

SURVEYOR'S REPORT

Specific Purpose Survey of the Monitoring Wells

OSF-62

Osceola County, Florida

South Florida Water Management District's

Purchase Order number PC P602214

Keith and Schnars project number 16434.07,

Task 22003

Report Date: August 15, 2006

Submittal: First

Prepared for:

South Florida Water Management District

Prepared by:



2525 Drane Field Road Suite #7

Lakeland, FL 33811

Ph. (863) 646-4771 Fax (863) 464-3378

Licensed Business (L.B.) 1337

SURVEYOR'S REPORT

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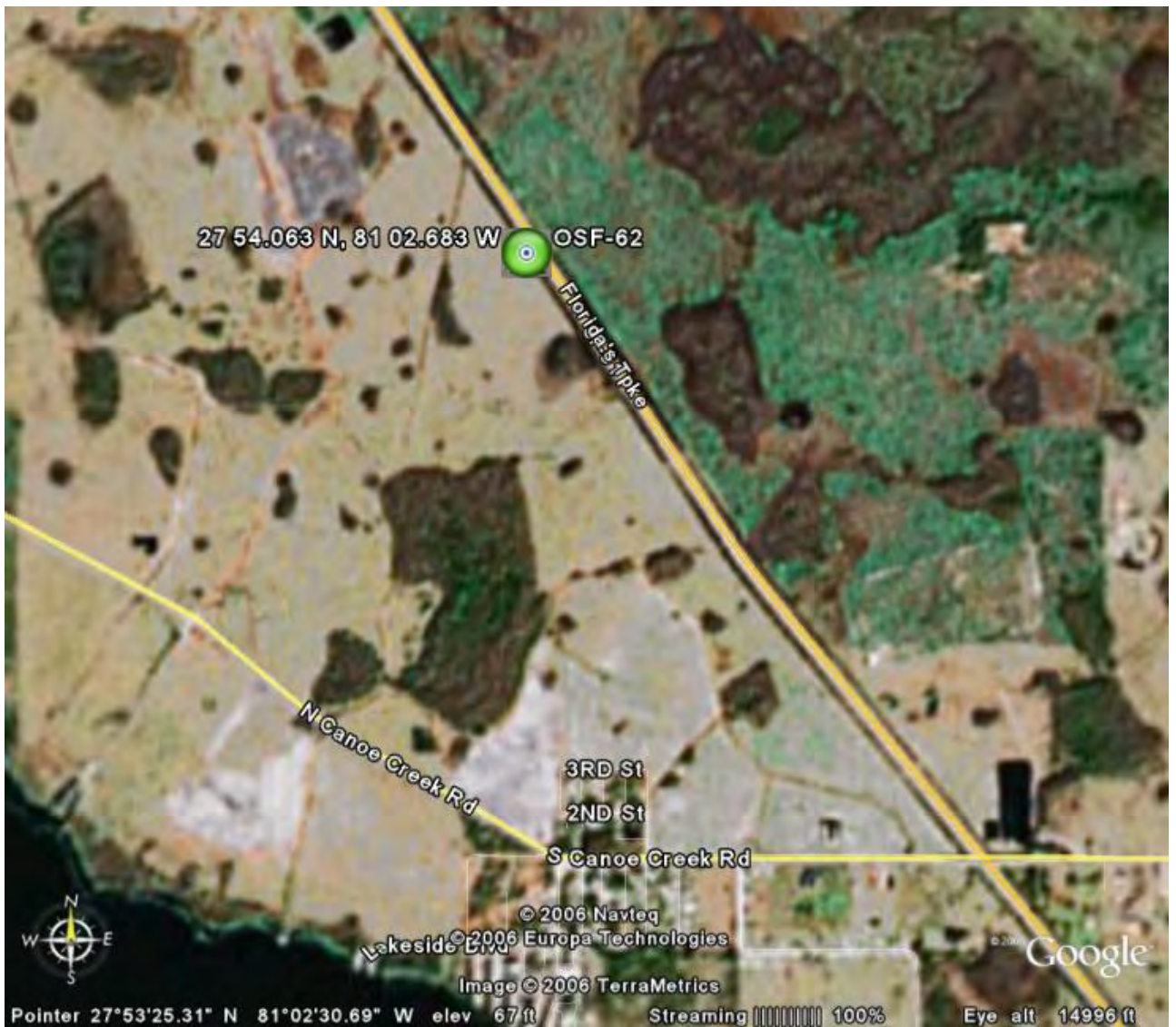
SURVEYOR'S REPORT

PURPOSE

To establish vertical data (NAVD 1988 and NGVD 1929) on the Monitoring Wells at the structure.

LOCATION OF PROJECT

The project is located in Osceola County.



SURVEYOR'S 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. Surveyor's Report.

DATUM FOR THE PROJECT


The vertical datum for the project is North American Datum of 1988 (NAVD '88). National Geodetic Survey vertical control monuments with published NAVD '88 elevations were used as the basis for this survey. The National Geodetic Vertical Datum of 1929 (NGVD '29) shown were computed using CORPSCON version 6.0 program.

