



PB 1576		Elevation:	15.36 ft	(NAVD 88)	16.86 ft	(NGVD 29)
Bench Mark 1:	C 561		19.45 ft	(NAVD 88)	20.95 ft	(NGVD 29)
Bench Mark 2:	CONVICT RM-3 RESET		17.47 ft	(NAVD 88)	18.98 ft	(NGVD 29)
Monitoring Well 1:	PB 1576		19.49 ft	(NAVD 88)	21.00 ft	(NGVD 29)
Monitoring Well 2:	PB 1577		14.61 ft	(NAVD 88)	16.12 ft	(NGVD 29)
Length of Run:	3.57 km		To Reach PB 1576: FROM INTERSECTION US 441 HWY/OSPREY POND LANE, GO WEST ON OSPREY POND LANE FOR 0.9 MILES TO 116 TH TERRACE. GO SOUTH ON 116 TH TERRACE FOR 0.3 MILES TO EAGLES NEST DRIVE. GO WEST ON EAGLES NEST DRIVE FOR 0.25 MILES TO DIRT ROAD. GO SOUTH ON DIRT ROAD FOR +/- 200'. CONCRETE MONUMENT WILL BE ON LEFT. 7.0' WEST OF MONITORING WELL PB 1577. 53.2' WEST OF PK NAIL & DISK LB4318 IN NORTH SIDE OF PALM TREE. 6.2' EAST OF BARBED WIRE FENCE. 31.0' SOUTH OF U.S. GEOLOGICAL SURVEY WELL. MAGNET SET 1' NORTH OF CONCRETE MONUMENT.			
Max Allowable Misclosure:	15 mm					
Actual Misclosure:	3 mm					
						

PB 1583		Elevation:	17.98 ft	(NAVD 88)	19.47 ft	(NGVD 29)
Bench Mark 1:	H 413		16.69 ft	(NAVD 88)	18.18 ft	(NGVD 29)
Bench Mark 2:	G 413		18.06 ft	(NAVD 88)	19.55 ft	(NGVD 29)
Monitoring Well 1:	PB 1583		17.11 ft	(NAVD 88)	18.60 ft	(NGVD 29)
Length of Run:	6.58 km		To Reach PB 1583: FROM INTERSECTION OF SOUTHERN BLVD. & F ROAD (BIG BLUE TRACE). GO NORTH ON F ROAD FOR 1.4 MILES TO BRYAN ROAD. GO EAST ON BRYAN ROAD FOR 0.3 MILE TO MARK ON LEFT. 50.0 FEET NORTH OF MONITORING WELL PB 1583, 13.0 FEET NORTH OF CENTERLINE BRYAN ROAD, 61.5 FEET NORTHEAST OF MAILBOX FOR HOUSE #13178. SET MAGNET 1 FOOT NORTH OF CONCRETE MONUMENT.			
Max Allowable Misclosure:	21 mm					
Actual Misclosure:	2 mm					
						

PB-1576/1577



PB-1577



PB-1576

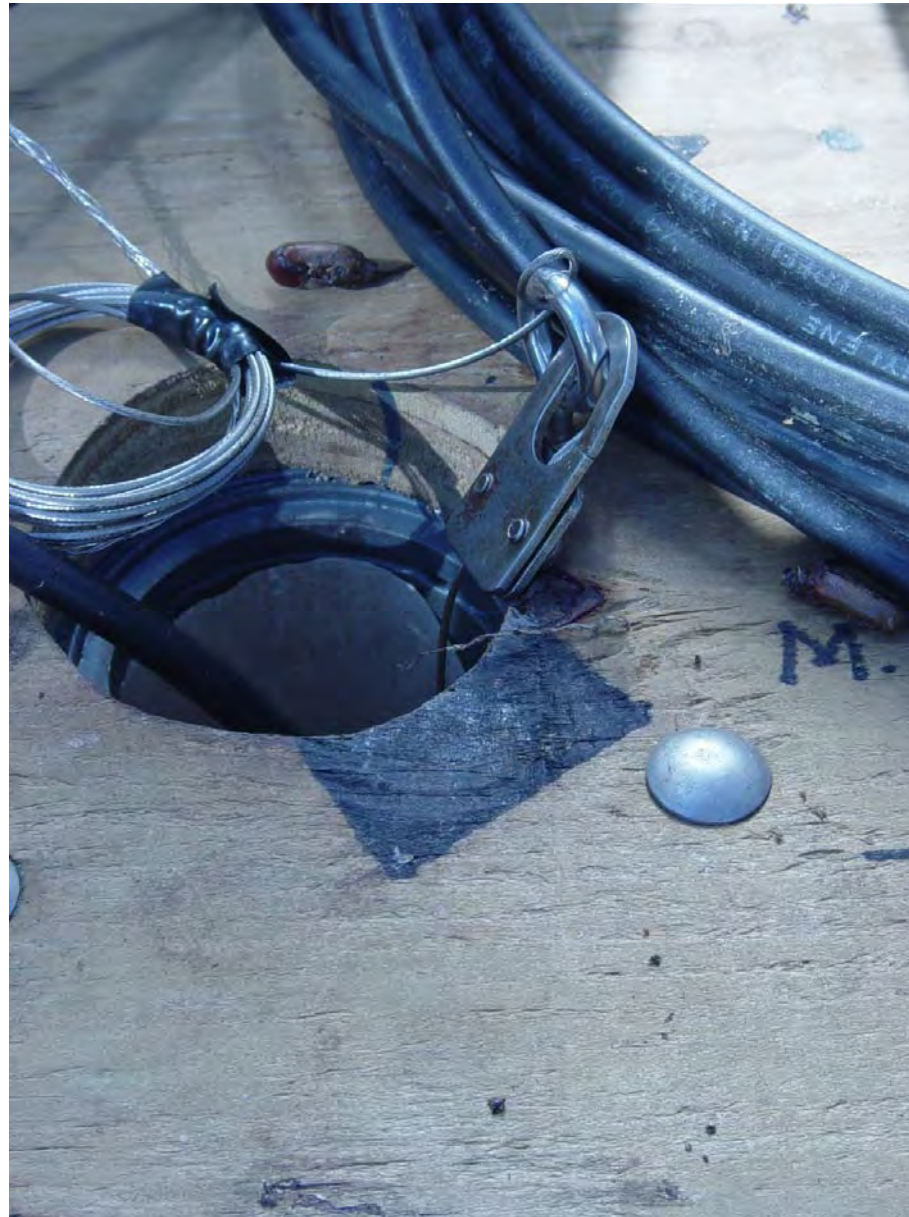
Nick Miller, Inc.
Date of Photo: May 9, 2005
View: Looking at the wells PB-1576 & PB-1577 facing west

PB-1576/1577



Nick Miller, Inc.
Date of Photo: May 9, 2005
View: Close-up of the well PB-1577 showing the contractor's markings

PB-1576/1577



Nick Miller, Inc.
Date of Photo: May 9, 2005
View: Close-up of the well PB-1576 showing the contractor's markings

PB-1576/1577



Nick Miller, Inc.

