

# **SURVEYORS REPORT**

**Specific Purpose Survey of the Stilling Wells**

**Site OK 100**

**Okeechobee, Florida**

**South Florida Water Management Districts**

**Purchase Order number PC P602223**

**Keith and Schnars project number 16434.00,**

**Task 22158**

**Report Date: August 3, 2006**

**Submittal: Second**

**Revised: October 2, 2006 to add date (2006)**

**stamping on Benchmark "OK 100 2006"**

**Prepared for:**

**South Florida Water Management District**

**Prepared by:**



**6500 N. Andrews Avenue**

**Ft. Lauderdale, Florida 33309-2132**

**Ph. (954) 776-1616 Fax (954) 351-7643**

**Licensed Business (L.B.) 1337**

**SURVEYORS REPORT**

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**TABLE OF CONTENTS**

<b>Purpose</b>	<b>1</b>
<b>Project location</b>	<b>1</b>
<b>Deliverables</b>	<b>2</b>
<b>Datum</b>	<b>2</b>
<b>Leveling Methods</b>	<b>2</b>
<b>Vertical Control</b>	<b>3, 4</b>
<b>Project Results</b>	<b>5</b>
<b>Project photos</b>	<b>6-11</b>
<b>Comments</b>	<b>12</b>
<b>Surveyors Certificate</b>	<b>12</b>

## **SURVEYORS REPORT**

### **PURPOSE**

To establish vertical data (NAVD 1988 and NGVD 1929)) on the Site Wells and set a benchmark at site OK 100.

### **LOCATION OF PROJECT**

The project is located in Okeechobee, Florida.



## **SURVEYORS REPORT**

### **ITEMS DELIVERED TO THE DISTRICT**

1. Electronic copy of field notes.
2. Electronic copy of all computation sheets.
3. CORPSMET 95 file.
4. Site photographs.
5. Surveyors Report.
6. South Florida Water Management District Benchmark Data Sheet.

### **DATUM FOR THE PROJECT**



The vertical datum for the project is National Geodetic Vertical Datum (NGVD) of 1929 and North American Vertical Datum (NAVD) of 1988. NGVD 29 elevations were derived using data provided by the South Florida Water Management District in a file named NGVD29.txt” when applicable, otherwise NGS superseded values were used.

### **LEVELING METHODS**

The elevations were established using a Leica NA2 conventional level with three-wire observation method. NGS benchmarks E-523 and F-523 were used to establish elevations on the site benchmark (OK 100). A level loop was run from benchmark F-523, through benchmark E-523, through site benchmark OK 100 2006 and back to benchmark E-523. The level run exceeds the closure accuracy of 0.03’ times the square root in mileage of the level run.



## SURVEYORS REPORT

### VERTICAL CONTROL

<b>BM F-523</b>		Elevation:	<b>NAVD 1988</b>	<b>38.48</b>	<b>NGVD 1929</b>	<b>39.770</b>
PID AJ 6169		Latitude	27°0854" (Scaled)			
State/County FL/Okeechobee		Longitude	-80°5214" (Scaled)			
USGS QUAD Okeechobee (1972)						
Vert. Order First Class II			<p>The station is located approximately 7.4 kilometers (4.6 miles) southwest of Okeechobee, Florida on the northeast corner of a bridge on State Road 78 over the Kissimmee River. Located on the Okeechobee quad Township 38 South, Range 35 East. The mark is on the highway right of way. To reach the station from the intersection of U.S. Highway 441 and State Road 78 in Okeechobee, Florida go southwest 7.42 kilometers (4.6 miles) on State Road 78 to the mark on right, on the northeast corner of bridge over Kissimmee River. The station is 4.6 meters (15.1 feet) northwest of the center of State Road 78 (two lane road), 2.6 meters (8.5 feet) southwest of the north end of the concrete guard rail and approximately 0.25 meters (0.8 feet) above the roadway of State Road 78.</p>			
<div style="border: 1px solid black; padding: 5px; display: inline-block;">Benchmark F-523</div> 						
						

# SURVEYORS REPORT

## VERTICAL CONTROL (CONT.)

<b>BM E-523</b>		Elevation:	<b>NAVD 1988</b>	<b>30.55'</b>	<b>NGVD 1929</b>	<b>31.831'</b>
PID AJ 6168		Latitude	27°09'10.13822"			
State/County FL/Okeechobee		Longitude	80°51'59.60647"			
USGS QUAD Okeechobee (1972)						
Vert. Order First Class II		<p>To reach the station from the intersection of U.S. Highway 441 and State Road 78 in Okeechobee, Florida go west on State Road 78 for 0.08 kilometers (0.05 miles) to a road leading south to Jaycee Park, thence south 0.16 kilometers (0.1 miles) to the top of Herbert Hoover Levee and a gate on right, thence southwest 5.80 kilometers (3.6 miles) to a gate on the levee, thence continue southwest on levee to the mark on left. Also to reach the mark from the intersection U.S. Highway 441 and State Road 78 go southwest on State Road 78, 6.77 kilometers (4.2 miles) to the top of the levee crossing State Road 78, thence on levee 0.08 kilometers (0.05 miles) to the mark on right on top of levee. The station is 78.1 meters (256.3 feet) east of the intersection of the center of State Road 78 and the center of the levee, 35.9 meters (117.8 feet) north of the west gate post in a board fence, 5.2 meters (17.0 feet) northeast of the southeast corner post of a wood pavilion, 0.7 meters (2.3 feet) northwest of carsonite witness post and 0.25 meters (0.8 feet) south of a magnet buried 0.1 meters (0.3 feet).</p>				
 <p style="border: 1px solid black; padding: 2px; display: inline-block;">Benchmark E-523</p>						
						

