

2013

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Report Issue Date: 4/25/14

Prepared For



SPECIFIC PURPOSE SURVEY



STAFF GAUGE AND REFERENCE ELEVATION REPORT

This document contains a surveyor's report and certification as to the accuracy of the methods used to determine NAVD88 elevations for staff gauges and stilling well reference elevations set by CivilSurv Design Group, Inc.

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT
INFRASTRUCTURE MANAGEMENT BUREAU - SURVEY AND MAPPING SECTION
STAFF GAUGE INSTALLATION & RECALIBRATION SERVICES
HYDRAULIC & HYDROLOGY, DISCIPLINES #8, CONTRACT #460002182**

TABLE OF CONTENTS

OVERVIEW OF THE PROJECT

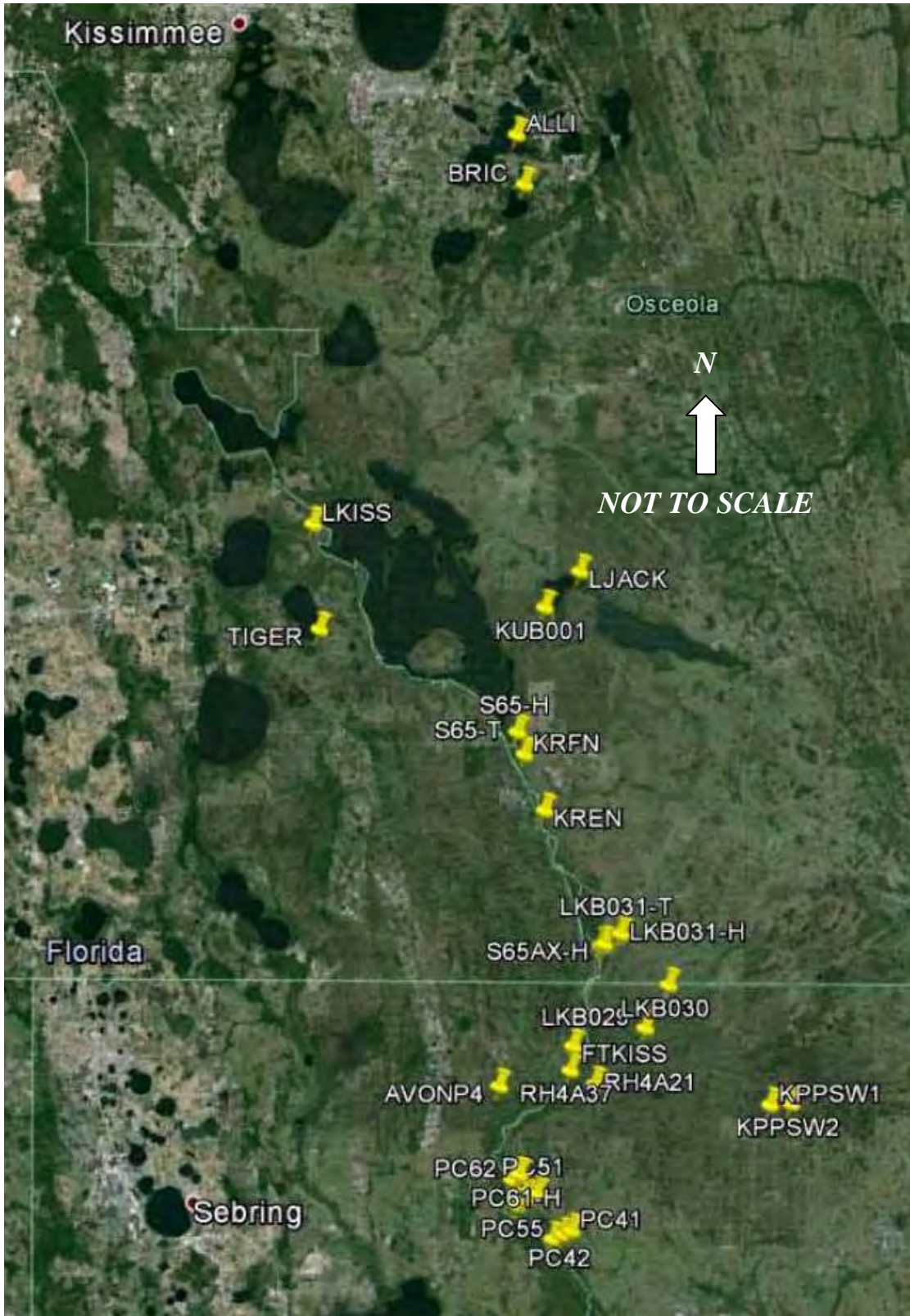
LOCATION OF THE PROJECT.....	1
STAFF GAUGE AND REFERENCE ELEVATIONS DETAIL SUMMARY.....	2
PROJECT RESULTS.....	3
SURVEYOR'S CERTIFICATION.....	3

STAFF GAUGE DETAILS:

ALLI.....	4-7
BRIC.....	8-11
LKISS.....	12
LJACK.....	13
TIGER.....	14
KUB001.....	15
S65_H.....	16
S65_T.....	17
KRFN.....	18
KREN.....	19-22
LKB031_H.....	23
LKB031_T.....	24
S65AX_H.....	25
S65AX_T.....	26
S65A_H.....	27
S65A_T.....	28
LKB030.....	29
LKB029.....	30
FTKISS.....	31
RH4A37.....	32
RH4A21.....	33
AVONP4.....	34
KPPSW1.....	35
KPPSW2.....	36
PC62.....	37
PC61_H.....	38
PC51.....	39
KRCN.....	40
PC53.....	41
PC55.....	42
PC41.....	43
PC42.....	44
KRBN.....	45



PROJECT LOCATION MAP



STAFF GAUGE SITES:	
1.	ALLI
2.	BRIC
3.	LKISS
4.	LJACK
5.	TIGER
6.	KUB001
7.	S65_H
8.	S65_T
9.	KRFN
10.	KREN
11.	LKB031_H
12.	LKB031_T
13.	S65AX_H
14.	S65AX_T
15.	S65A_H
16.	S65A_T
17.	LKB030
18.	LKB029
19.	FTKISS
20.	RH4A37
21.	RH4A21
22.	AVONP4
23.	KPPSW1
24.	KPPSW2
25.	PC62
26.	PC61_H
27.	PC51
28.	KRCN
29.	PC53
30.	PC55
31.	PC41
32.	PC42
33.	KRBN

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STAFF GAUGE AND REFERENCE ELEVATIONS DETAIL SUMMARY:

Gauge information provided by South Florida water management district, except as noted.

