Data Sheet and Surveyor's Report
for
Buck Island Ranch
Monitoring Well Benchmarks

Description: **Monitoring Well "BUCK 08"** Date: June 17, 2005
Location: Buck Island Ranch, Highlands County, Florida

Project Results

Benchmarks established:

1. **"BUCK 08A"**: 3" bronze survey disk set in concrete monument
   a. Elevation: **8.1440 m**
2. **"BUCK 08B"**: Top of existing 1.5" steel pipe
   a. Elevation: **8.2739 m**
3. **"BUCK 08C"**: Top of existing 3" PVC monitoring well casing
   a. Elevation: **9.0945 m**

Party Chief: **G. Royer** Field Book: **154,** Pages **1 - 45**

Survey Date: **February – May 2005** Bench Mark: **"H-437"** El. **9.395 m / 30.82 ft.**
"J-437" El. **11.555 m / 37.91 ft.**

Vertical Datum: **NAVD1988**

NGVD 1929 Offset: + **1.210 ft.** (add this value to convert to NGVD 1929)

Comments:
The offset value referred to as "NGVD 1929 Offset" was derived by subtracting the published NAVD 1988 elevation from the published NGVD 1929 elevation for NGS Benchmarks "H-437 and J-437".

G.P.S. POSITION (NAD 83, Florida East Zone, Sub-meter):

Well Site: **"BUCK 08A"** N = **1017417** E = **590621**

NAVD 88 - North American Vertical Datum of 1988
NGVD29 -National Geodetic Vertical Datum of 1929
NAD 83 (Horizontal Datum) North American Datum of 1983

*Note: See the SFWMD Benchmark Description Sheet for additional information

SURVEYOR'S REPORT

Vertical Control Survey

Hyatt Survey Services, Inc. operating under sub-contract to George F Young, Inc. and the South Florida Water Management District was tasked with the execution of a Vertical Control Survey in support of the District's Benchmark Densification and Monitoring Well Elevation Initiatives.

Purpose

The purpose of this survey was to establish benchmarks at each of 22 monitoring wells on the Buck Island Ranch Facility in Highlands County, Florida. A minimum of two (2) benchmarks were established at each well.

1. **"A"** benchmarks are NGS Class "C", "poured-in-place," concrete monuments with SFWMD bronze disks set flush with the ground.
2. **"B"** benchmarks were set on the top of existing 1.5" steel pipes at each well site. Each pipe protrudes approximately 3" above the surrounding ground.
3. **"C"** benchmarks were set on the top of the 3" PVC well casing at each well site.

Elevations were determined by digital differential leveling performed in accordance with the Minimum Technical Standards (MTS) for Vertical Control Surveys as set forth in Chapter 61G17-6 FAC and the requirements for Second-Order Class II Vertical Control Surveys as established by the Federal Geodetic Control Sub-committee.

Vertical Control

All elevations are based on National Geodetic Survey Benchmarks "H-437" and "J-437" both Second Order, Class I vertical control monuments. The vertical datum used was NAVD 88 (North American Vertical Datum of 1988).

Level Lines

All level runs were double-run under differing atmospheric conditions and meet or exceed the formula of the Square Root in miles of the level run multiplied by 0.03'. A Leica DNA 3003 digital level and two 3 meter aluminum bar-coded "Invar Rods" with aluminum struts were utilized to obtain all leveling data.

The processing of the field data was performed by and under the supervision of Mr. Ronnie Taylor, Florida's NGS Advisor. NGS' "WDDPROC" leveling software was utilized to process the field data and to create the NGS benchmark descriptions.

Prepared by: **Hyatt Survey Services, Inc.**
11007 8th Avenue East
Bradenton, Florida 34212
(941) 748-4693

Prepared for: **South Florida Water Management District**
3301 Gun Club Road
West Palm Beach, Florida 33406

Notes:

1) This survey meets all applicable requirements of the Florida Minimum Technical Standards as contained in Chapter 61G17-6 FAC.
2) Not valid without the signature and the original raised seal of the Florida Surveyor and Mapper in responsible Charge.
3) Additions or deletions to this data by anyone other than the signing party are prohibited without written consent of the signing party.

Hyatt Survey Services, Inc.
Russell P. Hyatt, PSM, VP
Professional Surveyor and Mapper
License Number 5303

Signed: _____ Seal:

BUCK08

Prime Contractor: George F. Young, Inc.
Subcontractor: Hyatt Survey Services, Inc.
Date of Photo: June 17, 2005
View: Well Site

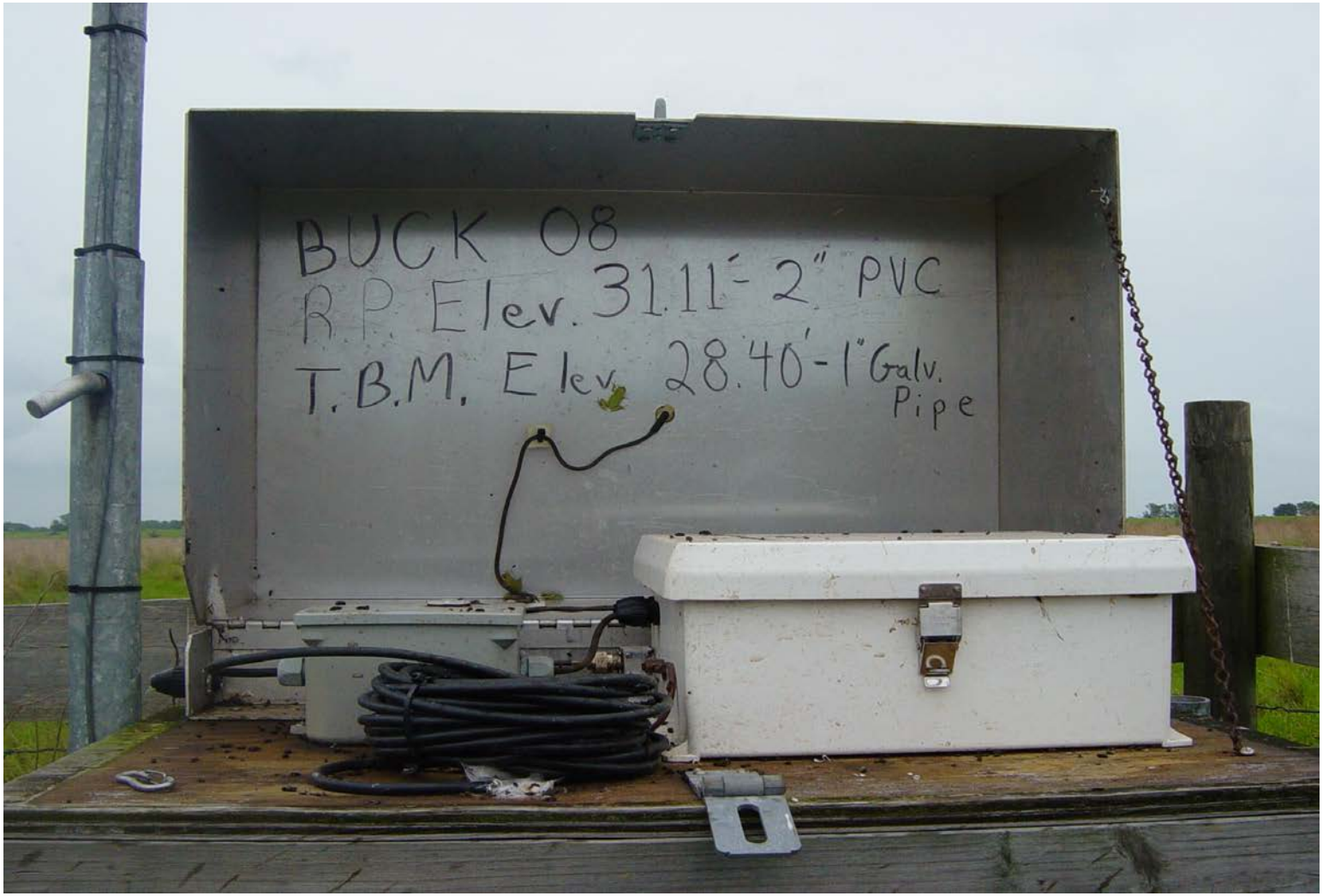
BUCK08A

Prime Contractor: George F. Young, Inc.
Subcontractor: Hyatt Survey Services, Inc.
Date of Photo: June 10, 2005
View: Monument

BUCK08B

Prime Contractor: George F. Young, Inc.
Subcontractor: Hyatt Survey Services, Inc.
Date of Photo: June 10, 2005
View: Pipe

BUCK08C



Prime Contractor: George F. Young, Inc.
Subcontractor: Hyatt Survey Services, Inc.
Date of Photo: June 10, 2005
View: Well

LEICA DIGITAL GEODETIC LEVELING - BACKUP RECORDING SHEET

LINE	PROJECT	FILENAME	PAGE OF
			1

SURVEY ORDER	SURVEY CLASS	TIME ZONE CODE		TEMP PROBE TOP HGT	TEMP PROBE BOTTOM HGT
2	1	Q			

CODE 1 - BEGINNING OF DAY OR CHANGE IN OBSERVER OR INSTRUMENT TYPE

INFO 1 DATE (MMDDYY)	INFO 2 OBS'R #	OBS'R INIT'S	INFO 3 -INST TYPE (2000, 2002, 3000, (3003))	INFO 4 -TEMP CODE (0 for C - 1 for F)
5/17/5	1	SR		80°

CODE 2 - EQUIPMENT USED

INFO 1 - INST SERIAL #	INFO 2 - INST COLLIMATION	ROD CODE	INFO 3 - ROD 1 SERIAL #	INFO 4 - ROD 2 SERIAL #
283420	+3.1	396	29572	29720

CODE 11 - BEGINNING SECTION INFORMATION

SPSN #	BM DESIG	BENCH MARK STAMPING	INFO 1 TIME (HHMM)	INFO 2 Rod On Mark #	INFO 3 TEMP	DIR F (B)
22	BLK 9	BLK	0900	1	80°	

CODE 99 - ENDING SECTION INFORMATION

SPSN #	BM DESIG	BENCH MARK STAMPING	INFO 1 TIME (HHMM)	INFO 2 Rod On Mark #	INFO 3 TEMP	INFO 4 W S #
21	BLK 8	BLK 8 2005	1045	1	86°	0/2

SECTION OBSERVATONS INFORMATION (Recall from level using UP/DN arrows)

TOTAL SETUPS	TOTAL DISTANCE (D)	ACCUMULATED IMB (d)	ELEV DIFFERENCE (GROUND HGT)
5	525.5	-0.2	+0.0315

	CLOSURE	REMARKS
F		
B		
DIF		
ALW'D		

WIND CODE - (0) 0-6 MPH (1) 6-15 MPH (2) >15 MPH
SUN CODE - (0) 25% SUNNY (1) 25-75% SUNNY (2) >75% SUNNY
OTHER INFO CODES
CODE 22 - REJECT PREVIOUS BACKSIGHT AND FORSIGHT (NO INFO ENTRIES - PRESS REC)
CODE 33 - GRADIENT TEMPERATURES (INFO 1 - LOWER PROBE - NO DECIMAL 761 FOR 76.1)
(INFO 2 - UPPER PROBE - NO DECIMAL 761 FOR 76.1)
CODE 9999 - END OF DAY, CHG OBS, CHG EQUIPMENT (NO INFO ENTRIES - PRESS REC)

LEICA DIGITAL GEODETIC LEVELING - BACKUP RECORDING SHEET

LINE	PROJECT	FILENAME	PAGE OF

SURVEY ORDER	SURVEY CLASS	TIME ZONE CODE		TEMP PROBE TOP HGT	TEMP PROBE BOTTOM HGT
	1				

CODE 1 - BEGINNING OF DAY OR CHANGE IN OBSERVER OR INSTRUMENT TYPE

INFO 1 DATE (MMDDYY)	INFO 2 OBS'R #	OBS'R INIT'S	INFO 3 -INST TYPE (2000, 2002, 3000, 3003)	INFO 4 -TEMP CODE (0 for C - 1 for F)

CODE 2 - EQUIPMENT USED

INFO 1 - INST SERIAL #	INFO 2 - INST COLLIMATION	ROD CODE	INFO 3 - ROD 1 SERIAL #	INFO 4 - ROD 2 SERIAL #
		396		

CODE 11 - BEGINNING SECTION INFORMATION

SPSN =	BM DESIG	BENCH MARK STAMPING	INFO 1 TIME (HHMM)	INFO 2 Rod On Mark #	INFO 3 TEMP	DIR F (B)
21	BKK8	BKK8-A "2005"	1100	1	87°	

CODE 99 - ENDING SECTION INFORMATION

SPSN =	BM DESIG	BENCH MARK STAMPING	INFO 1 TIME (HHMM)	INFO 2 Rod On Mark #	INFO 3 TEMP	INFO 4 W/ S =
20	BKK-6	BKK6A "2005"	1248	1	90°	0/2

SECTION OBSERVATONS INFORMATION (Recall from level using UP/DN arrows)

