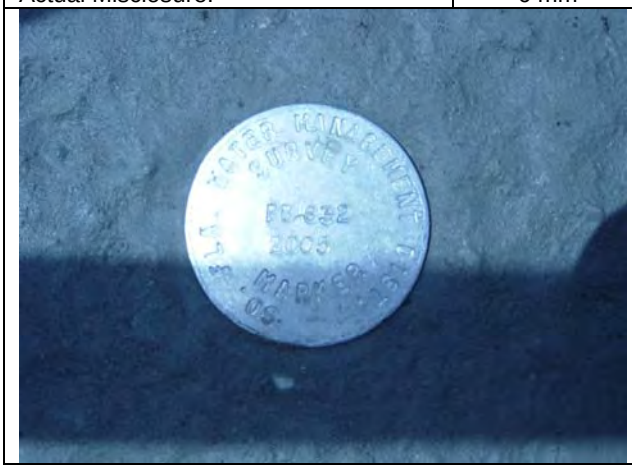
PB 830	Elevation:	**22.42 ft**	(NAVD 88)	23.83 ft	(NGVD 29)
Bench Mark 1:	ENR 103	20.07 ft	(NAVD 88)	21.49 ft	(NGVD 29)
Bench Mark 2:	CAN AZ MK	36.52 ft	(NAVD 88)	37.75 ft	(NGVD 29)
Bench Mark 3:	L 402	15.91 ft	(NAVD 88)	17.42 ft	(NGVD 29)
Bench Mark 4:	C 402	14.97 ft	(NAVD 88)	16.52 ft	(NGVD 29)
Bench Mark 5:	X 537	23.29 ft	(NAVD 88)	24.74 ft	(NGVD 29)
Monitoring Well 1:	PB 830	21.36 ft	(NAVD 88)	22.77 ft	(NGVD 29)
Monitoring Well 2:	PB 831	24.86 ft	(NAVD 88)	26.26 ft	(NGVD 29)

To Reach PB 830:

FROM INTERSECTION BEE-LINE HIGHWAY & ENTRANCE OF CORBETT NATIONAL PARK. GO WESTERLY & SOUTHERLY THROUGH CORBETT NATIONAL PARK ENTRANCE ON DIRT ROAD FOR 8.5 MILES TO MARK ON RIGHT. 26.8 FEET WEST OF CENTERLINE OF DIRT ROAD, 59.9 FEET SOUTHWEST OF 12 INCH OAK TREE, 36.5 FEET NORTH OF 12 INCH PALM TREE, 57.8 FEET NORTH OF MONITORING WELL PB 831 (USGS MONITORING WELL). SET MAGNET 1 FOOT NORTH OF CONCRETE MONUMENT.

PB 832	Elevation:	**10.00 ft**	(NAVD 88)	11.53 ft	(NGVD 29)
Bench Mark 1:	I95 Y 15	14.98 ft	(NAVD 88)	16.51 ft	(NGVD 29)
Bench Mark 2:	JENKINS	19.89 ft	(NAVD 88)	21.41 ft	(NGVD 29)
Monitoring Well:	PB 832	12.26 ft	(NAVD 88)	13.79 ft	(NGVD 29)
Length of Run:	2.98 km				
Max Allowable Misclosure:	14 mm				
Actual Misclosure:	6 mm				



To Reach PB 832:

FROM INTERSECTION OF INDIANTOWN ROAD/SR-706 & CENTRAL BLVD. GO NORTH ON CENTRAL BLVD. FOR MILE. CONCRETE MONUMENT WILL BE ON RIGHT. 4.3' WEST OF CHAIN LINKED FENCE. 18.1' EAST OF GUARDRAIL. 52.4' NORTH OF STORM BASIN, 20' SOUTHEAST OF LIGHT POLE #8888. MAGNET SET 1' NORTH OF CONCRETE MONUMENT.

PB-830

Nick Miller, Inc.
Date of Photo: August 6, 2005
View: Looking at the well PB-830 facing south

PB-830

Nick Miller, Inc.
Date of Photo: August 6, 2005
View: Close-up of the well PB-830 showing the contractor's markings

PB-830

Nick Miller, Inc.
Date of Photo: August 6, 2005
View: Looking at the well PB-831 facing south

PB-830

Nick Miller, Inc.
Date of Photo: August 6, 2005
View: Close-up of the well PB-831 showing the contractor's markings

PB-830

Nick Miller, Inc.
Date of Photo: August 6, 2005
View: Looking at the benchmark facing south

PB-830

Nick Miller, Inc.
Date of Photo: August 6, 2005
View: A top view of the benchmark

1078 SFWMD

SET CONCRETE MONUMENT
FOR MONITORING WELL
PB 830

PB 830

- SET PAIRED-IN-PLACE CONCRETE MONUMENT W/ BRASS DISK
- SET MAGNET 1' NORTH OF CONC. MONUMENT

- SET CONC. MONUMENT 26.8' WEST OF E DIRT ROAD
- " " " 59.9' SW OF 12" OAK TREE
- " " " 36.5' NORTH OF 12" PALM TREE
- " " " ~~19.5'~~ 57.8' NORTH OF MONITORING WELL PB831 (USGS MW)

STAMPED PB 830
2005

COORDINATES ON CONCRETE MONUMENT PB 830

STATE PLANE 83	WGS 84
N. 279109.11 m	N 26° 51' 06." 14
E. 258456.30 m	W. 080° 24' 42." 44

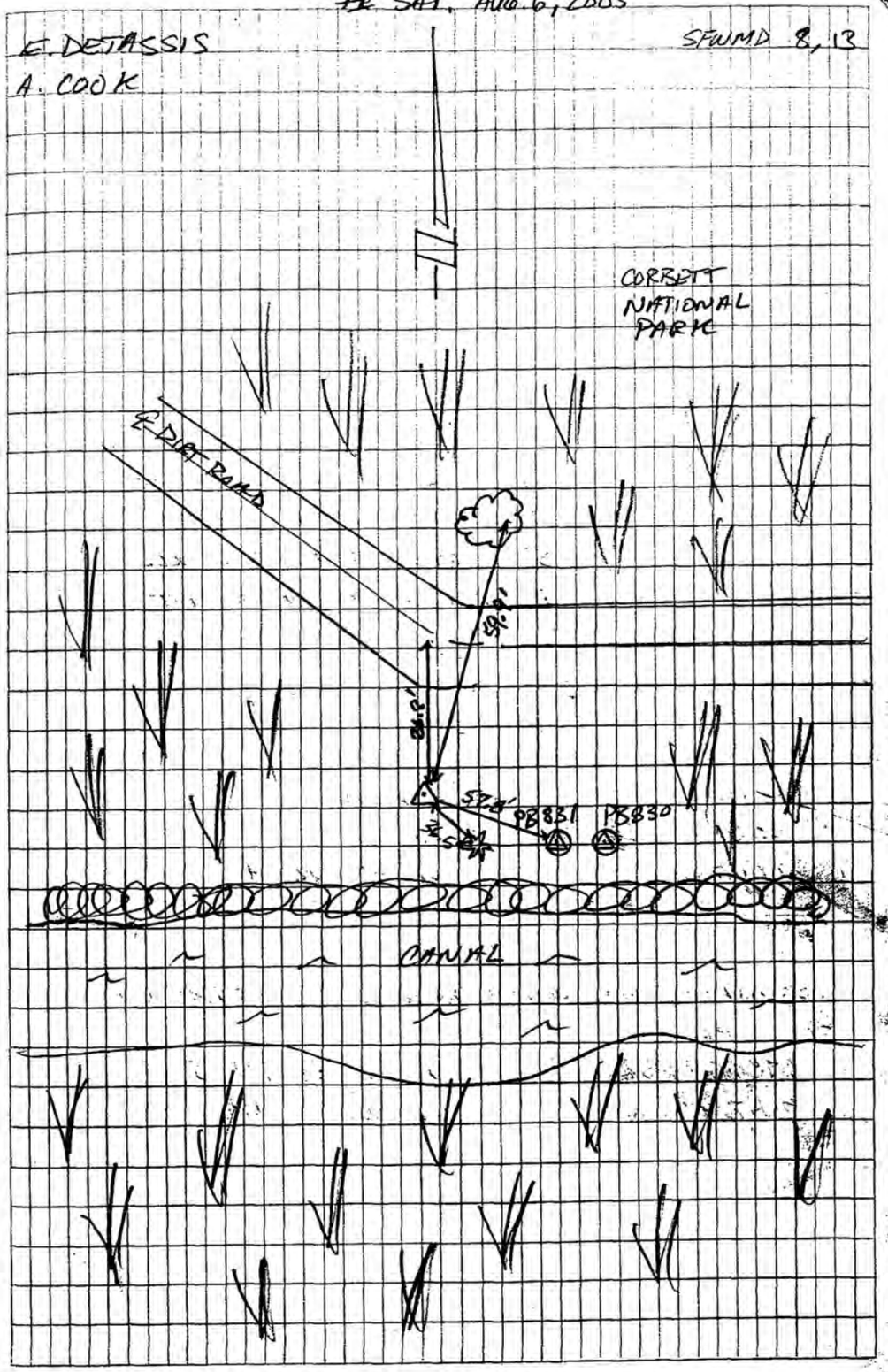
COORDINATES ON MONITORING WELL PB830 & PB831

STATE PLANE 83	WGS 84
N. 279092.70 m	N. 26° 51' 05." 60
E. 258464.95 m	W. 080° 24' 42." 13

FR SAT. AUG. 6, 2005

E. DETASSIS
A. COOK

SFWMD 8, 13



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY PALM BEACH	**PROJECT Hydrology – Palm Beach County Wells**	**DESIGNATION PB 830 2005**
SECTION 02	**TOWNSHIP 42 SOUTH**	**RANGE 39 EAST**

GEOGRAPHIC INDEX OF QUAD

Established by Nick Miller Inc. **Recovered by**	**NAME OF QUADRANGLE** **Big Mound South**
SURVEYOR Stephen M. Gordon **DATE** 8/26/2005	**FIELD BOOK** 8 **PAGE** 13

HORIZONTAL DATUM: **1927** (**1983**) **Other**_____ (circle one) ZONE (**E**) or **W**

STATE PLANE COORDINATES	**E 847,952 ft**	**N 915,710 ft**
LATITUDE: N 26.85171°	**LONGITUDE: W 80.41179°**	
VERTICAL DATUM: MSL **1929** (**1988**) **Other** _____ (circle one)		**EL. 22.42 ft**
VERTICAL DATUM: MSL (**1929**) **1988 Other** _____ (circle one)		**EL. 23.83 ft**

CONTROL ACCURACY: HORIZONTAL 1 2 3 (SUB-METER) (circle one) **VERTICAL 1 2 (3)**

DESCRIPTION

To Reach:

FROM INTERSECTION BEE-LINE HIGHWAY & ENTRANCE OF CORBETT NATIONAL PARK. GO WESTERLY & SOUTHERLY THROUGH CORBETT NATIONAL PARK ENTRANCE ON DIRT ROAD FOR 8.5 MILES TO MARK ON RIGHT. 26.8 FEET WEST OF CENTERLINE OF DIRT ROAD, 59.9 FEET SOUTHWEST OF 12 INCH OAK TREE, 36.5 FEET NORTH OF 12 INCH PALM TREE, 57.8 FEET NORTH OF MONITORING WELL PB 831 (USGS MONITORING WELL). SET MAGNET 1 FOOT NORTH OF CONCRETE MONUMENT.

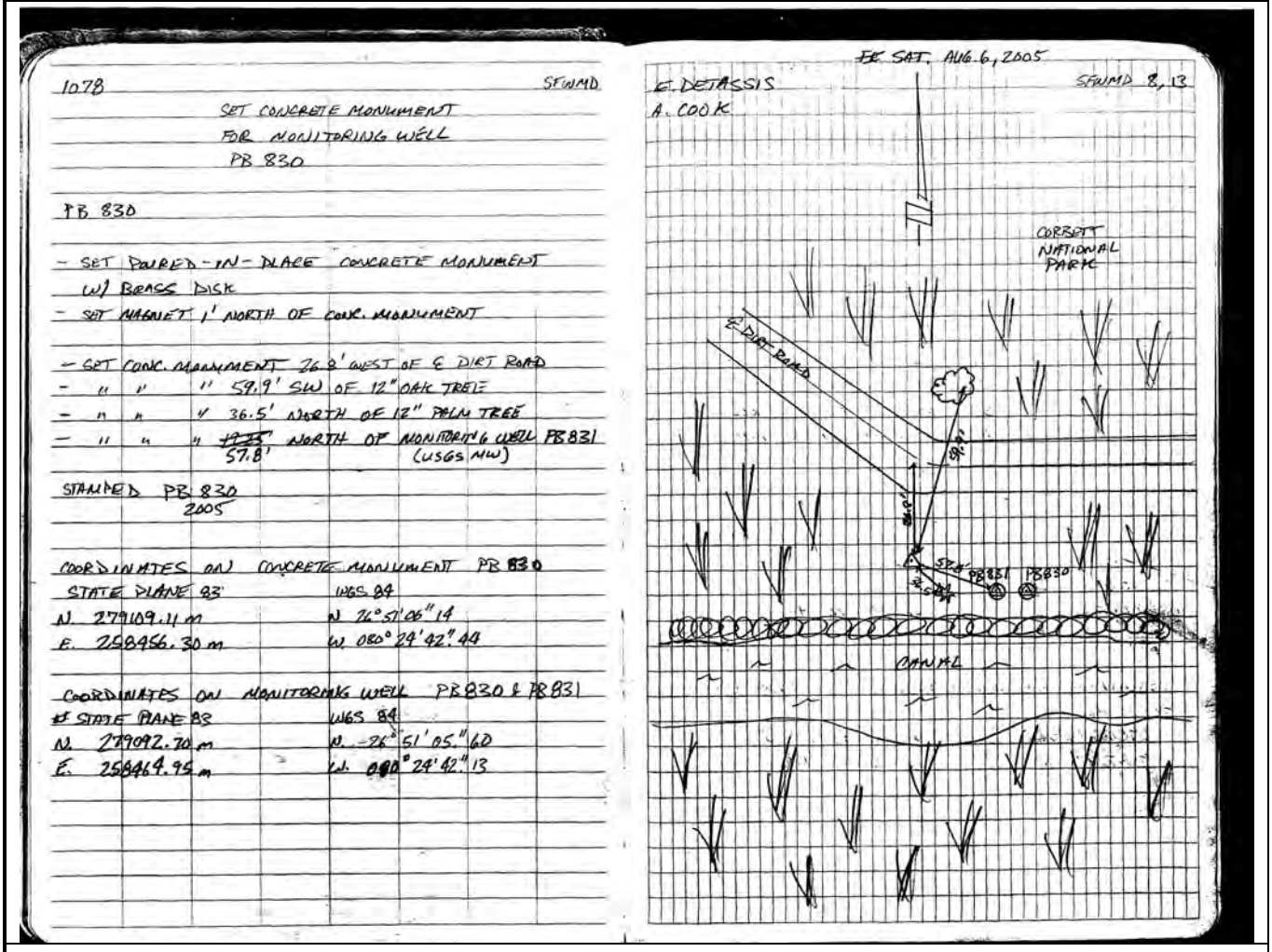
Benchmarks Used: ENR 103, CAN AZ MK, L 402, C 402, and X 537

