY AND KEYS PHONE TOM SMITH AT 863-696-3182 OR INQUIRE AT PARK OFFICE.

Site Name		Sensor		
LJACK		STG1		

Latitude 27° 54' 36"	Longitude 81° 09' 00"	Northing 1326984	Easting 607824
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Section 31	Township 29	Range 32	County Osceola	Quad Lake Marian NW
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Benchmark Information:

Name TLWMA3 2007	Existing / Set Existing	NAVD88 59.60	NGVD29 60.80
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Reference Point Information:

Stamped Elevation (NGVD29) 58.88	Stamped Date 1-14-08	By Firm Woolpert, Inc.
--	--------------------------------	----------------------------------

Note: Reference mark at edge of wood as marked.

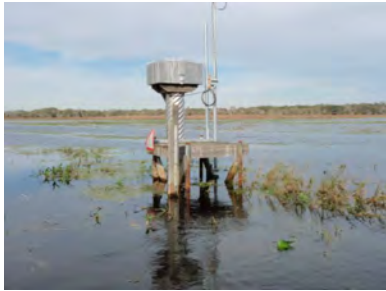
Staff Gauge Information:

Water Elevation (NGVD29) 53.53	Gauge Reading 53.60	Time of Reading 15:00	Date of Reading 1-14-08
--	-------------------------------	---------------------------------	-----------------------------------

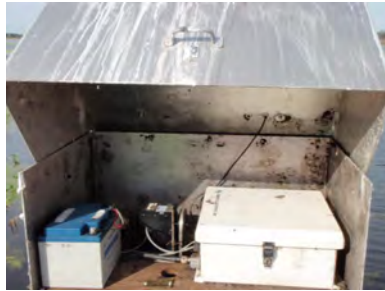
To Reach Description:

From the intersection of US 441 and CR 523 in the town of Kenansville, FL travel west on CR 523 for 9.5 miles to Prairie Lakes Rd. on the left. Turn left (west-southwest) and travel along Prairie Lakes Rd. for 2 miles to Boat Ramp Rd. Turn right (west-southwest) onto Boat Ramp Rd. and travel for 1 mile to boat ramp. Well is 250 feet from shore, visible from boat ramp.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Staff Gauge:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: LJACK

Date: JAN 14, 08

Crew: W. MILLER/A. ANTONIO

Bench Mark Used:

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
<u>KLGPS</u>	<u>1990</u>	<u>55.069</u>	<u>56.269</u>	<u>Y</u>

(if needed) Conversion factor = _____ Converted NGVD29 = _____

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>LEVEL NOTES IN</u>		<u>OL 01</u>		<u>53.60</u>	<u>TOP OF WATER</u>
<u>PAGE 55</u>				<u>58.88</u>	<u>MARK</u>

NGVD 29 Ground Elev. @ Well Site: N/A

Tag Check List:

Photo Check List:

- Stamp Site/Station Designation
- Stamp Elevation in NGVD 29
- Stamp Date
- Stamp By Woolpert
- Stamp Datum (NGVD 29)
- Scratch Elev / Remove Tag

- Bench Mark close Up
- Bench Mark standing
- M. Well tag close Up
- M. Well standing
- M. Well Area
- Staff Gauge

- Picture # 26
- Picture # 25
- Picture # 22
- Picture # 23
- Picture # 25
- Picture # 24

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
<u>LJACK</u>	<u>53.53</u>	<u>53.60</u>	<u>3 PM</u>	<u>JAN 14, 08</u>

Latitude and Longitude Of Local Bench Mark:

<u>27 54 36</u>	<u>81 09 00</u>
-----------------	-----------------

Site Description, Comments, or Remarks:

JAN 14, 08 JOB # 67411 W. MILLER
 RUN ELEV TO LIACK A. ANTONIO

#	+	HI	DIST	-	ELEV	DESC.
1	6.481	106.481	181.17			BM
			323.91	5.367	101.115	
2	4.926	106.041	177.60			
			298.24	5.362	100.679	
3	4.437	105.116	359.34			
			316.76	5.161	99.956	
	4.757	104.712	356.97			
			282.31	5.237	99.475	
	5.214	104.689	316.18			
			216.23	6.515	98.174	
	4.682	102.856	295.13			
			311.44	5.571	97.285	
	3.763	101.048	342.20			
			182.19	4.781	96.267	TP#1 SIR
	96.267	100.850	182.42			
			311.84	3.548	97.302	
	5.414	102.716	340.77			
			293.84	4.510	98.266	
	6.342	104.547	234.89			
			293.58	5.045	99.502	
	5.217	104.719	305.28			
			314.46	4.734	99.985	
	5.096	105.081	358.94			
			344.77	4.393	100.688	
	5.501	106.189	351.78			
			322.81	5.368	100.821	
	5.611	106.432	178.89			
			121.77	6.421	100.011	✓ BM

ERR = 0.011

BM TLWMA3 2007
 ELEV = 100 ASSUMED
 59.60 NAVD 88
 60.80 NGVD 29

01/55

60.80
 59.60

 1.20

57.68
 1.20

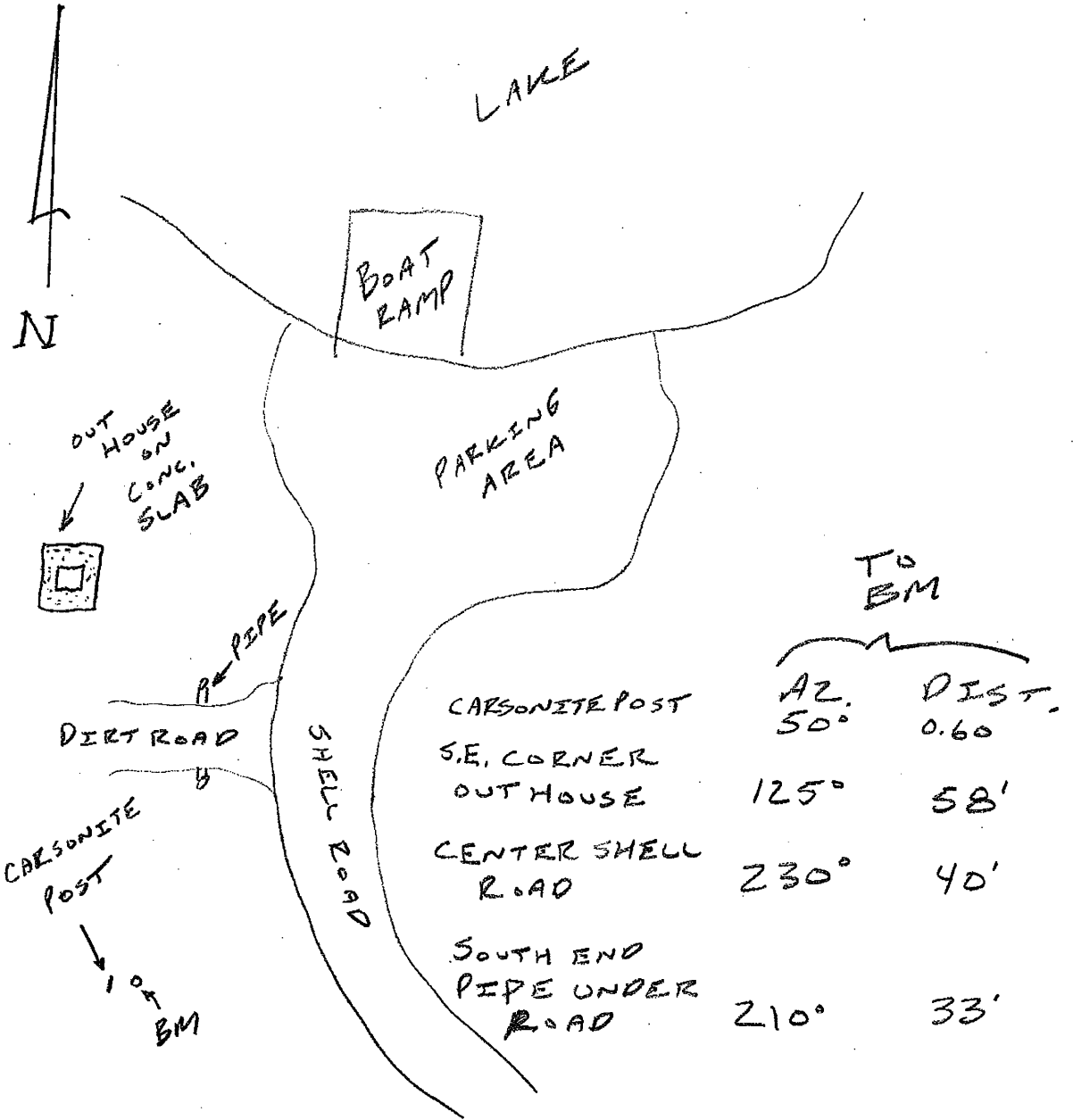
 58.88

55.867 NAVD 88
 57.067 NGVD 29

ELEV. TO WELL "LIACK" & BM PJ7
 STAMPED
 USED 88 55.867

+	HI	DIST	-	ELEV	DESC
4.863	60.730	89.29			BM A1
		238.24	5.661	55.069	PJ7 1
5.687	60.756	248.20			
			8.43	52.326	TOP OF WATER
		95.18	4.890	55.866	BM 2
4.278	60.144	179.65			
		311.72	2.469	57.675	well 3
2.598	60.273	312.63			(58.88 NGVD 29)
		179.60	4.395	55.878	BM 4

KL GPS 1990





South Florida Water Management District Benchmark Database

Report run on: May 21, 2008 10:00 AM

Designation: TLWMA3
County: OSCEOLA
USGS Quad: LAKE MARIAN NW
Project: TLWMA3 WELL SITE
Sec: 5 Twp: 30 Rge: 32
Status: GOOD

Latitude: 279054.000 Scaled values only
Longitude: 811401.000
Monument By: NICK MILLER, INC.
Year: 2007
Type: V
Stamping: LB 4318
Party Chief:
Field Book 18
Page: 68

NAD 1927 Coordinates:

N =
E =

Adjustment:

NAD 1983 Coordinates:

X = 610925.900
Y = 1298341.600

Adjustment:

Order:
Class:

NGVD 1929

Elevation: 60.800
Order: 3
Class:

NAVD 1988

Elevation: 59.600
Order: 3
Class:

Description:

***** RECOVERY NOTE *****

1/14/2008 MILLER WOOLPERT TLWMA3 2007 EL. 59.30 NGVD 1929
(21-MAY-08 HJE)

TO REACH FROM THE INTERSECTION OF US 441 AND CR 523, HEAD WEST NORTHWEST ON CR 523 FOR 9.7 MILES TO THREE LAKES WILDLIFE MANAGEMENT ENTRANCE. MAKE LEFT AND HEAD SOUTHWESTERLY ON MAIN GRADE ROAD FOR 2.0 MILES TO GRADE ROAD INTERSECTION. TURN RIGHT AND HEAD NORTHWESTERLY ON GRADE ROAD FOR 0.2 MILE TO THE MARK ON RIGHT, SET IN TOP OF A ROUND CONCRETE MONUMENT RECESSED 0.3 FOOT BELOW GROUND LEVEL. LOCATED 27.0 FEET NORTH OF CENTERLINE OF DIRT ROAD, 14.4 FEET SOUTH OF TLWMA3 MONITORING WELL SITE, 55.5 FEET NORTHWEST OF PK NAIL AND DISK LB 4318 ON NORTH SIDE OF 1.2 FOOT DIAMETER OAK TREE, 109.0 FEET EAST OF PK NAIL AND DISK LB 4318 ON SOUTH SIDE OF 0.8 FOOT DIAMETER OAK TREE AND 2.0 FEET SOUTH OF A CARSONITE WITNESS POST. MAGNET SET 1 FOOT NORTH OF BENCHMARK.
BENCHMARKS USED: OSC 6 FLDNR, OSC 7 FLDNR
SURVEYOR STEPHEN M. GORDON 7/3/2007 NOTE HORIZONTAL IS SUB-METER.
RECORD ENTERED BY M.REICHERT 7/11/2007



South Florida Water Management District Benchmark Database

Report run on: May 21, 2008 11:17 AM

Designation: PJ7	Latitude: 275436.000	Scaled values only
County: OSCEOLA	Longitude: 810900.000	
USGS Quad: LAKE MARIAN NW	Monument By: SFWMD	
Project: LJACK WELL SITE	Year: 1990	
Sec: 31 Twp: 29 Rge: 32	Type: H/V	
Status: GOOD	Stamping: NONE	
NAD 1927 Coordinates:	Party Chief: SK	
N =	Field Book 3	
E =	Page: 26,27	
Adjustment:	NGVD 1929	
NAD 1983 Coordinates:	Elevation: 55.069	
X = 607761.247	Order: 3	
Y = 1300052.077	Class:	
Adjustment: 86	NAVD 1988	
Order:	Elevation: 56.269	
Class:	Order: 3	
	Class:	

Description:

***** RECOVERY NOTE *****

1/7/08 MILLER WOOLPERT FIELD BOOK 1 PAGE 55 EL. 55.069 NAVD 1988
EL. 56.269 NGVD 1929 (21-MAY-08 HJE)

TO REACH THE POINT FROM THE THREE LAKES WILDLIFE MANAGEMENT AREA BOAT RAMP ON THE EAST SIDE OF LAKE JACKSON, TRAVEL SOUTHERLY ALONG THE SHELL ROCK ROAD LEADING FROM THE BOAT RANP FOR APPROXIMATELY 300 FEET TO THE POINT ON THE RIGHT. THE POINT LOCATION IS APPROXIMATELY 40 FEET SOUTH OF THE SHELL ROCK ROAD, AND IS MARKED WITH A METAL WITNESS POST.





SOUTH FLORIDA SURVEY
GPS SURVEY
WATER MARK
MANAGEMENT DISTRICT
1999

Site Name		Sensor	
MARIC		STG1	

Latitude 28° 03' 07.77"	Longitude 81° 27' 44.68"	Northing 1352657	Easting 507088
Section 18	Township 28	Range 29	County Polk
			Quad Lake Hatchineha

Benchmark Information:

Name POT 28518	Existing / Set Existing	NAVD88 53.33	NGVD29 54.34
--------------------------	-----------------------------------	------------------------	------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 57.85	Stamped Date 1-07-08	By Firm Woolpert, Inc.
--	--------------------------------	----------------------------------

Note: Reference point at marked "X" above tag.

Staff Gauge Information:

Water Elevation (NGVD29) 50.123	Gauge Reading 50.20	Time of Reading 14:10	Date of Reading 1-7-08
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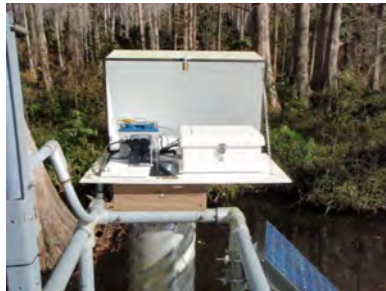
To Reach Description:

From the intersection of SR 27A and CR 542 in the city of Dundee, FL travel east on CR 542 for 7.6 miles to Poinciana Parkway. Turn left (North) on Poinciana Parkway and travel 4.9 miles to a 90 degree bend in Poinciana Parkway. At the bend turn right to gate. Sign "London Creek Ranch". Follow ranch road for 2.5 miles. Bear left at "Y", past horse barn and house to a "T" and turn right (south) and travel this grass/dirt road for about 0.75mile to site on the left at wooden bridge.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Staff Gauge:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: MARIC

Date: JAN 7, 08

Crew: W. MILLER / A. ANTONIO

Bench Mark Used:

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
<u>Pot 28518</u>	<u>1983</u>	<u>53.330</u>	<u>54.340</u>	<u>Y</u>

(if needed) Conversion factor = _____ Converted NGVD29 = _____

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>A1 Bm</u>	<u>5.769</u>	<u>60.109</u>			<u>15.58</u>
<u>water</u>			<u>9.986</u>	<u>50.123</u>	<u>22.10</u>
<u>1 well</u>			<u>2.258</u>	<u>57.850</u>	<u>26.62</u>
	<u>2.040</u>	<u>59.890</u>			<u>26.72</u>
<u>2 Bm</u>			<u>5.550</u>	<u>54.340</u>	<u>15.56</u>

NGVD 29 ~~Ground~~ Elev. @ Well Site: 50.123 (WATER ELEV)

Tag Check List:

Photo Check List:

- | | | | |
|--|----------|----------------------|---------------------|
| <input checked="" type="checkbox"/> Stamp Site/Station Designation | <u>✓</u> | Bench Mark close Up | Picture # <u>6</u> |
| <input checked="" type="checkbox"/> Stamp Elevation in NGVD 29 | <u>✓</u> | Bench Mark standing | Picture # <u>7</u> |
| <input checked="" type="checkbox"/> Stamp Date | <u>✓</u> | M. Well tag close Up | Picture # <u>11</u> |
| <input checked="" type="checkbox"/> Stamp By Woolpert | <u>✓</u> | M. Well standing | Picture # <u>9</u> |
| <input checked="" type="checkbox"/> Stamp Datum (NGVD 29) | <u>✓</u> | M. Well Area | Picture # <u>8</u> |
| <input checked="" type="checkbox"/> Scratch Elev / Remove Tag | <u>✓</u> | Staff Gauge | Picture # <u>10</u> |

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
<u>MARIC</u>	<u>50.123</u>	<u>50.20</u>	<u>2:10pm</u>	<u>JAN 7, 08</u>

Latitude and Longitude Of Local Bench Mark:

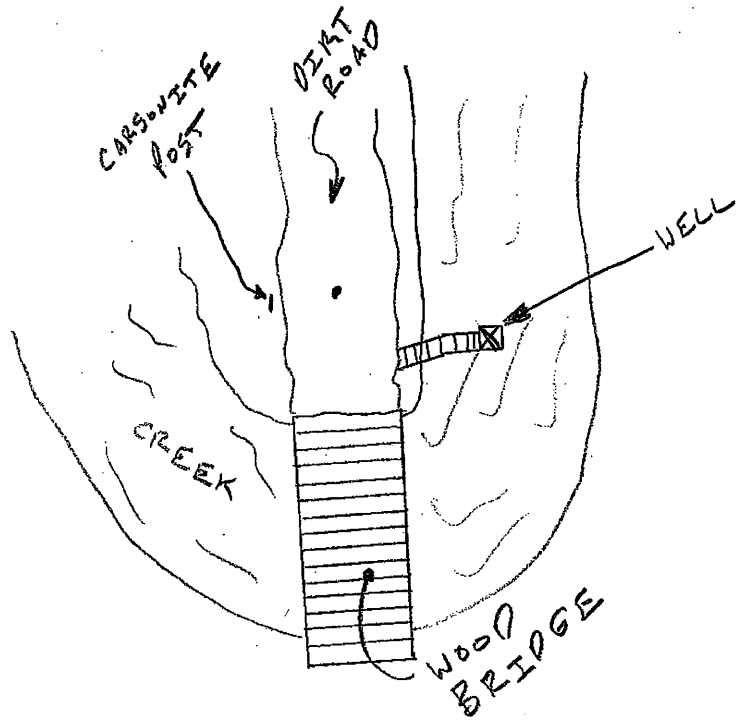
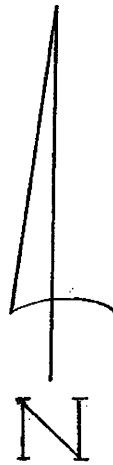
<u>28 03 07.77</u>	<u>81 27 44.68</u>
--------------------	--------------------

Site Description, Comments, or Remarks:

LOCK CODE ON BOX IS 6745

LAT 28 03 07.77
 LONG 81 27 44.68

MARIC



	AZ	DIST
NE CORNER BRIDGE	335°	19'
NW CORNER BRIDGE	10°	18'
WELL CENTERLINE	310°	25'
CARSONITE POST	80°	7.5'

TO
BM



South Florida Water Management District Benchmark Database

Report run on: May 21, 2008 11:37 AM

Designation: POT28S18	Latitude: 280307.800	Scaled values only
County: POLK	Longitude: 812744.700	
USGS Quad: N28081233	Monument By: SFWMD	
Project: MARIC WELL SITE	Year: 1983	
Sec: 18 Twp: 28 Rge: 29	Type: V	
Status: GOOD	Stamping: BM PO-T-28-S18 1983	
NAD 1927 Coordinates:	Party Chief: C. HORNER	
N =	Field Book	
E =	Page:	
Adjustment:	NGVD 1929	
NAD 1983 Coordinates:	Elevation: 54.340	
X =	Order: 3	
Y =	Class:	
Adjustment:	NAVD 1988	
Order:	Elevation: 53.330	
Class:	Order: 3	
	Class:	

Description:

OLD SFWMD EL. 54.315 NGVD 1929

***** RECOVERY NOTE *****

1/7/2008 MILLER WOOLPERT NO FIELD BOOK POT28S18 1983 EL. 53.33 NAVD 1988,
EL. 54.34 NGVD 1929 (21-MAY-08 HJE)

2/3/2005 ETGETON COONER & ASSOCIATES FIELD BOOK 81, PAGE 61 FOUND 2-INCH
ALUMINUM DISK IN CONCRETE MONUMENT " SO. FLA. WATER
MANAGEMENT DIST. PO-T-28S18 1983 EXISTING BENCHMARK POT28S18
53.33' (NAVD 88) MEASURED FOR THIS PROJECT 54.34' (NGVD 29)
CALCULATED USING 1.01' OFFSET VALUE BASED OFFSET VALUE BASED ON
VERTICAL CONVERSION (VERTCON) TRANSFORMATION PROGRAM VERSION
2.10 PERFORMED ON EXISTING NGS BENCHMARK OS134. 54.33' (NGVD 29)
CALCULATED USING 1.00' OFFSET VALUE BASED OFFSET VALUE BASED ON
VERTICAL CONVERSION (VERTCON) TRANSFORMATION PROGRAM VERSION
2.10 PERFORMED ON EXISTING NGS BENCHMARK OS135. 54.38' (NGVD 29)
CALCULATED USING 1.05' OFFSET VALUE BASED OFFSET VALUE BASED ON
VERTICAL CONVERSION (VERTCON) TRANSFORMATION PROGRAM VERSION
2.10 PERFORMED ON EXISTING SFWMD BENCHMARK POT28S18 54.315' (NGVD
29) POSTED SFWMD DATABASE

12/18/1996 NED STRICKLAND, KISS LAKES FIELD BOOK 83, PAGE 67, BM PO-T28-S18
1983, SOUTH FLORIDA WATER MANAGEMENT DISTRICT ALUMINUM DISK
SET 14 FEET NORTH OF THE NORTH END AND CENTERLINE OF THE
BRIDGE OVER LAKE MARION CREEK EL. 54.315 NGVD 1929
TIE IN FB KL27, P4

7/26/1983 CHUCK HORNER, FIELD BOOK POLK COUNTY WELLS 4, PAGE 38
SFWMD BM PO T28 S18 , STATION IS LOCATED IN THE CENTER OF THE DIRT
ROAD ON THE NORTH SIDE OF THE WOODEN BRIDGE OVER MARION CREEK
60 FEET AZUMUTH 150 DEGREES.

FROM THE INTERSECTION OF ALTERNATE 27 AND HATCHINEHA ROAD (C-542) 60 EAST ON C542
APPROXIMATELY 6.9 MILES TO A DIRT ROAD CALLED V RANCH ROAD, GO NORTH ON V RANCH ROAD .4
MILE TO A CATTLE GATE, CONTINUE NORTH ACROSS THE CATTLE GATE APPROXIMATELY 1.2 MILES. THE
DIRT ROAD WILL INTERSECT AN ASPHALT ROAD, CONTINUE ON THE DIRT ROAD FOR ANOTHER 2.8 MILES
TO A WOODEN BRIDGE CROSSING LAKE MARION CREEK AND STATION LOCATION.



South Florida Water Management District Benchmark Database

Report run on: May 21, 2008 11:37 AM

BM IS LOCATED AS FOLLOWS: 14.5 FEET NORTH OF THE NORTH END OF THE WOODEN BRIDGE AND IN THE CENTER OF THE DIRT ROAD, N 21 DEGREE W. AND 56.5 FEET FROM A WATER RECORDER AND 14.0 FEET N.E. OF A LARGE CYPRESS TREE WITH A WITNESS SIGN ON IT.

Site Name		Sensor		
ORF 61		GW1		

Latitude 28° 28' 09"	Longitude 81° 32' 28"	Northing 1503773	Easting 482382	
Section 10	Township 23	Range 28	County Orange	Quad Windermere

Benchmark Information:

Name R 627	Existing / Set Existing	NAVD88 107.77	NGVD29 108.71
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Reference Point Information:

Stamped Elevation (NGVD29) 108.40	Stamped Date 1-2-08	By Firm Woolpert, Inc.
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Note: Reference point at top of PVC pipe as marked.