TOTAL SETUPS	TOTAL DISTANCE (D)	ACCUMULATED IMB (d)	ELEV DIFFERENCE (GROUND HGT)
5	352.2	+0.2	-0.0235

	CLOSURE	REMARKS
F		
B		
DIF		
ALW'D		

WIND CODE - (0) 0-6 MPH (1) 6-15 MPH (2) >15 MPH
SUN CODE - (0) 25% SUNNY (1) 25-75% SUNNY (2) >75% SUNNY
OTHER INFO CODES
CODE 22 - REJECT PREVIOUS BACKSIGHT AND FORSIGHT (NO INFO ENTRIES - PRESS REC)
CODE 33 - GRADIENT TEMPERATURES (INFO 1 - LOWER PROBE - NO DECIMAL 761 FOR 76.1)
(INFO 2 - UPPER PROBE - NO DECIMAL 761 FOR 76.1)
CODE 9999 - END OF DAY, CHG OBS, CHG EQUIPMENT (NO INFO ENTRIES - PRESS REC)

LEICA DIGITAL GEODETIC LEVELING - BACKUP RECORDING SHEET

LINE	PROJECT	FILENAME	PAGE OF
			3 3

SURVEY ORDER	SURVEY CLASS	TIME ZONE CODE		TEMP PROBE TOP HGT	TEMP PROBE BOTTOM HGT
	1				

CODE 1 - BEGINNING OF DAY OR CHANGE IN OBSERVER OR INSTRUMENT TYPE

INFO 1 DATE (MMDDYY)	INFO 2 OBS'R #	OBS'R INIT'S	INFO 3 -INST TYPE (2000, 2002, 3000, 3003)	INFO 4 -TEMP CODE (0 for C - 1 for F)

CODE 2 - EQUIPMENT USED

INFO 1 - INST SERIAL #	INFO 2 - INST COLLIMATION	ROD CODE	INFO 3 - ROD 1 SERIAL #	INFO 4 - ROD 2 SERIAL #
		396		

CODE 11 - BEGINNING SECTION INFORMATION

SPSN =	BM DESIG	BENCH MARK STAMPING	INFO 1 TIME (HHMM)	INFO 2 Rod On Mark #	INFO 3 TEMP	DIR F / B

CODE 99 - ENDING SECTION INFORMATION

SPSN =	BM DESIG	BENCH MARK STAMPING	INFO 1 TIME (HHMM)	INFO 2 Rod On Mark #	INFO 3 TEMP	INFO 4 W/S =
			1520PM			10

BACK-8

SECTION OBSERVATONS INFORMATION (Recall from level using UP/DN arrows)

TOTAL SETUPS	TOTAL DISTANCE (D)	ACCUMULATED IMB (d)	ELEV DIFFERENCE (GROUND HGT)
3			

	CLOSURE	REMARKS
F		FORGOT TO INSERT INTERMEDIATE
B		END OF SECTION
DIF		
ALW'D		

WIND CODE - (0) 0-6 MPH (1) 6-15 MPH (2) >15 MPH
SUN CODE - (0) 25% SUNNY (1) 25-75% SUNNY (2) >75% SUNNY
OTHER INFO CODES
CODE 22 - REJECT PREVIOUS BACKSIGHT AND FORSIGHT (NO INFO ENTRIES - PRESS REC)
CODE 33 - GRADIENT TEMPERATURES (INFO 1 - LOWER PROBE - NO DECIMAL 761 FOR 76.1)
(INFO 2 - UPPER PROBE - NO DECIMAL 761 FOR 76.1)
CODE 9999 - END OF DAY, CHG OBS, CHG EQUIPMENT (NO INFO ENTRIES - PRESS REC)

LEICA DIGITAL GEODETIC LEVELING - BACKUP RECORDING SHEET

LINE	PROJECT	FILENAME	PAGE	OF
			1	1

SURVEY ORDER	SURVEY CLASS	TIME ZONE CODE		TEMP PROBE TOP HGT	TEMP PROBE BOTTOM HGT
2	1	Q			

CODE 1 - BEGINNING OF DAY OR CHANGE IN OBSERVER OR INSTRUMENT TYPE

INFO 1 DATE (MMDDYY)	INFO 2 OBS'R #	OBS'R INIT'S	INFO 3 -INST TYPE (2000, 2002, 3000, (3003))	INFO 4 -TEMP CODE (0 for C - 1 for F)
5/11/5	1	SE		93°

CODE 2 - EQUIPMENT USED

INFO 1 - INST SERIAL #	INFO 2 - INST COLLIMATION	ROD CODE	INFO 3 - ROD 1 SERIAL #	INFO 4 - ROD 2 SERIAL #
2834ZD	~~89~~ -3.1	396	29572	29720

CODE 11 - BEGINNING SECTION INFORMATION

, ACTUALLY #0021 →

SPSN #	BM DESIG	BENCH MARK STAMPING	INFO 1 TIME (HHMM)	INFO 2 Rod On Mark #	INFO 3 TEMP	DIR F (B)
0022	BUCK 8	~~BUCK 8 A 2005~~	1500	1	93°	

CODE 99 - ENDING SECTION INFORMATION

SPSN #	BM DESIG	BENCH MARK STAMPING	INFO 1 TIME (HHMM)	INFO 2 Rod On Mark #	INFO 3 TEMP	INFO 4 W S =
0022	BUCK-9	X	1700	1	90°	0/2

SECTION OBSERVATONS INFORMATION (Recall from level using UP/DN arrows)

TOTAL SETUPS	TOTAL DISTANCE (D)	ACCUMULATED IMB (d)	ELEV DIFFERENCE (GROUND HGT)
7			

	CLOSURE	REMARKS
F		PUT WRONG SSN# @ CODE 11 ✓
B		
DIF		
ALW'D		

WIND CODE - (0) 0-6 MPH (1) 6-15 MPH (2) >15 MPH
SUN CODE - (0) 25% SUNNY (1) 25-75% SUNNY (2) >75% SUNNY
OTHER INFO CODES
CODE 22 - REJECT PREVIOUS BACKSIGHT AND FORSIGHT (NO INFO ENTRIES - PRESS REC)
CODE 33 - GRADIENT TEMPERATURES (INFO 1 - LOWER PROBE - NO DECIMAL 761 FOR 76.1)
(INFO 2 - UPPER PROBE - NO DECIMAL 761 FOR 76.1)
CODE 9999 - END OF DAY, CHG OBS, CHG EQUIPMENT (NO INFO ENTRIES - PRESS REC)

[illegible] MGT WELLS

+	DIST	−	DIST
1.7561	19.94		
1.2318	19.88	0.9836	39.74
+ 3.0 COLL		2.0050	40.0
1.7678	50.18		
1.7169	51.51	1.7518	49.[illegible]
1.1796	50.43	1.1965	51.15
1.5580	57.71	1.4907	51.50
1.4653	30.22	1.4412	57.76
1.4034	16.19	1.4454	30.45
END SECTION		1.3634	16.?
1.3852	50.34		
1.5208	54.60	1.4779	50.15
1.5257	23.75	1.6031	54.64
1.5919	20.47	1.5767	23.88
END SECTION		1.5585	20.53
1.6317	50.35		
1.7351	47.22	1.5469	50.[illegible]
1.4827	44.02	1.5082	47.24
1.4376	33.54	1.4567	44.02
* FORGOT TO INSERT ID PT # 0021 *		1.4532	33.85

5 | 5 | 5 16

DESC

(A) ↑ [illegible]

(B) ↑ [illegible]

ROD A

ROD B

ROD A

- BUCK - 4A SSN 0018
- TP-1
- TP-2
- TP-3
- TP-4
- TP-5
- BUCK 5-B SSN # 0019
- BUCK 5-B " "
- ~~B~~ TP-1 ~~STUCK TRUCK~~
- TP-2
- TP-3
- BUCK 6-A SSN - 0020
- BUCK 6-A " "
- TP-1
- TP-2
- TP-3
- BUCK ~~5-B~~ 8-A SSN - 0021

OKEECHOBEE MGNT WELL 5/11/15

+	DIST	-	DIST
1.79	19.87		
1.2597	19.94	1.0224	40.06
-3.1		2.0289	39.97

+	DIST	-	DIST
1.3758	38.80		
1.5503	36.45	1.4923	38.76
1.0713	35.35	1.0069	36.45
1.4559	33.83	1.4011	35.38
1.3825	37.59	~~1.5428~~	35.69
1.4845	37.41	1.4857	37.55
1.6291	21.13	1.3891	37.51
1.5410	10.70	1.6778	21.45
END SECTION		1.5289	10.26
1.5509	41.23		
		1.81	

DESC
RCD A
RCD B
RCD A

(A) S. BOYER, H. WOODRUFF
(B) D. VYES

DESC
BUCK 8-A (~~39-B~~) SSN # 21 (~~22~~)
TP-1
TP-2
TP-3
TP-4
TP-5
TP-6
TP-7
BUCK-9-B SSN # 22 (~~21~~)
BUCK-9-B " "
TP-6

OKEECHOBEE MONT WELL

+	DIST	−	DIST
1.7887	19.96		
1.2771	19.96	0.9541	39.95
+3.1		2.1122	39.97
1.4994	42.36		
1.5640	42.16	1.4913	42.57
1.4371	42.29	1.5197	42.60
1.6971	42.47	1.6500	42.38
0.9355	42.53	1.0123	42.53
1.2466	50.84	1.4783	42.27
END SECTION		1.1965	50.48
1.5887	42.55		
1.3058	42.15	1.4859	42.61
1.6444	42.54	1.4493	42.45
1.3667	36.25	1.4267	42.42
1.4273	6.21	1.3527	36.15
1.4462	6.46	1.4827	6.16
END SECTION		1.5654	6.21
1.5646	35.65		
1.4111	35.19	1.3626	35.40

- CONT -

5/17/5

23

DESC		
BCD Δ	(B) ↑	S ROTER
	(A) ↑	D RE
BCD B		D VE 15
BCD Δ		
BUCK 9-B SSN-22		
TP-1		
TP-2		
TP-3		
TP-4		
TP-5		
BUCK 8-A SSN-21		
BUCK 8-A SSN-21		
TP-1		
TP-2		
TP-3		
TP-4		
TP-5		
BUCK-6A SSN-20		
BUCK 6A SSN-20		
TP-1		

OKEECHOBEE MONT. WELL

+	DIST	–	DIST
1.7887	19.96		
1.2711	19.96	0.9541	39.95
B.1		2.1122	39.97
1.4994	42.36		
1.5620	42.16	1.4913	42.57
1.4371	42.29	1.5197	42.65
1.6971	42.47	1.6520	42.38
0.9355	42.53	1.0123	42.52
1.2466	50.84	1.4783	42.27
END SECTION		1.1965	50.48
1.5887	42.55		
1.3058	42.15	1.4859	42.61
1.6044	42.54	1.4493	42.45
1.3667	36.25	1.4267	42.42
1.4273	6.21	1.3527	36.15
1.4462	6.46	1.4827	6.16
END SECTION		1.5654	6.21
1.5546	35.65		
1.4111	35.19	1.3626	35.40

(margin note: 1.6044)

- CONT -

5/17/15

DESC ⊼ S. RAYER

(B) ↑ D. REE

(A) ↑ D. VETS

ROD A

ROD B

ROD A

BUCK 9-B SSN-22

TP-1

TP-2

TP-3

TP-4

TP-5

BUCK 8-A SSN-21

BUCK 8-A SSN-21

TP-1

TP-2

TP-3

TP-4

TP-5

BUCK 6A SSN-20

BUCK 6A SSN-20

TP-1

: 05-1233

OKEECHOBEE MON'T WELLS

1	DIST	2	DIST
1.7561	19.19		
1.3315	19.88	1.7332	21.2
+3.0	20.1	2.0050	Δ
1.7678	50.18		
1.4169	51.51	1.7818	49.2
1.1706	50.43	1.1965	51.1
1.5520	57.71	1.4707	51.0
1.4653	30.22	1.4412	57.7
1.4024	16.19	1.4151	30.
END SECTION		1.3634	16.?
1.3852	50.31		
1.5208	54.60	1.4777	50.15
1.5257	23.75	1.6031	54.64
1.5919	20.47	1.5762	23.8
END SECTION		1.5585	20.53
1.6317	50.35		
1.4351	47.72	1.5467	50.6
1.4827	41.06	1.5082	47.74
1.4376	33.54	1.4561	41.
FORGOT TO INSERT		1.4532	33.85

ID FT # 0?1

5|5|5

BASE — RD A — RD B — BM 1

(A) 1. [illegible]
(B) 1. [illegible]

BUCK-1A	SSI 0?1
TP-1	
TP-2	
TP-3	
TP-4	
TP-5	
BUCK 5-B	SSI # 0019
BUCK 5-B	" "
BE TP-1	STUCK TRUCK
TP-2	
TP-3	
BUCK 6-A	SSI = 0020
BUCK 6-A	
TP-1	
TP-2	
TP-3	
BUCK 8-A	SSI - 0021

