



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

SCADA RTU Station Names: POF27U (GW1) POF27L (GW2) POF28U (GW3) POF28L (GW4) POS14 (GW5) POF29 (GW6)	DB Hydro Station Names: POF27U POF27L POF28U POF28L POS14 POF 29	DB Hydro Site Name: LFAKBB	Agency: WMD	Last Date of Field Work: 12-oct-16
Party Chief: Strickland	Field Book: Misc 7B	Pages 6&8	Prepared by: H. Ehmke	

SITE SPECIFIC DATA

Site Benchmark: POF27	Benchmark Elevation (NAVD88) 61.662	Corpscon 6.0.1 Conversion Factor (NAVD88 to NGVD29) +1.204		
Reference Elevation(s) (NAVD88): 63.81 POF27U (GW1) 64.48 POF27L (GW2) 64.35 POF28U (GW3) 65.28 POF28L (GW4) 65.30 POS14 (GW5) 65.58 POF29 (GW6)	Existing Brass Tag Elevation (Datum): 65.01 POF27U (GW1) 65.68 POF27L (GW2) 65.56 POF28U (GW3) 66.49 POF28L (GW4) 66.47 POS14 (GW5) 66.78 POF29 (GW6)		Calibration Port Elevation(s) (NAVD88): Not applicable	
Ground Elevation (NAVD88): 61.3 POF27U (GW1) 61.3 POF27L (GW2) 62.5 POF28U (GW3) 62.5 POF28L (GW4) 62.3 POS14 (GW5) 63.2 POF29 (GW6)		Pad Elevation (NAVD88): 61.64 POF27U (GW1) 61.64 POF27L (GW2) 62.59 POF28U (GW3) 62.59 POF28L (GW4) N/A POS14 (GW5) 63.27 POF29 (GW6)		

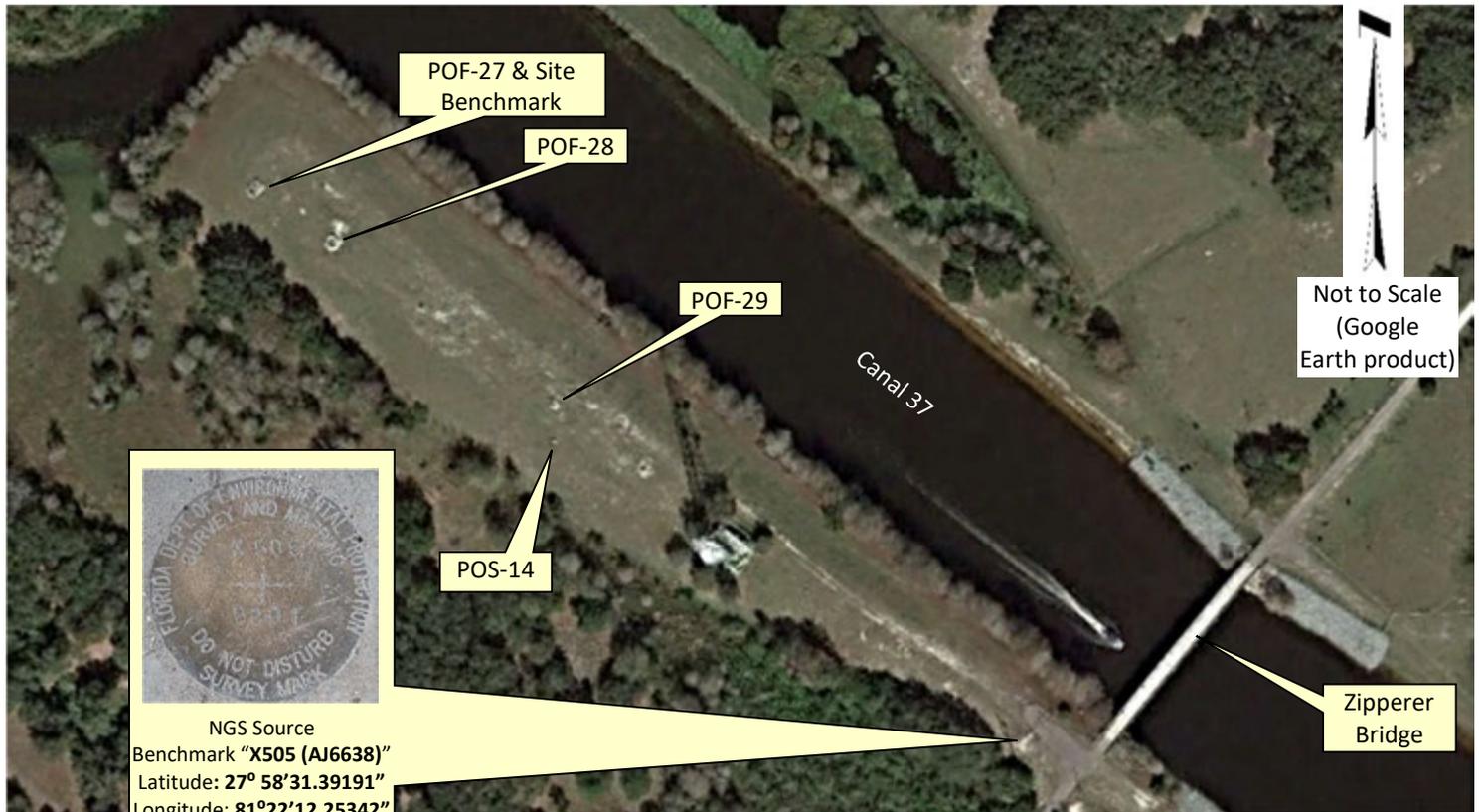
GEOGRAPHIC DATA

Section 12	Township 29 South	Range 29 East	
Benchmark	Latitude: 27° 58'36.74239"	Longitude: 81°22'21.22637"	Source: OPUS
	State Plane Coordinates	Northing (Y) = 1324479.34	Easting (X) = 535918.25

NAVD88 – North American Vertical Datum of 1988
NGVD29- National Geodetic Vertical Datum of 1929
Corpscon 6.0.1 - A U.S. Army Corps of Engineers Engineering Research and Development Center Topographic Engineering Center Alexandria, Virginia Windows-based program to convert coordinates and elevations between datum's using vertcon05.txt and vertcon05.05 files supplied by the U.S. Army Corps of Engineers South Atlantic Division, Jacksonville Fl.