LEVELING METHODS

Benchmark OSF-62 was constructed at the site. The elevations were established from Benchmark Q199 using a Topcon DL-102C Digital Level and adjusted using Tripod Data Systems Survey Link DC with Geodetic and Digital Level modules 7.5.5.

SURVEYOR'S REPORT

VERTICAL CONTROL

BM Q 199		Elevation:	NAVD 1988	66.91'	NGVD 1929	
Found in National Geodetic Survey Database	Latitude		27°53'09" (Scaled)			
State/County FL/Osceola	Longitude		81°03'36" (Scaled)			
USGS QUAD Lake Marian NE (1972)						
Horiz. Order (Preliminary) Class (Preliminary)	DESCRIBED BY COAST AND GEODETIC SURVEY 1960 4.6 MI NW FROM KENANSVILLE. 4.65 MILES WEST AND NORTHWEST ALONG STATE ROAD 523 FROM THE JUNCTION OF U.S. HIGHWAY 441 AT KENANSVILLE, AT THE JUNCTION OF A DRIVE LEADING SOUTHWEST TO THE LUCKY L. RANCH, 52 FEET SOUTHWEST OF THE CENTER LINE OF ROAD, 49 1/2 FEET NORTHWEST OF THE CENTER LINE OF THE NORTHWEST ONE OF TWO DRIVES, 1 1/2 FEET NORTHEAST OF A FENCE LINE, 2 FEET SOUTHEAST OF A STEEL WITNESS POST, ABOUT 1 1/2 FEET BELOW THE LEVEL OF THE HIGHWAY, AND SET IN TOP OF A CONCRETE POST PROJECTING 4 INCHES.					
						

SURVEYOR'S REPORT

PROJECT RESULTS

Monitoring Well (GW-1)	Monitoring Well (GW-2)
<p>Monitoring Well OSF-62: Reference mark: <u>Set mark on S. side PVC pipe</u> <u>With initials K&S.</u></p> <p>New Reference Mark El. <u>74.012'</u> (NGVD '29) <u>(Wrote -1.198' to NAVD 1988).</u></p> <p>Initials: <u>K&S</u> <u>B.M., R.F.,</u></p> <p>Date: <u>7/26/06</u></p> <p>written at the mark: El. <u>74.02'</u> Date: <u>None</u> By: <u>None</u></p> <p>Reference Mark location: <u>Top of PVC Pipe</u></p>	<p>Monitoring Well OSF-62: Reference mark: <u>Set mark on N. side PVC pipe</u> <u>With initials K&S.</u></p> <p>New Reference Mark El. <u>74.809'</u> (NGVD '29) <u>(Wrote -1.198' to NAVD 1988).</u></p> <p>Initials: <u>K&S</u> <u>B.M., R.F.,</u></p> <p>Date: <u>7/26/06</u></p> <p>written at the mark: El. <u>74.78'</u> Date: <u>None</u> By: <u>None</u></p> <p>Reference Mark location: <u>Top of PVC Pipe</u></p>

SURVEYOR'S REPORT

PROJECT RESULTS

Monitoring Well (GW-3)

Monitoring Well OSF-62:

Reference mark:

Set mark on S. side PVC pipe
With initials K&S.

New Reference

Mark El. **71.829'**

(NGVD '29)

(Wrote -1.198' to NAVD 1988).

Initials:

K&S

B.M., R.F.,

Date:

7/26/06

written at the mark:

El. **71.83'**

Date: **None**

By: **None**

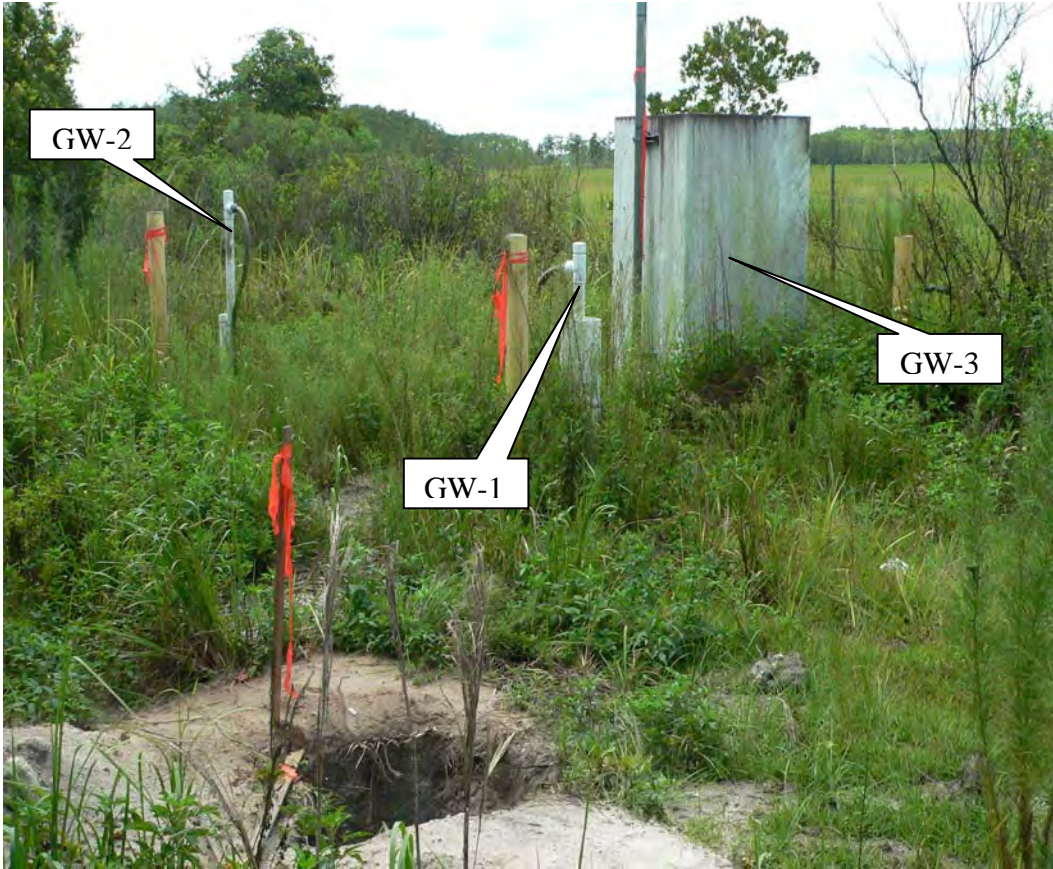
Reference Mark location:

Top of PVC Pipe

SURVEYOR'S REPORT

PROJECT PHOTO

OSF-62



SURVEYOR'S REPORT

PROJECT PHOTO

MONITORING WELL GW-1

OSF-62



SURVEYOR'S REPORT
PROJECT PHOTO
MONITORING WELL GW-2
OSF-62



SURVEYOR'S REPORT

PROJECT PHOTO

MONITORING WELL GW-3

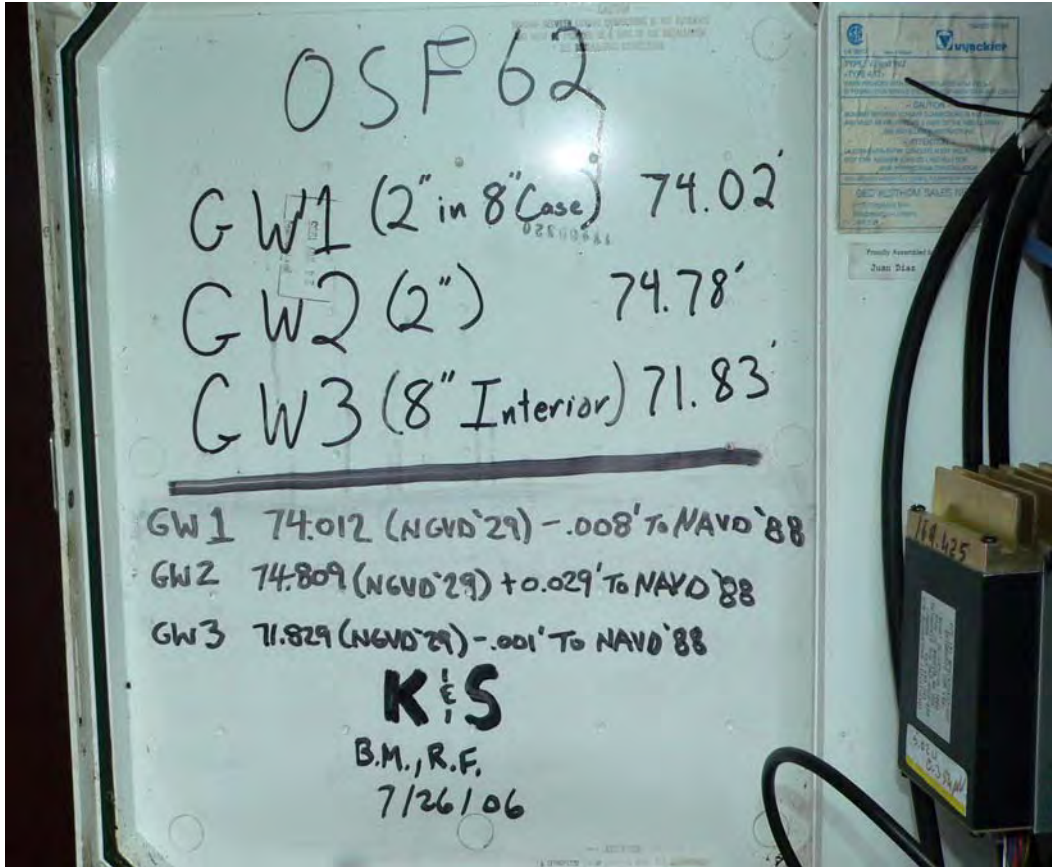
OSF-62



SURVEYOR'S REPORT

PROJECT PHOTO

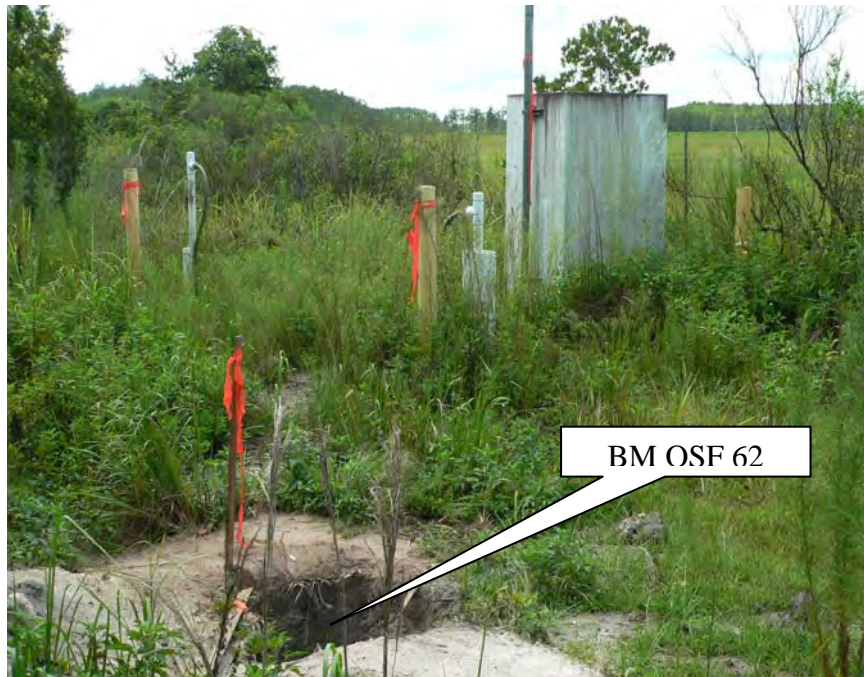
OSF-62



SURVEYOR'S REPORT

PROJECT PHOTO

OSF-62



SURVEYOR'S REPORT

Comments:

Party Chief: B. Miller Field Book: 1163 Page 17, 20-23
Bench Mark: "Q 199" El. 66.91', Vertical Datum: NAVD1988
Offset: 1.207' SFWMD VALUE (add this value to convert to NGVD 1929)
Offset: 1.207' NGS VALUE (add this value to convert to NGVD 1929)
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

SURVEYOR'S 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:

Date of Survey
July 26, 2006

Kenneth T. Glass, PSM
Professional Surveyor and Mapper
State of Florida
Certificate No. 5713

Identification Information:

Citation:

Citation Information:

Originator: Kenneth T. Glass, P. S. M. (ed.)

Publication Date: 20060726

Publication Time: Unknown

Title: S. F. W. M. D. Monitoring Well

Edition: OSF-62

Series Information:

Publication Information:

Publication Place: Not Published

Publisher: None

Online Linkage: kglass@keithandschnars.com

Larger Work Citation:

Citation Information:

Series Information:

Publication Information:

Description:

Abstract:

South Florida Water Management District
Structure OSF-62

Purpose:

To establish reference elevations in NAVD 1988 and
NGVD 1929 datum at the Monitoring Well(s).

Time Period of Content:

Time Period Information:

Single Date/Time:

Calendar Date: 20060726

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: 81°02' 41"

East Bounding Coordinate: 81°02' 41"

North Bounding Coordinate: 27°54' 03.8"

South Bounding Coordinate: 27°54' 03.8"

Keywords:

Theme:

Theme Keyword Thesaurus: Specific Purpose Survey

Theme Keyword: Monitoring Well(s)

Place:

Place Keyword Thesaurus: Osceola County

Place Keyword: S. F. W. M. D. Monitoring Well OSF-62

Place Keyword: SEC. 05 - T30S - R33E

Stratum:

Temporal:

Access Constraints: Key needed to gain access to Monitoring 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:

Acceler 8

Suite 150

2301 Centerpark West Drive

City: West Palm Beach

State or Province: Florida

Postal Code: 33409

Country: USA

OSF 62.gen

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 a hand held G.P.S. unit. The vertical data was collected using a Wild DL-102C Level. Coordinates are based on the Florida State Plane Coordinate System, East Zone, NAD 83/90. Elevations are based on NAVD 1988 with an offset supplied to convert to NGVD 1929.

Logical_Consistency_Report:

Vertical data on the monitoring well was established using the site benchmark.

Completeness_Report:

74.012' (NGVD 1929) OSF-62 Well (GW-1) .
Offset written at wells (-) 1.198' to NAVD 1988.

74.809' (NGVD 1929) OSF-62 Well (GW-2) .
Offset written at wells (-) 1.198' to NAVD 1988.

71.829' (NGVD 1929) OSF-62 Well (GW-3) .
Offset written at wells (-) 1.198' to NAVD 1988.

