

7 SCADA #89 9-13-11

hbk twp Rge
 bench run to establish Elevation
 at BBCW 6

FILENAME = BBCWA

Pt.	TIME	ELEV	Bm
1	11:47 AM		3.08 [NW 29]
2	11:50 AM	2.884	2.880 call
16	12:36 PM RETURN RUN	3.103	3.105 / Ag.
30	1:09 PM	2.882	2.880
31	1:15 PM	3.076	3.08 call

DATA 29
 LEVEL DL502

COMMENTS

TBM "SDDS SITE 4
 WSM LB 7232 Per Des.

B.M. SDDS SITE 4

BM BBCW 6 2" S.F.W.M.D ALUMN. DISK GROUTED
 INTO CONC. HEADWALL EAST SIDE
 OF CANAL RUNNING EAST & WEST

BM SDDS SITE 4

TBM "SDDS SITE 4
 WSM LB 7232

ESTABLISH ELEVATIONS @ WELL SITE 6A6B
BBCWB

FILE NAME: BBCWB

PT	TIME	ELEV
----	------	------

1		3.105
---	--	-------

2		5.724
---	--	-------

3		5.589
---	--	-------

RETURN

4.		3.105
----	--	-------

ERANKS
GIAMMARCO
HUDSON

B.M IN HEAD WALL SEE PT 16 PG 7 FB SCADA ?
BBCWB

GW1 MARK ON WELL

GW2 MARK ON WELL

B.M BBCWB



GW1

BBCW 6 GW1
ELEV. 5.724
DATE 9-13-2011
BY EE:RH-AG
NAVD NGVD 29

KEYCO

GW2

BBCW6 GW2
ELEV. 5.589
DATE 9.13.2011
BY EE:RH:AG
NAVD NGVD 29

BBCW 6 GW1
ELEV. 5.724
DATE 9.13.2011
BY EE:RH:AG
NAVD NGVD 29











SM
JA
VK
E
H





WITNESS POINT
PLEASE DO NOT DISTURB
THE AREA

SURVEY





WATER MANAGEMENT DISTRICT
B.M.
BB06
MARKER
052019



FLA WATER MANAGEMENT
SURVEY
B.M.
BBCW 6
MARKER 1950



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 8/07

DESIGNATION: BBCW6	PROJECT: BBCW6 Well Site
ESTABLISHED BY: SOUTH FLORIDA WATER MANAGEMENT DISTRICT	SURVEYOR: Elvie Ebanks
RECOVERED BY	DATE: 9/13/11

GEOGRAPHIC POSITION

SECTION 33	TOWNSHIP 57	RANGE 39 E
COUNTY: Miami-Dade	NAME OF QUADRANGLE	
	GEOGRAPHIC INDEX OF QUAD	
HORIZONTAL DATUM: 1927 1983 Other _____ (circle one) ZONE E or W		
VERTICAL DATUM: MSL 1929 1988 Other _____ (circle one)		
CONTROL ACCURACY: HORIZONTAL 1 2 3 _____ (circle one) VERTICAL 1 2 3		
STATE PLANE COORDINATES	X	Y
		NAVD 88 ELEV. 1.595
		NGVD 29 ELEV. 3.105
LATITUDE: 25° 25' 47.0"N		LONGITUDE: 80° 26' 01.3"W

RECOVERY DESCRIPTION

Stamping: **BM BBCW 6**

To Reach: From the intersection of Card Sound Road and U.S. 1 go Southeast for 1.7 miles to a dirt road (SW 167th Avenue) on the left; Turn left and go North on the dirt road (SW 167th Avenue) for 0.30 miles to the junction of a dirt road to the right (SW 376th Street); Turn right and go East along the dirt road (SW 376th Street) for 0.5 of a mile to a dirt road to the left (North); Turn left and go North 100 feet to the intersection of a dirt road to the East; turn right and go East on the dirt road for 0.6 of a mile to a bend to the left (North); go North continuing along the dirt road for 0.2 of a mile to a bend to the right road (East); Go East, continuing along the dirt road for 0.1 of a miles to a bend to the left (North); Go North, continuing along the dirt road 0.25 of a mile to a bend to the right (East); Go East, continuing along the dirt road for 0.25 of a mile to a bend to the left (North); Go North, continuing along the dirt road 0.25 of a mile to a dirt road to the right (East); turn right and go East for 0.15 miles to a bend in the road to the North; Go North, over a canal and station location on the right. Station is a South Florida Water Management District aluminum disk grouted into the East concrete headwall of an East/West canal and stamped "BM BBCW6."