Staff Gauge Site	Latitude	Longitude	Benchmark Used	Benchmark Elevation	Datum Offset to NGVD29	Stilling Well Reference Elevations*
ALLI	28.1225	81.1155	ALLI	65.32	1.04	69.62
BRIC	28.1024	81.1132	BRIC	66.03	1.07	70.50
LKISS	27.94363056	81.35363056	KSSP 5	54.49	1.21	57.29
LJACK	27.91168611	81.15006111	PJ7	55.069	1.21	57.62
TIGER	27.87252222	81.34833333	PO265	53.54	1.22	56.90
KUB001	27.88748333	81.17672222	KUB001	53.55	1.20	63.69
S65_H	27.8035437	81.19758398	KR1013	61.808	1.19	63.53
S65_T	27.8035437	81.19758398	KR1013	61.808	1.19	56.89
KRFN	27.78833333	81.19280833	KR1558GPS	56.228	1.19	53.64
KREN	27.75064167	81.17719722	KRENF	48.605	1.19	53.56
LKB031_H	27.66770278	81.11949722	LKB031	52.01	1.19	56.32
LKB031_T	27.66770278	81.11949722	LKB031	52.01	1.19	56.21
S65AX_H	27.66058094	81.1315826	Z473	52.71	1.18	57.10
S65AX_T	27.66058094	81.1315826	Z473	52.71	1.18	53.16
S65A_H	27.65952633	81.13437589	MACK	52.76	1.18	55.47
S65A_T	27.65952633	81.13437589	MACK	52.76	1.18	53.11
LKB030	27.63284722	81.08260278	LKB030	52.08	1.20	57.88
LKB029	27.60370278	81.10046111	LKB029	47.58	1.18	57.53
FTKISS	27.59166944	81.15536389	T461	51.08	1.16	48.72
RH4A37	27.57524444	81.15760278	RH4A37	38.71	1.16	48.64
RH4A21	27.56612222	81.13869722	MAG nail	50.678	1.17	54.21
AVONP4	27.56519722	81.21175278	AVPK4	43.04	1.13	48.92
KPPSW1	27.55176111	81.00998889	KPPSW1	69.36	1.21	73.24
KPPSW2	27.55176111	81.00998889	KPPSW2	70.42	1.21	74.50
PC62	27.50133056	81.20186111	PC62	44.74	1.15	48.23
PC61_H	27.497225	81.20389167	PC61	40.43	1.15	44.88
PC51	27.49189722	81.18260833	KRRPC45	37.16	1.16	44.58
KRCN	27.48955278	81.18783611	KRRPC44	37.04	1.16	43.52
PC53	27.48833333	81.19305833	PC53	37.97	1.15	43.78
PC55	27.48408611	81.198975	KRRPC50	36.86	1.15	43.92
PC41	27.46683889	81.15673333	KRRPC46	38.16	1.17	43.68
PC42	27.46428889	81.16321111	KRRPC47	36.41	1.17	42.18
KRBN	27.46134444	81.17115556	KRBN	38.52	1.16	43.50

Note:

*Denotes information developed in this survey by CivilSurv Design Group, Inc.



Specific Purpose Survey Report

Purpose:

To assemble, install and calibrate 40 staff gauges to NAVD88 datum; and establish a benchmark – also referred to as a reference elevation (RE) – on the platform of associated headwater and tailwater telemetry stations. Field Surveys for these gauges completed during the period of 4/23/13 through 4/24/14.

Leveling methods:

Leveling methods: Conventional differential leveling was performed in accordance with Florida Administrative Code 5J-17.051(3)(b)15.a. The maximum error of closure for this type of leveling is $0.05' \times \sqrt{\text{Distance in miles}}$. The error of closure achieved for the leveling performed meets or exceeds this specification.

Equipment used:

Wild NA-1

Vertical Datum:

The staff gauges listed in this report have been correctly calibrated to the North American Vertical Datum 1988 (NAVD88) as of April 24, 2014.

Sources of Data:

Benchmarks were provided by South Florida Water Management District. Information on the specific benchmarks can be obtained from the S.D.E.R.A. Website: <http://my.sfwmd.gov/sderawebapp/gis/sderamain.jsp>

Surveyor's Note:

Vertical closures obtained by comparison to converted existing NGVD'29 reference elevation tags. Party Chief and Field Book information reported herein is for consultant reference only. Each site had multiple crew visits, and stamping date is one of the on-site days.

Surveyor's Certificate:

This staff gauge elevations and stilling well reference elevations specific purpose survey (consisting of a cover, index and 45 numbered pages) is certified to the South Florida Water Management District. This report is not valid without the original signature and raised seal. All staff gauges contained in this Surveyor's Report were calibrated to a vertical accuracy of +/- 0.05'.

This is to certify that this staff gauge elevations and stilling well reference elevations specific purpose survey report was made under my responsible charge and meets the minimum technical requirements as set forth in Chapter 5J-17 of the Florida Administrative Code.

Report Issue Date: April 25, 2014

Robert N. Johnson, PSM 6540
Senior Project Surveyor
CivilSurv Design Group, Inc.
Certificate of Authorization Number: LB-7805

Date

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KRFN

Specifications:

Field Book: 802, Page: 46

Originating Bench Mark: KR1558GPS Elev.: 56.228 Vertical Datum: NAVD'88

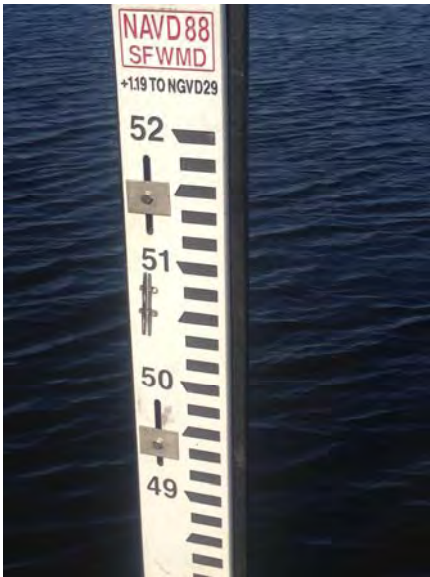
Bench Mark Description: Found brass disk in poured in place concrete monument

Datum Offset: 1.19 (Add this value to convert to NGVD'29)

Stilling Well Reference Elevation:53.64'

PHOTOGRAPHS:

KRFN



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2-10-14
750' elev

B. Johnson
B. EASTON
J. BREED

KRFM

STA	(+)	HI	(-)	Elev
	6.64			56.228
	5.57		6.83	
	<u>4.50</u>		5.85	
	5.57	61.798	<u>4.97</u>	
			5.85	55.948
	4.97			
	3.89		4.72	
	<u>2.81</u>		4.01	
	3.89	59.838	<u>3.30</u>	
			4.01	55.828
	3.09			
	2.81		11.28	
	<u>2.53</u>		10.97	
	2.81	58.1638	<u>10.66</u>	
			10.97	47.668
			7.72	
			7.92	
			<u>7.12</u>	
			7.42	51.218
	5.59		5.79	
	4.80		5.60	
	<u>4.01</u>		4.21	
	4.80	58.738	<u>5.00</u>	
			5.00	53.638
	6.48		4.09	
	5.42		3.06	
	<u>4.36</u>		<u>2.03</u>	
	5.42		3.06	55.378
	<u>5.42</u>	60.758		