05-1238

OKEECHOBEE MONIT WELL

+	DIST	−	DIST
1.79	19.87		
1.2597	19.94	1.0224	40.06
−3.1		2.0289	39.97

+	DIST	−	DIST
1.3758	38.80		
1.5503	36.45	1.4923	38.76
1.0713	35.35	1.0069	36.45
1.4559	33.83	1.4011	35.38
1.3825	37.59	1.5428	35.69
1.4845	37.41	1.4857	37.55
1.6291	21.13	1.3891	37.51
1.5410	10.70	1.6778	21.45
1.~~[illegible]~~ END SEC		1.5289	10.26

5/11/5 17

DESC

ROD A

ROD B

ROD A

↑ = ROTER
(A) ¶ H. WOODRUFF
(B) ¶ D. VYES

DESC

BUCK ~~89~~ 8-A -B SSN # ~~22~~ 21

TP-1

TP-2

TP-3

TP-4

TP-5

TP-6

TP-7

BUCK-9-B SSN # ~~21~~ 22

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Identification_Information:
        Citation:
                Citation_Information:
                        Originator: George F. Young, Inc.
                        Publication_Date: Unknown
                        Publication_Time: Unknown
                        Title: Buck Island Ranch Monitoring Well Benchmarks
                        Publication_Information:
                                Publication_Place: Not published
                                Publisher: None
        Description:
                Abstract:
                        South Florida Water Management District
                        Buck Island Ranch Monitoring Well Benchmarks
                Purpose:
                        To establish NAVD 88 and NGVD 29 elevations and
                        benchmarks at each of twenty two well sites.
        Time_Period_of_Content:
                Time_Period_Information:
                        Range_of_Dates/Times:
                                Beginning_Date: 20050217
                                Ending_Date: 20050617
                Currentness_Reference: Pending NGS Approval
        Status:
                Progress: In work
                Maintenance_and_Update_Frequency: Unknown
        Spatial_Domain:
                Bounding_Coordinates:
                        West_Bounding_Coordinate: -081°13'03"
                        East_Bounding_Coordinate: -080°12'06"
                        North_Bounding_Coordinate: +27°08'41"
                        South_Bounding_Coordinate: +27°07'50"
        Keywords:
                Theme:
                        Theme_Keyword_Thesaurus: None
                        Theme_Keyword: Record Survey
                        Theme_Keyword: Well Site
                Place:
                        Place_Keyword_Thesaurus: None
                        Place_Keyword: S.F.W.M.D. Well L28WFUVM
                        Place_Keyword: Sec. 18, Twp. 48 S., Rge. 33 E.
                        Place_Keyword: Hendry County, Florida
        Access_Constraints: None
        Use_Constraints: None
        Point_of_Contact:
                Contact_Information:
                        Contact_Person_Primary:
                                Contact_Person: Howard Ehmke
                                Contact_Organization: South Florida Water Management
District
                        Contact_Position: Professional Surveyor & Mapper
                        Contact_Address:
                                Address_Type: mailing and physical address
                                Address: 3301 Gun Club Road
                                City: West Palm Beach
                                State_or_Province: Florida
                                Postal_Code: 33406
                                Country: USA
                        Contact_Voice_Telephone: (561) 686-8800, Ext. 4636
                        Contact_Facsimile_Telephone: (561) 681-6265
                        Contact_Electronic_Mail_Address: hehmke@sfwmd.gov
                        Hours_of_Service: 8:00 am to 5:00 pm EST
Data_Quality_Information:
```

Attribute_Accuracy:
Attribute_Accuracy_Report:
This survey was prepared using sub-meter GPS and DNA 3003 Leveling instruments. The horizontal location of the well
and benchmark was performed using sub-meter GPS. The vertical data was collected using a Leica DNA 3003 Level.
Coordinates are based on the Florida State Plane Coordinate System, East Zone, NAD 83/90.
Elevations are based on NAVD 88

Logical_Consistency_Report:
Horizontal data was established using Coastguard corrected sub-meter GPS
Vertical data was established using control points H-437 and J-437.

Completeness_Report:
Horizontal location taken at approximate center of well.
Site Benchmark is a 3" bronze disk set in top of poured in place 48"x12" round concrete monument
THE MARK IS ABOUT 15 MI SOUTHEAST OF LAKE PLACID, 12.5 MI NORTHWEST OF LAKEPORT IN SECTION 34, TOWNSHIP 38 SOUTH, RANGE 31 EAST.TO REACH THE MARK FROM THE JUNCTION OF U.S. HIGHWAY 27 AND STATE ROAD 70, GO EAST ON STATE ROAD 70 FOR 7.16 MI TO JC DURRANCE ROAD (A DIRT ROAD) ON THE RIGHT, TURN RIGHT AND GO SOUTH FOR 4.51 MI TO THE END OF JC DURRANCE ROAD AND A TEE INTERSECTION WITH UNNAMED DIRT ROAD. TURN RIGHT, GO THROUGH A GATE AND HEAD WEST 0.5 MI TO THREE GATES. GO THROUGH THE CENTER GATE AND HEAD SOUTH 0.59 MI TO THE SOUTH SIDE OF A BRIDGE OVER A CANAL AND THE NORTH SIDE OF A LARGE FENCED PASTURE. THE MARK IS 4 FT WEST AND 1,804 FT SOUTH OF THE SOUTH END OF THE BRIDGE.THE MARK IS LOCATED ON THE SOUTH SIDE OF A MONITORING WELL ENCLOSED BY A 4 FT WOODEN FENCE. THE MARK IS A 3 IN BRONZE SURVEY DISK SET IN CONCRETE, 2 FT SOUTH OF THE FENCE, SET FLUSH WITH THE GROUND. THE NAD 1983, FLORIDA EAST ZONE, STATE PLANE
1017417
590621 FT.NOTE A MAGNET WAS IMBEDDED IN THE GROUND ON THE SOUTH SIDE OF THE
NONE
THE MARK IS ABOUT 15 MI SOUTHEAST OF LAKE PLACID, 12.5 MI NORTHWEST OF LAKEPORT IN SECTION 34, TOWNSHIP 38 SOUTH, RANGE 31 EAST.TO REACH THE MARK FROM THE JUNCTION OF U.S. HIGHWAY 27 AND STATE ROAD 70, GO EAST ON STATE ROAD 70 FOR 7.16 MI TO JC DURRANCE ROAD (A DIRT ROAD) ON THE RIGHT, TURN RIGHT AND GO SOUTH FOR 4.51 MI TO THE END OF JC DURRANCE ROAD AND A TEE INTERSECTION WITH UNNAMED DIRT ROAD. TURN RIGHT, GO THROUGH A GATE AND HEAD WEST 0.5 MI TO THREE GATES. GO THROUGH THE CENTER GATE AND HEAD SOUTH 0.59 MI TO THE SOUTH SIDE OF A BRIDGE OVER A CANAL AND THE NORTH SIDE OF A LARGE FENCED PASTURE. THE MARK IS 3 FT EAST AND 1,800 FT SOUTH OF THE SOUTH END OF THE BRIDGE.THE MARK IS LOCATED ON THE SOUTH

SIDE OF A MONITORING WELL ENCLOSED BY A 4 FT
WOODEN FENCE. THE MARK IS 1.5 IN STEEL PIPE, 1
FT INSIDE THE FENCED ENCLOSURE, SET 3 IN
ABOVE THE SURROUNDING GROUND. THE NAD
1983, FLORIDA EAST ZONE, STATE PLANE
1017417
590621 FT.Notable Land marks: NONE
THE MARK IS ABOUT 15 MI SOUTHEAST OF
LAKE PLACID, 12.5 MI NORTHWEST OF LAKEPORT IN
SECTION 34, TOWNSHIP 38 SOUTH, RANGE 31
EAST.TO REACH THE MARK FROM THE JUNCTION
OF U.S. HIGHWAY 27 AND STATE ROAD 70, GO EAST
ON STATE ROAD 70 FOR 7.16 MI TO JC DURRANCE
ROAD (A DIRT ROAD) ON THE RIGHT, TURN RIGHT
AND GO SOUTH FOR 4.51 MI TO THE END OF JC
DURRANCE ROAD AND A TEE INTERSECTION WITH
UNNAMED DIRT ROAD. TURN RIGHT, GO THROUGH
A GATE AND HEAD WEST 0.5 MI TO THREE GATES.
GO THROUGH THE CENTER GATE AND HEAD
SOUTH 0.59 MI TO THE SOUTH SIDE OF A BRIDGE
OVER A CANAL AND THE NORTH SIDE OF A LARGE
FENCED PASTURE. THE MARK IS 4 FT EAST AND
1799FT SOUTH OF THE SOUTH END OF THE
BRIDGE.THE MARK IS A 3 IN PVC MONITORING WELL
PIPE INSIDE A STEEL BOX SURROUNDED BY A 4 FT
WOODEN FENCE. THE MARK IS SET 4 FT ABOVE THE
SURROUNDING GROUND. THE NAD 1983, FLORIDA
EAST ZONE, STATE PLANE COORDINATE FOR THE
1017418 FT, E=590621 FT.Notable Land
NONE
N270757
W0801206

Positional_Accuracy:
Horizontal_Positional_Accuracy:
Horizontal_Positional_Accuracy_Report:
The horizontal positions were established with sub-meter
GPS
Vertical_Positional_Accuracy:
Vertical_Positional_Accuracy_Report:
Second Order, Class II
The methodology was approved by Mr. Ronnie Taylor, State, Geodetic Advisor
The NAVD 88 elevations established for this survey was
determined by using the published values for benchmark
H-437 and J-437.

Lineage:
Process_Step:
Process_Description:
Horizontal data was established using Coastguard corrected sub-meter GPS
Vertical data was established using control points H-437 and J-437.
Process_Date: 20050617

Metadata_Reference_Information:
Metadata_Date: 20050617
Metadata_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Catherine A. Pollak
Contact_Organization: George F. Young, Inc.