Notable Land marks: **Well BBC6**

FIELD BOOK **SCADA 9** PAGE **7&8** Source Benchmark: **SDDS Site 4**


SKETCH





SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY MIAMI-DADE		PROJECT SDDS		DESIGNATION SDDS SITE 4	
SECTION 33		TOWNSHIP 57 S		RANGE 39 E	
GEOGRAPHIC INDEX OF QUAD					
Established by <u>WHIDDEN SURVEYING</u> _ Recovered by			NAME OF QUADRANGLE <u>HOMESTEAD</u>		
SURVEYOR <u>C. LINDSTEDT</u> DATE <u>3/21/2011</u>			FIELD BOOK <u>102</u> PAGES <u>1-8</u>		
HORIZONTAL DATUM: 1927 (1983) Other _____ (circle one) ZONE (E) or W					
VERTICAL DATUM: MSL (1929) (1988) Other _____ (circle one)					
CONTROL ACCURACY: HORIZONTAL 1 2 (3) +/-3M (circle one) VERTICAL 1 2 (3)					
STATE PLANE COORDINATES		X 839944.17 USFT	Y 396111.59 USFT	EL. 2.87 FEET (29) EL 1.36 FEET (88)	
LATITUDE N 25 25 20.256			LONGITUDE W 080 26 35.417		
DESCRIPTION					
<p>To Reach:</p> <p>TO REACH THE STATION FROM THE INTERSECTION OF CARD SOUND ROAD AND US 1 GO SOUTHEAST FOR 1.7 MILES TO A DIRT ROAD. TURN LEFT AND GO NORTH ON DIRT ROAD FOR 0.30 MILES TO THE JUNCTION OF A DIRT ROAD. TURN RIGHT AND GO EAST FOR 1.02 MILE TO THE JUNCTION OF A DIRT ROAD. TURN LEFT AND GO NORTH FOR 0.25 MILES TO THE JUNCTION OF A DIRT ROAD. TURN RIGHT AND GO EAST FOR 0.07 MILES AND STATION IS ON THE LEFT. MONUMENT IS A 12" ROUND POURED IN PLACE CONCRETE MONUMENT WITH A SOUTH FLORIDA WATER MANAGEMENT DISTRICT ALUMINUM DISK STAMPED "SDDS SITE 4 2011"</p>					
					



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY MIAMI-DADE		PROJECT SDDS		DESIGNATION SDDS SITE 4 REF	
SECTION <u>33</u>		TOWNSHIP 57 S		RANGE 39 E	
GEOGRAPHIC INDEX OF QUAD					
Established by <u>WHIDDEN SURVEYING</u> _ Recovered by			NAME OF QUADRANGLE <u>HOMESTEAD</u>		
SURVEYOR <u>C. LINDSTEDT</u> DATE <u>3/21/2011</u>			FIELD BOOK <u>102</u> PAGES <u>1-8</u>		
HORIZONTAL DATUM: 1927 <u>1983</u> Other _____ (circle one) ZONE <u>E</u> or W					
VERTICAL DATUM: MSL <u>1929</u> <u>1988</u> Other _____ (circle one)					
CONTROL ACCURACY: HORIZONTAL 1 2 <u>3</u> <u>+/-3M</u> (circle one) VERTICAL 1 2 <u>3</u>					
STATE PLANE COORDINATES		X 839589.86 USFT	Y 396111.1 USFT	EL. 3.07 FEET (29) EL 1.56 FEET (88)	
LATITUDE N 25 25 20.27			LONGITUDE W 080 26 39.28		
DESCRIPTION					
<p>To Reach:</p> <p>TO REACH THE STATION FROM THE INTERSECTION OF CARD SOUND ROAD AND US 1 GO SOUTHEAST FOR 1.7 MILES TO A DIRT ROAD. TURN LEFT AND GO NORTH ON DIRT ROAD FOR 0.30 MILES TO THE JUNCTION OF A DIRT ROAD. TURN RIGHT AND GO EAST FOR 1.02 MILE TO THE JUNCTION OF A DIRT ROAD. TURN LEFT AND GO NORTH FOR 0.25 MILES TO THE JUNCTION OF A DIRT ROAD STATION IS ON THE LEFT. MONUMENT IS A 5/8" IRON ROD AND CAP "WSM LB 7232"</p>					