Notable Land marks:

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

SKETCH



1078 SFWMD

SET CONCRETE MONUMENT
FOR MONITORING WELL
PB 830

PB 830

- SET POURED-IN-PLACE CONCRETE MONUMENT W/ BRASS DISK
- SET MAGNET 1' NORTH OF CONC. MONUMENT

- SET CONC. MONUMENT 76.8' WEST OF C DIRT ROAD
- " " " 59.9' SW OF 12" OAK TREE
- " " " 36.5' NORTH OF 12" PALM TREE
- " " " ~~47.3'~~ 57.8' NORTH OF MONITORING WELL PB831 (USGS NW)

STAMPED PB 830 2005

COORDINATES ON CONCRETE MONUMENT PB 830

STATE PLANE 83'	NGS 84
N. 279109.11 m	N 26°51'06"14
E. 258456.30 m	W 080°24'42"44

COORDINATES ON MONITORING WELL PB830 & PB831

STATE PLANE 83	NGS 84
N. 279092.70 m	N. 26°51'05"60
E. 258464.95 m	W. 080°24'42"13

FE SAT. AUG. 6, 2005

E. DEJASSIS
A. COOK

SFWMD 8, 13

CORBETT NATIONAL PARK

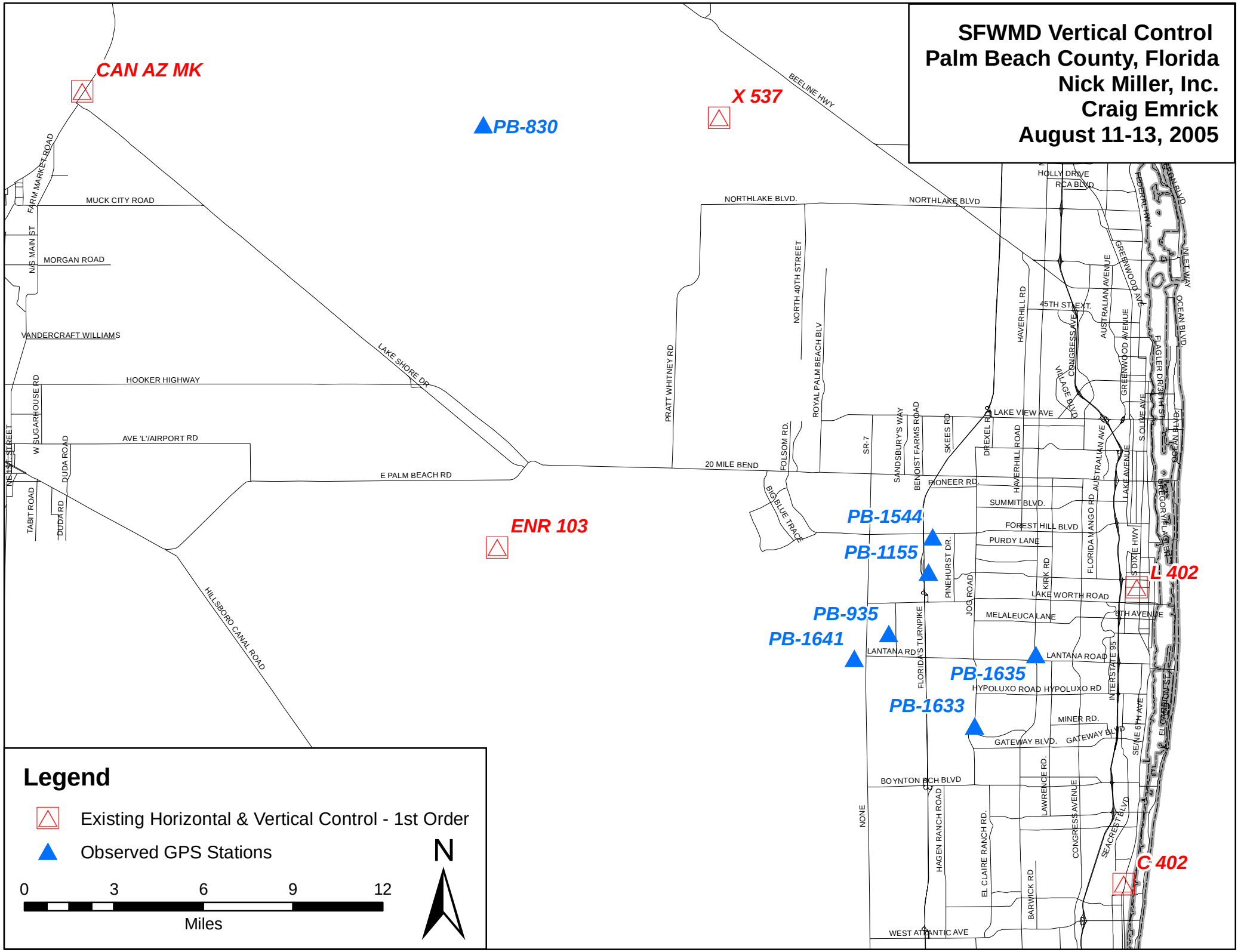
C DIRT ROAD

59.9'

57.8'

PB831 PB830

CANAL


SFWMD Vertical Control
Palm Beach County, Florida
Nick Miller, Inc.
Craig Emrick
August 11-13, 2005
CAN AZ MK
PB-830
X 537
ENR 103
PB-1544
PB-1155
PB-935
PB-1641
PB-1635
PB-1633
L 402
C 402
BEELINE HWY
FARM MARKET ROAD
MUCK CITY ROAD
N/S MAIN ST
MORGAN ROAD
VANDERCRAFT WILLIAMS
HOOKER HIGHWAY
W SUGARHOUSE RD
NE 1ST STREET
AVE 'L'/AIRPORT RD
DUDA ROAD
DUDA RD
TABIT ROAD
E PALM BEACH RD
LAKE SHORE DR
HILLSBORO CANAL ROAD
PRATT WHITNEY RD
NORTHLAKE BLVD.
NORTH 40TH STREET
ROYAL PALM BEACH BLV
20 MILE BEND
FOLSOM RD.
BIG BLUE TRACE
SR-7
SANDSBURY'S WAY
BENOIST FARMS ROAD
SKEES RD
DREXEL RD
LAKE VIEW AVE
PIONEER RD.
SUMMIT BLVD.
FOREST HILL BLVD
PURDY LANE
PINEHURST DR.
JOG ROAD
FLORIDA'S TURNPIKE
LANTANA RD
LANTANA ROAD
HYPOLUXO ROAD HYPOLUXO RD
MINER RD.
GATEWAY BLVD.
BOYNTON BCH BLVD
HAGEN RANCH ROAD
EL CLAIRE RANCH RD.
LAWRENCE RD.
CONGRESS AVENUE
BARWICK RD
WEST ATLANTIC AVE
NONE
HOLLY DRIVE
RCA BLVD
FEDERAL HWY
INLET WAY
OCEAN BLVD
45TH ST EXT.
HAVERHILL RD
CONGRESS AVE
VILLAGE BLVD
AUSTRALIAN AVENUE
GREENWOOD AVENUE
FLAGLER DR
S OLIVE AVE
OCEAN BLVD
LAKE AVENUE
GREGORY RD
FLAGLER
S DIXIE HWY
KIRK RD
LAKE WORTH ROAD
6TH AVENUE
MELALEUCA LANE
INTERSTATE 95
SEACREST BLVD
SE/NE 6TH AVE
EL CAMINO ST
Legend
Existing Horizontal & Vertical Control - 1st Order
Observed GPS Stations
0
3
6
9
12
Miles
N

♀ NATIONAL GEODETIC SURVEY
PROGRAM ADJUST ADJUSTMENT PROGRAM
PAGE 1
VERSION 4.30

BLUE BOOK FILE = bbkf2

ADJUSTMENT FILE = afilevf

GPS FILE = gfile.mod

DOPPLER FILE = nodfile

OUTPUT FILE = adjvf1.out

OUTPUT BLUE BOOK FILE = bbkvf1

SYSTEM TIME IS 05/AUG/23 14:21:52.28

******************************** A-FILE CONTENTS ********************************

```
    **AFILEVF - 1078.004 SFWMD VERTICAL CONTROL
    **NICK MILLER INCORPORATED
    CC        0001                              26384292269N080241891471W   6188
    **        0001 ENR 103
    DD3
    II109999999
    MM3YY
    PP22
```

******************************** END OF A-FILE ********************************

♀ NATIONAL GEODETIC SURVEY
PROGRAM ADJUST ADJUSTMENT PROGRAM
PAGE 2
VERSION 4.30

***************** ADJUSTMENT FILE OPTIONS **********

ELLIPSOID SEMI-MAJOR AXIS = 6378137.000 METERS
ECCENTRICITY SQUARED = 0.006694380022903416
DEFAULT ORTHOMETRIC HEIGHT = 0.000 METERS
DEFAULT GEOID HEIGHT = 0.000 METERS
ADJUST ORTHOMETRIC HEIGHTS
SCALE SIGMAS BY A-POSTERIORI SIGMA OF UNIT WEIGHT
ABORT IF SINGULARITIES
UPDATE *80* RECORDS INTO NEW BBOOK FILENAME--bbkvf1

DO NOT CREATE ADJUSTED POSITIONS FILE
DO NOT UPDATE BLUE BOOK AND ADJUSTMENT FILE AT THE END OF EACH ITERATION
COMPUTE A 3-DIMENSIONAL ADJUSTMENT
COMPUTE NO MORE THAN 10 ITERATIONS
DO NOT DISPLAY STATISTICS IF SOLUTION SLOWLY CONVERGES
ABORT IF MISCLOSURE EXCEEDS 0.1E+21 SIGMA
PRINT WHEN MISCLOSURES EXCEED 0.1E+21 SIGMA
CONVERGE IF RMS SUM OF SHIFTS BELOW 0.003 METERS
COMPUTE NORMALIZED RESIDUALS AND INVERSE
ECHO LARGE BLUE BOOK MISCLOSURES ONLY
ECHO GPS DATA TRANSFER FILE
ECHO LARGE G-FORMAT MISCLOSURES ONLY
ECHO DOPPLER DATA TRANSFER FILE
DISPLAY CONSTRAINTS
DISPLAY ALL GPS RESIDUALS GREATER OR EQUAL TO 0.0 MM
DISPLAY ALL NON-GPS RESIDUALS/SD GREATER OR EQUAL TO 0.0 SIGMA
DISPLAY DIRECTION RESIDUALS

```
DISPLAY ANGLE RESIDUALS
DISPLAY ZENITH DISTANCE RESIDUALS
DISPLAY DISTANCE RESIDUALS
DISPLAY ASTRO-AZIMUTH RESIDUALS
DISPLAY GPS RESIDUALS
DISPLAY DOPPLER RESIDUALS
DISPLAY CONSTRAINED RESIDUALS
DISPLAY RESIDUALS GROUPED AROUND INTERSECTION STAS
DISPLAY POSITION SHIFTS
DISPLAY POSITION GOOGE NUMBERS

MINUTES SINCE START OF PROGRAM IS    0.0

♀                                                    NATIONAL GEODETIC SURVEY
PROGRAM ADJUST                                         ADJUSTMENT PROGRAM
                              PAGE   3
                                                         VERSION   4.30


******** CONSTRAINTS *************

 OBS #

     3   CC        0001                              26384292269N080241891471W   6188

************ END OF CONSTRAINTS *************

♀                                                    NATIONAL GEODETIC SURVEY
PROGRAM ADJUST                                         ADJUSTMENT PROGRAM
                              PAGE   4
                                                         VERSION   4.30


************ BLUE BOOK ************

 OBS #

******** END OF BLUE BOOK ********

♀                                                    NATIONAL GEODETIC SURVEY
PROGRAM ADJUST                                         ADJUSTMENT PROGRAM
                              PAGE   5
                                                         VERSION   4.30


******** GPS OBSERVATIONS *************


*********** END OF GPS OBSERVATIONS *********

MINUTES TO READ BBOOK, GFILE, AND DFILE    0.0

MINUTES TO REORDER    0.0

THE NUMBER OF NON-TRIVIAL COMPONENTS IS  1.

♀                                                    NATIONAL GEODETIC SURVEY
PROGRAM ADJUST                                         ADJUSTMENT PROGRAM
                              PAGE   6
                                                         VERSION   4.30


*** OBSERVATIONAL SUMMARY ***

  SSN  CMP  STATION NAME                    DIR          ANG          AZI          DIS
  ZD           GPS       DOP
                                          FRM   TO    FRM   TO    FRM   TO    FRM   TO
FRM   TO    FRM   TO
```

```
    1C   1  ENR103                          0    0      0    0      0    0      0    0
  0    0     11    0      0
    2    1  PB0830                          0    0      0    0      0    0      0    0
  0    0      0    7      0
    3    1  PB1633                          0    0      0    0      0    0      0    0
  0    0      2   10      0
    4    1  CAN AZ MK                       0    0      0    0      0    0      0    0
  0    0      2    0      0
    5    1  L402                            0    0      0    0      0    0      0    0
  0    0      8    0      0
    6    1  PB1544                          0    0      0    0      0    0      0    0
  0    0      1    7      0
    7    1  C402                            0    0      0    0      0    0      0    0
  0    0     13    0      0
    8    1  PB1641                          0    0      0    0      0    0      0    0
  0    0      2    4      0
    9    1  PB1595                          0    0      0    0      0    0      0    0
  0    0      1    6      0
   10    1  PB1155                          0    0      0    0      0    0      0    0
  0    0      3    7      0
   11    1  X537                            0    0      0    0      0    0      0    0
  0    0      4    2      0
   12    1  PB1635                          0    0      0    0      0    0      0    0
  0    0      0    4      0

TOTAL MINUTES TO COMMENCMENT OF ADJUSTMENT    0.0

♀                                                    NATIONAL GEODETIC SURVEY
PROGRAM ADJUST                                         ADJUSTMENT PROGRAM
                          PAGE   7
                                                         VERSION   4.30


********** COMMENCING ADJUSTMENT **********

THE AVERAGE BAND WIDTH FOR THE 3 DIM. ADJUSTMENT OF    12 STATIONS AND RANK     36 IS
72.4%.   D.P. WORDS NEEDED=      469

ITERATION # 0 THE RMS CORRECTION IS      0.039 METERS --- VTPV=        108.514  DF=   108
VARIANCE=          1.00

 MAXIMUM SHIFT - STATION: L402                                  VERTICAL SHIFT=
0.068 METERS

MINUTES NEEDED FOR ITERATION  0 =    0.0

ITERATION # 1 THE RMS CORRECTION IS      0.000 METERS --- VTPV=        108.514  DF=   108
VARIANCE=          1.00

 MAXIMUM SHIFT - STATION: CAN AZ MK                             VERTICAL SHIFT=
0.000 METERS

MINUTES NEEDED FOR ITERATION  1 =    0.0

********** ADJUSTMENT CONVERGED *************


THE FOLLOWING UNKNOWNS HAVE GOOGE NUMBERS LESS THAN 1.00D-03

MINUTES TO INVERT    0.0

♀                                                    NATIONAL GEODETIC SURVEY
PROGRAM ADJUST                                         ADJUSTMENT PROGRAM
                          PAGE   8
                                                         VERSION   4.30


*** JOB STATISTICS ***
```