Staff Gauge Information:

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:

From the intersection of SR535 and I-4 in Lake Buena Vista, FL proceed north on SR535 for 0.50mi to S. Apopka Vinland Rd. Turn left (west) and proceed on S. Apopka Vinland Rd. for 7.8 mi to Chase Rd. Turn right (east) onto Chase Rd. and proceed on Chase Rd. for 1.6 mi (Chase Rd. has a left turn at a "T" intersection) to entrance to public park and boat ramp on the right (east). Follow main east bound road in park for 0.50 mi where the paying station for the boat ramp is. Turn left (north) into parking lot to the north and proceed to the most north end of the parking lot. Wells are found about 250' north-northwest of the north end of the parking area in a black chain link fence.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Site Name		Sensor		
ORF 61		GW2		

Latitude 28° 28' 09"	Longitude 81° 32' 28"	Northing 1503773	Easting 482382	
Section 10	Township 23	Range 28	County Orange	Quad Windermere

Benchmark Information:

Name R 627	Existing / Set Existing	NAVD88 107.77	NGVD29 108.71
----------------------	-----------------------------------	-------------------------	-------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 108.49	Stamped Date 1-2-08	By Firm Woolpert, Inc.
---	-------------------------------	----------------------------------

Note: Reference point at top of PVC pipe as marked.

Staff Gauge Information:

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:

From the intersection of SR535 and Interstate 4 in Lake Buena Vista, FL proceed north on SR535 for 0.50mi to S. Apopka Vinland Rd. Turn left (west) and proceed on S. Apopka Vinland Rd. for 7.8 mi to Chase Rd. Turn right (east) onto Chase Rd. and proceed on Chase Rd. for 1.6 mi (Chase Rd. has a left turn at a "T" intersection) to entrance to public park and boat ramp on the right (east). Follow main east bound road in park for 0.50 mi where the paying station for the boat ramp is. Turn left (north) into parking lot to the north and proceed to the most north end of the parking lot. Wells are found about 250' north-northwest of the north end of the parking area in a black chain link fence.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Site Name		Sensor		
ORF 61		GW3		

Latitude 28° 28' 09"	Longitude 81° 32' 28"	Northing 1503773	Easting 482382	
Section 10	Township 23	Range 28	County Orange	Quad Windermere

Benchmark Information:

Name R 627	Existing / Set Existing	NAVD88 107.77	NGVD29 108.71
----------------------	-----------------------------------	-------------------------	-------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 108.49	Stamped Date 1-2-08	By Firm Woolpert, Inc.
---	-------------------------------	----------------------------------

Note: Reference point at top of PVC pipe as marked.

Staff Gauge Information:

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:

From the intersection of SR535 and Interstate 4 in Lake Buena Vista, FL proceed north on SR535 for 0.50mi to S. Apopka Vinland Rd. Turn left (west) and proceed on S. Apopka Vinland Rd. for 7.8 mi to Chase Rd. Turn right (east) onto Chase Rd. and proceed on Chase Rd. for 1.6 mi (Chase Rd. has a left turn at a "T" intersection) to entrance to public park and boat ramp on the right (east). Follow main east bound road in park for 0.50 mi where the paying station for the boat ramp is. Turn left (north) into parking lot to the north and proceed to the most north end of the parking lot. Wells are found about 250' north-northwest of the north end of the parking area in a black chain link fence.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: ORF 61

Date: 1-2-08

Crew: W. MILLER / A. ANTONIO

Bench Mark Used:

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
<u>R 627</u>	<u>2005</u>	<u>107.767</u>	<u>108.709</u>	<u>Y</u>

(if needed) Conversion factor = _____ Converted NGVD29 = _____

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>SEE</u>	<u>FIELD</u>		<u>GW1</u>	<u>108.40</u>	
<u>BOOK</u>	<u>OL 1 PAGE 53</u>		<u>GW2</u>	<u>108.49</u>	
<u>FOR LEVEL RUN</u>			<u>GW3</u>	<u>108.49</u>	

NGVD 29 Ground Elev. @ Well Site: 105.97 (CONC. PAD)

Tag Check List:

Photo Check List:

- | | | | |
|---|--|---|--|
| <ul style="list-style-type: none"> • Stamp Site/Station Designation <u>✓</u> • Stamp Elevation in NGVD 29 <u>✓</u> • Stamp Date <u>✓</u> • Stamp By Woolpert <u>✓</u> • Stamp Datum (NGVD 29) <u>✓</u> • Scratch Elev / Remove Tag <u>✓</u> | <ul style="list-style-type: none"> <u>✓</u> <u>✓</u> <u>✓</u> <u>✓</u> <u>✓</u> <u>✓</u> | <ul style="list-style-type: none"> Bench Mark close Up Bench Mark standing M. Well tag close Up M. Well standing M. Well Area Staff Gauge | <ul style="list-style-type: none"> Picture # <u>✓</u> Picture # <u>✓</u> Picture # <u>✓</u> Picture # <u>✓</u> Picture # <u>✓</u> Picture # <u>N/A</u> |
|---|--|---|--|

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.

Latitude and Longitude Of Local Bench Mark:

<u>28 28 09</u>	<u>81 32 28</u>
-----------------	-----------------

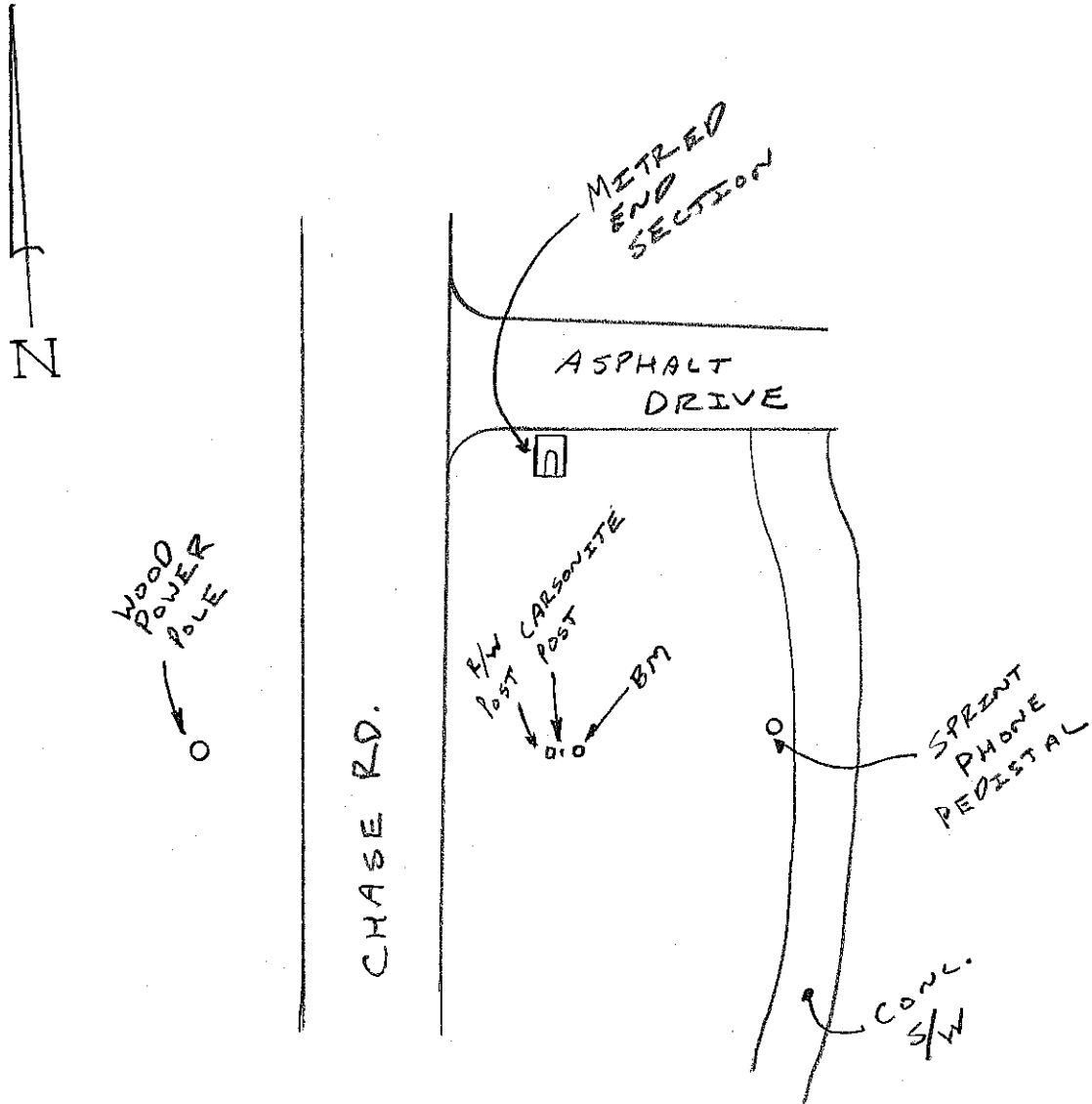
Site Description, Comments, or Remarks:

LAT 28 28 30
LONG 81 32 10

BM R627

LAT 28 28 08

LONG 81 32 28



	TO BM	
	AZ.	DIST.
CARSONITE POST	95°	0.80'
WOOD POWER POLE	95°	61'
SPRINT PHONE PED	307°	10.70'
MITRED END SECTION	175°	26'

The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

PROGRAM = datasheet95, VERSION = 8.8
1      National Geodetic Survey,   Retrieval Date = NOVEMBER  2, 2015
DI9116 *****
DI9116 DESIGNATION - R 627
DI9116 PID - DI9116
DI9116 STATE/COUNTY- FL/ORANGE
DI9116 COUNTRY - US
DI9116 USGS QUAD - WINDERMERE (1980)
DI9116
DI9116 *CURRENT SURVEY CONTROL
DI9116
DI9116* NAD 83(1986) POSITION- 28 28 09. (N) 081 32 27. (W) SCALED
DI9116* NAVD 88 ORTHO HEIGHT - 32.842 (meters) 107.75 (feet) ADJUSTED
DI9116
DI9116 GEOID HEIGHT - -27.544 (meters) GEOID12B
DI9116 DYNAMIC HEIGHT - 32.794 (meters) 107.59 (feet) COMP
DI9116 MODELED GRAVITY - 979,193.0 (mgal) NAVD 88
DI9116
DI9116 VERT ORDER - FIRST CLASS II
DI9116
DI9116.The horizontal coordinates were scaled from a topographic map and have
DI9116.an estimated accuracy of +/- 6 seconds.
DI9116.
DI9116.The orthometric height was determined by differential leveling and
DI9116.adjusted by the NATIONAL GEODETIC SURVEY
DI9116.in April 2010.
DI9116
DI9116.Significant digits in the geoid height do not necessarily reflect accuracy.
DI9116.GEOID12B height accuracy estimate available here.
DI9116
DI9116.Photographs are available for this station.
DI9116
DI9116.The dynamic height is computed by dividing the NAVD 88
DI9116.geopotential number by the normal gravity value computed on the
DI9116.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
DI9116.degrees latitude (g = 980.6199 gals.).
DI9116
DI9116.The modeled gravity was interpolated from observed gravity values.
DI9116
DI9116;
DI9116;SPC FL E - North East Units Estimated Accuracy
DI9116; 458,320. 147,040. MT (+/- 180 meters Scaled)
DI9116
DI9116 SUPERSEDED SURVEY CONTROL
DI9116
DI9116.No superseded survey control is available for this station.
DI9116
DI9116_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMM470492(NAD 83)
DI9116
DI9116_MARKER: F = FLANGE-ENCASED ROD
DI9116_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
DI9116_STAMPING: R 627 2005
DI9116_MARK LOGO: NGS
DI9116_PROJECTION: RECESSED 8 CENTIMETERS
DI9116_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET
DI9116_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
DI9116_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DI9116+SATELLITE: SATELLITE OBSERVATIONS - May 05, 2005

```

DI9116 ROD/PIPE-DEPTH: 5.0 meters

DI9116

DI9116 HISTORY - Date Condition Report By

DI9116 HISTORY - 20050505 MONUMENTED FLDEP

DI9116

DI9116

STATION DESCRIPTION

DI9116

DI9116'DESCRIBED BY FL DEPT OF ENV PRO 2005

DI9116'THE MARK IS ABOUT 5.3 MI (8.5 KM) SOUTH OF GOTHA, 2.0 MI (3.2 KM)

DI9116'SOUTH OF WINDERMERE, IN SECTION 20, TOWNSHIP 23 SOUTH, RANGE 28 EAST.

DI9116'

DI9116'TO REACH THE MARK FROM THE JUNCTION OF SIXTH AVENUE (COUNTY ROAD 439,

DI9116'CONROY WINDERMERE ROAD) AND MAIN STREET (COUNTY ROAD 439 NORTH) IN

DI9116'WINDERMERE, GO SOUTHEAST ON MAIN STREET FOR 0.55 MI (0.9 KM) TO THE

DI9116'JUNCTION OF 12TH STREET ON THE LEFT AND CHASE ROAD ON THE RIGHT, TURN

DI9116'RIGHT ON CHASE ROAD AND GO SOUTHWEST FOR 1.75 MI (2.8 KM) TO THE MARK

DI9116'ON THE LEFT, A STAINLESS STEEL ROD DRIVEN TO REFUSAL AT A DEPTH OF

DI9116'16.4 FT (5.0 M) WITH A NGS LOGO CAP RECESSED 0.3 FT (0.1 M) BELOW THE

DI9116'LEVEL OF THE GROUND AND ABOUT 1.0 FT (0.3 M) BELOW THE LEVEL OF CHASE

DI9116'ROAD, THE DATUM POINT IS RECESSED 0.3 FT (0.1 M) BELOW THE LEVEL OF

DI9116'THE NGS LOGO CAP.

DI9116'

DI9116'LOCATED 90.0 FT (27.4 M) SOUTH OF A OVERHEAD POWER LINE, 48.0 FT (14.6

DI9116'M) SOUTH OF THE APPROXIMATE CENTERLINE OF A DRIVEWAY AT 11101, 11124,

DI9116'32.0 FT (9.8 M) EAST OF THE CENTERLINE OF CHASE ROAD, 11.0 FT (3.4 M)

DI9116'NORTHWEST OF SPRINT CABLE BOX NUMBER 11261, 10.4 FT (3.2 M) WEST OF

DI9116'THE WEST THE WEST EDGE OF A SIDEWALK, 1.0 FT (0.3 M) EAST OF A

DI9116'RIGHT-OF-WAY MARKER AND 0.8 FT (0.2 M) EAST OF A CARSONITE WITNESS

DI9116'POST.

DI9116'

DI9116'NOTE A MAGNET WAS PLACED INSIDE OF THE NGS LOGO CAP.

DI9116'

DI9116'NOTE ACCESS TO THE DATUM POINT IS HAD THROUGH A 5-INCH (13 CM) NGS

DI9116'LOGO CAP.

*** retrieval complete.

Elapsed Time = 00:00:02

Site Name		Sensor		
RATHAM		STG1		

Latitude 27° 43' 20.72"	Longitude 81° 10' 02.2"	Northing 1231938	Easting 602118
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Section 6	Township 32	Range 32	County Polk	Quad Fort Kissimmee NW
---------------------	-----------------------	--------------------	-----------------------	----------------------------------

Benchmark Information:

Name F 461	Existing / Set Existing	NAVD88 52.45	NGVD29 53.68
----------------------	-----------------------------------	------------------------	------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 53.17	Stamped Date 1-4-08	By Firm Woolpert, Inc.
--	-------------------------------	----------------------------------

Note: Reference point at marked "X" above tag.

Staff Gauge Information: Water level was below staff gauge so reading was not available (NA).

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:

From the intersection of SR 60 and CR 630 in the town of Lake Wales, FL travel east on SR 60 for 6 miles to River Ranch Blvd. Turn right (south) on River Ranch Blvd. travel for 3 miles to open gate on right turn and travel south-southeast on a shell road for 4.55 miles. Well is just right of the shell road.

Sensor Well Area:



Senor Well:



Tag Close-up:



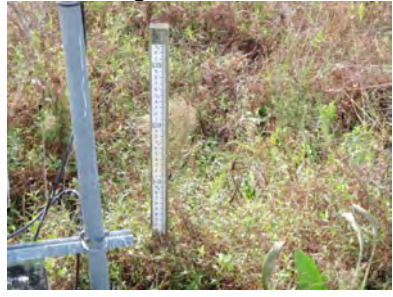
Bench Mark:



Bench Mark



Staff Gauge



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: RATHAM

Date: JAN 4, 08

Crew: W. MILLER / A. ANTONIO

Bench Mark Used: F461

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
F461	1997	52.45	53.68	Y

(if needed) Conversion factor = _____ Converted NGVD29 = _____

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
A1	5.914	59.594			40.09
1 (well)			6.428	53.166	144.21
2	6.264	59.430			144.50
			11.336	48.094	142.91
2 (BM)			5.748	53.681	39.86

NGVD 29 Ground Elev. @ Well Site: 48.094

Tag Check List:

- Stamp Site/Station Designation
- Stamp Elevation in NGVD 29
- Stamp Date
- Stamp By Woolpert
- Stamp Datum (NGVD 29)
- Scratch Elev / Remove Tag

Photo Check List:

- | | |
|--|---------------------|
| <input checked="" type="checkbox"/> Bench Mark close Up | Picture # <u>9</u> |
| <input checked="" type="checkbox"/> Bench Mark standing | Picture # <u>8</u> |
| <input checked="" type="checkbox"/> M. Well tag close Up | Picture # <u>10</u> |
| <input checked="" type="checkbox"/> M. Well standing | Picture # <u>11</u> |
| <input checked="" type="checkbox"/> M. Well Area | Picture # <u>12</u> |
| <input checked="" type="checkbox"/> Staff Gauge | Picture # <u>13</u> |

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
RATHAM	NONE	N/A	1:15 PM	JAN 4, 08

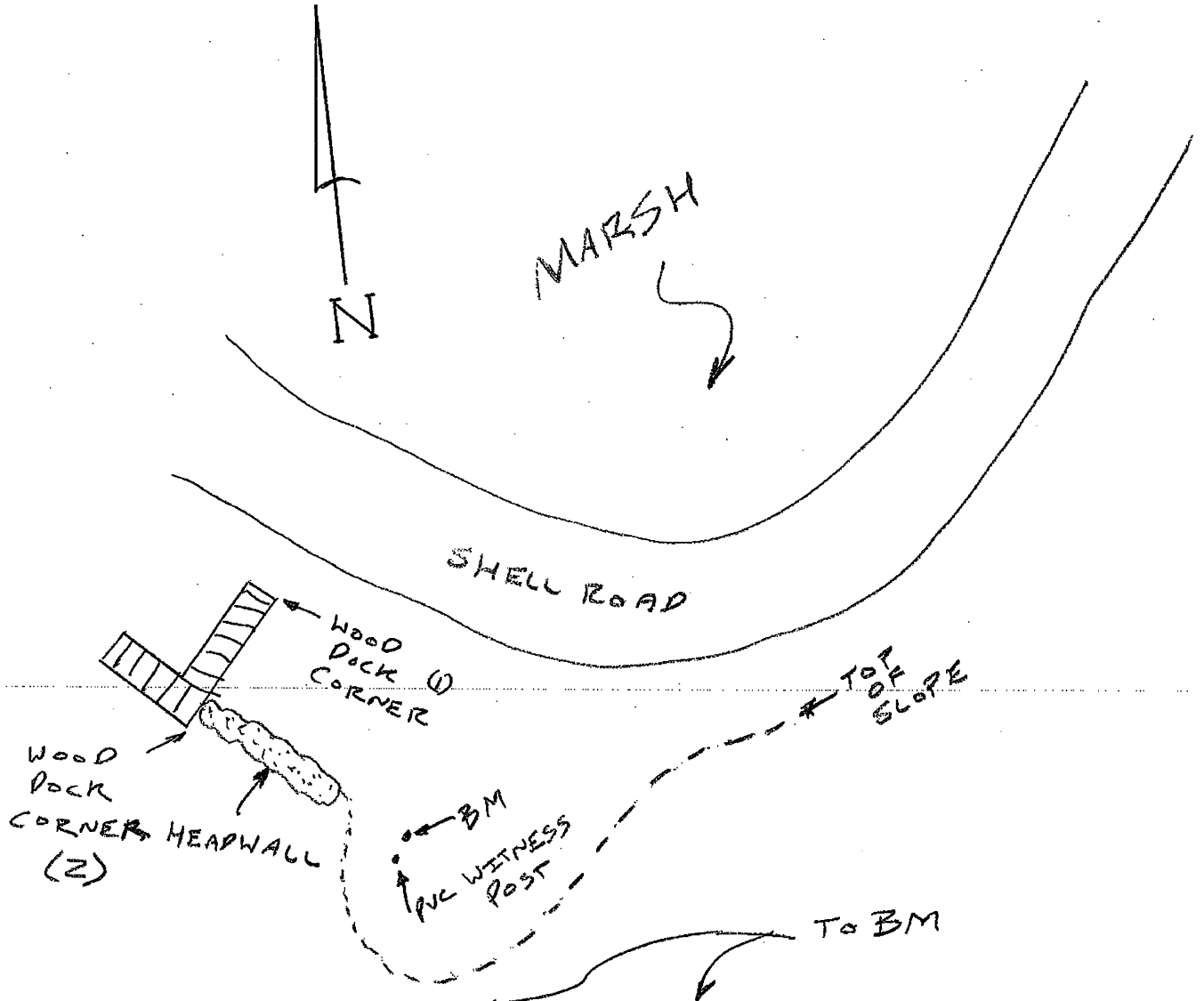
Latitude and Longitude Of Local Bench Mark:

27 43 20.72	81 10 02.20
-------------	-------------

Site Description, Comments, or Remarks:

RATHAM

LAT 27 43 20.72
LONG 81 10 02.20



	AZ	DIST
PVC POST	25°	1.20'
WOOD DOCK COR. (1)	175°	30'
WOOD DOCK COR. (2)	145°	30'

The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

DATABASE = ,PROGRAM = datasheet, VERSION = 7.60
1 National Geodetic Survey, Retrieval Date = MAY 21, 2008
AH8776 *****
AH8776 DESIGNATION - F 461
AH8776 PID - AH8776
AH8776 STATE/COUNTY- FL/POLK
AH8776 USGS QUAD - FORT KISSIMMEE NW (1972)
AH8776
AH8776 *CURRENT SURVEY CONTROL
AH8776
AH8776 * NAD 83(1986)- 27 43 22. (N) 081 10 02. (W) SCALED
AH8776 * NAVD 88 - 15.987 (meters) 52.45 (feet) ADJUSTED
AH8776
AH8776 GEOID HEIGHT- -26.60 (meters) GEOID03
AH8776 DYNAMIC HT - 15.963 (meters) 52.37 (feet) COMP
AH8776 MODELED GRAV- 979,161.4 (mgal) NAVD 88
AH8776
AH8776 VERT ORDER - SECOND CLASS I
AH8776
AH8776.The horizontal coordinates were scaled from a topographic map and have
AH8776.an estimated accuracy of +/- 6 seconds.
AH8776
AH8776.The orthometric height was determined by differential leveling
AH8776.and adjusted in July 1999.
AH8776
AH8776.The geoid height was determined by GEOID03.
AH8776
AH8776.The dynamic height is computed by dividing the NAVD 88
AH8776.geopotential number by the normal gravity value computed on the
AH8776.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AH8776.degrees latitude (g = 980.6199 gals.).
AH8776
AH8776.The modeled gravity was interpolated from observed gravity values.
AH8776
AH8776;
AH8776;SPC FL W - North East Units Estimated Accuracy
AH8776; 375,770. 282,120. MT (+/- 180 meters Scaled)
AH8776
AH8776 SUPERSEDED SURVEY CONTROL
AH8776
AH8776.No superseded survey control is available for this station.
AH8776
AH8776_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML835665(NAD 83)
AH8776_MARKER: DD = SURVEY DISK
AH8776_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AH8776_STAMPING: F 461 1997
AH8776_MARK LOGO: FLDEP
AH8776_MAGNETIC: N = NO MAGNETIC MATERIAL
AH8776_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AH8776+STABILITY: SURFACE MOTION
AH8776_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AH8776+SATELLITE: SATELLITE OBSERVATIONS - 1997
AH8776
AH8776 HISTORY - Date Condition Report By
AH8776 HISTORY - 1997 MONUMENTED FLDEP
AH8776
AH8776 STATION DESCRIPTION
AH8776
AH8776'DESCRIBED BY FL DEPT OF ENV PRO 1997 (JLM)
AH8776'THE MARK IS ABOUT 32.5 MI (52.3 KM) SOUTHEAST OF LAKE WALES IN SECTION
AH8776'6, TOWNSHIP 32 SOUTH, RANGE 32 EAST. TO REACH THE MARK FROM THE
AH8776'INTERSECTION OF STATE ROAD 27 UNDERPASS AND STATE ROAD 60 IN LAKE
AH8776'WALES, GO EAST-SOUTHEAST ON STATE ROAD 60 FOR 25.7 MI (41.4 KM) TO THE
AH8776'JUNCTION OF RIVER RANCH BOULEVARD ON THE RIGHT, TURN RIGHT ON RIVER
AH8776'RANCH BOULEVARD AND GO SOUTHEAST FOR 2.55 MI (4.10 KM) TO THE GUARD
AH8776'HOUSE AT THE ENTRANCE TO RIVER RANCH, CONTINUE SOUTH ON RIVER RANCH
AH8776'BOULEVARD FOR 0.3 MI (0.5 KM) TO THE JUNCTION OF KICCO ROAD ON THE
AH8776'RIGHT, TURN RIGHT ON KICCO ROAD AND GO SOUTHEAST FOR 0.2 MI (0.3 KM)
AH8776'TO FOUR SETS OF DOUBLE UNLOCKED GATES, CONTINUE SOUTH ON KICCO ROAD
AH8776'FOR 0.5 MI (0.8 KM) TO ANOTHER UNLOCKED METAL GATE, CONTINUE SOUTHEAST

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DATASHEETS

AH8776'ON KICCO ROAD FOR 0.5 MI (0.8 KM) TO A LOCKED METAL GATE, THE ENTRANCE
AH8776'TO PROPERTY OWNED BY THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT,
AH8776'CONTINUE SOUTHEAST ON A SHELL ROAD (KICCO ROAD) FOR 0.2 MI (0.3 KM) TO
AH8776'THE JUNCTION OF A ROAD ON THE LEFT, CONTINUE SOUTH-SOUTHEAST ON THE
AH8776'SHELL ROAD (KICCO ROAD) FOR 1.45 MI (2.33 KM) TO THE NORTH END OF A
AH8776'BRIDGE, CONTINUE SOUTHEAST ON THE SHELL ROAD (KICCO ROAD) FOR 1.45 MI
AH8776'(2.33 KM) TO AN UNLOCKED GATE NUMBER 9, CONTINUE SOUTH ON SHELL ROAD
AH8776'(KICCO ROAD) FOR 0.05 MI (0.08 KM) TO AN UNLOCKED GATE NUMBER 9A,
AH8776'CONTINUE SOUTH-SOUTHEAST ON SHELL ROAD (KICCO ROAD) FOR 0.2 MI (0.3
AH8776'KM) TO AN UNLOCKED GATE, CONTINUE NORTHEAST ON THE SHELL ROAD (KICCO
AH8776'ROAD) FOR 0.4 MI (0.6 KM) TO THE MARK ON THE RIGHT, SET IN THE TOP OF
AH8776'A ROUND CONCRETE MONUMENT FLUSH WITH THE GROUND AND 2.5 FT (0.8 M)
AH8776'BELOW THE LEVEL OF THE SHELL ROAD (KICCO ROAD) . LOCATED 47.5 FT (14.5
AH8776'M) SOUTHEAST OF SURVEY MARK NUMBER E 461, 32.0 FT (9.8 M)
AH8776'SOUTH-SOUTHEAST OF A WOODEN WALKWAY TO A TIDE GAUGE, 28.8 FT (8.8 M)
AH8776'SOUTHWEST OF THE APPROXIMATE CENTERLINE OF THE SHELL ROAD (KICCO ROAD)
AH8776'AND 1.0 FT (0.3 M) NORTHEAST OF A 2-INCH PVC WITNESS POST. NOTE FOR
AH8776'ACCESS AND KEY CONTACT SOUTH FLORIDA WATER MANAGEMENT DISTRICT AT
AH8776'561-686-8800.

*** retrieval complete.
Elapsed Time = 00:00:00

Site Name		Sensor		
S63A-SCA		HW		

Latitude	Longitude	Northing	Easting	
28° 04' 47.8"	81° 15' 35.5"	1361858	572373	
Section	Township	Range	County	Quad
6	28	31	Osceola	Cypress Lake

Benchmark Information:

Name	Existing / Set	NAVD88	NGVD29
KR 1068	Existing	62.959	63.86

Reference Point Information:

Stamped Elevation (NGVD29)	Stamped Date	By Firm
67.95	1-17-08	Woolpert, Inc.

Note: Reference point at marked "X" above tag.

Staff Gauge Information:

Water Elevation (NGVD29)	Gauge Reading	Time of Reading	Date of Reading
56.35	56.55	09:30	1-17-08

To Reach Description: (as described)

From the intersection of CR 523 and US 441 in the town of Kenansville, FL travel west along CR 523 for 23 miles to Canoe creek. Turn right (northeast) on to the north side of the canal to gate to the entrance to structure S63A. Wells are in the building.

Well Sensor Area:



Well Sensor:



Tag Close-up:



Bench Mark:



Bench Mark:



Staff Gauge:



Site Name		Sensor		
S63A-SCA		TW		

Latitude 28° 04' 47.8"	Longitude 81° 15' 35.5"	Northing 1361858	Easting 572373	
Section 6	Township 28	Range 31	County Osceola	Quad Cypress Lake

Benchmark Information:

Name KR 1068	Existing / Set Existing	NAVD88 62.959	NGVD29 63.86
------------------------	-----------------------------------	-------------------------	------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 67.956	Stamped Date 1-17-08	By Firm Woolpert, Inc.
---	--------------------------------	----------------------------------

Note: Reference point at marked "X" above tag.

Staff Gauge Information:

Water Elevation (NGVD29) 49.84	Gauge Reading 49.90	Time of Reading 09:30	Date of Reading 1-17-08
--	-------------------------------	---------------------------------	-----------------------------------

To Reach Description:

From the intersection of CR 532 and US 441 in the town of Kenansville, FL., travel west along 523 23 miles to Canoe Creek. Turn right (northeast) on to the north side of the canal to gate to the entrance to the structure of S63A. Wells are in the building.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Staff Gauge:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: 563A

Date: JAN 17, 08

Crew: W. MILLER/A. ANTONIO

Bench Mark Used:

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
<u>KR1068</u>	<u>1966</u>	<u>62.959</u>	<u>63.86</u>	<u>Y</u>

(if needed) Conversion factor = _____ Converted NGVD29 = _____

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>Bm</u>	<u>4.622</u>	<u>68.482</u>			
<u>UPSTREAM WELL</u>	<u>0.683</u>	<u>68.631</u>	<u>0.534</u>	<u>67.948</u>	
<u>DOWNSTREAM</u>	<u>0.538</u>	<u>68.949</u>	<u>0.675</u>	<u>67.956</u>	
<u>Bm</u>			<u>4.636</u>	<u>63.858</u>	

NGVD 29 Ground Elev. @ Well Site: _____

Tag Check List:

Photo Check List:

- | | | |
|---|--|--|
| <ul style="list-style-type: none"> • Stamp Site/Station Designation • Stamp Elevation in NGVD 29 • Stamp Date • Stamp By Woolpert • Stamp Datum (NGVD 29) • Scratch Elev / Remove Tag | <div style="text-align: center; font-size: 2em; font-weight: bold; margin-bottom: 10px;">/</div> <ul style="list-style-type: none"> _____ Bench Mark close Up _____ Bench Mark standing _____ M. Well tag close Up _____ M. Well standing _____ M. Well Area _____ Staff Gauge | <ul style="list-style-type: none"> Picture # _____ Picture # _____ Picture # _____ Picture # _____ Picture # _____ Picture # _____ |
|---|--|--|

UPSTREAM

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
<u>KR 1068</u>	<u>56.35</u>	<u>56.55</u>	<u>9:30AM</u>	<u>JAN 17, 08</u>

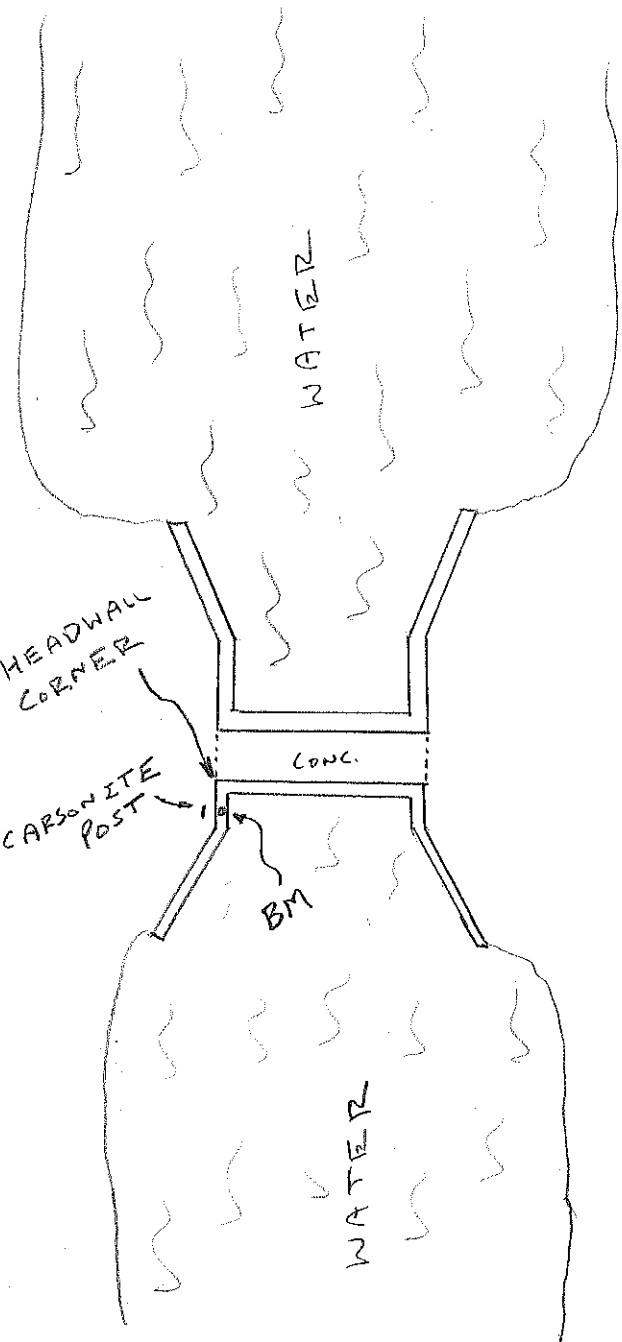
Latitude and Longitude Of Local Bench Mark:

<u>28 04 47.8</u>	<u>81 15 35.5</u>
-------------------	-------------------

Site Description, Comments, or Remarks:

DOWNSTREAM 49.84 49.90 9:30AM JAN 17, 08

KR1068 LAT 28 04 47.8
 LONG 81 15 35.5



STRUCTURE BUILDING

TO
BM

	AZ.	DIST.
CARSONITE POST	80°	0.50'
STRUCTURE BUILDING	145°	54'
HEADWALL CORNER	165°	1.40'

The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

PROGRAM = datasheet95, VERSION = 8.8
1      National Geodetic Survey,   Retrieval Date = NOVEMBER  2, 2015
DG6261 *****
DG6261 DESIGNATION - KR 1068
DG6261 PID - DG6261
DG6261 STATE/COUNTY- FL/OSCEOLA
DG6261 COUNTRY - US
DG6261 USGS QUAD - CYPRESS LAKE (1987)
DG6261
DG6261 *CURRENT SURVEY CONTROL
DG6261
DG6261 * NAD 83(1986) POSITION- 28 04 49. (N) 081 15 34. (W) SCALED
DG6261 * NAVD 88 ORTHO HEIGHT - 19.190 (meters) 62.96 (feet) ADJUSTED
DG6261
DG6261 GEOID HEIGHT - -27.685 (meters) GEOID12B
DG6261 DYNAMIC HEIGHT - 19.162 (meters) 62.87 (feet) COMP
DG6261 MODELED GRAVITY - 979,150.4 (mgal) NAVD 88
DG6261
DG6261 VERT ORDER - SECOND CLASS I
DG6261
DG6261.The horizontal coordinates were scaled from a topographic map and have
DG6261.an estimated accuracy of +/- 6 seconds.
DG6261.
DG6261.The orthometric height was determined by differential leveling and
DG6261.adjusted by the NATIONAL GEODETIC SURVEY
DG6261.in September 2004.
DG6261
DG6261.Significant digits in the geoid height do not necessarily reflect accuracy.
DG6261.GEOID12B height accuracy estimate available here.
DG6261
DG6261.The dynamic height is computed by dividing the NAVD 88
DG6261.geopotential number by the normal gravity value computed on the
DG6261.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
DG6261.degrees latitude (g = 980.6199 gals.).
DG6261
DG6261.The modeled gravity was interpolated from observed gravity values.
DG6261
DG6261; North East Units Estimated Accuracy
DG6261;SPC FL E - 415,130. 174,500. MT (+/- 180 meters Scaled)
DG6261
DG6261 SUPERSEDED SURVEY CONTROL
DG6261
DG6261.No superseded survey control is available for this station.
DG6261
DG6261_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMM745061(NAD 83)
DG6261
DG6261_MARKER: DD = SURVEY DISK
DG6261_SETTING: 36 = SET IN A MASSIVE STRUCTURE
DG6261_SP_SET: WATER STRUCTURE WALL
DG6261_STAMPING: KR 1068 1966 JACKSONVILLE FLA
DG6261_MARK LOGO: USE
DG6261_MAGNETIC: N = NO MAGNETIC MATERIAL
DG6261_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
DG6261_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DG6261+SATELLITE: SATELLITE OBSERVATIONS - December 18, 2002
DG6261
DG6261 HISTORY - Date Condition Report By