SITE4.LST

STAR*LEV Adjustment Program
 Copyright 1995 STARPLUS SOFTWARE, INC.
 Licensed for Use by Harding ESE
 Serial Number 21987

STAR*LEV Version 1.30
 Run Date : Sun Mar 13 17:12:23 2011

Summary of Files Used

Input Data File : site4.dat
 Output Listing (This File) : site4.lst
 Adjusted Elevations : site4.pts
 Project Options : site4.prj
 Error Log : site4.err

Summary of Options Used

Type of Run was Adjustment and Error Propagation

Print Input Data File : Yes
 Print Summary of All Input Observations : Yes
 Default Standard Error for Elevations : FIXED
 Section Length Units : Feet
 Default Std Error for Diff in Elevations : 0.030000 Feet/Mile

Listing of Input Data File

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=====
[ 1] # STAR*DINI Version 1.06
[ 2] # Copyright STARPLUS SOFTWARE, INC. 1997-2000
[ 3] # NGVD 1929
[ 4] # Raw Field File: site4.raw
[ 5] E 1000 5.88 ! ' T316
[ 6] E 35 3.19 ! ' A317
[ 7] # Elevation Difference Records
[ 8] # Station          Diff      Dist  Descriptor
[ 9] V 1000-1001        0.62700   5807   ' BM1
[10] V 1001-1002        0.33600   4500   ' BM2
[11] V 1002-2400        0.52600    503   ' TP
[12] V 2400-35         -4.10700   4803
[13] V 2400-1003       -3.19700   5272   ' BM3
[14] V 1003-1004       -1.25700   3908   ' SITE 4
[15] V 1004-1002        3.91800   9050   ' BM2
[16] V 1002-2400        0.51600    507   ' TP
[17] V 1004-5005        0.19800    355   ' SITE 4REF
[18] V 5005-1004       -0.19800    355   ' SITE 4
[19] V 1004-5006       -0.35200     35   ' SG REF NAIL
[20] V 5006-1004        0.35200     35   ' SITE 4
[21] V 5006-5007       -1.03600    41    ' EW 2011_3_7
  
```

Network has 2 fixed elevation stations

Summary of All Unadjusted Input Observations

Number of Stations with Elevations = 10

Station	Elevation	Std Error	Description
1000	5.88000	FIXED	T316
35	3.19000	FIXED	A317
1001	6.50700	*	BM1
1002	6.84300	*	BM2

SITE4. LST

2400	7. 36900	*	TP
1003	4. 17200	*	BM3
1004	2. 91500	*	SITE 4
5005	3. 11300	*	SITE 4REF
5006	2. 56300	*	SG REF NAIL
5007	1. 52700	*	EW 2011_3_7

Number of Differences in Elevation = 13

At	To	Elev Diff	Length Feet	StdErr
1000	1001	0. 62700	5807. 00	0. 03146
1001	1002	0. 33600	4500. 00	0. 02770
1002	2400	0. 52600	503. 00	0. 00926
2400	35	-4. 10700	4803. 00	0. 02861
2400	1003	-3. 19700	5272. 00	0. 02998
1003	1004	-1. 25700	3908. 00	0. 02581
1004	1002	3. 91800	9050. 00	0. 03928
1002	2400	0. 51600	507. 00	0. 00930
1004	5005	0. 19800	355. 00	0. 00778
5005	1004	-0. 19800	355. 00	0. 00778
1004	5006	-0. 35200	35. 00	0. 00244
5006	1004	0. 35200	35. 00	0. 00244
5006	5007	-1. 03600	41. 00	0. 00264

Adjustment Results

Updated Elevations and Changes from Initial Estimates

Station	Elevation	Change	Description
1000	5. 88000	-0. 00000	T316
35	3. 19000	0. 00000	A317
1001	6. 48158	-0. 02542	BM1
1002	6. 79789	-0. 04511	BM2
2400	7. 31802	-0. 05098	TP
1003	4. 12561	-0. 04639	BM3
1004	2. 87201	-0. 04299	SITE 4
5005	3. 07001	-0. 04299	SITE 4REF
5006	2. 52001	-0. 04299	SG REF NAIL
5007	1. 48401	-0. 04299	EW 2011_3_7

Statistical Summary

Number of Observations = 13
 Number of Unknowns = 8