PICTURES

Aerial Overall Site



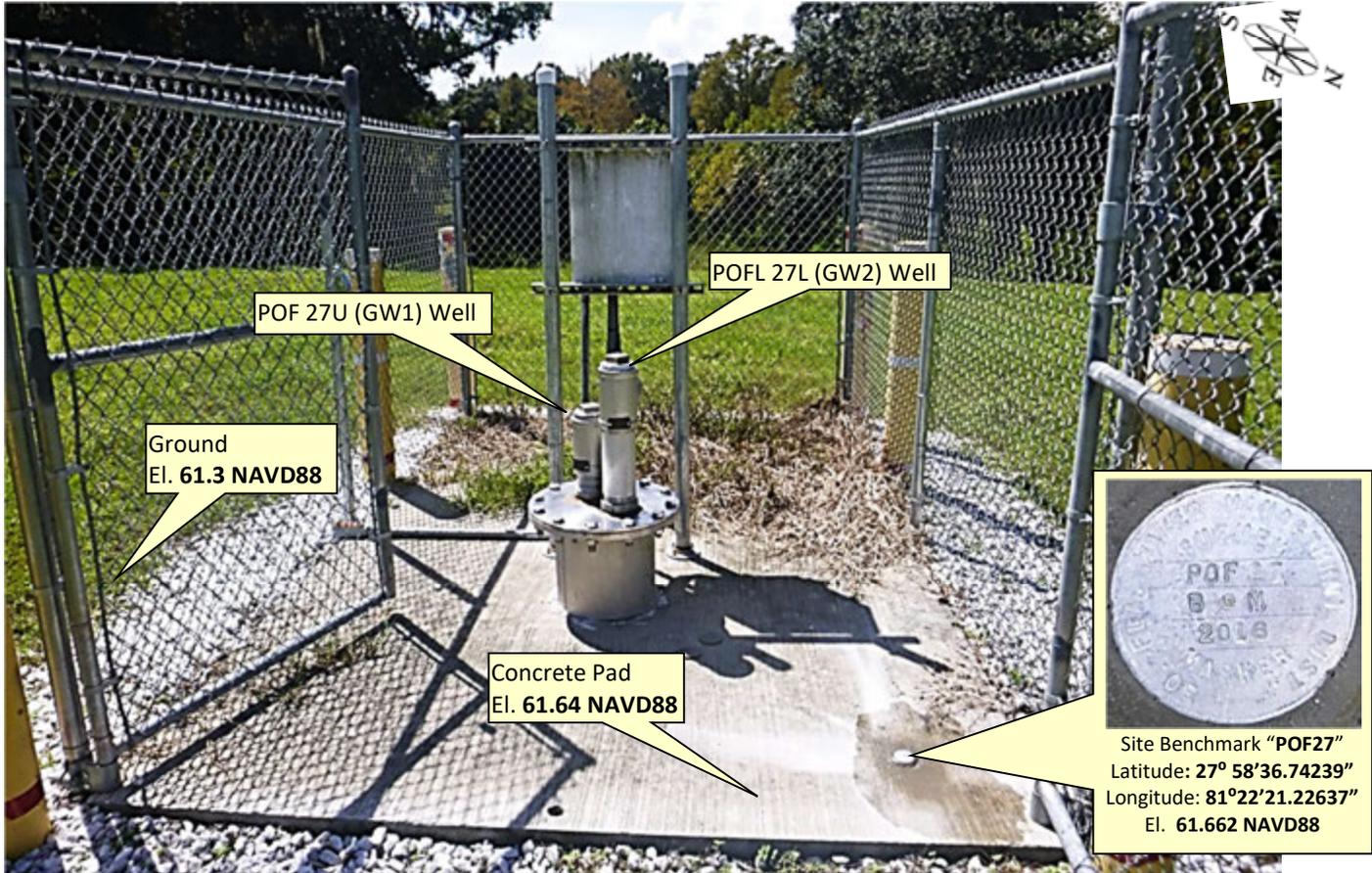
NGS Source
 Benchmark **"X505 (AJ6638)"**
 Latitude: **27° 58'31.39191"**
 Longitude: **81°22'12.25342"**
 El. **57.461 NAVD88**



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

POF27 (GW1 & GW2) Well Site



Looking Southerly (oblique not to scale) (04-Oct-16)

POF27U (GW1) Reference Point



(Oblique Not to scale)
(12-nov-16)

POF 27U (GW1) Well
REF. Mark
El. 63.81 NAVD88

POF27U (GW1) Old Brass Tag (to be removed)



POF27U (GW1) New Brass Tag (to be added)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

POF27L (GW2) Reference Point



(Oblique Not to scale)
(12-nov-16)

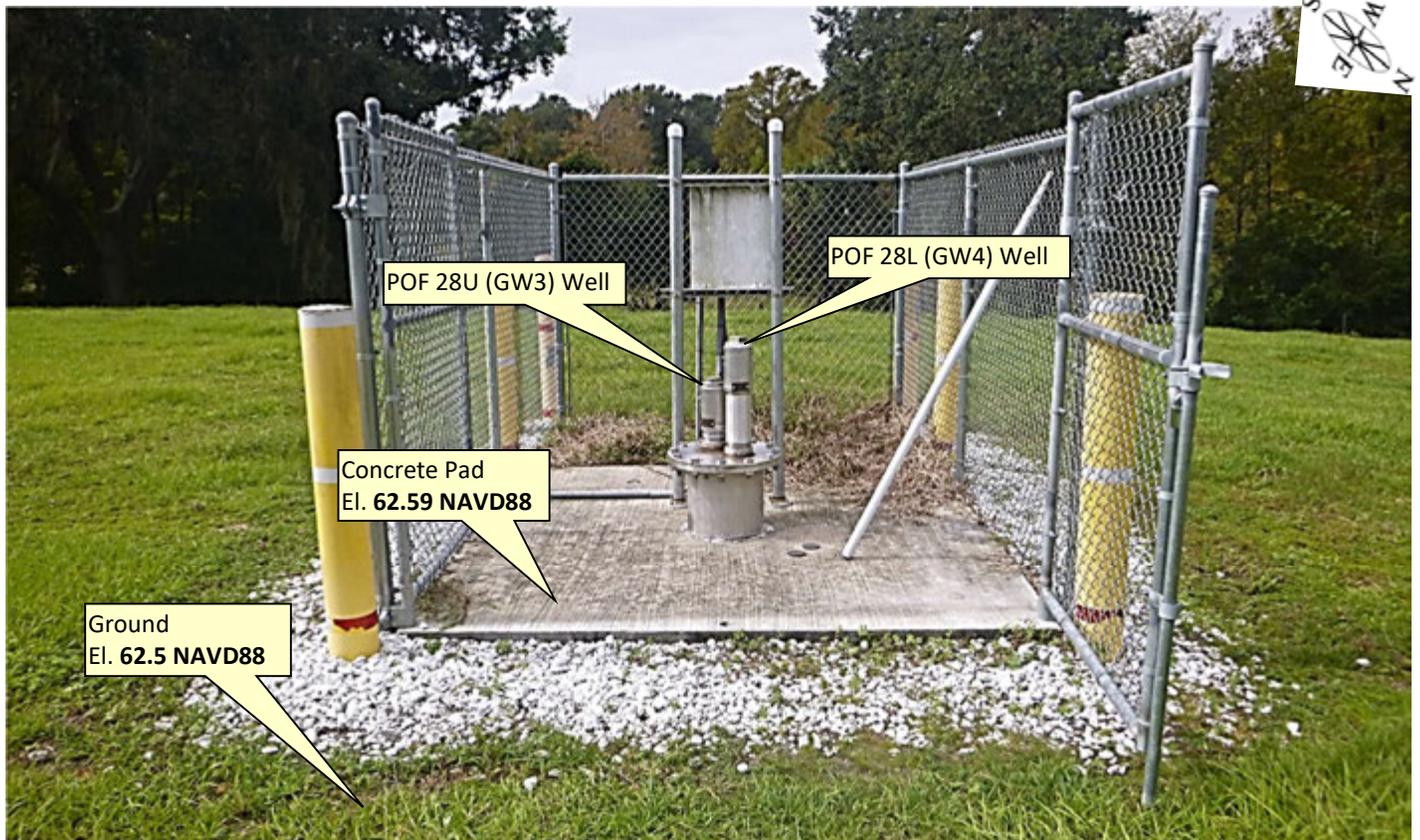
POF 27L (GW2) Well
REF. Mark
EL. 64.48 NAVD88