Cont PG 47

Description
BPT KR 558 GRS (US ARMY CORPS OF ENGINEERS)
TIP
TIP
PVC Well Pipe @ NINE COR OF Stilling Well Structure
2" galvanized Pipe @ NINE COR OF Well Structure
X-MARK on Stilling Well KRFM
TIP

KREN- Cont from pg 46

STA	(+)	HI	(-)	ELEV
		60.798	4.65 3.63 <u>2.61</u> 3.63	57.168
	4.81 4.32 <u>3.83</u> 4.32	62.486	5.78 5.26 <u>4.74</u> 5.26	56.228

DESC
TP
(56.228) KR1558 GPS

KREN

Specifications:

Field Book: 802, Page: 45

Originating Bench Mark: KRENF Elev.: 48.605 Vertical Datum: NAVD'88

Bench Mark Description: Found concrete monument with brass disk

Datum Offset: 1.19 (Add this value to convert to NGVD'29)

Stilling Well Reference Elevation: 53.56'

PHOTOGRAPHS:

KREN



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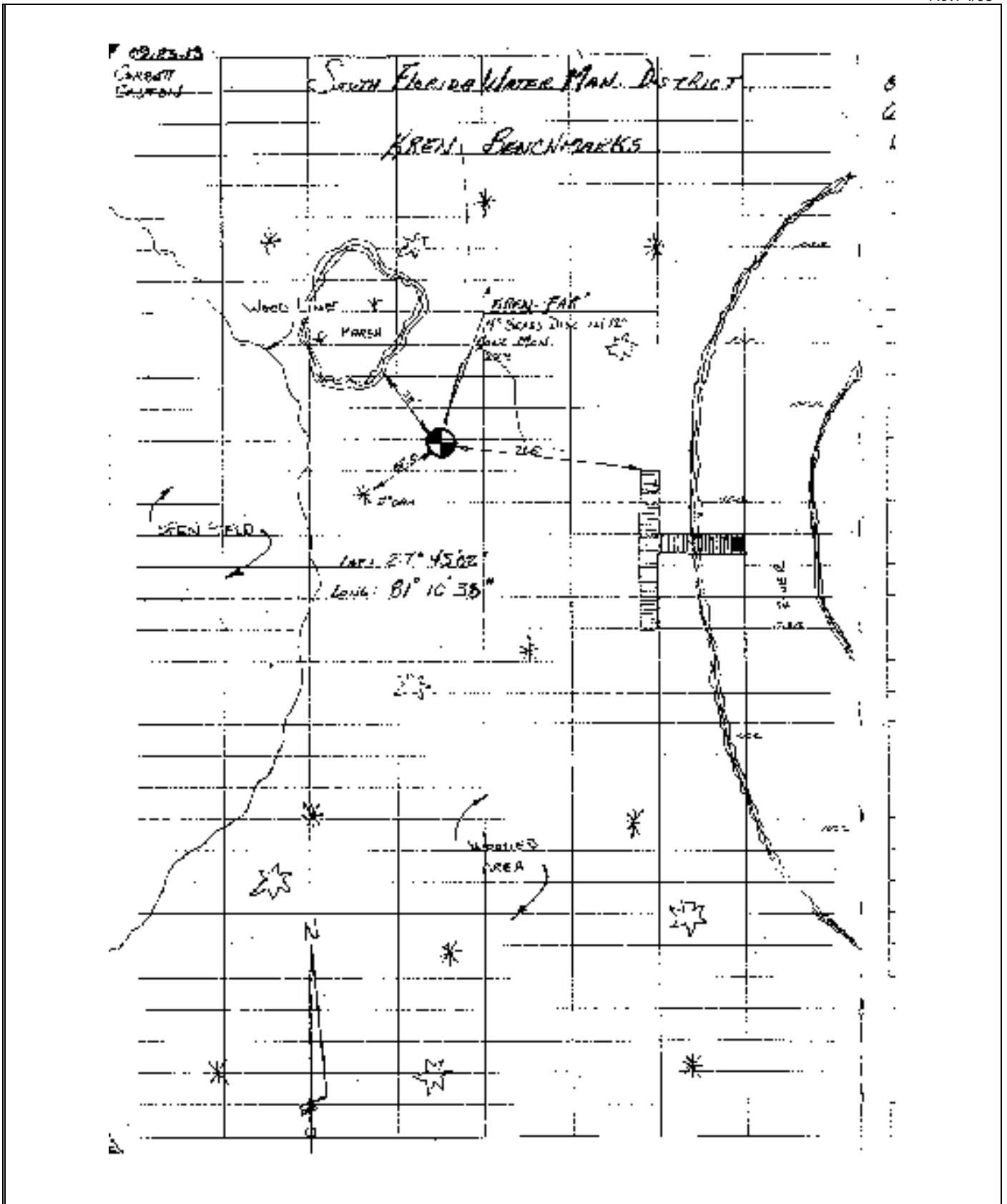
Rev. 4/08

COUNTY POLK	PROJECT	DESIGNATION KRENF
SECTION <u>25</u>	TOWNSHIP <u>31</u> SOUTH	RANGE <u>31</u> EAST
NAME OF QUADRANGLE <u>LAKE MARIAN SW</u>		
Established by <u>CIVILSURV DESIGN GROUP, INC</u> (Surveyor / Firm Name)	Recovered by <u>CIVILSURV DESIGN GROUP, INC</u> (Surveyor / Firm Name)	
DATE <u>9/23/13</u> (Established or Recovered)	FIELD BOOK _____	PAGE _____
HORIZONTAL DATUM: 1927 <u>1983</u> ADJ _____ Other _____ (circle one) ZONE <u>E</u> or W		
STATE PLANE COORDINATES	N 000,000.000 ft	E 000,000.000 ft
LATITUDE: N 27° 45' 02"	LONGITUDE: W 81° 10' 38"	
VERTICAL DATUM: MSL 1929 <u>1988</u> Other _____ (circle one)	EL. 48.61 ft	
VERTICAL DATUM: MSL <u>1929</u> 1988 Other _____ (circle one)	EL. ft	
CONTROL ACCURACY: HORIZONTAL 1 2 3 <u>SUB-METER</u> (circle one) VERTICAL 1 <u>2</u> <u>3</u>		
DESCRIPTION		
<p>To Reach:</p> <p>THE MARK IS AT A WATER GAUGE PLATFORM ON THE KISSIMMEE RIVER ABOUT 3.9 MI SOUTH OF THE INTERSECTION OF STATE ROAD 60 AND THE KISSIMMEE RIVER IN ESTIMATED SECTION 25, TOWNSHIP 31 SOUTH, RANGE 31 EAST.</p> <p>TO REACH THE MARK FROM THE INTERSECTION OF STATE ROAD 60 AND RIVER RANCH BOULEVARD, PROCEED APPROXIMATELY 2.95 MILES SOUTHERLY ALONG RIVER RANCH BOULEVARD TO THE INTERSECTION OF TWO GATED ROADS ON THE RIGHT, PROCEED ALONG THE SECOND DIRT ROAD FOR APPROXIMATELY 1.9 MILES TO A ROCK ROAD ON THE LEFT, THENCE FOLLOW SAID ROCK ROAD FOR APPROXIMATELY 2350 FEET TO AN EXISTING GAUGE PLATFORM. THE MARK IS APPROXIMATELY 75 FEET WESTERLY OF SAID PLATFORM AND 15.0 FEET NORTHEASTERLY OF A 5" OAK, AND 30 FEET SOUTHEASTERLY OF A MARSH.</p> <p>NGS Benchmarks Used: Z 460 KR 1559</p>		
Notable Land marks:		
SKETCH		