```

DG6261 HISTORY - 1966 MONUMENTED USE
DG6261 HISTORY - 20021218 GOOD FLDEP

DG6261

STATION DESCRIPTION

DG6261

DG6261'DESCRIBED BY FL DEPT OF ENV PRO 2002 (JLM)

DG6261'THE MARK IS ABOUT 24.8 MI NORTH OF KENANSVILLE, 6.6 MI SOUTH OF ST.

DG6261'CLOUD, IN SECTION 6, TOWNSHIP 28 SOUTH, RANGE 31 EAST.

DG6261'

DG6261'TO REACH THE MARK FROM THE JUNCTION OF U.S. HIGHWAYS 192, 441 (13TH

DG6261'STREET) AND COUNTY ROAD 523 (VERMONT AVENUE, CANOE CREEK ROAD) IN ST.

DG6261'CLOUD, GO SOUTH ON COUNTY ROAD 523 (VERMONT AVENUE, CANOE CREEK ROAD)

DG6261'FOR 12.05 MI TO CANAL C-34 AND A LEVEE ROAD ON THE WEST SIDE OF THE

DG6261'CANAL, TURN LEFT ON THE LEVEE ROAD AND GO NORTHEAST FOR APPROXIMATELY

DG6261'75.0 FT TO A LOCKED GATE, CONTINUE NORTHEAST ON THE LEVEE ROAD FOR

DG6261'0.15 MI TO WATER CONTROL STRUCTURE S-63A ON THE RIGHT AND THE MARK ON

DG6261'THE RIGHT, SET FLUSH IN THE TOP OF THE SOUTHWEST STRUCTURE WALL.

DG6261'

DG6261'LOCATED 88.8 FT EAST OF THE WEST GATE OF THE STRUCTURE, 57.7 FT

DG6261'SOUTHEAST OF THE SOUTHEAST CORNER OF THE STRUCTURE (11.0 FT SQUARE)

DG6261'BUILDING NUMBER S-63A AND 7.5 FT SOUTH OF THE APPROXIMATE CENTERLINE

DG6261'OF THE LEVEE ROAD.

DG6261'

DG6261'NOTE FOR KEY CONTACT THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT AT

DG6261'(407) 686-8800.

*** retrieval complete.

Elapsed Time = 00:00:05

COUNTRY OSCEOLA CO		TYPE OF MARK DISC		STATION KR 1068	
LOCALITY Structure 63-A		STAMPING ON MARK		AGENCY (CAST IN MARKS) C of E	
ELEVATION 63.86 ✓		LONGITUDE		DATUM N. A.	
LATITUDE		LONGITUDE		DATUM MSL	
NORTHING)(EASTING) (FT) (M)		(EASTING)(NORTHING) (FT) (M)		GRID AND ZONE M E	
NORTHING)(EASTING) (FT) (M)		(EASTING)(NORTHING) (FT) (M)		GRID AND ZONE	
				ESTABLISHED BY (AGENCY) C of E	
				DATE	
				ORDER	

O OBTAIN GRID AZIMUTH, ADD TO THE GEODETIC AZIMUTH

O OBTAIN GRID AZ. (ADD)(SUB.) TO THE GEODETIC AZIMUTH

OBJECT	AZIMUTH OR DIRECTION		BACK AZIMUTH	GEOD. DISTANCE		GRID DISTANCE	
	(GEODETIC)	(GRID)		(METERS)	(FEET)	(METERS)	(FEET)

1. Station is located in Osceola County approximately 12.1 miles south of St. Cloud, Florida.
2. To reach: From intersection of Road 441 and 523 proceed south on 523 12.1 miles to Canoe Creek bridge and station location (C-34).
3. Station is located on the S. W. Wing Wall of S-63A approximately 175' east of KR 998.
4. Mark is a Corps of Engineers disc set flush in concrete "Wing Wall" of S-63A. Station is stamped KR 1068 - 1966 - Jacksonville.

ELEV. = 63.86 IS PER P. RANKIN PRECISE 2ND ORDER LEVELS NOV. 1981
P.L.H.

SKETCH



STATION DESIGNATION

YEAR 1900

AGENCY

DISTURBING THIS MARK

Site Name	Sensor			
S65A-SCA	STG1			

Latitude 27° 39' 33.2"	Longitude 81° 08' 07.2"	Northing 1363587	Easting 525045	
Section 28	Township 32	Range 32	County Osceola	Quad Fort Kissimmee NW

Benchmark Information:

Name MACK 5-23-84	Existing / Set Existing	NAVD88 52.76	NGVD29 53.95
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Reference Point Information:

Stamped Elevation (NGVD29) 57.57	Stamped Date 1-17-08	By Firm Woolpert, Inc.
--	--------------------------------	----------------------------------

Note: Reference mark at top of PVC pipe as marked.

Staff Gauge Information:

Water Elevation (NGVD29) 46.21	Gauge Reading 46.30	Time of Reading 12:30	Date of Reading 1-17-08
--	-------------------------------	---------------------------------	-----------------------------------

To Reach Description:
 From the intersection of SR 60 and US 441 travel northwest on SR 60 for 11.1 miles to a local dirt road and turn left (south) and travel along the road for 8.5 miles to the boat lock at Kissimmee River. The well is located in the south building next to the boat lock.

Sensor Well Area:



Sensor Well:



Tag Close-up:



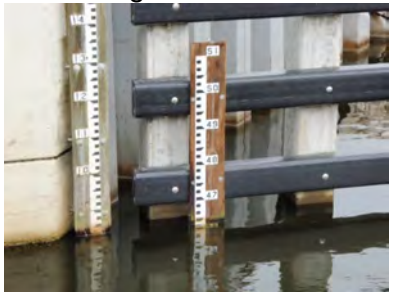
Bench Mark:



Bench Mark:



Staff Gauge:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: 565A

Date: JAN 17, 08

Crew: W. MILLER / A. ANTONIO

Bench Mark Used:

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
<u>MACK 5-23-84</u>	<u>1984</u>	<u>52.76</u>	<u>53.95</u>	<u>Y</u>

(if needed) Conversion factor = _____ Converted NGVD29 = _____

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>Bm</u>	<u>4.186</u>	<u>58.136</u>			
<u>well</u>			<u>0.563</u>	<u>57.573</u>	
	<u>0.662</u>	<u>58.235</u>			
<u>Bm</u>			<u>4.285</u>	<u>53.95</u>	

NGVD 29 Ground Elev. @ Well Site: N/A

Tag Check List:

- Stamp Site/Station Designation _____
- Stamp Elevation in NGVD 29 _____
- Stamp Date _____
- Stamp By Woolpert _____
- Stamp Datum (NGVD 29) _____
- Scratch Elev / Remove Tag _____

Photo Check List:

- | | | |
|---|----------------------|-----------------|
| / | Bench Mark close Up | Picture # _____ |
| / | Bench Mark standing | Picture # _____ |
| / | M. Well tag close Up | Picture # _____ |
| / | M. Well standing | Picture # _____ |
| / | M. Well Area | Picture # _____ |
| / | Staff Gauge | Picture # _____ |

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
<u>565A</u>	<u>46.21</u>	<u>46.30</u>	<u>12:30pm</u>	<u>JAN 17, 08</u>

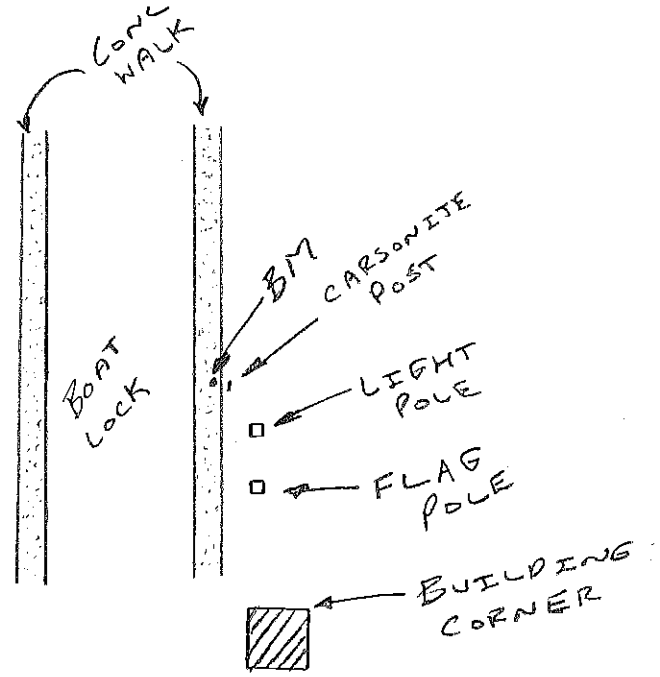
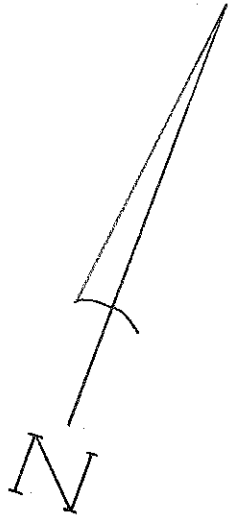
Latitude and Longitude Of Local Bench Mark:

<u>27 39 33.2</u>	<u>81 08 07.2</u>
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Site Description, Comments, or Remarks:

MACK (5-23-84)

LAT 27 39 33.2
LONG 81 08 07.2



	To BM	
	AZ.	DIST.
CARSONITE POST	265°	0.70'
LIGHT POLE	340°	9'
NNE BUILDING CORNER	330°	48'