OSF-62 2006 was the site benchmark used for this survey. NAVD 1988 elevation 67.421'

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°54'03.8"

Long. 81°02'41.0"

Horizontal_Positional_Accuracy_Explanation: Value derived

by hand-held GPS unit.

Vertical_Positional_Accuracy:

Vertical_Positional_Accuracy_Report:

The onsite benchmark was used to establish the elevations on the monitoring well(s) in this report.

Quantitative_Vertical_Positional_Accuracy_Assessment:

Vertical_Positional_Accuracy_Value: 0.058 ft. NAVD88

Vertical_Positional_Accuracy_Explanation: Better than

0.03ft. x sq. root of miles of the level loop.

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Series_Information:

Publication_Information:

Larger_Work_Citation:

Citation_Information:

Series_Information:

Publication_Information:

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Range_of_Dates/Times:

Multiple_Dates/Times:

Process_Step:

Process_Description:

Differential leveling was performed using a Wild DL-102C level. The onsite benchmark OSF62 2006 was used to determine the monitoring well elevation. Elevations

OSF 62.gen
were written at the wells in NGVD 1929 with an offset
provided to convert the elevations to NAVD 1988.
Process_Date: 20060726
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Organization_Primary:
Contact_Address:

Spatial_Data_Organization_Information:
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Geographic:
Latitude_Resolution: 27°54'03.8"
Longitude_Resolution: 81°02'41.0"
Geographic_Coordinate_Units: Degrees, minutes, and decimal

seconds

Geodetic_Model:
Vertical_Coordinate_System_Definition:
Altitude_System_Definition:
Depth_System_Definition:

Entity_and_Attribute_Information:
Detailed_Description:
Entity_Type:
Attribute:
Attribute_Domain_Values:
Attribute_Value_Accuracy_Information:

Overview_Description:
Distribution_Information:
Distributor:

Contact_Information:
Contact_Person_Primary:
Contact_Organization_Primary:
Contact_Organization: Keith and Schnars, P. A.
Contact_Person: Kenneth T. Glass, P. S. M.
Contact_Position: Director of Surveying and Mapping Lakeland
Contact_Address:
Address_Type: mailing and physical address
Address: 2525 Drane Field Rd., Suite 7
City: Lakeland
State_or_Province: Florida
Postal_Code: 33811
Country: Polk
Contact_Voice_Telephone: (863)-646-4771
Contact_Facsimile_Telephone: (863)-646-3378
Contact_Electronic_Mail_Address: kglass@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: 20060809

Metadata_Contact:

Contact_Information:
Contact_Person_Primary:
Contact_Person: Kenneth T. Glass, P. S. M.
Contact_Organization: Keith and Schnars, P. A.
Contact_Organization_Primary:

OSF 62. gen

Contact_Position: Director of Surveying and Mapping Lakeland

Contact_Address:

Address_Type: mailing and physical address

Address: 2525 Drane Field Rd., Suite 7

City: Lakeland

State_or_Province: FL

Postal_Code: 33811

Country: USA

Contact_Voice_Telephone: (863) 646-4771

Contact_Facsimile_Telephone: (863) 646-3378

Contact_Electronic_Mail_Address: kglass@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:

SAME CREW
7/26/2006
OSF-62 REDO

BM	BS	MEAN	HI	FS	MEAN
	6.43		73.711		
BM OSF 62	6.29	6.290	70.924		
	6.15				
	18.87				
WELL PIPE 1				0.98	
				0.90	17' 0.897
				0.81	
				2.69	
WELL PIPE 2				0.14	
				0.10	8' 0.100
				0.06	
				0.30	
WELL PIPE 3	3.28		73.858	3.13	
	3.23	3.227	71.071	3.08	10' 3.080
	3.17			3.03	
	9.68			9.24	
WELL PIPE 2				0.29	
				0.25	8' 0.250
				0.21	
				0.75	
WELL PIPE 1				1.13	
				1.04	17' 1.043
				0.96	
				3.13	
BM OSF 62				6.58	
				6.44	29' 6.437
				6.29	
				19.31	

ELEV.	ADJ. ELEV.	REMARKS
	67.421	
	64.634	POURED CONC. MON. W/S.F.W.M.D. BRASS DISK
	NAVD '88	
72.814		
70.027		2" PVC PIPE NE OF ABOVE GROUND VAULT
		NAVD 29 =
	71.225	74.012
	- 1.198	TO NAVD 88
73.611		
70.824		2" PVC PIPE SE OF ABOVE GROUND VAULT
		NAVD 29 =
	72.022	74.809
	- 1.198	TO NAVD 88
70.631		
67.844		8" PVC PIPE IN ABOVE GROUND VAULT
		NAVD 29 =
	69.042	71.829
	- 1.198	TO NAVD 88
73.608		
70.824		2" PVC PIPE SE OF ABOVE GROUND VAULT
		NAVD 29 =
	72.019	74.806
	- 1.198	TO NAVD 88
72.815		
70.028		2" PVC PIPE NE OF ABOVE GROUND VAULT
		NAVD 29 =
	71.226	74.013
	- 1.198	TO NAVD 88
67.421		
64.634	64.634	POURED CONC. MON. W/S.F.W.M.D.
FLAT		NAVD 88 BRASS DISK