POF27L (GW2) Old Brass Tag (*to be removed*)



POF27L (GW2) New Brass Tag (*to be added*)

POF28 (GW3 & GW4) Well Site



POF 28U (GW3) Well

POF 28L (GW4) Well

Concrete Pad
El. 62.59 NAVD88

Ground
El. 62.5 NAVD88

Looking Southerly (oblique not to scale) (12-Oct-16)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

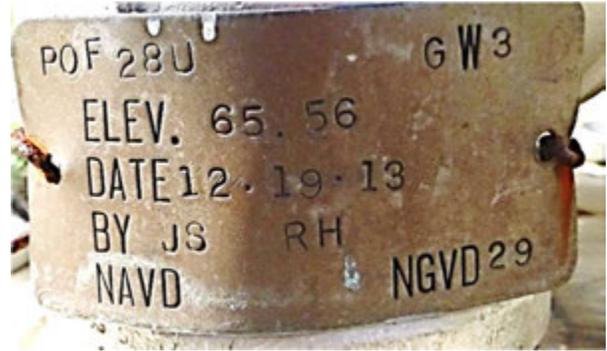
Rev. 1/16

POF28U (GW3) Reference Point



POF 28U (GW3) Well
REF. Mark
EL. 64.35 NAVD88

POF28U (GW3) Old Brass Tag *(to be removed)*



POF28U (GW3) New Brass Tag *(to be added)*

POF28L (GW4) Reference Point



POF 28L (GW4) Well
REF. Mark
EL. 65.28 NAVD88

POF28L (GW4) Old Brass Tag *(to be removed)*



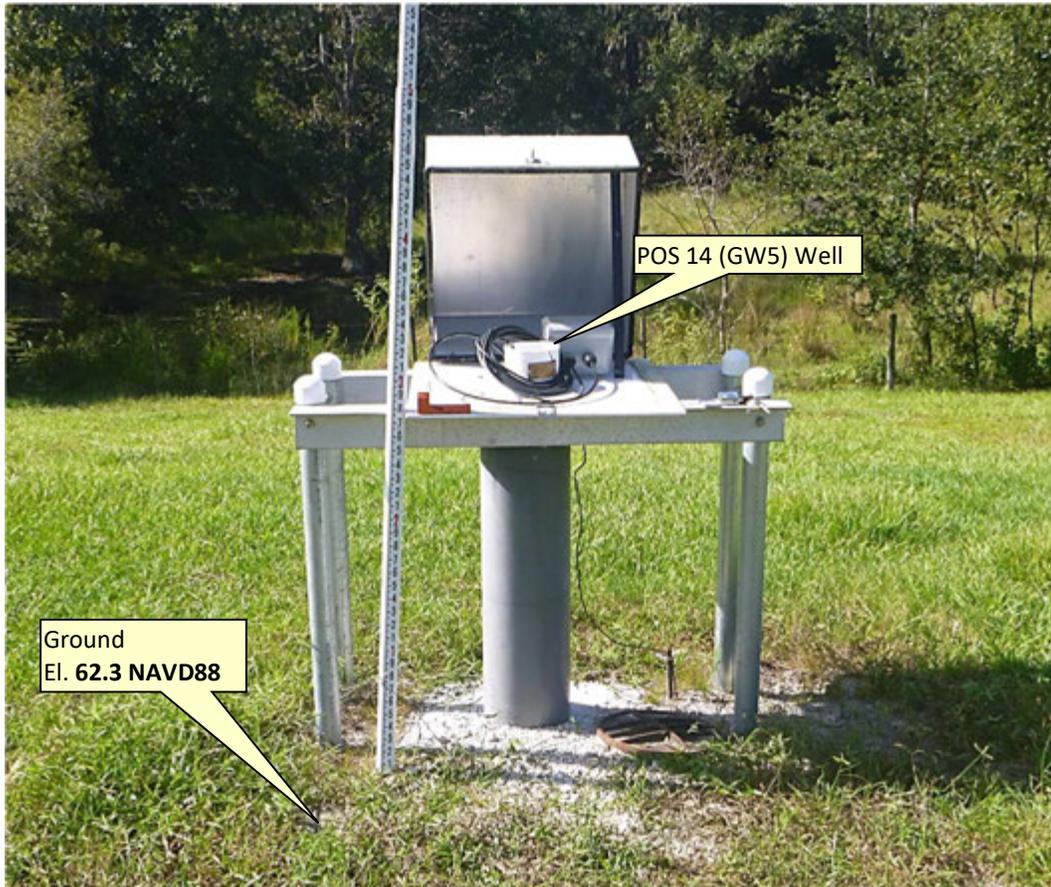
POF28L (GW4) New Brass Tag *(to be added)*



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

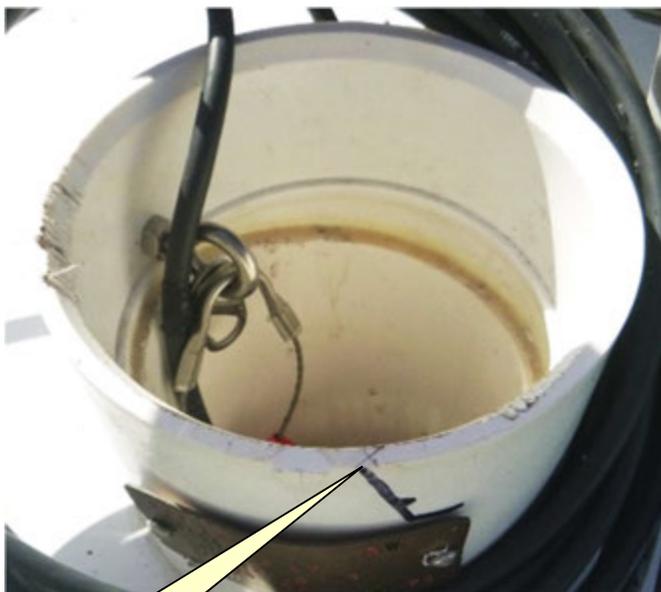
Rev. 1/16

POS 14 (GW5) Well Site



Looking Southerly (oblique not to scale) (12-Oct-16)