A.) BLUE-BOOK STATISTICS

NO. *80* CONTROL RECORDS	12
NO. *85* DEFLECTION RECORDS	0
NO. *86* ELEVATION RECORDS	12
NO. DIRECTIONS	0
NO. ANGLES	0
NO. GPS VECTORS	47
NO. DOPPLER OBS.	0
NO. ZENITH DISTANCES	0
NO. DISTANCES	0
NO. AZIMUTHS	0
B.) NO. CONSTRAINTS	3
C.) NO. ACCURACIES	0
D.) NO. REJECTED OBS.	0

NORMALIZED RESIDUALS

RN	FROM STATION / TO STATION(S) / SESSION ID	COMPUTED	OBSERVED	V=C-O SEC	V=C-O METER	SDV	V/SDV	MDE 3-SIGMA
1	LA	26 38 42.92269N	26 38 42.92269N	0.00000	0.000	0.00	0.00	0.0000
0.00	(1) ENR103							
2	LO	80 24 18.91471W	80 24 18.91471W	0.00000	0.000	0.00	0.00	0.0000
0.00	(1) ENR103							
3	EH	-19.242	-19.242		0.000	0.00	0.00	0.0000
0.00	(1) ENR103							
4	DX	-2356.4916	-2356.5032		0.0116	0.0094	1.2218	0.0252
	(1) ENR103							
5	DY	10042.7106	10042.7085		0.0021	0.0508	0.0418	0.0518
	(2) PB0830							
6	DZ	20426.4275	20426.4262		0.0013	0.0283	0.0453	0.0284
1.84	2235A							
	DN	22874.1175	22874.1163		0.0012	0.0068		
	DE	-650.2124	-650.2242		0.0118	0.0064		
	DL				0.0118	0.0093		
	DU	0.1088	0.1084		0.0004	0.0720		
7	DX	26060.7539	26060.7542		-0.0003	0.0120	-0.0255	0.0211
	(1) ENR103							
8	DY	29.2215	29.2602		-0.0387	0.0668	-0.5772	0.0455
	(3) PB1633							
9	DZ	-8733.9003	-8733.9150		0.0147	0.0360	0.4061	0.0251
2.56	2235A							
	DN	-9767.4108	-9767.4068		-0.0039	0.0070		
	DE	25691.2913	25691.2981		-0.0068	0.0064		
	DL				0.0079	0.0094		
	DU	-0.9347	-0.9753		0.0406	0.0800		
10	DX	21432.6803	21432.6775		0.0028	0.0061	0.4500	0.0473
	(4) CAN AZ MK							
11	DY	2731.2513	2731.2603		-0.0090	0.0350	-0.2563	0.0876
	(2) PB0830							
12	DZ	-1660.9262	-1660.9289		0.0026	0.0207	0.1273	0.0470
0.76	2235A							
	DN	-1859.4154	-1859.4135		-0.0019	0.0077		
	DE	21589.8297	21589.8284		0.0012	0.0072		
	DL				0.0022	0.0105		
	DU	-4.6891	-4.6987		0.0095	0.0804		

13 DX	-10961.4273	-10961.4272	-0.0001	0.0131	-0.0082	0.0269	
(5) L402							
14 DY	-625.0632	-625.1112	0.0479	0.0670	0.7123	0.0555	
(6) PB1544							
15 DZ	2525.8231	2525.8284	-0.0053	0.0356	-0.1475	0.0296	2.44
2235A							
DN	2825.4189	2825.4024	0.0165	0.0079			
DE	-10905.9793	-10905.9874	0.0081	0.0080			
DL			0.0184	0.0113			
DU	0.6179	0.6625	-0.0446	0.0825			
16 DX	-11392.4165	-11392.4307	0.0142	0.0169	0.8354	0.0311	
(7) C402							
17 DY	6576.0928	6576.1029	-0.0101	0.0944	-0.1064	0.0680	
(6) PB1544							
18 DZ	16869.4264	16869.4005	0.0258	0.0514	0.5000	0.0373	2.69
2235A							
DN	18860.1296	18860.1121	0.0176	0.0107			
DE	-10094.8108	-10094.8230	0.0122	0.0098			
DL			0.0214	0.0146			
DU	0.7395	0.7169	0.0226	0.1114			

NORMALIZED RESIDUALS

RN FROM STATION / TO STATION(S) / SESSION ID	COMPUTED	OBSERVED	V=C-O SEC	V=C-O METER	SDV	V/SDV	MDE 3-SIGMA
19 DX	-8508.7232	-8508.7300	0.0068	0.0128	0.5268	0.0227	
(7) C402							
20 DY	2417.8173	2417.9025	-0.0853	0.0688	-1.2340	0.0495	
(3) PB1633							
21 DZ	7706.0607	7706.0283	0.0324	0.0362	0.8894	0.0266	2.58
2235A							
DN	8611.4643	8611.4734	-0.0091	0.0073			
DE	-7966.8226	-7966.8147	-0.0080	0.0069			
DL			0.0121	0.0100			
DU	1.3189	1.2282	0.0907	0.0815			
22 DX	26060.7539	26060.7386	0.0153	0.0094	1.6110	0.0208	
(1) ENR103							
23 DY	29.2215	29.2412	-0.0197	0.0408	-0.4805	0.0450	
(3) PB1633							
24 DZ	-8733.9003	-8733.9134	0.0131	0.0221	0.5886	0.0249	2.44
2235B							
DN	-9767.4108	-9767.4126	0.0018	0.0068			
DE	25691.2913	25691.2795	0.0117	0.0063			
DL			0.0119	0.0092			
DU	-0.9347	-0.9602	0.0255	0.0523			
25 DX	-15158.7098	-15158.7196	0.0098	0.0087	1.1223	0.0257	
(7) C402							
26 DY	2966.0399	2966.0733	-0.0334	0.0407	-0.8161	0.0548	
(8) PB1641							
27 DZ	11053.2463	11053.2323	0.0140	0.0220	0.6340	0.0303	1.87
2235B							
DN	12354.0890	12354.0919	-0.0029	0.0068			
DE	-14426.8712	-14426.8752	0.0040	0.0062			
DL			0.0049	0.0092			
DU	1.1847	1.1475	0.0372	0.0524			

28 DX	1733.6317	1733.6311	0.0006	0.0082	0.0747	0.0220	
(8) PB1641							
29 DY	874.4093	874.3961	0.0132	0.0356	0.3680	0.0457	
(9) PB1595							
30 DZ	1132.4451	1132.4452	-0.0001	0.0195	-0.0038	0.0256	1.99
2235B							
DN	1266.3081	1266.3024	0.0057	0.0061			
DE	1857.1392	1857.1364	0.0028	0.0057			
DL			0.0064	0.0083			
DU	0.3051	0.3167	-0.0115	0.0470			
31 DX	-8077.7340	-8077.7406	0.0065	0.0089	0.7312	0.0229	
(5) L402							
32 DY	-4783.3387	-4783.3218	-0.0169	0.0363	-0.4646	0.0466	
(3) PB1633							
33 DZ	-6637.5426	-6637.5516	0.0090	0.0194	0.4596	0.0256	2.12
2235B							
DN	-7423.2535	-7423.2535	0.0000	0.0064			
DE	-8779.6580	-8779.6615	0.0035	0.0064			
DL			0.0035	0.0091			
DU	1.1979	1.1780	0.0199	0.0495			

NORMALIZED RESIDUALS

RN	COMPUTED FROM STATION / TO STATION(S) / SESSION ID	OBSERVED	V=C-O SEC	V=C-O METER	SDV	V/SDV	MDE 3-SIGMA
34 DX	-11532.5840	-11532.5764		-0.0076	0.0063	-1.1951	0.0230
(7) C402							
35 DY	5662.1125	5662.1039		0.0086	0.0144	0.5953	0.0463
(10) PB1155							
36 DZ	15120.9710	15120.9683		0.0026	0.0095	0.2781	0.0277
2.31 2235B							
DN	16904.2220	16904.2152		0.0067	0.0078		
DE	-10389.9497	-10389.9437		-0.0060	0.0071		
DL				0.0090	0.0105		
DU	0.3054	0.3130		-0.0076	0.0195		
37 DX	-1892.4941	-1892.5012		0.0071	0.0046	1.5230	0.0244
(10) PB1155							
38 DY	-1821.6633	-1821.6562		-0.0071	0.0089	-0.8006	0.0513
(9) PB1595							
39 DZ	-2935.2796	-2935.2761		-0.0035	0.0067	-0.5200	0.0298
1.51 2235B							
DN	-3283.8287	-3283.8219		-0.0068	0.0072		
DE	-2175.3907	-2175.3965		0.0057	0.0063		
DL				0.0089	0.0096		
DU	1.1832	1.1774		0.0058	0.0178		
40 DX	-12994.0889	-12994.0704		-0.0185	0.0140	-1.3132	0.0443
(5) L402							
41 DY	-3360.7068	-3360.6953		-0.0114	0.0318	-0.3570	0.0840
(9) PB1595							
42 DZ	-2157.9118	-2157.9278		0.0159	0.0190	0.8365	0.0499
2.45 2245A							
DN	-2414.3183	-2414.3289		0.0106	0.0142		
DE	-13377.9051	-13377.8849		-0.0202	0.0137		
DL				0.0228	0.0198		
DU	1.3660	1.3516		0.0144	0.0429		

43 DX	10983.7331	10983.7602	-0.0271	0.0181	-1.4925	0.0561	
(11) X537							
44 DY	-10857.6940	-10857.7337	0.0397	0.0418	0.9470	0.1040	
(9) PB1595							
45 DZ	-24949.2791	-24949.2853	0.0063	0.0243	0.2558	0.0618	2.50
2245A							
DN	-27933.6508	-27933.6761	0.0253	0.0177			
DE	8983.8517	8983.8716	-0.0199	0.0177			
DL			0.0322	0.0250			
DU	-0.8253	-0.7890	-0.0363	0.0554			
46 DX	1733.6317	1733.6452	-0.0135	0.0194	-0.6911	0.0548	
(8) PB1641							
47 DY	874.4093	874.3690	0.0403	0.0428	0.9364	0.1050	
(9) PB1595							
48 DZ	1132.4451	1132.4597	-0.0146	0.0292	-0.4973	0.0722	2.74
2245A							
DN	1266.3081	1266.3024	0.0058	0.0214			
DE	1857.1392	1857.1456	-0.0064	0.0176			
DL			0.0086	0.0278			
DU	0.3051	0.3492	-0.0441	0.0535			