The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

DATABASE = ,PROGRAM = datasheet, VERSION = 7.60
1 National Geodetic Survey, Retrieval Date = MAY 21, 2008
AH8837 *****
AH8837 DESIGNATION - MACK
AH8837 PID - AH8837
AH8837 STATE/COUNTY- FL/POLK
AH8837 USGS QUAD - FORT KISSIMMEE NW (1972)
AH8837
AH8837 *CURRENT SURVEY CONTROL
AH8837
AH8837* NAD 83(1986)- 27 39 32. (N) 081 08 08. (W) SCALED
AH8837* NAVD 88 - 16.082 (meters) 52.76 (feet) ADJUSTED
AH8837
AH8837 GEOID HEIGHT- -26.39 (meters) GEOID03
AH8837 DYNAMIC HT - 16.058 (meters) 52.68 (feet) COMP
AH8837 MODELED GRAV- 979,164.9 (mgal) NAVD 88
AH8837
AH8837 VERT ORDER - SECOND CLASS I
AH8837
AH8837.The horizontal coordinates were scaled from a topographic map and have
AH8837.an estimated accuracy of +/- 6 seconds.
AH8837
AH8837.The orthometric height was determined by differential leveling
AH8837.and adjusted in July 1999.
AH8837.No vertical observational check was made to the station.
AH8837
AH8837.The geoid height was determined by GEOID03.
AH8837
AH8837.The dynamic height is computed by dividing the NAVD 88
AH8837.geopotential number by the normal gravity value computed on the
AH8837.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AH8837.degrees latitude (g = 980.6199 gals.).
AH8837
AH8837.The modeled gravity was interpolated from observed gravity values.
AH8837
AH8837;
AH8837;SPC FL W - North East Units Estimated Accuracy
AH8837; 368,710. 285,290. MT (+/- 180 meters Scaled)
AH8837
AH8837 SUPERSEDED SURVEY CONTROL
AH8837
AH8837.No superseded survey control is available for this station.
AH8837
AH8837_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML866594(NAD 83)
AH8837_MARKER: DD = SURVEY DISK
AH8837_SETTING: 36 = SET IN A MASSIVE STRUCTURE
AH8837_SP_SET: WATER STRUCTURE
AH8837_STAMPING: MACK 5-23-84 1984
AH8837_MARK LOGO: USE
AH8837_MAGNETIC: N = NO MAGNETIC MATERIAL
AH8837_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
AH8837_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AH8837+SATELLITE: SATELLITE OBSERVATIONS - November 16, 1997
AH8837
AH8837 HISTORY - Date Condition Report By
AH8837 HISTORY - 1984 MONUMENTED USE
AH8837 HISTORY - 19971116 GOOD FLDEP
AH8837 HISTORY - 20070815 GOOD INDIV
AH8837
AH8837 STATION DESCRIPTION
AH8837
AH8837'DESCRIBED BY FL DEPT OF ENV PRO 1997 (JLM)
AH8837'THE MARK IS ABOUT 39.0 MI (62.8 KM) SOUTHEAST OF LAKE WALES IN SECTION
AH8837'28, TOWNSHIP 32 SOUTH, RANGE 32 EAST. TO REACH THE MARK FROM THE
AH8837'INTERSECTION OF STATE ROAD 27 AND STATE ROAD 60 IN LAKE WALES, GO
AH8837'EAST-SOUTHEAST ON STATE ROAD 60 FOR 26.9 MI (43.3 KM) TO THE WEST END
AH8837'OF THE BRIDGE OVER THE KISSIMMEE RIVER, CONTINUE EAST FOR 11.05 MI
AH8837'(17.78 KM) TO THE JUNCTION OF A DIRT ROAD ON THE RIGHT, TURN RIGHT ON
AH8837'THE DIRT ROAD AND GO SOUTH FOR 5.6 MI (9.0 KM) TO A Y-JUNCTION, BEAR
AH8837'LEFT AND CONTINUE SOUTH THEN WEST ON THE DIRT ROAD FOR 2.6 MI (4.2 KM)

```

AH8837' TO A METAL GATE, CONTINUE WEST FOR 1.0 MI (1.6 KM) TO THE DEAD END OF
AH8837' THE ROAD AT STURCTURE S-65A AND THE MARK. SET IN THE TOP OF THE WATER
AH8837' CONTROL STURCTURE WALL, 0.2 FT (6.1 CM) ABOVE THE LEVEL OF THE GROUND.
AH8837' THE MARK CAN ALSO BE REACHED FROM THE INTERSECTION OF STATE ROAD 27
AH8837' AND STATE ROAD 60 IN LAKE WALES, GO EAST-SOUTHEAST ON STATE ROAD 60
AH8837' FOR 25.7 MI (41.4 KM) TO THE JUNCTION OF RIVER RANCH BOULEVARD ON THE
AH8837' RIGHT, TURN RIGHT AND GO SOUTHEAST ON RIVER RANCH BOULEVARD FOR 2.55
AH8837' MI (4.10 KM) TO THE GUARD HOUSE AT THE ENTRANCE TO RIVER RANCH,
AH8837' CONTINUE SOUTHEAST ON RIVER RANCH BOULEVARD FOR 0.3 MI (0.5 KM) TO THE
AH8837' JUNCTION OF KICCO ROAD ON THE RIGHT (A DIRT ROAD LEADING SOUTHEAST) ,
AH8837' TURN RIGHT ON KICCO ROAD AND GO SOUTHEAST FOR 0.2 MI (0.3 KM) TO FOUR
AH8837' SETS OF DOUBLE UNLOCKED GATES, CONTINUE SOUTH ON KICCO ROAD FOR 0.5 MI
AH8837' (0.8 KM) TO A UNLOCKED METAL GATE, CONTINUE SOUTHEAST ON KICCO ROAD
AH8837' FOR 0.05 MI (0.08 KM) TO AN LOCKED GATE, THE ENTRANCE TO THE PROPERTY
AH8837' OWNED BY THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT, CONTINUE
AH8837' SOUTHEAST ON KICCO ROAD FOR 0.2 MI (0.3 KM) TO THE JUNCTION OF A ROAD
AH8837' ON THE LEFT, CONTINUE SOUTH-SOUTHEAST ON KICCO ROAD FOR 1.45 MI (2.33
AH8837' KM) TO THE NORTH END OF A BRIDGE, CONTINUE SOUTHEAST ON THE DIRT ROAD
AH8837' FOR 1.45 MI (2.33 KM) TO UNLOCKED GATES NUMBER 9, CONTINUE SOUTH ON
AH8837' THE DIRT ROAD FOR 0.05 MI (0.08 KM) TO AN UNLOCKED GATE NUMBER 9A,
AH8837' CONTINUE SOUTH-SOUTHEAST ON THE DIRT ROAD FOR 0.2 MI (0.3 KM) TO AN
AH8837' UNLOCKED GATE, CONTINUE NORTHEAST ON THE DIRT ROAD FOR 1.95 MI (3.14
AH8837' KM) TO AN UNLOCKED GATE, CONTINUE SOUTH ON THE DIRT ROAD FOR 1.15 MI
AH8837' (1.85 KM) TO GATE NUMBER 16, CONTINUE SOUTH-SOUTHWEST ON THE DIRT ROAD
AH8837' FOR 0.2 MI (0.3 KM) TO A ROAD ON THE LEFT, CONTINUE SOUTH-SOUTHEAST ON
AH8837' THE DIRT ROAD FOR 0.8 MI (1.3 KM) TO THE JUNCTOIN OF A DIM TRACK ROAD
AH8837' ON THE RIGHT LEADING SOUTH, CONTINUE EAST ON THE DIRT ROAD FOR 0.4 MI
AH8837' (0.6 KM) TO STURCTURE S-65A, THE END OF TRUCK TRAVEL, WALKING
AH8837' NORTHEAST FOR APPROXIMATELY 60.0 FT (18.3 M) AND THROUGH THE WALKWAY
AH8837' TO THE MARK ON THE RIGHT IN THE STRUCTURE WALL. LOCATED 55.6 FT (16.9
AH8837' M) SOUTH OF THE SOUTHWEST CORNER OF A SMALL BUILDING, 52.0 FT (15.8 M)
AH8837' NORTH OF THE NORTHWEST CORNER OF THE SMALL 12.0 FT (3.7 M) X 12.0 FT
AH8837' (3.7 M) BUILDING, 26.1 FT (8.0 M) NORTH-NORTH OF THE EXTENDED
AH8837' CENTERLINE OF THE ROAD, 10.9 FT (3.3 M) NORTH-NORTHWEST OF A LIGHT
AH8837' POLE AND 2.6 FT (0.8 M) EAST OF A 3.0 FT (0.9 M) HIGH CHAINLINK FENCE.
AH8837' NOTE FOR ACCESS AND KEY CONTACT SOUTH FLORIDA WATER MANAGEMENT
AH8837' DISTRICT AT 561-686-8800.

AH8837

AH8837

STATION RECOVERY (2007)

AH8837

AH8837' RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2007 (RS)

AH8837' KEITH AND ASSOCIATES

*** retrieval complete.

Elapsed Time = 00:00:00



CORPS

ENGINEERS - U.S. ARMY
STATION DESIGNATION
5-23-84
MAC K

YEAR 1984
AGENCY
DISTURBING THIS MARK

SURVEY MARK

Site Name		Sensor		
S-65GW		GW1		

Latitude 27° 48' 12.7"	Longitude 81° 11' 51.2"	Northing 1261327	Easting 592302
Section 11	Township 31	Range 31	County Osceola
			Quad Lake Marian SW

Benchmark Information:

Name KR 1013	Existing / Set Existing	NAVD88 61.81	NGVD29 63.00
------------------------	-----------------------------------	------------------------	------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 57.88	Stamped Date 1-17-08	By Firm Woolpert, Inc.
--	--------------------------------	----------------------------------

Note: Reference mark at top of PVC pipe as marked.

Staff Gauge Information:

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:

From the intersection of SR 60 and US 441 travel northwest on SR 60 for 19.8 miles to the Kissimmee River, the structure is visible from the road and the wells are on a strip of land on the south side between the boat locks and the water control structure.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Site Name		Sensor		
S-65GW		GW2		

Latitude 27° 48' 12.7"	Longitude 81° 11' 51.2"	Northing 1261327	Easting 592302
Section 11	Township 31	Range 31	County Osceola
			Quad Lake Marian SW

Benchmark Information:

Name KR 1013	Existing / Set Existing	NAVD88 61.81	NGVD29 63.00
------------------------	-----------------------------------	------------------------	------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 57.98	Stamped Date 1-17-08	By Firm Woolpert, Inc.
--	--------------------------------	----------------------------------

Note: Reference mark at top of PVC pipe as marked.

Staff Gauge Information:

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:
From the intersection of SR 60 and US 441 travel northwest on SR 60 for 19.8 miles to the Kissimmee River. Structure is visible from the road and wells are a strip of land on the south side between the boat locks and the water control structure.

Sensor Well Area:



Sensor Well:



Tag close Up:



Bench Mark:



Bench Mark:



Site Name		Sensor	
S-65GW		GW3	

Latitude 27° 48' 12.7"	Longitude 81° 11' 51.2"	Northing 1261327	Easting 592302
Section 11	Township 31	Range 31	County Osceola
			Quad Lake Marian SW

Benchmark Information:

Name KR 1013	Existing / Set Existing	NAVD88 61.81	NGVD29 63.00
------------------------	-----------------------------------	------------------------	------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 57.87	Stamped Date 1-17-08	By Firm Woolpert, Inc.
--	--------------------------------	----------------------------------

Note: Reference mark at top of PVC pipe as marked.

Staff Gauge Information:

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:

From the intersection of SR 60 and US 441 travel northwest on SR 60 for 19.8 miles to the Kissimmee River. Structure is visible from the road and wells are a strip of land on the south side between the boat locks and the water control structure.

Sensor Well Area:



Sensor Well:



Tag Close Up:



Bench Mark:



Bench Mark:



The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.48
1 National Geodetic Survey, Retrieval Date = JULY 12, 2007
AH8844 *****
AH8844 DESIGNATION - KR 1013
AH8844 PID - AH8844
AH8844 STATE/COUNTY- FL/OSCEOLA
AH8844 USGS QUAD - LAKE MARIAN SW (1972)
AH8844
AH8844 *CURRENT SURVEY CONTROL
AH8844
AH8844 *-----*
AH8844 * NAD 83(1986)- 27 48 12. (N) 081 11 50. (W) SCALED
AH8844 * NAVD 88 - 18.839 (meters) 61.81 (feet) ADJUSTED
AH8844 *-----*
AH8844 GEOID HEIGHT- -26.86 (meters) GEOID03
AH8844 DYNAMIC HT - 18.811 (meters) 61.72 (feet) COMP
AH8844 MODELED GRAV- 979,152.5 (mgal) NAVD 88
AH8844
AH8844 VERT ORDER - SECOND CLASS I
AH8844
AH8844.The horizontal coordinates were scaled from a topographic map and have
AH8844.an estimated accuracy of +/- 6 seconds.
AH8844
AH8844.The orthometric height was determined by differential leveling
AH8844.and adjusted by the NATIONAL GEODETIC SURVEY in July 1999.
AH8844.No vertical observational check was made to the station.
AH8844
AH8844.The geoid height was determined by GEOID03.
AH8844
AH8844.The dynamic height is computed by dividing the NAVD 88
AH8844.geopotential number by the normal gravity value computed on the
AH8844.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AH8844.degrees latitude (g = 980.6199 gals.).
AH8844
AH8844.The modeled gravity was interpolated from observed gravity values.
AH8844
AH8844; North East Units Estimated Accuracy
AH8844;SPC FL E - 384,430. 180,570. MT (+/- 180 meters Scaled)
AH8844
AH8844 SUPERSEDED SURVEY CONTROL
AH8844
AH8844.No superseded survey control is available for this station.
AH8844
AH8844_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML805754(NAD 83)
AH8844_MARKER: DD = SURVEY DISK
AH8844_SETTING: 37 = SET IN A MASSIVE RETAINING WALL
AH8844_SP_SET: SPILLWAY RETAINING WALL
AH8844_STAMPING: KR 1013 0-1 1964 JACKSONVILLE
AH8844_MARK LOGO: USE
AH8844_MAGNETIC: N = NO MAGNETIC MATERIAL
AH8844_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
AH8844_SATELLITE: THE SITE LOCATION WAS REPORTED AS NOT SUITABLE FOR
AH8844+SATELLITE: SATELLITE OBSERVATIONS - September 19, 1997
AH8844
AH8844 HISTORY - Date Condition Report By
AH8844 HISTORY - 1964 MONUMENTED USE
AH8844 HISTORY - 19970919 GOOD FLDEP
AH8844
AH8844 STATION DESCRIPTION
AH8844
AH8844'DESCRIBED BY FL DEPT OF ENV PRO 1997 (MWM)
AH8844'THE MARK IS ABOUT 26.8 MI (43.1 KM) EAST-SOUTHEAST OF LAKE WALES,
AH8844'50.9 MI (81.9 KM) NORTH-NORTHWEST OF VERO BEACH IN ESTIMATED SECTION
AH8844'11, TOWNSHIP 31 SOUTH, RANGE 31 EAST. TO REACH THE MARK FROM THE
AH8844'INTERSECTION OF STATE ROAD 27 UNDERPASS AND STATE ROAD 60 IN LAKE
AH8844'WALES, GO EAST-SOUTHEAST ON STATE ROAD 60 FOR 25.7 MI (41.4 KM) TO THE
AH8844'JUNCTION ON RIVER RANCH BOULEVARD ON THE RIGHT, CONTINUE EAST ON STATE
AH8844'ROAD 60 FOR 1.45 MI (2.33 KM) TO THE JUNCTION OF A PAVED ROAD (ACCESS
AH8844'TO SPILLWAY DAM NUMBER S-65) ON THE RIGHT, TURN RIGHT ON THE PAVED
AH8844'ROAD AND GO SOUTH THEN WEST FOR 0.2 MI (0.3 KM) TO STRUCTURE NUMBER S

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DATASHEETS

AH8844'65 AND THE MARK ON THE LEFT, SET IN THE TOP OF THE SOUTHEAST CONCRETE
AH8844'RETAINING WALL. LOCATED 42.6 FT (13.0 M) WEST OF A METAL GUARDRAIL,
AH8844'17.1 FT (5.2 M) SOUTH OF A STEEL LADDER GOING TO THE TOP OF THE
AH8844'STRUCTURE, 1.0 FT (0.3 M) EAST OF A 3.0 FT (0.9 M) HIGH CHAINLINK
AH8844'FENCE AND 1.0 FT (0.3 M) SOUTH OF THE SOUTH EDGE OF THE CONCRETE ROAD
AH8844'CROSSING THE STRUCTURE.

*** retrieval complete.
Elapsed Time = 00:00:00

Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: 565GW

Date: JAN 17, 08

Crew: W. MILLER/A. ANTONIO

Bench Mark Used: KR1013

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
<u>KR1013 0-1</u>	<u>1972</u>	<u>61.808</u>	<u>63.00</u>	<u>Y</u>

964 JACKSONVILLE (if needed) Conversion factor = _____ Converted NGVD29 = _____

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>Bm</u>	<u>2.007</u>	<u>65.007</u>			
<u>6W1</u>	<u>2.188</u>	<u>60.073</u>	<u>7.122</u>	<u>57.885</u>	
<u>6W3</u>	<u>2.528</u>	<u>60.398</u>	<u>2.203</u>	<u>57.870</u>	
<u>6W2</u>	<u>6.835</u>	<u>64.816</u>	<u>2.417</u>	<u>57.981</u>	
<u>Bm</u>			<u>1.810</u>	<u>63.006</u>	
<u>GROUND</u>			<u>9.57</u>	<u>55.246</u>	

NGVD 29 Ground Elev. @ Well Site: 55.25

Tag Check List:

Photo Check List:

- | | | | |
|---|--|---|--|
| <ul style="list-style-type: none"> • Stamp Site/Station Designation _____ • Stamp Elevation in NGVD 29 _____ • Stamp Date _____ • Stamp By Woolpert _____ • Stamp Datum (NGVD 29) _____ • Scratch Elev / Remove Tag _____ | | <ul style="list-style-type: none"> _____ Bench Mark close Up _____ Bench Mark standing _____ M. Well tag close Up _____ M. Well standing _____ M. Well Area _____ Staff Gauge | <ul style="list-style-type: none"> Picture # _____ Picture # _____ Picture # _____ Picture # _____ Picture # _____ Picture # _____ |
|---|--|---|--|

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.

Latitude and Longitude Of Local Bench Mark:

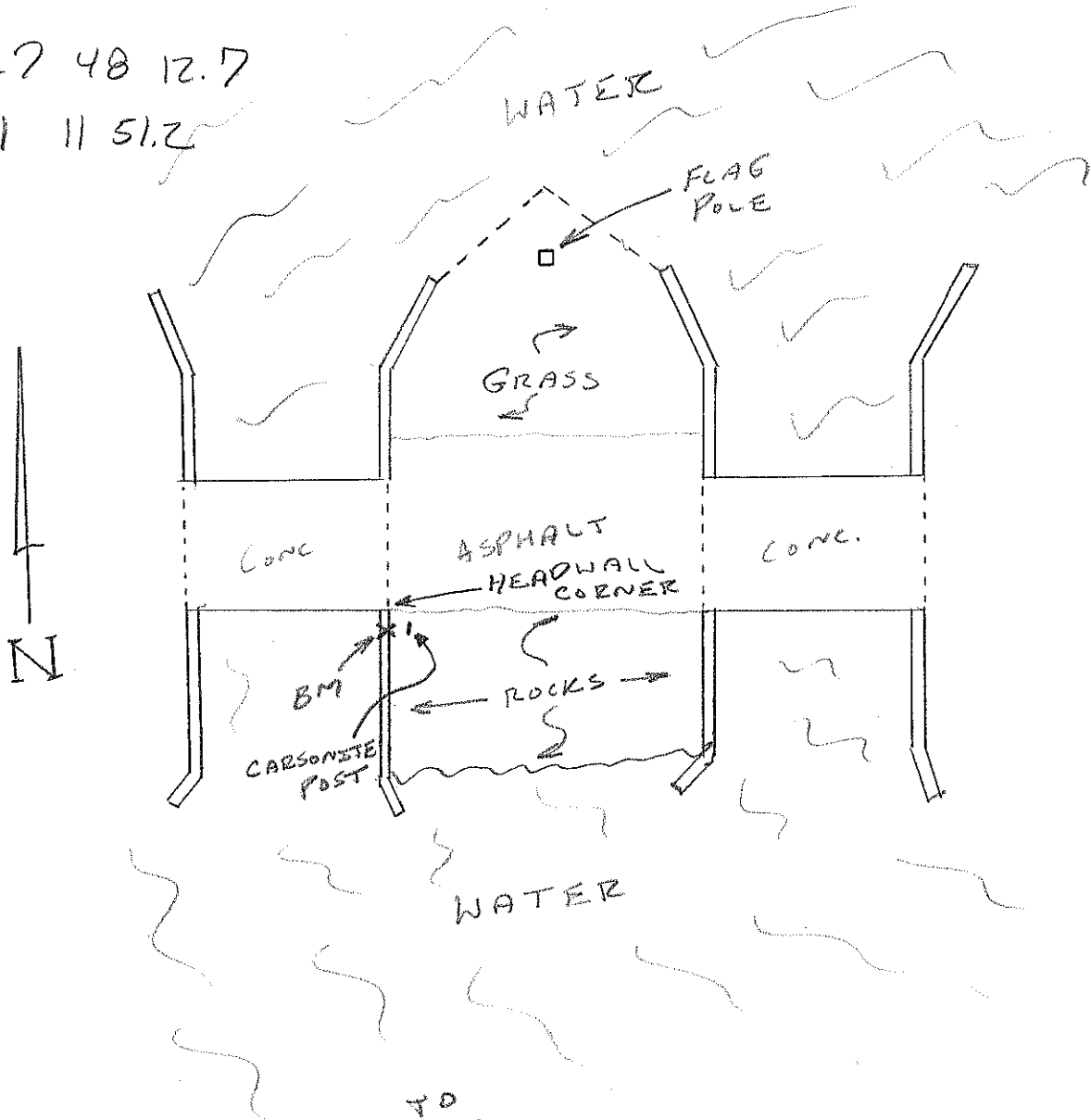
<u>27 48 12.7</u>	<u>81 11 51.2</u>
-------------------	-------------------

Site Description, Comments, or Remarks:

KR 1013

LAT 27 48 12.7

LONG 81 11 51.2



	TO BM	
	AZ.	DIST.
CARSONITE POST	270°	0.50'
FLAG POLE	230°	65'
HEADWALL CORNER	195°	1.20'

Site Name
SEBRING

Sensor
GW1

Latitude 27° 27' 30.54"	Longitude 81° 21' 15.34"	Northing 1136116	Easting 541350
Section 5	Township 35	Range 30	County Highlands
			Quad Lorida

Benchmark Information:

Name SEBRING MW2004	Existing / Set Existing	NAVD88 NA	NGVD29 63.04
-------------------------------	-----------------------------------	---------------------	------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 66.35	Stamped Date 1-10-08	By Firm Woolpert, Inc.
--	--------------------------------	----------------------------------

Note: Reference point at the edge of the box as marked.

Staff Gauge Information:

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:

Site is located at the Water Treatment Plant of the Sebring Regional Airport, 128 Authority LN, Sebring FL 33870. Tel. 863-655-6444.

Sensor Well Area:



Sensor Well:



Tag:



Bench Mark:



Bench Mark:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: SEBRING

Date: JAN 10, 08

Crew: W. MILLER/A. ANTONIO

Bench Mark Used:

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
<u>SEBRING MW 2004</u>	<u>2004</u>	<u>NONE</u>	<u>63.04</u>	<u>Y</u>
(if needed) Conversion factor = _____ Converted NGVD29 = _____				

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>A1 Bm</u>	<u>5.011</u>	<u>68.051</u>			<u>30.29</u>
<u>Ground</u>			<u>4.761</u>	<u>63.290</u>	<u>29.51</u>
<u>1</u>			<u>1.703</u>	<u>66.347</u>	<u>30.37</u>
	<u>1.490</u>	<u>67.838</u>			<u>30.38</u>
<u>2</u>			<u>4.794</u>	<u>63.043</u>	<u>30.25</u>

NGVD 29 Ground Elev. @ Well Site: 63.290

Tag Check List:

- Stamp Site/Station Designation
- Stamp Elevation in NGVD 29
- Stamp Date
- Stamp By Woolpert
- Stamp Datum (NGVD 29)
- Scratch Elev / Remove Tag

OLD TAG IS OK

Photo Check List:

<input type="checkbox"/> Bench Mark close Up	Picture #	<u>1</u>
<input type="checkbox"/> Bench Mark standing	Picture #	<u>2</u>
<input type="checkbox"/> M. Well tag close Up	Picture #	<u>5</u>
<input type="checkbox"/> M. Well standing	Picture #	<u>4</u>
<input type="checkbox"/> M. Well Area	Picture #	<u>3</u>
<input type="checkbox"/> Staff Gauge	Picture #	_____

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.

Latitude and Longitude Of Local Bench Mark:

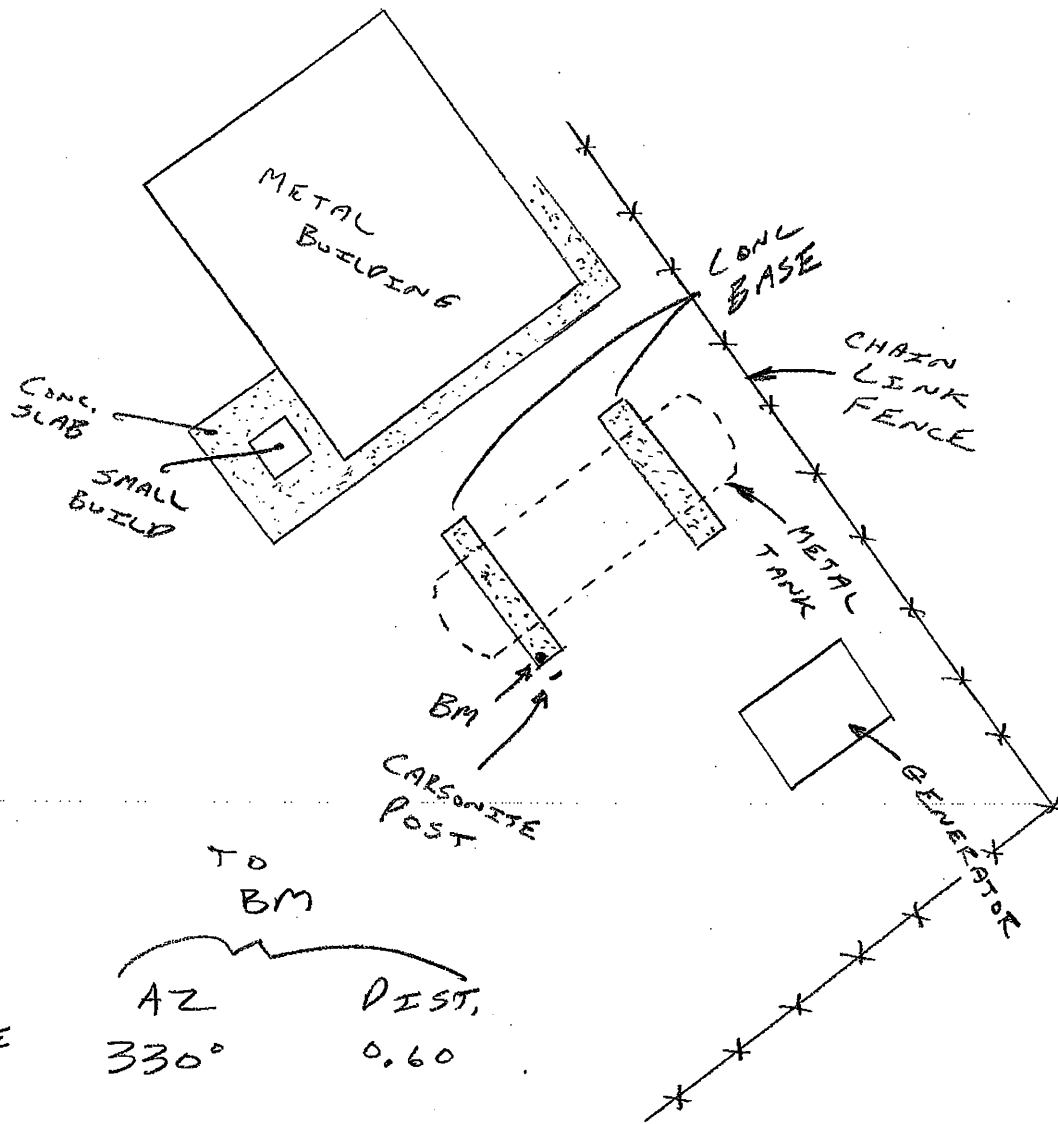
<u>27 27 30.54</u>	<u>81 21 15.34</u>
--------------------	--------------------

Site Description, Comments, or Remarks:

SEABRINGWM2004

LAT 27 27 30.54

LONG 81 21 15.34



	AZ	DIST.
CARSONITE POST	330°	0.60
S. CORNER METAL BUILD.	150°	27'
W. CORNER GENERATOR	250°	22'



South Florida Water Management District Benchmark Database

Report run on: May 21, 2008 2:01 PM

Designation: SEBRINGMW2004	Latitude: 272730.500	Scaled values only
County: HIGHLANDS	Longitude: 812115.300	
USGS Quad: LORIDA	Monument By: SFWMD	
Project: HIGHLANDS COUNTY LEVELS	Year: 2004	
Sec: 5 Twp: 35 Rge: 30	Type: V	
Status: GOOD	Stamping: BM SEBRING MW 2004	
NAD 1927 Coordinates:	Party Chief: EBANKS	
N =	Field Book ESDA MISC #06	
E =	Page: 56	
Adjustment:	NGVD 1929	
NAD 1983 Coordinates:	Elevation: 63.040	
X = 541281.346	Order: 3	
Y = 1135992.042	Class:	
Adjustment: 90	NAVD 1988	
Order:	Elevation: 61.948	
Class:	Order: 3	
	Class:	

Description:

***** RECOVERY NOTE *****
1/10/2008 MILLER WOOLPERT NO FIELD BOOK SEBRING MW 2004 NAVD 88 EL. NONE
EL. 63.04 NGVD 1929 (21-MAY-08 HJE)

FROM THE AIRPORT AT SEBRING: FOLLOW THE MAIN ENTRANCE ROAD TO BOEING AVEUNE. FOLLOW BOEING AVENUE NORTH TO THE INTERSECTION WITH WEBSTER TURN DRIVE AND THE SEBRING WATER TREATMENT PLANT ON THE SOUTHWEST CORNER OF THE INTERSECTION: THE BENCHMARK IS LOCATED ON THE BASE FOR THE SUPPORT OF THE RAISED WATER TANK. THE BENCHMARK IS A SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD) ALUMINUM DISK GROUTED INTO THE CONCRETE AND STAMPED "BM SEBRING MW 2004". ACCESS IS THRU LOCKED GATE TO CHAIN LINK ENCLOSURE. KEYS MAYBE OBTAINED FROM AIRPORT OPERATIONS CUSTOMER SERVICE TELEPHONE NUMBER 863-655-6444 EXTENSION 102.
LEVEL RUN FROM NGS MONUMENT SUPPLY (EL. 63.12 NAVD 1988, EL.64.21 NGVD1929)



WATER MANAGEMENT
SURVEY

BM

FLA. SEBRING DIS
MW

MARKER
OS 2004

Site Name		Sensor		
-----------	--	--------	--	--

TIGER

STG1

Latitude	Longitude	Northing	Easting	
27° 52' 19.72"	81° 20' 36.48"	1286486	545269	
Section	Township	Range	County	Quad
17	30	30	Polk	Lake Weohyakapka

Benchmark Information:

Name	Existing / Set	NAVD88	NGVD29
Z 504	Existing	55.04	56.24

Reference Point Information:

Stamped Elevation (NGVD29)	Stamped Date	By Firm
58.12	1-04-08	Woolpert, Inc.

Note: Reference point at edge of box as marked.

Staff Gauge Information:

Water Elevation (NGVD29)	Gauge Reading	Time of Reading	Date of Reading
50.15	50.26	12:00	1-4-08

To Reach Description:

From the intersection of SR 60 and CR 630 in the town of Lake Wales, FL travel east-northeast along SR60 for 4.5 miles to Sam Keen Rd. turn right (northeast) onto Sam Keen Rd. and travel for 4.5 miles to Entrance road to trailer park on left. Turn left (north-northwest) onto road and continue straight along road for 1300ft to boat ramp. Well is next to the boat ramp.

Sensor Well Area:



Sensor Well:



Tag:



Bench Mark:



Bench Mark:



Staff Gauge:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: TIGER

Date: JAN 4, 08

Crew: W. MILLER / A. ANTONIO

Bench Mark Used:

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
<u>2584</u>	<u>2001</u>	<u>55.039</u>	<u>56.240</u>	<u>Y</u>

(if needed) Conversion factor = _____ Converted NGVD29 = _____

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>SEE FIELD BOOK OLD PAGE 54</u>				<u>58.11</u>	<u>REF-MARK</u>
<u>FOR LEVEL NOTES</u>					

NGVD 29 ~~Ground~~ Elev. @ Well Site: 50.15 (WATER ELEV)

Tag Check List:

- Stamp Site/Station Designation
- Stamp Elevation in NGVD 29
- Stamp Date
- Stamp By Woolpert
- Stamp Datum (NGVD 29)
- Scratch Elev / Remove Tag

Photo Check List:

- | | | |
|----------------------|-----------|----------|
| Bench Mark close Up | Picture # | <u>3</u> |
| Bench Mark standing | Picture # | <u>2</u> |
| M. Well tag close Up | Picture # | <u>4</u> |
| M. Well standing | Picture # | <u>5</u> |
| M. Well Area | Picture # | <u>6</u> |
| Staff Gauge | Picture # | <u>7</u> |

USED
58.12
ALREADY
STAMPED

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
<u>TIGER</u>	<u>50.15</u>	<u>50.26</u>	<u>12 PM</u>	<u>JAN 4, 08</u>

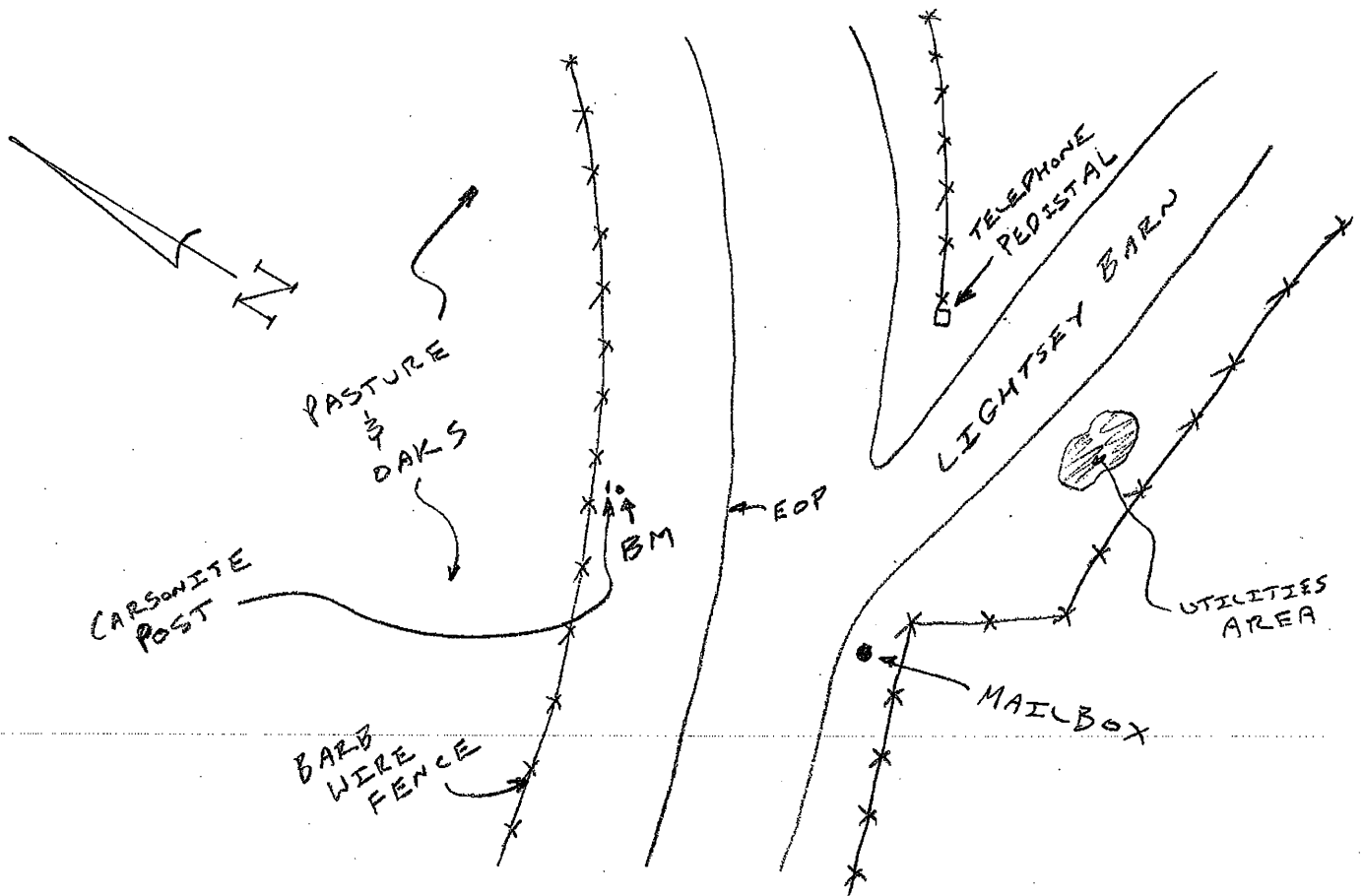
Latitude and Longitude Of Local Bench Mark:

<u>27 52 19.72</u>	<u>81 20 36.48</u>
--------------------	--------------------

Site Description, Comments, or Remarks:

TIGER

LAT 27 52 19.72
 LONG 81 20 36.48



	TO BM	
	AZ	DIST
MAILBOX	347°	46'
TELEPHONE PED.	300°	63'
EOP	0°	13'
CARSONITE POST	160°	2'

The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

PROGRAM = datasheet95, VERSION = 8.8
1      National Geodetic Survey,      Retrieval Date = NOVEMBER  2, 2015
AJ6628 *****
AJ6628 DESIGNATION - Z 504
AJ6628 PID - AJ6628
AJ6628 STATE/COUNTY- FL/POLK
AJ6628 COUNTRY - US
AJ6628 USGS QUAD - LAKE WEOHYAKAPKA SE (1993)
AJ6628
AJ6628 *CURRENT SURVEY CONTROL
AJ6628
AJ6628* NAD 83(1986) POSITION- 27 52 20. (N) 081 20 36. (W) SCALED
AJ6628* NAVD 88 ORTHO HEIGHT - 16.776 (meters) 55.04 (feet) ADJUSTED
AJ6628
AJ6628 GEOID HEIGHT - -27.039 (meters) GEOID12B
AJ6628 DYNAMIC HEIGHT - 16.751 (meters) 54.96 (feet) COMP
AJ6628 MODELED GRAVITY - 979,141.8 (mgal) NAVD 88
AJ6628
AJ6628 VERT ORDER - SECOND CLASS I
AJ6628
AJ6628.The horizontal coordinates were scaled from a topographic map and have
AJ6628.an estimated accuracy of +/- 6 seconds.
AJ6628.
AJ6628.The orthometric height was determined by differential leveling and
AJ6628.adjusted by the NATIONAL GEODETIC SURVEY
AJ6628.in April 2004.
AJ6628
AJ6628.Significant digits in the geoid height do not necessarily reflect accuracy.
AJ6628.GEOID12B height accuracy estimate available here.
AJ6628
AJ6628.The dynamic height is computed by dividing the NAVD 88
AJ6628.geopotential number by the normal gravity value computed on the
AJ6628.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AJ6628.degrees latitude (g = 980.6199 gals.).
AJ6628
AJ6628.The modeled gravity was interpolated from observed gravity values.
AJ6628
AJ6628; North East Units Estimated Accuracy
AJ6628;SPC FL W - 392,220. 264,660. MT (+/- 180 meters Scaled)
AJ6628
AJ6628 SUPERSEDED SURVEY CONTROL
AJ6628
AJ6628.No superseded survey control is available for this station.
AJ6628
AJ6628_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML662830(NAD 83)
AJ6628
AJ6628_MARKER: DD = SURVEY DISK
AJ6628_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AJ6628_STAMPING: Z 504 2001
AJ6628_MARK LOGO: FLDEP
AJ6628_MAGNETIC: B = BAR MAGNET IMBEDDED IN MONUMENT
AJ6628_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AJ6628+STABILITY: SURFACE MOTION
AJ6628_SATELLITE: THE SITE LOCATION WAS REPORTED AS NOT SUITABLE FOR
AJ6628+SATELLITE: SATELLITE OBSERVATIONS - April 18, 2005
AJ6628
AJ6628 HISTORY - Date Condition Report By