```
                        Contact_Position: Project Surveyor
                        Contact_Address:
                                Address_Type: mailing and physical address
                                Address:
                                        299 Dr. Martin Luther King, Jr.
                                        Street, North
                                City: St. Petersburg
                                State_or_Province: Florida
                                Postal_Code: 33701
                                Country: USA
                        Contact_Voice_Telephone: (727) 822-4317
                        Contact_Facsimile_Telephone: (727) 822-2919
                        Contact_Electronic_Mail_Address: pollak@georgefyoung.com
                        Hours_of_Service: 8:00 am to 5:00 pm EST
        Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial
Metadata
        Metadata_Standard_Version: 19980601
```

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY: HIGHLANDS	**PROJECT: BUCK ISLAND RANCH**	**DESIGNATION: BUCK 08A**
SECTION 34	**TOWNSHIP 38 SOUTH**	**RANGE 31 EAST**
GEOGRAPHIC INDEX OF QUAD		
Established by HYATT SURVEY SERVICES **____ Recovered by**	**NAME OF QUADRANGLE: BRIGHTON NW**	
SURVEYOR R. HYATT **DATE** 06 /16 / 2005	**FIELD BOOK** 154 **PAGE** 1 - 45	
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 4th (circle one) **VERTICAL 1 2 3**		
STATE PLANE COORDINATES	**X = 590621 FT**	**Y = 1017417 FT** **EL. = 8.1440 m**
LATITUDE : N270757	LONGITUDE: W0801206	

DESCRIPTION

To Reach:

THE MARK IS ABOUT 15 MI SOUTHEAST OF LAKE PLACID, 12.5 MI NORTHWEST OF LAKEPORT IN SECTION 34, TOWNSHIP 38 SOUTH, RANGE 31 EAST.

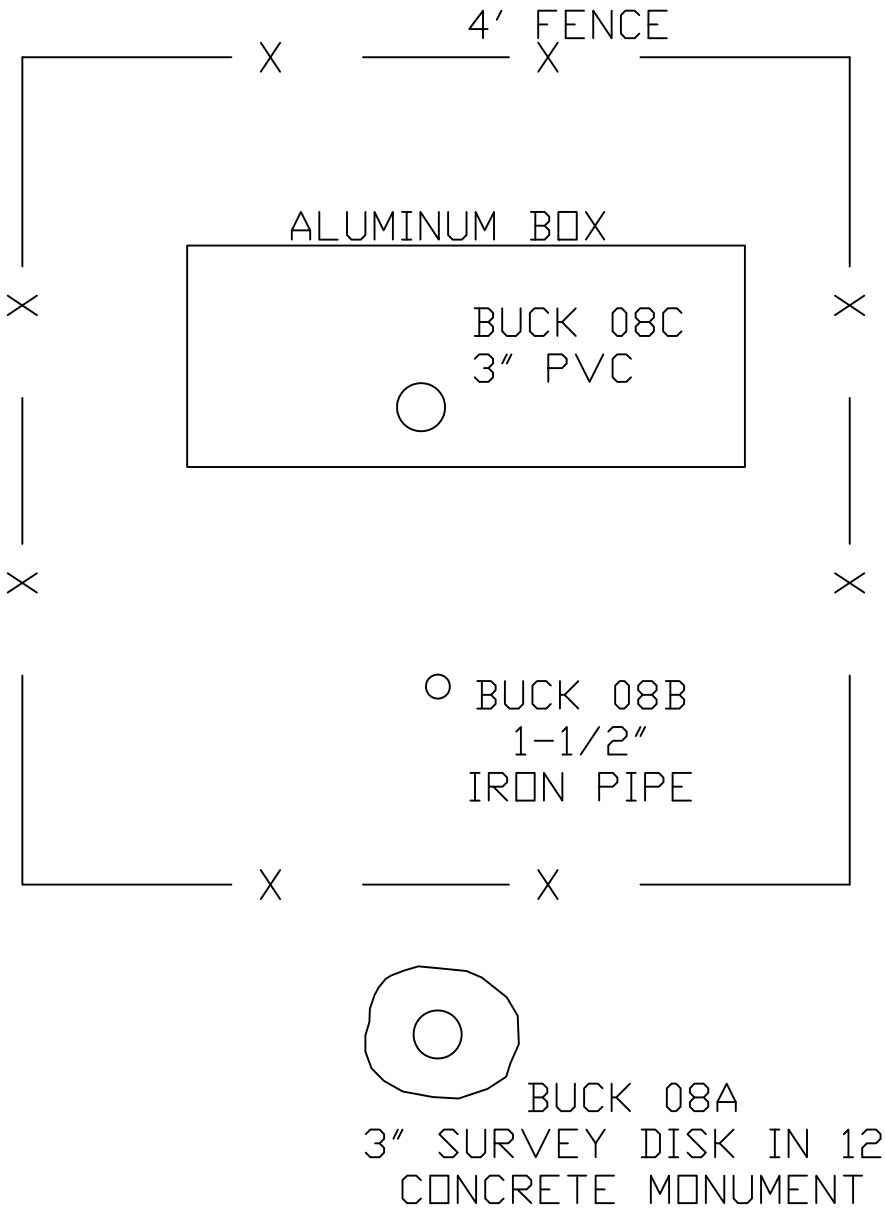
TO REACH THE MARK FROM THE JUNCTION OF U.S. HIGHWAY 27 AND STATE ROAD 70, GO EAST ON STATE ROAD 70 FOR 7.16 MI TO JC DURRANCE ROAD (A DIRT ROAD) ON THE RIGHT, TURN RIGHT AND GO SOUTH FOR 4.51 MI TO THE END OF JC DURRANCE ROAD AND A TEE INTERSECTION WITH UNNAMED DIRT ROAD. TURN RIGHT, GO THROUGH A GATE AND HEAD WEST 0.5 MI TO THREE GATES. GO THROUGH THE CENTER GATE AND HEAD SOUTH 0.59 MI TO THE SOUTH SIDE OF A BRIDGE OVER A CANAL AND THE NORTH SIDE OF A LARGE FENCED PASTURE. THE MARK IS 4 FT WEST AND 1,804 FT SOUTH OF THE SOUTH END OF THE BRIDGE.

THE MARK IS LOCATED ON THE SOUTH SIDE OF A MONITORING WELL ENCLOSED BY A 4 FT WOODEN FENCE. THE MARK IS A 3 IN BRONZE SURVEY DISK SET IN CONCRETE, 2 FT SOUTH OF THE FENCE, SET FLUSH WITH THE GROUND. THE NAD 1983, FLORIDA EAST ZONE, STATE PLANE COORDINATE POSITION OF THE MARK IS N=1017417 FT, E=590621 FT.

NOTE A MAGNET WAS IMBEDDED IN THE GROUND ON THE SOUTH SIDE OF THE MONUMENT.

Notable Land marks: NONE

SKETCH: SEE ATTACHED SKETCH



TITLE

SKETCH OF BUCK 08 MONITORING WELL

Hyatt Survey Services, Inc.

Geographic Data Specialists

11007 8TH AVENUE EAST BRADENTON, FLORIDA 34212

PH. (941) 748-4693 FAX (941) 744-1643 LB No.: 7203

JOB NUMBER	REVISION	SCALE	DATE	DRAWN BY	FILE NAME	SHEET
12-0538		NOT TO SCALE	6/17/05	RSF	BUCK08.DWG	1 OF 1

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY: HIGHLANDS	**PROJECT: BUCK ISLAND RANCH**	**DESIGNATION: BUCK 08B**
SECTION 34	**TOWNSHIP 38 SOUTH**	**RANGE 31 EAST**
GEOGRAPHIC INDEX OF QUAD		
Established by HYATT SURVEY SERVICES **____ Recovered by**	**NAME OF QUADRANGLE: BRIGHTON NW**	
SURVEYOR R. HYATT **DATE** 06 /16 / 2005	**FIELD BOOK** 154 **PAGE** 1 - 45	
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 4th (circle one) **VERTICAL 1 2 3**		
STATE PLANE COORDINATES	**X = 590621 FT**	**Y = 1017417 FT** **EL. = 8.2739 m**
LATITUDE : N270757		LONGITUDE: W0811206

DESCRIPTION

To Reach:

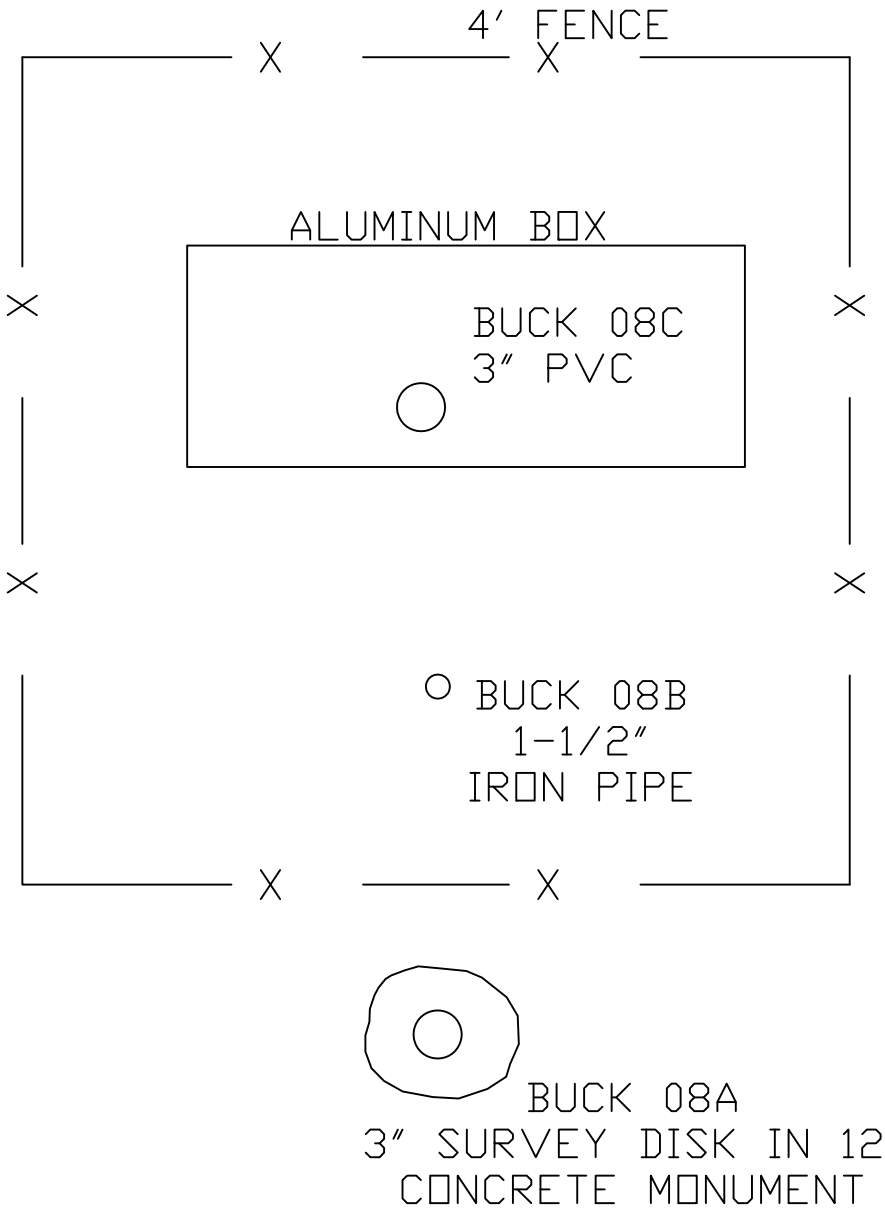
THE MARK IS ABOUT 15 MI SOUTHEAST OF LAKE PLACID, 12.5 MI NORTHWEST OF LAKEPORT IN SECTION 34, TOWNSHIP 38 SOUTH, RANGE 31 EAST.

TO REACH THE MARK FROM THE JUNCTION OF U.S. HIGHWAY 27 AND STATE ROAD 70, GO EAST ON STATE ROAD 70 FOR 7.16 MI TO JC DURRANCE ROAD (A DIRT ROAD) ON THE RIGHT, TURN RIGHT AND GO SOUTH FOR 4.51 MI TO THE END OF JC DURRANCE ROAD AND A TEE INTERSECTION WITH UNNAMED DIRT ROAD. TURN RIGHT, GO THROUGH A GATE AND HEAD WEST 0.5 MI TO THREE GATES. GO THROUGH THE CENTER GATE AND HEAD SOUTH 0.59 MI TO THE SOUTH SIDE OF A BRIDGE OVER A CANAL AND THE NORTH SIDE OF A LARGE FENCED PASTURE. THE MARK IS 3 FT EAST AND 1,800 FT SOUTH OF THE SOUTH END OF THE BRIDGE.

THE MARK IS LOCATED ON THE SOUTH SIDE OF A MONITORING WELL ENCLOSED BY A 4 FT WOODEN FENCE. THE MARK IS 1.5 IN STEEL PIPE, 1 FT INSIDE THE FENCED ENCLOSURE, SET 3 IN ABOVE THE SURROUNDING GROUND. THE NAD 1983, FLORIDA EAST ZONE, STATE PLANE COORDINATE POSITION OF THE MARK IS N=1017417 FT, E=590621 FT.

Notable Land marks: NONE

SKETCH: SEE ATTACHED SKETCH



TITLE

SKETCH OF BUCK 08 MONITORING WELL

Hyatt Survey Services, Inc.

Geographic Data Specialists

11007 8TH AVENUE EAST BRADENTON, FLORIDA 34212

PH. (941) 748-4693 FAX (941) 744-1643 LB No.: 7203

JOB NUMBER	REVISION	SCALE	DATE	DRAWN BY	FILE NAME	SHEET
12-0538		NOT TO SCALE	6/17/05	RSF	BUCK08.DWG	1 OF 1

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY: HIGHLANDS	**PROJECT: BUCK ISLAND RANCH**	**DESIGNATION: BUCK 08C**
SECTION 34	**TOWNSHIP 38 SOUTH**	**RANGE 31 EAST**
GEOGRAPHIC INDEX OF QUAD		
Established by HYATT SURVEY SERVICES **____ Recovered by**	**NAME OF QUADRANGLE: BRIGHTON NW**	