Date of Photo: May 9, 2005

View: Looking at the benchmark facing west

PB-1576/1577



Nick Miller, Inc.
Date of Photo: May 9, 2005
View: A top view of the benchmark

1078

SFWMD

SET CON. MONUMENT
AT WELL SITE PB-1576/1577

PB 1576/1577

SET POURED-IN-PLACE CONC. MONUMENT
SET MAGNET 1' NORTH OF CONC. MONUMENT

- SET CONC. MON. 7.0' WEST OF MONITORING WELL PB1576/1577
- " " " 53.2' WEST OF PK NAIL & DISK IN ^(LB4318) PALM TREE ^(NORTH SIDE)
- " " " 6.2' EAST OF BARBED WIRE FENCE
- " " " ~~NORTH OF OAK TREE~~
- " " " 31' SOUTH OF U.S. GEOLOGICAL SURVEY WELL

STAMPED PB ¹⁵⁷⁶ 1577
2005

COORDINATES ON MONITORING WELL PB 1577/1578

STATE PLANE 83

WGS 84

N. 245697.909 m

N. $26^{\circ} 32' 57''$ 33446

E. 277163.163 m

W. $080^{\circ} 13' 32''$ 18611

COORDINATES ON CONC. MONUMENT

STATE PLANE 83

WGS 84

N. 245679.471 m

N. $26^{\circ} 32' 57''$ 32410

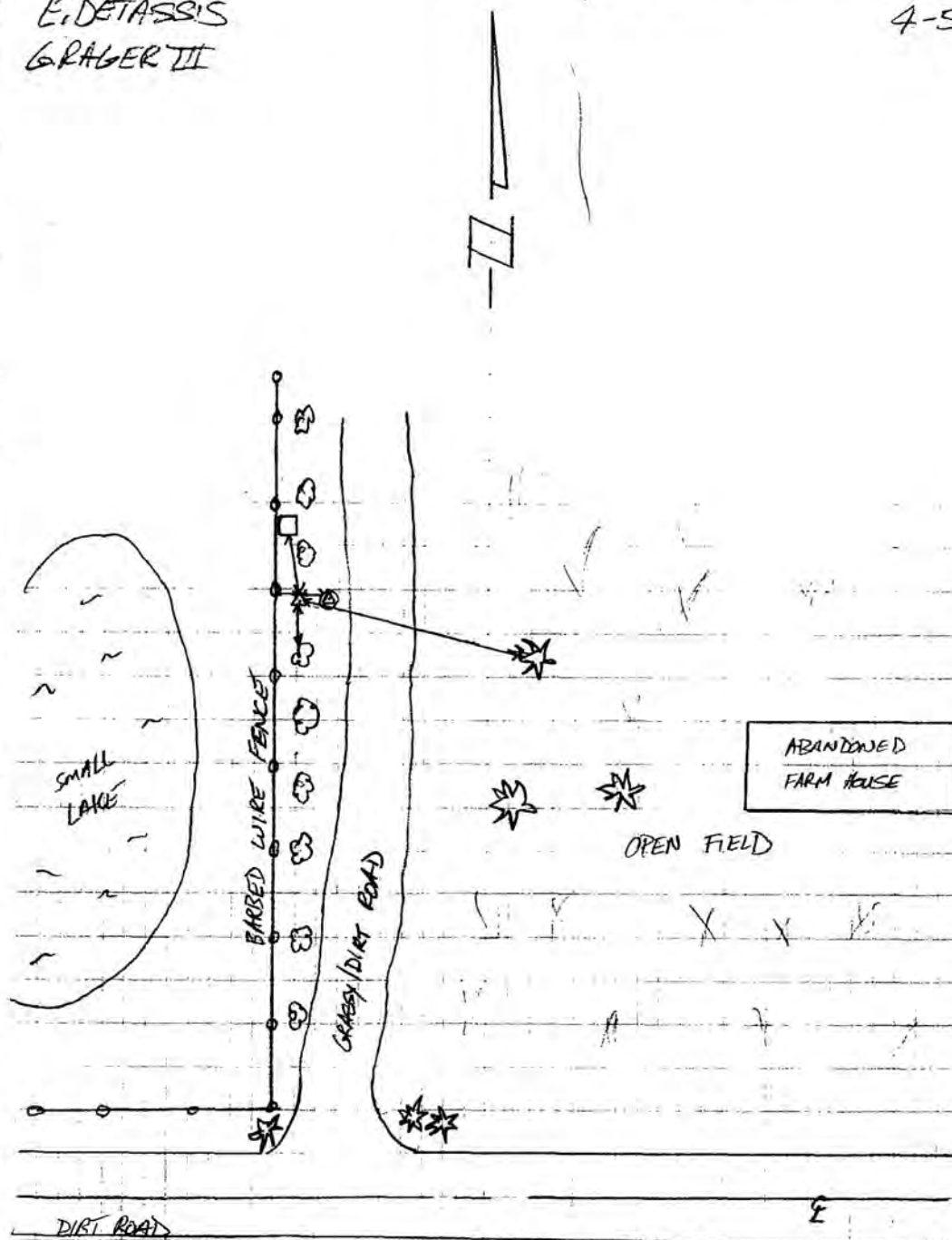
E. 277161.454 m

W. $080^{\circ} 13' 32''$ 26096

MON. MAY 9, 2005

E. DETASSIS
GRAGER III

4-51



- ⊙ - MONITORING WELL
- ⊠ - US GEOLOGICAL SURVEY WELL
- △ - CONC. MONUMENT
- ☁ - OAK TREE
- ★ - PALM TREE



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY	PALM BEACH		PROJECT	Hydrology – Palm Beach County Wells		DESIGNATION	PB 1576 2005	
SECTION	14		TOWNSHIP	45 SOUTH		RANGE	41 EAST	
GEOGRAPHIC INDEX OF QUAD								
Established by <u>Nick Miller Inc.</u> Recovered by				NAME OF QUADRANGLE Greenacres City				
SURVEYOR <u>Stephen M. Gordon</u> DATE <u>5/9/2005</u>				FIELD BOOK <u>4</u> PAGE <u>51</u>				
HORIZONTAL DATUM: 1927 <input checked="" type="radio"/> 1983 Other _____ (circle one) ZONE <input checked="" type="radio"/> E or W								
STATE PLANE COORDINATES			E 909,320 ft			N 806,092 ft		
LATITUDE: N 26.54926°			LONGITUDE: W 80.22563°					
VERTICAL DATUM: MSL 1929 <input checked="" type="radio"/> 1988 Other _____ (circle one)						EL. 15.36 ft		
VERTICAL DATUM: MSL <input checked="" type="radio"/> 1929 1988 Other _____ (circle one)						EL. 16.86 ft		
CONTROL ACCURACY: HORIZONTAL 1 2 3 <input checked="" type="radio"/> SUB-METER (circle one) VERTICAL 1 2 <input checked="" type="radio"/> 3								
DESCRIPTION								
<p>To Reach:</p> <p>FROM INTERSECTION US 441 HWY/OSPREY POND LANE, GO WEST ON OSPREY POND LANE FOR 0.9 MILES TO 116TH TERRACE. GO SOUTH ON 116TH TERRACE FOR 0.3 MILES TO EAGLES NEST DRIVE. GO WEST ON EAGLES NEST DRIVE FOR 0.25 MILES TO DIRT ROAD. GO SOUTH ON DIRT ROAD FOR +/- 200 FEET. CONCRETE MONUMENT WILL BE ON LEFT. 7.0 FEET WEST OF MONITORING WELL PB 1577. 53.2 FEET WEST OF PK NAIL & DISK LB4318 IN NORTH SIDE OF PALM TREE. 6.2 FEET EAST OF BARBED WIRE FENCE. 31.0 FEET SOUTH OF U.S. GEOLOGICAL SURVEY WELL. MAGNET SET 1 FOOT NORTH OF CONCRETE MONUMENT.</p> <p>Benchmarks Used: C 561 and CONVICT RM-3 RESET</p> <p>Notable Land marks:</p>								