POS 14 (GW5) Reference Point



POS 14 (GW5) Well REF. Mark
EL. 65.30 NAVD88

POS 14 (GW5) Old Brass Tag (to be removed)



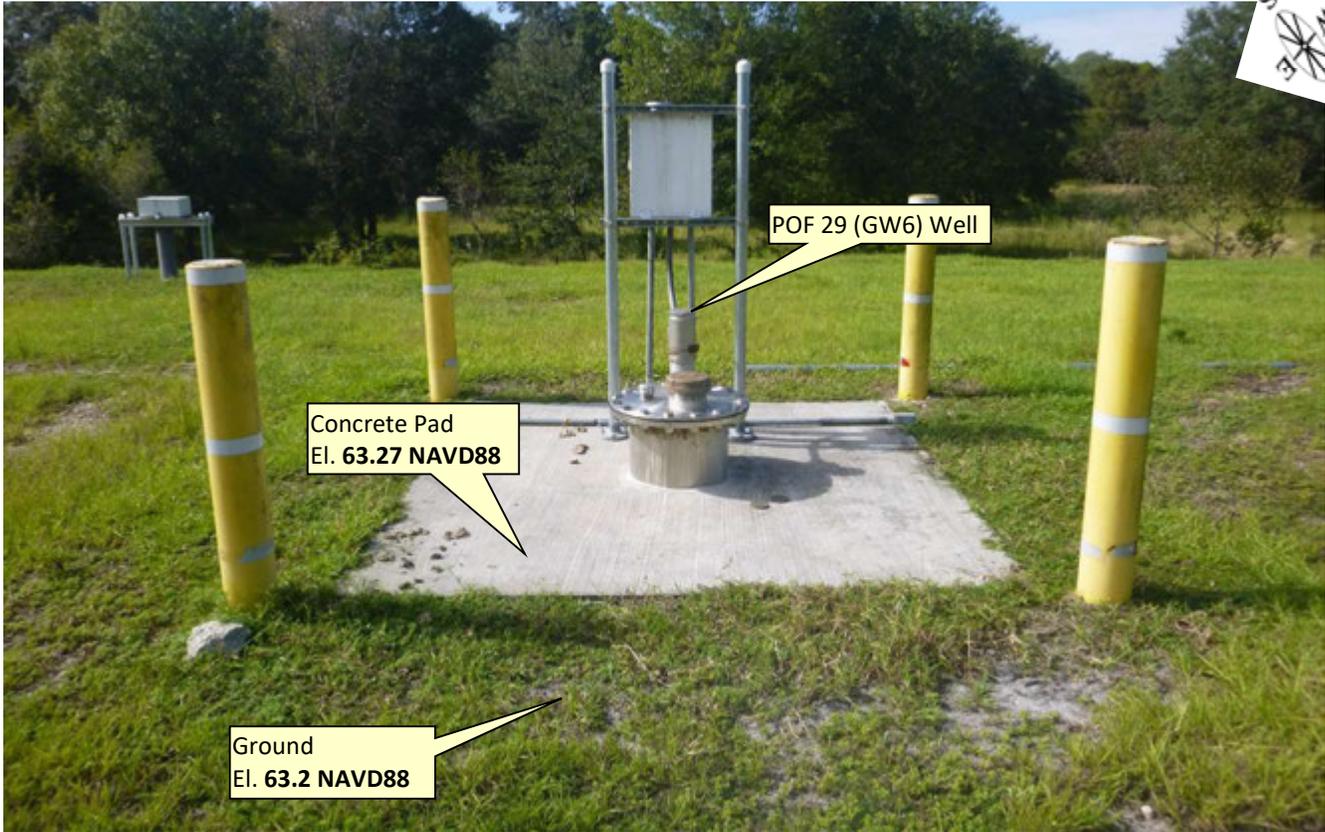
POS 14 (GW5) New Brass Tag (to be added)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

POF 29 (GW6) Well Site



Concrete Pad
El. 63.27 NAVD88

POF 29 (GW6) Well

Ground
El. 63.2 NAVD88

Looking Southerly (oblique not to scale) (12-Oct-16)

POF29 (GW6) Reference Point



POF 29 (GW6) Well
REF. Mark
El. 65.58 NAVD88

POF29 (GW6) Old Brass Tag (*to be removed*)



POF 29 (GW6) New Brass Tag (*to be added*)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

DESIGNATION: POF27	PROJECT: POF27 Well
ESTABLISHED BY: SOUTH FLORIDA WATER MANAGEMENT DISTRICT	SURVEYOR: Strickland
RECOVERED BY:	DATE: 3-oct-16

GEOGRAPHIC POSITION

SECTION 12	TOWNSHIP 29 SOUTH	RANGE 29 EAST
COUNTY Polk	NAME OF QUADRANGLE: Lake Weohyakapka NE GEOGRAPHIC INDEX OF QUAD: 3211	
HORIZONTAL DATUM: 1927 (1983) Other (circle one) ZONE (E) or W		
VERTICAL DATUM: MSL 1929 (1988) Other (circle one)		
VERTICAL ACCURACY: 1 2 (3)		
STATE PLANE COORDINATE	X= 535918.25	Y= 1324479.34 NAVD 88 EL. 61.662 NGVD 29 EL. 62.861
CORPSCON 6.0.1 CONVERSION FACTOR (NAVD88 TO NGVD29): +1.204		
LATITUDE: 27° 58'36.74239"		LONGITUDE: 81°22'21.22637"

RECOVERY DATA

Stamping: **POF27 B•M 2016**

To Reach: From the intersection of State Road 27 and State Road 60 (S.R. 60) in Lake Wales, go East-Southeast on S.R. 60 for 7.3 miles to the junction of Mammoth Grove Road on the left; turn left on Mammoth Grove Road and go North for 2.05 miles to the junction of Camp Mack Road on the right; turn right on Camp Mack Road and go North for 0.25 of a mile to a curve to the East; continue East on Camp Mack Road for 2.3 miles to the junction of Barney Keen Road (Boy Scout Road) on the right; continue Northeasterly on Camp Mack Road for 5.35 miles to the entrance to Lake Kissimmee State Park on the right; continue North on Camp Mack Road for 0.1 of a mile to the junction of a sand road on the right; turn right on the sand road and go Northeast for 75.0 feet to a locked gate; continue Northeast on the sand road for 0.35 of a mile to a Y-junction; continue Northeast on the sand road for 0.25 of a mile to the Southwest end of a bridge (spanning the South Florida Water Management District (SFWMD's) Canal 37 (Kissimmee River Canal); turn left and go 1000 feet to SFWMD's POF-27 well site and the station location.

The station is a SFWMD aluminum cap stamped "POF 27 B•M 2016" grouted into the concrete well pad. It is located 1 foot Southwest of the Northeast face of the concrete pad and 1 foot Southeast of the Northwest face of the concrete pad.