SURVEYOR R. HYATT **DATE** 06 /16 / 2005	**FIELD BOOK** 154 **PAGE** 1 - 45	
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 4th (circle one) **VERTICAL 1 2 3**		
STATE PLANE COORDINATES	**X = 590621 FT**	**Y = 1017418 FT** **EL. = 9.0945 m**
LATITUDE : N270757	LONGITUDE: W0811206	

DESCRIPTION

To Reach:

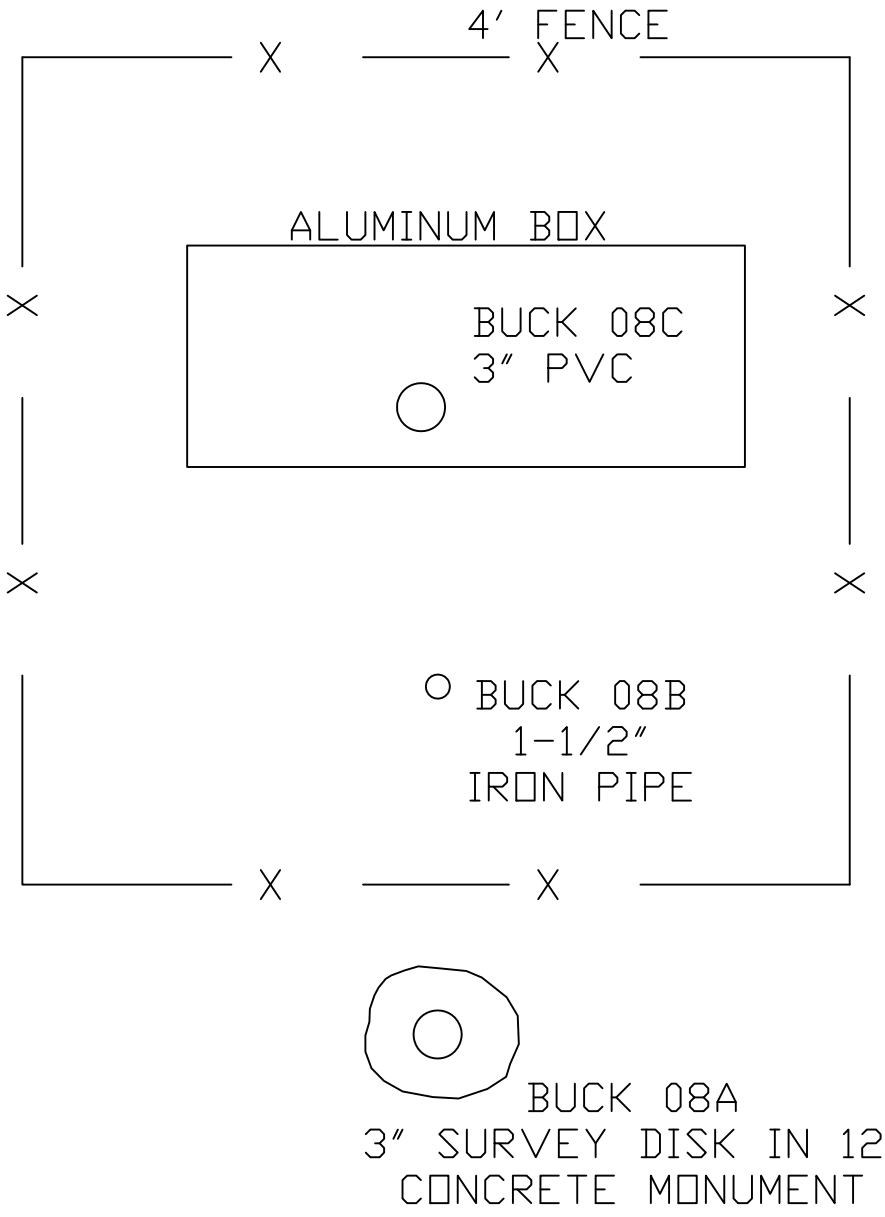
THE MARK IS ABOUT 15 MI SOUTHEAST OF LAKE PLACID, 12.5 MI NORTHWEST OF LAKEPORT IN SECTION 34, TOWNSHIP 38 SOUTH, RANGE 31 EAST.

TO REACH THE MARK FROM THE JUNCTION OF U.S. HIGHWAY 27 AND STATE ROAD 70, GO EAST ON STATE ROAD 70 FOR 7.16 MI TO JC DURRANCE ROAD (A DIRT ROAD) ON THE RIGHT, TURN RIGHT AND GO SOUTH FOR 4.51 MI TO THE END OF JC DURRANCE ROAD AND A TEE INTERSECTION WITH UNNAMED DIRT ROAD. TURN RIGHT, GO THROUGH A GATE AND HEAD WEST 0.5 MI TO THREE GATES. GO THROUGH THE CENTER GATE AND HEAD SOUTH 0.59 MI TO THE SOUTH SIDE OF A BRIDGE OVER A CANAL AND THE NORTH SIDE OF A LARGE FENCED PASTURE. THE MARK IS 4 FT EAST AND 1799 FT SOUTH OF THE SOUTH END OF THE BRIDGE.

THE MARK IS A 3 IN PVC MONITORING WELL PIPE INSIDE A STEEL BOX SURROUNDED BY A 4 FT WOODEN FENCE. THE MARK IS SET 4 FT ABOVE THE SURROUNDING GROUND. THE NAD 1983, FLORIDA EAST ZONE, STATE PLANE COORDINATE FOR THE MARK IS N=1017418 FT, E=590621 FT.

Notable Land marks: NONE

SKETCH: SEE ATTACHED SKETCH



TITLE

SKETCH OF BUCK 08 MONITORING WELL

Hyatt Survey Services, Inc.

Geographic Data Specialists

11007 8TH AVENUE EAST BRADENTON, FLORIDA 34212

PH. (941) 748-4693 FAX (941) 744-1643 LB No.: 7203

JOB NUMBER	REVISION	SCALE	DATE	DRAWN BY	FILE NAME	SHEET
12-0538		NOT TO SCALE	6/17/05	RSF	BUCK08.DWG	1 OF 1

The NGS Data Sheet

See file _dsdata.txt for more information about the datasheet.

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DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.12
1        National Geodetic Survey,   Retrieval Date = JANUARY 26, 2005
 AE6391 ***********************************************************************
 AE6391  DESIGNATION -  H 437
 AE6391  PID         -  AE6391
 AE6391  STATE/COUNTY-  FL/HIGHLANDS
 AE6391  USGS QUAD   -  BRIGHTON NW (1983)
 AE6391
 AE6391                         *CURRENT SURVEY CONTROL
 AE6391  ______________________________________________________________________
 AE6391* NAD 83(1986)-  27 08 14.     (N)    081 12 06.     (W)     SCALED
 AE6391* NAVD 88     -         9.395  (meters)      30.82   (feet)  ADJUSTED
 AE6391  ______________________________________________________________________
 AE6391  GEOID HEIGHT-         -25.20  (meters)                      GEOID03
 AE6391  DYNAMIC HT  -           9.380 (meters)      30.77  (feet)  COMP
 AE6391  MODELED GRAV-     979,125.1   (mgal)                        NAVD 88
 AE6391
 AE6391  VERT ORDER  -  SECOND    CLASS I
 AE6391
 AE6391.The horizontal coordinates were scaled from a topographic map and have
 AE6391.an estimated accuracy of +/- 6 seconds.
 AE6391
 AE6391.The orthometric height was determined by differential leveling
 AE6391.and adjusted by the National Geodetic Survey in March 1998.
 AE6391
 AE6391.The geoid height was determined by GEOID03.
 AE6391
 AE6391.The dynamic height is computed by dividing the NAVD 88
 AE6391.geopotential number by the normal gravity value computed on the
 AE6391.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 AE6391.degrees latitude (g = 980.6199 gals.).
 AE6391
 AE6391.The modeled gravity was interpolated from observed gravity values.
 AE6391
 AE6391;                    North         East     Units  Estimated Accuracy
 AE6391;SPC FL E     -   310,620.      180,010.      MT  (+/- 180 meters Scaled)
 AE6391
 AE6391                          SUPERSEDED SURVEY CONTROL
 AE6391
 AE6391.No superseded survey control is available for this station.
 AE6391
 AE6391_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML800016(NAD 83)
 AE6391_MARKER: DV = VERTICAL CONTROL DISK
 AE6391_SETTING: 38 = BRIDGE ABUTMENT
 AE6391_STAMPING: H 437 1995
 AE6391_MARK LOGO: NGS
 AE6391_MAGNETIC: N = NO MAGNETIC MATERIAL
 AE6391_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
 AE6391_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AE6391+SATELLITE: SATELLITE OBSERVATIONS - 1995
 AE6391
 AE6391  HISTORY     - Date     Condition        Report By
 AE6391  HISTORY     - 1995     MONUMENTED       FLDEP
 AE6391
 AE6391                          STATION DESCRIPTION
 AE6391
 AE6391'DESCRIBED BY FL DEPT OF ENV PRO 1995 (LGB)
 AE6391'THE MARK IS ABOUT 15.0 MI (24.1 KM) SOUTHEAST OF LAKE PLACID, 12.5 MI
 AE6391'(20.1 KM) NORTHWEST OF LAKEPORT IN SECTION 27, TOWNSHIP 38 SOUTH,
 AE6391'RANGE 31 EAST. TO REACH THE MARK FROM THE INTERSECTION OF U.S. HIGHWAY
 AE6391'27 AND STATE ROAD 70 SOUTH OF LAKE PLACID, GO EAST ON STATE ROAD 70
 AE6391'FOR 7.7 MI (12.4 KM) TO THE WEST END OF THE BRIDGE OVER CANAL C 41
 AE6391'(HARNEY POND CANAL), TURN RIGHT AT THE WEST END OF BRIDGE, PASSING
 AE6391'THROUGH THE GATE, GO SOUTH ON THE LEVEE ROAD FOR 1.05 MI (1.69 KM) TO
 AE6391'A SHARP CURVE TO THE RIGHT, CONTINUE WEST ON THE LEVEE ROAD FOR 1.85
 AE6391'MI (2.98 KM) TO A CURVE TO THE LEFT, CONTINUE SOUTH ON THE LEVEE ROAD
 AE6391'FOR 2.1 MI (3.4 KM) TO A CURVE TO THE LEFT, CONTINUE SOUTHEAST ON THE
 AE6391'LEVEE ROAD FOR 2.7 MI (4.3 KM) TO A BRIDGE ON THE LEFT AND THE MARK
 AE6391'SET FLUSH IN THE SOUTHWEST BRIDGE ABUTMENT. LOCATED 41.7 FT (12.7 M)
```