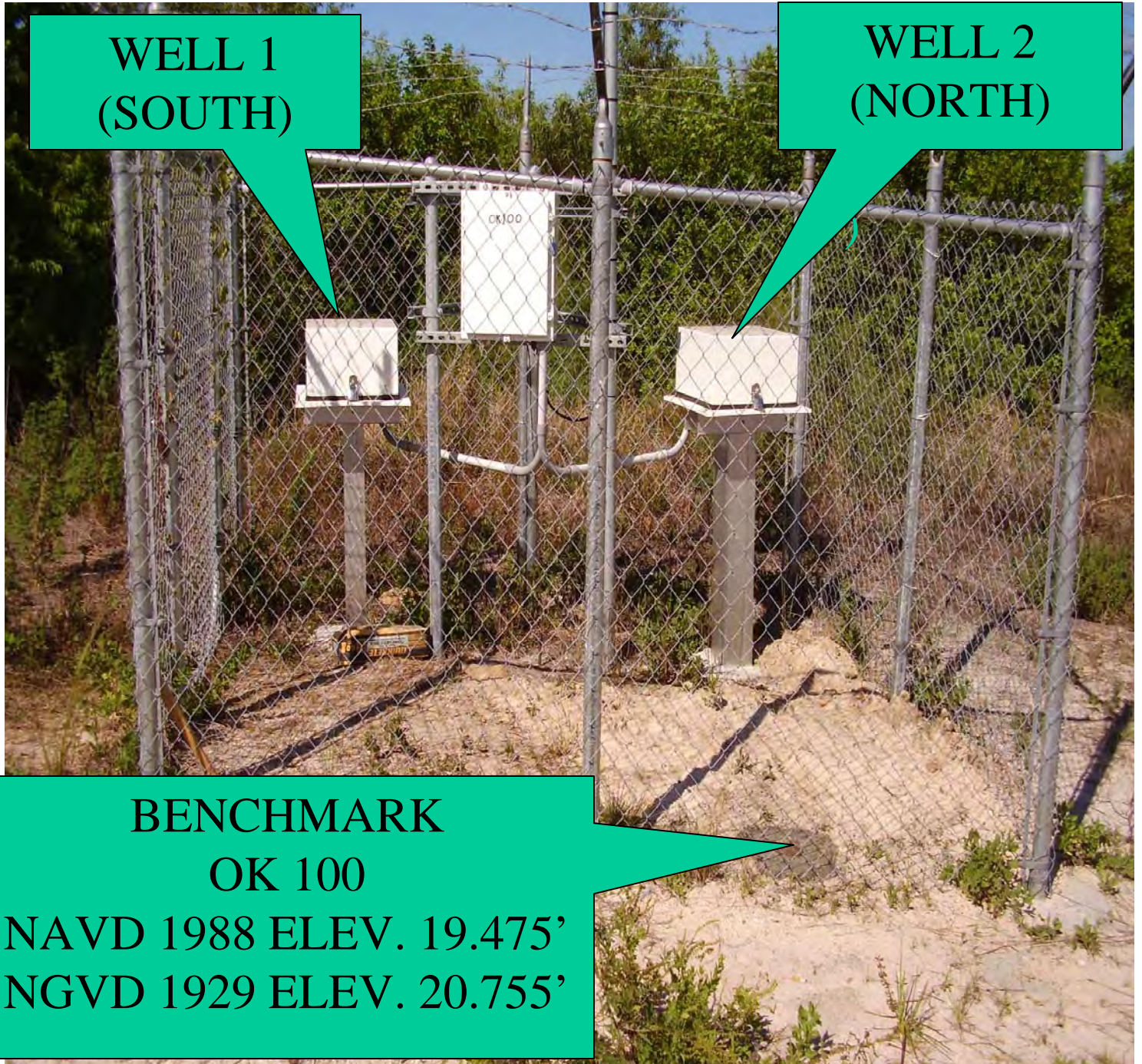
**SURVEYORS REPORT**

**PROJECT RESULTS**

<b>Well 1 (Southerly)</b>	<b>Well 2 (Northerly)</b>
<p>Stilling Well: Reference mark: <b><u>Set Mark on PVC pipe</u></b></p> <p><b>New Reference</b> Mark El. <b><u>24.37'</u></b> (NGVD 29) <b><u>(Wrote -1.28 NAVD to 1988).</u></b></p> <p><b>Initials:</b></p> <p><b><u>K&amp;S</u></b> <b><u>D.F., C.P.</u></b></p> <p><b>Date:</b> <b><u>06/22/06</u></b></p> <p>written at the mark: <b><u>None</u></b></p> <p>Reference Mark location: <b><u>None</u></b></p>	<p>Stilling Well: Reference mark: <b><u>Set Mark on PVC pipe</u></b></p> <p><b>New Reference</b> Mark El. <b><u>24.47'</u></b> (NGVD 29) <b><u>(Wrote -1.28 NAVD to 1988).</u></b></p> <p><b>Initials:</b></p> <p><b><u>K&amp;S</u></b> <b><u>D.F., C.P.</u></b></p> <p><b>Date:</b> <b><u>06/22/06</u></b></p> <p>written at the mark: <b><u>None</u></b></p> <p>Reference Mark location: <b><u>None</u></b></p>



# OK 100



WELL 1  
(SOUTH)

WELL 2  
(NORTH)

BENCHMARK  
OK 100

NAVD 1988 ELEV. 19.475'  
NGVD 1929 ELEV. 20.755'

06/22/06

Keith and Schnars, P.A.

Stilling Wells



# OK 100



**06/22/06**

**Keith and Schnars, P.A.**

**Benchmark OK 100**

# OK 100



06/22/06

Keith and Schnars, P.A.

North Well (#2) Elevation Information

# OK 100



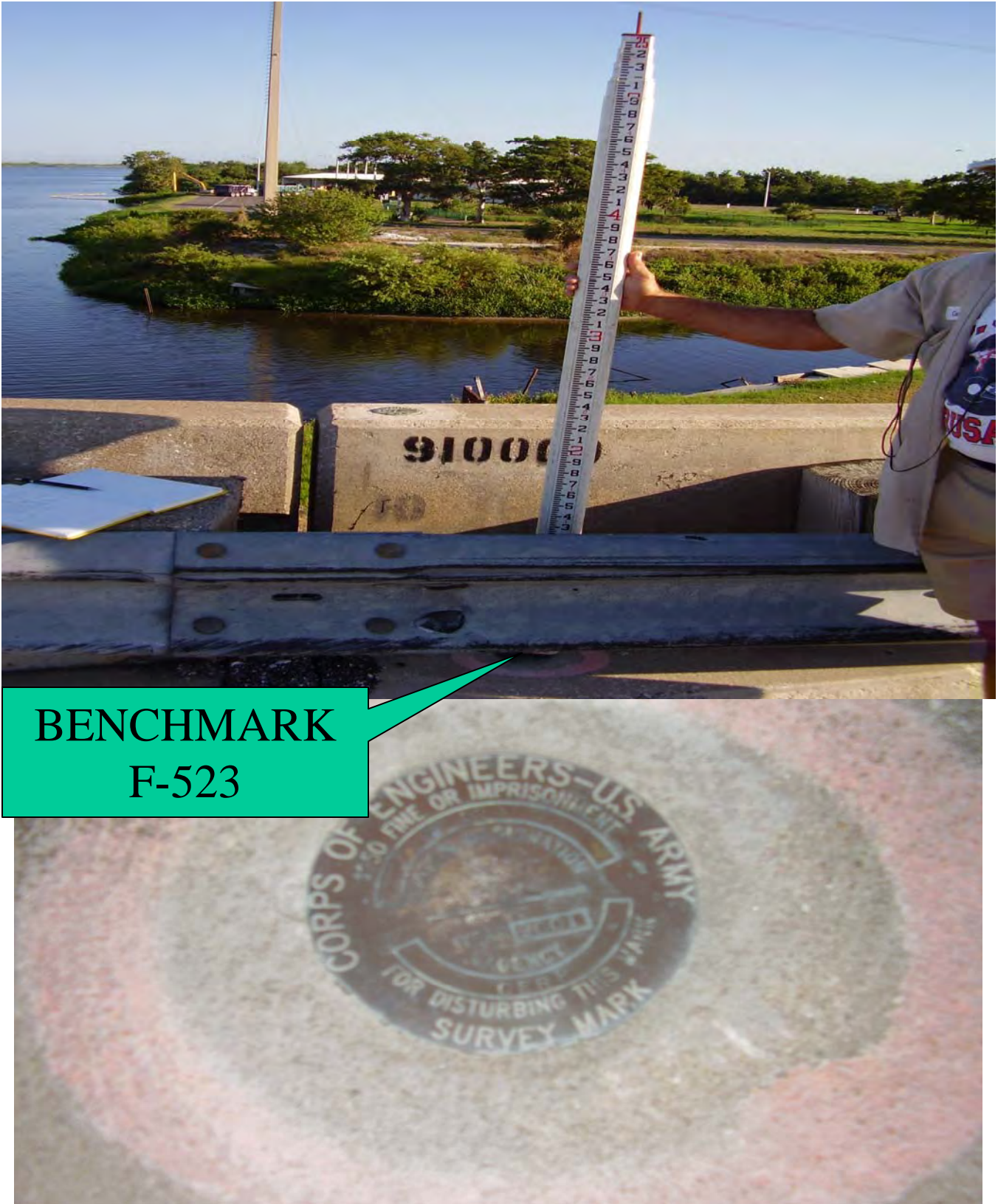
ELEV. 24.37  
By K+S 6-22-06  
D.F. : C.P.  
(-) 1.28 TO NAVD  
1988

06/22/06

Keith and Schnars, P.A.  
South Stilling (#1) Well Information



# OK 100



**BENCHMARK  
F-523**

**06/22/06**

**Keith and Schnars, P.A.**

**NGS Benchmark F-523**

# OK 100



**BENCHMARK  
E-523**



**06/22/06**

**Keith and Schnars, P.A.**

**NGS Benchmark E-523**



## SURVEYORS REPORT

Comments:

Party Chief: D. Ferels Field Book: 1216 Pages 24-29

Bench Mark: "OK 100" El. 19.475, Vertical Datum: NAVD1988

El. 20.755, Vertical Datum: NGVD1929

Offset: 1.28 SFWMD VALUE (subtract this value to convert to NAVD 1988)

Offset: 1.28 NGS VALUE (subtract this value to convert to NAVD 1988)

NAVD 88 - North American Vertical Datum of 1988

NGVD29 -National Geodetic Vertical Datum of 1929

NAD 83-99 (Horizontal Datum) North American Datum

NGS- National Geodetic Survey

SFWMD- South Florida Water Management District

PVC- Polyvinyl Chloride

## SURVEYORS CERTIFICATION

I hereby certify that this Specific Purpose Survey meets applicable portions of the Minimum Technical Standards set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 61-G17, Florida Administrative Code. This report is prepared for the sole and specific use of the South Florida Water Management District and is not assignable.