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01

COUNTY OSCEOLA	PROJECT	DESIGNATION Structure OSF-62	
SECTION <u>5</u>	TOWNSHIP <u>30</u> SOUTH	RANGE <u>33</u> EAST	
GEOGRAPHIC INDEX OF QUAD			
Established by <u>KEITH AND SCHNARS</u> Recovered by SET CLASS "C" MONUMENT WITH SFWMD BRASS DISK.		NAME OF QUADRANGLE <u>LAKE MARIAN NE</u>	
SURVEYOR <u>B. MILLER (Keith and Schnars)</u> DATE <u>07/14/2006</u>		FIELD BOOK , 1163, pgs. 17, 20-23	
HORIZONTAL DATUM: 1983 with 1999 correction, ZONE East			
VERTICAL DATUM: NGVD 1929 and NAVD 1988			
CONTROL ACCURACY: HORIZONTAL HAND-HELD GPS, 3rd Order VERTICAL			
STATE PLANE COORDINATES	X = 641721	Y = 1296735	EL. (NGVD 1929) 68.619' EL. (NAVD 1988) 67.421'
LATITUDE <u>27° 54' 03.8"</u>		LONGITUDE <u>81° 02' 41.0"</u>	
DESCRIPTION			
South Florida Water Management District brass disk set in concrete monument stamped OSF 62 / 2006			
The benchmark is located on the 3.5 miles N.W. of Kenansville			
To reach the mark from the intersection of S.R. 60 and the Florida Turnpike travel north along the Turnpike			
A distance of 18 miles to mile marker 210.6. The mark is 40' east of a hog wire fence, 170' west of the west edge of pavement of the south bound travel lane, 25' north east of the well structure.			
Notable Land marks:			

SKETCH



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/01



The NGS Data Sheet

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

```

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.35
1 National Geodetic Survey, Retrieval Date = APRIL 28, 2006
AF6159 *****
AF6159 DESIGNATION - Q 199
AF6159 PID - AF6159
AF6159 STATE/COUNTY- FL/OSCEOLA
AF6159 USGS QUAD - LAKE MARIAN NE (1972)
AF6159
AF6159 *CURRENT SURVEY CONTROL
AF6159
AF6159* NAD 83(1986)- 27 53 09. (N) 081 03 36. (W) SCALED
AF6159* NAVD 88 - 20.393 (meters) 66.91 (feet) ADJUSTED
AF6159
AF6159 GEOID HEIGHT- -27.23 (meters) GEOID03
AF6159 DYNAMIC HT - 20.363 (meters) 66.81 (feet) COMP
AF6159 MODELED GRAV- 979,159.4 (mgal) NAVD 88
AF6159
AF6159 VERT ORDER - SECOND CLASS 0
AF6159
AF6159.The horizontal coordinates were scaled from a topographic map and have
AF6159.an estimated accuracy of +/- 6 seconds.
AF6159
AF6159.The orthometric height was determined by differential leveling
AF6159.and adjusted by the National Geodetic Survey in June 1991..
AF6159
AF6159.The geoid height was determined by GEOID03.
AF6159
AF6159.The dynamic height is computed by dividing the NAVD 88
AF6159.geopotential number by the normal gravity value computed on the
AF6159.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AF6159.degrees latitude (g = 980.6199 gals.).
AF6159
AF6159.The modeled gravity was interpolated from observed gravity values.
AF6159
AF6159; North East Units Estimated Accuracy
AF6159;SPC FL E - 393,560. 194,090. MT (+/- 180 meters Scaled)
AF6159
AF6159 SUPERSEDED SURVEY CONTROL
AF6159
AF6159 NGVD 29 (??/??/92) 20.764 (m) 68.12 (f) ADJ UNCH 2 0
AF6159
AF6159.Superseded values are not recommended for survey control.
AF6159.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AF6159.See file dsdata.txt to determine how the superseded data were derived.
AF6159
AF6159 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML940845(NAD 83)
AF6159_MARKER: DB = BENCH MARK DISK
AF6159_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AF6159_SP_SET: SET IN TOP OF CONCRETE MONUMENT
AF6159_STAMPING: Q 199 1960
AF6159_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AF6159+STABILITY: SURFACE MOTION
AF6159
AF6159 HISTORY - Date Condition Report By
AF6159 HISTORY - 1960 MONUMENTED CGS
AF6159
AF6159 STATION DESCRIPTION
AF6159
AF6159'DESCRIBED BY COAST AND GEODETIC SURVEY 1960
AF6159'4.6 MI NW FROM KENANSVILLE.
AF6159'4.65 MILES WEST AND NORTHWEST ALONG STATE ROAD 523 FROM THE
AF6159'JUNCTION OF U.S. HIGHWAY 441 AT KENANSVILLE, AT THE JUNCTION
AF6159'OF A DRIVE LEADING SOUTHWEST TO THE LUCKY L. RANCH, 52 FEET
AF6159'SOUTHWEST OF THE CENTER LINE OF ROAD, 49 1/2 FEET NORTHWEST OF
AF6159'THE CENTER LINE OF THE NORTHWEST ONE OF TWO DRIVES, 1 1/2 FEET
AF6159'NORTHEAST OF A FENCE LINE, 2 FEET SOUTHEAST OF A STEEL WITNESS
AF6159'POST, ABOUT 1 1/2 FEET BELOW THE LEVEL OF THE HIGHWAY, AND SET
AF6159'IN TOP OF A CONCRETE POST PROJECTING 4 INCHES.