♀

PROGRAM ADJUST

NATIONAL GEODETIC SURVEY
ADJUSTMENT PROGRAM

PAGE 12

VERSION 4.30

NORMALIZED RESIDUALS

RN	COMPUTED FROM STATION / TO STATION(S) / SESSION ID	OBSERVED	V=C-O SEC	V=C-O METER	SDV	V/SDV	MDE 3-SIGMA
49 DX	-8508.7232	-8508.7312		0.0080	0.0120	0.6637	0.0225
(7) C402							
50 DY	2417.8173	2417.8731		-0.0559	0.0630	-0.8833	0.0467
(3) PB1633							
51 DZ	7706.0607	7706.0290		0.0317	0.0346	0.9121	0.0256
2.55 2245A							
DN	8611.4643	8611.4612		0.0031	0.0072		
DE	-7966.8226	-7966.8209		-0.0017	0.0068		
DL				0.0036	0.0099		
DU	1.3189	1.2543		0.0646	0.0757		
52 DX	-3023.8607	-3023.8590		-0.0018	0.0137	-0.1298	0.0428
(3) PB1633							
53 DY	3244.2953	3244.3546		-0.0593	0.0319	-1.8494	0.0796
(10) PB1155							
54 DZ	7414.9103	7414.8769		0.0334	0.0200	1.6649	0.0480
2.63 2245A							
DN	8292.7639	8292.7601		0.0038	0.0140		
DE	-2424.9013	-2424.8895		-0.0119	0.0139		
DL				0.0125	0.0197		
DU	-1.0153	-1.0822		0.0669	0.0412		
55 DX	-11532.5840	-11532.5845		0.0005	0.0131	0.0386	0.0394
(7) C402							
56 DY	5662.1125	5662.2189		-0.1064	0.0330	-3.2124	0.0686
(10) PB1155							
57 DZ	15120.9710	15120.9038		0.0671	0.0208	3.2094	0.0434
2.80 2245A							
DN	16904.2220	16904.2088		0.0132	0.0126		
DE	-10389.9497	-10389.9319		-0.0178	0.0126		
DL				0.0221	0.0178		
DU	0.3054	0.1815		0.1239	0.0392		

58 DX	19410.7673	19410.7670	0.0003	0.0322	0.0107	0.0510	
(1) ENR103							
59 DY	577.4442	577.4939	-0.0498	0.1734	-0.2855	0.1210	
(8) PB1641							
60 DZ	-5386.7147	-5386.7632	0.0485	0.0983	0.4914	0.0724	2.83
2245A							
DN	-6024.7864	-6024.8077	0.0214	0.0220			
DE	19230.9639	19230.9719	-0.0080	0.0161			
DL			0.0228	0.0273			
DU	-1.0655	-1.1311	0.0656	0.2033			
61 DX	-5085.9542	-5085.9526	-0.0016	0.0089	-0.1799	0.0223	
(5) L402							
62 DY	-2514.1378	-2514.1465	0.0087	0.0398	0.2184	0.0449	
(12) PB1635							
63 DZ	-3194.2476	-3194.2475	-0.0001	0.0210	-0.0046	0.0249	2.12
2245B							
DN	-3573.0101	-3573.0140	0.0039	0.0062			
DE	-5442.8517	-5442.8516	-0.0001	0.0061			
DL			0.0039	0.0087			
DU	0.7855	0.7935	-0.0080	0.0531			

NORMALIZED RESIDUALS

RN	FROM STATION / TO STATION(S) / SESSION ID	COMPUTED	OBSERVED	V=C-O SEC	V=C-O METER	SDV	V/SDV	MDE 3-SIGMA
64 DX		-5516.9434	-5516.9539		0.0105	0.0116	0.9044	0.0250
(7) C402								
65 DY		4687.0182	4687.0283		-0.0101	0.0504	-0.1989	0.0495
(12) PB1635								
66 DZ		11149.3557	11149.3548		0.0008	0.0263	0.0309	0.0273
2.34 2245B								
DN		12461.7068	12461.7113		-0.0045	0.0071		
DE		-4628.0449	-4628.0536		0.0087	0.0073		
DL					0.0098	0.0102		
DU		0.9053	0.8944		0.0109	0.0641		
67 DX		13016.3947	13016.4382		-0.0435	0.0224	-1.9331	0.0446
(11) X537								
68 DY		-8122.0505	-8122.0362		-0.0143	0.0955	-0.1492	0.0849
(6) PB1544								
69 DZ		-20265.5441	-20265.5299		-0.0143	0.0513	-0.2766	0.0475
2.73 2245B								
DN		-22693.9205	-22693.9047		-0.0157	0.0134		
DE		11448.6892	11448.7345		-0.0453	0.0141		
DL					0.0479	0.0195		
DU		-1.5759	-1.5754		-0.0004	0.1141		
70 DX		23036.8931	23036.9464		-0.0533	0.0228	-2.3304	0.0430
(1) ENR103								
71 DY		3273.5168	3273.4315		0.0853	0.1021	0.8315	0.0874
(10) PB1155								
72 DZ		-1318.9900	-1318.9414		-0.0486	0.0532	-0.9097	0.0458
2.84 2245B								
DN		-1474.6502	-1474.6484		-0.0018	0.0133		
DE		23258.9659	23259.0041		-0.0381	0.0140		
DL					0.0382	0.0193		
DU		-1.9414	-1.8364		-0.1050	0.1188		

73 DX	140.1674	140.1640	0.0034	0.0128	0.2686	0.0274	
(10) PB1155							
74 DY	913.9802	914.0037	-0.0235	0.0544	-0.4296	0.0539	
(6) PB1544							
75 DZ	1748.4554	1748.4503	0.0051	0.0289	0.1755	0.0292	2.60
2245B							
DN	1955.9092	1955.9153	-0.0061	0.0081			
DE	294.1464	294.1471	-0.0006	0.0085			
DL			0.0061	0.0118			
DU	0.4340	0.4105	0.0235	0.0669			
76 DX	-8508.7232	-8508.7386	0.0154	0.0145	1.0557	0.0268	
(7) C402							
77 DY	2417.8173	2417.8894	-0.0722	0.0613	-1.1721	0.0520	
(3) PB1633							
78 DZ	7706.0607	7706.0291	0.0316	0.0329	0.9554	0.0288	2.65
2245B							
DN	8611.4643	8611.4690	-0.0047	0.0080			
DE	-7966.8226	-7966.8254	0.0028	0.0084			
DL			0.0054	0.0116			
DU	1.3189	1.2388	0.0801	0.0738			

NORMALIZED RESIDUALS

RN	COMPUTED FROM STATION / TO STATION(S) / SESSION ID	OBSERVED	V=C-O SEC	V=C-O METER	SDV	V/SDV	MDE 3-SIGMA
79 DX	26060.7539	26060.7605		-0.0066	0.0245	-0.2688	0.0448
(1) ENR103							
80 DY	29.2215	29.2563		-0.0348	0.1048	-0.3307	0.0877
(3) PB1633							
81 DZ	-8733.9003	-8733.9276		0.0273	0.0558	0.4863	0.0479
2.89 2245B							
DN	-9767.4108	-9767.4203		0.0095	0.0140		
DE	25691.2913	25691.3037		-0.0124	0.0147		
DL				0.0156	0.0203		
DU	-0.9347	-0.9766		0.0419	0.1221		
82 DX	-15900.0880	-15900.0826		-0.0054	0.0056	-0.9473	0.0231
(3) PB1633							
83 DY	12280.3260	12280.3273		-0.0013	0.0311	-0.0423	0.0468
(11) X537							
84 DZ	29428.9098	29428.9123		-0.0025	0.0186	-0.1325	0.0268
1.56 2255A							
DN	32942.5696	32942.5720		-0.0024	0.0061		
DE	-13581.8645	-13581.8590		-0.0055	0.0054		
DL				0.0060	0.0082		
DU	0.9988	0.9996		-0.0008	0.0475		
85 DX	-13016.3947	-13016.3861		-0.0086	0.0083	-1.0361	0.0252
(6) PB1544							
86 DY	8122.0505	8122.0549		-0.0044	0.0379	-0.1155	0.0491
(11) X537							
87 DZ	20265.5441	20265.5379		0.0063	0.0229	0.2716	0.0285
1.82 2255A							
DN	22693.9205	22693.9162		0.0043	0.0070		
DE	-11448.6892	-11448.6799		-0.0092	0.0065		
DL				0.0102	0.0095		
DU	1.5759	1.5705		0.0054	0.0553		

88	DX	-5516.9434	-5516.9449		0.0015	0.0059	0.2592	0.0207
(	7)	C402						
89	DY	4687.0182	4687.0533		-0.0351	0.0326	-1.0715	0.0424
(	12)	PB1635						
90	DZ	11149.3557	11149.3346		0.0210	0.0188	1.1122	0.0239
1.77		2255A						
	DN	12461.7068	12461.7035		0.0032	0.0057		
	DE	-4628.0449	-4628.0404		-0.0045	0.0052		
	DL				0.0056	0.0077		
	DU	0.9053	0.8647		0.0405	0.0472		
91	DX	26060.7539	26060.7597		-0.0058	0.0067	-0.8588	0.0189
(	1)	ENR103						
92	DY	29.2215	29.2091		0.0124	0.0363	0.3397	0.0394
(	3)	PB1633						
93	DZ	-8733.9003	-8733.9004		0.0001	0.0212	0.0038	0.0225
2.27		2255A						
	DN	-9767.4108	-9767.4168		0.0060	0.0062		
	DE	25691.2913	25691.2949		-0.0036	0.0056		
	DL				0.0070	0.0083		
	DU	-0.9347	-0.9229		-0.0118	0.0482		

NORMALIZED RESIDUALS

RN	FROM STATION / TO STATION(S) / SESSION ID	COMPUTED	OBSERVED	V=C-O SEC	V=C-O METER	SDV	V/SDV	MDE 3-SIGMA
94	DX	23036.8931	23036.8859		0.0072	0.0064	1.1152	0.0195
(	1)	ENR103						
95	DY	3273.5168	3273.5325		-0.0157	0.0327	-0.4786	0.0401
(	10)	PB1155						
96	DZ	-1318.9900	-1318.9935		0.0035	0.0189	0.1824	0.0227
1.94		2255A						
	DN	-1474.6502	-1474.6458		-0.0044	0.0056		
	DE	23258.9659	23258.9615		0.0044	0.0051		
	DL				0.0063	0.0076		
	DU	-1.9414	-1.9579		0.0165	0.0454		
97	DX	-5085.9542	-5085.9496		-0.0046	0.0070	-0.6570	0.0211
(	5)	L402						
98	DY	-2514.1378	-2514.1600		0.0222	0.0312	0.7106	0.0423
(	12)	PB1635						
99	DZ	-3194.2476	-3194.2323		-0.0153	0.0181	-0.8407	0.0236
1.88		2255A						
	DN	-3573.0101	-3573.0066		-0.0035	0.0057		
	DE	-5442.8517	-5442.8510		-0.0007	0.0056		
	DL				0.0036	0.0081		
	DU	0.7855	0.8126		-0.0272	0.0455		
100	DX	140.1674	140.1704		-0.0030	0.0044	-0.6690	0.0178
(	10)	PB1155						
101	DY	913.9802	913.9859		-0.0057	0.0226	-0.2513	0.0360
(	6)	PB1544						
102	DZ	1748.4554	1748.4543		0.0011	0.0130	0.0832	0.0200
1.49		2255A						
	DN	1955.9092	1955.9105		-0.0013	0.0044		
	DE	294.1464	294.1503		-0.0039	0.0041		
	DL				0.0041	0.0060		
	DU	0.4340	0.4289		0.0051	0.0360		

103 DX	-12517.1575	-12517.1575	0.0000	0.0184	0.0014	0.0330
(11) X537						
104 DY	-2266.8369	-2266.8207	-0.0161	0.0865	-0.1857	0.0643
(2) PB0830						
105 DZ	-268.5820	-268.5932	0.0112	0.0443	0.2514	0.0344
2.30 2255B						
DN	-301.0664	-301.0692	0.0028	0.0087		
DE	-12720.0344	-12720.0318	-0.0027	0.0096		
DL			0.0039	0.0129		
DU	0.0437	0.0245	0.0192	0.1080		
106 DX	-11392.4165	-11392.4055	-0.0110	0.0259	-0.4244	0.0394
(7) C402						
107 DY	6576.0928	6576.0261	0.0667	0.1091	0.6084	0.0732
(6) PB1544						
108 DZ	16869.4264	16869.4566	-0.0303	0.0539	-0.5589	0.0374
2.75 2255B						
DN	18860.1296	18860.1265	0.0032	0.0108		
DE	-10094.8108	-10094.8114	0.0006	0.0130		
DL			0.0032	0.0169		
DU	0.7395	0.8135	-0.0740	0.1265		

NORMALIZED RESIDUALS

RN	COMPUTED FROM STATION / TO STATION(S) / SESSION ID	OBSERVED	V=C-O SEC	V=C-O METER	SDV	V/SDV	MDE 3-SIGMA
109	DX	-8508.7232	-8508.7161	-0.0071	0.0187	-0.3773	0.0298
	(7) C402						
110	DY	2417.8173	2417.7834	0.0338	0.0804	0.4187	0.0574
	(3) PB1633						
111	DZ	7706.0607	7706.0757	-0.0150	0.0404	-0.3708	0.0295
2.72	2255B						
	DN	8611.4643	8611.4623	0.0020	0.0083		
	DE	-7966.8226	-7966.8214	-0.0012	0.0097		
	DL			0.0023	0.0128		
	DU	1.3189	1.3565	-0.0376	0.0940		
112	DX	-2356.4916	-2356.4821	-0.0095	0.0203	-0.4667	0.0356
	(1) ENR103						
113	DY	10042.7106	10042.6867	0.0239	0.0909	0.2621	0.0669
	(2) PB0830						
114	DZ	20426.4275	20426.4437	-0.0162	0.0457	-0.3531	0.0357
2.51	2255B						
	DN	22874.1175	22874.1207	-0.0031	0.0096		
	DE	-650.2124	-650.2070	-0.0054	0.0110		
	DL			0.0063	0.0146		
	DU	0.1088	0.1386	-0.0298	0.1113		
115	DX	26060.7539	26060.7854	-0.0315	0.0245	-1.2816	0.0377
	(1) ENR103						
116	DY	29.2215	29.1241	0.0974	0.1056	0.9182	0.0712
	(3) PB1633						
117	DZ	-8733.9003	-8733.8533	-0.0470	0.0534	-0.8766	0.0370
2.84	2255B						
	DN	-9767.4108	-9767.4141	0.0033	0.0107		
	DE	25691.2913	25691.3059	-0.0146	0.0126		
	DL			0.0150	0.0165		
	DU	-0.9347	-0.8231	-0.1116	0.1223		