KEITH and SCHNARS, PA.

L.B. number 1337

By:

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Date of Survey

July 22, 2006

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Michael M. Mossey, PSM

Professional Surveyor and Mapper

State of Florida

Certificate No. 5660

6.22.06		S F W M			
FEELS		OK 100			
PIEDRAHITA					
	+	HI	-	ELEV	BM EL
BM	3.490				38.48
F523	2.760				
	2.030				
	2.760	41.24			
TP 1				9.780	
	1.580			9.070	
	0.940			8.360	
	0.290			9.070	32.17
	0.937	33.107			
TP 2				8.875	
	4.210			8.250	
	2.985			7.625	
	1.760			8.250	24.857
	2.985	27.842		24.856	ADJ.
TP 3				6.340	
	7.590			5.100	
	6.380			3.860	
	5.170			5.100	22.742
	6.380	29.122		22.740	ADJ.
TP 4				2.850	
	9.510			1.630	
	8.250			0.410	
	7.000			1.630	27.492
	8.253	35.745		27.490	ADJ.

E523 30.55 1988

1210

NAVD 1988  
 ARMY CORPS OF ENGINEERS BRASS DISK IN N.W.  
 COR. OF BRIDGE OVER THE KISSIMMEE RIVER.  
 15.1' N.W. OF THE CENTER OF S.R. 78, 8.5' S.W.  
 OF THE N. END OF CONC. GUARD RAIL



6.22.06

S FWM

FERELS

OK 100

PEDRAHITA

	+	HI	-	ELEV	BM EL
TP5			6.740		
	5.550		5.480		
	5.155		4.220		
	4.760		5.480	30.265 ✓	
	5.155 ✓	35.420 ✓		30.262	ADJ.

BM

5.240

30.55

E523

6.460

4.870

T.P. 6

5.210

4.500

3.970

4.870 ✓
 30.550 ✓ |  ||  | 5.213 ✓ | 35.763 ✓ |  | 30.547 | ADJ. |

TP 7

8.230

4.630

7.000

3.380

5.770

2.130

7.000 ✓
 28.763 ✓ |  ||  | 3.380 ✓ | 32.143 ✓ |  | 28.760 | ADJ. |

TP 8

7.070

6.350

5.820

5.090

4.570

3.830

5.820 ✓
 26.323 ✓ |  ||  | 5.090 ✓ | 31.413 ✓ |  | 26.319 | ADJ. |

TP 9

8.720

3.730

7.460

2.480

6.210

1.230

7.463 ✓
 23.950 ✓ |  ||  | 2.480 ✓ | 26.430 ✓ |  | 23.945 | ADJ. |

NAVD 1988

B.M. CHK. U.S. ARMY CORPS OF ENGINEERS BRASS  
 DISK. 256.3' E. OF INT. OF CENTER OF S.R.  
 TB IS THE CENTER OF THE LEVEE, 117.8' N. OF  
 THE W. GATE POST IN A BOARD FENCE, 17' N.E.  
 OF THE S.E. COR. POST OF A WOOD PAVILION,  
 2.3' N.W. OF CARSONIDE WITNESS POST.

6-22-06		SFWM			
FEREL'S		OK 100			
PIEDRAHITA					
	+	HI	-	ELEV	BM EL
TP 9/10				8.960	
	6.190			7.715	
	4.950			6.460	
	3.710			7.712	18.718 ✓
	4.950 ✓	23.668 ✓			18.714 ADJ.
TP 10				6.020	
11	8.240			4.780	
	6.980			3.540	
	5.720			4.780	18.888 ✓
	6.980 ✓	25.868 ✓			18.884 ADJ.
TP 11				6.410	
12	4.380			5.165	
	4.240			3.930	
	4.100			5.168	20.700 ✓
	4.240 ✓	24.940 ✓			20.695 ADJ.
BM				5.600	
OK 100	5.650			5.460	
T.P. 13	5.510			5.320	
	5.360			5.460	19.48 ✓
	5.507 ✓	24.987 ✓			19.475 ADJ.
TP 12				4.430	
14	6.715			4.290	
	5.460			4.150	
	4.210			4.290	20.697 ✓
	5.462 ✓	26.159 ✓			20.691 ADJ.

SET POURED CONC MON. W/ S.F.W.M. BRASS DISC  
INSIDE FENCED AREA FOR WELLS "OK 100"

6-22-06

S F W M

FERELS

OK 100

PIEDRAHITA

	+	HI	-	ELEV	BMEZ
TP 13				8.530	
15	5.970			7.280	
	4.730			6.030	
	3.480			7.280	18.87 <sup>8</sup>
	4.727	23.60 <sup>5</sup>		18.873	ADJ.
TP 14				6.130	
16	8.970			4.890	
	7.710			3.650	
	6.450			4.890	18.71 <sup>5</sup>
	7.710	26.42 <sup>5</sup>		18.709	ADJ.
TP 15				3.720	
17	8.800			2.480	
	7.600			1.240	
	6.400			2.480	23.94 <sup>5</sup>
	7.600	31.54 <sup>5</sup>		23.938	ADJ.
TP 16				6.530	
18	7.250			5.220	
	5.990			3.910	
	4.740			5.220	26.32 <sup>5</sup>
	5.993	32.31 <sup>8</sup>		26.318	ADJ.
TP 17				4.800	
19	8.550			3.550	
	7.325			2.310	
	6.095			3.553	28.71 <sup>5</sup>
	7.323	36.08 <sup>8</sup>		28.757	ADJ.

6-22-06

S F W M

FEELS

OK 100

PIEDHARITA

+

411

-

ELEV

BMEL

BM

6.755

30.55 NANO 1988

E523

5.530

4.305

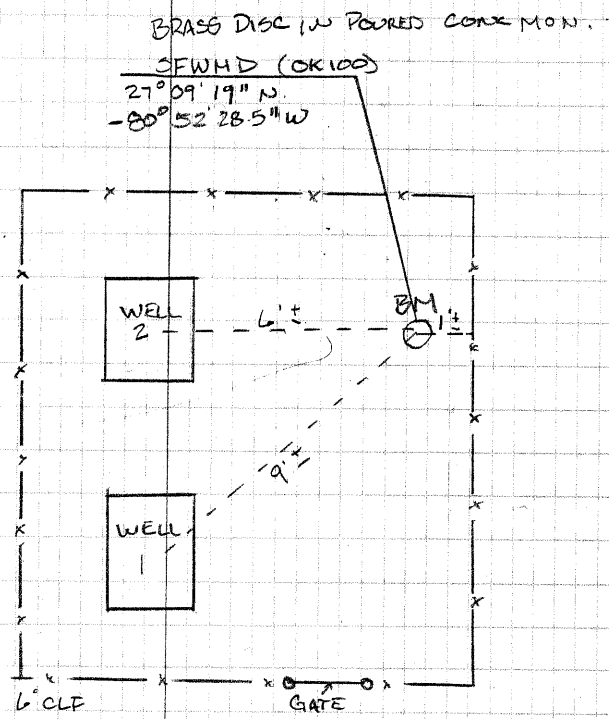
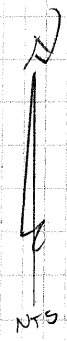
5.530 30.559

BM CHAIR; DESC. ON PG. 24

ERROR 0.008

ALLOWABLE 0.038

6-22-06		S F W M				
FEZELS		OK 100				
PIEDHAR TA						
	+	HI	-	ELEV	BME L	
BM	5.680				19.48	REF. PG. 26
OK 100	5.630					NAVD 1988
	5.570					
	5.627	25.107				
WELL 2			2.000			MARKER MARK ATOP
			1.910			PVC PIPE
			1.830			NAVD 1988 23.19
			1.913	23.194		NAVD 1929 24.47
WELL 1			2.110			MARKER MARK ATOP
			2.020			PVC PIPE
			1.930			NAVD 1988 23.09
			2.020	23.087		NAVD 1929 24.37
TP 11			4.630			
			4.410		20.700	REF. PG. 26
			4.180			
			4.407	20.700		



OK 100 Well.gen

Identification\_Information:

Citation:

Citation\_Information:

Originator: Michael M. Mossey, P. S. M. (ed.)