 Degrees of Freedom = 5

Data Type	Count	Weighted Residuals	Error Factor
Stations	10	0. 00	0. 00
Diff Elev	13	2. 38	0. 69
Total	23	2. 38	0. 69

Adjustment passes the Chi Square test at 5% level

Adjusted Elevation Difference Observations and Residuals

At	To	Adjusted Obs	Residual	StdErr	StdRes
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SITE4. LST

1000	1001	0.60158	-0.02542	0.03146	0.8
1001	1002	0.31630	-0.01970	0.02770	0.7
1002	2400	0.52013	-0.00587	0.00926	0.6
2400	35	-4.12802	-0.02102	0.02861	0.7
2400	1003	-3.19241	0.00459	0.02998	0.2
1003	1004	-1.25360	0.00340	0.02581	0.1
1004	1002	3.92588	0.00788	0.03928	0.2
1002	2400	0.52013	0.00413	0.00930	0.4
1004	5005	0.19800	-0.00000	0.00778	0.0
5005	1004	-0.19800	0.00000	0.00778	0.0
1004	5006	-0.35200	0.00000	0.00244	0.0
5006	1004	0.35200	-0.00000	0.00244	0.0
5006	5007	-1.03600	0.00000	0.00264	0.0

♀

Error Propagation

=====

Station Elevation Standard Deviations

Station	Elevation	StdDev	Description
1000	5.88000	0.00000	T316
35	3.19000	0.00000	A317
1001	6.48158	0.02481	BM1
1002	6.79789	0.02404	BM2
2400	7.31802	0.02372	TP
1003	4.12561	0.03460	BM3
1004	2.87201	0.03656	SITE 4
5005	3.07001	0.03697	SITE 4REF
5006	2.52001	0.03660	SG REF NAIL
5007	1.48401	0.03670	EW 2011_3_7

Elapsed time = 00:00:00

♀

REGISTRATION WORKSHEET - BBCW 6 Installation/Modification

Site Name: **BBCW 6** Today's Date: **9/15/2011** Type Recorder: **CR10**
 Activity: **Installation/Modifica** Effective Date: Start Date of Data :
 Customer: **L. Hennick/SCADA Monit.** Bus. Area: **SCADA** Agency: **SFWMD** Internal Order:
 Project Manager: **E. Ebanks** Bus. Area: **InfrStr. Mgt./Survey** Agency: **SFWMD** Fund:
 Contract #:
 Project Name: Legal Mandate:

Short Common Name / Description:

Proj. Mgr. Notes: Addendum Added to Update Surveying Data for GW Wells... (Repairs Done To Wells)

Site Directions: In Florida City... see SCADA site Folder for BBCW6...

Site Address (if any):

Transportation: **4X4 Vehicle** Lock type or combination: **Abloy S** #

Recorder Location/Purpose: **Stand-Alone Recorder (Non-Flow Site)** Structure Type:

Array ID Configuration table attached

SURVEY INFORMATION

B.M. Elevation: **3.105ft** Date: **9/13/2011** Stamp: **BM BBCW6 2011**
 Agency: **SFWMD** Type: **ALUM** Datum: **NGVD 29**

Benchmark Location/ Description: Located 54ft +/- SW of GW1..Grouted into Concrete Headwall of Culvert on east side of access road to wells... south of Carsonite marker... Alum Disk BM BBCW6 2011..

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		5.724ft	9/13/2011	5.724ft			3.105ft	NGVD 29	Mark Set on Top of 2" PVC Well in Steel casing... brass tag installed below Mark...
GW2		5.589ft	9/13/2011	5.589ft			3.105ft	NGVD 29	Mark set on Rim of 2" PVC well in Steel Casing... Brass tag below Ref. Pt.

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																
GW2																

COORDINATE INFORMATION

Item/Parm	Lat	Long	X-Coord	Y-Coord	Sec	Township	Range	Quad	Basin	County	Description
GW1	25 25 47.4	80 26 01.01			33	57	39			Miami/Dade	
GW2	25 25 47.4	80 26 01.00			33	57	39			Miami/Dade	