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

SKETCH

1078

SFEJMD

SET CON. MONUMENT
AT WELL SITE PB-1576/1577

PB 1576/1577

SET POURED-IN-PLACE CONC. MONUMENT
SET MAGNET 1' NORTH OF CONC. MONUMENT

- SET CONC. MON. 7.0' WEST OF MONITORING WELL PB1576/1577
 - " " " 53.2' WEST OF PK MAIL DIER IN PALM TREE (NORTH SIDE)
 - " " " 6.2' EAST OF BARBED WIRE FENCE
 - " " " NORTH OF OAK TREE
 - " " " 31' SOUTH OF U.S. GEOLOGICAL SURVEY WELL
- STAMPED PB 1576/1577
2005

COORDINATES ON MONITORING WELL PB 1577/1578

STATE PLANE 88	WGS 84
N. 245697.909 m	N. 26° 32' 57" 33446
E. 277163.183 m	W. 080° 13' 32" 18611

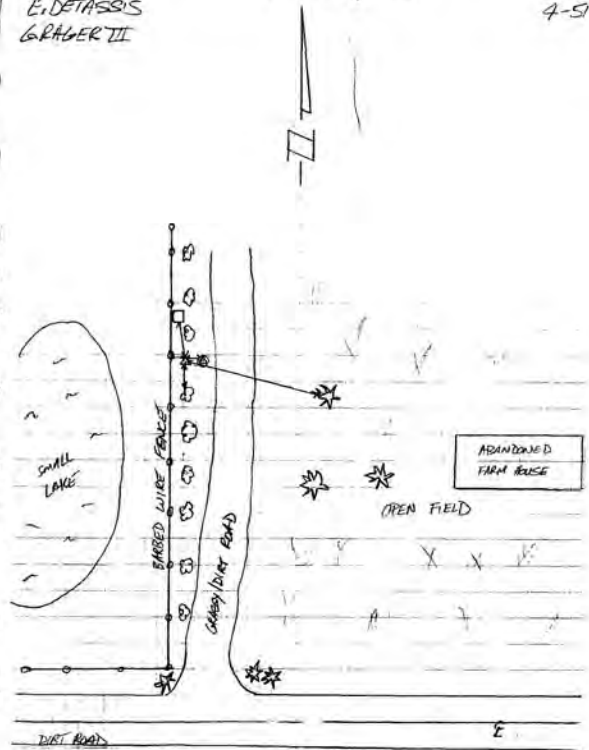
COORDINATES ON CONC. MONUMENT

STATE PLANE 83	WGS 84
N. 245694.471 m	N. 26° 32' 57" 32410
E. 277161.454 m	W. 080° 13' 32" 26896

E. DETASSIS
GRAGER II

MON. MAY 9, 2005

4-51



- ⊙ - MONITORING WELL
- △ - CONC. MONUMENT
- ☉ - OAK TREE
- ☎ - PALM TREE
- - US GEOLOGICAL SURVEY WELL

-*- FIELD ABSTRACT -*-

050512-050527 HGZ L26803 8.0 MM ORDER 2 CLASS 2 PAGE 1
 SOUTH FLORIDA WATER MANAGEMENT DISTRICT
 PALM BEACH COUNTY MONITORING WELLS
 ESTABLISH BENCH MARK NEAR MONITORING WELL PB-1576 AND PB- 1577

FROM	TO	START	F/B	DIST TOTAL (KM)	ELEV DIFF (MT)	-(F+B) TOTAL (MM)	MEAN DIFF FLD ELEV (MT)	I C
0215 C 561							5.92900	
0215 C 561		5120910	F	0.83	-0.59865 *	0.00	-0.59865	1
0216 CONVICT RM 3 RES				0.83		0.00	5.33035	
0216 CONVICT RM 3 RES		5121010	F	3.05	-0.64927 *	-0.28	-0.64779	1
0217 PB 1576		5241300	F	2.74	-0.64612 *			1
		5271125	B	2.76	0.64797 *			1
				3.57		-0.28	4.68256♀	

ELEVATION REJECTION AND ERROR CODES

- C - section elevation difference was rejected for cause
 ie. *43* record rejection code set to "F"
- R - section elevation difference was rejected by Halperin rejection algorithm
- @ - section elevation difference does not include refraction correction
- * - section elevation difference does not include rod correction

♀

INSTRUMENT CODE	INSTRUMENT	RODS
1	243 - 331132	396 - 111 396 - 222

♀
 LEVEL LINE SECTION RUNNING TREE

FROM	TO	N. LATITUDE	W. LONGITUDE	FIELD DISTANCE	VS. COMPUTED
0215		263231	0801218	0.00	0.00
0215	0216	263259	0801219	0.83	0.86
0216	0217	263257	0801332	2.74	2.02 ***♀

SECTION
 FROM TO ERROR MESSAGES

0216 0217 *** Field distance exceeds computed distance by more than 0.50 KM!

The NGS Data Sheet

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

```

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.27
1 National Geodetic Survey, Retrieval Date = SEPTEMBER 16, 2005
AJ9052 *****
AJ9052 DESIGNATION - C 561
AJ9052 PID - AJ9052
AJ9052 STATE/COUNTY- FL/PALM BEACH
AJ9052 USGS QUAD - GREENACRES CITY (1983)
AJ9052
AJ9052 *CURRENT SURVEY CONTROL
AJ9052
AJ9052 * NAD 83(1986)- 26 32 31. (N) 080 12 18. (W) SCALED
AJ9052 * NAVD 88 - 5.928 (meters) 19.45 (feet) ADJUSTED
AJ9052
AJ9052 GEOID HEIGHT- -25.69 (meters) GEOID03
AJ9052 DYNAMIC HT - 5.918 (meters) 19.42 (feet) COMP
AJ9052 MODELED GRAV- 979,104.2 (mgal) NAVD 88
AJ9052
AJ9052 VERT ORDER - FIRST CLASS II
AJ9052
AJ9052.The horizontal coordinates were scaled from a topographic map and have
AJ9052.an estimated accuracy of +/- 6 seconds.
AJ9052
AJ9052.The orthometric height was determined by differential leveling
AJ9052.and adjusted by the National Geodetic Survey in June 2002.
AJ9052.No vertical observational check was made to the station.
AJ9052
AJ9052.The geoid height was determined by GEOID03.
AJ9052
AJ9052.The dynamic height is computed by dividing the NAVD 88
AJ9052.geopotential number by the normal gravity value computed on the
AJ9052.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AJ9052.degrees latitude (g = 980.6199 gals.).
AJ9052
AJ9052.The modeled gravity was interpolated from observed gravity values.
AJ9052
AJ9052;
AJ9052;SPC FL E - North East Units Estimated Accuracy
AJ9052; 244,900. 279,220. MT (+/- 180 meters Scaled)
AJ9052
AJ9052 SUPERSEDED SURVEY CONTROL
AJ9052
AJ9052.No superseded survey control is available for this station.
AJ9052
AJ9052_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNK791359(NAD 83)
AJ9052_MARKER: DD = SURVEY DISK
AJ9052_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AJ9052_STAMPING: C 561 2002
AJ9052_MARK LOGO: FLDEP
AJ9052_PROJECTION: RECESSED 5 CENTIMETERS
AJ9052_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET
AJ9052_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AJ9052+STABILITY: SURFACE MOTION
AJ9052_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AJ9052+SATELLITE: SATELLITE OBSERVATIONS - February 24, 2002
AJ9052
AJ9052 HISTORY - Date Condition Report By
AJ9052 HISTORY - 20020224 MONUMENTED FLDEP
AJ9052
AJ9052 STATION DESCRIPTION
AJ9052
AJ9052'DESCRIBED BY FL DEPT OF ENV PRO 2002 (PBM)
AJ9052'THE MARK IS ABOUT 5.0 MI WEST OF BOYNTON BEACH, IN SECTION 19,
AJ9052'TOWNSHIP 45 SOUTH, RANGE
AJ9052'42 EAST.
AJ9052'
AJ9052'TO REACH THE MARK FROM THE INTERSECTION OF INTERSTATE 95 AND STATE
AJ9052'ROAD 804 IN BOYNTON
AJ9052'BEACH, GO WEST ON STATE ROAD 804 FOR 6.3 MI TO THE INTERSECTION OF THE
AJ9052'FLORIDA TURNPIKE
AJ9052'(STATE ROAD 91), CONTINUE WEST ON STATE ROAD 804 FOR 1.95 MI TO THE