Publication\_Date: 20060804

Publication\_Time: Unknown

Title: S. F. W. M. D. WELL OK 100

Edition: 1

Series\_Information:

Publication\_Information:

Publication\_Place: Not Published

Publisher: None

Online\_Linkage: mmossey@keithandschnars.com

Larger\_Work\_Citation:

Citation\_Information:

Series\_Information:

Publication\_Information:

Description:

Abstract:

South Florida Water Management District  
Well site OK 100.

Purpose:

To establish reference elevations in NAVD 1988 and  
NGVD 1929 datum on Wells. Set a site benchmark.

Time\_Period\_of\_Content:

Time\_Period\_Information:

Single\_Date/Time:

Calendar\_Date: 20060722

Range\_of\_Dates/Times:

Multiple\_Dates/Times:

Currentness\_Reference: Publication Date

Status:

Progress: Complete

Maintenance\_and\_Update\_Frequency: Unknown

Spatial\_Domain:

Bounding\_Coordinates:

West\_Bounding\_Coordinate: 80°52' 28"

East\_Bounding\_Coordinate: 80°52' 28"

North\_Bounding\_Coordinate: 27°09' 19"

South\_Bounding\_Coordinate: 27°09' 19"

Keywords:

Theme:

Theme\_Keyword\_Thesaurus: Specific Purpose Survey

Theme\_Keyword: Wells

Place:

Place\_Keyword\_Thesaurus: Okeechobee, Florida

Place\_Keyword: Well site OK 100

Place\_Keyword: Township 38S - Range 38E

Stratum:

Temporal:

Access\_Constraints: Key needed to gain access to wells.

Use\_Constraints: Call South Florida Water Management District for key.

Point\_of\_Contact:

Contact\_Information:

Contact\_Person\_Primary:

Contact\_Person: Howard J. Ehmke

Contact\_Organization: South Florida Water Management

District

Contact\_Organization\_Primary:

Contact\_Position: P. S. M.

Contact\_Address:

Address\_Type: mailing and physical address

Address:

OK 100 Well.gen  
Acceler 8  
Suite 150  
2301 Centerpark West Drive  
City: West Palm Beach  
State\_or\_Province: Florida  
Postal\_Code: 33409  
Country: USA  
Contact\_Voice\_Telephone: (561) 242-5520 ext 4064  
Contact\_Electronic\_Mail\_Address: hehmke@sfwmd.gov  
Hours\_of\_Service: 8:00 am to 5:00 pm EST

Security\_Information:

Cross\_Reference:

Citation\_Information:

Series\_Information:

Publication\_Information:

Data\_Quality\_Information:

Attribute\_Accuracy:

Attribute\_Accuracy\_Report:

The horizontal location of the benchmark was taken from the data sheet. The vertical data was collected using a Leica NA2 Level. Coordinates are based on the Florida State Plane Coordinate System, East Zone, NAD 1983. Elevations are based on NGVD 1929 with an offset supplied to convert to NAVD 1988.

Logical\_Consistency\_Report:

Vertical data on the wells was established using site Benchmark OK 100.

Completeness\_Report:

24.37' (NGVD 1929) Well 1 (Southerly).  
24.47' (NGVD1929) Well 2 (Northerly).  
Offset written at wells (-) 1.28' to NAVD 1988.  
OK 100 was the site benchmark used for this survey.  
NAVD 1988 elevation 19.475'  
NGVD 1929 elevation 20.755'

Positional\_Accuracy:

Horizontal\_Positional\_Accuracy:

Horizontal\_Positional\_Accuracy\_Report:

The horizontal position of the benchmark was established using a hand held GPS.

Quantitative\_Horizontal\_Positional\_Accuracy\_Assessment:

Horizontal\_Positional\_Accuracy\_Value: Lat. 27°09' 19"

Long. -80°52' 28"

Horizontal\_Positional\_Accuracy\_Explanation: Value

derived by hand-held GPS

Vertical\_Positional\_Accuracy:

Vertical\_Positional\_Accuracy\_Report:

The onsite benchmark was used to establish the elevations on the stilling wells in this report.

Quantitative\_Vertical\_Positional\_Accuracy\_Assessment:

Vertical\_Positional\_Accuracy\_Value: 0.008ft. NAVD88

Vertical\_Positional\_Accuracy\_Explanation: Better

than 0.03ft. x sq. root of miles of the Level Loop.

Quantitative\_Vertical\_Positional\_Accuracy\_Assessment:

Vertical\_Positional\_Accuracy\_Value: 0.008ft. NGVD 29

Vertical\_Positional\_Accuracy\_Explanation: Better

than 0.03ft. x the sq. root of miles of the Level Loop.

Liage:

Source\_Information:

Source\_Citation:

Citation\_Information:

Series\_Information:

Page 2

OK 100 Well .gen

Publ i cati on\_I nformati on:

Larger\_Work\_Ci tati on:

Ci tati on\_I nformati on:

Seri es\_I nformati on:

Publ i cati on\_I nformati on:

Source\_Ti me\_Period\_of\_Content:

Ti me\_Period\_I nformati on:

Si ngl e\_Date/Ti me:

Range\_of\_Dates/Ti mes:

Mul ti pl e\_Dates/Ti mes:

Process\_Step:

Process\_Descri pti on:

Di fferenti al l evel i ng was performed using a Lei ca

NA2

conventi onal l evel . A poured concrete monument with

a

brass SFWMD di sk (BM Ok 100) was set i nside a 6-foot  
chai n l i nk fence near the wel l s and elevated. A

l evel l oop

was run from NGS benchmark F-523, through NGS

benchmark E-523, through si te benchmark, OK 100, and  
back to E-523. The elevati ons were wri tten on the

wel l

housi ngs i n NGVD 1929 with an offset provided to

convert

the elevati ons to NAVD 1988.

Process\_Date: 20060722

Process\_Contact:

Contact\_I nformati on:

Contact\_Person\_Pri mary:

Contact\_Organi zati on\_Pri mary:

Contact\_Address:

Spati al \_Data\_Organi zati on\_I nformati on:

Spati al \_Reference\_I nformati on:

Hori zontal \_Coordi nate\_System\_Defi ni ti on:

Geographi c:

Lati tude\_Resol uti on: 25° 22' 02"

Longi tude\_Resol uti on: 80° 22' 35"

deci mal seconds

Geographi c\_Coordi nate\_Uni ts: Degrees, mi nutes, and

Geodeti c\_Model :

Verti cal \_Coordi nate\_System\_Defi ni ti on:

Al ti tude\_System\_Defi ni ti on:

Depth\_System\_Defi ni ti on:

Enti ty\_and\_Attri bute\_I nformati on:

Detail ed\_Descri pti on:

Enti ty\_Type:

Attri bute:

Attri bute\_Domai n\_Val ues:

Attri bute\_Val ue\_Accuraci ty\_I nformati on:

Overvi ew\_Descri pti on:

Di stri buti on\_I nformati on:

Di stri butor:

Contact\_I nformati on:

Contact\_Person\_Pri mary:

Contact\_Organi zati on\_Pri mary:

Contact\_Organi zati on: Kei th and Schnars

Contact\_Person: Mi chael Mossey

Contact\_Posi ti on: Project Surveyor

Contact\_Address:

Address\_Type: mai l i ng and physi cal address

Address: 6500 North Andrews Avenue

City: Ft. Lauderdale

Page 3



OK 100 Well .gen  
 State\_or\_Province: Florida  
 Postal\_Code: 33309-2132  
 Country: Broward  
 Contact\_Voice\_Telephone: 954 776-1616  
 Contact\_Facsimile\_Telephone: 954 351-7643  
 Contact\_Electronic\_Mail\_Address: mmossey@keithandschnars.com  
 Hours\_of\_Service: 8:00-5:00 est.  
 Distribution\_Liability: None  
 Standard\_Order\_Process:  
   Digital\_Form:  
     Digital\_Transfer\_Information:  
     Digital\_Transfer\_Option:  
       Online\_Option:  
         Computer\_Contact\_Information:  
           Network\_Address:  
           Dialup\_Instructions:  
         Offline\_Option:  
         Recording\_Capacity:  
 Available\_Time\_Period:  
   Time\_Period\_Information:  
     Single\_Date/Time:  
     Range\_of\_Dates/Times:  
     Multiple\_Dates/Times:  
 Metadata\_Reference\_Information:  
   Metadata\_Date: 20060804  
   Metadata\_Review\_Date: 20050721  
   Metadata\_Contact:  
     Contact\_Information:  
       Contact\_Person\_Primary:  
         Contact\_Person: Michael M. Mossey, P. S. M.  
         Contact\_Organization: Keith and Schnars  
       Contact\_Organization\_Primary:  
         Contact\_Position: Project Surveyor  
       Contact\_Address:  
         Address\_Type: mailing and physical address  
         Address: 6500 North Andrews Ave  
         City: Ft. Lauderdale  
         State\_or\_Province: FL  
         Postal\_Code: 33309-2132  
         Country: USA  
         Contact\_Voice\_Telephone: (954)776-1616  
         Contact\_Facsimile\_Telephone: (954)351-7643  
         Contact\_Electronic\_Mail\_Address: mmossey@keithandschnars.com  
         Hours\_of\_Service: 8:00 am to 5:00 pm EST  
   Metadata\_Standard\_Name: FGDC Content Standards for Digital Geospatial  
 Metadata  
   Metadata\_Standard\_Version: 19940608  
   Metadata\_Security\_Information:



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY Okeechobee	PROJECT STRIVE	DESIGNATION OK 100
SECTION	TOWNSHIP <u>38</u> SOUTH	RANGE <u>35</u> EAST
GEOGRAPHIC INDEX OF QUAD		
Established by _____ Recovered by <u>Set SFWMD brass disk in concrete OK 100.</u>		NAME OF QUADRANGLE <u>Okeechobee (1972)</u>
SURVEYOR <u>D. Ferels (Keith and Schnars)</u> DATE <u>06/22/2006</u>		FIELD BOOK, 1216, pgs. 24-28
HORIZONTAL DATUM: 1983, ZONE East		
VERTICAL DATUM: NGVD 1929 and NAVD 1988		
CONTROL ACCURACY: HORIZONTAL HAND-HELD GPS, 3 <sup>rd</sup> Order VERTICAL		
STATE PLANE COORDINATES	X = 696949	Y = 1025637
		EL. (NGVD 1929) 20.755' EL. (NAVD 1988) 19.475'
LATITUDE <u>27° 09'17"</u>		LONGITUDE <u>-80° 52'30"</u>
<b>DESCRIPTION</b>		
South Florida Water Management District brass disk set in concrete stamped "OK 100 2006".		
The benchmark is located inside a 6-foot chain link fence. 6' East of the North Well, 9' N.E. of the South Well and 1' West of the East side of the chain link fence.		
From the intersection of U.S. Highway 441 and State Road 78 in Okeechobee head Southwest on State Road 78 for 4.2 miles to River Road turn right on River Road and go 0.5 miles to the site on the left.		
Notable Land marks:		



SKETCH

From the "ngvd29.txt" file provided by NGS for the CERP Geodetic Vertical Control Project.

Line/Part: L26217/1 SSN+: mark floated, SSN\*: mark constrained, SSN#: mark floated & constrained

Mark ID	SSN	PID	Designation	Geopotential	Elevation	Codes
1181	0010	AJ6168	E 523	9.5081	9.7021	
1182	0011	AJ6169	F 523	11.8796	12.1220	

## The NGS Data Sheet

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

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.37

1 National Geodetic Survey, Retrieval Date = AUGUST 7, 2006

AJ6169 \*\*\*\*\*

AJ6169 DESIGNATION - F 523  
 AJ6169 PID - AJ6169  
 AJ6169 STATE/COUNTY- FL/OKEECHOBEE  
 AJ6169 USGS QUAD - OKEECHOBEE (1972)

AJ6169  
 AJ6169 \*CURRENT SURVEY CONTROL

NAD 83(1986)-	27 08 54.	(N)	080 52 14.	(W)	SCALED
NAVD 88	-	11.730	(meters)	38.48	(feet) ADJUSTED

AJ6169 GEOID HEIGHT- -26.38 (meters) GEOID03  
 AJ6169 DYNAMIC HT - 11.712 (meters) 38.43 (feet) COMP  
 AJ6169 MODELED GRAV- 979,084.1 (mgal) NAVD 88

AJ6169 VERT ORDER - FIRST CLASS II

AJ6169 The horizontal coordinates were scaled from a topographic map and have  
 AJ6169 an estimated accuracy of +/- 6 seconds.

AJ6169 The orthometric height was determined by differential leveling  
 AJ6169 and adjusted by the National Geodetic Survey in January 2002..

AJ6169 The geoid height was determined by GEOID03.

AJ6169 The dynamic height is computed by dividing the NAVD 88  
 AJ6169 geopotential number by the normal gravity value computed on the  
 AJ6169 Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 AJ6169 degrees latitude (g = 980.6199 gals.).

AJ6169 The modeled gravity was interpolated from observed gravity values.

	North	East	Units	Estimated Accuracy
AJ6169; SPC FL E -	311,850.	212,830.	MT	(+/- 180 meters Scaled)

AJ6169 SUPERSEDED SURVEY CONTROL

AJ6169 No superseded survey control is available for this station.

AJ6169 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNL128028(NAD 83)

AJ6169 MARKER: DD = SURVEY DISK

AJ6169 SETTING: 38 = SET IN THE ABUTMENT OR PIER OF A LARGE BRIDGE

AJ6169 SP\_SET: BRIDGE ABUTMENT

AJ6169 STAMPING: F 523 2001 CERP

AJ6169 MARK LOGO: USE

AJ6169 MAGNETIC: N = NO MAGNETIC MATERIAL

AJ6169 STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AJ6169 SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AJ6169 SATELLITE: SATELLITE OBSERVATIONS - May 13, 2001

HISTORY	- Date	Condition	Report By
AJ6169 HISTORY	- 20010513	MONUMENTED	EMCINC

AJ6169 HISTORY - 20010513 MONUMENTED EMCINC

AJ6169 STATION DESCRIPTION

AJ6169 DESCRIBED BY EMC INCORPORATED 2001 (CHP)  
 AJ6169 THE STATION IS LOCATED APPROXIMATELY 7.4 KILOMETERS (4.6 MILES)  
 AJ6169 SOUTHWEST OF OKEECHOBEE, FLORIDA ON THE NORTHEAST CORNER OF A  
 AJ6169 BRIDGE ON STATE ROAD 78 OVER THE KISSIMMEE RIVER.  
 AJ6169 LOCATED ON THE OKEECHOBEE QUAD TOWNSHIP 38 SOUTH, RANGE 35 EAST.  
 AJ6169 OWNERSHIP THE MARK IS ON THE HIGHWAY RIGHT OF WAY.  
 AJ6169 TO REACH THE STATION FROM THE INTERSECTION OF U.S. HIGHWAY 441  
 AJ6169 AND STATE ROAD 78 IN OKEECHOBEE, FLORIDA GO SOUTHWEST 7.42  
 AJ6169 KILOMETERS (4.6 MILES) ON STATE ROAD 78 TO THE MARK ON RIGHT, ON  
 AJ6169 THE NORTHEAST CORNER OF BRIDGE OVER KISSIMMEE RIVER.

DATASHEETS

AJ6169'  
AJ6169' THE STATION IS 4.6 METERS (15.1 FEET) NORTHWEST OF THE CENTER OF  
AJ6169' STATE ROAD 78 (TWO LANE ROAD), 2.6 METERS (8.5 FEET) SOUTHWEST OF  
AJ6169' THE NORTH END OF THE CONCRETE GUARD RAIL AND APPROXIMATELY 0.25  
AJ6169' METERS (0.8 FEET) ABOVE THE ROADWAY OF STATE ROAD 78.  
AJ6169'  
AJ6169'  
AJ6169'  
AJ6169'

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

From the "ngvd29.txt" file provided by NGS for the CERP Geodetic Vertical Control Project.  
 Line/Part: L26217/1 SSN+: mark floated, SSN\*: mark constrained, SSN#: mark floated & constrained  
 Mark ID SSN PID Designation Geopotential Elevation Codes  
 1181 0010 AJ6168 E 523 9.5081 9.7021  
 1182 0011 AJ6169 F 523 11.8796 12.1220

## The NGS Data Sheet

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

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.37

1 National Geodetic Survey, Retrieval Date = AUGUST 7, 2006

AJ6168 \*\*\*\*\*

AJ6168 DESIGNATION - E 523

AJ6168 PID - AJ6168

AJ6168 STATE/COUNTY- FL/OKEECHOBEE

AJ6168 USGS QUAD - OKEECHOBEE (1972)