NGS SOURCE BENCHMARK: **X505 (AJ6638)**

FIELD BOOK: **Misc 7B PAGE 6**

PICTURES

Overall Site



Looking Southwesterly (Not to Scale)



Aluminum cap stamped
"POF27 B•M 2016"

El. 61.662 NAVD88

El. 62.861 NGVD29

El. 62.866 NGVD29 (CORPSCON 6.0.1)



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 1/16

SKETCH

6 MISC FB# 7B 10-3-16

SEC	IS	TOP	29	ROW	29
ESTABLISH BAN @ WELL SITE LFARBS					
REF: MISC FB# 6-Q-783 30-32					
ANS PGS 49-50					
STRIP#			EL		24 EL
BAN / 1					57.46
					NAVS 80
BAN / 2			65.687		
BAN / 6			61.663		
BAN / 7			57.463		57.46
DIFF: 0.003					
10-4-16 NOTE: FS PTING SET BY THURBY ASSOC INC					
484' EIL W/ 48' BEAR IN CENTER TO EXPOSED OFF					
SPUS SESSION HOLD FS @ 0.5' BELOW GRADE					
START 10:30 AM END 13:00					
WBS BASE @ POF 27 2016 BAN NIT 24					
WBS ENTER @ X 505 2016 NIT 24					
START 10:49 AM END 13:10					

MISC FB# 7B 10-3-16

EMERSON DINGEVEN & BAC COVERED

SERIAL # 771295

FILE NAME S POF 27

STICKLAND

CLANTED

COMMENTS

BAN X 505 2016 FLODED BEARS OK FS Good COND

BAN POF 27 SPWMS ALONG PLOG PD IN BUDGE CORO

STAMPED "SPWMS BAN 70.11" Good COND

BAN POF 27 2016 SET SPWMS ALONG CAP IN THE NNW

CORNER of CONCRETE PAD FOR WELL SITE POF 27 &

LFARBS BAN IS 1' BE of THE NW EDGE of CONC SLAB &

SW of THE NE EDGE of CONC SLAB. EM IS STAMPED "POF 27 2016

BAN"

BAN X 505 2016 FLODED AS ABOVE

POF 27 2016

EM

2016

LFARBS

POF 27

WELL

SITE

CHADWICK

FENCE

PO PT 100

484' EIL

TOP BROWN

OFF NG D

0.5' BELOW

GRADE

From: opus
To: Strickland, James
Subject: OPUS solution : POF27.tps OP1475664147608
Date: Wednesday, October 05, 2016 6:43:49 AM

FILE: POF27.tps OP1475664147608

2005 NOTE: The IGS precise and IGS rapid orbits were not available
2005 at processing time. The IGS ultra-rapid orbit was/will be used to
2005 process the data.
2005

NGS OPUS SOLUTION REPORT
=====

All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: jstrickl@sfwmd.gov DATE: October 05, 2016
RINEX FILE: pof2278o.16o TIME: 10:43:01 UTC

SOFTWARE: page5 1209.04 master53.pl 160321 START: 2016/10/04 14:31:00
EPHEMERIS: igu19172.eph [ultra-rapid] STOP: 2016/10/04 17:00:00
NAV FILE: brdc2780.16n OBS USED: 5629 / 5831 : 97%
ANT NAME: TPSCR.G3 SCIS # FIXED AMB: 40 / 41 : 98%
ARP HEIGHT: 2.000 OVERALL RMS: 0.020(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2016.7586)

X: 845586.949(m) 0.012(m) 845586.155(m) 0.012(m)
Y: -5573131.631(m) 0.036(m) -5573130.064(m) 0.036(m)
Z: 2974238.159(m) 0.016(m) 2974237.993(m) 0.016(m)

LAT: 27 58 36.74238 0.003(m) 27 58 36.76304 0.003(m)
E LON: 278 37 38.77365 0.007(m) 278 37 38.75352 0.007(m)
W LON: 81 22 21.22635 0.007(m) 81 22 21.24648 0.007(m)
EL HGT: -8.404(m) 0.041(m) -9.956(m) 0.041(m)
ORTHO HGT: 18.867(m) 0.070(m) [NAVD88 (Computed using GEOID12B)]

UTM COORDINATES STATE PLANE COORDINATES

	UTM (Zone 17)	SPC (0902 FL W)	(Y) N=1324479.335 (X) E= 535918.245 FL E
Northing (Y) [meters]	3094696.348	403804.761	
Easting (X) [meters]	463360.715	261726.123	
Convergence [degrees]	-0.17477683	0.29434957	
Point Scale	0.99961657	0.99998819	
Combined Factor	0.99961789	0.99998951	

US NATIONAL GRID DESIGNATOR: 17RML6336094696(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DE9138	OKCB OKEECHOBEE CORS ARP	N271557.715	W0805119.181	93866.7
DI3564	CCV6 CAPE CANAVERAL 6 CORS ARP	N282735.827	W0803243.702	97249.9

DF7990 ZEFR ZEPHYRHILLS CORS ARP N281339.322 W0820952.671 82645.2

NEAREST NGS PUBLISHED CONTROL POINT

AJ6638 X 505 N275831. W0812211. 330.7

This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

From: opus
To: Strickland, James
Subject: OPUS solution : X505.tps OP1475664058724
Date: Wednesday, October 5, 2016 6:42:34 AM

FILE: X505.tps OP1475664058724

2005 NOTE: The IGS precise and IGS rapid orbits were not available
2005 at processing time. The IGS ultra-rapid orbit was/will be used to
2005 process the data.
2005

NGS OPUS SOLUTION REPORT
=====

All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: jstrickl@sfwmd.gov DATE: October 05, 2016
RINEX FILE: x505278o.16o TIME: 10:42:13 UTC

SOFTWARE: page5 1209.04 master52.pl 160321 START: 2016/10/04 14:50:00
EPHEMERIS: igu19172.eph [ultra-rapid] STOP: 2016/10/04 17:10:00
NAV FILE: brdc2780.16n OBS USED: 4423 / 4700 : 94%
ANT NAME: TPSCR.G3 SCIS # FIXED AMB: 22 / 30 : 73%
ARP HEIGHT: 2.000 OVERALL RMS: 0.022(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2016.7587)

X: 845840.826(m) 0.013(m) 845840.032(m) 0.013(m)
Y: -5573170.187(m) 0.059(m) -5573168.620(m) 0.059(m)
Z: 2974092.142(m) 0.037(m) 2974091.976(m) 0.037(m)

LAT: 27 58 31.39191 0.004(m) 27 58 31.41257 0.004(m)
E LON: 278 37 47.74658 0.011(m) 278 37 47.72646 0.011(m)
W LON: 81 22 12.25342 0.011(m) 81 22 12.27354 0.011(m)
EL HGT: -9.598(m) 0.070(m) -11.149(m) 0.070(m)
ORTHO HGT: 17.673(m) 0.119(m) [NAVD88 (Computed using GEOID12B)]

UTM COORDINATES STATE PLANE COORDINATES

	UTM (Zone 17)	SPC (0902 FL W)	
Northing (Y) [meters]	3094530.963	403641.323	(Y) N=1323936.547 (X) E= 536721.091 FL E
Easting (X) [meters]	463605.338	261972.184	
Convergence [degrees]	-0.17359905	0.29550451	
Point Scale	0.99961635	0.99998856	
Combined Factor	0.99961786	0.99999007	