118 DX	21432.6803	21432.7030	-0.0227	0.0279	-0.8108	0.0473
(4) CAN AZ MK						
119 DY	2731.2513	2731.1657	0.0856	0.1224	0.6960	0.0876
(2) PB0830						
120 DZ	-1660.9262	-1660.8898	-0.0365	0.0600	-0.6044	0.0470
2.24 2255B						
DN	-1859.4154	-1859.4227	0.0073	0.0119		
DE	21589.8297	21589.8380	-0.0083	0.0143		
DL			0.0111	0.0186		
DU	-4.6891	-4.5940	-0.0951	0.1548		
121 DX	-10961.4273	-10961.4135	-0.0138	0.0282	-0.4869	0.0396
(5) L402						
122 DY	-625.0632	-625.1259	0.0626	0.1198	0.5203	0.0734
(6) PB1544						
123 DZ	2525.8231	2525.8621	-0.0390	0.0600	-0.6467	0.0381
2.74 2255B						
DN	2825.4189	2825.4250	-0.0061	0.0109		
DE	-10905.9793	-10905.9764	-0.0029	0.0132		
DL			0.0067	0.0171		
DU	0.6179	0.6926	-0.0747	0.1397		

NORMALIZED RESIDUALS

RN	COMPUTED FROM STATION / TO STATION(S) / SESSION ID	OBSERVED	V=C-O SEC	V=C-O METER	SDV	V/SDV	MDE 3-SIGMA
124 DX	-12517.1575	-12517.1502		-0.0073	0.0140	-0.5186	0.0345
(11) X537							
125 DY	-2266.8369	-2266.8248		-0.0120	0.0705	-0.1700	0.0665
(2) PB0830							
126 DZ	-268.5820	-268.5907		0.0087	0.0397	0.2177	0.0365
2.33 2255C							
DN	-301.0664	-301.0693		0.0029	0.0098		
DE	-12720.0344	-12720.0252		-0.0092	0.0103		
DL				0.0096	0.0143		
DU	0.0437	0.0303		0.0134	0.0925		
127 DX	-11532.5840	-11532.5906		0.0066	0.0081	0.8132	0.0261
(7) C402							
128 DY	5662.1125	5662.0904		0.0221	0.0134	1.6427	0.0446
(10) PB1155							
129 DZ	15120.9710	15120.9848		-0.0139	0.0085	-1.6178	0.0255
2.29 2255C							
DN	16904.2220	16904.2251		-0.0032	0.0072		
DE	-10389.9497	-10389.9600		0.0103	0.0084		
DL				0.0108	0.0110		
DU	0.3054	0.3301		-0.0247	0.0187		
130 DX	-15158.7098	-15158.6957		-0.0141	0.0184	-0.7591	0.0536
(7) C402							
131 DY	2966.0399	2965.9774		0.0625	0.0306	2.0339	0.0923
(8) PB1641							
132 DZ	11053.2463	11053.2548		-0.0085	0.0193	-0.4386	0.0515
2.51 2255C							
DN	12354.0890	12354.0680		0.0210	0.0154		
DE	-14426.8712	-14426.8681		-0.0031	0.0182		
DL				0.0212	0.0238		
DU	1.1847	1.2458		-0.0610	0.0410		

133 DX	21144.3990	21144.4057	-0.0066	0.0106	-0.6262	0.0274	
(1) ENR103							
134 DY	1451.8535	1451.8372	0.0163	0.0527	0.3084	0.0563	
(9) PB1595							
135 DZ	-4254.2696	-4254.2590	-0.0105	0.0283	-0.3710	0.0307	2.16
2255C							
DN	-4758.4784	-4758.4767	-0.0017	0.0074			
DE	21086.7062	21086.7100	-0.0038	0.0076			
DL			0.0042	0.0106			
DU	-0.7602	-0.7401	-0.0201	0.0661			
136 DX	-36494.9795	-36494.9706	-0.0089	0.0110	-0.8037	0.0291	
(5) L402							
137 DY	5230.1504	5230.1474	0.0030	0.0555	0.0537	0.0599	
(2) PB0830							
138 DZ	22522.7852	22522.7919	-0.0066	0.0296	-0.2233	0.0318	1.98
2255C							
DN	25218.2462	25218.2502	-0.0039	0.0077			
DE	-35079.2518	-35079.2435	-0.0083	0.0079			
DL			0.0091	0.0111			
DU	2.2803	2.2873	-0.0070	0.0771			

NORMALIZED RESIDUALS

RN	FROM STATION / TO STATION(S) / SESSION ID	COMPUTED	OBSERVED	V=C-O SEC	V=C-O METER	SDV	V/SDV	MDE 3-SIGMA
139	DX	-11101.5948	-11101.5996	0.0048	0.0074	0.6521	0.0203	
	(5) L402							
140	DY	-1539.0435	-1539.0221	-0.0214	0.0364	-0.5840	0.0408	
	(10) PB1155							
141	DZ	777.3677	777.3628	0.0049	0.0195	0.2514	0.0220	2.01
	2255C							
	DN	869.5099	869.5153	-0.0054	0.0052			
	DE	-11200.9961	-11200.9972	0.0011	0.0054			
	DL			0.0055	0.0075			
	DU	0.1836	0.1618	0.0218	0.0477			
142	DX	-1733.6317	-1733.6316	-0.0001	0.0082	-0.0138	0.0226	
	(9) PB1595							
143	DY	-874.4093	-874.4172	0.0079	0.0428	0.1845	0.0468	
	(8) PB1641							
144	DZ	-1132.4451	-1132.4462	0.0011	0.0231	0.0463	0.0256	2.10
	2255C							
	DN	-1266.3081	-1266.3126	0.0045	0.0061			
	DE	-1857.1392	-1857.1404	0.0012	0.0062			
	DL			0.0046	0.0087			
	DU	-0.3051	-0.2986	-0.0065	0.0541			

RESIDUAL STATISTICS

OBSERVATION NUMBERS OF 20 GREATEST RESIDUALS (V)

56	116	119	20	71	77	57	107	122	131	53	50	70	59	72
60	14	117	67	47										

OBSERVATION NUMBERS OF 20 GREATEST STANDARDIZED RESIDUALS (V/SDV)

56	57	70	131	67	53	54	128	129	22	37	43	40	115	20
4	34	77	25	94										

OBSERVATION NUMBERS OF 20 GREATEST GPS DU COMPONENT RESIDUALS (V)

57	117	72	120	21	78	123	108	54	60	51	132	15	48	81
9	90	111	27	45										

OBSERVATION NUMBERS OF 20 GREATEST GPS DL COMPONENT RESIDUALS (V)

69	72	45	60	42	57	18	132	15	81	117	54	21	24	6
120	129	87	66	126										

TOTAL=	144	NO-CHECK=	3
MAX V=	9.7D-02	MAX V/SDV=	3.209
MIN V=	-1.1D-01	MIN V/SDV=	-3.212
MEAN V=	-6.6D-04	MEAN V/SDV=	-0.080

	MAX V	OBS #	MIN V	OBS #
DX	1.5D-02	76	-5.3D-02	70
DY	9.7D-02	116	-1.1D-01	56
DZ	6.7D-02	57	-4.9D-02	72
DN	2.5D-02	45	-1.6D-02	69
DE	1.2D-02	18	-4.5D-02	69
DL	4.8D-02	69	2.2D-03	12
DU	1.2D-01	57	-1.1D-01	117

	N	VTPV	RMS VTPV	RN	VTPV/RN	MEAN ABS RESIDUAL
DELTA X	47	30.7	0.81	36.00	0.85	0.010 (METERS)
DELTA Y	47	48.5	1.02	36.00	1.35	0.033 (METERS)
DELTA Z	47	29.2	0.79	36.00	0.81	0.016 (METERS)
DOPPLER X	0	0.0	0.00	0.00	0.00	0.000 (METERS)
DOPPLER Y	0	0.0	0.00	0.00	0.00	0.000 (METERS)
DOPPLER Z	0	0.0	0.00	0.00	0.00	0.000 (METERS)
DIRECTION	0	0.0	0.00	0.00	0.00	0.000 (SECONDS)
H ANGLE	0	0.0	0.00	0.00	0.00	0.000 (SECONDS)
ZEN DIST	0	0.0	0.00	0.00	0.00	0.000 (SECONDS)
DISTANCE	0	0.0	0.00	0.00	0.00	0.000 (METERS)
AZIMUTH	0	0.0	0.00	0.00	0.00	0.000 (SECONDS)
OTHER	3	0.0	0.00	0.00	0.00	0.000
TOTAL	144	108.5	0.87	108.00	1.00	

	N CONTRIB.	RMS RESIDUAL	MEAN ABS RESIDUAL
NORTH	47	0.009	0.006 (METERS)
EAST	47	0.012	0.008 (METERS)
UP	47	0.048	0.036 (METERS)

DEGREES OF FREEDOM	=	108
VARIANCE SUM	=	108.5
STD.DEV.OF UNIT WEIGHT	=	1.002
VARIANCE OF UNIT WEIGHT	=	1.00

MINUTES TO LIST RESIDUALS 0.0

ADJUSTED POSITIONS

SSN	NAME	LATITUDE	LONGITUDE	ORTHO. HT.	G. HT.	E. HT.
1	1 ENR103	26 38 42.92269N	80 24 18.91471W	6.188	-25.430	-19.242
	SHIFTS (M.)	0.000N	0.000W			
0.068 AZ= 0 H= 0.000 T= 0.068	SCALED SIGMAS (M.)	0.000	0.000			
0.000	GOOGES	1.0D+00	1.0D+00			
1.0D+00	X = 950834.0404	Y = -5624805.2036	Z = 2843130.1491			
2	2 PB0830	26 51 6.13055N	80 24 42.44606W	6.916	-26.049	-19.133
	SHIFTS (M.)	0.000S	0.000W			
0.068 AZ= 0 H= 0.000 T= 0.068	SCALED SIGMAS (M.)	0.004	0.004			
0.042	GOOGES	8.4D-01	8.7D-01			
8.7D-01	X = 948477.5488	Y = -5614762.4930	Z = 2863556.5766			
3	3 PB1633	26 33 25.56102N	80 8 50.33449W	5.696	-25.863	-20.167
	SHIFTS (M.)	0.000N	0.000W			
0.068 AZ= 0 H= 0.000 T= 0.068	SCALED SIGMAS (M.)	0.003	0.003			
0.024	GOOGES	8.8D-01	8.8D-01			
9.5D-01	X = 976894.7943	Y = -5624775.9821	Z = 2834396.2487			
4	4 CAN AZ MK	26 52 6.54423N	80 37 44.55162W	11.205	-25.650	-14.445
	SHIFTS (M.)	0.000S	0.000E			
0.068 AZ= 0 H= 0.000 T= 0.068	SCALED SIGMAS (M.)	0.008	0.008			
0.081	GOOGES	7.0D-01	7.0D-01			
7.2D-01	X = 927044.8685	Y = -5617493.7442	Z = 2865217.5028			
5	5 L402	26 37 26.75686N	80 3 33.03391W	4.914	-26.280	-21.366
	SHIFTS (M.)	0.000N	0.000W			
0.068 AZ= 0 H= 0.000 T= 0.068	SCALED SIGMAS (M.)	0.004	0.004			
0.031	GOOGES	5.2D-01	5.4D-01			
5.0D-01	X = 984972.5283	Y = -5619992.6433	Z = 2841033.7913			
6	6 PB1544	26 38 58.55958N	80 10 7.33922W	5.199	-25.947	-20.748

```
                         SHIFTS (M.)       0.000N            0.000W
      0.068 AZ=  0 H=  0.000 T=  0.068
                         SCALED SIGMAS (M.)       0.004             0.004
      0.034
                                GOOGES             9.9D-01           9.8D-01
      9.5D-01
               X =     974011.1010          Y =   -5620617.7066          Z =
2843559.6144

    7    7 C402                            26 28 45.75507N   80  4  2.59081W     4.605
-26.090   -21.485
                         SHIFTS (M.)       0.000N            0.000W
      0.068 AZ=  0 H=  0.000 T=  0.068
                         SCALED SIGMAS (M.)       0.004             0.003
      0.026
                                GOOGES             8.8D-01           8.6D-01
      9.6D-01
               X =     985403.5175          Y =   -5627193.7993          Z =
2826690.1881

    8    8 PB1641                          26 35 27.16649N   80 12 43.73337W     5.422
-25.726   -20.304
                         SHIFTS (M.)       0.000N            0.000W
      0.068 AZ=  0 H=  0.000 T=  0.068
                         SCALED SIGMAS (M.)       0.005             0.005
      0.033
                                GOOGES             9.5D-01           9.4D-01
      9.3D-01
               X =     970244.8077          Y =   -5624227.7594          Z =
2837743.4344

♀                                                    NATIONAL GEODETIC SURVEY
PROGRAM ADJUST                                         ADJUSTMENT PROGRAM
                              PAGE  22
                                                          VERSION   4.30


ADJUSTED POSITIONS

      SSN NAME                               LATITUDE          LONGITUDE      ORTHO. HT.
G. HT.    E. HT.

    9    9 PB1595                          26 36  8.31125N   80 11 36.61210W     5.792
-25.791   -19.999
                         SHIFTS (M.)       0.000N            0.000W
      0.068 AZ=  0 H=  0.000 T=  0.068
                         SCALED SIGMAS (M.)       0.004             0.004
      0.027
                                GOOGES             5.7D-01           5.7D-01
      4.8D-01
               X =     971978.4394          Y =   -5623353.3501          Z =
2838875.8795

   10   10 PB1155                          26 37 55.00877N   80 10 17.97444W     4.721
-25.903   -21.182
                         SHIFTS (M.)       0.000N            0.000W
      0.068 AZ=  0 H=  0.000 T=  0.068
                         SCALED SIGMAS (M.)       0.003             0.003
      0.025
                                GOOGES             7.5D-01           7.4D-01
      5.0D-01
               X =     973870.9335          Y =   -5621531.6868          Z =
2841811.1591

   11   11 X537                           26 51 15.91242N   80 17  1.68308W     7.173
-26.350   -19.177
                         SHIFTS (M.)       0.000S            0.000W
      0.068 AZ=  0 H=  0.000 T=  0.068
                         SCALED SIGMAS (M.)       0.004             0.004
```

```
       0.035
                                GOOGES            7.5D-01           7.4D-01
       6.1D-01
                X =     960994.7063          Y =   -5612495.6561          Z =
2863825.1586

   12   12 PB1635                           26 35 30.66315N   80  6 49.77057W     5.437
-26.017   -20.580
                                SHIFTS (M.)       0.000N            0.000W
       0.068 AZ=  0 H=  0.000 T=  0.068
                               SCALED SIGMAS (M.)       0.004             0.004
       0.037
                                GOOGES            1.0D+00           9.9D-01
       9.5D-01
                X =     979886.5741          Y =   -5622506.7811          Z =
2837839.5437

MINUTES TO LIST ADJUSTED POSITIONS    0.0

UPDATED CONTROL POINT RECORDS IN FILE -- bbkvf1


MINUTES TO UPDATE CONTROL POINTS    0.0

END OF ADJUST PROCESSING
SYSTEM TIME IS 05/AUG/23 14:21:52.38
HAVE A NICE DAY!
```