AJ6168

AJ6168 \*CURRENT SURVEY CONTROL

AJ6168

AJ6168\* NAD 83(1999)- 27 09 10.13822(N) 080 51 59.60647(W) ADJUSTED

AJ6168\* NAVD 88 - 9.311 (meters) 30.55 (feet) ADJUSTED

AJ6168

AJ6168 X - 901,478.515 (meters) COMP

AJ6168 Y - -5,607,159.404 (meters) COMP

AJ6168 Z - 2,893,284.702 (meters) COMP

AJ6168 LAPLACE CORR- -2.47 (seconds) DEFLEC99

AJ6168 ELLIP HEIGHT- -17.09 (meters) (12/12/02) GPS OBS

AJ6168 GEOID HEIGHT- -26.40 (meters) GEOID03

AJ6168 DYNAMIC HT - 9.296 (meters) 30.50 (feet) COMP

AJ6168 MODELED GRAV- 979,084.3 (mgal) NAVD 88

AJ6168

AJ6168 HORZ ORDER - FIRST

AJ6168 VERT ORDER - FIRST CLASS II

AJ6168 ELLP ORDER - FOURTH CLASS I

AJ6168

AJ6168.The horizontal coordinates were established by GPS observations

AJ6168.and adjusted by the National Geodetic Survey in December 2002..

AJ6168

AJ6168.The orthometric height was determined by differential leveling

AJ6168.and adjusted by the National Geodetic Survey in January 2002..

AJ6168

AJ6168.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AJ6168

AJ6168.The Laplace correction was computed from DEFLEC99 derived deflections.

AJ6168

AJ6168.The ellipsoidal height was determined by GPS observations

AJ6168.and is referenced to NAD 83.

AJ6168

AJ6168.The geoid height was determined by GEOID03.

AJ6168

AJ6168.The dynamic height is computed by dividing the NAVD 88

AJ6168.geopotential number by the normal gravity value computed on the

AJ6168.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AJ6168.degrees latitude (g = 980.6199 gals.).

AJ6168

AJ6168.The modeled gravity was interpolated from observed gravity values.

AJ6168

AJ6168;

	North	East	Units	Scale	Factor	Converg.
AJ6168;SPC FL E	- 312,342.838	213,226.114	MT	0.99994334	+0 03 39.2	
AJ6168;SPC FL E	- 1,024,744.79	699,559.34	sFT	0.99994334	+0 03 39.2	
AJ6168;UTM 17	- 3,003,368.250	513,221.601	MT	0.99960216	+0 03 39.2	

AJ6168

AJ6168! - Elev Factor x Scale Factor = Combined Factor

AJ6168!SPC FL E - 1.00000268 x 0.99994334 = 0.99994602

AJ6168!UTM 17 - 1.00000268 x 0.99960216 = 0.99960484

AJ6168

AJ6168 SUPERSEDED SURVEY CONTROL

AJ6168

AJ6168 NAVD 88 (12/12/02) 9.31 (m) 30.5 (f) LEVELING 3

AJ6168

AJ6168.Superseded values are not recommended for survey control.

AJ6168.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AJ6168.[See file dsdata.txt](#) to determine how the superseded data were derived.

AJ6168

AJ6168\_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RNL1322203368(NAD 83)

AJ6168\_MARKER: DD = SURVEY DISK

AJ6168\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AJ6168\_STAMPING: E 523 2001 CERP

AJ6168\_MARK LOGO: USE  
 AJ6168\_PROJECTION: RECESSED 10 CENTIMETERS  
 AJ6168\_MAGNETIC: O = OTHER; SEE DESCRIPTION  
 AJ6168\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO  
 AJ6168+STABILITY: SURFACE MOTION  
 AJ6168\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 AJ6168+SATELLITE: SATELLITE OBSERVATIONS - October 03, 2002

AJ6168	HISTORY	- Date	Condition	Report By
AJ6168	HISTORY	- 20010509	MONUMENTED	EMCINC
AJ6168	HISTORY	- 20021003	GOOD	MAPTEC
AJ6168	HISTORY	- 20050718	GOOD	MACTEC

AJ6168  
 AJ6168 STATION DESCRIPTION

AJ6168 DESCRIBED BY EMC INCORPORATED 2001 (MKC)  
 AJ6168 THE STATION IS LOCATED APPROXIMATELY 6.4 KILOMETERS (4.0 MILES)  
 AJ6168 SOUTHWEST OF OKEECHOBEE, FLORIDA ON THE HERBERT HOOVER LEVEE  
 AJ6168 APPROXIMATELY 4.5 MILES (14.8 FEET) SOUTH OF THE CENTER OF THE  
 AJ6168 LEVEE. LOCATED ON THE OKEECHOBEE QUAD TOWNSHIP 38 SOUTH, RANGE 35  
 AJ6168 EAST.  
 AJ6168 OWNERSHIP SOUTH FLORIDA WATER MANAGEMENT DISTRICT  
 AJ6168 TO REACH THE STATION FROM THE INTERSECTION OF U.S. HIGHWAY 441  
 AJ6168 AND STATE ROAD 78 IN OKEECHOBEE, FLORIDA GO WEST ON STATE ROAD  
 AJ6168 78 FOR 0.08 KILOMETERS (0.05 MILES) TO A ROAD LEADING SOUTH TO JAYCEE  
 AJ6168 PARK, THENCE SOUTH 0.16 KILOMETERS (0.1 MILES) TO THE TOP OF  
 AJ6168 HERBERT HOOVER LEVEE AND A GATE ON RIGHT, THENCE SOUTHWEST 5.80  
 AJ6168 KILOMETERS (3.6 MILES) TO A GATE ON THE LEVEE, THENCE CONTINUE  
 AJ6168 SOUTHWEST ON LEVEE TO THE MARK ON LEFT. ALSO TO REACH THE MARK  
 AJ6168 FROM THE INTERSECTION U.S. HIGHWAY 441 AND STATE ROAD 78 GO  
 AJ6168 SOUTHWEST ON STATE ROAD 78, 6.77 KILOMETERS (4.2 MILES) TO THE TOP  
 AJ6168 OF THE LEVEE CROSSING STATE ROAD 78, THENCE ON LEVEE 0.08  
 AJ6168 KILOMETERS (0.05 MILES) TO THE MARK ON RIGHT ON TOP OF LEVEE.  
 AJ6168 THE STATION IS 78.1 METERS (256.3 FEET) EAST OF THE INTERSECTION OF  
 AJ6168 THE CENTER OF STATE ROAD 78 AND THE CENTER OF THE LEVEE, 35.9  
 AJ6168 METERS (117.8 FEET) NORTH OF THE WEST GATE POST IN A BOARD FENCE,  
 AJ6168 5.2 METERS (17.0 FEET) NORTHEAST OF THE SOUTHEAST CORNER POST OF A  
 AJ6168 WOOD PAVILION, 0.7 METERS (2.3 FEET) NORTHWEST OF CARSONITE  
 AJ6168 WITNESS POST AND 0.25 METERS (0.8 FEET) SOUTH OF A MAGNET BURIED 0.1  
 AJ6168 METERS (0.3 FEET).