```

DATASHEETS

AJ9052' INTERSECTION OF U.S.
AJ9052' HIGHWAY 441 (STATE ROAD 7), TURN LEFT ON U.S. HIGHWAY 441 (STATE ROAD
AJ9052' 7) AND GO SOUTH FOR
AJ9052' 1.0 MI TO THE JUNCTION OF A DIM TRACK PRIVATE ROAD ON THE RIGHT WITH A
AJ9052' BRIDGE LEADING
AJ9052' EAST (ENTRANCE TO MECCA FARMS) AND THE MARK ON THE RIGHT, SET IN THE
AJ9052' TOP OF A ROUND
AJ9052' CONCRETE MONUMENT RECESSED 0.2 FT BELOW THE LEVEL OF THE GROUND AND
AJ9052' ABOUT LEVEL
AJ9052' WITH THE PRIVATE ROAD.
AJ9052'
AJ9052' LOCATED APPROXIMATE 72.0 FT EAST OF THE EAST EDGE OF U.S. HIGHWAY 441,
AJ9052' 56.3 FT NORTH OF A
AJ9052' POWER POLE, 16.0 FT SOUTH OF THE APPROXIMATE CENTERLINE OF THE DIM
AJ9052' TRACK ROAD, 11.9 FT
AJ9052' SOUTHWEST OF THE SOUTHEAST END OF A WOODEN BRIDGE, 7.0 FT SOUTHWEST OF
AJ9052' THE EAST END
AJ9052' OF A GUARDRAIL AND 1.6 FT WEST OF A CARSONITE WITNESS POST.
AJ9052'
AJ9052' NOTE A MAGNET WAS IMBEDDED IN THE GROUND, 0.2 FT SOUTH OF THE
AJ9052' MONUMENT.
AJ9052'
AJ9052'
AJ9052'
AJ9052'
AJ9052'
AJ9052'
AJ9052'
AJ9052'
AJ9052'
AJ9052'
AJ9052'
AJ9052'
AJ9052'
AJ9052'
AJ9052'
AJ9052'

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

The NGS Data Sheet

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

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.27

1 National Geodetic Survey, Retrieval Date = SEPTEMBER 16, 2005

AD6716 *****

AD6716 CBN - This is a Cooperative Base Network Control Station.

AD6716 DESIGNATION - CONVICT RM 3 RESET

AD6716 PID - AD6716

AD6716 STATE/COUNTY- FL/PALM BEACH

AD6716 USGS QUAD - GREENACRES CITY (1983)

AD6716

AD6716 *CURRENT SURVEY CONTROL

AD6716

AD6716* NAD 83(1999)- 26 32 59.61177(N) 080 12 19.29488(W) ADJUSTED

AD6716* NAVD 88 - 5.326 (meters) 17.47 (feet) ADJUSTED

AD6716

AD6716 X - 971,256.709 (meters) COMP

AD6716 Y - -5,626,114.363 (meters) COMP

AD6716 Z - 2,833,681.754 (meters) COMP

AD6716 LAPLACE CORR- -2.69 (seconds) DEFLEC99

AD6716 ELLIP HEIGHT- -20.40 (meters) (05/31/01) GPS OBS

AD6716 GEOID HEIGHT- -25.70 (meters) GEOID03

AD6716 DYNAMIC HT - 5.318 (meters) 17.45 (feet) COMP

AD6716 MODELED GRAV- 979,105.1 (mgal) NAVD 88

AD6716

AD6716 HORZ ORDER - B

AD6716 VERT ORDER - FIRST CLASS II

AD6716 ELLP ORDER - FIFTH CLASS I

AD6716

AD6716.The horizontal coordinates were established by GPS observations

AD6716.and adjusted by the National Geodetic Survey in May 2001.

AD6716

AD6716.The orthometric height was determined by differential leveling

AD6716.and adjusted by the National Geodetic Survey in June 2002.

AD6716.No vertical observational check was made to the station.

AD6716

AD6716.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AD6716

AD6716.The Laplace correction was computed from DEFLEC99 derived deflections.

AD6716

AD6716.The ellipsoidal height was determined by GPS observations

AD6716.and is referenced to NAD 83.

AD6716

AD6716.The geoid height was determined by GEOID03.

AD6716

AD6716.The dynamic height is computed by dividing the NAVD 88

AD6716.geopotential number by the normal gravity value computed on the

AD6716.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AD6716.degrees latitude (g = 980.6199 gals.).

AD6716

AD6716.The modeled gravity was interpolated from observed gravity values.

AD6716

AD6716;

	North	East	Units	Scale	Factor	Converg.
AD6716;SPC FL E -	245,780.476	279,180.406	MT	1.00001855	+0 21	18.7
AD6716;UTM 17 -	2,936,828.598	579,153.389	MT	0.99967735	+0 21	18.7

AD6716

AD6716! - Elev Factor x Scale Factor = Combined Factor

AD6716!SPC FL E - 1.00000320 x 1.00001855 = 1.00002175

AD6716!UTM 17 - 1.00000320 x 0.99967735 = 0.99968055

AD6716

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AD6716

AD6716.Superseded values are not recommended for survey control.

AD6716.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AD6716. [See file dsdata.txt](#) to determine how the superseded data were derived.

AD6716
 AD6716_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNK7915336829(NAD 83)
 AD6716_MARKER: DR = REFERENCE MARK DISK
 AD6716_SETTING: 31 = SET IN A PAVEMENT SUCH AS STREET, SIDEWALK, CURB, ETC.
 AD6716_SP_SET: PAD
 AD6716_STAMPING: CONVICT NO 3 1934
 AD6716_MARK LOGO: CGS
 AD6716_MAGNETIC: N = NO MAGNETIC MATERIAL
 AD6716_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY
 AD6716_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AD6716+SATELLITE: SATELLITE OBSERVATIONS - October 22, 2004

AD6716	HISTORY	- Date	Condition	Report By
AD6716	HISTORY	- 1963	MONUMENTED	CGS
AD6716	HISTORY	- 1963	GOOD	CGS
AD6716	HISTORY	- 19890326	GOOD	NGS
AD6716	HISTORY	- 19910810	GOOD	ADRGS
AD6716	HISTORY	- 19980223	GOOD	FLDEP
AD6716	HISTORY	- 20020224	GOOD	FLDEP
AD6716	HISTORY	- 20021207	GOOD	FLDEP
AD6716	HISTORY	- 20030107	GOOD	PICKET
AD6716	HISTORY	- 20041022	GOOD	USPSQD

AD6716
 AD6716 STATION DESCRIPTION

AD6716'DESCRIBED BY COAST AND GEODETIC SURVEY 1963 (LSB)
 AD6716'STATION IS LOCATED ALONG THE WEST SIDE OF A CANAL WHICH PARALLELS
 AD6716'U.S. HIGHWAY 441 AND IS ABOUT 10 MILES SOUTHWEST OF LAKE WORTH, 10
 AD6716'MILES NORTHWEST OF DELRAY BEACH AND 8 MILES WEST OF BOYNTON
 AD6716'BEACH.