```

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

The NGS Data Sheet

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

```

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.35
1 National Geodetic Survey, Retrieval Date = APRIL 28, 2006
AF6158 *****
AF6158 DESIGNATION - R 199
AF6158 PID - AF6158
AF6158 STATE/COUNTY- FL/OSCEOLA
AF6158 USGS QUAD - LAKE MARIAN NE (1972)
AF6158
AF6158 *CURRENT SURVEY CONTROL
AF6158
AF6158 * NAD 83(1986)- 27 53 32. (N) 081 04 26. (W) SCALED
AF6158 * NAVD 88 - 20.671 (meters) 67.82 (feet) ADJUSTED
AF6158
AF6158 GEOID HEIGHT- -27.25 (meters) GEOID03
AF6158 DYNAMIC HT - 20.640 (meters) 67.72 (feet) COMP
AF6158 MODELED GRAV- 979,156.7 (mgal) NAVD 88
AF6158
AF6158 VERT ORDER - SECOND CLASS 0
AF6158
AF6158 The horizontal coordinates were scaled from a topographic map and have
AF6158 an estimated accuracy of +/- 6 seconds.
AF6158
AF6158 The orthometric height was determined by differential leveling
AF6158 and adjusted by the National Geodetic Survey in June 1991..
AF6158
AF6158 The geoid height was determined by GEOID03.
AF6158
AF6158 The dynamic height is computed by dividing the NAVD 88
AF6158 geopotential number by the normal gravity value computed on the
AF6158 Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AF6158 degrees latitude (g = 980.6199 gals.).
AF6158
AF6158 The modeled gravity was interpolated from observed gravity values.
AF6158
AF6158; North East Units Estimated Accuracy
AF6158; SPC FL E - 394,270. 192,730. MT (+/- 180 meters Scaled)
AF6158
AF6158 SUPERSEDED SURVEY CONTROL
AF6158 NGVD 29 (??/??/92) 21.041 (m) 69.03 (f) ADJ UNCH 2 0
AF6158
AF6158 Superseded values are not recommended for survey control.
AF6158 NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AF6158 See file dsdata.txt to determine how the superseded data were derived.
AF6158
AF6158 U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML927852(NAD 83)
AF6158_MARKER: DB = BENCH MARK DISK
AF6158_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AF6158_SP_SET: SET IN TOP OF CONCRETE MONUMENT
AF6158_STAMPING: R 199 1960
AF6158_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AF6158+STABILITY: SURFACE MOTION
AF6158_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AF6158+SATELLITE: SATELLITE OBSERVATIONS - April 30, 2005
AF6158
AF6158 HISTORY - Date Condition Report By
AF6158 HISTORY - 1960 MONUMENTED CGS
AF6158 HISTORY - 1963 GOOD NGS
AF6158 HISTORY - 20050430 GOOD GEOCAC
AF6158
AF6158 STATION DESCRIPTION
AF6158
AF6158 DESCRIBED BY COAST AND GEODETIC SURVEY 1960
AF6158 5.5 MI NW FROM KENANSVILLE.
AF6158 5.5 MILES WEST AND NORTHWEST ALONG STATE ROAD 523 FROM THE
AF6158 JUNCTION OF U.S. HIGHWAY 441 AT KENANSVILLE, ON THE OUTSIDE OF A
AF6158 SLIGHT CURVE WITH TANGENTS EXTENDING EAST AND NORTHWEST THAT IS
AF6158 THE NORTHWEST END OF A S CURVE NORTHWEST AND SOUTHEAST, 50 FEET
AF6158 SOUTHWEST OF THE CENTER LINE OF ROAD, 4 1/2 FEET EAST OF POWER

```


DATASHEETS

AF6158'LINE POLE NO. 17-612-41-11, 3 FEET SOUTHEAST OF A HIGHWAY
AF6158'RIGHT-OF-WAY POST, 1 1/2 FEET NORTHEAST OF A FENCE LINE, 2 FEET
AF6158'NORTHWEST OF A STEEL WITNESS POST, ABOUT 2 FEET BELOW THE LEVEL
AF6158'OF THE ROAD, AND SET IN THE TOP OF A CONCRETE POST PROJECTING
AF6158'4 INCHES.

AF6158
AF6158 STATION RECOVERY (1963)

AF6158
AF6158 RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1963
AF6158 RECOVERED IN GOOD CONDITION.