LENGTH RELATIVE ACCURACIES (USING A-POSTERIORI WEIGHTS)

SSN FROM STATION		SSN TO STATION		DISTANCE	INTERNAL ACCURACY	EXTERNAL ACCURACY	SURVY ORDER
(0006)	PB1544	(0010)	PB1155	1977	1: 650000	1: 430902	2
(0002)	PB0830	(0011)	X537	12723	1: 2700000	1: 877567	2
(0009)	PB1595	(0011)	X537	29342	1: 5600000	1: 1026388	2
(0006)	PB1544	(0011)	X537	25418	1: 6200000	1: 1100818	2
(0002)	PB0830	(0004)	CAN AZ MK	21669	1: 3400000	1: 1114565	2
(0003)	PB1633	(0011)	X537	35632	1: 9000000	1: 1372874	2
(0001)	ENR103	(0002)	PB0830	22883	1: 5500000	1: 1376850	2
(0005)	L402	(0006)	PB1544	11266	1: 3100000	1: 1569338	2
(0008)	PB1641	(0009)	PB1595	2247	1: 600000	1: 1706639	2
(0003)	PB1633	(0005)	L402	11497	1: 3200000	1: 1749776	2
(0003)	PB1633	(0007)	C402	11731	1: 4200000	1: 1773652	2
(0006)	PB1544	(0007)	C402	21391	1: 6200000	1: 2343437	2
(0005)	L402	(0010)	PB1155	11234	1: 3500000	1: 2552426	2
(0005)	L402	(0009)	PB1595	13594	1: 2900000	1: 2708816	2
(0002)	PB0830	(0005)	L402	43203	1: 9800000	1: 2735065	2
(0009)	PB1595	(0010)	PB1155	3939	1: 890000	1: 2829039	2
(0005)	L402	(0012)	PB1635	6510	1: 1800000	1: 3034561	2
(0003)	PB1633	(0010)	PB1155	8640	1: 2700000	1: 3806203	2
(0001)	ENR103	(0010)	PB1155	23305	1: 7400000	1: 3999867	2
(0007)	C402	(0010)	PB1155	19841	1: 6900000	1: 4275758	2
(0001)	ENR103	(0008)	PB1641	20152	1: 4400000	1: 4706460	2
(0001)	ENR103	(0003)	PB1633	27485	1: 10000000	1: 4736186	2
(0001)	ENR103	(0009)	PB1595	21616	1: 5200000	1: 4812295	2
(0007)	C402	(0012)	PB1635	13293	1: 3900000	1: 6116571	2
(0007)	C402	(0008)	PB1641	18993	1: 4600000	1: 7119191	2

PB-832

Nick Miller, Inc.
Date of Photo: June 8, 2005
View: Looking at the well PB-832 (east well) facing south

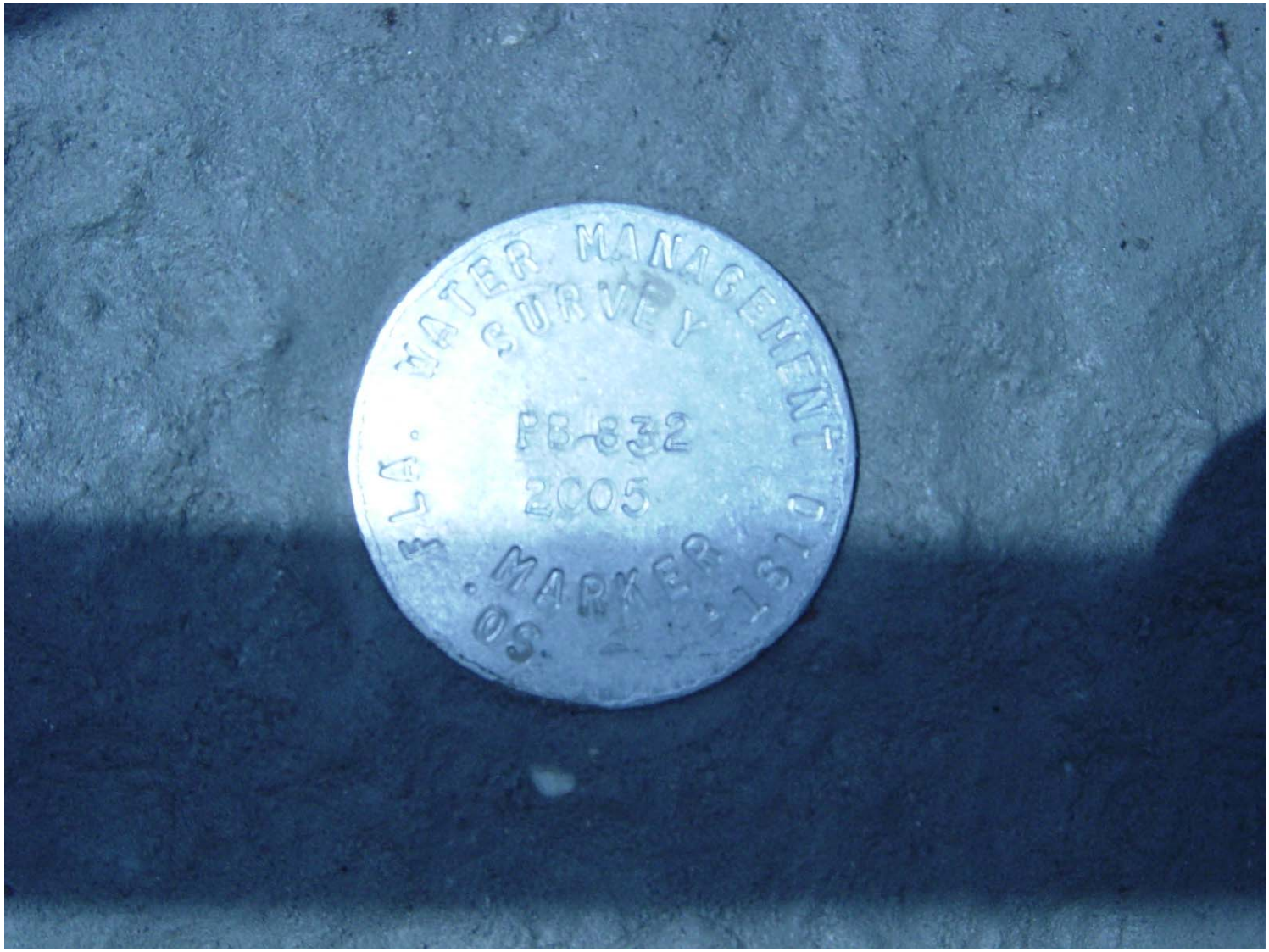
PB-832

Nick Miller, Inc.
Date of Photo: June 8, 2005
View: Close-up of the well PB-832 showing the contractor's markings

PB-832

Nick Miller, Inc.
Date of Photo: June 8, 2005
View: Looking at the benchmark facing north

PB-832



Nick Miller, Inc.
Date of Photo: June 8, 2005
View: A top view of the benchmark

1078 SEWAID

WED. JUNE 8, 2005

E. DETASSIS
J. CAMPBELL

4-67

SET CONC. MONUMENT AT THE SITE OF MONITORING WELL PB-832.

PB-832

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

- SET CONC. MON. 4.3' WEST OF CHAINLINKED FENCE
- " " " 524' NORTH OF STORM BASIN
- " " " 20' SE OF LIGHT POLE #8888
- " " " 18.1' EAST OF GUARDRAIL

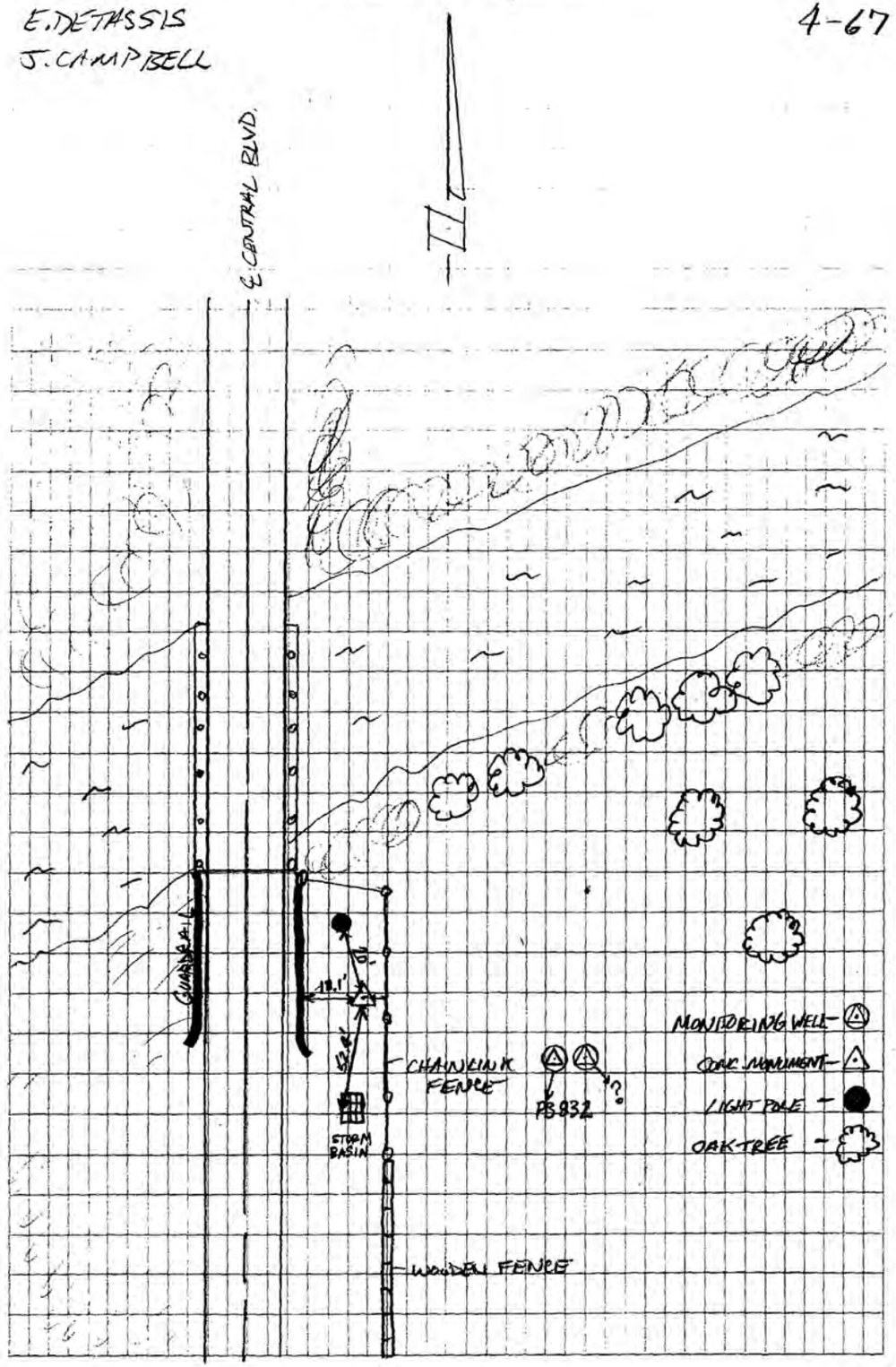
STAMPED PB 832
2005

COORDINATES ON CONC. MON. PB 832

STATE PLANE 83	WGS 84
N. 288810.815	N. 26 56 16.21649
E. 286014.941	W. 80 08 01.82526

COORDINATES ON MONITORING WELL PB 832

STATE PLANE 83	WGS 84
N. 288810.782	N. 26 56 16.19513
E. 286032.181	W. 80 08 01.19400



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY PALM BEACH	**PROJECT Hydrology – Palm Beach County Wells**	**DESIGNATION PB 832 2005**
SECTION 03	**TOWNSHIP 41 SOUTH**	**RANGE 42 EAST**

GEOGRAPHIC INDEX OF QUAD

Established by Nick Miller Inc. **Recovered by**	**NAME OF QUADRANGLE** **Rood**
SURVEYOR Stephen M. Gordon **DATE** 7/28/2005	**FIELD BOOK** 4 **PAGE** 67

HORIZONTAL DATUM: **1927** (**1983**) **Other**_____ (circle one) ZONE (**E**) or **W**

STATE PLANE COORDINATES	**E 938,367 ft**	**N 947,542 ft**
LATITUDE: N 26.93784°	**LONGITUDE: W 80.13384°**	
VERTICAL DATUM: MSL **1929** (**1988**) **Other** _____ (circle one)		**EL. 10.00 ft**
VERTICAL DATUM: MSL (**1929**) **1988 Other** _____ (circle one)		**EL. 11.53 ft**

CONTROL ACCURACY: HORIZONTAL 1 2 3 (SUB-METER) (circle one) **VERTICAL 1 2 (3)**

DESCRIPTION

To Reach:

FROM INTERSECTION OF INDIANTOWN ROAD/SR-706 & CENTRAL BLVD. GO NORTH ON CENTRAL BLVD. FOR MILE. CONCRETE MONUMENT WILL BE ON RIGHT. 4.3 FEET WEST OF CHAIN LINKED FENCE. 18.1 FEET EAST OF GUARDRAIL. 52.4 FEET NORTH OF STORM BASIN, 20 FEET SOUTHEAST OF LIGHT POLE #8888. MAGNET SET 1 FOOT NORTH OF CONCRETE MONUMENT.