AE6391'NORTH OF THE APPROXIMATE CENTERLINE OF THE LEVEE ROAD, 18.9 FT (5.8 M)
AE6391'NORTH OF A CARSONITE WITNESS POST, 8.4 FT (2.6 M) WEST OF THE
AE6391'APPROXIMATE CENTERLINE OF THE BRIDGE AND 5.9 FT (1.8 M) SOUTH OF A
AE6391'GATE. NOTE ALL GATES ON LEVEE ARE LOCKED, FOR KEY CONTACT CARL ZEISS,
AE6391'SOUTH FLORIDA WATER MANAGEMENT DISTRICT, WEST PALM BEACH, FL. PHONE
AE6391'NUMBER (407) 686-8800.

*** 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 = Sybase ,PROGRAM = datasheet, VERSION = 7.12
1        National Geodetic Survey,   Retrieval Date = JANUARY 26, 2005
 AE6392 ***********************************************************************
 AE6392  DESIGNATION -  J 437
 AE6392  PID         -  AE6392
 AE6392  STATE/COUNTY-  FL/HIGHLANDS
 AE6392  USGS QUAD   -  BRIGHTON NW (1983)
 AE6392
 AE6392                        *CURRENT SURVEY CONTROL
 AE6392  ______________________________________________________________________
 AE6392* NAD 83(1999)-  27 08 13.27828(N)    081 11 02.84354(W)     ADJUSTED
 AE6392* NAVD 88     -        11.555  (meters)      37.91   (feet)  ADJUSTED
 AE6392  ______________________________________________________________________
 AE6392  X           -     870,509.596 (meters)                     COMP
 AE6392  Y           -  -5,612,861.809 (meters)                     COMP
 AE6392  Z           -   2,891,728.917 (meters)                     COMP
 AE6392  LAPLACE CORR-          -3.52  (seconds)                    DEFLEC99
 AE6392  ELLIP HEIGHT-         -13.67  (meters)          (05/31/01) GPS OBS
 AE6392  GEOID HEIGHT-         -25.25  (meters)                     GEOID03
 AE6392  DYNAMIC HT  -          11.537 (meters)      37.85  (feet)  COMP
 AE6392  MODELED GRAV-     979,122.9   (mgal)                       NAVD 88
 AE6392
 AE6392  HORZ ORDER  -  FIRST
 AE6392  VERT ORDER  -  SECOND    CLASS I
 AE6392  ELLP ORDER  -  FOURTH    CLASS I
 AE6392
 AE6392.The horizontal coordinates were established by GPS observations
 AE6392.and adjusted by the National Geodetic Survey in May 2001.
 AE6392
 AE6392.The orthometric height was determined by differential leveling
 AE6392.and adjusted by the National Geodetic Survey in March 1998.
 AE6392
 AE6392.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 AE6392
 AE6392.The Laplace correction was computed from DEFLEC99 derived deflections.
 AE6392
 AE6392.The ellipsoidal height was determined by GPS observations
 AE6392.and is referenced to NAD 83.
 AE6392
 AE6392.The geoid height was determined by GEOID03.
 AE6392
 AE6392.The dynamic height is computed by dividing the NAVD 88
 AE6392.geopotential number by the normal gravity value computed on the
 AE6392.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 AE6392.degrees latitude (g = 980.6199 gals.).
 AE6392
 AE6392.The modeled gravity was interpolated from observed gravity values.
 AE6392
 AE6392;                    North         East     Units Scale Factor Converg.
 AE6392;SPC FL E     -   310,599.174   181,748.129   MT  0.99994529   -0 05 02.3
 AE6392;UTM  17      - 3,001,625.181   481,754.356   MT  0.99960411   -0 05 02.3
 AE6392
 AE6392!             -  Elev Factor  x  Scale Factor =   Combined Factor
 AE6392!SPC FL E     -   1.00000215  x   0.99994529  =   0.99994744
 AE6392!UTM  17      -   1.00000215  x   0.99960411  =   0.99960626
 AE6392
 AE6392                          SUPERSEDED SURVEY CONTROL
 AE6392
 AE6392  NAD 83(1990)-  27 08 13.27723(N)    081 11 02.84324(W) AD(       ) 1
 AE6392  ELLIP H (05/30/00)  -13.70   (m)                        GP(       ) 3 2
 AE6392  NAVD 88 (05/30/00)   11.55   (m)           37.9    (f) LEVELING    3
 AE6392
 AE6392.Superseded values are not recommended for survey control.
 AE6392.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 AE6392.See file dsdata.txt to determine how the superseded data were derived.
 AE6392
 AE6392_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML8175401625(NAD 83)
 AE6392_MARKER: I = METAL ROD
 AE6392_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
```

AE6392_STAMPING: J 437 1995
AE6392_MARK LOGO: NGS
AE6392_PROJECTION: FLUSH
AE6392_MAGNETIC: N = NO MAGNETIC MATERIAL
AE6392_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
AE6392_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AE6392+SATELLITE: SATELLITE OBSERVATIONS - July 13, 1999
AE6392_ROD/PIPE-DEPTH: 24.4 meters
AE6392
AE6392 HISTORY   - Date   Condition   Report By
AE6392 HISTORY   - 1995   MONUMENTED   FLDEP
AE6392 HISTORY   - 19990713 GOOD   BAH
AE6392
AE6392   STATION DESCRIPTION
AE6392
AE6392'DESCRIBED BY FL DEPT OF ENV PRO 1995 (LGB)
AE6392'THE MARK IS ABOUT 15.0 MI (24.1 KM) SOUTHEAST OF LAKE PLACID, 12.1 MI
AE6392'(19.5 KM) NORTHWEST OF LAKEPORT IN SECTION 25, TOWNSHIP 38 SOUTH,
AE6392'RANGE 31 EAST. TO REACH THE MARK FROM THE INTERSECTION OF U.S. HIGHWAY
AE6392'27 AND STATE ROAD 70 SOUTH OF LAKE PLACID, GO EAST ON STATE ROAD 70
AE6392'FOR 7.7 MI (12.4 KM) TO THE WEST END OF THE BRIDGE OVER CANAL C 41
AE6392'(HARNEY POND CANAL), TURN RIGHT AT THE WEST END OF BRIDGE, PASSING
AE6392'THROUGH THE GATE, GO SOUTH ON THE LEVEE ROAD FOR 1.05 MI (1.69 KM) TO
AE6392'A SHARP CURVE TO THE RIGHT, CONTINUE WEST ON THE LEVEE ROAD FOR 1.85
AE6392'MI (2.98 KM) TO A CURVE TO THE LEFT, CONTINUE SOUTH ON THE LEVEE ROAD
AE6392'FOR 2.1 MI (3.4 KM) TO A CURVE TO THE LEFT, CONTINUE SOUTHEAST ON THE
AE6392'LEVEE ROAD FOR 2.7 MI (4.3 KM) TO ANOTHER CURVE TO THE LEFT, CONTINUE
AE6392'EAST ON THE LEVEE ROAD FOR 1.1 MI (1.8 KM) TO A PAIR OF 5.0 FT (1.5 M)
AE6392'DIAMETER CULVERTS, A GATE, AND THE MARK JUST EAST OF THE GATE ON THE
AE6392'RIGHT, A STAINLESS STEEL ROD DRIVEN TO THE DEPTH OF 80.0 FT (24.4 M)
AE6392'RECESSED 0.4 FT (12.2 CM) WITH A LOGO CAP FLUSH WITH THE GROUND.
AE6392'LOCATED 118.0 FT (36.0 M) SOUTH OF THE TOP SCARP OF CANAL C 41, 90.0
AE6392'FT (27.4 M) NORTH OF A FENCE LINE, 6.0 FT (1.8 M) EAST OF THE SOUTH
AE6392'GATE POST AND 2.5 FT (0.8 M) EAST OF A CARSONITE WITNESS POST. NOTE
AE6392'ACCESS TO DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP. NOTE ALL GATES
AE6392'ON LEVEE ARE LOCKED, FOR KEY CONTACT CARL ZEISS, SOUTH FLORIDA WATER
AE6392'MANAGEMENT DISTRICT, WEST PALM BEACH, FL. PHONE NUMBER (407)
AE6392'686-8800.
AE6392
AE6392   STATION RECOVERY (1999)
AE6392
AE6392'RECOVERY NOTE BY BERRYMAN & HENIGAR 1999 (BH)
AE6392'RECOVERED AS DESCRIBED.

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

SFWMD - Buck Island Ranch
Monitoring Well Benchmarks
Computation Sheet

West Side Bench Runs

				Foreward Run #1								Reverse Run #2						Preliminary	Preliminary	
Plus	HI	Minus	Elevation	Benchmark Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Plus	HI	Minus	Elevation	Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Mean Delta	Adjusted Elevation (meters)	Prorated Elevation Adjustment	Benchmark Description
1.5769	10.9719		9.3950	**H-437**				1.5290	9.5759		8.0469	**Buck 1A**					8.0469	**8.0479**	**Buck 1A**
1.2373	10.2816	1.9276	9.0443					1.6929	10.5401	0.7287	8.8472								
1.4202	10.2451	1.4567	8.8249					1.1648	9.8373	1.8676	8.6725								
1.9284	10.2106	1.9629	8.2822					1.2641	10.1098	0.9916	8.8457								
1.4947	10.3185	1.3868	8.8238					1.6112	10.6170	1.1040	9.0058								
1.4255	10.4332	1.3108	9.0077					1.2763	10.4593	1.4340	9.1830								
1.6000	10.3754	1.6578	8.7754					1.6381	10.7007	1.3967	9.0626								
1.4450	10.3749	1.4455	8.9299					1.3182	10.4256	1.5933	9.1074								
1.3653	10.2412	1.4990	8.8759					1.4297	10.3343	1.5210	8.9046								
1.3029	10.4064	1.1377	9.1035					1.2983	10.3796	1.2530	9.0813								
1.4358	10.4914	1.3508	9.0556					1.6185	10.5848	1.4133	8.9663								
1.4350	10.5093	1.4171	9.0743					1.4891	10.5131	1.5608	9.0240								
1.3662	10.3915	1.4840	9.0253					1.5914	10.4590	1.6455	8.8676								
1.8000	10.5282	1.6633	8.7282					1.2818	10.3154	1.4254	9.0336								
1.5585	10.6713	1.4154	9.1128					1.4516	10.2345	1.5325	8.7829								
1.3980	10.6202	1.4491	9.2222					1.5334	10.3955	1.3724	8.8621								
1.8185	10.6895	1.7492	8.8710					1.4060	10.3779	1.4236	8.9719								
1.2979	10.2080	1.7794	8.9101					1.5885	10.5146	1.4518	8.9261								
1.2827	9.8445	1.6462	8.5618					1.4112	10.3117	1.6141	8.9005								
1.0878	10.0836	0.8487	8.9958					1.2995	10.3217	1.2895	9.0222								
1.5901	9.8335	1.8402	8.2434					1.5650	10.9147	0.9720	9.3497								
1.5609	9.5286	1.8658	7.9677					1.6021	11.1659	1.3509	9.5638								
		1.4837	8.0449	**Buck 1A**	32.4276	33.7777	-1.3501			1.7713	9.3946	**H-437**	32.0607	30.713	1.3477	1.3489			
1.6026	9.6475		8.0449	**Buck 1A**				1.5308	9.5124		7.9816	**Buck 2A**					7.98255	**7.9839**	**Buck 2A**
1.4547	9.6357	1.4665	8.1810					1.6312	9.8526	1.2910	8.2214								
1.5586	9.8827	1.3116	8.3241					1.4845	9.9331	1.4040	8.4486								
1.4750	9.8521	1.5056	8.3771					1.4619	10.0354	1.3596	8.5735								
1.4788	9.7537	1.5772	8.2749					1.5758	10.0207	1.5905	8.4449								
1.4061	9.6808	1.4790	8.2747					1.4685	9.6838	1.8054	8.2153								
1.3335	9.4576	1.5567	8.1241					1.5098	9.7072	1.4864	8.1974								
1.5206	9.4590	1.5192	7.9384					1.4091	9.6185	1.4978	8.2094								
		1.4775	7.9815	**Buck 2A**	11.8299	11.8933	-0.0634			1.5716	8.0469	**Buck 1A**	12.0716	12.0063	0.0653	0.06435			
1.4975	9.4790		7.9815	**Buck 2A**				1.2116	9.4564		8.2448	**Buck 3B**					8.2455	**8.2470**	**Buck 3B**
1.4772	9.5316	1.4246	8.0544					1.4400	9.5453	1.3511	8.1053								
1.5121	9.5761	1.4676	8.0640					1.6740	9.6000	1.6193	7.9260								
1.5604	9.7000	1.4365	8.1396					1.1349	9.4657	1.2692	8.3308								
		1.4558	8.2442	**Buck 3B**	6.0472	5.7845	0.2627			1.4841	7.9816	**Buck 2A**	5.4605	5.7237	-0.2632	-0.26295			
1.4879	9.7321		8.2442	**Buck 3B**				1.6343	9.8822		8.2479	**Buck 4A**					8.248	**8.2497**	**Buck 4A**
1.4041	9.9134	1.2228	8.5093					1.5949	9.9508	1.5263	8.3559								
1.4722	9.8024	1.5832	8.3302					1.5594	9.9624	1.5478	8.4030								
1.4825	9.8099	1.4750	8.3274					1.2978	9.7127	1.5475	8.4149								
		1.5638	8.2461	**Buck 4A**	5.8467	5.8448	0.0019			1.4679	8.2448	**Buck 3B**	6.0864	6.0895	-0.0031	-0.0025			
1.7678	10.0139		8.2461	**Buck 4A**				1.8997	10.1476		8.2479	**Buck 4A**							
1.4169	9.6490	1.7818	8.2321					1.9971	10.2401	1.9046	8.2430								