US NATIONAL GRID DESIGNATOR: 17RML6360594530(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DE9138	OKCB OKEECHOBEE CORS ARP	N271557.715	W0805119.181	93594.9
DF7990	ZEFR ZEPHYRHILLS CORS ARP	N281339.322	W0820952.671	82931.8

DI3564 CCV6 CAPE CANAVERAL 6 CORS ARP N282735.827 W0803243.702 97137.1

NEAREST NGS PUBLISHED CONTROL POINT

AJ6638 X 505 N275831. W0812211. 36.3

This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

SEC	12	TWP	29	RGE	29
ESTABLISH BM @ WELL SITE LFAKBB					
REF: MISC FB# 6-PGS 30-32 AND PGS 49-50					
STA IPT#		EL		BM EL	
BM / 1				57.46	NAVD 88
BM / 2		65.687			
BM / 6		61.663			
BM / 9		57.463		57.46	
DIFF = 0.003					

EQ USED DINI LEVEL & BAR CODE ROD

SERIAL # 771295

STRICKLAND

CLANTON

FILE NAME: POF 27

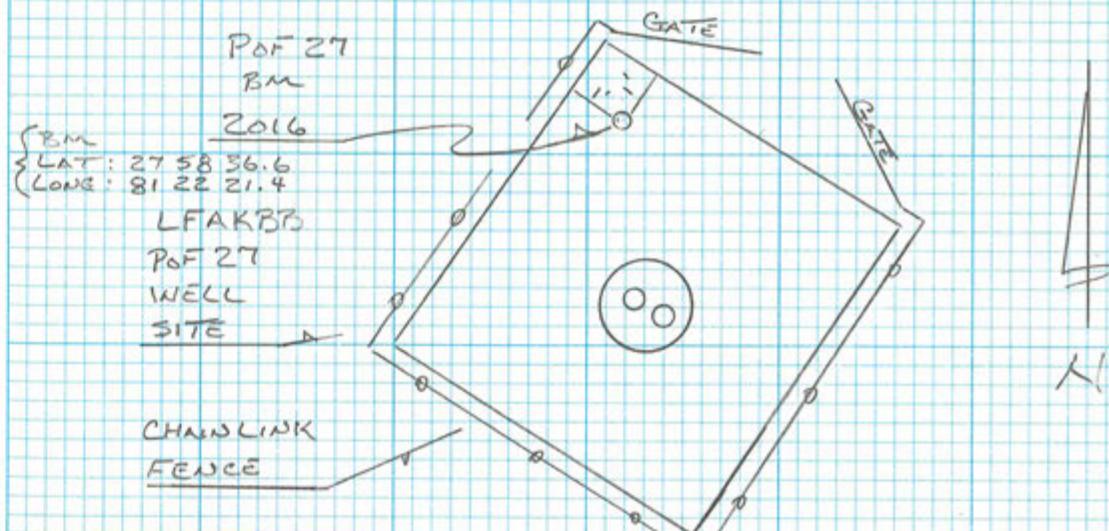
COMMENTS

BM X SOS 2001 FLDED BRASS DISK FID GOOD COND

BM POLL SFWM ALUM PLUG FID IN BRIDGE CURB STAMPED "SFWM BM PO. 11" Good COND

BM POF 27 2016 SET SFWM ALUM CAP IN THE NNW CORNER of CONCRETE PAD FOR WELL SITE POF 27 & LFAKBB, BM IS 1' SE of THE NW EDGE of CONC SLAB & 1' SW of THE NE EDGE of CONC SLAB. BM IS STAMPED "POF 27 2016 BM"

BM X SOS 2001 FLDED AS ABOVE



SEC	12	TWP	29	RGE	29
ESTABLISH NAVD 88 ELEV. ON WELL HEADS @ WELL SITE LFAK 88					
STA	+	HI	-	ELEV	BM ELEV
BM	6.86	68.52		61.66	61.662 AST NAVD 88
GW1			4.71	63.81	
GW2			4.04	64.48	
CONC			6.88	61.64	
GRND			7.2	61.32	
GW3			4.17	64.35	
GW4			3.24	65.28	
CONC			5.93	62.57	
GRND			6.0	62.52	
GW5			3.22	65.30	
GRND			6.2	62.32	
GW6			2.94	65.58	
CONC			5.25	63.27	
GRND			5.3	63.22	
BM			6.86	61.66	61.66 NAVD 88

REF: MISC FB# 6-Q PAGES 49 & 50

KIT STEICKLAND
& CLAYTON

COMMENTS

BM POF 27 2016 SEWARD ALUM CAP PG-6 THIS BOOK

GW1 XI POF 27 U 4" SS T

GW2 XI POF 27 L 4" SS T

CONC SLAB
GROUND

GW3 XI POF 28 U 2" SS T

GW4 XI POF 28 L 4" SS T

CONC SLAB
GROUND

GW5 "X" POS 14 4" PVC
GROUND

GW6 X POF 29 4" SS T

CONC SLAB
GROUND

BM POF 27 2016 AS ABOVE

Project Information		Coordinate System	
Name:		Name:	Default
Size:		Datum:	WGS 1984
Modified:	2/15/2012 8:48:57 AM (UTC:-7)	Zone:	Default
Time zone:	Mountain Standard Time	Geoid:	
Reference number:		Vertical datum:	
Description:			

Level Report

Imported file: [POF27.DAT](#)
Instrument: DiNi
Standard error per kilometer of double leveling: 0.00230 ft
Standard error per turn/station setup: 0.00000 ft
Creation option: Delta elevations
Description usage: Feature codes

Run - 1 Raw Observations

Raw Misclosure: 0.00400 ft
Σ BS Distances: 1102.440 ft
Σ FS Distances: 1103.640 ft
Run Length: 2206.080 ft
Reduction: Adjusted Values

Create	Point ID	BS	IS	FS	Δ Elevation	Raw Elevation	Correction	Adj. Elevation	Type	Distance	Description
<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/> 8.89000 ft			0.00000 ft	57.460 ft	0.00000 ft	57.460 ft	Benchmark	49.870 ft	X505 3
<input type="checkbox"/>	2			<input checked="" type="checkbox"/> 0.66300 ft	8.22700 ft	65.687 ft	-0.00006 ft	65.687 ft	Computed	64.500 ft	PO11 3
	2	<input checked="" type="checkbox"/> 0.44800 ft								64.470 ft	PO11 3
<input type="checkbox"/>	3			<input checked="" type="checkbox"/> 8.67400 ft	-8.22600 ft	57.461 ft	-0.00012 ft	57.461 ft	Computed	49.870 ft	3
	3	<input checked="" type="checkbox"/> 6.70800 ft								247.440 ft	3
<input type="checkbox"/>	4			<input checked="" type="checkbox"/> 2.03100 ft	4.67700 ft	62.138 ft	-0.00123 ft	62.137 ft	Computed	248.850 ft	3
	4	<input checked="" type="checkbox"/> 5.70700 ft								212.600 ft	3
<input type="checkbox"/>	5			<input checked="" type="checkbox"/> 6.22000 ft	-0.51300 ft	61.625 ft	-0.00204 ft	61.623 ft	Computed	211.610 ft	3
	5	<input checked="" type="checkbox"/> 5.33000 ft								33.730 ft	3
<input type="checkbox"/>	6					61.664 ft	-0.00206 ft	61.662 ft	Computed	34.880 ft	POF27 3