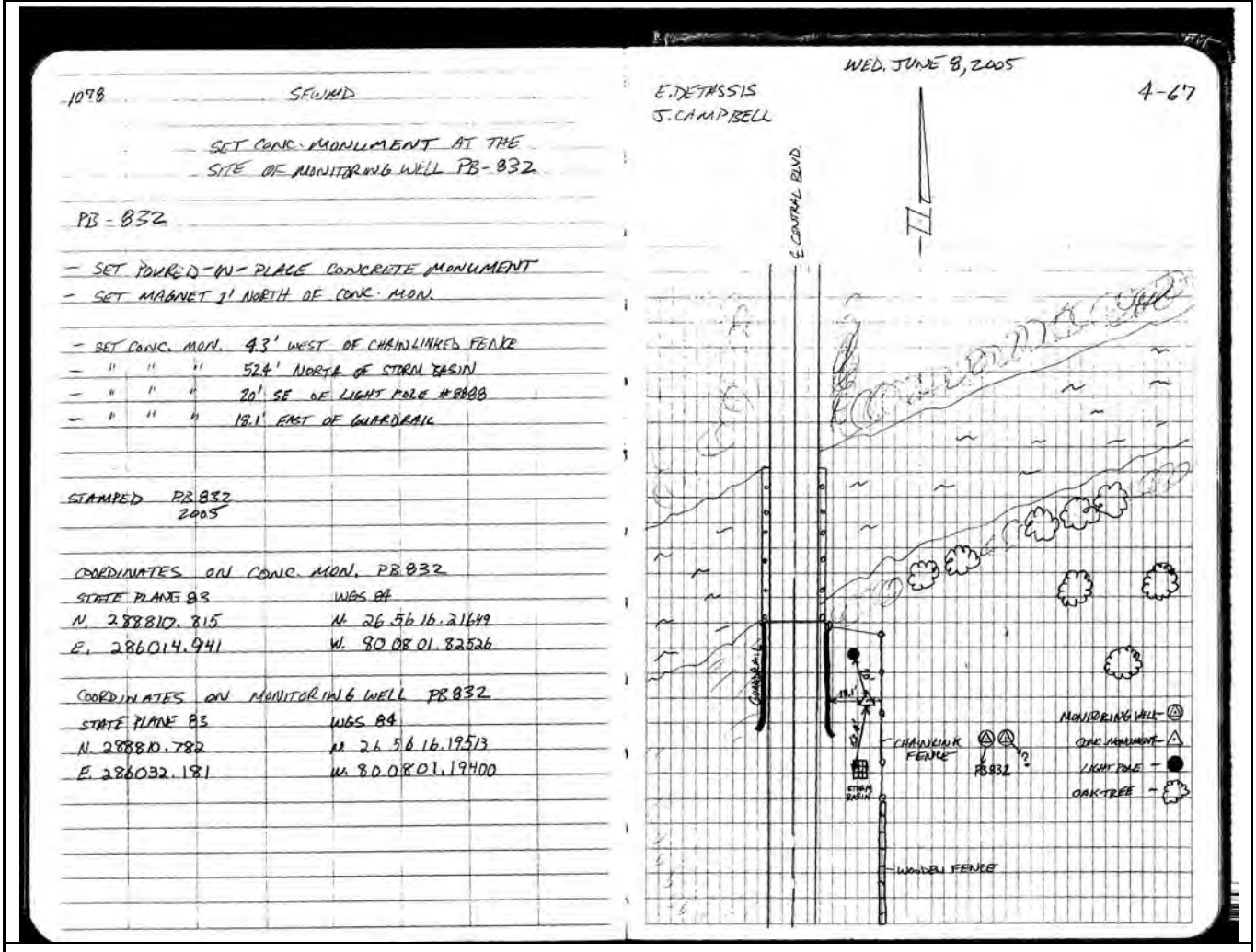
Benchmarks Used: I95 Y 15 and JENKINS

Notable Land marks:

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

SKETCH



1098 SEWARD

SET CONC. MONUMENT AT THE SITE OF MONITORING WELL PB-832

PB-832

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

- SET CONC. MON. 43' WEST OF CHAIN LINKED FENCE
- " " " 524' NORTH OF STORM BASIN
- " " " 20' SE OF LIGHT POLE #8808
- " " " 18.1' EAST OF GUARDRAIL

STAMPED PB 832 2005

COORDINATES ON CONC. MON. PB 832

STATE PLANE 83	WGS 84
N. 288810.815	N. 26 56 16.21649
E. 286014.941	W. 80 08 01.82526

COORDINATES ON MONITORING WELL PB 832

STATE PLANE 83	WGS 84
N. 288810.782	N. 26 56 16.19513
E. 286032.181	W. 80 08 01.19400

WED. JUNE 8, 2005

E. DETASSIS
J. CAMPBELL

4-67

E. CENTRAL BLVD.

GUARDRAIL

18.1'

CHAIN LINK FENCE

PB 832

STORM BASIN

WOODEN FENCE

MONITORING WELL
CONC. MONUMENT
LIGHT POLE
OAK TREE

-*- FIELD ABSTRACT -*-

050623-050804 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 1547

FROM / TO	START	F/B	DIST TOTAL (KM)	ELEV DIFF (MT)		-(F+B) TOTAL (MM)	MEAN DIFF FLD ELEV (MT)	I C
0243 I95 Y 15							4.56600	
0243 I95 Y 15	6231107	F	1.82	1.48915	*	0.00	1.48915	1
0242 JENKINS								
			1.82			0.00	6.05515	
0242 JENKINS	6231421	F	1.19	-3.00435	*	-3.88	-3.00629	1
0245 PB 832	6270900	B	1.16	3.00823	*			1
	SL 1		2.98			-3.88	3.04886	
0242 JENKINS	6271120	F	2.65	-4.35750	*	0.22	-4.35739	1
0244 PB 789	6280825	B	2.64	4.35728	*			1
	SL 1		4.46			0.22	1.69776	
0242 JENKINS	8040840	B	1.65	0.87161	*	0.49	-0.87185	2
0278 PB 1547C	8041045	F	1.64	-0.87210	*			2
			3.46			0.49	5.18330	
0278 PB 1547C	8031340	B	1.77	0.93214	*	3.99	-0.93413	2
0151 PB 1648	8041320	F	1.81	-0.93612	*			2
			5.23			4.48	4.24917	
0151 PB 1648	7280815	F	2.08	1.16152	*	-1.15	1.16094	3
0275 PB 1547B	8031040	B	2.05	-1.16037	*			2
			7.28			3.33	5.41011	
0275 PB 1547B	7281130	F	2.31	0.77779	*	2.87	0.77923	3
0274 PB 1547A	8030815	B	2.34	-0.78066	*			2
			9.59			6.20	6.18934	
0274 PB 1547A	7290845	F	2.16	-0.57622	*	0.87	-0.57579	4
0273 PB 1547	8021355	B	2.17	0.57535	*			5
			11.76			7.07	5.61355♀	

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
2	243 - 332854	396 - 333	396 - 444
3	243 - 331132	396 - 333	396 - 444
4	243 - 332854	396 - 111	396 - 222
5	243 - 332854	396 - 111	396 - 333

♀

LEVEL LINE SECTION RUNNING TREE

0243
0242 (0245
0244)
0278
0151

0275
0274
0273♀

FROM	TO	N. LATITUDE	W. LONGITUDE	FIELD DISTANCE	VS. COMPUTED	
	0243	265642	0800923	0.00	0.00	
0243	0242	265602	0800832	1.82	1.87	
0242	0245	265616	0800801	1.16	0.96	
0242	0244	265538	0800717	2.64	2.20	
0242	0278	265605	0800931	1.64	1.63	
0278	0151	265610	0801034	1.77	1.74	
0151	0275	265631	0801140	2.05	1.93	
0275	0274	265632	0801304	2.31	2.32	
0274	0273	265606	0801354	2.16	1.59	**♀

Windows Abstra Version 2.3 -- Jan 1, 2004 -- Tue Aug 16 12:22:05 2005

SECTION
FROM TO E R R O R M E S S A G E S

0274 0273 *** 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 = 7.28
1        National Geodetic Survey,   Retrieval Date = OCTOBER  6, 2005
 AC5325 ***********************************************************************
 AC5325  DESIGNATION -  I95 Y 15
 AC5325  PID         -  AC5325
 AC5325  STATE/COUNTY-  FL/PALM BEACH
 AC5325  USGS QUAD   -  ROOD (1983)
 AC5325
 AC5325                          *CURRENT SURVEY CONTROL
 AC5325  ______________________________________________________________________
 AC5325* NAD 83(1986)-  26 56 42.     (N)    080 09 23.     (W)     SCALED
 AC5325* NAVD 88     -         4.566  (meters)      14.98   (feet)  ADJUSTED
 AC5325  ______________________________________________________________________
 AC5325  GEOID HEIGHT-         -27.11  (meters)                     GEOID03
 AC5325  DYNAMIC HT  -           4.559 (meters)      14.96  (feet)  COMP
 AC5325  MODELED GRAV-     979,099.1   (mgal)                       NAVD 88
 AC5325
 AC5325  VERT ORDER  -  SECOND    CLASS II
 AC5325
 AC5325.The horizontal coordinates were scaled from a topographic map and have
 AC5325.an estimated accuracy of +/- 6 seconds.
 AC5325
 AC5325.The orthometric height was determined by differential leveling
 AC5325.and adjusted by the National Geodetic Survey in February 1997.
 AC5325
 AC5325.The geoid height was determined by GEOID03.
 AC5325
 AC5325.The dynamic height is computed by dividing the NAVD 88
 AC5325.geopotential number by the normal gravity value computed on the
 AC5325.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 AC5325.degrees latitude (g = 980.6199 gals.).
 AC5325
 AC5325.The modeled gravity was interpolated from observed gravity values.
 AC5325
 AC5325;                     North         East     Units  Estimated Accuracy
 AC5325;SPC FL E     -   289,590.      283,770.      MT  (+/- 180 meters Scaled)
 AC5325
 AC5325                           SUPERSEDED SURVEY CONTROL
 AC5325
 AC5325.No superseded survey control is available for this station.
 AC5325
 AC5325_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNK837806(NAD 83)
 AC5325_MARKER: DD = SURVEY DISK
 AC5325_SETTING: 31 = SET IN A PAVEMENT SUCH AS STREET, SIDEWALK, CURB, ETC.
 AC5325_SP_SET: DROP INLET
 AC5325_STAMPING: BM I 95 Y 15
 AC5325_MARK LOGO: FLDT
 AC5325_MAGNETIC: O = OTHER; SEE DESCRIPTION
 AC5325_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY
 AC5325
 AC5325  HISTORY     - Date     Condition        Report By
 AC5325  HISTORY     - 1989     MONUMENTED       FLDT
 AC5325
 AC5325                           STATION DESCRIPTION
 AC5325
 AC5325'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1989 (CBM)
 AC5325'TO REACH THE MARK FROM THE INTERCHANGE OF INTERSTATE ROUTE 95 AND SR
 AC5325'706, ABOUT 3 MILES (4.8 KM) WEST OF JUPITER, GO NORTHEAST ON
 AC5325'INTERSTATE ROUTE 95 FOR ABOUT 0.6 MILE (1.0 KM) TO A CONCRETE DROP
 AC5325'INLET IN THE MEDIAN AND THE MARK.  IT IS SET IN A DRILL HOLE IN THE
 AC5325'TOP NORTH PORTION OF THE CONCRETE RIM OF THE DROP INLET, 34.5 FEET
 AC5325'(10.5 M) EAST OF THE EAST EDGE OF THE SOUTHBOUND LANES, 33.5 FEET
 AC5325'(10.2 M) WEST OF THE WEST EDGE OF THE NORTHBOUND LANES AND 1.9 FEET
 AC5325'(0.6 M) SOUTH OF THE NORTH EDGE OF THE CONCRETE RIM.