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/08





PICTURE



1- close up of the disk or Rod stamping



2- A picture (about 10 feet away) that shows the mark in relationship to the well



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

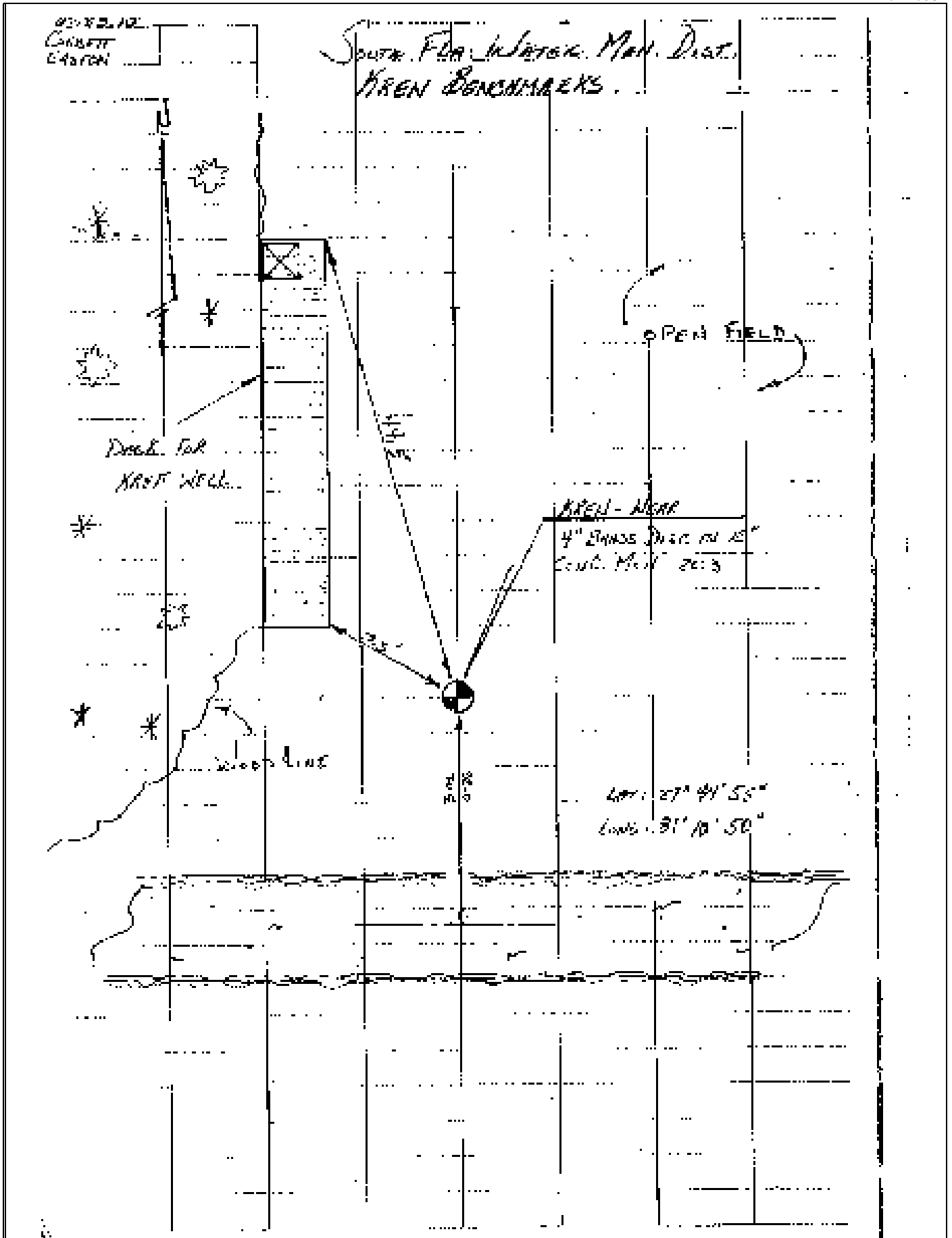
Rev. 4/08

COUNTY	POLK	PROJECT	DESIGNATION	KRENN
SECTION	<u>25</u>	TOWNSHIP	<u>31</u> SOUTH	RANGE <u>31</u> EAST
NAME OF QUADRANGLE <u>FORT KISSIMMEE NW</u>				
Established by <u>CIVILSURV DESIGN GROUP, INC</u> (Surveyor / Firm Name)		Recovered by <u>CIVILSURV DESIGN GROUP, INC</u> (Surveyor / Firm Name)		
DATE <u>9/23/13</u> (Established or Recovered)		FIELD BOOK _____ PAGE _____		
HORIZONTAL DATUM: 1927 <u>1983</u> ADJ _____ Other _____ (circle one) ZONE <u>E</u> or W				
STATE PLANE COORDINATES		N 000,000.000 ft	E 000,000.000 ft	
LATITUDE: N 27° 44' 55"		LONGITUDE: W 81° 10' 50"		
VERTICAL DATUM: MSL 1929 <u>1988</u> Other _____ (circle one)		EL. 50.52 ft		
VERTICAL DATUM: MSL <u>1929</u> 1988 Other _____ (circle one)		EL. _____ ft		
CONTROL ACCURACY: HORIZONTAL 1 2 3 <u>SUB-METER</u> (circle one) VERTICAL 1 2 <u>3</u>				
DESCRIPTION				
To Reach:				
<p>THE MARK IS AT A WATER GAUGE PLATFORM ON THE KISSIMMEE RIVER ABOUT 3.9 MI SOUTH OF THE INTERSECTION OF STATE ROAD 60 AND THE KISSIMMEE RIVER IN ESTIMATED SECTION 25, TOWNSHIP 31 SOUTH, RANGE 31 EAST.</p> <p>TO REACH THE MARK FROM THE INTERSECTION OF STATE ROAD 60 AND RIVER RANCH BOULEVARD, PROCEED APPROXIMATELY 2.95 MILES SOUTHERLY ALONG RIVER RANCH BOULEVARD TO THE INTERSECTION OF TWO GATED ROADS ON THE RIGHT, PROCEED ALONG THE SECOND DIRT ROAD FOR APPROXIMATELY 1.9 MILES TO A ROCK ROAD ON THE LEFT, THENCE FOLLOW SAID ROCK ROAD FOR APPROXIMATELY 1000 FEET AND THE STATION IS ON THE LEFT.</p> <p>THE MARK IS APPROXIMATELY 7 FEET SOUTHEASTERLY OF SAID PLATFORM.</p>				
NGS Benchmarks Used: Z 460 KR 1559				
Notable Land marks:				
SKETCH				