AJ6168  
 AJ6168 STATION RECOVERY (2002)

AJ6168 RECOVERY NOTE BY MAPTECH INCORPORATED 2002 (MKC)  
 AJ6168 THE STATION IS LOCATED APPROXIMATELY 6.4 KILOMETERS (4.0 MILES)  
 AJ6168 SOUTHWEST OF OKEECHOBEE, FLORIDA ON THE HERBERT HOOVER LEVEE  
 AJ6168 APPROXIMATELY 4.5 MILES (14.8 FEET) SOUTH OF THE CENTER OF THE  
 AJ6168 LEVEE. LOCATED ON THE OKEECHOBEE QUAD TOWNSHIP 38 SOUTH, RANGE 35  
 AJ6168 EAST.  
 AJ6168 OWNERSHIP SOUTH FLORIDA WATER MANAGEMENT DISTRICT  
 AJ6168 TO REACH THE STATION FROM THE INTERSECTION OF U.S. HIGHWAY 441  
 AJ6168 AND STATE ROAD 78 IN OKEECHOBEE, FLORIDA GO WEST ON STATE ROAD  
 AJ6168 78 FOR 0.08 KILOMETERS (0.05 MILES) TO A ROAD LEADING SOUTH TO JAYCEE  
 AJ6168 PARK, THENCE SOUTH 0.16 KILOMETERS (0.1 MILES) TO THE TOP OF  
 AJ6168 HERBERT HOOVER LEVEE AND A GATE ON RIGHT, THENCE SOUTHWEST 5.80  
 AJ6168 KILOMETERS (3.6 MILES) TO A GATE ON THE LEVEE, THENCE CONTINUE  
 AJ6168 SOUTHWEST ON LEVEE TO THE MARK ON LEFT. ALSO TO REACH THE MARK  
 AJ6168 FROM THE INTERSECTION U.S. HIGHWAY 441 AND STATE ROAD 78 GO  
 AJ6168 SOUTHWEST ON STATE ROAD 78, 6.77 KILOMETERS (4.2 MILES) TO THE TOP  
 AJ6168 OF THE LEVEE CROSSING STATE ROAD 78, THENCE ON LEVEE 0.08  
 AJ6168 KILOMETERS (0.05 MILES) TO THE MARK ON RIGHT ON TOP OF LEVEE.  
 AJ6168 THE STATION IS 78.1 METERS (256.3 FEET) EAST OF THE INTERSECTION OF  
 AJ6168 THE CENTER OF STATE ROAD 78 AND THE CENTER OF THE LEVEE, 35.9  
 AJ6168 METERS (117.8 FEET) NORTH OF THE WEST GATE POST IN A BOARD FENCE,  
 AJ6168 5.2 METERS (17.0 FEET) NORTHEAST OF THE SOUTHEAST CORNER POST OF A  
 AJ6168 WOOD PAVILION, 0.7 METERS (2.3 FEET) NORTHWEST OF CARSONITE  
 AJ6168 WITNESS POST AND 0.25 METERS (0.8 FEET) SOUTH OF A MAGNET BURIED 0.1  
 AJ6168 METERS (0.3 FEET).

AJ6168  
 AJ6168  
 AJ6168  
 AJ6168

AJ6168 STATION RECOVERY (2005)  
AJ6168  
AJ6168'RECOVERY NOTE BY MACTEC ENGINEERING AND CONSULTING 2005 (CBG)  
AJ6168'RECOVERED AS DESCRIBED

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

OK 100	16434.00	PARTY CHIEF	D. FERELS	DATE:	June 22, 2006	Datum:	NAVD88	FIELD BOOK 1216	PAGES	24-28			
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	3.490												
BM	2.760	2.760	41.240			38.480	38.480						NGS BM F-523
	2.030												
STADIA		146.000											
	1.580			9.780									
TP1	0.940	0.937	33.107	9.070	9.070	32.170		288.00	0.000290065	0.000290065	32.170	9.805	
	0.290			8.360				4.00					
	2.810			27.210				4.00					
STADIA		129.000			142.000								
	4.210			8.875									
TP2	2.985	2.985	27.842	8.250	8.250	24.857		254.00	0.000255821	0.000545887	24.856	7.576	
	1.760			7.625				4.00					
	8.955			24.750				8.00					
STADIA		245.000			125.000								
	7.590			6.340									
TP3	6.380	6.380	29.122	5.100	5.100	22.742		493.00	0.000496535	0.001042422	22.741	6.931	
	5.170			3.860				-3.00					
	19.140			15.300				5.00					
STADIA		242.000			248.000								
	9.510			2.850									
TP4	8.250	8.253	35.745	1.630	1.630	27.492		486.00	0.000489485	0.001531907	27.490	8.379	
	7.000			0.410				-2.00					
	24.760			4.890				3.00					
STADIA		251.000			244.000								
	5.550			6.740									
TP5	5.155	5.155	35.420	5.480	5.480	30.265		503.00	0.000506607	0.002038514	30.263	9.224	
	4.760			4.220				-1.00					
	15.465			16.440				2.00					
STADIA		79.000			252.000								



OK 100	16434.00	PARTY CHIEF	D. FERELS	DATE:	June 22, 2006	Datum:	NAVD88	FIELD BOOK 1216	PAGES	24-28			
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	6.460			5.240									
TP6	5.210	5.213	35.763	4.870	4.870	30.550		153.00	0.000154097	0.002192611	30.548	9.311	BM CHECK NGS BM E-523
	3.970			4.500				5.00					NGS DATA SHEET ELEV. 30.55
	15.640			14.610				7.00					
STADIA		249.000			74.000								
	4.630			8.230									
TP7	3.380	3.380	32.143	7.000	7.000	28.763		495.00	0.000498550	0.002691161	28.761	8.766	
	2.130			5.770				3.00					
	10.140			21.000				10.00					
STADIA		250.000			246.000								
	6.350			7.070									
TP8	5.090	5.090	31.413	5.820	5.820	26.323		500.00	0.000503586	0.003194747	26.320	8.022	
	3.830			4.570				0.00					
	15.270			17.460				10.00					
STADIA		252.000			250.000								
	3.730			8.720									
TP9	2.480	2.480	26.430	7.460	7.463	23.950		503.00	0.000506607	0.003701354	23.946	7.299	
	1.230			6.210				1.00					
	7.440			22.390				11.00					
STADIA		250.000			251.000								
	6.190			8.960									
TP10	4.950	4.950	23.668	7.715	7.712	18.718		500.00	0.000503586	0.004204939	18.714	5.704	
	3.710			6.460				0.00					
	14.850			23.135				11.00					
STADIA		248.000			250.000								
	8.240			6.020									
TP11	6.980	6.980	25.868	4.780	4.780	18.888		496.00	0.000499557	0.004704496	18.884	5.756	
	5.720			3.540				0.00					
	20.940			14.340				11.00					
STADIA		252.000			248.000								

OK 100	16434.00	PARTY CHIEF	D. FERELS	DATE:	June 22, 2006	Datum:	NAVD88	FIELD BOOK 1216	PAGES	24-28			
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	4.380			6.410									
TP12	4.240	4.240	24.940	5.165	5.168	20.700		500.00	0.000503586	0.005208082	20.695	6.308	
	4.100			3.930				4.00					
	12.720			15.505				15.00					
STADIA		28.000			248.000								
	5.650			5.600									
TP13	5.510	5.507	24.987	5.460	5.460	19.480		56.00	0.000056402	0.005264483	19.475	5.936	SET SFWMD BRASS DISK STAMPED
	5.360			5.320				0.00					OK 100 2006
	16.520			16.380				15.00					
STADIA		29.000			28.000								
	6.715			4.430									
TP14	5.460	5.462	26.158	4.290	4.290	20.697		57.00	0.000057409	0.005321892	20.691	6.307	
	4.210			4.150				1.00					
	16.385			12.870				16.00					
STADIA		250.500			28.000								
	5.970			8.530									
TP15	4.730	4.727	23.605	7.280	7.280	18.878		500.50	0.000504089	0.005825981	18.873	5.752	
	3.480			6.030				0.50					
	14.180			21.840				16.50					
STADIA		249.000			250.000								
	8.970			6.130									
TP16	7.710	7.710	26.425	4.890	4.890	18.715		497.00	0.000500564	0.006326545	18.709	5.702	
	6.450			3.650				1.00					
	23.130			14.670				17.50					
STADIA		252.000			248.000								
	8.800			3.720									
TP17	7.600	7.600	31.545	2.480	2.480	23.945		500.00	0.000503586	0.006830131	23.938	7.296	
	6.400			1.240				4.00					
	22.800			7.440				21.50					
STADIA		240.000			248.000								

OK 100	16434.00	PARTY CHIEF	D. FERELS	DATE:	June 22, 2006	Datum:	NAVD88	FIELD BOOK	1216	PAGES	24-28		
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	7.250			6.530									
TP18	5.990	5.993	32.318	5.220	5.220	26.325		502.00	0.000505600	0.007335730	26.318	8.022	
	4.740			3.910				-22.00					
	17.980			15.660				-0.50					
STADIA		251.000			262.000								

OK 100	16434.00	PARTY CHIEF	D. FERELS	DATE:	June 22, 2006	Datum:	NAVD88	FIELD BOOK 1216	PAGES	24-28			
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	8.550			4.800									
TP19	7.325	7.323	36.088	3.550	3.553	28.765		249.00	0.000250786	0.007839316	28.757	8.765	
	6.095			2.310				-249.00					
	21.970			10.660				1.50					
STADIA		245.500			249.000								
				6.755									
BM				5.530	5.530	30.558	30.550	490.50	0.000494017	0.008333333	30.550	9.312	BM CHECK @ E-523
				4.305				0.50					
				16.590				2.00					
					245.000								