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

The NGS Data Sheet

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

```
DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.28
1        National Geodetic Survey,   Retrieval Date = OCTOBER  6, 2005
 AD6275 ***********************************************************************
 AD6275  TIDAL BM    -  This is a Tidal Bench Mark.
 AD6275  DESIGNATION -  JENKINS
 AD6275  PID         -  AD6275
 AD6275  STATE/COUNTY-  FL/PALM BEACH
 AD6275  USGS QUAD   -  ROOD (1983)
 AD6275
 AD6275                        *CURRENT SURVEY CONTROL
 AD6275  ______________________________________________________________________
 AD6275* NAD 83(1990)-  26 56 02.31467(N)    080 08 32.88006(W)     ADJUSTED
 AD6275* NAVD 88     -         6.061  (meters)      19.89   (feet)  ADJUSTED
 AD6275  ______________________________________________________________________
 AD6275  LAPLACE CORR-          -3.81  (seconds)                     DEFLEC99
 AD6275  GEOID HEIGHT-         -27.12  (meters)                      GEOID03
 AD6275  DYNAMIC HT  -           6.051 (meters)      19.85  (feet)  COMP
 AD6275  MODELED GRAV-     979,098.1   (mgal)                        NAVD 88
 AD6275
 AD6275  HORZ ORDER  -  FIRST
 AD6275  VERT ORDER  -  SECOND    CLASS I
 AD6275
 AD6275.The horizontal coordinates were established by classical geodetic methods
 AD6275.and adjusted by the National Geodetic Survey in May 1991.
 AD6275
 AD6275.The orthometric height was determined by differential leveling
 AD6275.and adjusted by the National Geodetic Survey in February 1997.
 AD6275
 AD6275.This Tidal Bench Mark is designated as VM 5564
 AD6275.by the Center for Operational Oceanographic Products and Services.
 AD6275
 AD6275.The Laplace correction was computed from DEFLEC99 derived deflections.
 AD6275
 AD6275.The geoid height was determined by GEOID03.
 AD6275
 AD6275.The dynamic height is computed by dividing the NAVD 88
 AD6275.geopotential number by the normal gravity value computed on the
 AD6275.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 AD6275.degrees latitude (g = 980.6199 gals.).
 AD6275
 AD6275.The modeled gravity was interpolated from observed gravity values.
 AD6275
 AD6275;                    North         East     Units Scale Factor Converg.
 AD6275;SPC FL E     -   288,377.542   285,160.906   MT  1.00003068   +0 23 18.4
 AD6275;UTM  17      - 2,979,411.130   585,131.849   MT  0.99968947   +0 23 18.4
 AD6275
 AD6275!             -  Elev Factor  x  Scale Factor =   Combined Factor
 AD6275!SPC FL E     -   1.00000331  x   1.00003068  =   1.00003399
 AD6275!UTM  17      -   1.00000331  x   0.99968947  =   0.99969278
 AD6275
 AD6275:                Primary Azimuth Mark                     Grid Az
 AD6275:SPC FL E     -  JENKINS S 2                              063 52 05.2
 AD6275:UTM  17      -  JENKINS S 2                              063 52 05.2
 AD6275
 AD6275|-----------------------------------------------------------------------|
 AD6275|  PID    Reference Object                    Distance      Geod. Az   |
 AD6275|                                                           dddmmss.s  |
 AD6275|  AD6535 JENKINS S 1 PBCSD 1970            APPROX. 0.5 KM 0033232.5  |
 AD6275|  AD6531 JENKINS S 1 PBCSD A 1             229.305 METERS 00638      |
 AD6275|  CW9097 JENKINS RM 1                       22.659 METERS 04738      |
 AD6275|  AD6433 TEQUESTA PB CABLE TV TOWER        APPROX. 6.4 KM 0540825.6  |
 AD6275|  AD6429 TEQUESTA EPIS CH SPIRE            APPROX. 5.6 KM 0583730.0  |
 AD6275|  CW9098 JENKINS S 2                                      0641523.6  |
 AD6275|  AD6427 JUPITER INLET BEACH COLONY TK     APPROX. 6.1 KM 0655128.5  |
 AD6275|  AD6445 JUPITER INLET LH 1934             APPROX. 6.2 KM 0745231.7  |
 AD6275|  AD6422 JUPITER USCG RADIO TOWER          APPROX. 6.3 KM 0750158.6  |
 AD6275|  AD6417 JUPITER RAD STA WJTS WEST MAST    APPROX. 2.6 KM 0765913.4  |
 AD6275|  AD6441 JUPITER MICROWAVE TOWER CENTER    APPROX. 3.3 KM 0883401.9  |
 AD6275|  AD6414 JUPITER USAF GAPFILLER RADAR      APPROX. 7.2 KM 0903320.7  |
```

```
AD6275| AD6276 JENKINS RM 2                          23.712 METERS 20503     |
AD6275| AD6530 JUPITER FLA TURNPIKE RAD MAST       APPROX. 1.5 KM 2771550.9 |
AD6275|-----------------------------------------------------------------------|
AD6275
AD6275                          SUPERSEDED SURVEY CONTROL
AD6275
AD6275  NAD 83(1986)-  26 56 02.31938(N)    080 08 32.88912(W) AD(       ) 1
AD6275  NAD 27      -  26 56 01.11331(N)    080 08 33.73139(W) AD(       ) 1
AD6275  NAVD 88 (06/15/91)    6.067  (m)           19.90   (f) UNKNOWN     2 1
AD6275  NGVD 29 (09/01/92)    6.527  (m)           21.41   (f) ADJUSTED    2 1
AD6275
AD6275.Superseded values are not recommended for survey control.
AD6275.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AD6275.See file dsdata.txt to determine how the superseded data were derived.
AD6275
AD6275_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNK8513279411(NAD 83)
AD6275_MARKER: DD = SURVEY DISK
AD6275_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AD6275_SP_SET: CONCRETE POST
AD6275_STAMPING: JENKINS 1970
AD6275_MARK LOGO: FLDT
AD6275_PROJECTION: FLUSH
AD6275_MAGNETIC: O = OTHER; SEE DESCRIPTION
AD6275_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AD6275+STABILITY: SURFACE MOTION
AD6275_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AD6275+SATELLITE: SATELLITE OBSERVATIONS - March 04, 2004
AD6275
AD6275  HISTORY     - Date     Condition        Report By
AD6275  HISTORY     - 1970     MONUMENTED       NGS
AD6275  HISTORY     - 1973     GOOD             NGS
AD6275  HISTORY     - 1981     GOOD             FLDNR
AD6275  HISTORY     - 19891231 GOOD             FLDT
AD6275  HISTORY     - 19950407 GOOD             USPSQD
AD6275  HISTORY     - 20020209 GOOD             USPSQD
AD6275  HISTORY     - 20030217 GOOD             USPSQD
AD6275  HISTORY     - 20040304 GOOD             USPSQD
AD6275
AD6275                          STATION DESCRIPTION
AD6275
AD6275'DESCRIBED BY NATIONAL GEODETIC SURVEY 1970 (CLH)
AD6275'STATION IS LOCATED ABOUT 3-1/2 MILES SOUTHWEST OF TEQUESTA, 3 MILES
AD6275'WEST OF JUPITER, ON SOUTH SIDE OF STATE HIGHWAY 706 AND ON WEST
AD6275'LEVEE OF CANAL C-18.
AD6275'
AD6275'TO REACH THE STATION FROM THE POST OFFICE IN JUPITER, GO SOUTH
AD6275'ON HIGHWAY A1A ALONG THE EAST SIDE OF RAILROAD TRACKS FOR 0.45
AD6275'MILE TO THE JUNCTION OF STATE HIGHWAY 706.  TURN RIGHT AND GO WEST
AD6275'ON STATE HIGHWAY 706 FOR 3.0 MILES TO A CONCRETE BRIDGE OVER CANAL
AD6275'AND GATE ON LEFT JUST WEST OF THE BRIDGE.  TURN LEFT AND PASS
AD6275'THROUGH GATE AND GO SOUTHWEST ALONG TOP OF LEVEE FOR 150 FEET TO
AD6275'STATION AS DESCRIBED.
AD6275'
AD6275'STATION MARK, STAMPED JENKINS 1970, IS SET IN A CONCRETE POST
AD6275'FLUSH WITH THE GROUND.  IT IS 227 FEET SOUTHWEST OF THE SOUTHWEST
AD6275'CORNER OF BRIDGE, 165 FEET SOUTH OF CENTER OF STATE HIGHWAY 706,
AD6275'35 FEET NORTHWEST OF THE WEST EDGE OF LEVEE AND 2.2 FEET EAST OF
AD6275'A METAL WITNESS POST.
AD6275'
AD6275'RM 1, STAMPED JENKINS NO 1 1970, IS SET IN A CONCRETE POST THAT
AD6275'IS SET FLUSH.  IT IS 87 FEET SOUTHWEST OF THE CENTER OF GATE, 18
AD6275'FEET NORTHWEST OF WEST EDGE OF LEVEE AND 1 FOOT SOUTHEAST OF A
AD6275'METAL WITNESS POST.
AD6275'
AD6275'RM 2, STAMPED JENKINS NO 2 1970, IS SET IN A CONCRETE POST THAT
AD6275'IS SET FLUSH.  IT IS 57 FEET SOUTHEAST OF EAST SIDE OF A PALMETTO
AD6275'PATCH, 23.5 FEET NORTHWEST OF THE WEST EDGE OF LEVEE AND 1.2 FEET
AD6275'NORTHEAST OF A METAL WITNESS POST.
AD6275'
AD6275'JENKINS S-2 (AZ MK), IS A PALM BEACH COUNTY SURVEY DEPARTMENT
AD6275'BRONZE DISK STAMPED JENKINS S-2, IS SET IN A ROUND CONCRETE POST
AD6275'FLUSH WITH THE SURFACE OF THE GROUND.  IT IS 199 FEET EAST OF THE
AD6275'NORTHWEST CORNER OF BALL PARK, 79 FEET WEST OF THE NORTHEAST
AD6275'CORNER OF BALL PARK AND 2 FEET NORTH OF THE NORTH EDGE OF THE
AD6275'BALL PARK.
AD6275'
AD6275'TO REACH JENKINS S-2 (AZ MK) FROM THE STATION, GO EAST ON STATE
AD6275'HIGHWAY 706 FOR 0.2 MILE TO A BALL PARK ON LEFT.  TURN LEFT AND
AD6275'GO NORTH ACROSS BALL PARK FOR 0.05 MILE TO THE MARK AS DESCRIBED.
AD6275'
AD6275'HEIGHT OF LIGHT ABOVE STATION MARK 26 METERS.
```

```
AD6275
AD6275                          STATION RECOVERY (1973)
AD6275
AD6275'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1973 (RRW)
AD6275'STATION, RM 1, AND RM 2 RECOVERED IN GOOD CONDITION AS DESCRIBED BY
AD6275'CLH IN 1970.
AD6275
AD6275                          STATION RECOVERY (1981)
AD6275
AD6275'RECOVERY NOTE BY FL DEPT OF NAT RES 1981
AD6275'3.45 MI WEST FROM JUPITER.
AD6275'TO REACH THE STATION FROM THE POST OFFICE IN JUPITER, GO SOUTH ON
AD6275'HIGHWAY A1A ALONG THE EAST SIDE OF RAILROAD TRACKS FOR 0.45 MILE TO
AD6275'THE JUNCTION OF STATE HIGHWAY 706, TURN RIGHT AND GO WEST ON STATE
AD6275'HIGHWAY 706 FOR 3.0 MILE TO A CONCRETE BRIDGE OVER CANAL AND GATE ON
AD6275'LEFT JUST WEST OF THE BRIDGE, TURN LEFT AND PASS THROUGH GATE AND GO
AD6275'SOUTHWEST ALONG TOP OF LEVEE FOR 150 FEET TO THE STATION, 227 FEET
AD6275'SOUTHWEST OF THE SOUTHWEST CORNER OF THE BRIDGE, 165 FEET SOUTH OF
AD6275'CENTER OF STATE HIGHWAY 706, 35 FEET NORTHWEST OF THE WEST EDGE OF THE
AD6275'LEVEE, 2.2 FEET EST OF A METAL WITNESS POST.
AD6275
AD6275                          STATION RECOVERY (1989)
AD6275
AD6275'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1989 (CBM)
AD6275'TO REACH THE MARK FROM THE POST OFFICE IN JUPITER, GO SOUTH ON HIGHWAY
AD6275'A1A ALONG THE EAST SIDE OF RAILROAD TRACKS FOR 0.45 MILE (0.72 KM) TO
AD6275'THE JUNCTION OF STATE ROAD 706, TURN RIGHT AND GO WEST ON STATE ROAD
AD6275'706 FOR 3.0 MILES (4.8 KM) TO A CONCRETE BRIDGE OVER CANAL AND GATE ON
AD6275'LEFT JUST WEST OF THE BRIDGE.  TURN LEFT AND PASS THROUGH GATE AND GO
AD6275'SOUTHWEST ALONG TOP OF LEVEE FOR 150 FEET (45.7 M) TO THE MARK. IT IS
AD6275'SET IN THE TOP OF A ROUND CONCRETE MONUMENT, 135.0 FEET (41.1 M)
AD6275'SOUTHWEST OF THE SOUTHWEST END OF THE BRIDGE ABUTMENT, 88.0 FEET (26.8
AD6275'M) SOUTH OF THE SOUTH EDGE OF THE EASTBOUND LANE AND 4.0 FEET (1.2 M)
AD6275'NORTH OF THE WEST END OF THE GATE.
AD6275
AD6275                          STATION RECOVERY (1995)
AD6275
AD6275'RECOVERY NOTE BY US POWER SQUADRON 1995
AD6275'RECOVERED IN GOOD CONDITION.
AD6275
AD6275                          STATION RECOVERY (2002)
AD6275
AD6275'RECOVERY NOTE BY US POWER SQUADRON 2002 (AEP)
AD6275'RECOVERED IN GOOD CONDITION.
AD6275
AD6275                          STATION RECOVERY (2003)
AD6275
AD6275'RECOVERY NOTE BY US POWER SQUADRON 2003 (AEP)
AD6275'RECOVERED IN GOOD CONDITION.
AD6275
AD6275                          STATION RECOVERY (2004)
AD6275
AD6275'RECOVERY NOTE BY US POWER SQUADRON 2004 (AEP)
AD6275'MARK IS 1.0 FOOT EAST OF CARSONITE WITNESS POST
AD6275'

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