```

AJ6628 HISTORY - 2001 MONUMENTED FLDEP
AJ6628 HISTORY - 20050418 GOOD INDIV

AJ6628

AJ6628 STATION DESCRIPTION

AJ6628

AJ6628'DESCRIBED BY FL DEPT OF ENV PRO 2001 (JLM)

AJ6628'THE MARK IS ABOUT 65.4 MI (105.2 KM) NORTH-NORTHWEST OF VERO BEACH,

AJ6628'15.2 MI (24.5 KM) EAST-SOUTHEAST OF LAKE WALES, IN SECTION 17,

AJ6628'TOWNSHIP 30 SOUTH, RANGE 30 EAST. TO REACH THE MARK FROM THE

AJ6628'INTERSECTION OF STATE ROAD 27 AND STATE ROAD 60 IN LAKE WALES, GO

AJ6628'EAST-SOUTHEAST ON STATE ROAD 60 FOR 7.3 MI (11.7 KM) TO THE JUNCTION

AJ6628'OF MAMMOTH GROVE ROAD ON THE LEFT, CONTINUE EAST-SOUTHEAST ON STATE

AJ6628'ROAD 60 FOR 7.85 MI (12.63 KM) TO THE JUNCTION OF SAM KEEN ROAD ON THE

AJ6628'LEFT, TURN LEFT ON SAM KEEN ROAD AND GO NORTHEAST FOR 2.1 MI (3.4 KM)

AJ6628'TO THE JUNCTION OF A PAVED ROAD ON THE RIGHT (LEADING EAST) AND THE

AJ6628'MARK ON THE LEFT, SET IN THE TOP OF A ROUND CONCRETE MONUMENT FLUSH

AJ6628'WITH THE GROUND AND 2.0 FT (0.6 M) BELOW THE LEVEL OF STATE ROAD 60.

AJ6628'LOCATED 91.1 FT (27.8 M) NORTH OF POWER POLE NUMBER 17-55-25 WITH ONE

AJ6628'GUY WIRE ATTACHED, 28.6 FT (8.7 M) NORTH OF THE APPROXIMATE CENTERLINE

AJ6628'OF SAM KEEN ROAD, 15.8 FT (4.8 M) NORTH OF THE EDGE OF THE PAVEMENT,

AJ6628'2.3 FT (0.7 M) SOUTH OF A BARB WIRE FENCE AND 1.6 FT (0.5 M) SOUTH OF

AJ6628'A CARSONITE WITNESS POST. NOTE A BAR MAGNET WAS IMBEDDED IN THE

AJ6628'MONUMENT ON THE SOUTH SIDE, 0.2 FT (6.1 CM) BELOW THE TOP OF THE

AJ6628'MONUMENT.

AJ6628

AJ6628 STATION RECOVERY (2005)

AJ6628

AJ6628'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2005 (ADJ)

AJ6628'RECOVERED IN GOOD CONDITION.

*** retrieval complete.

Elapsed Time = 00:00:04

Site Name		Sensor		
TURLAK		GW1		

Latitude 28° 30' 02.9"	Longitude 81° 28' 36.0"	Northing 1515086	Easting 503067
Section 11	Township 23	Range 28	County Orange
			Quad Lando West

Benchmark Information:

Name TURLAK 2008	Existing / Set Set	NAVD88 123.39	NGVD29 124.28
----------------------------	------------------------------	-------------------------	-------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 127.13	Stamped Date 1-22-08	By Firm Woolpert, Inc.
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Note: Reference point at edge of box as marked.

Staff Gauge Information:

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:

From the intersection of SR435 and SR526 in the town of Orlando, FL travel south on SR435 for 0.70 mile to Raleigh St. Turn right (west) onto Raleigh St. and travel for 0.80 mile to S. Hiawassee Rd. Turn left (south) onto S. Hiawassee Rd. and go 1.86 miles to the entrance to Turkey Lake Park on the west side of the road (also Ashley Park Ct. on the east side) Turn left (west) into Turkey Lake Park and follow entrance road for about 0.60 miles to parking area with building and turn right into parking area. Travel straight through parking area and take road exit on the southeast side of the parking lot and well is on the north side of the road 70'+/- from parking lot.

Sensor Well Area:



Sensor Well:



Tag Close:



Bench Mark:



Bench Mark:



JAN 16, 08 JOB# 67411 W. MILLER
 RUN ELEV TO TURLAK A. ANTONIO

#	+	HI	DIST	-	ELEV	DESC.
1	3.855	140.415	33.37			BM
			48.57	5.625	134.79	
2	3.352	138.143	239.23			
			343.24	9.511	128.632	SPKN
3	5.306	133.938	361.98			
			326.04	6.790	127.148	SPKN
4	0.526	127.674	191.50			
			267.41	5.896	121.777	SPKN
5	6.579	128.357	183.20			
			227.60	7.612	120.745	SPKN
6	2.868	123.613	243.28			
			277.71	6.750	116.863	SPKN
7	3.869	120.732	338.19			
			304.21	9.587	111.145	SPKN
8	3.907	115.052	331.21			
			162.06	1.102	113.951	SPKN
9	12.957	126.908	154.94			
			80.02	0.754	126.153	SPKN
10	11.509	127.662	168.82			
			289.73	4.688	132.975	
11	0.784	133.759	133.73			
			233.56	11.447	122.311	SPKN
12	4.727	127.039	357.44			
			334.92	5.256	121.783	SPKN
13	5.167	126.949	366.29			
			330.72	6.363	120.587	SPKN
14	2.276	122.863	359.82			
			238.96	12.863	109.999	SPKN
15	0.820	110.819	76.66			
			111.32	12.158	98.661	SPKN
	6.695	105.356	351.57			

BM GOTH A RESET 01/56
 NAVD 88 ELEV = 136.56

#	+	HI	DIST	-	ELEV	DESC.
16			88.70	0.606	104.750	SPKN
	13.024	117.774	281.58			
17			325.37	4.879	112.896	SPKN
	2.704	115.599	170.83			
18			373.42	9.418	106.182	SPKN
	8.168	114.350	321.59			
19			153.91	0.845	113.505	SPKN
	13.088	126.594	284.06			
20			227.03	1.292	125.302	SPKN
	9.340	134.642	354.86			
21			171.87	1.520	133.122	SPKN
	8.425	141.548	357.74			
22			340.35	9.611	131.937	SPKN
	7.907	139.843	371.80			
23			348.66	5.130	134.713	SPKN
	8.570	143.283	357.10			
24			357.13	4.118	139.165	SPKN
	11.721	140.886	345.95			
25			131.89	12.664	128.222	SPKN
	0.867	129.089	84.51			
26			183.56	4.455	124.633	SPKN
	12.774	137.407	163.41			
27			132.31	0.631	136.777	SPKN
	7.947	144.723	375.38			
28			333.71	4.480	140.243	SPKN
	5.984	146.228	375.66			
29			303.94	9.221	137.006	SPKN
	3.354	140.361	334.79			
30			371.49	8.204	132.156	SPKN
	4.157	136.313	266.86			

#	+	HI	Dist	-	ELEV	DESC.
31			286.55	5.110	131.203	
	2.075	133.278	330.23			
2			255.53	12.763	120.515	SPKN
	0.676	121.191	126.12			
3			267.98	12.606	108.585	SPKN
	6.339	114.924	325.11			
4			248.91	2.410	112.515	SPKN
	10.826	123.340	155.32			
5			278.41	4.413	118.927	SPKN
	5.231	124.158	367.79			
6			224.04	10.484	113.674	SPKN
	0.355	114.029	177.16			
37			336.98	6.713	107.317	SPKN
	1.620	108.937	252.45			
38			332.81	6.038	102.899	SPKN
	10.436	113.335	357.96			
39			112.80	0.862	112.473	
	11.668	124.141	125.04			
40			109.33	0.756	123.385	SPKN
	10.914	134.299	354.04			
41			222.07	0.193	134.106	SPKN
	8.417	142.524	353.65			
42			289.66	6.123	136.400	SPKN
A1	5.974	142.374	276.72			
1.			316.92	13.285	129.089	
	6.396	129.485	172.73			
2			189.65	6.698	122.787	
	4.906	127.787	377.20			
3			350.17	2.326	125.368	
	2.653	128.021	129.60			

#	+	HI	REST	-	ELEV	DESC.
4			334.07	8.345	119.676	
	8.998	128.674	221.12			
5			214.67	0.232	128.442	
	2.291	130.732	329.74			
6			223.93	3.227	127.506	
	7.972	135.478	157.39			
7			242.99	6.374	129.104	
	1.281	130.385	255.04			
8			295.14	2.374	128.011	
	2.338	130.348	94.08			
9			60.93	6.913	123.435	
	6.684	130.120	61.01			
10			94.03	2.108	128.011	
	2.824	130.835	315.95			
11			279.93	0.785	130.051	
	2.827	132.877	318.74			
12			212.92	7.973	124.905	
	7.285	132.190	363.35			
13			341.46	12.507	119.682	
	8.610	128.292	343.31			
14			346.99	3.428	124.864	
	5.374	130.238	209.23			
15			318.79	0.120	130.118	
	7.275	137.393	213.03			
16			230.27	2.778	134.615	
	8.733	143.348	156.17			
17			310.97	6.944	136.404	A1 PKN
	4.437	140.841	373.12			
18			368.77	10.521	130.320	
	8.861	131.181	372.14			
19			186.31	11.885	119.296	SPKN
	0.892	120.188	82.09			

0/50
DESC.

Bm TUR
LAK

#	+	HI	DIST	-	ELEV	DESC.
0			253.69	10.970	189.218	SNE WPD
	0.153	109.371	61.84			
21			357.29	7.287	102.084	SPK N
	7.296	109.388	367.82			
22			347.64	1.878	107.502	SPK N
	11.331	118.833	201.59			
23			195.75	0.848	117.985	SPK N
	3.971	121.957	368.16			
24			323.03	7.766	114.191	SPK N
	0.512	114.703	380.08			
25			306.35	8.113	106.590	SPK N
	2.797	109.386	362.19			
26			340.77	8.200	101.186	SPK N
	2.338	103.524	356.63			
27			303.90	7.470	96.055	SPK N
	2.589	98.643	353.69			
28			339.36	4.744	93.900	SPK N
	9.763	103.663	355.85			
29			260.71	2.771	100.892	SPK N
	11.453	112.345	376.91			
30			375.16	1.392	110.954	SPK N
	9.661	120.615	350.36			
31			322.33	4.065	116.549	SPK N
	2.288	118.837	347.56			
32			296.17	9.708	109.129	SPK N
	4.570	113.699	377.81			
33			257.38	4.261	109.437	SPK N
	9.789	119.226	357.39			
34			325.08	2.801	116.426	SPK N
	9.534	125.959	349.05			
35			99.19	0.902	125.057	SPK N
	12.869	137.926	230.08			

#	+	HI	DIST	-	ELEV	DESC.
36			183.72	0.420	137.506	SPK N
	0.057	143.564	380.76			
37			343.53	6.057	137.507	SPK N
	5.404	142.911	351.95			
38			320.43	4.438	138.473	SPK N
	0.626	139.100	293.81			
39			271.92	13.300	125.800	SPK N
	0.559	126.359	307.79			
40			319.95	11.751	114.608	SPK N
	5.139	119.747	345.06			
41			357.49	5.512	114.235	SPK N
	6.301	120.536	363.02			
42			283.10	8.663	111.873	SPK N
	5.906	117.779	308.46			
43			117.56	6.749	111.030	BM

CHK BM ORA 30
ELEV = 110.950
ERROR = 0.080

Site Name		Sensor		
WR11		GW1		

Latitude 28° 05' 03.64"	Longitude 81° 24' 23.95"	Northing 1363587	Easting 525045	
Section 3	Township 28	Range 29	County Osceola	Quad Lake Hatchineha

Benchmark Information:

Name WR11 2007	Existing / Set Set	NAVD88 67.59	NGVD29 68.66
--------------------------	------------------------------	------------------------	------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 71.97	Stamped Date 12-19-07	By Firm Woolpert, Inc.
--	---------------------------------	----------------------------------

Note: Reference point at edge of the box as marked.

Staff Gauge Information:

Water Elevation (NGVD29) 65.82	Gauge Reading 65.83	Time of Reading 09:48	Date of Reading 12-19-07
--	-------------------------------	---------------------------------	------------------------------------

To Reach Description:

From the intersection of US423 and US192 in Kissimmee Fl. travel south on N John Young Pkwy for 3.51 miles to Pleasant Hill Road. Turn left (south) on Pleasant Hill Road and travel 8.6 miles to Scrub Jay Trail. Turn left (east) onto Scrub Jay Trail (entrance to Disney Wilderness preserve, gate access required) travel along Scrub Jay trail 1.4 miles to unnamed dirt road on right. Turn onto dirt road (west) and travel dirt road 0.70 miles to another unnamed dirt road and turn left (south). Travel dirt road for 3.1 miles to off road trail on left (east). Turn left on trail and follow trail for 0.40 miles. Bench mark for well is on right side (south) of trail 10+/- . Well WR11 is 350Ft from bench mark at a 75degree compass bearing.