AF6158
AF6158 STATION RECOVERY (2005)

AF6158
AF6158 RECOVERY NOTE BY GEOCACHING 2005 (MAG)
AF6158 RECOVERED IN GOOD CONDITION.

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

Closure Report for file V:\PROJECTS-NEW FORMAT\16434.07 - SFWMD - Monitoring Well Sites\TASK 2

Job No. / Task No. : 1643407 / 22003 OSF 62 BENCHRUN
 Benchmark No. : R 199
 Starting BM Elev. : 67.820
 Ending BM Elev. : 66.910
 Unadjusted Ending Elev.: 66.938
 Closure Error : 0.028
 Length of Level Run : 4,677.740
 Allowable Error : 0.028
 Units : Feet

Closure is within allowable tolerances

Adjustment proportional to total distance

Pt.#	Unadj. Elev.	Adj. Elev.	Description
=====	=====	=====	=====
R 199	67.820		
TBM1	70.226	70.225	
TBM2	69.300	69.296	
TBM3	68.874	68.867	
TBM4	68.779	68.770	
TBM5	68.761	68.749	
TBM6	68.473	68.458	
TBM7	68.468	68.451	
TBM8	68.433	68.413	
TBM9	67.991	67.968	
TBM10	68.323	68.298	
TBM11	68.109	68.081	
Q 199	66.938	66.910	

Closure Report for file V:\PROJECTS-NEW FORMAT\16434.07 - SFWMD - Monitoring Well Sites\TASK 2

Job No. / Task No. : 1643407 / 22003 OSF 62 BENCHRUN
 Benchmark No. : Q 199
 Starting BM Elev. : 66.910
 Ending BM Elev. : 67.820
 Unadjusted Ending Elev.: 67.878
 Closure Error : 0.058
 Length of Level Run : 37,606.020
 Allowable Error : 0.080
 Units : Feet

Closure is within allowable tolerances

Adjustment proportional to total distance

Pt.#	Unadj. Elev.	Adj. Elev.	Description
Q 199	66.910		
TBM12	67.900	67.899	
TBM13	67.953	67.952	
TBM14	68.088	68.086	
TBM15	67.927	67.924	
TBM16	68.343	68.340	
TBM17	68.947	68.943	
TBM18	68.293	68.288	
TBM19	68.566	68.560	
TBM20	68.812	68.806	
TBM21	68.969	68.962	
TBM22	69.500	69.492	
TBM23	65.131	65.123	
TBM24	67.278	67.270	
TBM25	68.012	68.003	
TBM26	68.025	68.015	
TBM27	68.246	68.235	
TBM28	67.769	67.758	
TBM29	67.590	67.578	
TBM30	68.725	68.712	
TBM31	68.512	68.499	
TBM32	68.329	68.315	
TBM33	66.655	66.640	
TBM34	66.731	66.716	
TBM35	67.547	67.531	
TBM36	69.075	69.058	
TBM37	70.617	70.600	
TBM38	70.737	70.719	
TBM39	70.133	70.114	
TBM40	69.431	69.412	
TBM41	72.790	72.770	
TBM42	73.058	73.038	
TBM43	72.584	72.563	
TBM44	72.198	72.176	
TBM45	72.154	72.131	
TBM46	72.164	72.141	
TBM47	72.092	72.068	
TBM48	68.667	68.643	
BM OSF 62	67.446	67.421	
TBM49	69.346	69.321	
TBM50	68.969	68.944	
TBM51	69.217	69.191	
TBM52	69.145	69.118	
TBM53	68.559	68.531	
TBM54	68.384	68.356	
TBM55	67.873	67.844	
TBM56	65.710	65.680	
TBM57	67.582	67.552	
TBM58	66.848	66.817	
TBM59	68.270	68.238	
TBM60	67.226	67.194	
TBM61	67.802	67.769	
TBM62	69.100	69.066	

TBM63	68.626	68.592
TBM64	67.834	67.799
TBM65	68.180	68.144
TBM66	69.055	69.019
TBM67	69.076	69.039
TBM68	68.713	68.675
TBM69	68.611	68.572
TBM70	70.839	70.800
TBM71	71.150	71.110
TBM72	70.738	70.697
TBM73	70.233	70.192
TBM74	69.693	69.651
TBM75	69.787	69.744
TBM76	69.440	69.396
TBM77	69.006	68.962
TBM78	68.587	68.542
TBM79	68.411	68.365
TBM80	68.164	68.118
TBM81	68.072	68.025
TBM82	68.206	68.158
TBM83	67.924	67.876
TBM84	68.306	68.257
TBM85	68.377	68.327
TBM86	68.445	68.395
TBM87	69.167	69.116
TBM88	68.307	68.255
TBM89	68.415	68.363
TBM90	68.454	68.401
TBM91	68.474	68.420
TBM92	68.843	68.789
TBM93	69.039	68.984
TBM94	69.262	69.206
TBM95	70.177	70.121
TBM96	69.696	69.639
TBM97	69.379	69.321
R 199	67.878	67.820