OK 100	16434.00	PARTY CHIEF	D. FERELS	DATE:	June 22, 2006	Datum:	NAVD88	FIELD BOOK 1216	PAGES	24-28			
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
								LOR=	8274.00	CHECK VALUES TO VERIFY SAME			
										OR TO SEE THEY ARE WITHIN			
	TOTAL +=	4138.000		TOTAL -=	4136.000				8274.00	THIRD ORDER SPECS( MAX DIFF. 33 FT.)			
					2.00								
					RAW CLOSURE=	0.008							
					ERROR PER FOOT=	0.000							
					MTS ALLOWABLE ERROR FOR THIRD ORDER=	0.038							
					ACTUAL ERROR=	0.008							RED IF BAD-----GREEN IF GOOD

OK 100	16434.00	PARTY CHIEF	D. FERELS	DATE:	June 22, 2006	Datum:	NGVD29	FIELD BOOK 1216	PAGES	24-28			
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	3.490												
BM	2.760	2.760	42.530			39.770	39.770						NGS BM F-523
	2.030												
STADIA		146.000											
	1.580			9.780									
TP1	0.940	0.937	34.397	9.070	9.070	33.460		288.00	0.000696089	0.000696089	33.459	10.198	
	0.290			8.360				4.00					
	2.810			27.210				4.00					
STADIA		129.000			142.000								
	4.210			8.875									
TP2	2.985	2.985	29.132	8.250	8.250	26.147		254.00	0.000613912	0.001310001	26.145	7.969	
	1.760			7.625				4.00					
	8.955			24.750				8.00					
STADIA		245.000			125.000								
	7.590			6.340									
TP3	6.380	6.380	30.412	5.100	5.100	24.032		493.00	0.001191570	0.002501571	24.029	7.324	
	5.170			3.860				-3.00					
	19.140			15.300				5.00					
STADIA		242.000			248.000								
	9.510			2.850									
TP4	8.250	8.253	37.035	1.630	1.630	28.782		486.00	0.001174651	0.003676222	28.778	8.772	
	7.000			0.410				-2.00					
	24.760			4.890				3.00					
STADIA		251.000			244.000								
	5.550			6.740									
TP5	5.155	5.155	36.710	5.480	5.480	31.555		503.00	0.001215739	0.004891961	31.550	9.616	
	4.760			4.220				-1.00					
	15.465			16.440				2.00					
STADIA		79.000			252.000								

OK 100	16434.00	PARTY CHIEF	D. FERELS	DATE:	June 22, 2006	Datum:	NGVD29	FIELD BOOK 1216	PAGES	24-28			
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	6.460			5.240									
TP6	5.210	5.213	37.053	4.870	4.870	31.840		153.00	0.000369797	0.005261759	31.835	9.703	BM CHECK NGS BM E-523
	3.970			4.500				5.00					DATA SHEET ELEV. 31.831 (NGVD
	15.640			14.610				7.00					1929 TXT FILE)
STADIA		249.000			74.000								
	4.630			8.230									
TP7	3.380	3.380	33.433	7.000	7.000	30.053		495.00	0.001196404	0.006458162	30.047	9.158	
	2.130			5.770				3.00					
	10.140			21.000				10.00					
STADIA		250.000			246.000								
	6.350			7.070									
TP8	5.090	5.090	32.703	5.820	5.820	27.613		500.00	0.001208488	0.007666651	27.606	8.414	
	3.830			4.570				0.00					
	15.270			17.460				10.00					
STADIA		252.000			250.000								
	3.730			8.720									
TP9	2.480	2.480	27.720	7.460	7.463	25.240		503.00	0.001215739	0.008882390	25.231	7.690	
	1.230			6.210				1.00					
	7.440			22.390				11.00					
STADIA		250.000			251.000								
	6.190			8.960									
TP10	4.950	4.950	24.958	7.715	7.712	20.008		500.00	0.001208488	0.010090878	19.998	6.095	
	3.710			6.460				0.00					
	14.850			23.135				11.00					
STADIA		248.000			250.000								
	8.240			6.020									
TP11	6.980	6.980	27.158	4.780	4.780	20.178		496.00	0.001198821	0.011289699	20.167	6.147	
	5.720			3.540				0.00					
	20.940			14.340				11.00					
STADIA		252.000			248.000								

OK 100	16434.00	PARTY CHIEF	D. FERELS	DATE:	June 22, 2006	Datum:	NGVD29	FIELD BOOK 1216	PAGES	24-28			
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	4.388			6.410									
TP12	4.240	4.243	26.233	5.165	5.168	21.990		500.00	0.001208488	0.012498187	21.978	6.699	
	4.100			3.930				4.00					
	12.728			15.505				15.00					
STADIA		28.800			248.000								
	5.650			5.600									
TP13	5.510	5.507	26.279	5.460	5.460	20.773		56.80	0.000137284	0.012635472	20.760	6.328	SET SFWMD BRASS DISK STAMPED
	5.360			5.320				0.80					OK 100 2006
	16.520			16.380				15.80					
STADIA		29.000			28.000								
	6.715			4.430									
TP14	5.460	5.462	27.451	4.290	4.290	21.989		57.00	0.000137768	0.012773239	21.977	6.698	
	4.210			4.150				1.00					
	16.385			12.870				16.80					
STADIA		250.500			28.000								
	5.970			8.530									
TP15	4.730	4.727	24.898	7.280	7.280	20.171		500.50	0.001209697	0.013982936	20.157	6.144	
	3.480			6.030				0.50					
	14.180			21.840				17.30					
STADIA		249.000			250.000								
	8.970			6.130									
TP16	7.710	7.710	27.718	4.890	4.890	20.008		497.00	0.001201237	0.015184174	19.992	6.094	
	6.450			3.650				1.00					
	23.130			14.670				18.30					
STADIA		252.000			248.000								
	8.800			3.720									
TP17	7.600	7.600	32.838	2.480	2.480	25.238		500.00	0.001208488	0.016392662	25.221	7.687	
	6.400			1.240				4.00					
	22.800			7.440				22.30					
STADIA		240.000			248.000								



OK 100	16434.00	PARTY CHIEF	D. FERELS	DATE:	June 22, 2006	Datum:	NGVD29	FIELD BOOK	1216	PAGES	24-28		
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	7.250			6.530									
TP18	5.990	5.993	33.611	5.220	5.220	27.618		502.00	0.001213322	0.017605984	27.600	8.413	
	4.740			3.910				-22.00					
	17.980			15.660				0.30					
STADIA		251.000			262.000								

OK 100	16434.00	PARTY CHIEF	D. FERELS	DATE:	June 22, 2006	Datum:	NGVD29	FIELD BOOK 1216	PAGES	24-28			
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
	8.550			4.800									
TP19	7.325	7.323	37.381	3.550	3.553	30.058		249.00	0.000601827	0.018814473	30.039	9.156	
	6.095			2.310				-249.00					
	21.970			10.660				2.30					
STADIA		245.500			249.000								
				6.755									
BM				5.530	5.530	31.851	31.831	490.50	0.001185527	0.020000000	31.831	9.702	BM CHECK @ E-523
				4.305				0.50					
				16.590				2.80					
					245.000								

OK 100	16434.00	PARTY CHIEF	D. FERELS	DATE:	June 22, 2006	Datum:	NGVD29	FIELD BOOK	1216	PAGES	24-28		
STATION	3 WIRE	AVG.(ENG)	HI	3 WIRE	AVG.(ENG)	ELEV.	BM EL.	DIST.	ERROR	ACCUM.	ADJ. ELEV.	METRIC	DESCRIPTION
							LOR=	8274.80	CHECK VALUES TO VERIFY SAME				
									OR TO SEE THEY ARE WITHIN				
	TOTAL +=	4138.800		TOTAL -=	4136.000			8274.80	THIRD ORDER SPECS( MAX DIFF. 33 FT.)				
					2.80								
					RAW CLOSURE=	0.020							
					ERROR PER FOOT=	0.000							
					MTS ALLOWABLE ERROR FOR THIRD ORDER=	0.038							
					ACTUAL ERROR=	0.020		RED IF BAD-----GREEN IF GOOD					