AD6716'
 AD6716'TO REACH FROM THE JUNCTION OF U.S. HIGHWAY 441 AND STATE HIGHWAY
 AD6716'804 WHICH IS ABOUT 8 MILES WEST OF BOYNTON BEACH, GO NORTH ON
 AD6716'HIGHWAY 441 FOR 1.45 MILES TO A SMALL WOODEN BRIDGE CROSSING THE
 AD6716'CANAL ON THE RIGHT (EAST) SIDE OF HIGHWAY AND THE STATION 125 FEET
 AD6716'NORTH OF THIS BRIDGE.

AD6716'
 AD6716'STATION MARK IS 8 FEET WEST OF THE WEST EDGE OF THE CANAL AND
 AD6716'125 FEET NORTH OF THE WOODEN BRIDGE CROSSING THE CANAL. THE DISK IS
 AD6716'STAMPED CONVICT NO 3 1934. IT IS CONTEMPLATED THAT
 AD6716'A BC 4 CAMERA PEDESTAL WILL SET DIRECTLY OVER THIS MARK.

AD6716
 AD6716 STATION RECOVERY (1963)

AD6716
 AD6716 RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1963
 AD6716 RECOVERED IN GOOD CONDITION.

AD6716
 AD6716 STATION RECOVERY (1989)

AD6716
 AD6716 RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1989
 AD6716 THE STATION IS LOCATED ABOUT 16.1 KM (10.00 MI) SOUTHWEST OF LAKE
 AD6716 WORTH, 16.1 KM (10.00 MI) NORTHWEST OF DELRAY BEACH, 12.9 KM
 AD6716 (8.00 MI) WEST OF BOYNTON BEACH, ON THE WEST SIDE OF A CANAL WHICH
 AD6716 PARALLELS U.S. HIGHWAY 441. OWNERSHIP--STATE OF FLORIDA DOT.
 AD6716 TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 441 AND STATE
 AD6716 ROUTE 804 WHICH IS ABOUT 12.9 KM (8.00 MI) WEST OF BOYNTON BEACH, GO
 AD6716 NORTH ALONG U.S. HIGHWAY 441 FOR 2.4 KM (1.50 MI) TO NORTH ONE OF TWO
 AD6716 OLD WOODEN BRIDGES CROSSING A CANAL ON THE RIGHT AND THE STATION.
 AD6716 THE STATION IS SET IN THE TOP CENTER OF A 2 FT BY 2 FT CONCRETE
 AD6716 BALLISTIC CAMERA PAD WHICH IS FLUSH WITH GROUND. LOCATED 40.5 M
 AD6716 (132.9 FT) NORTH-NORTHWEST OF THE NORTHWEST CORNER OF THE WOODEN
 AD6716 BRIDGE, 42.7 M (140.1 FT) NORTH OF THE APPROXIMATE CENTER OF A DIRT
 AD6716 ROAD LEADING EAST TO THE WOODEN BRIDGE, 10.5 M (34.4 FT) EAST OF THE
 AD6716 CENTERLINE OF HIGHWAY 441, 3.2 M (10.5 FT) EAST OF A METAL GUARDRAIL,
 AD6716 ABOUT 2.4 M (7.9 FT) WEST OF THE WEST EDGE OF THE CANAL AND 1.2 M
 AD6716 (3.9 FT) WEST OF A FIBERGLASS WITNESS POST.
 AD6716 DESCRIBED BY G.F. SMITH.

AD6716
 AD6716 STATION RECOVERY (1991)

AD6716
 AD6716 RECOVERY NOTE BY ADR GEODETIC SERVICES 1991
 AD6716 RECOVERED IN GOOD CONDITION.

AD6716
 AD6716 STATION RECOVERY (1998)

AD6716
 AD6716 RECOVERY NOTE BY FL DEPT OF ENV PRO 1998 (RKW)
 AD6716 RECOVERED IN GOOD CONDITION WITH THESE CHANGES, THE MARK IS 132.4 FT
 AD6716 (40.4 M) NORTH-NORTHWEST OF THE NORTHWEST CORNER OF THE NEW
 AD6716 METAL-CONCRETE DECKED BRIDGE, 129.1 FT (39.3 M) NORTH OF THE CENTER OF
 AD6716 THE BRIDGE AND THE FIBERGLASS WITNESS POST HAS BEEN MOWED OFF.

DATASHEETS

AD6716
AD6716 STATION RECOVERY (2002)
AD6716
AD6716 RECOVERY NOTE BY FL DEPT OF ENV PRO 2002 (PBM)
AD6716 RECOVERED AS DESCRIBED.
AD6716
AD6716 STATION RECOVERY (2002)
AD6716
AD6716 RECOVERY NOTE BY FL DEPT OF ENV PRO 2002 (BPJ)
AD6716 RECOVERED AS DESCRIBED.
AD6716
AD6716
AD6716 STATION RECOVERY (2003)
AD6716
AD6716 RECOVERY NOTE BY PICKETT AND ASSOCIATES 2003 (HS)
AD6716 RECOVERED IN GOOD CONDITION.
AD6716
AD6716 STATION RECOVERY (2004)
AD6716
AD6716 RECOVERY NOTE BY US POWER SQUADRON 2004 (AAS)
AD6716 RECOVERED IN GOOD CONDITION.

*** retrieval complete.
Elapsed Time = 00:00:01

PB-1583



Nick Miller, Inc.

Date of Photo: August 3, 2005

View: Looking at the well PB-1583 facing north

PB-1583



Nick Miller, Inc.
Date of Photo: August 3, 2005
View: Close-up of the well PB-1583 showing the contractor's markings

PB-1583



Nick Miller, Inc.

Date of Photo: August 3, 2005

View: Looking at the benchmark PB-1583A facing west

PB-1583



Nick Miller, Inc.

Date of Photo: August 3, 2005

View: A top view of the benchmark PB-1583A

PB-1583



Nick Miller, Inc.

Date of Photo: August 3, 2005

View: Looking at the benchmark PB-1583 facing west

PB-1583



Nick Miller, Inc.

Date of Photo: August 3, 2005

View: A top view of the benchmark PB-1583

1078

SEWARD

SET CONCRETE MONUMENT FOR @
MONITORING WELL PB 1583

PB 1583

- SET POURED-IN-PLACE CONCRETE MONUMENT
W/ BRASS DISK
- SET MAGNET 1' NORTH OF CONCRETE MONUMENT
- SET CONC. MONUMENT 50.0' NORTH OF MONITORING WELL PB 1583
- " " " 73.0' NORTH OF & BRYAN ROAD
- " " " 61.5' NE OF MAIL BOX #13178