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Rev. 4/08





PICTURE



1- close up of the disk or Rod stamping



2- A picture (about 10 feet away) that shows the mark in relationship to the well

B. JOHNSON
B. Easton
J. Bred

KREN

2-18-14
2-11-14
75° Clear

STA	(+)	HI	(-)	ELEV
	5.58	54.785	1.145	48.605
			2.145	51.705
			0.62	53.0
			5.58	53.565
				48.605

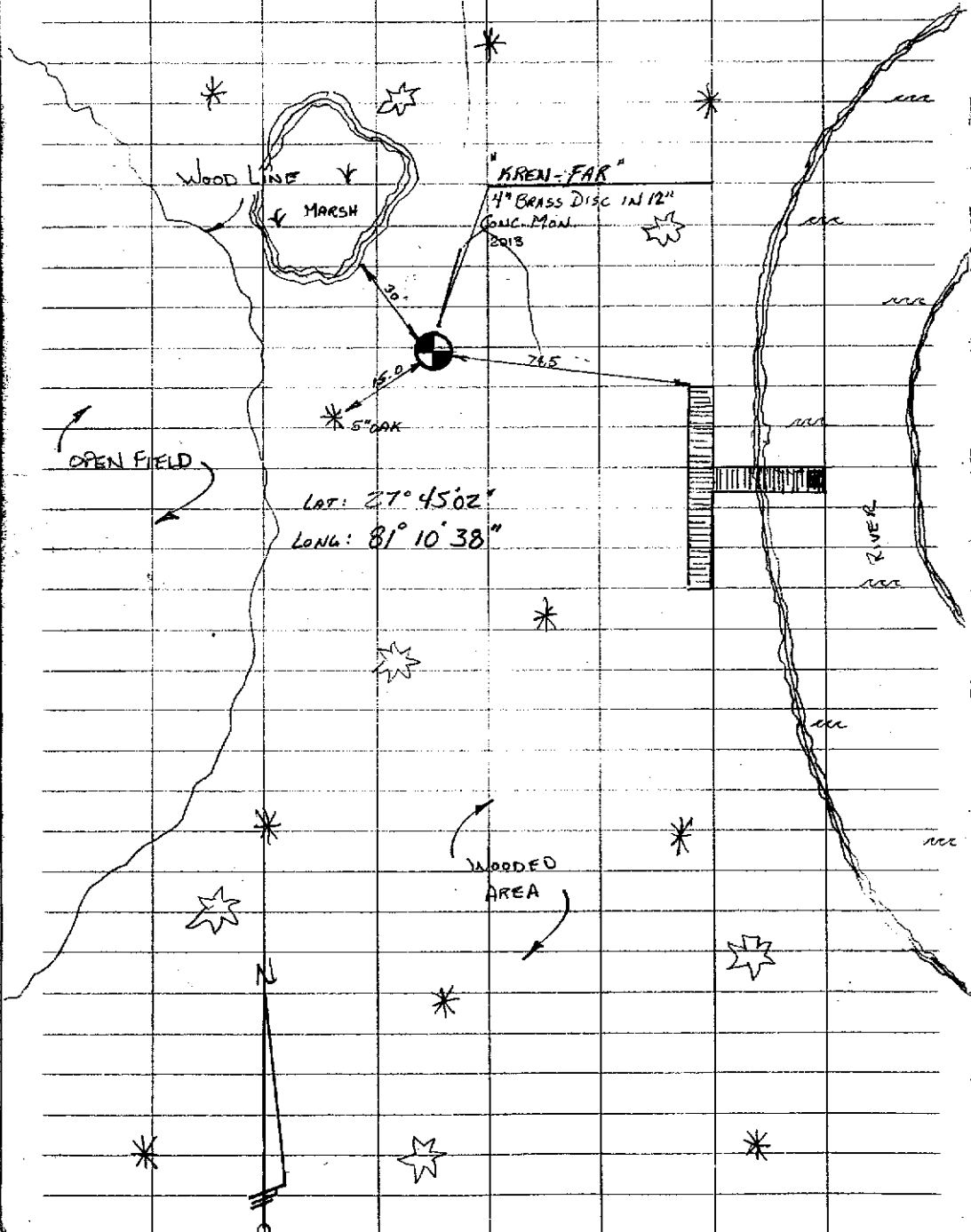
Description
BM KREN
STAFF GN @ ELEV 53'
X MARK @ STILLING WELL
BM KREN