Sensor Well Area:



Sensor Well:



Tag Close Up:



Bench Mark:



Bench Mark:



Staff Gauge:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: WR11

Date: Dec 19, 07

Crew: W. MILLER, A. ANTONO

Bench Mark Used: WR11 (2007)

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
WR11	2007	67.59		Y

(if needed) Conversion factor = $\frac{1.04}{1.07}$ Converted NGVD29 = $\frac{68.63}{68.66}$

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
BM WR11	5.129	73.059			245.23
Ground			7.899	65.8 8 89	163.53
Water			7.766	65.29 823	164.80
MARK			1.832	71.937	166.57
	1.763	73.700		.967	166.96
✓ BM			5.082	68.618	244.51

NGVD 29 Ground Elev. @ Well Site: 65.8~~8~~89

Tag Check List:

Photo Check List:

- | | | | |
|----------------------------------|-----------------|----------------------|--------------------|
| • Stamp Site/Station Designation | <u>WR11</u> | Bench Mark close Up | Picture # <u>5</u> |
| • Stamp Elevation in NGVD 29 | <u>✓ 71.97</u> | Bench Mark standing | Picture # <u>6</u> |
| • Stamp Date | <u>12-19-07</u> | M. Well tag close Up | Picture # <u>1</u> |
| • Stamp By Woolpert | <u>✓</u> | M. Well standing | Picture # <u>2</u> |
| • Stamp Datum (NGVD 29) | <u>✓</u> | M. Well Area | Picture # <u>3</u> |
| • Scratch Elev / Remove Tag | <u>✓</u> | Staff Gauge | Picture # <u>4</u> |

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
WR11	65.2982	65.83	9:43 AM	12-19-07

Latitude and Longitude Of Local Bench Mark:

28 05 03.64	81 24 23.90
-------------	-------------

Site Description, Comments, or Remarks:

Site Name				Sensor
WR15				GW1

Latitude 28° 05' 02.38"	Longitude 81° 23' 24.51"	Northing 1363442	Easting 530369
Section 2	Township 28	Range 29	County Osceola
			Quad Lake Hatchineha

Benchmark Information:

Name WR15 2007	Existing / Set Set	NAVD88 62.01	NGVD29 63.09
--------------------------	------------------------------	------------------------	------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 67.86	Stamped Date 12-19-07	By Firm Woolpert, Inc.
--	---------------------------------	----------------------------------

Note: Reference point at edge of the box as marked.

Staff Gauge Information: Water level was below staff gauge so reading was not available (NA).

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:

From the intersection of US423 and US192 in Kissimmee, FL. travel south on N John Young Pkwy for 3.51 miles to Pleasant Hill Road. Turn left (south) on Pleasant Hill Road and travel 8.6 miles to Scrub Jay Trail, Turn left (east) onto Scrub Jay Trail (entrance to Disney Wilderness preserve, gate access required) travel along Scrub Jay trail 1.4 miles to unnamed dirt road on right. Turn onto dirt road (west) and travel dirt road 0.70miles to another dirt road and turn left (south) on dirt road and travel 2.4miles to another unnamed off road trail on left and turn (east). Travel 1.7 miles along trail to bench mark on north side of trail 10Ft +/- . Well WR15 is 500Ft+/- from bench mark at a 195 degree compass bearing.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Staff Gauge:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: WR 15

Date: DEC 19, 07

Crew: W. MILLER/A. ANTONIO

Bench Mark Used: WR 15

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
<u>WR 15</u>	<u>2007</u>	<u>62.01</u>		<u>Y</u>

(if needed) Conversion factor = $\frac{1.04}{1.079}$ Converted NGVD29 = $\frac{62.01}{1.079} = 63.089$

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
				<u>.470</u>	
				<u>61.431</u>	<u>GROUND</u>
<u>SEE</u>	<u>BOOK DL 1</u>	<u>PG 51</u>			
<u>FOR</u>	<u>BENCH RUN</u>			<u>67.823</u>	<u>MARK</u>
				<u>.862</u>	

NGVD 29 Ground Elev. @ Well Site: 61.431 470

Tag Check List:

Photo Check List:

- | | | | |
|--|----------------|----------------------|---------------------|
| <input checked="" type="checkbox"/> Stamp Site/Station Designation | <u>✓</u> | Bench Mark close Up | Picture # <u>12</u> |
| <input checked="" type="checkbox"/> Stamp Elevation in NGVD 29 | <u>✓ 67.86</u> | Bench Mark standing | Picture # <u>11</u> |
| <input checked="" type="checkbox"/> Stamp Date | <u>✓</u> | M. Well tag close Up | Picture # <u>10</u> |
| <input checked="" type="checkbox"/> Stamp By Woolpert | <u>✓</u> | M. Well standing | Picture # <u>9</u> |
| <input checked="" type="checkbox"/> Stamp Datum (NGVD 29) | <u>✓</u> | M. Well Area | Picture # <u>8</u> |
| <input checked="" type="checkbox"/> Scratch Elev / Remove Tag | <u>✓</u> | Staff Gauge | Picture # <u>7</u> |

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
<u>WR 15</u>	<u>NONE</u>	<u>N/A</u>	<u>12:15 PM</u>	<u>12-19-07</u>

Latitude and Longitude Of Local Bench Mark:

<u>28.05 04.33</u>	<u>31.23 74.51</u>
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Site Description, Comments, or Remarks:

Site Name		Sensor	
WR16		GW1	

Latitude 28° 04' 41.79"	Longitude 81° 23' 31.30"	Northing 1361365	Easting 529754
Section 2	Township 28	Range 29	County Osceola
			Quad Lake Hatchineha

Benchmark Information:

Name WR-11 1996	Existing / Set Existing	NAVD88 65.14	NGVD29 66.19
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Reference Point Information:

Stamped Elevation (NGVD29) 70.68	Stamped Date 12-19-07	By Firm Woolpert, Inc.
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Note: Reference point at top of PVC pipe as marked.

Staff Gauge Information: Water level was below staff gauge so reading was not available (NA).

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:

From the intersection of US423 and US192 in Kissimmee, FL. travel south on N John Young Pkwy for 3.51 miles to Pleasant Hill road. Turn left (south) on Pleasant Hill Road and travel 8.6 miles to Scrub Jay Trail, Turn left (east) onto Scrub Jay Trail (entrance to Disney Wilderness preserve, gate access required) travel along Scrub Jay trail 1.4 miles to unnamed dirt road on right. Turn onto dirt road (west) and travel dirt road 0.70miles to another dirt road and turn left (south) on dirt road and travel 2.4 miles to another unnamed off road trail on left and turn (east). Travel 1.4 miles to unnamed trail on right and turn (south) and follow trail for 300+/- to another trail on left and turn on trail (southeast) and follow trail for 0.40 miles. Bench mark for WR16 (stamped WR11) is 30Ft+/- on west side of trail and WR16 is 300Ft+/- at a 260 degree compass bearing from benchmark.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Staff Gauge:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: WR 16

Date: Dec 19, 07

Crew: W. MILLER, A. ANTONIO

Bench Mark Used: WR 11 1996

Name stamp	Date stamp	Published NAVD 88 Elev.	Published NGVD 29 Elev.	Sign Present (Y/N)
WR 11	1996	65.14		Y

(if needed) Conversion factor = 1.04 Converted NGVD29 = 66.18

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
BM WR 11	5.173	71.353			187.20
GROUND			6.887	64.466	153.54
MARK			.0672	70.681	157.15
	0.646	71.326			156.60
			5.143	66.183	186.66

NGVD 29 Ground Elev. @ Well Site: 64.466

Tag Check List:

- Stamp Site/Station Designation
- Stamp Elevation in NGVD 29
- Stamp Date
- Stamp By Woolpert
- Stamp Datum (NGVD 29)
- Scratch Elev / Remove Tag

Photo Check List:

- | | |
|--|---------------------|
| <input checked="" type="checkbox"/> Bench Mark close Up | Picture # <u>18</u> |
| <input checked="" type="checkbox"/> Bench Mark standing | Picture # <u>17</u> |
| <input checked="" type="checkbox"/> M. Well tag close Up | Picture # <u>16</u> |
| <input checked="" type="checkbox"/> M. Well standing | Picture # <u>15</u> |
| <input checked="" type="checkbox"/> M. Well Area | Picture # <u>14</u> |
| <input checked="" type="checkbox"/> Staff Gauge | Picture # <u>13</u> |

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
WR 16	NONE	N/A	1:58 PM	12-19-07

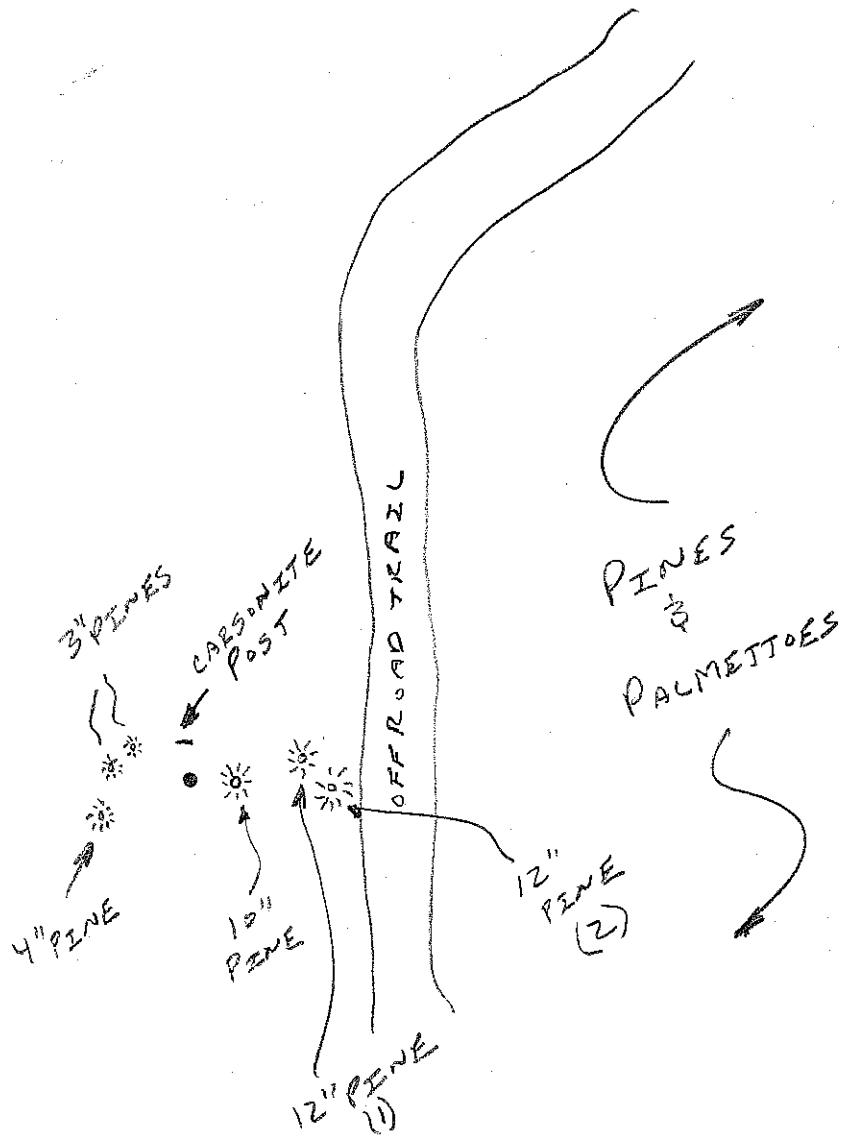
Latitude and Longitude Of Local Bench Mark:

28 04 41.79	81 23 31.30
-------------	-------------

Site Description, Comments, or Remarks:

WR 16

LAT 28 04 41.79
LONG 81 23 31.30



TO
BM

	AZ	DIST
10" PINE	270°	4 FT
12" PINE (1)	255°	23'
12" PINE (2)	270°	29'
3" PINES	120°	11 FT
4" PINE	80°	13 FT
E TRAIL	270°	44'
CARBONITE POST	0°	0.50 FT



South Florida Water Management District Benchmark Database

Report run on: May 21, 2008 6:32 AM

Designation: WR11
County: POLK
USGS Quad: LAKE HATCHINEHA
Project: WR16 WELL SITE
Sec: 2 Twp: 28 Rge: 29
Status: GOOD

Latitude: 280441.800 Scaled values only
Longitude: 812331.300
Monument By: SFWMD
Year: 1996
Type: V
Stamping: SITE 6 1996 WR-11
Party Chief: ART HOLLIN
Field Book KISS LAKES 57
Page: 6 & 7

NAD 1927 Coordinates:

N =
E =

Adjustment:

NAD 1983 Coordinates:

X =
Y =

Adjustment:

Order:
Class:

NGVD 1929
Elevation: 66.180
Order: 3
Class:

NAVD 1988
Elevation: 65.140
Order: 3
Class:

Description:

SFWMD EL. 66.19 NGVD 1929

***** RECOVERY NOTE *****
12/19/07 MILLER WOOLPERT NO FIELD BOOK WR 11 1996 EL. 65.14 NAVD 1988
VERTCON CONVERSION EL. 66.22 NGVD 1929 LATITUDE: 28^04'41.79"
LONGITUDE 81^23'31.30" (21-MAY-08 HJE)

TO REACH: FROM THE INTERSECTION OF PLEASANT HILLS (STATE ROAD 531) AND CYPRESS PARKWAY, GO WEST ON PLEASANT HILLS 0.6 OF A MILE TO THE INTERSECTION OF A DIRT ROAD (SCRUB JAY LANE) ON SOUTH SIDE OF THE ROAD; THEN GO SOUTH ON ROAD 1.8 MILES TO THE MAIN GATE TO THE DISNEY WILDERNESS PRESERVE (WALKER RANCH); THEN GO THRU GATE & CONTINUE ON ROAD 2.8 MILES TO A ROAD (TRAIL) ON THE EAST SIDE OF THE ROAD; THEN GO EAST ON ROAD 1.05 MILES TO WHERE TWO ROADS INTERSECT; CONTINUE EASTERLY ON ROAD. 0.3 OF A MILE (AND THE ROAD IS HEADING SOUTH AND AT THE INTERSECTION OF AN EAST/WEST FENCE LINE (COUNTY LINE , TOWNSHIP LINE AND OSCEOLA, POLK COUNTY LINES); CONTINUE THROUGH THE GATE AND THE ROAD SPLITS; THEN GO ON ROAD TO SOUTH SOUTHWEST, 0.45 OF A MILE TO STATION.
STATION IS 48.4 FEET WEST OF THE CENTERLINE OF THE ROAD, 102.4 FEET S47 DEGREES W. OF A 25-INCH OAK, 3.4 FEET WEST OF AN 8-INCH PINE TREE W/WITNESS SIGN, 71 FEET EAST OF THE EAST EDGE OF A CYPRESS POND AND 250 FEET MORE OR LESS WEST OF A LARGER CYPRESS POND.

STATION W.R-11 SITE 6 IS A 1-1/4" X 3' GALVANIZED IRON PIPE WITH A SFWMD ALUMINUM DISK STAMPED "SITE 6 1996 BM WR-11".





SM
URPK

WATER MANAGEMENT DISTRICT
SURVEY
SITE 6
1996 BM
WR - 11
MARKER. 1510
FLA.

Site Name		Sensor		
BFARM		STG1		

Latitude 28 16 26.10	Longitude 81 28 33.08	Northing 1432592	Easting 503001
Section 35	Township 25	Range 28	County Osceola
			Quad Kissimmee

Benchmark Information:

Name BFARM 2007	Existing / Set Set	NAVD88 64.09	NGVD29 65.02
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Reference Point Information:

Stamped Elevation (NGVD29) 64.13	Stamped Date 9-29-07	By Firm Woolpert, Inc.
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Note: Reference point at edge of the box as marked.

Staff Gauge Information:

Water Elevation (NGVD29) 56.60	Gauge Reading 56.47	Time of Reading 08:20	Date of Reading 9-20-07
--	-------------------------------	---------------------------------	-----------------------------------

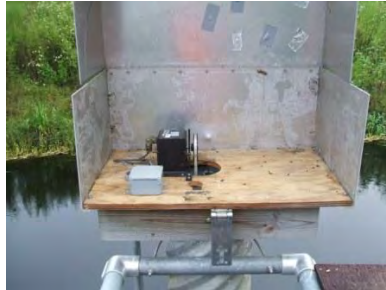
To Reach Description:

From the intersection of HWY192 & North Poinciana Blvd in the town of Kissimmee Florida, travel south along North Poinciana Blvd. for approximately 4.5 miles to creek. Site is located on the west side of road and on the south side of the creek.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Staff Gauge:



Monitoring Well Field Data Sheet

SFWMD #067411

GALVIN 28 16 25.5
81 28 33.7

Site/Station Designation: BFARM

Date: 9/20/07

Crew: RODRIGUEZ/MCLARTNEY

Bench Mark Used:

Name stamp	Date stamp	EL NAVD 88	EL NGVD 29	Sign Present
BFARM	2007	64.094	65.022	Yes

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
BFARM				65.022	BM
	5.095	70.054			23.84
WELL			5.990	64.127	73.73
	5.926	69.990			72.27
WATER			13.449	56.604	62.84
BFARM			5.029	65.024	23.73

Tag Check List:

Photo Check List:

- Stamp Site/Station Designation BFARM Bench Mark close
- Stamp Elevation in NGVD 29 64.13 Bench Mark standing
- Stamp Date 9 20 07 M. Well tag close
- Stamp By Woolpert ✓ M. Well standing
- Stamp Datum (NGVD 29) ✓ M. Well Area
- Scratch Old Tag

Photo# 1478
Photo# 1479
Photo# 1475
Photo# 1476
Photo# 1477

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
BFARM	56.60	56.47	08:20	9-20-07

Latitude and Longitude:

N 28° 16' 26.10483	W 081° 28' 33.0836
1432592.55	503001.62

Site Description, Comments, or Remarks:

NO LOCK WAS PRESENT AT WELL SITE. BENCH MARK SET BY WOOLPERT NAVD 88 CONVERTED TO NGVD 29 HERE



South Florida Water Management District Benchmark Database

Report run on: May 20, 2008 3:22 PM

Designation: BFARM	Latitude: 281626.100	Scaled values only
County: OSCEOLA	Longitude: 812833.100	
USGS Quad: KISSIMMEE	Monument By: WOOLPERT	
Project: BFARM WELL SITE	Year: 2007	
Sec: 35 Twp: 25 Rge: 28	Type: H/V	
Status:	Stamping: BFARM 2007	
NAD 1927 Coordinates:	Party Chief:	
N =	Field Book WO104	
E =	Page: 36	
Adjustment:	NGVD 1929	
NAD 1983 Coordinates:	Elevation: 65.020	
X = 503001.000	Order: 3	
Y = 1432592.000	Class:	
Adjustment:	NAVD 1988	
Order:	Elevation: 64.090	
Class:	Order:	
	Class:	

Description:

9/12/2007 CESTNIK, WOOLPERT, CONTRACTOR'S FB WO104 PAGE 36
TO REACH FROM THE INTERSECTION OF HIGHWAY 192 & NORTH POINCIANA BOULEVARD IN THE TOWN OF KISSIMMEE FLORIDA, TRAVEL SOUTH ALONG NORTH POINCIANA BOULEVARD FOR APPROXIAMTELY 4.5 MILES TO CREEK. BENCH MARK IS LOCATED ON THE WEST SIDE OF ROAD AND ON THE SOUTH SIDE OF CREEK.
(MR 4/22/2008)

Site Name		Sensor	
KISSFS		GW1	

Latitude	Longitude	Northing	Easting
28° 17' 25.73"	81° 26' 54.39"	1438580	511848
Section	Township	Range	County
19	25	29	Osceola
			Quad
			Kissimmee

Benchmark Information:

Name	Existing / Set	NAVD88	NGVD29
KISSFS 1983	Existing	NA	75.84

Reference Point Information:

Stamped Elevation (NGVD29)	Stamped Date	By Firm
74.95	9-26-2007	Woolpert, Inc.

Note: Reference point at edge of the box as marked.

Staff Gauge Information:

Water Elevation (NGVD29)	Gauge Reading	Time of Reading	Date of Reading
NA	NA	NA	NA

To Reach Description: (as described)

The site is located approximately 100 ft south of the Kissimmee SFMWD Field Station Main Administration Building. Field Station is on S. Hoagland Blvd. in Kissimmee.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Site Name		Sensor		
KISSFS		GW2		

Latitude 28° 17' 25.73"	Longitude 81° 26' 54.39"	Northing 1438580	Easting 511848	
Section 19	Township 25	Range 29	County Osceola	Quad Kissimmee

Benchmark Information:

Name KISSFS 1983	Existing / Set Existing	NAVD88 NA	NGVD29 75.84
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Reference Point Information:

Stamped Elevation (NGVD29) 74.36	Stamped Date 9-26-2007	By Firm Woolpert, Inc.
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Note: Reference point at top of PVC pipe as marked.

Staff Gauge Information:

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description: (as described)

The site is located approximately 100 ft south of the Kissimmee SFMWD Field Station Main Administration Building. Field Station is on S. Hoagland Blvd. in Kissimmee.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Site Name		Sensor		
KISSFS		GW3		

Latitude	Longitude	Northing	Easting	
28° 17' 25.73"	81° 26' 54.39"	1438580	511848	
Section	Township	Range	County	Quad
19	25	29	Osceola	Kissimmee

Benchmark Information:

Name	Existing / Set	NAVD88	NGVD29
KISSFS 1983	Existing	NA	75.84

Reference Point Information:

Stamped Elevation (NGVD29)	Stamped Date	By Firm
74.457	9-26-2007	Woolpert, Inc.

Note: Reference point at top of PVC pipe as marked.

Staff Gauge Information:

Water Elevation (NGVD29)	Gauge Reading	Time of Reading	Date of Reading
NA	NA	NA	NA

To Reach Description: (as described)

The site is located approximately 100 ft south of the Kissimmee SFMWD Field Station Main Administration Building. Field Station is on S. Hoagland Blvd. in Kissimmee.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: KISS FS

Date: 9 26 07

Crew: URZUA/MCLARTNEY

Bench Mark Used:

Name stamp	Date stamp	EL NAVD 88	EL NGVD 29	Sign Present
<u>KISS FS</u>	<u>1983</u>	—	<u>75.840</u>	<u>NO</u>

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>KISS FS</u>				<u>75.840</u>	
	<u>3.787</u>	<u>79.627</u>			<u>77.39</u>
<u>GWI</u>			<u>4.678</u>	<u>74.449</u>	<u>193.50</u>
	<u>4.646</u>	<u>79.595</u>			<u>193.96</u>
<u>KISS FS</u>			<u>3.751</u>	<u>75.844</u>	<u>77.17</u>

Tag Check List:

Photo Check List:

- Stamp Site/Station Designation KISS FS GWI Bench Mark close
- Stamp Elevation in NGVD 29 74.95 Bench Mark standing
- Stamp Date 9 26 07 M. Well tag close
- Stamp By Woolpert M. Well standing
- Stamp Datum (NGVD 29) ✓ M. Well Area
- Scratch Old Tag ✓

Photo#	<u>100-0067</u>
Photo#	<u>100-0068</u>
Photo#	<u>100-0070</u>
Photo#	<u>100-0071</u>
Photo#	<u>100-0072</u>

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
—	—	—	—	—

Latitude and Longitude:

<u>28° 17' 25.73</u>	<u>81 26 54.39</u>
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Site Description, Comments, or Remarks:

Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: KISS FS

Date: 9-26-07

Crew: URZUA/McCARTNEY

Bench Mark Used:

Name stamp	Date stamp	EL NAVD 88	EL NGVD 29	Sign Present
KISS FS	1983	—	75.840	NO

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
KISS FS				75.840	
	3.747	79.587			77.43
GWZ			5.13	74.457	194.7
	5.09	79.547			193.8
KISS FS			3.72	75.827	77.54

Tag Check List:

Photo Check List:

- | | | |
|----------------------------------|-------------|---------------------|
| • Stamp Site/Station Designation | KISS FS GWZ | Bench Mark close |
| • Stamp Elevation in NGVD 29 | 74.46 | Bench Mark standing |
| • Stamp Date | 9 26 07 | M. Well tag close |
| • Stamp By Woolpert | ✓ | M. Well standing |
| • Stamp Datum (NGVD 29) | ✓ | M. Well Area |
| • Scratch Old Tag | ✓ | |

Photo#	100-0067
Photo#	100-0068
Photo#	100-0073
Photo#	100-0074
Photo#	100-0072

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
—	—	—	—	—

Latitude and Longitude:

28 17 25.73	81 26 54.39
-------------	-------------

Site Description, Comments, or Remarks:

Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: KISS FS

Date: 9 26 07

Crew: URZUA/MCLARTNEY

Bench Mark Used:

Name stamp	Date stamp	EL NAVD 88	EL NGVD 29	Sign Present
KISS FS	1983	~	75.840	NO

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
KISS FS				75.840	
	3.72	79.56			
GW3			5.20	74.36	
	5.14	79.54			
KISS FS			3.70	75.84	

Tag Check List:

Photo Check List:

- Stamp Site/Station Designation KISS FS GW3 Bench Mark close
- Stamp Elevation in NGVD 29 74.36 Bench Mark standing
- Stamp Date 9 26 07 M. Well tag close
- Stamp By Woolpert / M. Well standing
- Stamp Datum (NGVD 29) / M. Well Area
- Scratch Old Tag /

Photo#	100-0067
Photo#	100-0068
Photo#	100-0075
Photo#	100-0076
Photo#	100-0072

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
—	—	—	—	—

Latitude and Longitude:

28 17 25.73	81 26 54.34
-------------	-------------

Site Description, Comments, or Remarks:



South Florida Water Management District Benchmark Database

Report run on: May 21, 2008 7:56 AM

Designation: KISSFS
County: OSCEOLA
USGS Quad: KISSIMMEE
Project: OKEECHOBEE COUNTY LEVELS
Sec: 19 Twp: 25 Rge: 29
Status: GOOD

Latitude: 281726.400
Longitude: 812651.700
Monument By: SFWMD
Year: 1983
Type: V
Stamping: B.M. KISS. F.S.
Party Chief: V. CHARLTON
Field Book OSC WELLS 11
Page: 4

Scaled values only

NAD 1927 Coordinates:

N =
E =

Adjustment:

NAD 1983 Coordinates:

X =
Y =

Adjustment:

Order:
Class:

NGVD 1929
Elevation: 75.840
Order: 3
Class:

NAVD 1988

Elevation:
Order:
Class:

Description:

***** RECOVERY NOTE *****
1/7/08 URZUA WOOLPERT NO FIELD BOOK KISSFS 1983 EL. 75.84 NGVD 1929
(21-MAY-08 HJE)

TO REACH: FROM THE INTERSECTION OF US 192 AND AIRPORT ROAD GO SOUTH ALONG AIRPORT ROAD APPROXIMATELY 1.1 MILES TO THE KISSIMMEE FIELD STATION AND STATION LOCATION.