			<input checked="" type="checkbox"/> 5.29100 ft	0.03900 ft						
	6	<input checked="" type="checkbox"/> 4.84700 ft								34.910 ft POF27 3
<input type="checkbox"/>	7		<input checked="" type="checkbox"/> 4.88600 ft	-0.03900 ft	61.625 ft	-0.00208 ft	61.623 ft	Computed	33.660 ft	3
	7	<input checked="" type="checkbox"/> 6.23100 ft							211.650 ft	3
<input type="checkbox"/>	8		<input checked="" type="checkbox"/> 5.79300 ft	0.43800 ft	62.063 ft	-0.00289 ft	62.060 ft	Computed	212.500 ft	3
	8	<input checked="" type="checkbox"/> 1.92700 ft							247.770 ft	3
<input checked="" type="checkbox"/>	9		<input checked="" type="checkbox"/> 6.52600 ft	-4.59900 ft	57.464 ft	-0.00400 ft	57.460 ft	Benchmark	247.770 ft	X505 3

Run - 1 (N1) Reduced Observations

Observation	Status	Raw Δ Elevation	Correction	Final Δ Elevation	Setups	Length	Σ BS Readings	Σ FS Readings	Std. Error
1-9 (E1)	Enabled	0.00400 ft	-0.00400 ft	0.00000 ft	8	2206.080 ft	40.08800 ft	40.08400 ft	0.02457 ft

Run - 1 (N1) Reduced Coordinates

Point ID	Status	Elevation
1	Enabled	57.46000 ft
9	Enabled	57.46000 ft

Date: 10/4/2016 9:24:17 AM	Project:	Trimble Business Center
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Office

Project

10 October 2016

INPUT

State Plane, flhpgn - Florida HPGN
0902 - Florida West, Meters
Vertical - NAVD88, U.S. Feet

OUTPUT

State Plane, flhpgn - Florida HPGN
0901 - Florida East, U.S. Feet
Vertical - NGVD29 (Custom), U.S. Feet

POF27

1/1

Northing/Y: 403804.761

Easting/X: 261726.123

Elevation/Z: 0

Convergence: 0 17 39.65844

Scale Factor: 0.999988186

Combined Factor: 0.999992462

Northing/Y: 1324479.335

Easting/X: 535918.248

Elevation/Z: 1.204

Convergence: -0 10 29.19661

Scale Factor: 0.999957751

Combined Factor: 0.999961970

Grid Shift (U.S. ft.): X/Easting = -322761.5, Y/Northing = -336.8

Remark:

Corpscon v6.0.1, U.S. Army Corps of Engineers

From: [opus](#)
To: [Strickland, James](#)
Subject: OPUS solution : POF27.tps OP1475664147608
Date: Wednesday, October 05, 2016 6:43:49 AM

FILE: POF27.tps OP1475664147608

2005 NOTE: The IGS precise and IGS rapid orbits were not available
2005 at processing time. The IGS ultra-rapid orbit was/will be used to
2005 process the data.
2005

NGS OPUS SOLUTION REPORT
=====

All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: jstrickl@sfwmd.gov DATE: October 05, 2016
RINEX FILE: pof2278o.16o TIME: 10:43:01 UTC

SOFTWARE: page5 1209.04 master53.pl 160321 START: 2016/10/04 14:31:00
EPHEMERIS: igu19172.eph [ultra-rapid] STOP: 2016/10/04 17:00:00
NAV FILE: brdc2780.16n OBS USED: 5629 / 5831 : 97%
ANT NAME: TPSCR.G3 SCIS # FIXED AMB: 40 / 41 : 98%
ARP HEIGHT: 2.000 OVERALL RMS: 0.020(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2016.7586)

X: 845586.949(m) 0.012(m) 845586.155(m) 0.012(m)
Y: -5573131.631(m) 0.036(m) -5573130.064(m) 0.036(m)
Z: 2974238.159(m) 0.016(m) 2974237.993(m) 0.016(m)

LAT: 27 58 36.74238 0.003(m) 27 58 36.76304 0.003(m)
E LON: 278 37 38.77365 0.007(m) 278 37 38.75352 0.007(m)
W LON: 81 22 21.22635 0.007(m) 81 22 21.24648 0.007(m)
EL HGT: -8.404(m) 0.041(m) -9.956(m) 0.041(m)
ORTHO HGT: 18.867(m) 0.070(m) [NAVD88 (Computed using GEOID12B)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 17) **SPC (0902 FL W)**
Northing (Y) [meters] 3094696.348 **403804.761**
Easting (X) [meters] 463360.715 **261726.123**
Convergence [degrees] -0.17477683 0.29434957
Point Scale 0.99961657 0.99998819
Combined Factor 0.99961789 0.99998951

US NATIONAL GRID DESIGNATOR: 17RML6336094696(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DE9138	OKCB OKEECHOBEE CORS ARP	N271557.715	W0805119.181	93866.7
DI3564	CCV6 CAPE CANAVERAL 6 CORS ARP	N282735.827	W0803243.702	97249.9

DF7990 ZEFR ZEPHYRHILLS CORS ARP N281339.322 W0820952.671 82645.2

NEAREST NGS PUBLISHED CONTROL POINT

AJ6638 X 505 N275831. W0812211. 330.7

This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

REGISTRATION WORKSHEET - LFAKBB Addendum (NAVD 88)

Site Name: **LFAKBB** Today's Date: **10/31/2016** Type Recorder: **CR1000**
 Activity: **Addendum (NAVD 8** Effective Date: **10/31/2016** Start Date of Data :
 Customer: Bus. Area: Agency: **SFWMD** Internal Order:
 Project Manager: **Jim Vincent** Bus. Area: **SCADA Maintenance** Agency: **SFWMD** Fund:
 Contract #:
 Project Name: **NAVD88 conversion** Legal Mandate:

Short Common Name / Description:

Proj. Mgr. Notes: Site converted to NAVD88 datum. Sensors calibrated using new reference.

Site Directions: SR 60 to Boys Scout Camp/ Barney Kean Rd to Camp Mack Rd... Take Camp Mack Rd. East to Just pass Entrance Rd. To Kissimmee State Park Entrance... continue east on Camp Mack Rd... Just before Bridge over C-37 make a left along Canal about 500' +/- to Site...