STAMPED PB 1583
2005

COORDINATES FOR CONCRETE MONUMENT PB 1583

STATE PLANE 83

NAD 84

N. 262717.207m

N. $26^{\circ}42'10''.85$

E. 274362.07m

W. $080^{\circ}15'09''.79$

COORDINATES FOR MONITORING WELL PB 1583

STATE PLANE 83

NAD 84

N. 262702.29m

N. $26^{\circ}42'10''.355$

E. 274362.60m

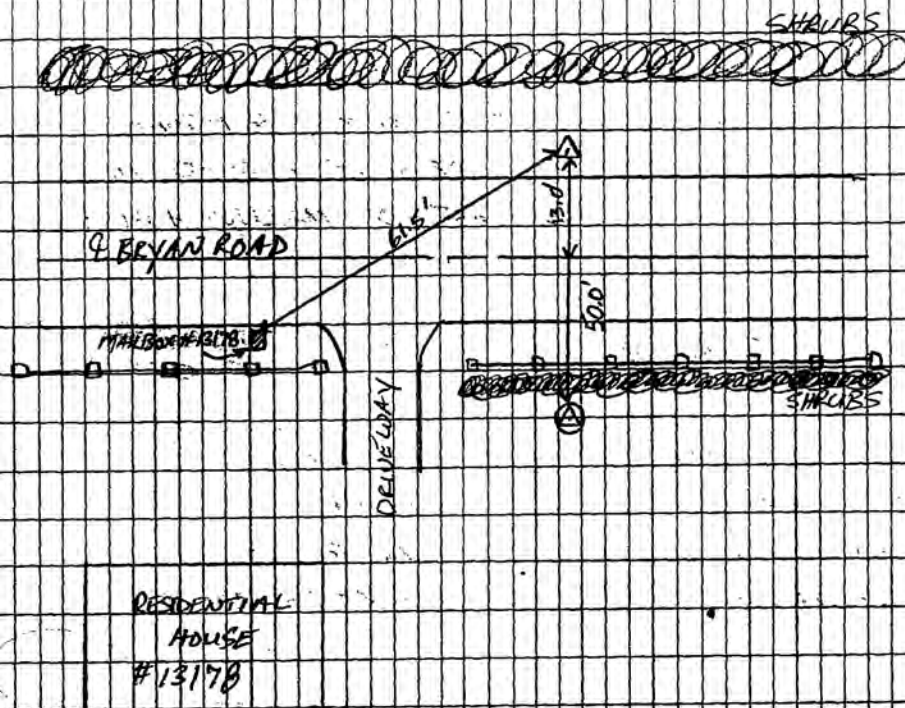
W. $080^{\circ}15'09''.771$

WED. AUG 3, 2005

F. DETASSIS

SEWARD 85

G. RAGER III



△ - SET MONUMENT
⊙ - MONITORING WELL

1078

SFWMD

SET CONCRETE MONUMENT #2
FOR MONITORING WELL PB 1583

PB 1583A

- SET POURED-IN-PLACE CONCRETE MONUMENT
W/ BRASS DISK
- SET MAGNET 1' NORTH CON. MONUMENT
- SET CONC. MONUMENT 75' EAST OF Q F ROAD
- " " " 60.5' NE OF NORTH END OF CULVERT
- " " " 70.2' NORTH OF MAILBOX #13659

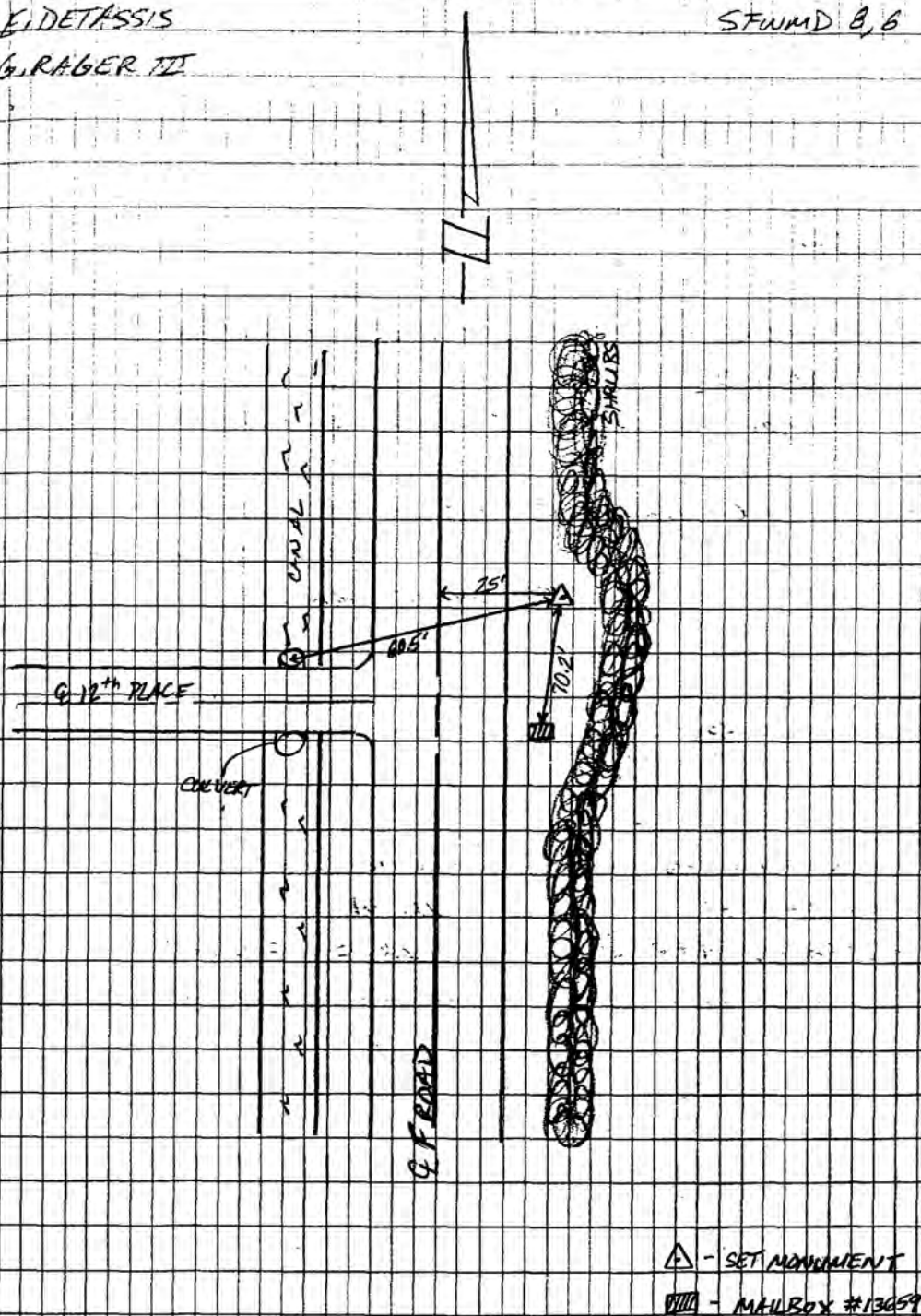
STAMPED PB 1583A
2005

COORDINATES ON CONCRETE MONUMENT PB 1583
STATE PLANE 83 WAS 84
N. 261612.282 METERS N. 26° 41' 35.043"
E. 273826.995 METERS W. 080° 15' 29.376"

WED. AUG. 3, 2005

EIDETASSIS
G. RAGER III

SFWMD 8, 6





SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY PALM BEACH	PROJECT Hydrology – Palm Beach County Wells	DESIGNATION PB 1583 2005
SECTION 28	TOWNSHIP 43 SOUTH	RANGE 41 EAST
GEOGRAPHIC INDEX OF QUAD		
Established by <u>Nick Miller Inc.</u> Recovered by	NAME OF QUADRANGLE Loxahatchee	
SURVEYOR <u>Stephen M. Gordon</u> DATE <u>8/26/2005</u>	FIELD BOOK <u>8</u> PAGE <u>5</u>	
HORIZONTAL DATUM: 1927 1983 Other _____ (circle one) ZONE E or W		
STATE PLANE COORDINATES	E 900,127 ft	N 861,923 ft
LATITUDE: N 26.70301°	LONGITUDE: W 80.25272°	
VERTICAL DATUM: MSL 1929 1988 Other _____ (circle one)	EL. 17.98 ft	
VERTICAL DATUM: MSL 1929 1988 Other _____ (circle one)	EL. 19.47 ft	
CONTROL ACCURACY: HORIZONTAL 1 2 3 SUB-METER (circle one) VERTICAL 1 2 3		
DESCRIPTION		
<p>To Reach:</p> <p>FROM INTERSECTION OF SOUTHERN BLVD. & F ROAD (BIG BLUE TRACE). GO NORTH ON F ROAD FOR 1.4 MILES TO BRYAN ROAD. GO EAST ON BRYAN ROAD FOR 0.3 MILE TO MARK ON LEFT. 50.0 FEET NORTH OF MONITORING WELL PB 1583, 13.0 FEET NORTH OF CENTERLINE BRYAN ROAD, 61.5 FEET NORTHEAST OF MAILBOX FOR HOUSE #13178. SET MAGNET 1 FOOT NORTH OF CONCRETE MONUMENT.</p> <p>Benchmarks Used: H 413 and G 413</p> <p>Notable Land marks:</p>		