1.1706	9.6231	1.1965	8.4525					1.4298	9.6335	2.0364	8.2037								
1.5580	9.6904	1.4907	8.1324					1.4292	9.6045	1.4582	8.1753								
1.4653	9.7145	1.4412	8.2492					1.4951	9.7084	1.3912	8.2133								
1.4034	9.6725	1.4454	8.2691					1.4795	9.7894	1.3985	8.3099								
		1.3634	8.3091	**Buck 5B**	8.7820	8.7190	0.0630			1.4787	8.3107	**Buck 5B**	9.7304	9.6676	0.0628	0.0629	8.3109	**8.3129**	**Buck 5B**

SFWMD - Buck Island Ranch
Monitoring Well Benchmarks
Computation Sheet

Plus	HI	Minus	Elevation	Benchmark Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Plus	HI	Minus	Elevation	Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Mean Delta	Adjusted Elevation (meters)	Prorated Elevation Adjustment	Benchmark Description
1.3852	9.6943		8.3091	**Buck 5B**				1.5646	9.6835		8.1189	**Buck 6A**					8.1187	**8.1209**	**Buck 6A**
1.5208	9.7372	1.4779	8.2164					1.4111	9.7320	1.3626	8.3209								
1.5257	9.6598	1.6031	8.1341					1.3968	9.6907	1.4381	8.2939								
1.5919	9.6750	1.5767	8.0831					1.4174	9.7126	1.3955	8.2952								
		1.5585	8.1165	**Buck 6A**	6.0236	6.2162	-0.1926			1.4019	8.3107	**Buck 5B**	5.7899	5.5981	0.1918	0.1922			
								1.5887	9.7312		8.1425	**Buck 8A**					8.14155	**8.1440**	**Buck 8A**
1.6317	9.7482		8.1165	**Buck 6A**				1.3058	9.5511	1.4859	8.2453								
1.4351	9.6364	1.5469	8.2013					1.6044	9.7062	1.4493	8.1018								
1.4827	9.6109	1.5082	8.1282					1.3667	9.6462	1.4267	8.2795								
1.4376	9.5918	1.4567	8.1542					1.4273	9.7208	1.3527	8.2935								
		1.4532	8.1386	**Buck 8A**	5.9871	5.9650	0.0221	1.4462	9.6843	1.4827	8.2381								
										1.5654	8.1189	**Buck 6A**	8.7391	8.7627	-0.0236	-0.02285			
1.3758	9.5144		8.1386	**Buck 8A**				1.4994	9.6103		8.1109	**Buck 9B**					8.10865	**8.1114**	**Buck 9B**
1.5503	9.5724	1.4923	8.0221					1.5640	9.6830	1.4913	8.1190								
1.0713	9.6368	1.0069	8.5655					1.4371	9.6004	1.5197	8.1633								
1.4559	9.6916	1.4011	8.2357					1.6971	9.6475	1.6500	7.9504								
1.3825	9.5313	1.5428	8.1488					0.9355	9.5707	1.0123	8.6352								
1.4845	9.5301	1.4857	8.0456					1.2466	9.3390	1.4783	8.0924								
1.6291	9.7701	1.3891	8.1410							1.1965	8.1425	**Buck 8A**	8.3797	8.3481	0.0316	0.0329			
1.5410	9.6333	1.6778	8.0923																
		1.5289	8.1044	**Buck 9B**	11.4904	11.5246	-0.0342												
1.5075	9.6119		8.1044	**Buck 9B**				2.0806	10.0293		7.9487	**Buck 10A**					7.9461	**7.9490**	**Buck 10A**
1.3061	9.5092	1.4088	8.2031					1.3675	9.5893	1.8075	8.2218								
1.6681	9.4778	1.6995	7.8097					1.5019	9.5761	1.5151	8.0742								
1.6949	9.5309	1.6418	7.8360					1.3489	9.5642	1.3608	8.2153								
		1.5894	7.9415	**Buck 10A**	6.1766	6.3395	-0.1629			1.4533	8.1109	**Buck 9B**	6.2989	6.1367	0.1622	0.16255			
								1.3549	9.3894		8.0345	**Buck 11B**					8.03075	**8.0340**	**Buck 11B**
1.5843	9.5258		7.9415	**Buck 10A**				1.3880	9.4430	1.3344	8.0550								
1.4540	9.5784	1.4014	8.1244					1.4131	9.5210	1.3351	8.1079								
1.4155	9.4682	1.5257	8.0527					1.5197	9.6189	1.4218	8.0992								
1.3800	9.5978	1.2504	8.2178					1.4410	9.5470	1.5129	8.1060								
1.4729	9.4851	1.5856	8.0122					1.4633	9.5983	1.4120	8.1350								
1.1798	9.2667	1.3982	8.0869					1.4779	9.6110	1.4652	8.1331								
		1.2417	8.0250	**Buck 11B**	8.4865	8.4030	0.0835	1.4363	9.4476	1.5997	8.0113								
										1.4989	7.9487	**Buck 10A**	11.4942	11.58	-0.0858	-0.08465			
1.5778	9.6028		8.0250	**Buck 11B**				1.5857	10.9807		9.3950	**H-437**					9.3913	**9.3950**	**H-437**
1.6708	10.3053	0.9683	8.6345					1.1452	10.3988	1.7271	9.2536								
1.4559	10.1500	1.6112	8.6941					1.2592	10.1930	1.4650	8.9338								
1.2135	10.0147	1.3488	8.8012					1.5455	10.3269	1.4116	8.7814								
1.3837	10.2113	1.1871	8.8276					1.4370	10.1415	1.6224	8.7045								
1.2700	10.0314	1.4499	8.7614					1.7494	10.1537	1.7372	8.4043								
1.3796	10.1104	1.3006	8.7308					1.4437	9.9914	1.6060	8.5477								
1.2350	10.0850	1.2604	8.8500					1.3080	9.7107	1.5887	8.4027								
1.7861	10.3916	1.4795	8.6055					1.5859	9.6785	1.6181	8.0926								
1.5440	10.3077	1.6279	8.7637					1.3894	9.5304	1.5375	8.1410								
1.4888	10.1134	1.6831	8.6246							1.4959	8.0345	**Buck 11B**	14.449	15.8095	-1.3605	-1.36055			
1.4763	10.2948	1.2949	8.8185																
2.0240	10.6456	1.6732	8.6216																
1.6362	11.0869	1.1949	9.4507																
		1.7013	9.3856	**H-437**	21.1417	19.7811	1.3606												
1.6157	11.0107		9.3950	**H-437**				1.4494	9.7318		8.2824	**Buck 7B**					8.28275	**8.2828**	**Buck 7B**
0.9892	10.1507	1.8492	9.1615					1.2762	9.7976	1.2104	8.5214								
1.1855	9.8518	1.4844	8.6663					1.5941	10.1972	1.1945	8.6031								
1.2020	9.7236	1.3302	8.5216					1.8115	10.9892	1.0195	9.1777								
		1.4412	8.2824	**Buck 7B**	4.9924	6.1050	-1.1126			1.5949	9.3943	**H-437**	6.1312	5.0193	1.1119	1.11225			

SFWMD - Buck Island Ranch
Monitoring Well Benchmarks
Computation Sheet

East Side Bench Runs																			
Foreward Run #1								Reverse Run #2								Preliminary	Preliminary		
Plus	HI	Minus	Elevation	Benchmark Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Plus	HI	Minus	Elevation	Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Mean Delta	Adjusted Elevation (meters)	Prorated Elevation Adjustment	Benchmark Description
0.9432	12.4982		11.5550	J-437				1.9986	9.8717		7.8731	Buck 20A							
1.3173	11.0350	2.7805	9.7177					1.5150	9.3642	2.0225	7.8492								
1.2316	9.8580	2.4086	8.6264					2.9798	11.6494	0.6946	8.6696								
2.3465	10.9722	1.2323	8.6257					1.4440	9.8614	3.2320	8.4174								
1.7698	10.3788	2.3632	8.6090					2.8779	12.3977	0.3416	9.5198								
1.3100	9.2574	2.4314	7.9474					1.6664	13.4310	0.6331	11.7646								
		1.3872	7.8702	Buck 20A	8.9184	12.6032	-3.6848			1.8767	11.5543	J-437	12.4817	8.8005	3.6812	3.683	11.55985	11.5550	J-437
1.9430	9.8132		7.8702	Buck 20A				1.4105	9.4864		8.0759	Buck 12B							
1.8603	9.4222	2.2513	7.5619					2.0659	9.7420	1.8103	7.6761								
1.5142	9.4850	1.4514	7.9708					1.4043	9.7940	1.3523	8.3897								
1.4106	9.5257	1.3699	8.1151					1.2964	9.8695	1.2209	8.5731								
1.6551	9.7508	1.4300	8.0957					1.3240	9.8208	1.3727	8.4968								
1.3601	9.5419	1.5690	8.1818					1.3201	9.8779	1.2630	8.5578								
1.4092	9.5751	1.3760	8.1659					1.4787	9.9123	1.4443	8.4336								
1.3745	9.4837	1.4659	8.1092					1.4935	9.8331	1.5727	8.3396								
		1.4120	8.0717	Buck 12B	12.5270	12.3255	0.2015	1.3980	9.7105	1.5206	8.3125								
								1.0214	9.4757	1.2562	8.4543								
										1.6026	7.8731	Buck 20A	14.2128	14.4156	-0.2028	-0.20215	7.87685	7.8725	Buck 20A
1.5000	9.5717		8.0717	Buck 12B				1.5960	9.4309		7.8349	Buck 13A							
1.6934	9.4443	1.8208	7.7509					1.3913	9.3609	1.4613	7.9696								
1.5228	9.5503	1.4168	8.0275					1.5033	9.4892	1.3750	7.9859								
1.4841	9.4715	1.5629	7.9874					1.4601	9.5350	1.4143	8.0749								
		1.6424	7.8291	Buck 13A	6.2003	6.4429	-0.2426			1.4591	8.0759	Buck 12B	5.9507	5.7097	0.241	0.2418	8.079	8.0754	Buck 12B
1.7948	9.6239		7.8291	Buck 13A				1.5509	9.4585		7.9076	Buck 14B							
1.4983	9.4595	1.6627	7.9612					1.9861	9.6285	1.8161	7.6424								
		1.5574	7.9021	Buck 14B	3.2931	3.2201	0.0730			1.7936	7.8349	Buck 13A	3.537	3.6097	-0.0727	-0.07285	7.8372	7.8339	Buck 13A
1.5392	9.4413		7.9021	Buck 14B				1.5528	9.4298		7.8770	Buck 15A							
1.6278	9.4424	1.6267	7.8146					1.4583	9.4860	1.4021	8.0277								
		1.5717	7.8707	Buck 15A	3.1670	3.1984	-0.0314			1.5784	7.9076	Buck 14B	3.0111	2.9805	0.0306	0.031	7.91005	7.9069	Buck 14B
1.5848	9.4555		7.8707	Buck 15A				1.4814	9.4556		7.9742	Buck 16B							
0.8872	9.4610	0.8817	8.5738					1.7663	9.7838	1.4381	8.0175								
1.4545	9.4376	1.4779	7.9831					1.4105	9.3790	1.8153	7.9685								
		1.4707	7.9669	Buck 16B	3.9265	3.8303	0.0962	1.4276	9.4175	1.3891	7.9899								
										1.5405	7.8770	Buck 15A	6.0858	6.183	-0.0972	-0.0967	7.87905	7.8761	Buck 15A
1.4462	9.4131		7.9669	Buck 16B				1.6125	9.4649		7.8524	Buck 17A							
1.6787	9.4573	1.6345	7.7786					1.3993	9.4322	1.4320	8.0329								
		1.6114	7.8459	Buck 17A	3.1249	3.2459	-0.1210			1.4580	7.9742	Buck 16B	3.0118	2.89	0.1218	0.1214	7.97575	7.9731	Buck 16B
1.6085	9.4544		7.8459	Buck 17A				1.5574	9.5152		7.9578	Buck 18B							
1.5033	9.5050	1.4527	8.0017					1.4904	9.4713	1.5343	7.9809								
		1.5548	7.9502	Buck 18B	3.1118	3.0075	0.1043			1.6189	7.8524	Buck 17A	3.0478	3.1532	-0.1054	-0.10485	7.85435	7.8518	Buck 17A
1.4811	9.4313		7.9502	Buck 18B				1.6693	9.6490		7.9797	Buck 19A							
1.8287	9.9701	1.2899	8.1414					1.1914	9.4936	1.3468	8.3022								
1.5083	9.6509	1.8275	8.1426							1.5358	7.9578	Buck 18B	2.8607	2.8826	-0.0219	-0.02055	7.9592	7.9569	Buck 18B
		1.6815	7.9694	Buck 19A	4.8181	4.7989	0.0192												

SFWMD - Buck Island Ranch
Monitoring Well Benchmarks
Computation Sheet

Plus	HI	Minus	Elevation	Benchmark Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Plus	HI	Minus	Elevation	Description	Sum of "Plus" Column	Sum of "Minus" Column	Delta = Difference in Elevation	Mean Delta	Adjusted Elevation (meters)	Prorated Elevation Adjustment	Benchmark Description
1.6394	9.6088		7.9694	**Buck 19A**				1.9151	9.8872		7.9721	**Buck 22B**							
1.4109	9.6314	1.3883	8.2205					1.9112	9.9174	1.8810	8.0062								
1.3867	9.5068	1.5113	8.1201					1.4913	9.8750	1.5337	8.3837								
1.5512	9.6179	1.4401	8.0667					1.3551	9.8051	1.4250	8.4500								
1.8902	9.9212	1.5869	8.0310					1.5823	9.8941	1.4933	8.3118								
1.6636	9.7215	1.8633	8.0579					1.3200	9.6218	1.5923	8.3018								
		1.7591	7.9624	**Buck 22B**	9.5420	9.5490	-0.0070			1.6421	7.9797	**Buck 19A**	9.575	9.5674	0.0076	0.0073	7.97975	**7.9776**	**Buck 19A**
1.8973	9.8597		7.9624	**Buck 22B**				2.0585	9.8161		7.7576	**Buck 21A**							
1.5705	9.7389	1.6913	8.1684					1.4509	9.6525	1.6145	8.2016								
1.4919	9.4512	1.7796	7.9593					1.6103	9.6259	1.6369	8.0156								
1.4377	9.5509	1.3380	8.1132					1.4082	9.5472	1.4869	8.1390								
1.7685	9.7568	1.5626	7.9883					1.5949	9.6252	1.5169	8.0303								
1.1950	9.4128	1.5390	8.2178					1.4346	9.7306	1.3292	8.2960								
		1.6649	7.7479	**Buck 21A**	9.3609	9.5754	-0.2145	1.0665	9.4916	1.3055	8.4251								
								1.4202	9.3873	1.5245	7.9671								
										1.4152	7.9721	**Buck 22B**	12.0441	11.8296	0.2145	0.2145	7.97245	**7.9707**	**Buck 22B**