09.23.13

CORBETT
EASTON

SOUTH FLORIDA WATER MAN. DISTRICT

KREN BENCHMARKS



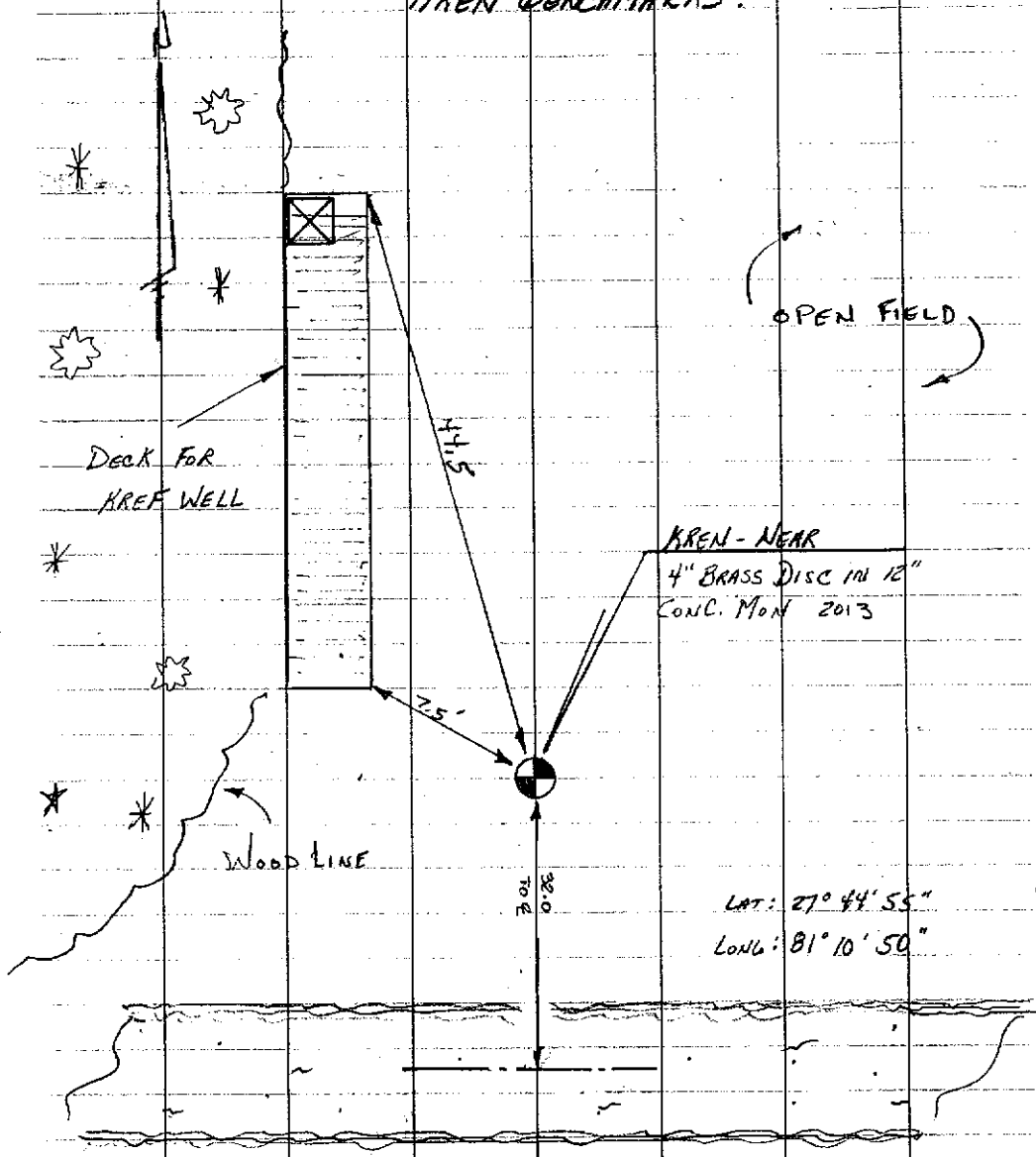
778-71

30°
OVERCAST, RAIN
WILD NA 2

14.5
15.0

09.23.13
CORBETT
EASTON

SOUTH FLA. WATER MAN. DIST. KREN BENCHMARKS.



LAT: 27° 44' 55"
LONG: 81° 10' 50"

84° - RAIN - AFTERNOON T-STORMS

09.24.13:

CORBETT

EASTON

SFWM D

- KREN -

NAVD 88

STA	(+)	HI	(-)	ELEV	BMEL
Z460					58.93'
	+ 7.03'		+ 6.36'		
	+ 6.05'	196 59.98	+ 5.38'	116	
	+ 5.07'		+ 4.40'	117	
	+ 6.05'		+ 5.38'		
TP				54.60'	
	+ 6.20'		+ 6.37'		
	+ 5.46'	148 60.06	+ 5.71'	132	
	+ 4.72'		+ 5.05'		
	+ 5.46'		+ 5.71'		
KR1559				54.35'	54.36'
	+ 5.78'		+ 7.06'		
	+ 4.78'	200 59.13	+ 6.03'	200	
	+ 3.78'		+ 5.00'		
	+ 4.78'		+ 6.03'		
TP				53.10'	
	+ 4.98'		+ 6.80'		
	+ 4.21'	151 57.31	+ 6.04'	151	
	+ 3.44'		+ 5.28'		
	+ 4.21'		+ 6.04'		
TP				51.27'	
	+ 5.82'		+ 6.72'		
	+ 5.19'	170 56.46	+ 6.08'	170	
	+ 4.56'		+ 5.44'		
	+ 5.19'		+ 6.08'		
				50.38'	

498-49

WILD NO 1

PAIN

REMARKS

FOUND STEEL PIN IN 6" ROUND LOG CAP Z460 1972

TURNING POINT SET 90d NAIL DIRT ROAD

FOUND 4" BRASS DISC IN 6" CONC MON. U.S. ARMY CORPS
ENCL. KR1559.

TURNING POINT SET 90d NAIL DIRT ROAD

TURNING POINT SET 90d NAIL @ So. EP DIRT ROAD

TURNING POINT SET 90d NAIL DIRT ROAD

09.24.13

CORDETT
EASTONS F W M D
KREN
MAYD 28

STA	(+)	HI	(-)	ELEV	BMEL
TP				50.38	
	+ 5.76		+ 5.615		
	m 5.63	2	m 5.495	24	
	b 5.50		b 5.375		
	A 5.63		A 5.495		
KREN-NEAR				= 50.515	
	+ 10.59		+ 2.45		
	m 8.44	230	m 59.955	230	
	b 8.29		b .15		
	A 9.44		A 1.30		
TP				+ 58.455	
	+ 7.65		+ 12.85		
	m 6.39	253	m 45.045	242	
	b 5.13		b 10.43		
	A 6.39		A 11.64		
TP				+ 53.405	
	+ 2.29		+ 7.09		
	m 1.33	192	m 54.735	192	
	b .37		b 5.17		
	A 1.33		A 6.13		
KREN-FAR				+ 48.605	
	+ 7.16		+ 2.36		
	m 6.20	251	m 54.805	192	
	b 5.24		b .40		
	A 6.20		A 1.40		
				+ 53.405	

778-50

WILD NA I

DRAIN

REMARKS

TURN PT. 90 L N!

SET 6" BRASS DISC IN 12" ROUND CONC. MON.
SO. FL. WATER. MAN. DIST. "KREN NEAR" 2013.

TURN PT. 90 L N!

TURN PT. WOOD HUB

SET 6" BRASS DISC IN 12" ROUND CONC. MON.
SO. FLA. WATER. MAN. DIST. "KREN FAR" 2013.

WOOD HUB

EASTON		KREN		BLVD 88	
STA	(+)	HI	(-)	ELEV	BMSL
TP				53.405	
T	10.48'		T 4.76'		
M	1.40'	62.895	M 3.68'		
B	8.32'		B 2.6'		
A	9.40'		A 3.68'		
TP				59.125	
T	3.40'		T 9.83'		
M	2.32'	61.445	M 8.75'		
B	1.24'		B 7.67'		
A	2.32'		A 8.75'		
TP				52.675	
T	3.86'		T 5.36'		
M	2.98'	55.175	M 4.42'		
B	2.10'		B 3.48'		
A	2.98'		A 4.42'		
TP				51.255	
				50.755	
T	6.53'		T 4.75'		
M	5.77'	57.025	M 3.98'		
B	5.01'		B 3.21'		
A	5.77'		A 3.98'		
TP				53.045	
T	7.09'		T 5.79'		
M	6.08'	59.125	M 4.78'		
B	5.07'		B 3.77'		
A	6.08'		A 4.78'		
KR1559				54.345	54.36'
					.015

RAW	REMARKS
	TURN PIN.
	TURN PIN SET 90 d NL IN FIELD.
	TURN PIN SET 90 d NL IN FIELD.
	TURN PIN SET 90 d NL IN WOODS.
	TURN PIN SET 90 d NL IN WOODS.
	FOUND 4" BRASS DISC IN CONC REF PG 49.
5348 USPT	1.043 IN .030 ALLOWABLE ERROR.
	.015 ERROR ON RUN