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

SKETCH

1078

SEWARD

SET CONCRETE MONUMENT FOR (A)
MONITORING WELL PR 1583

PR 1583

- SET POURED-IN-PLACE CONCRETE MONUMENT
- W/ BRASS DISK
- SET MAGNET 1' NORTH OF CONCRETE MONUMENT
- SET CONC. MONUMENT 50.0 NORTH OF MONITORING WELL PR 1583
- " " " 73.0' NORTH OF Q BRYAN ROAD
- " " " 61.5' NE OF MAIL BOX #13178

STAMPED PR 1583
2005

COORDINATES FOR CONCRETE MONUMENT PR 1583

STATE PLANE 83

WGS 84

N. 262717.267m

N. 26°42'10".85

E. 274362.07m

W. 080°15'09".79

COORDINATES FOR MONITORING WELL PR 1583

STATE PLANE 83

WGS 84

N. 262702.29m

N. 26°42'10".355

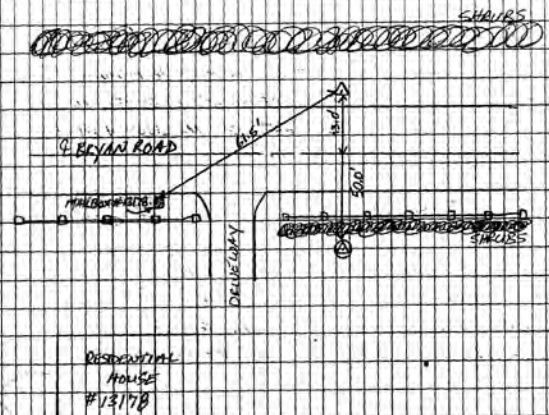
E. 274362.00m

W. 080°15'09".771

WED. AUG 3, 2005

F. METASSIS
G. RABER III

SEWARD B/S



△ - SET MONUMENT
⊗ - MONITORING WELL

-*- FIELD ABSTRACT -*-

050804-050809 HGZ L26803 8.0 MM ORDER 2 CLASS 2 PAGE 1
SOUTH FLORIDA WATER MANAGEMENT DISTRICT
PALM BEACH COUNTY MONITORING WELLS
ESTABLISH BENCH MARK NEAR MONITORING WELL PB-1583

Table with columns: FROM TO, START, F/B, DIST TOTAL (KM), ELEV DIFF (MT), -(F+B) TOTAL (MM), MEAN DIFF FLD ELEV (MT), I C. Contains data for well sections 0281, 0282, 0283, 0284, 0279.

ELEVATION REJECTION AND ERROR CODES

- C - section elevation difference was rejected for cause i.e. *43* record rejection code set to "F"
R - section elevation difference was rejected by Halperin rejection algorithm
@ - section elevation difference does not include refraction correction
* - section elevation difference does not include rod correction

Table with columns: INSTRUMENT CODE, INSTRUMENT, RODS. Shows instrument details for codes 1 and 2.

LEVEL LINE SECTION RUNNING TREE

Table with columns: FROM TO, N. LATITUDE, W. LONGITUDE, FIELD DISTANCE VS. COMPUTED. Shows level line section data for well sections 0281, 0282, 0283, 0284, 0279.

SECTION FROM TO ERROR MESSAGES

The NGS Data Sheet

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

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.27

1 National Geodetic Survey, Retrieval Date = SEPTEMBER 19, 2005

AD8196 *****

AD8196 DESIGNATION - H 413

AD8196 PID - AD8196

AD8196 STATE/COUNTY- FL/PALM BEACH

AD8196 USGS QUAD - LOXAHATCHEE (1984)

AD8196

AD8196 *CURRENT SURVEY CONTROL

AD8196* NAD 83(1999)- 26 40 59.24457(N) 080 17 01.04820(W) ADJUSTED

AD8196* NAVD 88 - 5.088 (meters) 16.69 (feet) ADJUSTED

AD8196

AD8196 X - 962,454.455 (meters) COMP

AD8196 Y - -5,620,917.021 (meters) COMP

AD8196 Z - 2,846,878.933 (meters) COMP

AD8196 LAPLACE CORR- -2.30 (seconds) DEFLEC99

AD8196 ELLIP HEIGHT- -20.64 (meters) (12/12/02) GPS OBS

AD8196 GEOID HEIGHT- -25.74 (meters) GEOID03

AD8196 DYNAMIC HT - 5.080 (meters) 16.67 (feet) COMP

AD8196 MODELED GRAV- 979,112.9 (mgal) NAVD 88

AD8196

AD8196 HORZ ORDER - FIRST

AD8196 VERT ORDER - FIRST CLASS II

AD8196 ELLP ORDER - FOURTH CLASS II

AD8196

AD8196.The horizontal coordinates were established by GPS observations

AD8196.and adjusted by the National Geodetic Survey in December 2002.

AD8196

AD8196.The orthometric height was determined by differential leveling

AD8196.and adjusted by the National Geodetic Survey in September 1992.

AD8196

AD8196.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AD8196

AD8196.The Laplace correction was computed from DEFLEC99 derived deflections.

AD8196

AD8196.The ellipsoidal height was determined by GPS observations

AD8196.and is referenced to NAD 83.

AD8196

AD8196.The geoid height was determined by GEOID03.

AD8196

AD8196.The dynamic height is computed by dividing the NAVD 88

AD8196.geopotential number by the normal gravity value computed on the

AD8196.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AD8196.degrees latitude (g = 980.6199 gals.).

AD8196

AD8196.The modeled gravity was interpolated from observed gravity values.

AD8196

AD8196;

	North	East	Units	Scale	Factor	Converg.
AD8196;SPC FL E	- 260,496.036	271,298.907	MT	1.00000391	+0 19	18.1
AD8196;UTM 17	- 2,951,539.137	571,274.580	MT	0.99966272	+0 19	18.1

AD8196

AD8196! - Elev Factor x Scale Factor = Combined Factor

AD8196!SPC FL E - 1.00000324 x 1.00000391 = 1.00000715

AD8196!UTM 17 - 1.00000324 x 0.99966272 = 0.99966596

AD8196

AD8196

AD8196 SUPERSEDED SURVEY CONTROL

AD8196

AD8196 NAVD 88 (12/12/02) 5.09 (m) 16.7 (f) LEVELING 3

AD8196 NGVD 29 (09/01/92) 5.541 (m) 18.18 (f) ADJUSTED 1 2

AD8196

AD8196.Superseded values are not recommended for survey control.

AD8196.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AD8196.[See file dsdata.txt](#) to determine how the superseded data were derived.