1.6015	9.3494		7.7479	**Buck 21A**				1.2360	12.7910		11.5550	**J-437**					11.555		
1.3305	9.3566	1.3233	8.0261					1.1291	12.5386	1.3815	11.4095								
1.7334	9.6698	1.4202	7.9364					1.2447	12.2862	1.4971	11.0415								
1.7039	9.6545	1.7192	7.9506					1.6178	12.4240	1.4800	10.8062								
1.6311	9.5663	1.7193	7.9352					1.2294	12.8978	0.7556	11.6684								
1.5721	9.7729	1.3655	8.2008					1.4177	13.0188	1.2967	11.6011								
1.5992	9.7704	1.6017	8.1712					1.5680	12.8936	1.6932	11.3256								
1.6002	9.8496	1.5210	8.2494					0.6027	11.2540	2.2423	10.6513								
1.6236	9.7572	1.7160	8.1336					1.3210	10.3158	2.2592	8.9948								
2.5383	10.8480	1.4475	8.3097					1.3232	10.4815	1.1575	9.1583								
1.1523	11.1014	0.8989	9.9491					0.9842	9.3059	2.1598	8.3217								
1.1276	9.6786	2.5504	8.5510					1.4235	9.3712	1.3582	7.9477								
2.7434	11.3156	1.1064	8.5722					1.7020	9.3506	1.7226	7.6486								
2.2914	13.0662	0.5408	10.7748					1.6132	9.5637	1.4001	7.9505								
		1.5216	11.5446	**J-437**	24.2485	20.4518	3.7967			1.8061	7.7576	**Buck 21A**	18.4125	22.2099	-3.7974	-3.79705	7.75795	**7.7569**	**Buck 21A**

SFWMD - Buck Island Ranch
Monitoring Well Benchmarks
Computation Sheet

Subordinate Bench Runs																			
Plus	HI	Minus	Elevation	Benchmark Description	Delta = Difference in Elevation	Mean Delta	Preliminary Adjusted Elevation	Benchmark Description			Plus	HI	Minus	Elevation	Benchmark Description	Delta = Difference in Elevation	Mean Delta	Preliminary Adjusted Elevation	Benchmark Description
1.6484	9.4823		7.8339	Buck 13A							1.5924	9.4993		7.9069	Buck 14B				
		0.6309	8.8514	Buck 13C	1.0175								0.6432	8.8561	Buck 14C	0.9492			
0.6310	9.4824		8.8514	Buck 13C							0.6432	9.4993		8.8561	Buck 14C				
		1.6486	7.8338	Buck 13A	-1.0176	1.0176	**8.8515**	Buck 13C					1.5924	7.9069	Buck 14B	-0.9492	0.9492	**8.8561**	Buck 14C
1.4950	9.3711		7.8761	Buck 15A							1.5014	9.3775		7.8761	Buck 15A				
		1.4543	7.9168	Buck 15B	0.0407								0.6178	8.7597	Buck 15C	0.8836			
1.4541	9.3709		7.9168	Buck 15B							0.6176	9.3773		8.7597	Buck 15C				
		1.4950	7.8759	Buck 15A	-0.0409	0.0408	**7.9169**	Buck 15B					1.5015	7.8758	Buck 15A	-0.8839	0.88375	**8.7598**	Buck 15C
1.4968	9.4699		7.9731	Buck 16B							1.6031	9.5600		7.9569	Buck 18B				
		0.6344	8.8355	Buck 16C	0.8624								0.6598	8.9002	Buck 18C	0.9433			
0.6344	9.4699		8.8355	Buck 16C							0.6585	9.5587		8.9002	Buck 18C				
		1.4969	7.9730	Buck 16B	-0.8625	0.8625	**8.8355**	Buck 16C					1.6019	7.9568	Buck 18B	-0.9434	0.94335	**8.9002**	Buck 18C
1.5298	9.3816		7.8518	Buck 17A							1.5299	9.4060		7.8761	Buck 17A				
		1.4450	7.9366	Buck 17B	0.0848								0.5377	8.8683	Buck 17C	0.9922			
1.4461	9.3827		7.9366	Buck 17B							0.5378	9.4061		8.8683	Buck 17C				
		1.5300	7.8527	Buck 17A	-0.0839	0.0844	**7.9362**	Buck 17B					1.5296	7.8765	Buck 17A	-0.9918	0.992	**8.8681**	Buck 17C
1.4539	9.5293		8.0754	Buck 12B							1.4625	9.4332		7.9707	Buck 22B				
		0.5987	8.9306	Buck 12C	0.8552								0.4901	8.9431	Buck 22C	0.9724			
0.6001	9.5307		8.9306	Buck 12C							0.4924	9.4355		8.9431	Buck 22C				
		1.4559	8.0748	Buck 12B	-0.8558	0.8555	**8.9309**	Buck 12C					1.4650	7.9705	Buck 22B	-0.9726	0.9725	**8.9432**	Buck 22C
1.5261	9.5037		7.9776	Buck 19A							1.5237	9.5013		7.9776	Buck 19A				
		1.3454	8.1583	Buck 19B	0.1807								0.532	8.9693	Buck 19C	0.9917			
1.3431	9.5014		8.1583	Buck 19B							0.5324	9.5017		8.9693	Buck 19C				
		1.5236	7.9778	Buck 19A	-0.1805	0.1806	**8.1582**	Buck 19B					1.5234	7.9783	Buck 19A	-0.991	0.99135	**8.9689**	Buck 19C
1.6168	9.3737		7.7569	Buck 21A							1.6190	9.3759		7.7569	Buck 21A				
		1.5146	7.8591	Buck 21B	0.1022								0.5827	8.7932	Buck 21C	1.0363			
1.5183	9.3774		7.8591	Buck 21B							0.5806	9.3738		8.7932	Buck 21C				
		1.6206	7.7568	Buck 21A	-0.1023	0.1023	**7.8591**	Buck 21B					1.6166	7.7572	Buck 21A	-1.036	1.03615	**8.7930**	Buck 21C
1.4749	9.3474		7.8725	Buck 20A							1.4775	9.3500		7.8725	Buck 20A				
		1.4620	7.8854	Buck 20B	0.0129								0.4893	8.8607	Buck 20C	0.9882			
1.4647	9.3501		7.8854	Buck 20B							0.4859	9.3466		8.8607	Buck 20C				
		1.4775	7.8726	Buck 20A	-0.0128	0.0129	**7.8853**	Buck 20B					1.4744	7.8722	Buck 20A	-0.9885	0.98835	**8.8608**	Buck 20C
1.5426	9.5905		8.0479	Buck 1A							1.5400	9.5879		8.0479	Buck 1A				
		1.4994	8.0911	Buck 1B	0.0432								0.5966	8.9913	Buck 1C	0.9434			
1.4973	9.5884		8.0911	Buck 1B							0.6008	9.5921		8.9913	Buck 1C				
		1.5408	8.0476	Buck 1A	-0.0435	0.0433	**8.0912**	Buck 1B					1.5442	8.0479	Buck 1A	-0.9434	0.9434	**8.9913**	Buck 1C
1.5526	9.5365		7.9839	Buck 2A							1.5520	9.5359		7.9839	Buck 2A				
		1.4119	8.1246	Buck 2B	0.1407								0.5536	8.9823	Buck 2C	0.9984			
1.4106	9.5352		8.1246	Buck 2B							0.5974	9.5797		8.9823	Buck 2C				
		1.5495	7.9857	Buck 2A	-0.1389	0.1398	**8.1237**	Buck 2B					1.5945	7.9852	Buck 2A	-0.9971	0.99775	**8.9817**	Buck 2C

SFWMD - Buck Island Ranch
Monitoring Well Benchmarks
Computation Sheet

Subordinate Bench Runs

Plus	HI	Minus	Elevation	Benchmark Description	Delta = Difference in Elevation	Mean Delta	Preliminary Adjusted Elevation	Benchmark Description			Plus	HI	Minus	Elevation	Benchmark Description	Delta = Difference in Elevation	Mean Delta	Preliminary Adjusted Elevation	Benchmark Description
1.4742	9.7212		8.2470	**Buck 3B**							1.4047	9.7176		8.3129	**Buck 5B**				
		0.6842	9.0370	**Buck 3C**	0.7900								0.5447	9.1729	**Buck 5C**	0.86			
0.6855	9.7225		9.0370	**Buck 3C**							0.4953	9.6682		9.1729	**Buck 5C**				
		1.4740	8.2485	**Buck 3B**	-0.7885	0.7893	**9.0363**	**Buck 3C**					1.3549	8.3133	**Buck 5B**	-0.8596	0.8598	**9.1727**	**Buck 5C**
1.5430	9.7927		8.2497	**Buck 4A**							1.5457	9.7954		8.2497	**Buck 4A**				
		1.4687	8.3240	**Buck 4B**	0.0743								0.5753	9.2201	**Buck 4C**	0.9704			
1.4713	9.7953		8.3240	**Buck 4B**							0.5754	9.7955		9.2201	**Buck 4C**				
		1.5458	8.2495	**Buck 4A**	-0.0745	0.0744	**8.3241**	**Buck 4B**					1.5456	8.2499	**Buck 4A**	-0.9702	0.9703	**9.2200**	**Buck 4C**
1.5171	9.6380		8.1209	**Buck 6A**							1.5095	9.6304		8.1209	**Buck 6A**				
		1.3944	8.2436	**Buck 6B**	0.1227								0.4809	9.1495	**Buck 6C**	1.0286			
1.3862	9.6298		8.2436	**Buck 6B**							0.4782	9.6277		9.1495	**Buck 6C**				
		1.5091	8.1207	**Buck 6A**	-0.1229	0.1228	**8.2437**	**Buck 6B**					1.5062	8.1215	**Buck 6A**	-1.028	1.0283	**9.1492**	**Buck 6C**
1.4219	9.4559		8.0340	**Buck 11B**							1.4762	9.5876		8.1114	**Buck 9B**				
		0.5336	8.9223	**Buck 11C**	0.8883								0.6243	8.9633	**Buck 9C**	0.8519			
0.5364	9.4587		8.9223	**Buck 11C**							0.6285	9.5918		8.9633	**Buck 9C**				
		1.4240	8.0347	**Buck 11B**	-0.8876	0.8880	**8.9219**	**Buck 11C**					1.4802	8.1116	**Buck 9B**	-0.8517	0.8518	**8.9632**	**Buck 9C**
1.7537	9.7027		7.9490	**Buck 10A**							1.7556	9.7046		7.9490	**Buck 10A**				
		1.6537	8.0490	**Buck 10B**	0.1000								0.8109	8.8937	**Buck 10C**	0.9447			
1.6553	9.7043		8.0490	**Buck 10B**							0.808	9.7017		8.8937	**Buck 10C**				
		1.7548	7.9495	**Buck 10A**	-0.0995	0.0998	**8.0487**	**Buck 10B**					1.7521	7.9496	**Buck 10A**	-0.9441	0.9444	**8.8934**	**Buck 10C**
1.5719	9.7159		8.1440	**Buck 8A**							1.5690	9.7130		8.1440	**Buck 8A**				
		1.4423	8.2736	**Buck 8B**	0.1296								0.6185	9.0945	**Buck 8C**	0.9505			
1.4388	9.7124		8.2736	**Buck 8B**							0.618	9.7125		9.0945	**Buck 8C**				
		1.5691	8.1433	**Buck 8A**	-0.1303	0.1300	**8.2739**	**Buck 8B**					1.5686	8.1439	**Buck 8A**	-0.9506	0.95055	**9.0945**	**Buck 8C**
1.5024	9.7852		8.2828	**Buck 7B**															
		0.6280	9.1572	**Buck 7C**	0.8744														
0.6249	9.7821		9.1572	**Buck 7C**															
		1.5006	8.2815	**Buck 7B**	-0.8757	0.8751	**9.1578**	**Buck 7C**											

Well #	Location	Diameter	Easting	Northing	RP Elevation	TBM Elevation
Buck 01	Winter 1	4"	-81.21650328	27.13703711	30.81	28.29
Buck 02	Winter 1	2"	-81.21758805	27.13164098	30.82	28.00
Buck 03	Winter 2	2"	-81.21529124	27.13120664	30.91	28.29
Buck 04	Winter 3	2"	-81.21272495	27.1306711	31.51	28.55
Buck 05	Winter 4	2"	-81.20781146	27.13207561	31.51	28.66
Buck 06	Winter 5	2"	-81.20500916	27.13301191	31.39	28.38
Buck 07	Winter 6	4"	-81.20242938	27.13583025	31.31	28.52
Buck 08	Winter 6	2"	-81.20150397	27.13256782	31.11	28.40
Buck 09	Winter 7	2"	-81.19678183	27.13100357	30.61	27.80
Buck 10	Winter 8	2"	-81.19422701	27.1310297	30.44	27.66
Buck 11	Winter 8	4"	-81.19382747	27.1359575	30.58	27.66
Buck 12	Summer 1	2"	-81.18349326	27.14474698	30.43	27.62
Buck 13	Summer 2	2"	-81.18165026	27.14478323	30.22	27.12
Buck 14	Summer 3	2"	-81.17989676	27.14477872	30.25	27.11
Buck 15	Summer 4	2"	-81.17804051	27.14481268	29.88	27.10
Buck 16	Summer 5	2"	-81.17579256	27.1448426	30.17	27.32
Buck 17	Summer 6	2"	-81.17371487	27.14485196	30.19	27.19
Buck 18	Summer 7	2"	-81.1717829	27.14486337	30.39	27.28
Buck 19	Summer 8	2"	-81.17012554	27.14482701	30.59	27.92
Buck 20	Summer 1	4"	-81.18290103	27.139737	30.30	26.69
Buck 21	Summer 5	4"	-81.17499578	27.1411081	30.06	26.99
Buck 22	Summer 8	4"	-81.17035165	27.14107319	30.54	27.34

Office

Project

2 June 2017

INPUT

Geographic, flhpgn - Florida HPGN
Vertical - NAVD88, U.S. Feet

OUTPUT

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

BUCK08

1/1

Latitude: 27 07 57
Longitude: 81 12 06
Elevation/Z: 0

Northing/Y: 1017389.165
Easting/X: 590577.107
Elevation/Z: 1.220
Convergence: -0 05 31.09325
Scale Factor: 0.999946108
Combined Factor: 0.999950002

Remark:

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

sfwmd.gov

DBHYDRO | by station

STATION INFORMATION

Station	BUCK08_G
Site	BUCK08
Type	WELL
Latitude (ddmmss.sss)	270757.205
Longitude (ddmmss.sss)	811205.401
X Coord (ft) NAD83	590630
Y Coord (ft) NAD83	1017410
County	Highlands
Basin	C-41N
Section	34
Township	38
Range	31
Show Map	Google Map
Well Info	Info
Description	Middle of unimproved pasture W6 at Buck Island Ranch S of Harney pond canal
Notes	Description provided by Odi Villapando
Nearby Stations	Nearby Stations
Attachments	None Available

Query returned 1 station record(s).

Get Time Series Data

SFWMD Headquarters: 3301 Gun Club Road, West Palm Beach, Florida 33406
561-686-8800 | 1-800-432-2045 (Florida Only)