Site Address (if any):

Transportation: **Std Vehicle** Lock type or combination: **Abloy S** #

Recorder Location/Purpose: **GW Well Cluster** Structure Type:

Array ID Configuration table attached

SURVEY INFORMATION

B.M. Elevation: **57.46ft.** Date: **1/1/2001** Stamp: **BM X-505 2001**
 Agency: **DEP** Type: **BRASS** Datum: **NAVD 88**

Benchmark Location/ Description: Located at the SW side of Bridge over C-37... Northside of access Rd, .. 39ft N of PP # 21893 with 2 Guy Wires attached...

COMMUNICATIONS INFORMATION

Communications System: **Loggernet** Loggernet Server: **0** Loggernet IP Address:

Tower: **ACMET** Communication Type: R.F. Code/Modem Address: R.F. Access Point:

Phone Number:

RTU Address: Gateways:

WELL INFORMATION

Sensor	Customer Ref	Ref Elev	Elev Date	Top of Well	Bottom of Well	Ground Elev	Benchmark Elev	Benchmark Datum	Ref Elevation Location
GW1	POF27U	63.81ft	10/12/2016	63.81ft			57.46ft	NAVD 88	Cut Mark top of Well... Brass Tag attached...
GW2	POF27L	64.48ft	10/12/2016	64.48ft			57.46ft	NAVD 88	"X" Mark on Rim of Well ... Brass Tag attached...
GW3	POF28U	64.35ft	10/12/2016	64.35ft			57.46ft	NAVD 88	"X" Mark on Rim of Well... Brass Tag attached...
GW4	POF28L	65.28ft	10/12/2016	65.28ft			57.46ft	NAVD 88	"X" Mark on Rim of Well... Brass Tag attached...
GW5	POS14	65.30ft	10/12/2016	65.30ft			57.46ft	NAVD 88	"X" Mark on Rim of Well... Brass Tag attached...
GW6	POF29	65.58ft	10/12/2016	65.58ft			57.46ft	NAVD 88	"X" Mark on Rim of Well... Brass Tag attached...

Sensor	GW Sensor Location Offset	Meas Pt Elevation	GW Land Elevation	Depth of Well	Type of Well	Top of Monitored Interval	Base of Monitored Interval	Parameter Transmitted
GW1	-40	23.8			UNHD			Raw Head Data
GW2	-40	24.4			UNHD			Raw Head Data
GW3	-40	24.35			UNHD			Raw Head Data
GW4	-40	25.28			UNHD			Raw Head Data
GW5	-25	41.47			Standart G			Water Level Elevation
GW6	-40	25.58			UNHD			Raw Head Data

COORDINATE INFORMATION

Item/Parm	Lat	Long	X-Coord	Y-Coord	Sec	Township	Range	Quad	Basin	County	Description
GW1	27 58 36	81 22 21			12	29	29	LK. WEOHYAK		POLK	
GW2	27 58 36	81 22 21			12	29	29	LK. WEOHYAK		POLK	
GW3	27 58 36	81 22 20			12	29	29	LK. WEOHYAK		POLK	
GW4	27 58 36	81 22 20			12	29	29	LK. WEOHYAK		POLK	
GW5	27 58 34	81 22 17			12	29	29	LK. WEOHYAK		POLK	
GW6	27 58 34	81 22 17			12	29	29	LK. WEOHYAK		POLK	

DBHYDRO | by station

STATION INFORMATION

Station	POF-27L
Site	LFAKBB
Type	SUBSTATION
Latitude (ddmmss.sss)	275836.728
Longitude (ddmmss.sss)	812221.215
X Coord (ft) NAD83	535920.335
Y Coord (ft) NAD83	1324480.528
County	Polk
Basin	LAKE HATCHINEHA
Section	12
Township	29
Range	29
Map	Launch Map
Well Info	Info
Description	POF-27 open-hole monitor (lower zone)
Notes	
Nearby Stations	Nearby Stations
Attachments	None Available

Query returned 1 station record(s).

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DBHYDRO | by station

STATION INFORMATION

Station	POF-27U
Site	LFAKBB
Type	SUBSTATION
Latitude (ddmmss.sss)	275836.728
Longitude (ddmmss.sss)	812221.215
X Coord (ft) NAD83	535920.335
Y Coord (ft) NAD83	1324480.528
County	Polk
Basin	LAKE HATCHINEHA
Section	12
Township	29
Range	29
Map	Launch Map
Well Info	Info
Description	POF-27 annular zone monitor (upper zone)
Notes	
Nearby Stations	Nearby Stations
Attachments	None Available

Query returned 1 station record(s).

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DBHYDRO | by station

STATION INFORMATION

Station	POF-28L
Site	LFAKBB
Type	SUBSTATION
Latitude (ddmmss.sss)	275836.223
Longitude (ddmmss.sss)	812220.329
X Coord (ft) NAD83	535999.615
Y Coord (ft) NAD83	1324429.286
County	Polk
Basin	LAKE HATCHINEHA
Section	12
Township	29
Range	29
Map	Launch Map
Well Info	Info
Description	Monitors (1950 - 2221 ft bls)
Notes	
Nearby Stations	Nearby Stations
Attachments	None Available

Query returned 1 station record(s).

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DBHYDRO | by station

STATION INFORMATION

Station	POF-28U
Site	LFAKBB
Type	SUBSTATION
Latitude (ddmmss.sss)	275836.223
Longitude (ddmmss.sss)	812220.329
X Coord (ft) NAD83	535999.615
Y Coord (ft) NAD83	1324429.286
County	Polk
Basin	LAKE HATCHINEHA
Section	12
Township	29
Range	29
Map	Launch Map
Well Info	Info
Description	Monitors (1300 - 1683 ft bls) (Back-filled, Summer 2013)
Notes	
Nearby Stations	Nearby Stations
Attachments	None Available

Query returned 1 station record(s).

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DBHYDRO | by station

STATION INFORMATION

Station	POF-29
Site	LFAKBB
Type	WELL
Latitude (ddmmss.sss)	275834.601
Longitude (ddmmss.sss)	812217.749
X Coord (ft) NAD83	536229.382
Y Coord (ft) NAD83	1324262.092
County	Polk
Basin	LAKE HATCHINEHA
Section	12
Township	29
Range	29
Map	Launch Map
Well Info	Info
Description	KISSIMMEE BASIN, LOWER FLORIDAN RECON: SITE B DUAL-ZONE PRODUCTION WELL
Notes	As-Built Survey 10/27/2011
Nearby Stations	Nearby Stations
Attachments	Show Attachments

Query returned 1 station record(s).

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DBHYDRO | by station

STATION INFORMATION

Station	POS-14
Site	LFAKBB
Type	WELL
Latitude (ddmmss.sss)	275834.4
Longitude (ddmmss.sss)	812217.4
X Coord (ft) NAD83	536261.659
Y Coord (ft) NAD83	1324244.382
County	Polk
Basin	LAKE HATCHINEHA
Section	12
Township	29
Range	29
Map	Launch Map
Well Info	Info
Description	KISSIMMEE BASIN, LOWER FLORIDAN RECON: SITE B SURFICIAL MONITOR WELL
Notes	
Nearby Stations	Nearby Stations
Attachments	Show Attachments

Query returned 1 station record(s).

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