KRCN

Specifications:

Field Book: 802, Page: 50

Originating Bench Mark: KRRPC44 Elev.: 37.04 Vertical Datum: NAVD'88

Bench Mark Description: Found brass disk in PVC pipe

Datum Offset: 1.16 (Add this value to convert to NGVD'29)

Stilling Well Reference Elevation:43.52'

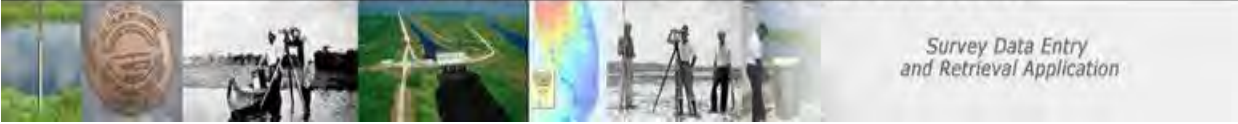
PHOTOGRAPHS:

KRCN



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Survey Data Entry and Retrieval Application (SDERA) Print Output

Control Point Search Results

Derived Data - Denoted By:
**

Designation	KRCN	Record State	ACCEPTED
NGS PID			
Project Name	KRCN & PC52 WELL SITES	Date Entered/Updated	10/08/2013
Updated By	rbarnesj	Status	
Party Chief		Type	H/V
Monument Set By	MACTEC ENG & CONSLTG INC	Date Established	01/01/2005
County		Section	26
Township	34	Range	31
Quadrangle	BASINGER NW	Offset (29 to 88)	
NGS Source BM		CCR Link	
Ctrl Pt Source(s)			

<u>Horizontal</u>	<u>NAD 1927</u>	<u>NAD 1983</u>	<u>Vertical</u>	<u>NGVD 1929</u>	<u>NAVD 1988</u>
Latitude		27 29 22.5	Class		
Longitude		81 11 16.3	Order	3	3
Northing(Y)		1147188.221	Elevation	0.0	39.67
Easting(X)		595266.743	Measurement Unit	Feet	Feet
Class					
Order		3			
NAD83 Adj Year		1999			

Field Book

Field Book Pages

Stamping

KRCN 2005

How to Reach

Description

TO REACH THE STATION FROM THE U.S. POST OFFICE IN LORIDA, FLORIDA; GO EAST ON U.S. HIGHWAY NO. 98 FOR 8.9 MILES TO A PAVED ROAD ON THE LEFT (S-65-C LOCK ACCESS ROAD). TURN LEFT ON PAVED ROAD AND GO NORTH FOR +/- 1.4 MILES TO STRUCTURE S-65-C BOAT RAMP ON THE LEFT; THENCE BY BOAT ALONG THE KISSIMMEE RIVER TRAVEL NORTH FOR +/- 7.6 MILES TO THE STATION.

THE STATION IS A SFWMD 3 1/2 BRASS DISK IN A CONCRETE COLUMN STAMPED KRCN 2005.

WELL DATA
HORIZONTAL LOCATION TAKEN AT APPROXIMATE CENTER OF STRUCTURE.
LAT. + 27? 29 22.45

LONG. - 81? 11 16.25
N 1147185. USFT
E 595267. USFT

KRCNND M.P. -- EXISTING REFERENCE MARK AT WELL IS THE TOP
OF A 2 PVC PIPE IN CENTER OF RECORDED BOX FLOOR.
NEWLY LEVELED ELEVATIONS.
13.263 (M) 43.51 (FT) NAVD 88 BASED ON PUBLISHED NGS
VALUES.
13.626 (M) 44.71 (FT) NGVD 29

KRCNNM M.P. -- EXISTING REFERENCE MARK AT WELL IS THE TOP
OF A 2 PVC PIPE IN CENTER OF RECORDED BOX FLOOR.
NEWLY LEVELED ELEVATIONS.
13.245 (M) 43.45 (FT) NAVD 88 BASED ON PUBLISHED NGS
VALUES.
13.608 (M) 44.65 (FT) NGVD 29

KRCNNS M.P. -- EXISTING REFERENCE MARK AT WELL IS THE TOP
OF A 2 PVC PIPE IN CENTER OF RECORDED BOX FLOOR.
NEWLY LEVELED ELEVATIONS.
13.283 (M) 43.58 (FT) NAVD 88 BASED ON PUBLISHED NGS
VALUES.
13.646 (M) 44.77 (FT) NGVD 29

PC 52 M.P. -- EXISTING REFERENCE MARK (MARK POINT) IS A
BLACK MARKED SQUARE LOCATED AT THE PERIMETER OF CIRCULAR
OPENING IN RECORDED BOX WOOD FLOOR.
NEWLY LEVELED ELEVATIONS.
13.278 (M) 43.56 (FT) NAVD 88 BASED ON PUBLISHED NGS
VALUES.
13.641 (M) 44.76 (FT) NGVD 29

42.00 MARK ON STAFF GAUGE
NEWLY LEVELED ELEVATIONS.
12.447 (M) 40.84 (FT) NAVD 88 BASED ON PUBLISHED NGS
VALUES.
12.810 (M) 42.03 (FT) NGVD 29

KRCN 2005 .
05_KRCN
NEO 000 0017 349663.669 181437.666 12.090 FLE0901 M 0
NEO 000 KRCNTBM1 349659.115 181439.859 12.296 FLE0901 M 0

DISCLAIMER:

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17

STA	(#)	MN	HI	=	MN
8-29-13 S. M. Scripps J. Breed					
S.F.W.M.D KREN NAVD 88					
B.M KRRPC44	-2.12 -1.95 -1.78 -5.85	1.95	38.99		
MAG Nail				1.48 1.32 1.17 3.98	4.323
COUPLING on P.P.C				-3.48 -3.32 -3.17 -9.97	3.323
MAG Nail	1.55 1.40 1.26 4.21	1.403	39.07		
B.M KRRPC44				1.20 2.03 1.86 1.04	2.03

802/28

Elev.	Disc
37.04	found 16" PVC pipe filled w/conc w/ 3" Brass Disk Marked "SFWMD KREN"
37.667	Set PK/MAG nail under well Box (+) 3.21 to Mark Point in well Box Elev. on MP 40.847
35.667	Shot Couplings on Pipe
37.04	(+) 7.933 from Couplings to top of SHAW Gauge Mark

KRBN

Specifications:

Field Book: 802, Page: 20

Originating Bench Mark: KRBN Elev.: 38.52 Vertical Datum: NAVD'88

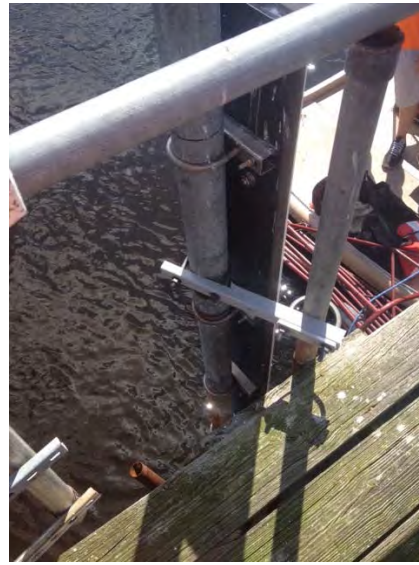
Bench Mark Description: Found brass disk in PVC pipe

Datum Offset: 1.16 (Add this value to convert to NGVD'29)

Stilling Well Reference Elevation:43.50'

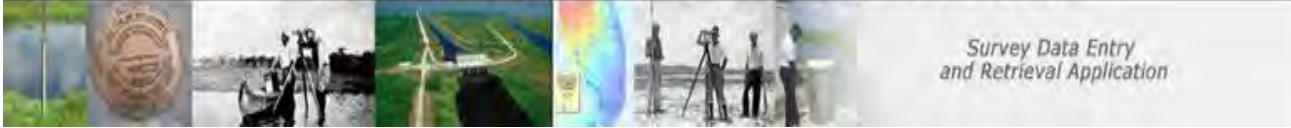
PHOTOGRAPHS:

KRBN



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Survey Data Entry
and Retrieval Application

Survey Data Entry and Retrieval Application (SDERA) Print Output

Control Point Search Results

Derived Data - Denoted
By: **

Designation	KRBN	Record State	ACCEPTED
NGS PID			
Project Name	KISSIMMEE RIVER	Date Entered/Updated	06/27/2009
Updated By	ATLAS DATA LOAD	Status	
Party Chief		Type	H/V
Monument Set By	MACTEC ENG & CONSLTG INC	Date Established	01/01/2005
County	HIGHLANDS	Section	6
Township	35	Range	32
Quadrangle	BASINGER NW	Offset (29 to 88)	
NGS Source BM		CCR Link	
Ctrl Pt Source(s)			

Horizontal	<u>NAD 1927</u>	<u>NAD 1983</u>	Vertical	<u>NGVD 1929</u>	<u>NAVD 1988</u>
Latitude		27 27 40.7	Class		
Longitude		81 10 16.0	Order	3	3
Northing(Y)		1136902.8	Elevation	39.72	38.52
Easting(X)		600678.5	Measurement Unit	Feet	Feet
Class					
Order					
NAD83 Adj Year					

Field Book
KR-MEC 01

Field Book Pages
32-36

Stamping
KRBN 2005

How to Reach

Description

TO REACH THE STATION FROM THE U.S. POST OFFICE IN LORIDA, FLORIDA; GO EAST ON U.S. HIGHWAY NO. 98 FOR 8.9 MILES TO A PAVED ROAD ON THE LEFT (S-65-C LOCK ACCESS ROAD). TURN LEFT ON PAVED ROAD AND GO NORTH FOR +/- 1.4 MILES TO STRUCTURE S-65-C BOAT RAMP ON THE LEFT; THENCE BY BOAT ALONG THE KISSIMMEE RIVER TRAVEL NORTH FOR +/- 5.4 MILES TO THE STATION LOCATED IN GRASS MARSH

AT:

LAT. + 27° 27' 40.70013

LONG. - 81° 10' 16.00145

MARK IS A SFWMD 3 1/2 BRASS DISK; STAMPED [KRBN] [2005]; SET IN TOP OF A 16 DIAMETER PVC PIPE FILLED WITH CONCRETE.

WELL DATA

HORIZONTAL LOCATION TAKEN AT APPROXIMATE CENTER OF STRUCTURE.

LAT. + 27° 27' 40.70

LONG. - 81° 10' 16.01

N 1136903. USFT

E 600678. USFT

KRBND M.P. -- EXISTING REFERENCE MARK AT WELL IS THE TOP OF A 2 PVC PIPE IN CENTER OF RECORDED BOX FLOOR.

NEWLY LEVELED ELEVATIONS.

13.253 (M) 43.48 (FT) NAVD 88 BASED ON PUBLISHED NGS VALUES.

13.616 (M) 44.68 (FT) NGVD 29

KRBNDM M.P. -- EXISTING REFERENCE MARK AT WELL IS THE TOP OF A 2 PVC PIPE IN CENTER OF RECORDED BOX FLOOR.

NEWLY LEVELED ELEVATIONS.

13.223 (M) 43.38 (FT) NAVD 88 BASED ON PUBLISHED NGS VALUES.

13.586 (M) 44.58 (FT) NGVD 29

KRBNS M.P. -- EXISTING REFERENCE MARK AT WELL IS THE TOP OF A 2 PVC PIPE IN CENTER OF RECORDED BOX FLOOR.

NEWLY LEVELED ELEVATIONS.

13.249 (M) 43.47 (FT) NAVD 88 BASED ON PUBLISHED NGS VALUES.

13.612 (M) 44.66 (FT) NGVD 29

KRBNS M.P. -- EXISTING REFERENCE MARK (MARK POINT) IS A BLACK MARKED SQUARE LOCATED AT THE PERIMETER OF CIRCULAR OPENING IN RECORDED BOX WOOD FLOOR.

NEWLY LEVELED ELEVATIONS.

13.248 (M) 43.46 (FT) NAVD 88 BASED ON PUBLISHED NGS VALUES.

13.611 (M) 44.66 (FT) NGVD 29

40.00 MARK ON STAFF GAUGE

NEWLY LEVELED ELEVATIONS.

11.823 (M) 38.79 (FT) NAVD 88 BASED ON PUBLISHED NGS VALUES.

12.186 (M) 39.98 (FT) NGVD 29

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STA	(+)	MA	HI	(-)	MA
BM KRBA	3.19 2.93 2.67	2.93	411.45		
<input checked="" type="checkbox"/> on Platform				2.05 1.70 1.35	1.70
<input checked="" type="checkbox"/> on well Box	(+) 3.15				
SS on Coupling				1.69 .30 .97	1.303
TOP OF STAFF GAGE MARK	(+) 1.853				
<input checked="" type="checkbox"/> on Platform	2.29 1.93 1.58	1.933	411.683		
Bm KRBA				3.42 3.16 2.90	3.16

ELV	Desc.
38.52	Found 16" PVC PIPE fitted w/ core w/ 3 1/2" Brass Disk - SFWMD stamped KRBA 2005
39.75	Set <input checked="" type="checkbox"/> on wood Platform under well Box. Placed vt 3.75' on 3" ELV on well Box.
43.50	<input checked="" type="checkbox"/> on well Box
46.147	Shot Coupling on Staff Gage. PIPE (+) 1.853 TO TOP OF STAFF GAGE MARK
42.00	TOP OF STAFF GAGE MARK
	<input checked="" type="checkbox"/> on wood Platform
38.523	Found 16" PVC PIPE fitted w/ core w/ 3 1/2" Brass Disk - SFWMD stamped KRBA 2005