THE STATION IS A SOUTH FLORIDA WATER MANAGEMENT DISTRICT ALUMINUM DISK SET ON THE NORTHWEST CORNER OF THE CONCRETE BASE FOR THE RADIO TOWER AT THE KISSIMMEE FIELD STATION, ABOUT 100 FEET SOUTH OF THE GAS PUMP ISLANDS AND IS STAMPED "B.M. KISS.F.S.



WATER MANAGEMENT DIST.
SURVEY
8 M.F.S.
FLA. 80-08 MARKER 1810

Site Name		Sensor		
WRLGTE		GW1		

Latitude 28° 21' 12.55"	Longitude 81° 30' 14.08"	Northing 1461558	Easting 494092	
Section 34	Township 24	Range 28	County Orange	Quad Intercession City

Benchmark Information:

Name WRLGTE 2007	Existing / Set Set	NAVD88 93.14	NGVD29 94.03
----------------------------	------------------------------	------------------------	------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 97.20	Stamped Date 9-21-07	By Firm Woolpert, Inc.
--	--------------------------------	----------------------------------

Note: Reference point at top of PVC pipe as marked.

Staff Gauge Information:

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:

From the intersection of SR535 & HWY192 in the town of Kissimmee Florida, go north on SR535 for 1.8 miles to International Drive South. Then proceed west on International Drive South for 0.7 mile to a dirt maintenance entrance to the south past Gateway entry. Follow Dirt road south then east and south again around lake for approximately 0.2miles to the site on the left (east) side of road.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Bench Mark:



Site Name		Sensor	
WRLGTE		GW2	

Latitude 28° 21' 12.55"	Longitude 81° 30' 14.08"	Northing 1461558	Easting 494092
Section 34	Township 24	Range 28	County Orange
			Quad Intercession City

Benchmark Information:

Name WRLGTE 2007	Existing / Set Set	NAVD88 93.14	NGVD29 94.03
----------------------------	------------------------------	------------------------	------------------------

Reference Point Information:

Stamped Elevation (NGVD29) 97.18	Stamped Date 9-21-07	By Firm Woolpert, Inc.
--	--------------------------------	----------------------------------

Note: Reference point at top of PVC pipe as marked.

Staff Gauge Information:

Water Elevation (NGVD29) NA	Gauge Reading NA	Time of Reading NA	Date of Reading NA
---------------------------------------	----------------------------	------------------------------	------------------------------

To Reach Description:

From the intersection of SR535 & HWY192 in the town of Kissimmee Florida, go north on SR535 for 1.8 miles to International Drive South. Then proceed west on International Drive South for 0.7 mile to a dirt maintenance entrance to the south past Gateway entry. Follow Dirt road south then east and south again around lake for approximately 0.2miles to the site on the left (east) side of road.

Sensor Well Area:



Sensor Well:



Tag Close-up:



Bench Mark:



Bench Mark:



Bench Mark:



Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: WRLGTE GW1

Date: 9 21 07

Crew: RODRIGUEZ/M-CARTNEY

Bench Mark Used:

Name stamp	Date stamp	EL NAVD 88	EL NGVD 29	Sign Present
WRLGTE	2007	93.14	94.03 <i>CORPSCON</i>	Yes

Level Setup:

STA	BS	HI	FS	EL	DIST & REM
WRLGTE				94.03	
	6.117				28.00
GW1			2.944	97.20	51.84
	2.581				52.43
WRLGTE			6.054	94.03	28.72

Tag Check List:

Photo Check List:

- Stamp Site/Station Designation WRLGTE W1 Bench Mark close
- Stamp Elevation in NGVD 29 97.20 Bench Mark standing
- Stamp Date 9 21 07 M. Well tag close
- Stamp By Woolpert ✓ M. Well standing
- Stamp Datum (NGVD 29) ✓ M. Well Area
- Scratch Old Tag /

Photo#	1521
Photo#	1522
Photo#	1523
Photo#	1524
Photo#	1527

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
-	-	-	-	-

Site Description, Comments, or Remarks:

$\frac{N}{1461558.76}$ $\frac{E}{494092.02}$
 28° 21' 12.5501 N 81° 30' 14.0819 W

Monitoring Well Field Data Sheet

SFWMD #067411

Site/Station Designation: WRLGTE GWZ

Date: 9-21-07

Crew: RODRIGUEZ/McCARTNEY

Bench Mark Used:

Name stamp	Date stamp	EL NAVD 88	EL NGVD 29	Sign Present
<u>WRLGTE</u>	<u>2007</u>	<u>93.14</u>	<u>94.03</u>	<u>Yes</u>

CORPSCON

Level Setup:

STA	BS	HI	FS	NGVD29 EL	DIST & REM
<u>WRLGTE</u>				<u>94.03</u>	
	<u>6.054</u>				<u>28.72</u>
<u>GWZ</u>			<u>2.900</u>	<u>97.18</u>	<u>52.76</u>
	<u>2.706</u>				<u>54.56</u>
<u>WRLGTE</u>			<u>5.860</u>	<u>94.03</u>	<u>31.59</u>

Tag Check List:

Photo Check List:

- | | | |
|----------------------------------|------------------|---------------------|
| • Stamp Site/Station Designation | <u>WRLGTE:WZ</u> | Bench Mark close |
| • Stamp Elevation in NGVD 29 | <u>97.18</u> | Bench Mark standing |
| • Stamp Date | <u>9 21 07</u> | M. Well tag close |
| • Stamp By Woolpert | <u>✓</u> | M. Well standing |
| • Stamp Datum (NGVD 29) | <u>✓</u> | M. Well Area |
| • Scratch Old Tag | <u>✓</u> | |

Photo#	<u>1521</u>
Photo#	<u>1522</u>
Photo#	<u>1525</u>
Photo#	<u>1526</u>
Photo#	<u>1527</u>

Staff Gauge:

Site Name	Water Elev.	Gauge Reading	Time Meas.	Date Meas.
_____	_____	_____	_____	_____

Latitude and Longitude:

--	--

1461 548.76

494 092.02

Site Description, Comments, or Remarks:

28° 21' 12.5501 N

81° 20' 14.0819 W

Section 3: Monitoring Well Site Information in Table Format

Monitoring Well Site Information in Table Format

Well Designation	Well Type	County	Quadrangle	Section	Township	Range	Northing	Easting	Latitude of BM	Longitude of BM	Ref. Point Elev. (NGVD29)	Ref. Point Elev. (NAVD88)	Benchmark Name Used to Set Ref. Elev.	Benchmark Elev. (NGVD29)	Benchmark Elev. (NAVD88)
BOGAFB	NONE	ORANGE	PINE CASTLE	33	23	30	1497078	556344	28 27 05.30	81 18 36.09	92.14	91.17	GODWIN1	89.45	88.48
KENAN1	GW1	OSCEOLA	LAKE MARIN NE	10	30	33	1292324	650320	27 53 19.06	81 01 05.93	79.32	78.09	KEEN5	75.83	74.61
LCYPR19	GW1	OSCEOLA	CYPRESS LAKE	4	28	30	1360051	549721	28 04 28.30	81 19 49.10	57.51	56.39	LCYP19	54.53	53.41
LHATCH3	STG1	POLK	HESPERIDES	1	29	29	1327143	534579	27 59 02	81 22 37	59.27	58.06	LHATCH3	54.50	53.29
LJACK	STG1	OSCEOLA	LAKE MARIAN NW	31	29	32	1326984	607824	27 54 36	81 09 00	58.88	57.68	TLWMA3	60.80	59.60
MARIC	STG1	POLK	LAKE HATCHINEHA	18	28	29	1352657	507088	28 03 07.77	81 27 44.68	57.85	56.84	POT 28518	54.34	53.33
ORF 61	GW1	ORANGE	WINDERMERE	10	23	28	1503773	482382	28 28 09	81 32 28	108.40	107.45	R 627	108.71	107.77
ORF 61	GW2	ORANGE	WINDERMERE	10	23	28	1503773	482382	28 28 09	81 32 28	108.49	107.55	R 627	108.71	107.77
ORF 61	GW3	ORANGE	WINDERMERE	10	23	28	1503773	482382	28 28 09	81 32 28	108.49	107.55	R 627	108.71	107.77
RATHAM	GW1	POLK	FORT KISSIMMEE NW	6	32	32	1231938	602118	27 43 20.72	81 10 02.20	53.17	51.94	F 461	53.68	52.45
S63A-SCA	HW	OSCEOLA	CYPRESS LAKE	6	28	31	1361858	572373	28 04 47.8	81 15 35.5	67.95	67.05	KR 1068	63.86	62.96
S63A-SCA	TW	OSCEOLA	CYPRESS LAKE	6	28	31	1361858	572373	28 04 47.8	81 15 35.5	67.96	67.06	KR 1068	63.86	62.96
S-65GW	GW1	OSCEOLA	LAKE MARIAN SW	11	31	31	1261327	592302	27 48 12.7	81 11 51.2	57.88	56.69	KR 1013	63.00	61.81
S-65GW	GW2	OSCEOLA	LAKE MARIAN SW	11	31	31	1261327	592302	27 48 12.7	81 11 51.2	57.98	56.79	KR 1013	63.00	61.81
S-65GW	GW3	OSCEOLA	LAKE MARIAN SW	11	31	31	1261327	592302	27 48 12.7	81 11 51.2	57.87	56.68	KR 1013	63.00	61.81
S 65A SCA	STG1	OSCEOLA	FORT KISSIMMEE NW	28	32	32	1363587	525045	27 39 33.2	81 08 07.2	57.57	56.38	MACK 5-23-84	53.95	52.76
SEBRING	GW1	HIGHLANDS	LORIDA	5	35	30	1136116	541350	27 27 30.54	81 21 15.34	66.35	NA	SEBRING MW2004	63.04	NA
TIGER	STG1	POLK	LAKE WEOHYAKAPKA	17	30	30	1286486	545269	27 52 19.72	81 20 36.48	58.12	56.92	Z 504	56.24	55.04
TURLAK	GW1	ORANGE	LANDO WEST	11	23	28	1515086	503067	28 30 02.9	81 28 36.00	127.13	126.24	TURLAK 2008	124.28	123.39
WR 11	GW1	OSCEOLA	LAKE HATCHINEHA	3	28	29	1363587	525045	28 05 03.64	81 24 23.95	71.97	70.93	WR11 2007	68.66	67.59
WR 15	GW1	OSCEOLA	LAKE HATCHINEHA	2	28	29	1363442	530369	28 05 02.38	81 23 24.51	67.86	66.82	WR15 2007	63.09	62.01
WR 16	GW1	OSCEOLA	LAKE HATCHINEHA	2	28	29	1361365	529754	28 04 41.79	81 23 31.30	70.68	69.64	WR11 1996	66.19	65.14
BFARM	STG1	OSCEOLA	KISSIMMEE	35	25	28	1432592	503001	28 16 26.10	81 28 33.08	64.13	63.17	BFARM 2007	65.02	64.09
KISSFS	GW1	OSCEOLA	KISSIMMEE	19	25	29	1438580	511848	28 17 25.73	81 26 54.39	74.95	NA	KISSFS 1983	75.84	NA
KISSFS	GW2	OSCEOLA	KISSIMMEE	19	25	29	1438580	511848	28 17 25.73	81 26 54.39	74.36	NA	KISSFS 1983	75.84	NA
KISSFS	GW3	OSCEOLA	KISSIMMEE	19	25	29	1438580	511848	28 17 25.73	81 26 54.39	74.46	NA	KISSFS 1983	75.84	NA
WRLGTE	GW1	ORANGE	INTERCESSION CITY	34	24	28	1461558	494092	28 21 12.55	81 30 14.08	97.20	96.31	WRLGTE 2007	94.03	93.14
WRLGTE	GW2	ORANGE	INTERCESSION CITY	34	24	28	1461558	494092	28 21 12.55	81 30 14.08	97.18	96.29	WRLGTE 2007	94.03	93.14

NOTES:

1. Latitude and longitude were derived at the benchmark location, and is given to assist in locating the site. It is not meant to accurately locate each well.
2. Northing and Eastings were obtained by using CORPSCON to convert the latitude and longitude to Florida State Plane Coordinates, East Zone, Adjustment of 1990 (NAD83/90) HARN.
3. All measurements and elevations are in feet unless otherwise noted.
4. Some Benchmarks used did not have a published NAVD88 elevation, and therefore have been left blank.

Section 4: Benchmark Data Sheets



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY	OSCEOLA	PROJECT	VDUP- Reference Elevation Audit Project # 1	DESIGNATION	BFARM
SECTION	35	TOWNSHIP	25S	RANGE	28E
GEOGRAPHIC INDEX OF QUAD		28081-C4			
Established by	WOOLPERT	NAME OF QUADRANGLE		KISSIMMEE	
SURVEYOR JOHN CESTNICK DATE 9 / 12 / 2007		FIELD BOOK W0104-36		PAGE	
HORIZONTAL DATUM: 1983		ZONE E			
VERTICAL DATUM: NGVD 1929 (CORPSCON)		NAVD 1988			
CONTROL ACCURACY: HORIZONTAL GPS RTD		VERTICAL 3			
STATE PLANE COORDINATES	X 503001	Y 1432592	EL. NGVD 29	65.02	
			NAVD 88	64.09	
LATITUDE	28° 16' 26.1"	LONGITUDE	81° 28' 33.1"		
DESCRIPTION					
<p>To Reach:</p> <p>From the intersection of HWY192 & North Poinciana Blvd in the town of Kissimmee Florida, travel south along North Poinciana Blvd. for approximately 4.5 miles to creek. Benchmark is located on the west side of road and on the south side of the creek.</p>					

SKETCH

References:

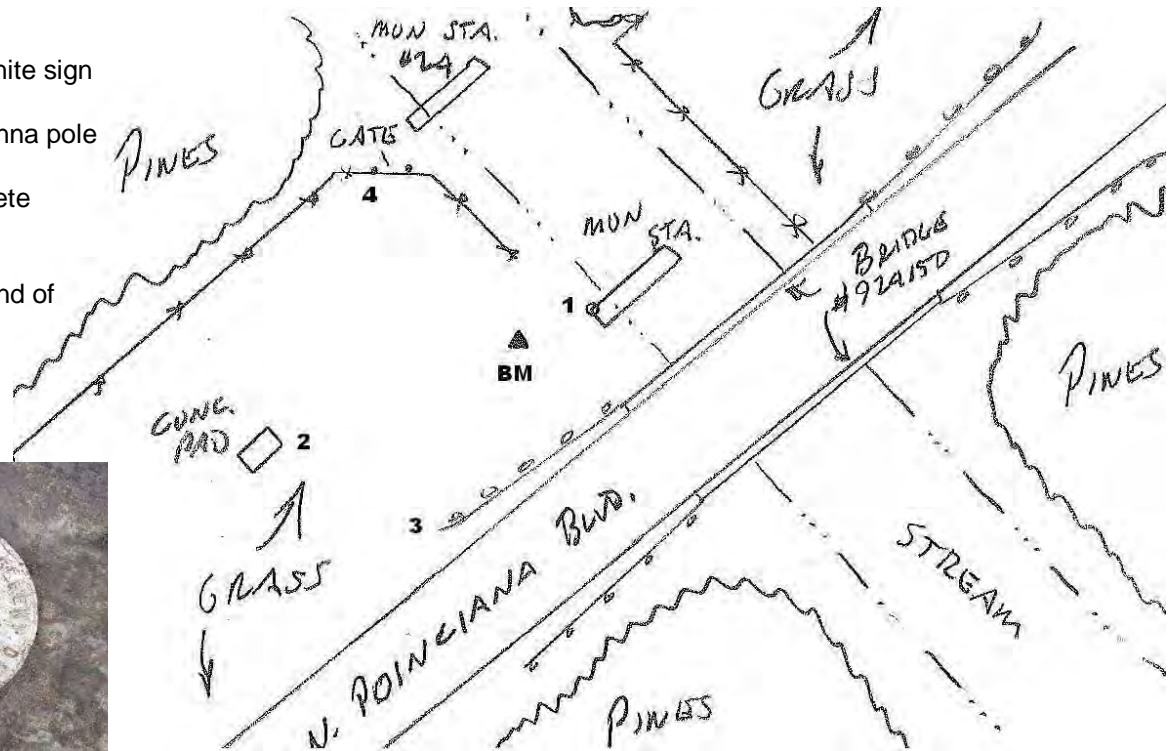
260°, 1' from carsonite sign

195°, 24' from antenna pole

90°, 68' from concrete pad.

17°, 48' from SW end of guard rail.

137°, 74' from W gate post.





SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY	ORANGE	PROJECT	VDUP- Reference Elevation Audit Project # 1	DESIGNATION	TURLAK 2008
SECTION	11	TOWNSHIP	23S	RANGE	28E
GEOGRAPHIC INDEX OF QUAD 28081-E4					
Established by WOOLPERT			NAME OF QUADRANGLE ORLANDO WEST		
SURVEYOR JOHN CESTNICK DATE 1 / 22 / 2008			FIELD BOOK W0104-36 PAGE		
HORIZONTAL DATUM: 1983 ZONE E					
VERTICAL DATUM: NGVD 1929 (CORPSCON) NAVD 1988					
CONTROL ACCURACY: HORIZONTAL GPS RTD			VERTICAL 3		
STATE PLANE COORDINATES	X 503067	Y 1515086	EL. NGVD 29 124.28		
			NAVD 88 123.39		
LATITUDE	28° 30' 02.9"	LONGITUDE	81° 28' 36.0"		
DESCRIPTION					

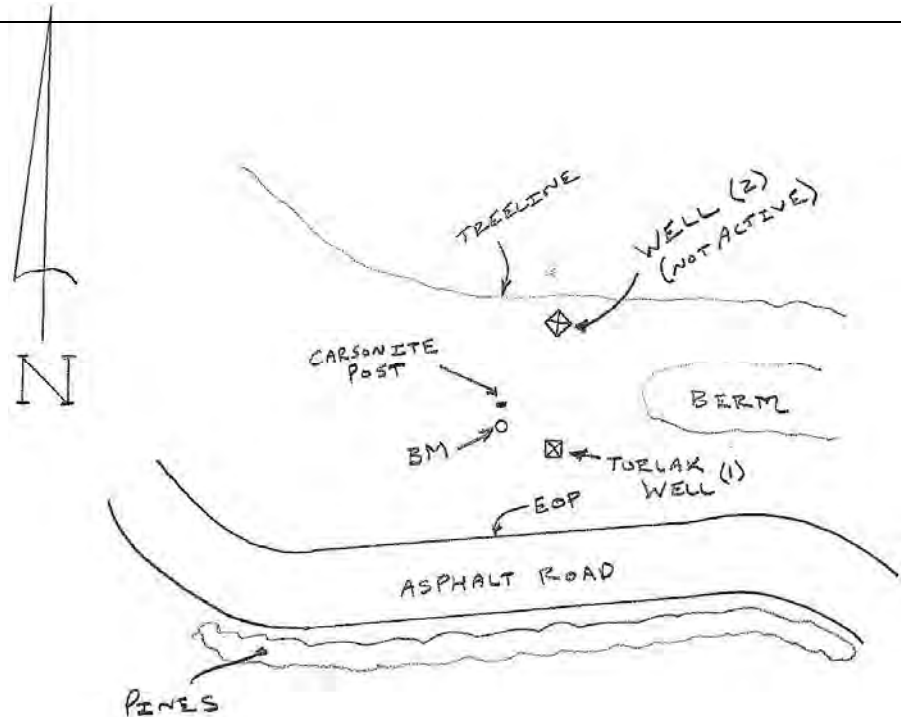
To Reach:

From the intersection of SR435 and SR526 in the town of Orlando, FL travel south on SR435 for 0.70 mile to Raleigh St. Turn right (west) onto Raleigh St. and travel for 0.80 mile to S. Hiwassee Rd. Turn left (south) onto S. Hiwassee Rd. and go 1.86 miles to the entrance to Turkey Lake Park on the west side of the road (also Ashley Park Ct. on the east side) Turn left (west) into Turkey Lake Park and follow entrance road for about 0.60 miles to parking area with building and turn right into parking area. Travel straight through parking area and take road exit on the southeast side of the parking lot and BM is on the north side of the road 70'+/- from parking lot.