AD8196

AD8196_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNK7127551539(NAD 83)

AD8196_MARKER: I = METAL ROD

AD8196_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)

AD8196_SP_SET: STAINLESS STEEL ROD

AD8196_STAMPING: H 413 1992
 AD8196_MARK LOGO: NGS
 AD8196_PROJECTION: FLUSH
 AD8196_MAGNETIC: I = MARKER IS A STEEL ROD
 AD8196_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
 AD8196_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AD8196+SATELLITE: SATELLITE OBSERVATIONS - February 04, 2005
 AD8196_ROD/PIPE-DEPTH: 35.2 meters
 AD8196

HISTORY	- Date	Condition	Report By
HISTORY	- 1992	MONUMENTED	NGS
HISTORY	- 20020517	GOOD	MAPTEC
HISTORY	- 20021111	GOOD	USPSQD
HISTORY	- 20040114	GOOD	USPSQD
HISTORY	- 20050204	GOOD	USPSQD

STATION DESCRIPTION

AD8196 DESCRIBED BY NATIONAL GEODETIC SURVEY 1992
 AD8196 21.3 KM (13.25 MI) WESTERLY ALONG U.S. HIGHWAY 98 FROM THE JUNCTION
 AD8196 OF INTERSTATE HIGHWAY 95 IN WEST PALM BEACH, 25.9 M (85.0 FT) NORTH
 AD8196 OF THE CENTERLINE OF THE WESTBOUND LANES OF THE HIGHWAY, 14.3 M (46.9
 AD8196 FT) EAST OF THE EXTENDED CENTERLINE OF OUSLEY FARMS ROAD, 2.0 M (6.6
 AD8196 FT) EAST OF A T-JUNCTION UTILITY POLE WITH 2 GUY CABLES, 0.5 M (1.6
 AD8196 FT) SOUTH OF A WITNESS POST, AND 0.4 M (1.3 FT) BELOW THE LEVEL OF
 AD8196 THE HIGHWAY. NOTE--ACCESS TO THE DATUM POINT IS THROUGH A 5-INCH
 AD8196 LOGO CAP.

STATION RECOVERY (2002)

AD8196 RECOVERY NOTE BY MAPTECH INCORPORATED 2002 (CDP)
 AD8196 STATION RECOVERY (2002)
 AD8196 RECOVERY NOTE BY MAPTECH, INCORPORATED 2002 (CDP)
 AD8196 RECOVERED AS DESCRIBED.

STATION RECOVERY (2002)

AD8196 RECOVERY NOTE BY US POWER SQUADRON 2002 (AAS)
 AD8196 RECOVERED IN GOOD CONDITION.

STATION RECOVERY (2004)

AD8196 RECOVERY NOTE BY US POWER SQUADRON 2004 (AAS)
 AD8196 RECOVERED IN GOOD CONDITION.

STATION RECOVERY (2005)

AD8196 RECOVERY NOTE BY US POWER SQUADRON 2005 (AAS)
 AD8196 RECOVERED IN GOOD CONDITION.

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

The NGS Data Sheet

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

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.27

1 National Geodetic Survey, Retrieval Date = SEPTEMBER 19, 2005

AD8195 *****

AD8195 DESIGNATION - G 413
AD8195 PID - AD8195
AD8195 STATE/COUNTY- FL/PALM BEACH
AD8195 USGS QUAD - LOXAHATCHEE (1984)

AD8195
AD8195 *CURRENT SURVEY CONTROL

AD8195*	NAD 83(1986)-	26 40 56.	(N)	080 15 52.	(W)	SCALED
AD8195*	NAVD 88	-	5.506 (meters)	18.06	(feet)	ADJUSTED

AD8195 GEOID HEIGHT- -25.78 (meters) GEOID03
AD8195 DYNAMIC HT - 5.497 (meters) 18.03 (feet) COMP
AD8195 MODELED GRAV- 979,113.6 (mgal) NAVD 88

AD8195 VERT ORDER - FIRST CLASS II

AD8195.The horizontal coordinates were scaled from a topographic map and have
AD8195.an estimated accuracy of +/- 6 seconds.

AD8195.The orthometric height was determined by differential leveling
AD8195.and adjusted by the National Geodetic Survey in September 1992.

AD8195.The geoid height was determined by GEOID03.

AD8195.The dynamic height is computed by dividing the NAVD 88
AD8195.geopotential number by the normal gravity value computed on the
AD8195.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AD8195.degrees latitude (g = 980.6199 gals.).

AD8195.The modeled gravity was interpolated from observed gravity values.

AD8195;	North	East	Units	Estimated Accuracy
AD8195;SPC FL E -	260,410.	273,210.	MT	(+/- 180 meters Scaled)

AD8195 SUPERSEDED SURVEY CONTROL

AD8195	NGVD 29 (09/01/92)	5.960 (m)	19.55 (f)	ADJUSTED	1 2
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AD8195.Superseded values are not recommended for survey control.

AD8195.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AD8195.[See file dsdata.txt](#) to determine how the superseded data were derived.

AD8195 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNK731514(NAD 83)

AD8195_MARKER: I = METAL ROD

AD8195_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)

AD8195_SP_SET: STAINLESS STEEL ROD IN SLEEVE

AD8195_STAMPING: G 413 1992

AD8195_MARK LOGO: NGS

AD8195_PROJECTION: FLUSH

AD8195_MAGNETIC: I = MARKER IS A STEEL ROD

AD8195_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AD8195_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AD8195+SATELLITE: SATELLITE OBSERVATIONS - February 04, 2005

AD8195_ROD/PIPE-DEPTH: 48.4 meters

AD8195_SLEEVE-DEPTH : 0.9 meters

AD8195	HISTORY	- Date	Condition	Report By
AD8195	HISTORY	- 1992	MONUMENTED	NGS
AD8195	HISTORY	- 20021111	GOOD	USPSQD
AD8195	HISTORY	- 20040115	GOOD	USPSQD
AD8195	HISTORY	- 20050204	GOOD	USPSQD

AD8195 STATION DESCRIPTION

AD8195'DESCRIBED BY NATIONAL GEODETIC SURVEY 1992

AD8195'19.4 KM (12.05 MI) WESTERLY ALONG U.S. HIGHWAY 98 FROM THE JUNCTION

DATASHEETS

AD8195' OF INTERSTATE HIGHWAY 95 IN WEST PALM BEACH, 231.0 M (757.9 FT) EAST
AD8195' CENTER OF E ROAD, 12.1 M (39.7 FT) SOUTH OF THE CENTERLINE OF THE
AD8195' WESTBOUND LANES OF THE HIGHWAY, 2.0 M (6.6 FT) SOUTHEAST OF THE
AD8195' CENTER OF A STORM DRAIN, 1.3 M (4.3 FT) SOUTH-SOUTHWEST OF A WITNESS
AD8195' POST, AND 0.5 M (1.6 FT) BELOW THE LEVEL OF THE HIGHWAY.
AD8195' NOTE--ACCESS TO THE DATUM POINT IS THROUGH A 5-INCH LOGO CAP.

AD8195
AD8195 STATION RECOVERY (2002)

AD8195
AD8195 RECOVERY NOTE BY US POWER SQUADRON 2002 (AAS)
AD8195 CAP BROKEN OFF.

AD8195
AD8195 STATION RECOVERY (2004)

AD8195
AD8195 RECOVERY NOTE BY US POWER SQUADRON 2004 (AAS)
AD8195 RECOVERED IN GOOD CONDITION.

AD8195
AD8195 STATION RECOVERY (2005)

AD8195
AD8195 RECOVERY NOTE BY US POWER SQUADRON 2005 (AAS)
AD8195 RECOVERED IN GOOD CONDITION.

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