SKETCH

References:

- 165° and 1' from carsonite sign
- 305° and 5' from Well (1)
- 190° and 15' from Well (2)
- 345° and 15' from EOP



The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

DATABASE = ,PROGRAM = datasheet, VERSION = 7.60
1 National Geodetic Survey, Retrieval Date = MAY 21, 2008
AK6868 *****
AK6868 DESIGNATION - GOTHA RESET
AK6868 PID - AK6868
AK6868 STATE/COUNTY- FL/ORANGE
AK6868 USGS QUAD - WINTER GARDEN (1984)
AK6868
AK6868 *CURRENT SURVEY CONTROL
AK6868
AK6868 * NAD 83(1990)- 28 31 34.94734(N) 081 31 43.58761(W) ADJUSTED
AK6868 * NAVD 88 - 41.624 (meters) 136.56 (feet) ADJUSTED
AK6868
AK6868 LAPLACE CORR- -1.25 (seconds) DEFLEC99
AK6868 GEOID HEIGHT- -27.49 (meters) GEOID03
AK6868 DYNAMIC HT - 41.564 (meters) 136.36 (feet) COMP
AK6868 MODELED GRAV- 979,198.5 (mgal) NAVD 88
AK6868
AK6868 HORZ ORDER - FIRST
AK6868 VERT ORDER - SECOND CLASS I
AK6868
AK6868.The horizontal coordinates were established by classical geodetic methods
AK6868.and adjusted by the National Geodetic Survey in May 1991.
AK6868
AK6868.The orthometric height was determined by differential leveling
AK6868.and adjusted in December 1995.
AK6868
AK6868.The Laplace correction was computed from DEFLEC99 derived deflections.
AK6868
AK6868.The geoid height was determined by GEOID03.
AK6868
AK6868.The dynamic height is computed by dividing the NAVD 88
AK6868.geopotential number by the normal gravity value computed on the
AK6868.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AK6868.degrees latitude (g = 980.6199 gals.).
AK6868
AK6868.The modeled gravity was interpolated from observed gravity values.
AK6868
AK6868;
AK6868; North East Units Scale Factor Converg.
AK6868;SPC FL E - 464,654.355 148,246.337 MT 0.99997422 -0 15 09.1
AK6868;SPC FL E - 1,524,453.50 486,371.52 sFT 0.99997422 -0 15 09.1
AK6868;UTM 17 - 3,155,627.798 448,263.995 MT 0.99963303 -0 15 09.1
AK6868
AK6868! Elev Factor x Scale Factor = Combined Factor
AK6868!SPC FL E - 0.99999778 x 0.99997422 = 0.99997200
AK6868!UTM 17 - 0.99999778 x 0.99963303 = 0.99963081
AK6868
AK6868
AK6868 -----
AK6868 | PID Reference Object Distance Geod. Az |
AK6868 | | | | dddmmss.s |
AK6868 | CW6062 GOTHA RM 1 28.968 METERS 12711 |
AK6868 | AB3486 GOTHA RM 3 23.725 METERS 19457 |
AK6868 | CW6061 GOTHA AZ MK 1991229.4 |
AK6868 | AB3487 GOTHA RM 2 36.618 METERS 23006 |
AK6868 | -----
AK6868
AK6868 SUPERSEDED SURVEY CONTROL
AK6868
AK6868 NAD 83(1986)- 28 31 34.95364(N) 081 31 43.60269(W) AD( ) 1
AK6868 NAD 27 - 28 31 33.94400(N) 081 31 44.34000(W) AD( ) 1
AK6868
AK6868.Superseded values are not recommended for survey control.
AK6868.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AK6868.See file dsdata.txt to determine how the superseded data were derived.
AK6868
AK6868_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMM4826455628(NAD 83)
AK6868_MARKER: DH = HORIZONTAL CONTROL DISK
AK6868_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AK6868_SP_SET: CONCRETE POST

```

AK6868_STAMPING: GOTHA 1935 RESET 1979
 AK6868_MARK LOGO: NGS
 AK6868_MAGNETIC: N = NO MAGNETIC MATERIAL
 AK6868_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 AK6868+STABILITY: SURFACE MOTION
 AK6868_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AK6868+SATELLITE: SATELLITE OBSERVATIONS - February 10, 1994

AK6868	HISTORY	- Date	Condition	Report By
AK6868	HISTORY	- 1979	MONUMENTED	NGS
AK6868	HISTORY	- 1979	GOOD	NGS
AK6868	HISTORY	- 1986	GOOD	USPSQD
AK6868	HISTORY	- 1986	GOOD	FLDNR
AK6868	HISTORY	- 19940210	GOOD	NGS

STATION DESCRIPTION

AK6868 DESCRIBED BY NATIONAL GEODETIC SURVEY 1979 (CLN)
 AK6868 THE STATION UNDERGROUND MARK AND REFERENCE MARK 2 WERE RECOVERED
 AK6868 AND FOUND IN GOOD CONDITION. THE STATION SURFACE MARK WAS FOUND
 AK6868 HIT AND TILTED TO THE NORTH. THE SURFACE MARK WAS REMOVED AND A
 AK6868 NEW SURFACE MARK WAS SET DIRECTLY OVER THE UNDERGROUND MARK.
 AK6868 REFERENCE MARK 1 WAS FOUND DESTROYED AND THE DISK MISSING.
 AK6868 REFERENCE MARK 3 WAS ESTABLISHED AT THIS TIME. THE DISTANCE
 AK6868 TO REFERENCE MARK 2 CHECKED THE ORIGINAL DESCRIPTION.

AK6868 STATION IS ABOUT 10.0 MILES WEST-SOUTHWEST OF DOWNTOWN ORLANDO,
 AK6868 ABOUT 2.0 MILES NORTHEAST OF WINDERMERE, AT SETTLEMENT OF
 AK6868 GOTHA AND ON PROPERTY OF MRS. ELBERTA AND MR. CHARLES OSWALD,
 AK6868 GOTHA, FLORIDA.

AK6868 TO REACH FROM THE JUNCTION OF MAIN STREET (COUNTY ROUTE 435)
 AK6868 AND 6TH AVENUE IN WINDERMERE, GO NORTH ON MAIN STREET (ALSO
 AK6868 MAQUIRE ROAD) FOR 1.7 MILES TO GOTHA ROAD ON RIGHT. KEEP
 AK6868 RIGHT AND GO NORTHEAST ON GOTHA ROAD FOR 1.15 MILES TO MOORE
 AK6868 ROAD ON LEFT. TURN A SHARP LEFT AND GO WEST ON MOORE ROAD
 AK6868 FOR 0.1 MILE TO THE SECOND HOUSE ON RIGHT AND STATION IN ORANGE
 AK6868 ORCHARD AS DESCRIBED.

AK6868 STATION MARK IS A STANDARD DISK STAMPED GOTHA 1935 1979, IS
 AK6868 SET IN THE TOP OF A 24-INCH ROUND CONCRETE MONUMENT THAT IS
 AK6868 SET 3 INCHES BELOW THE GROUND SURFACE. IT IS 115.0 FEET
 AK6868 EAST-SOUTHEAST OF THE SOUTHWEST CORNER OF THE OSWALDS HOUSE,
 AK6868 90.5 FEET SOUTHEAST OF THE NORTHEAST CORNER OF THE HOUSE, 66.0
 AK6868 FEET SOUTHEAST OF THE SOUTHEAST CORNER OF THE CARPORT OF THE
 AK6868 HOUSE, 50.0 FEET NORTH OF THE CENTER OF MOORE ROAD, 29.0
 AK6868 FEET NORTHEAST OF A POWER LINE POLE WITH TRANSFORMER, 6.0
 AK6868 FEET WEST OF AN ORANGE TREE AND 2.8 FEET WEST OF A METAL
 AK6868 WITNESS POST.

AK6868 REFERENCE MARK 2 IS A STANDARD DISK STAMPED GOTHA NO 2 1935,
 AK6868 IS SET IN THE TOP OF A 12-INCH ROUND CONCRETE MONUMENT THAT
 AK6868 PROJECTS 3 INCHES ABOVE THE GROUND. IT IS 28.0 FEET SOUTH OF
 AK6868 THE CENTER OF MOORE ROAD, 21.0 FEET WEST OF THE CENTER OF AN
 AK6868 ASPHALT DRIVEWAY AND 1.0 FOOT EAST OF A METAL WITNESS POST.

AK6868 REFERENCE MARK 3 IS A STANDARD DISK STAMPED GOTHA 1935 NO 3
 AK6868 1979, IS SET IN THE TOP OF A 12-INCH ROUND CONCRETE MONUMENT
 AK6868 THAT IS SET FLUSH WITH THE GROUND. IT IS 25.0 FEET SOUTH OF THE
 AK6868 CENTER OF MOORE ROAD, 2.0 FEET EAST OF A POWER LINE POLE AND
 AK6868 2.2 FEET SOUTHEAST OF A METAL WITNESS POST.

AK6868 NOTICE--STATION MARK CAN BE FOUND WITH A METAL DETECTOR.

STATION RECOVERY (1979)

AK6868 RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1979
 AK6868 THE FOLLOWING TEXT WAS TAKEN FROM A 1979 HORIZONTAL CONTROL
 AK6868 DESCRIPTION BY NGS--
 AK6868 STATION IS ABOUT 10.0 MILES WEST-SOUTHWEST OF DOWNTOWN ORLANDO,
 AK6868 ABOUT 2.0 MILES NORTHEAST OF WINDERMERE, AT SETTLEMENT OF
 AK6868 GOTHA AND ON PROPERTY OF MRS. ELBERTA AND MR. CHARLES OSWALD,
 AK6868 GOTHA, FLORIDA.
 AK6868 TO REACH FROM THE JUNCTION OF MAIN STREET (COUNTY ROUTE 435)
 AK6868 AND 6TH AVENUE IN WINDERMERE, GO NORTH ON MAIN STREET (ALSO
 AK6868 MAQUIRE ROAD) FOR 1.7 MILES TO GOTHA ROAD ON RIGHT. KEEP
 AK6868 RIGHT AND GO NORTHEAST ON GOTHA ROAD FOR 1.15 MILES TO MOORE
 AK6868 ROAD ON LEFT. TURN A SHARP LEFT AND GO WEST ON MOORE ROAD
 AK6868 FOR 0.1 MILE TO THE SECOND HOUSE ON RIGHT AND STATION IN ORANGE
 AK6868 ORCHARD AS DESCRIBED.
 AK6868 STATION MARK IS A STANDARD DISK STAMPED GOTHA 1935 1979, IS

DATASHEETS

AK6868 SET IN THE TOP OF A 24-INCH ROUND CONCRETE MONUMENT THAT IS
AK6868 SET 3 INCHES BELOW THE GROUND SURFACE. IT IS 115.0 FEET
AK6868 EAST-SOUTHEAST OF THE SOUTHWEST CORNER OF THE OSWALDS HOUSE,
AK6868 90.5 FEET SOUTHEAST OF THE NORTHEAST CORNER OF THE HOUSE, 66.0
AK6868 FEET SOUTHEAST OF THE SOUTHEAST CORNER OF THE CARPORT OF THE
AK6868 HOUSE, 50.0 FEET NORTH OF THE CENTER OF MOORE ROAD, 29.0
AK6868 FEET NORTHEAST OF A POWER LINE POLE WITH TRANSFORMER, 6.0
AK6868 FEET WEST OF AN ORANGE TREE AND 2.8 FEET WEST OF A METAL
AK6868 WITNESS POST.

AK6868 NOTICE--STATION MARK CAN BE FOUND WITH A METAL DETECTOR.

AK6868

STATION RECOVERY (1986)

AK6868

AK6868 RECOVERY NOTE BY US POWER SQUADRON 1986 (JD)

AK6868 RECOVERED IN GOOD CONDITION.

AK6868

STATION RECOVERY (1986)

AK6868

AK6868 RECOVERY NOTE BY FL DEPT OF NAT RES 1986

AK6868 RECOVERED IN GOOD CONDITION.

AK6868

STATION RECOVERY (1994)

AK6868

AK6868 RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1994 (RLT)

AK6868 THE STATION IS IN GOTHA ABOUT 3.2 MI (5.1 KM) SOUTH OF OCOEE, 4.5 MI

AK6868 (7.2 KM) SOUTHEAST OF WINTER GARDEN IN SECTION 32, TOWNSHIP 22 SOUTH,

AK6868 RANGE 28 EAST. TO REACH THE STATION FROM THE FLORIDA TURNPIKE

AK6868 INTERCHANGE NUMBER 80 (WINTER GARDEN-OCOEE), SOUTHEAST OF WINTER

AK6868 GARDEN AND SOUTHWEST OF OCOEE, GO EAST ON STATE ROAD 50 (WEST COLONIAL

AK6868 DRIVE) FOR 0.8 MI (1.3 KM) TO THE INTERSECTION OF COUNTY ROAD 439

AK6868 NORTH (BLUFORD AVENUE) ON THE LEFT AND OLD WINTER GARDEN ROAD ON THE

AK6868 RIGHT, TURN RIGHT ON OLD WINTER GARDEN ROAD AND GO SOUTHWEST FOR 1.0

AK6868 MI (1.6 KM) TO THE JUNCTION OF HEMPLE ROAD ON THE RIGHT, TURN RIGHT ON

AK6868 HEMPLE ROAD AND GO SOUTH FOR 1.15 MI (1.85 KM) TO THE POST OFFICE ON

AK6868 THE RIGHT, CONTINUE SOUTH ON HEMPLE ROAD FOR 0.3 MI (0.5 KM) TO THE

AK6868 JUNCTION OF 6TH STREET ON THE RIGHT, TURN RIGHT ON 6TH STREET AND GO

AK6868 WEST FOR 0.25 MI (0.40 KM) TO A Y-JUNCTION FOR GOTHA ROAD, BEAR RIGHT

AK6868 AND CONTINUE WEST ON THE DIRT ROAD FOR 0.05 MI (0.08 KM) TO THE

AK6868 STATION ON THE RIGHT, IN THE TOP OF A 2.0 FT (0.6 M) ROUND CONCRETE

AK6868 MONUMENT RECESSED 0.3 FT (9.1 CM) BELOW THE LEVEL OF THE GROUND,

AK6868 LOCATED 120.5 FT (36.7 M) NORTHEAST OF GOTHA NO 2, 90.7 FT (27.6 M)

AK6868 SOUTHEAST OF THE NORTHEAST CORNER OF THE HOUSE, 77.8 FT (23.7 M)

AK6868 NORTH-NORTHEAST OF GOTHA NO 3 RESET, 47.5 NORTH OF THE APPROXIMATE

AK6868 CENTERLINE OF THE DIRT ROAD, 27.3 FT (8.3 M) NORTHEAST OF POWER POLE

AK6868 NUMBER 904666 135237 062427 WITH A LIGHT AND TRANSFORMER ATTACHED AND

AK6868 1.7 FT (0.5 M) SOUTH OF A CARSONITE WITNESS POST.

*** retrieval complete.

Elapsed Time = 00:00:00

The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

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DATABASE = ,PROGRAM = datasheet, VERSION = 7.60
1 National Geodetic Survey, Retrieval Date = MAY 21, 2008
AA6655 *****
AA6655 DESIGNATION - ORA 30
AA6655 PID - AA6655
AA6655 STATE/COUNTY- FL/ORANGE
AA6655 USGS QUAD - ORLANDO WEST (1980)
AA6655
AA6655 *CURRENT SURVEY CONTROL
AA6655
AA6655 * NAD 83(1986)- 28 31 59. (N) 081 27 31. (W) SCALED
AA6655 * NAVD 88 - 33.819 (meters) 110.95 (feet) ADJUSTED
AA6655
AA6655 GEOID HEIGHT- -27.56 (meters) GEOID03
AA6655 DYNAMIC HT - 33.770 (meters) 110.79 (feet) COMP
AA6655 MODELED GRAV- 979,200.2 (mgal) NAVD 88
AA6655
AA6655 VERT ORDER - SECOND CLASS I
AA6655
AA6655 .The horizontal coordinates were scaled from a topographic map and have
AA6655 .an estimated accuracy of +/- 6 seconds.
AA6655
AA6655 .The orthometric height was determined by differential leveling
AA6655 .and adjusted in December 1995.
AA6655
AA6655 .The geoid height was determined by GEOID03.
AA6655
AA6655 .The dynamic height is computed by dividing the NAVD 88
AA6655 .geopotential number by the normal gravity value computed on the
AA6655 .Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AA6655 .degrees latitude (g = 980.6199 gals.).
AA6655
AA6655 .The modeled gravity was interpolated from observed gravity values.
AA6655
AA6655 ;
AA6655 ; North East Units Estimated Accuracy
AA6655 ; SPC FL E - 465,370. 155,120. MT (+/- 180 meters Scaled)
AA6655
AA6655 SUPERSEDED SURVEY CONTROL
AA6655
AA6655 No superseded survey control is available for this station.
AA6655
AA6655 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMM551563(NAD 83)
AA6655 MARKER: DD = SURVEY DISK
AA6655 SETTING: 32 = SET IN A RETAINING WALL OR CONCRETE LEDGE
AA6655 SP_SET: CULVERT HEADWALL
AA6655 STAMPING: ORA 30 FLDNR
AA6655 MARK LOGO: FL-095
AA6655 MAGNETIC: O = OTHER; SEE DESCRIPTION
AA6655 STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AA6655 +STABILITY: SURFACE MOTION
AA6655
AA6655 HISTORY - Date Condition Report By
AA6655 HISTORY - 1984 MONUMENTED FLDNR
AA6655 HISTORY - 19840615 GOOD FL-095
AA6655 HISTORY - 20060716 GOOD GEOCAC
AA6655
AA6655 STATION DESCRIPTION
AA6655
AA6655 DESCRIBED BY ORANGE COUNTY FLORIDA 1984
AA6655 BEGIN AT THE JUNCTION OF STATE ROAD 435 WITH STATE ROAD 50, GO 1.3 MI
AA6655 (2.1 KM) SOUTH ON STATE ROAD 435 TO THE MARK. THE MARK IS SET IN TOP
AA6655 OF A CULVERT HEADWALL, 40.0 FT (12.2 M) SOUTHEAST OF THE CENTER LINE
AA6655 OF THE NORTHBOUND LANE OF THE HIGHWAY, 5.8 FT (1.8 M) NORTHEAST OF THE
AA6655 SOUTHWEST END OF THE HEADWALL, AND 60.0 FT (18.3 M) NORTHWEST OF THE
AA6655 CENTER LINE OF THE DRIVE AROUND THE KIRKMAN COMMERCE CENTER. IN
AA6655 SECTION 31, TOWNSHIP 22 SOUTH, RANGE 29 EAST. SITE SUITABILITY FOR
AA6655 GPS OCCUPATION NOT DETERMINED.
AA6655
AA6655 STATION RECOVERY (2006)

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DATASHEETS

AA6655
AA6655'RECOVERY NOTE BY GEOCACHING 2006 (NJE)
AA6655'RECOVERED IN GOOD CONDITION.

*** retrieval complete.
Elapsed Time = 00:00:00



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY	OSCEOLA	PROJECT	VDUP- Reference Elevation Audit Project # 1	DESIGNATION	WR11 2007
SECTION	3	TOWNSHIP	28S	RANGE	29E
GEOGRAPHIC INDEX OF QUAD 28081-A4					
Established by WOOLPERT			NAME OF QUADRANGLE LAKE HATCHINEHA		
SURVEYOR JOHN CESTNICK DATE 12 / 19 / 2007			FIELD BOOK W0104 PAGE		
HORIZONTAL DATUM: 1983 ZONE E					
VERTICAL DATUM: NGVD 1929 (CORPSCON) NAVD 1988					
CONTROL ACCURACY: HORIZONTAL GPS RTD			VERTICAL 3		
STATE PLANE COORDINATES	X 525045	Y 1363587	EL. NGVD 29 68.66		
			NAVD 88 67.59		
LATITUDE	28° 05' 03.64"	LONGITUDE	81° 24' 23.95"		
DESCRIPTION					

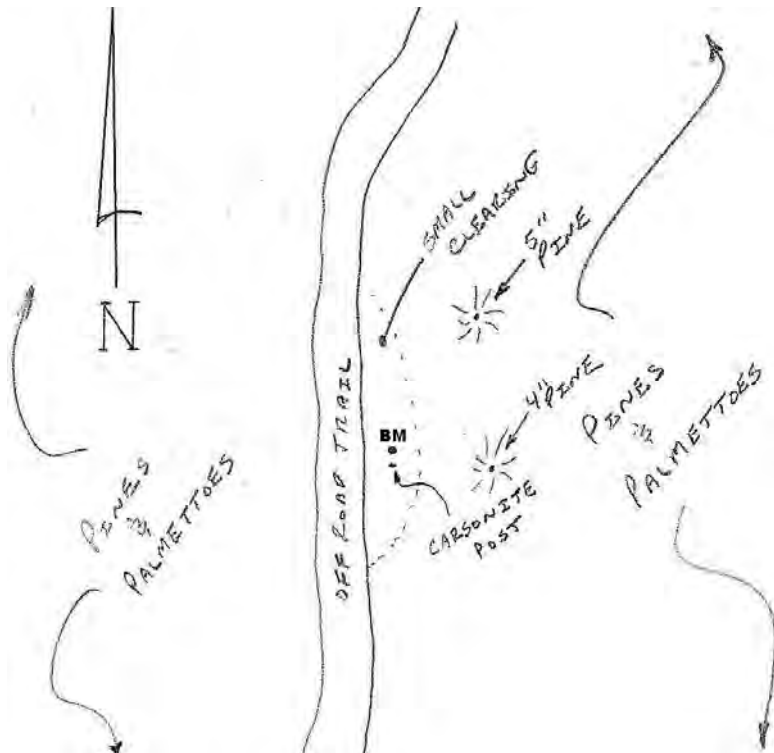
To Reach:

From the intersection of US423 and US192 in Kissimmee FL. travel south on N John Young Pkwy for 3.51 miles to Pleasant Hill Road. Turn left (south) on Pleasant Hill Road and travel 8.6 miles to Scrub Jay Trail. Turn left (east) onto Scrub Jay Trail (entrance to Disney Wilderness preserve, gate access required) travel along Scrub Jay trail 1.4 miles to unnamed dirt road on right. Turn onto dirt road (west) and travel dirt road 0.70 miles to another unnamed dirt road and turn left (south). Travel dirt road for 3.1 miles to off road trail on left (east). Turn left on trail and follow trail for 0.40 miles. Bench mark for well is on right side (south) of trail 10+/-.

SKETCH

References:

- 350° and 1' from carsonite sign
- 295° and 20' from 4" Pine Tree
- 220° and 50' from 5" Pine Tree
- 255° and 350' from Well





SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY	OSCEOLA	PROJECT	VDUP- Reference Elevation Audit Project # 1	DESIGNATION	WR15 2007
SECTION	2	TOWNSHIP	28S	RANGE	29E
GEOGRAPHIC INDEX OF QUAD 28081-A4					
Established by WOOLPERT			NAME OF QUADRANGLE LAKE HATCHINEHA		
SURVEYOR JOHN CESTNICK DATE 12 / 19 / 2007			FIELD BOOK W0104 PAGE		
HORIZONTAL DATUM: 1983 ZONE E					
VERTICAL DATUM: NGVD 1929 (CORPSCON) NAVD 1988					
CONTROL ACCURACY: HORIZONTAL GPS RTD			VERTICAL 3		
STATE PLANE COORDINATES	X 530369	Y 1363442	EL. NGVD 29 63.09		
			NAVD 88 62.01		
LATITUDE	28° 05' 02.38"	LONGITUDE	81° 23' 24.51"		
DESCRIPTION					

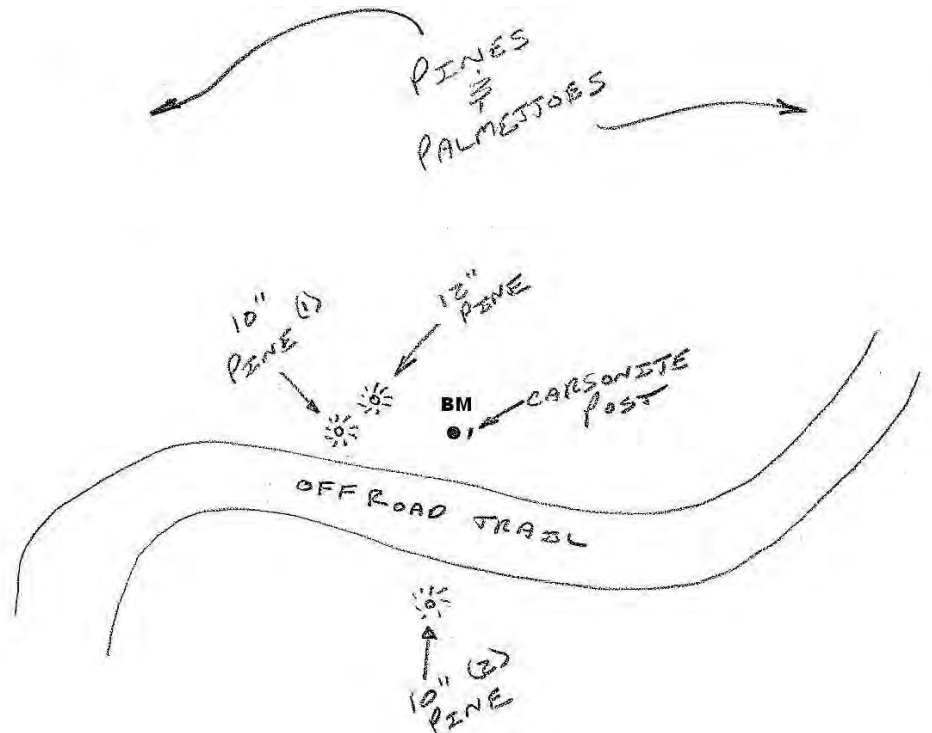
To Reach:

From the intersection of US423 and US192 in Kissimmee, Fl. travel south on N John Young Pkwy for 3.51 miles to Pleasant Hill Road. Turn left (south) on Pleasant Hill Road and travel 8.6 miles to Scrub Jay Trail, Turn left (east) onto Scrub Jay Trail (entrance to Disney Wilderness preserve, gate access required) travel along Scrub Jay trail 1.4 miles to unnamed dirt road on right. Turn onto dirt road (west) and travel dirt road 0.70miles to another dirt road and turn left (south) on dirt road and travel 2.4miles to another unnamed off road trail on left and turn (east). Travel 1.7 miles along trail to bench mark on north side of trail 10Ft +/-.

SKETCH

References:

- 90 ° and 1' from carsonite sign
- 125° and 15' from 12" Pine Tree
- 110° and 19' from 10" Pine (1) Tree
- 30° and 23' from 10" Pine (2) Tree
- 30° and 8' from trail centerline
- 15° and 500' from Well





SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY	ORANGE	PROJECT	VDUP- Reference Elevation Audit Project # 1	DESIGNATION	WRLGTE
SECTION	34	TOWNSHIP	24S	RANGE	28E
GEOGRAPHIC INDEX OF QUAD 28081-C5					
Established by WOOLPERT			NAME OF QUADRANGLE INTERCESSION CITY		
SURVEYOR JOHN CESTNICK DATE 9 / 12 / 2007			FIELD BOOK W0104-28 PAGE		
HORIZONTAL DATUM: 1983 ZONE E					
VERTICAL DATUM: NGVD 1929 (CORPSCON) NAVD 1988					
CONTROL ACCURACY: HORIZONTAL GPS RTD			VERTICAL 3		
STATE PLANE COORDINATES	X	494092	Y	1461558	EL. NGVD 29 94.03 NAVD 88 93.14
LATITUDE	28° 21' 12.6"	LONGITUDE	81° 30' 14.1"		
DESCRIPTION					

To Reach:

From the intersection of SR535 & HWY192 in the town of Kissimmee Florida, go north on SR535 for 1.8 miles to International Drive South. Then proceed west on International Drive South for 0.7 mile to a dirt maintenance entrance to the south past Gateway entry. Follow Dirt road south then east and south again around lake for approximately 0.2miles to the BM on the left (east) side of road. BM is +/- 20 west of well, SE of high tension overhead wires, and east of lake. The BM is a SFWMD disc on an 8" diameter & 40" deep concrete monument incased by a PVC pipe.

SKETCH

References:

- 270 ° and 1' from carsonite sign
- 270° and 25' from antenna pole.
- 207° and 95' from power pole.
- 27° and 79' from 3" pine tree.

